Cambourne to Cambridge Busway

Date: 9 October 2025

Subject: Response to alternative scenarios for Land Value Uplift assessment

Background

1. Mr Edward Leigh has undertaken his own analysis of alternative scenarios to produce estimates of Land Value assessments. The scenarios assessed are:

   a. Bourn Airfield only

   b. House prices adjusted down

   c. Lower house price growth

   d. Bourn Airfield only and lower house price growth

   e. Nil house price growth

   f. Bourn Airfield with house prices adjusted

   g. Bourn Airfield only with house prices adjusted & nil future growth

Response

2. In response to the request from Mr Edward Leigh to review the BCR metrics produced by him and advise as to whether "the calculations are sound within a tolerance of 1 decimal place of the BCR" the alternative scenarios have been tested using the spreadsheet appraisal model used for the results presented in CD9-32, Table 4, which demonstrates an indicative BCR metric of 1.8.

3. To test the alternative scenarios the following assumptions provided by Mr Edward Leigh (as shown in Annex A, along with the results produced) for each of the scenarios listed above have been applied:

Total additionality	3,073 dwellings	2,415 dwellings
Scenario	b, c, e	a, d, f, g

Average dwelling price	£506,051 (2024 price)	£423,245 (2024 price)
Scenario	a, c, d, e	b, f, g

Annual growth in house prices	2.2% p.a	0.85% p.a	0% p.a
Scenario	a, b, f	c, d	e, g

4. The change to additionality from 3,073 dwellings to 2,415 dwellings reflects the exclusion of the Cambourne West dependent development.

5. The average dwelling price of £423,245 applied by Mr Edward Leigh reflects a lower value than the £506,051 value presented in the OBC Economic Case Addendum, which is based on the Aspinall Verdi Viability Report [CD1-21.02, page 22, paragraph 4.4.31, footnote 3], provided as Annex B.

6. Mr Leigh's alternative annual growth in house prices of 0.85% and 0% are lower than the 2.2% used to produce the indicative BCR metric of 1.8. An assumption of nil growth in house price growth is at the low end of the 'reasonable range' referred to in the guidance on sensitivity testing presented on PDF page 126, paragraph C21 of The MHCLG Appraisal Guide (March 2025) ("the Guide"), provided as Annex C.

7. The Guide identifies an assumption of 0% real increase in house prices as a low sensitivity test to be undertaken alongside a high sensitivity test of a 5% increase in house prices. For completeness, the result of assuming a 5% real increase in house price rather than 0% (with all other assumptions the same as for the Nil house price growth alternative scenario, identified as "scenario e" above) has also been produced.

8. The table below presents the estimated BCR metric by Mr Edward Leigh and the WSP calculated BCR metric for each alternative scenario, as well as the 5% house price growth sensitivity. Edward Leigh's figure is referred to as the Estimated metric and the WSP figure is referred to as the Calculated metric. A comparison of the results shows that in all but one case the estimated BCR metric is lower than the calculated one. For five of the alternative scenarios, it is 0.1 lower and for the scenario assuming Bourn Airfield only with house prices adjusted and nil future growth it is 0.2 lower.

Estimated and calculated indicative BCR metrics

	Bourn Airfield only	House prices adjusted down	Lower house price growth	Bourn Airfield only and lower house price growth
Estimated BCR metric	1.5	1.2	1.2	1.0
Calculated BCR metric	1.5	1.3	1.3	1.1
Difference	0.0	0.1	0.1	0.1

	Nil house price growth	Bourn Airfield with house prices adjusted	Bourn Airfield only with house prices adjusted & nil future growth	5% house price growth
Estimated BCR metric	0.9	1.0	0.3	-
Calculated BCR metric	1.0	1.1	0.5	3.2
Difference	0.1	0.1	0.2	-

Annex A

Assumptions and results of Edward Leigh's LVU assessment of alternative scenarios

	Dwellings	Economic Case Addendum Table 4-17 (reference)	Bourn Airfield only	House prices adjusted down	Lower house price growth	Bourn Airfield only and lower house price growth	Nil house price growth	Bourn Airfield only with house prices adjusted	Bourn Airfield only with house prices adjusted & nil future growth
wellings and percentage counted as additional									
Cambourne West	2,350	28%	0%	28%	28%	0%	28%	0%	0%
Bourn Airfield	3,500	69%	69%	69%	69%	69%	69%	69%	69%
Total additionality		**3,073**	**2,415**	**3,073**	**3,073**	**2,415**	**3,073**	**2,415**	**2,415**
Percentage difference from reference			*-21%*	*0%*	*0%*	*-21%*	*0%*	*-21%*	*-21%*
Dwelling prices									
Average dwelling price in 2024		£ 506,051	£ 506,051	£ 423,245	£ 506,051	£ 506,051	£ 506,051	£ 423,245	£ 423,245
Difference from reference			*0%*	*-16%*	*0%*	*0%*	*0%*	*-16%*	*-16%*
Future real annual growth in house prices		2.20%	2.20%	2.20%	0.85%	0.85%	0.00%	2.20%	0.00%
GDV									
GDV in 2010 prices and values		**£m 672.07**	**£m 528.16**	**£m 562.10**	**£m 566.68**	**£m 430.98**	**£m 509.22**	**£m 441.74**	**£m 320.44**
GDV per dwelling		£ 218,702	£ 218,702	£ 182,915	£ 184,406	£ 178,461	£ 165,709	£ 182,915	£ 132,687
Build costs									
Adjustment to GDV-apportioned costs	31%		£ -0	£ 7,261	£ 6,959	£ 8,165	£ 10,752	£ 7,261	£ 17,452
Build cost per dwelling		£ -143,140	£ -143,140	£ -135,879	£ -136,182	£ -134,976	£ -132,388	£ -135,879	£ -125,688
Total build costs in 2010 prices and values		**£m -439.87**	**£m -345.68**	**£m -417.56**	**£m -418.49**	**£m -325.97**	**£m -406.83**	**£m -328.15**	**£m -303.54**
Other costs and benefits (pro-rata to number of dwellings)		**£m -48.02**	**£m -37.74**	**£m -48.02**	**£m -48.02**	**£m -37.74**	**£m -48.02**	**£m -37.74**	**£m -37.74**
LVU benefits		**£m 184.18**	**£m 144.74**	**£m 96.52**	**£m 100.17**	**£m 67.28**	**£m 54.37**	**£m 75.85**	**£m -20.84**
CtoC Scheme Adjusted Benefits		£m 67.67	£m 67.67	£m 67.67	£m 67.67	£m 67.67	£m 67.67	£m 67.67	£m 67.67
Total benefits		**£m 251.85**	**£m 212.41**	**£m 164.19**	**£m 167.84**	**£m 134.95**	**£m 122.04**	**£m 143.52**	**£m 46.83**
CtoC Scheme costs		£m -137.96	£m -137.96	£m -137.96	£m -137.96	£m -137.96	£m -137.96	£m -137.96	£m -137.96
CtoC Scheme Net Present Value		**£m 113.89**	**£m 74.45**	**£m 26.23**	**£m 29.88**	**£m -3.01**	**£m -15.92**	**£m 5.56**	**£m -91.13**
CtoC Scheme BCR		**1.8**	**1.5**	**1.2**	**1.2**	**1.0**	**0.9**	**1.0**	**0.3**

Annex B

Aspinall Verdi (August 2021) Greater Cambridge Local Plan Report: First Proposals (Preferred Options) – Viability Report

First Proposals Consultation Stage

Viability Report

Greater Cambridge Local Plan Report:
First Proposals (Preferred Options)

Greater Cambridge Shared Planning

August 2021

Private and Confidential

Quality Assurance

Date of Report	31 August 2021
Version	V5
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Date	27 August 2021
Authorised by	Ben Aspinall, Managing Director
Date	31 August 2021

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Appendix 5 – Area Wide Residential Appraisals

Appendix 6 – Strategic Site Appraisals

Appendix 7 – Commercial Market Report

Appendix 8 – BTR Appraisals

Appendix 9 – Commercial Appraisals

Executive Summary

ES 1 AspinallVerdi have been appointed by South Cambridgeshire District Council and Cambridge City Council to provide a viability evidence base for the Greater Cambridge Local Plan.

ES 2 The authorities adopted separate local plans in 2018, and have now started the production of a Greater Cambridge Local Plan (GCLP) which, once adopted, will form the development plan for the two authorities up to 2041.

ES 3 The purpose of this report is to set out the inputs, assumptions and results of the viability testing to accompany the First Proposals stage of plan making.

ES 4 Testing is carried out using a typology approach, informed by our professional judgement based on comparable developments. The typologies are compliant with technical and minimum space standards.

ES 5 The testing necessarily remains at a high level at this stage and will be refined at the plan moved towards the draft local plan stage. It provides a broad analysis of viability through making assumptions about potential infrastructure and abnormal works required to bring the type and quantum of development identified forward; and costs that would be generated by the policy proposals.

ES 6 Market evidence has been used to inform the capital values, rents and yields in the assessment but are subject to change once further details are known about scheme specifics. The viability appraisals assessment assumes that affordable housing will be delivered on-site along with a number of other known policy costs.

ES 7 Due to the uncertainties caused by the Novel Coronavirus (COVID-19) Global Pandemic, we recommend that when policy makers are making decisions based on viability evidence in the current climate, they must ensure there is an adequate “viability buffer”. In essence, a degree of caution should be taken when imposing planning policies and more surplus should be left as the profitability and viability of development may reduce due to economic uncertainty. That said, it should be noted that Cambridgshire is in a very high value part of the country in the Cambridge-Milton Keynes-Oxford Arc and approximately 60 miles from London.

ES 8 Based on our appraisals and inputs, all of the typologies tested can deliver:

- 40% affordable housing;
- S106 contributions identified and costed in this report;

- any additional costs that we have identified and costed in this report (i.e., Future Homes Standards), and
- a surplus available for infrastructure, CIL or additional S106 costs.

ES 9 The surplus in all scenarios for most typologies is substantial, although in the case of Dispersal Village B and D (both brownfield sites), the surplus is substantially smaller, and these positive residuals should be treated cautiously. Urban C also has a substantially lower surplus due to its being flatted development on a brownfield site with a high BLV.

ES 10 In terms of the strategic sites, all three (North East Cambridge Area Action Plan (NEC AAP) – 700 units; Cambridge East Airport – 1,000 units; and Cambourne – 1,000 units) are viable where the scheme is traditional housing, again with very comfortable surplus figures.

ES 11 As specific infrastructure costs emerge, the surplus will be at least partially eroded, but at present, there is a healthy headroom for affordable housing and other policy aspirations to be met, particularly as the costs for transport emerge. Close monitoring of the infrastructure cost plans is advised. This will include the North East Cambridge Area Action Plan (NEC AAP) where more detailed work is already underway to identify a more in-depth analysis of the viability of this scheme, beyond the whole plan viability assumptions we have made in this part of our study.

ES 12 It is important to note that whilst our work shows that the schemes are viable, further work and consultation is required to ensure that the schemes are deliverable, i.e., demonstrating that the sites are technically deliverable and that the landowner's value aspirations are reasonable.

1 Introduction

1.1 AspinallVerdi have been appointed by Greater Cambridge Shared Planning, comprising South Cambridgeshire District Council and Cambridge City Council (referred to as GCSP) to provide a viability evidence base for the Greater Cambridge Local Plan.

1.2 The plan making process has reached the First Proposals (Preferred Options) stage, which forms part of the regulation 18 stages.

1.3 The purpose of this report is to set out the inputs, assumptions and results of the viability testing to accompany the First Proposals stage of plan making. The testing necessarily remains at a high level at this stage and will be refined as the plan moved towards the draft local plan stage. It provides a broad analysis of viability through making assumptions about potential infrastructure and abnormal works required to bring the type and quantum of development identified forward, and costs that would be generated by the policy proposals.

1.4 The vision proposed for the new local plan is:

> *We want Greater Cambridge to be a place where a big decrease in our climate impacts comes with a big increase in the quality of everyday life for all our communities. New development must reduce carbon emissions and reliance on the private car; create thriving neighbourhoods with the variety of jobs and homes we need; increase nature, wildlife and green spaces; and safeguard our unique heritage and landscapes.*

1.5 In addition to the work supporting the Greater Cambridge Local Plan, our report will also produce a more detailed analysis and in depth appraisal to support the North East Cambridge Area Action Plan (NEC AAP). This work is in addition to the GCSP but should be read as one document as the two studies will overlap in regards to national and local planning policy, methodology and some appraisal inputs.

RICS Practice Statement Declaration

1.1 Our FVA has been carried out in accordance with the RICS Financial Viability in Planning: Conduct and Reporting Practice Statement (1st Edition, May 2019).

1.2 Our FVA has also been carried out in accordance with the RICS Assessing viability in planning under the National Planning Policy Framework 2019 for England Guidance Note, 1st edition, March 2021; having regard to the National Planning Policy Framework (NPPF, Last updated 20 July 2021) and the Viability Planning Practice Guidance (PPG, Last updated 1 September 2019).

Objectivity, Impartiality and Reasonableness

1.3 We can confirm that we have undertaken our financial viability assessment with objectivity, impartiality and without interference. In doing so we have made reference to all appropriate sources of information to form our conclusions and recommendations.

1.6 At all stages of the viability process, we have advocated reasonable, transparent and appropriate engagement between the parties.

Conflicts of Interest

1.4 We confirm that we have undertaken a conflict-of-interest check in relation to this instruction and we are not aware of any deemed conflicts in relation to this instruction. We confirm that we are not acting on behalf of any party in relation to scheme specific viability testing in Greater Cambridgeshire.

Local Plan Reviewed

1.7 To inform this First Proposals document, we have reviewed the November 2020 draft we prepared of the emerging Greater Cambridge Local Plans spatial options assessment: Viability Assessment in order to test the cumulative impact of these policies in the context of the Local Plan.

Novel Coronavirus (COVID-19)

1.5 The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on 11 March 2020, has impacted global financial markets. In the second quarter of 2020, the United Kingdom entered the deepest recession in modern history which have consequently impacted property market activity.

1.6 Many agents and commentators anticipated house prices would fall as a result of the nationally-imposed lockdown and consequent freeze in property market activity. However, as restrictions were eased during the summer of 2020, many agents reported surges in interest and uplifting activity. This has been attributed to the combination of pent-up demand and the introduction of the stamp duty holiday. [1]

1.7 Market commentators have also noticed that buyers have reappraised the benefits of urban living, with increasing numbers of buyers seeking larger spaces to work from home and an increased priority for private external space. As this trend has grown, some agents in well-connected, greener locations are noticing that demand is increasing house prices. As a result, there are likely

[1] The Guardian, 2020. Hope for some, heartbreak for others as house prices go through the roof.

to be both winners and losers in the property market over the coming months and years and the delivery of the Local Plan should be monitored (and the Plan updated as appropriate).[2]

1.8 Due to these uncertainties, we recommend that when policy makers are making decisions based on viability evidence in the current climate, they must ensure there is an adequate "viability buffer". In essence, a degree of caution should be taken when imposing planning policies and more surplus should be left as the profitability and viability of development may reduce. That said, it should be noted that Cambridgshire is in a very high value part of the country in the Cambridge-Milton Keynes-Oxford Arc and approximately 60 miles from London.

Report Structure

1.8 The remainder of this report is structured as follows:

Section:	Contents:
Section 2 - National Planning Context	This section sets out the statutory requirements for the Local Plan and CIL viability including the NPPF, CIL Regulations and PPG website.
Section 3 - Local Planning Context	This section sets out the details of the existing evidence base and the proposed Local Plan policies which would have a direct impact on viability. The assumptions we have made to mitigate such policies are set out in the following sections.
Section 4 – Viability Assessment Methodology	This section describes our generic methodology for appraising the viability of development which is based on the residual approach as required by guidance and best practice.
Sections 5 – Residential Assumptions	We set out the development typologies that are to be tested as part of the study and summarise the cost and value assumptions made in the financial appraisals. This section references separate papers on the residential market and land values which are appended to this report.
Section 6 – Residential Viability Results	We present the findings of our financial appraisals for the District wide residential typologies (general needs and older persons).
Section 7 – Strategic Sites	We analyse the viability and delivery of the potential strategic sites.

[2] The Guardian, 2020. Escape to the country: how Covid is driving an exodus from Britain's cities

Section:	Contents:
Section 8 – Commercial Uses	We set out the assumptions used and the results of our viability testing in respect of commercial typologies.
Section 9 - Conclusions and Recommendations	Finally, we make our recommendations in respect of the Local Plan including affordable housing and other planning policy costs.

2 National planning policy context

2.1 Our economic viability appraisal has been carried out having regard to the NPPF, PPG on viability and CIL Regulations. We set out the pertinent points of these documents as follows:

National Planning Policy Framework (NPPF)

2.2 The NPPF sets out the Government's planning policies for England and how these are expected to be applied. It was first published on 27 March 2012 and the Ministry of Housing, Communities & Local Government (MHCLG) issued a revised version in July 2018 which was updated again in February 2019 to reflect the introduction of the standard method for assessing local housing need (and again in July 2021).

2.3 It confirms the primacy of the development plan in determining planning applications. It confirms that the NPPF must be taken into account in preparing the development plan, and is a material consideration in planning decisions[3].

2.4 It is important to note that within the new NPPF, paragraph 173 of the old NPPF (2012) has been deleted. The old paragraph 173 referred to viability and required '*competitive returns to a willing land owner and willing developer to enable the development to be deliverable'*.

Plans should be deliverable

2.5 The NPPF requires local plans to be deliverable, paragraph 16 of the revised NPPF states: *'Plans should:*

a) be prepared with the objective of contributing to the achievement of sustainable development;

b) be prepared positively, in a way that is aspirational but deliverable;

c) be shaped by early, proportionate and effective engagement between planmakers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees;

d) contain policies that are clearly written and unambiguous, so it is evident how a decision maker should react to development proposals;

e) be accessible through the use of digital tools to assist public involvement and policy presentation; and

f) serve a clear purpose, avoiding unnecessary duplication of policies that apply to a particular area (including policies in this Framework, where relevant).'[4]

[3] National Planning Policy Framework, February 2019, para 2
[4] MHCLG, February 2019, National Planning Policy Framework, paragraph 16

Planning contribution/obligations

2.6 The setting of development contributions should not place the delivery of the plan at risk:

'Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure). Such policies should not undermine the deliverability of the plan.'[5]

2.7 Paragraph 58 states:

'*Where up-to-date policies have set out the contributions expected from development, planning applications that comply with them should be assumed to be viable. It is up to the applicant to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage. The weight to be given to a viability assessment is a matter for the decision maker, having regard to all the circumstances in the case, including whether the plan and the viability evidence underpinning it is up to date, and any change in site circumstances since the plan was brought into force. All viability assessments, including any undertaken at the plan-making stage, should reflect the recommended approach in national planning guidance, including standardised inputs, and should be made publicly available*'.

2.8 The Government's objective is to reduce the delays to delivery of new housing due to the site-specific viability process that was created as a result of the previous paragraph 173. Once a new Local Plan is adopted no site-specific viability assessment should be required (except in exceptional circumstances) and developers should factor into their land buying decisions the cost of planning obligations (including affordable housing).

2.9 The NPPF states that planning obligations must only be sought where they meet all of the following tests[6]:

'a) necessary to make the development acceptable in planning terms;

b) directly related to the development; and

c) fairly and reasonably related in scale and kind to the development.'[7]

2.10 Notwithstanding the latest changes to the CIL Regulations (2019) which do away with the requirements for a Regulation 123 list of infrastructure, these tests ensure that Local Authorities cannot charge S106 or CIL twice ('double-dip') for the same infrastructure (as this would not be fair and reasonable).

[5] Ibid, paragraph 34
[6] Set out in Regulation 122(2) of the Community Infrastructure Levy Regulations 2010
[7] Ibid, paragraph 57

Affordable housing

2.11 The NPPF sets a 10 units threshold for seeking affordable housing contributions, except in designated rural areas:

'Provision of affordable housing should not be sought for residential developments that are not major developments, other than in designated rural areas (where policies may set out a lower threshold of 5 units or fewer).'[8]

2.12 The NPPF defines major development as follows:

'*For housing, development where 10 or more homes will be provided, or the site has an area of 0.5 hectares or more. For non-residential development it means additional floorspace of 1,000m2 or more, or a site of 1 hectare or more, or as otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015.''*[9]

2.13 Where affordable housing is sought, local planning authorities should seek at least 10% provision where there is identified need:

'Where major development involving the provision of housing is proposed, planning policies and decisions should expect at least 10% of the homes to be available for affordable home ownership, unless this would exceed the level of affordable housing required in the area, or significantly prejudice the ability to meet the identified affordable housing needs of specific groups. Exemptions to this 10% requirement should also be made where the site or proposed development:

a) provides solely for Build to Rent homes;

b) provides specialist accommodation for a group of people with specific needs (such as purpose-built accommodation for the elderly or students);

c) is proposed to be developed by people who wish to build or commission their own homes; or

d) is exclusively for affordable housing, an entry-level exception site or a rural exception site.'[10]

Vacant building credit (VBC)

2.14 The NPPF allows for affordable housing obligations to be reduced if there are any existing buildings on site:

[8] Ibid, paragraph 64
[9] Ibid, page 69
[10] Ibid, paragraph 65

'To support the re-use of brownfield land, where vacant buildings are being reused or redeveloped, any affordable housing contribution due should be reduced by a proportionate amount.'[11]

2.15 Our testing of brownfield sites has been conservative and not allowed for VBC. This allows for further contingency/viability buffer and future proofs policies should there be a change in VBC.

Planning Practice Guidance (PPG) for Viability

2.16 The Planning Practice Guidance for Viability was first published in March 2014 and substantially updated at the same time as the NPPF in July 2018. This has subsequently been updated again in February 2019, May 2019 and latterly 1 September 2019. The guidance is now much more prescriptive on the methodology to determine the land value and as such Chapter 3 details our approach to land value taking into account those revisions. We summarise below some key aspects of the PPG for this study.

Plans should set out contributions expected from development

2.17 The PPG paragraph 001 confirms that for viability and plan making:

Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure).

These policy requirements should be informed by evidence of infrastructure and affordable housing need, and a proportionate assessment of viability that takes into account all relevant policies, and local and national standards, including the cost implications of the Community Infrastructure Levy (CIL) and section 106. Policy requirements should be clear so that they can be accurately accounted for in the price paid for land. To provide this certainty, affordable housing requirements should be expressed as a single figure rather than a range. Different requirements may be set for different types or location of site or types of development.[12]

2.18 The PPG therefore confirms that Local Authorities can set different levels of CIL and/or affordable housing by greenfield or brownfield typologies.

Viability to be resolved at planning making stage

[11] Ibid, paragraph 64
[12] Paragraph: 001 Reference ID: 10-001-20190509, Revision date: 09 05 2019

2.19 The PPG builds on the NPPF in that viability matters should be resolved at the plan making stage rather than decision-making stage, thus placing further weight on viability assessments early in the process:

'Policy requirements, particularly for affordable housing, should be set at a level that takes account of affordable housing and infrastructure needs and allows for the planned types of sites and development to be deliverable, without the need for further viability assessment at the decision making stage.'[13]

It is the responsibility of site promoters to engage in plan making, taking into account any costs including their own profit expectations and risks, and ensure that proposals for development are policy compliant. Policy compliant means development which fully complies with up to date plan policies. A decision maker can give appropriate weight to emerging policies. The price paid for land is not a relevant justification for failing to accord with relevant policies in the plan. Landowners and site purchasers should consider this when agreeing land transactions[14]*.*

Setting of policy requirements for contributions

2.20 The PPG explains that Plans should set out the contributions expected from development. The contributions should '*include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure).'*[15]

2.21 When setting policies these will need to be informed through evidence based on the infrastructure and affordable housing need for the area. There is also a need for clarity of policy requirements so that these can be reflected in the land value:

'These policy requirements should be informed by evidence of infrastructure and affordable housing need, and a proportionate assessment of viability that takes into account all relevant policies, and local and national standards, including the cost implications of the Community Infrastructure Levy (CIL) and section 106. Policy requirements should be clear so that they can be accurately accounted for in the price paid for land. To provide this certainty, affordable housing requirements should be expressed as a single figure rather than a range. Different requirements may be set for different types or location of site or types of development.[16]'

2.22 In setting planning policy requirements local authorities need to have regard to the impact these have on development viability: *'The role for viability assessment is primarily at the plan making stage. Viability assessment should not compromise sustainable development but should be used*

[13] MHCLG, 09 May 2019, Planning Practice Guidance, Paragraph: 002 Reference ID: 10-002-20190509
[14] Ibid, Paragraph: 002 Reference ID: 10-002-20190509
[15] Ibid, Paragraph: 001 Reference ID: 10-001-20190509
[16] Ibid, Paragraph: 001 Reference ID: 10-001-20190509

to ensure that policies are realistic and that the total cumulative cost of all relevant policies will not undermine deliverability of the plan.'[17]

2.23 The PPG also places an emphasis on addressing education requirements when considering viability at plan-making stage:

'When considering viability, it is recommended that plan makers and local authorities for education work collaboratively to identify which schools are likely to expand, and where new schools will be needed as a result of planned growth.

It is important that costs and land requirements for education provision are known to inform site typologies and site-specific viability assessments, with an initial assumption that development will provide both funding for construction and land for new schools required onsite, commensurate with the level of education need generated by the development.'[18]

2.24 Ultimately the PPG is clear that total cumulative costs of policies should not render development unviable:

'The total cumulative cost of all relevant policies should not be of a scale that will make development unviable. Local planning authorities should set out future spending priorities for developer contributions in an Infrastructure Funding Statement.'[19]

Strategic Sites

2.25 Paragraph 005 of the PPG refers specifically to strategic sites:

It is important to consider the specific circumstances of strategic sites. Plan makers can undertake site specific viability assessment for sites that are critical to delivering the strategic priorities of the plan. This could include, for example, large sites, sites that provide a significant proportion of planned supply, sites that enable or unlock other development sites or sites within priority regeneration areas. Information from other evidence informing the plan (such as Strategic Housing Land Availability Assessments) can help inform viability assessment for strategic sites.[20]

2.26 And, paragraph 006:

Plan makers should engage with landowners, developers, and infrastructure and affordable housing providers to secure evidence on costs and values to inform viability assessment at the plan making stage.

It is the responsibility of site promoters to engage in plan making, take into account any costs including their own profit expectations and risks, and ensure that proposals for development are

[17] Ibid, Paragraph: 002 Reference ID: 10-002-20180724
[18] Ibid, Paragraph: 029 Reference ID: 10-029-20190509
[19] Ibid
[20] Paragraph: 005 Reference ID: 10-005-20180724, Revision date: 24 07 2018

policy compliant. Policy compliant means development which fully complies with up to date plan policies. A decision maker can give appropriate weight to emerging policies. It is important for developers and other parties buying (or interested in buying) land to have regard to the total cumulative cost of all relevant policies when agreeing a price for the land. Under no circumstances will the price paid for land be a relevant justification for failing to accord with relevant policies in the plan.

Where up-to-date policies have set out the contributions expected from development, planning applications that fully comply with them should be assumed to be viable. It is up to the applicant to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage.[21]

Standardised Inputs

2.27 Paragraph 006 reconfirms the guidance at paragraph 002. The RLV price paid for the site at the point of planning consent must be on a policy compliant basis.

2.28 The PPG also sets out standardised inputs to viability assessment. See also our detailed methodology and approach in section 3 in this respect.

2.29 Paragraph 010 of the PPG describes the principles for carrying out a viability assessment. It stated that, *'viability assessment is a process of assessing whether a site is financially viable, by looking at whether the value generated by a development is more than the cost of developing it'* […] '*in plan making and decision making viability helps to strike a balance between the aspirations of developers and landowners, in terms of returns against risk, and the aims of the planning system to secure maximum benefits in the public interest through the granting of planning permission.*'[22]

2.30 The PPG describes how the gross development value and costs should be defined for the purposes of viability assessment (Paragraphs 011 and 012).

2.31 Specifically, the PPG describes how land value should be defined for the purposes of viability assessment. In this respect the *'benchmark land value should be established on the basis of the* ***existing use value (EUV) of the land, plus a premium*** *for the landowner*.' (Paragraph 013)[23]

2.32 However, it is important to note that a paragraph 014 the PPG confirms that, '*market evidence can also be used as a cross-check of benchmark land value but should not be used in place of benchmark land value. There may be a divergence between benchmark land values and market evidence; and plan makers should be aware that this could be due to different assumptions and methodologies used by individual developers, site promoters and landowners'*. And, '*this*

[21] Paragraph: 006 Reference ID: 10-006-20190509, Revision date: 09 05 2019
[22] Paragraph: 010 Reference ID: 10-010-20180724, Revision date: 24 07 2018
[23] Paragraph: 013 Reference ID: 10-013-20180724, Revision date: 24 07 2018

evidence should be based on developments which are fully compliant with emerging or up to date plan policies, including affordable housing requirements at the relevant levels set out in the plan. Where this evidence is not available plan makers and applicants should identify and evidence any adjustments to reflect the cost of policy compliance. This is so that historic benchmark land values of non-policy compliant developments are not used to inflate values over time.' And, '*in plan making, the landowner premium should be tested and balanced against emerging policies'*.[24]

2.33 It is important that viability assessments are set within the context of the real estate market and that the BLV is not set too low so as to give a false impression of viability. Market evidence is important in this context but we note that the PPG paragraphs 2, 4, 14 and 18 all state that the actual price cannot be used as a reason not to accord with plan policies.

2.34 The PPG defines EUV as follows:

(Paragraph 015) '[…] *EUV is the value of the land in its existing use. Existing use value is not the price paid and should disregard hope value. Existing use values will vary depending on the type of site and development types*.[25]

2.35 The PPG also defines the premium to the landowner:

(Paragraph 016) *'The premium (or the 'plus' in EUV+) […] is the amount above existing use value (EUV) that goes to the landowner. The premium should provide a reasonable incentive for a land owner to bring forward land for development while allowing a sufficient contribution to fully comply with policy requirements.*

Plan makers should establish a reasonable premium to the landowner for the purpose of assessing the viability of their plan. This will be an iterative process informed by professional judgement and must be based upon the ***best available evidence informed by cross sector collaboration. Market evidence can include benchmark land values from other viability assessments. Land transactions can be used but only as a cross check*** *to the other evidence. Any data used should reasonably identify any adjustments necessary to reflect the cost of policy compliance (including for affordable housing), or differences in the quality of land, site scale, market performance of different building use types and reasonable expectations of local landowners. Policy compliance means that the development complies fully with up to date plan policies including any policy requirements for contributions towards affordable housing requirements at the relevant levels set out in the plan. […] Local authorities can request data on the price paid for land (or the price expected to be paid through an option or promotion agreement).*[26] (our emphasis).

[24] Paragraph: 014 Reference ID: 10-014-20190509, Revision date: 09 05 2019
[25] Paragraph: 015 Reference ID: 10-015-20190509, Revision date: 09 05 2019
[26] Paragraph: 016 Reference ID: 10-016-20190509, Revision date: 09 05 2019

2.36 Paragraph 017 of the PPG refers to alternative use value (AUV) for establishing benchmark land values. This is more at the decision-making stage as our site typologies herein are all for broadly defined uses.

2.37 Finally, the PPG also defines developer's return / profit for the purposes of viability assessment:

'For the purpose of plan making an assumption of 15-20% of gross development value (GDV) may be considered a suitable return to developers in order to establish the viability of plan policies.'[27]

2.38 In this respect we have provided sensitivities on the profit margin.

Need for engagement

2.39 The PPG places a greater emphasis on engagement at plan-making stage, from both plan makers and stakeholders:

'*Plan makers should engage with landowners, developers, and infrastructure and affordable housing providers to secure evidence on costs and values to inform viability assessment at the plan making stage.*

It is the responsibility of site promoters to engage in plan making, take into account any costs including their own profit expectations and risks, and ensure that proposals for development are policy compliant. Policy compliant means development which fully complies with up to date plan policies. A decision maker can give appropriate weight to emerging policies. It is important for developers and other parties buying (or interested in buying) land to have regard to the total cumulative cost of all relevant policies when agreeing a price for the land. Under no circumstances will the price paid for land be a relevant justification for failing to accord with relevant policies in the plan.'[28]

2.40 In this respect we carried out a stakeholder workshop in March 2021 to consult with industry in respect of the cost, value and BLV assumptions of the site allocations and we have consulted privately on a one-to-one basis with land owners and site promotors of strategic sites (see section 3 below).

PPG for housing for older & disabled people

2.41 There is a separate section of the PPG to help guide Councils in preparing policies on housing for older and disabled people (published 26 June 2019). The PPG recognises the necessity to plan for the housing needs of disabled people:

[27] Paragraph: 018 Reference ID: 10-018-20190509, Revision date: 09 05 2019
[28] Ibid, Paragraph: 006 Reference ID: 10-006-20190509

'The provision of appropriate housing for people with disabilities, including specialist and supported housing, is crucial in helping them to live safe and independent lives. Unsuitable or unadapted housing can have a negative impact on disabled people and their carers. It can lead to mobility problems inside and outside the home, poorer mental health and a lack of employment opportunities. Providing suitable housing can enable disabled people to live more independently and safely, with greater choice and control over their lives. Without accessible and adaptable housing, disabled people risk facing discrimination and disadvantage in housing. An ageing population will see the numbers of disabled people continuing to increase and it is important we plan early to meet their needs throughout their lifetime.'[29]

2.42 Where an identified need exists, planning policies can set out the proportion of new housing that will be delivered to the following standards:

'M4(1) Category 1: Visitable dwellings (the minimum standard that applies where no planning condition is given unless a plan sets a higher minimum requirement)

M4(2) Category 2: Accessible and adaptable dwellings

M4(3) Category 3: Wheelchair user dwellings

Planning policies for accessible housing need to be based on evidence of need, viability and a consideration of site specific factors.'[30]

2.43 The PPG recognises the diversity of specialist housing including, as follows:

- *Age-restricted general market housing: This type of housing is generally for people aged 55 and over and the active elderly. It may include some shared amenities such as communal gardens, but does not include support or care services.*
- *Retirement living or sheltered housing: This usually consists of purpose-built flats or bungalows with limited communal facilities such as a lounge, laundry room and guest room. It does not generally provide care services, but provides some support to enable residents to live independently. This can include 24 hour on-site assistance (alarm) and a warden or house manager.*
- *Extra care housing or housing-with-care: This usually consists of purpose-built or adapted flats or bungalows with a medium to high level of care available if required, through an onsite care agency registered through the Care Quality Commission (CQC). Residents are able to live independently with 24 hour access to support services and staff, and meals are also available. There are often extensive communal areas, such as space to socialise or a wellbeing centre. In some cases, these developments are known as retirement*

[29] MHCLG, 26 June 2019, Paragraph: 002 Reference ID: 63-002-20190626
[30] MHCLG, 26 June 2019, Paragraph: 009 Reference ID: 63-015-20190626

communities or villages - the intention is for residents to benefit from varying levels of care as time progresses.

- *Residential care homes and nursing homes: These have individual rooms within a residential building and provide a high level of care meeting all activities of daily living. They do not usually include support services for independent living. This type of housing can also include dementia care homes.*

2.44 The PPG states that:

'There is a significant amount of variability in the types of specialist housing for older people. The list above provides an indication of the different types of housing available but is not definitive. Any single development may contain a range of different types of specialist housing.'[31]

2.45 In this respect we have appraised generic retirement living or sheltered housing schemes typically delivered by developers such as McCarthy & Stone or Churchill retirement living (see section 5 – typologies).

2.46 In regards to how the viability of specialist housing for older people should be addressed, the PPG states the following:

https://www.gov.uk/guidance/viability *sets out how plan makers and decision takers should take account of viability, including for specialist housing for older people. Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure. Plans can set out different policy requirements for different types of development. These policy requirements should be informed by evidence of infrastructure and affordable housing need, and a proportionate assessment of viability that takes into account all relevant policies and local and national standards, including the cost implications of Community Infrastructure Levy and section 106'*

.

2.47 Viability guidance states that where up to date policies have set out the contributions expected from development, planning applications that comply with them should be assumed to be viable. It is up to the applicant to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage. Such circumstances could include types of development which may significantly vary from standard models of development for sale (for example housing for older people).'[32]

[31] Ibid, Paragraph: 010 Reference ID: 63-015-20190626
[32] Ibid, Paragraph: 015 Reference ID: 63-015-20190626

PPG for Build to Rent

2.48 The PPG also has a separate section on Build to Rent PPG (published 13 September 2018) which states:

'As part of their plan making process, local planning authorities should use a local housing need assessment to take into account the need for a range of housing types and tenures in their area including provisions for those who wish to rent. Specific demographic data is available on open data communities which can be used to inform this process. The assessment will enable an evidence-based planning judgement to be made about the need for build to rent homes in the area, and how it can meet the housing needs of different demographic and social groups.

If a need is identified, authorities should include a plan policy setting out their approach to promoting and accommodating build to rent. This should recognise the circumstances and locations where build to rent developments will be encouraged – for example as part of large sites and/or a town-centre regeneration area.'[33]

2.49 The PPG for build to rent sets out the requirements for affordable housing:

'The National Planning Policy Framework states that affordable housing on build to rent schemes should be provided by default in the form of affordable private rent, a class of affordable housing specifically designed for build to rent. Affordable private rent and private market rent units within a development should be managed collectively by a single build to rent landlord.

20% is generally a suitable benchmark for the level of affordable private rent homes to be provided (and maintained in perpetuity) in any build to rent scheme. If local authorities wish to set a different proportion they should justify this using the evidence emerging from their local housing need assessment, and set the policy out in their local plan. Similarly, the guidance on viability permits developers, in exception, the opportunity to make a case seeking to differ from this benchmark.

National affordable housing policy also requires a minimum rent discount of 20% for affordable private rent homes relative to local market rents. The discount should be calculated when a discounted home is rented out, or when the tenancy is renewed. The rent on the discounted homes should increase on the same basis as rent increases for longer-term (market) tenancies within the development.'[34]

[33] MHCLG, 13 September 2018, Paragraph: 001 Reference ID: 60-001-20180913
[34] Ibid, Paragraph: 002 Reference ID: 60-001-20180913

PPG for First Homes

2.50 On 24 May 2021 MHCLG issued guidance on First Homes. The guidance provides the following description for First Homes:

'First Homes are a specific kind of discounted market sale housing and should be considered to meet the definition of 'affordable housing' for planning purposes. Specifically, First Homes are discounted market sale units which:

a) must be ***discounted by a minimum of 30%*** *against the market value;*

b) are sold to a person or persons meeting the First Homes eligibility criteria (see below);

c) on their first sale, will have a restriction registered on the title at HM Land Registry to ensure this discount (as a percentage of current market value) and certain other restrictions are passed on at each subsequent title transfer; and,

d) after the discount has been applied, the first sale must be at a ***price no higher than £250,000*** *(or £420,000 in Greater London).*

First Homes are the government's preferred discounted market tenure and should ***account for at least 25% of all affordable housing units*** *delivered by developers through planning obligations.'*[35]

2.51 The guidance explains that there should be a S106 agreement to secure restrictions *'on the use and sale of the property, and a legal restriction on the title of the property to ensure that these restrictions are applied to the property at each future sale […]. The price cap of £250,000 (or £420,000 in Greater London), however, applies only to the first sale and not to any subsequent sales of any given First Home.'*[36]

2.52 The guidance explains that homes meeting First Homes criteria should be considered to meet the definition of affordable housing for planning purposes.

2.53 There is scope to change the minimum discount of 30% to either 40% or 50%[37] but the local authority will need to demonstrate need for this – typically through the housing needs assessment at plan-making stage. But local authorities cannot set price caps higher than the national caps[38] although local authorities and neighbourhood planning groups can set lower price caps, again based on need.

[35] MHCLG,24 May 2021, Paragraph: 001 Reference ID: 70-001-20210524
[36] Ibid, Paragraph: 002 Reference ID: 70-002-20210524
[37] Ibid, Paragraph: 004 Reference ID: 70-004-20210524
[38] Ibid, Paragraph: 005 Reference ID: 70-005-20210524

MHCLG – planning system reform consultations

2.54 On 06 August 2020, the government opened two consultations that proposed major changes to the UK planning system in the coming years. The first proposes changes to the current system to speed up housing delivery in the short term. The second look longer-term and proposes a complete overhaul to the existing system.

2.55 We summarise both these White Paper documents as follows:

Changes to the current planning system consultation[39]

2.56 This document outlined a number of changes to the existing planning system. The four main proposals are listed below.

- Changes to the standard method for assessing local housing need.
- Securing of "First Homes" through developer contributions in the short term until the transition to a new system[40].
- Supporting small and medium-sized builders by temporarily lifting the small site's threshold below which developers do not need to contribute to affordable housing.
- Extending the current Permission in Principle to major development.

2.57 On 16 December 2020, after receiving c. 2,400 consultation responses, the Government published its response on local housing need. This is summarised below:

- The response acknowledged concerns that the distribution of needs was not right and confirmed it would not be proceeding with the changes set out in the consultation, stating that the most appropriate approach is to retain the standard method in its current form.
- The Government amended the current standard method for calculating housing need for the 20 most populous cities and urban centres in England by adding a 35% uplift to the post-cap number. This is to meet the principles of delivering more homes on brownfield land.
- The Planning Practice Guidance on housing and economic needs assessment was updated on 16 December 2020 and now includes the uplift as step 4 of the assessment of housing need.

Planning for the future consultation[41]

[39] MHCLG, August 2020, Changes to the current planning system consultation
[40] MHCLG, 24 May 2021 published PPG further detail on First Homes and their implementation. This is set out in section 2 below. We have incorporated First Homes as a sensitivity test within our initial Reg 18 viability advice and therefore this now becomes the baseline scenario as First Homes are now a requirement.
[41] MHCLG, August 2020, Planning for the Future – White Paper

2.58 This document outlines considerable long-term changes to the UK planning system. The outcome of this consultation will likely mean changes to primary legislation rather than just the NPPF.

2.59 A number of significant changes are proposed not least including the way local authorities evidence and create local plans. Amongst other things the way viability is considered in the planning system will be transformed with proposals including the removal of S106 agreements and CIL. These would be replaced with a single consolidated 'Infrastructure Levy' which would include all planning gain developer contributions – including affordable housing.

2.60 These changes could have a significant impact on the Local Plan Review and this viability assessment. We do not know what future plans may look like under the new system but it is likely that viability assessments such as this will change considerably. However, the Chief Planner and MHCLG have strongly encouraged Local Authorities to continue in the preparation and adoption of Local Plans, stating that a *'suitable transition period from approved to new local plans will be implemented'* as part of the reforms.[42]

[42] MHCLG, 2020, Planning Newsletter No. 3

3 Methodology

3.1 In this section of the report, we set out our methodology to establish the viability of the various land uses and development typologies to use in the testing.

3.2 Cross-reference should be made back to the Viability PPG guidance in section 2 and specifically the guidance in respect of EUV, premium and profit.

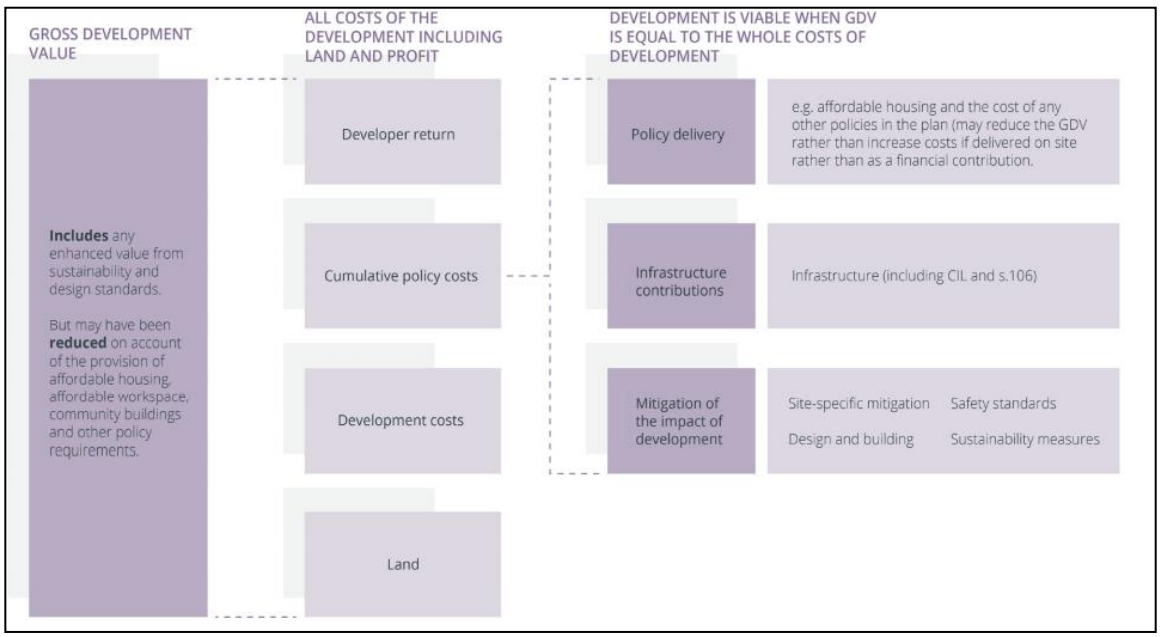
3.3 We also set out the professional guidance that we have had regard to in undertaking the economic viability appraisals.

Viability modelling best practice

3.4 The general principle is that affordable housing, CIL and other planning obligations will be levied on the increase in land value resulting from the grant of planning permission. However, there are fundamental differences in land economics and every development scheme is different. Therefore, to derive planning contributions (including CIL) and understand the 'appropriate balance', it is important to understand the micro-economic principles which underpin the viability analysis.

3.5 The uplift in value is calculated using a Residual Land Value (RLV) appraisal. The residual land value is determined by deducting development costs from development values. Figure 3-1 illustrates the principles of a residual appraisal.

Figure 3-1 Elements required for a viability assessment



Source: RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England

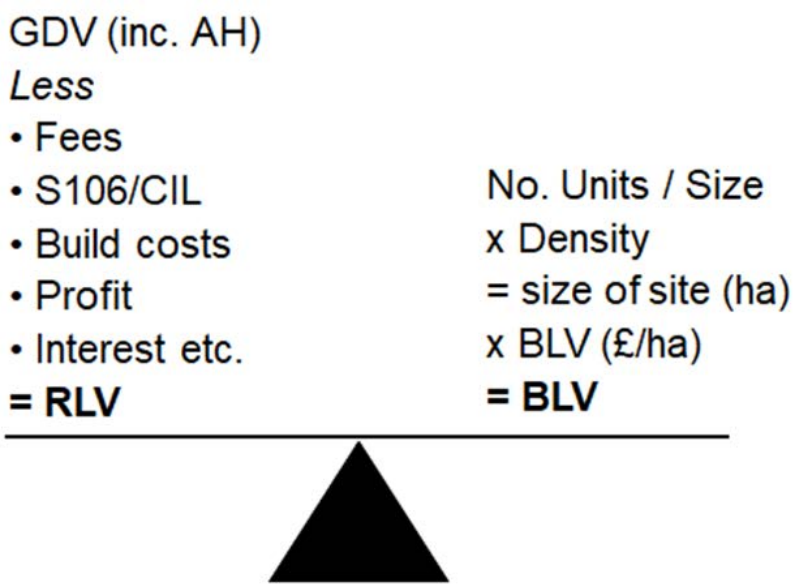
3.6 Our specific appraisals for each of the land uses and typologies are set out in the relevant sections below.

3.7 A scheme is viable if the Gross Development Value (GDV) of the scheme is greater than the total of all the costs of development including land acquisition, planning obligations and profit. Conversely, if the GDV is less than the total costs of development (including land, S106s and profit) the scheme will be unviable.

3.8 However, in order to advise on the ability of the proposed uses/scheme to support affordable housing and CIL/planning obligations we have benchmarked the residual land values (RLV) from the viability analysis against existing or alternative land use relevant to the particular typology – the Benchmark Land Value (BLV).

3.9 This approach is illustrated on the diagram in Figure 3-2.

Figure 3-2 Balance between RLV and TLV



Source: AspinallVerdi

What to test?

3.10 For plan wide viability testing it is not necessary to test every proposed development site but to base the testing on the 'type of sites' which are reflective of the development proposed over the plan period – this is known as testing of 'typologies.' Where there are key sites (strategic sites) that are fundamental to the delivery of the plan these need to be considered separately. The PPG explains this as follows:

'Assessing the viability of plans does not require individual testing of every site or assurance that individual sites are viable. Plan makers can use site typologies to determine viability at the plan making stage. Assessment of samples of sites may be helpful to support evidence. In some circumstances a more detailed assessment may be necessary for particular areas or key sites on which the delivery of the plan relies.'[43]

What is meant by a typology approach to viability?

3.11 Typologies for the viability testing are to be based on the proposed development in the plan to ensure the testing represents the type of development coming forward. In doing so it is appropriate to consider *'shared characteristics such as location, whether brownfield or greenfield, size of site and current and proposed use or type of development.'*[44]

3.12 Within this report we refer to 'scheme typologies' e.g. housing, build-to-rent or older persons schemes of various sizes and 'site typologies' e.g. greenfield or brownfield existing uses.

Viability testing of key sites

3.13 The PPG considers key sites as those sites that are crucial to the delivery of the plan *'…for example, large sites, sites that provide a significant proportion of planned supply, sites that enable or unlock other development sites or sites within priority regeneration areas.'*[45]

3.14 In this respect we have considered separately the following sites:

- North East Cambridge
- Cambourne
- Cambridge East Airport

Development appraisal inputs

3.15 In devising the inputs to use in the appraisals, it is acceptable to use standardised inputs (see section 2), rather than relying on site specifics: *'All viability assessments, including any undertaken at the plan-making stage, should reflect the recommended approach in national planning guidance, including standardised inputs, and should be made publicly available.'*[46]

Gross development value

[43] MHCLG, 05 May 2019, PPG, Paragraph: 004 Reference ID: 10-004-20190509
[44] Ibid, Paragraph: 004 Reference ID: 10-003-20180724
[45] MHCLG, 24 July 2018, PPG, Paragraph 005 Reference ID: 10-005-20180724
[46] MHCLG, National Planning Policy Framework (NPPF), February 2019. Paragraph 57

3.16 The Gross development value is the cumulative value of the completed development. For plan wide viability *assessments '…average figures can be used, with adjustment to take into account land use, form, scale, location, rents and yields, disregarding outliers in the data.'*[47]

Development costs

3.17 The PPG explains, as with values, cost should also reflect local market conditions, it also places an emphasis to identify development costs at plan-making stage: Local market development costs could relate to dealing with local ground conditions, environmental mitigation, flood risk, design requirements, sustainability etc.

3.18 The PPG states '*As far as possible, costs should be identified at the plan making stage. Plan makers should identify where costs are unknown and identify where further viability assessment may support a planning application.'* [48]

Benchmark land value

3.19 Benchmark land value (BLV), also sometimes referred to as threshold land value, has been subject to much debate in recent years due to trying to establish the most appropriate method to determine it for planning purposes. The two most common approaches have been Existing Use plus and Market Value adjusted for policy. The latter, although a more market facing approach, has faced criticism[49] because practitioners have not been adjusting land values fully for policy. The PPG now provides a clear single method (Existing Use plus Premium) in determining land value:

'To define land value for any viability assessment, a benchmark land value should be established on the basis of the ***existing use value (EUV)*** *of the land,* ***plus a premium*** *for the landowner. The premium for the landowner should reflect the minimum return at which it is considered a reasonable landowner would be willing to sell their land. The premium should provide a reasonable incentive, in comparison with other options available, for the landowner to sell land for development while allowing a sufficient contribution to fully comply with policy requirements. Landowners and site purchasers should consider policy requirements when agreeing land transactions. This approach is often called 'existing use value plus' (EUV+)'*[50]

3.20 The PPG also sets out the factors that should be considered when establishing the land value:

- '*be based upon existing use value*

[47] Ibid, Paragraph: 011 Reference ID: 10-011-20180724
[48] MHCLG, 05 May 2019, PPG, Paragraph 014 Reference ID: 10-014-20190509
[49] Sayce, S, et al, January 2017, Viability and the planning system: the relationship between economic viability testing, land values and affordable housing in London
[50] MHCLG, 05 May 2019, PPG, Paragraph: 013 Reference ID: 10-013-20190509

- allow for a premium to landowners (including equity resulting from those building their own homes)
- *reflect the implications of abnormal costs; site-specific infrastructure costs; and professional site fees*

Viability assessments should be undertaken using benchmark land values derived in accordance with this guidance. ***Existing use value should be informed by market evidence of current uses****, costs and values.* ***Market evidence can also be used as a cross-check of benchmark land value but should not be used in place of benchmark land value.*** *There may be a divergence between benchmark land values and market evidence; and plan makers should be aware that this could be due to different assumptions and methodologies used by individual developers, site promoters and landowners.*

This evidence should be based on developments which are fully compliant with emerging or up to date plan policies, including affordable housing requirements at the relevant levels set out in the plan. Where this evidence is not available plan makers and applicants should identify and evidence any adjustments to reflect the cost of policy compliance. This is so that historic benchmark land values of non-policy compliant developments are not used to inflate values over time.

In plan making, the landowner premium should be tested and balanced against emerging policies. In decision making, the cost implications of all relevant policy requirements*, including planning obligations and, where relevant, any Community Infrastructure Levy (CIL) charge should be taken into account.'*[51]

3.21 As the RICS guidance explains '*[t]he PPG is unambiguous that EUV+ is the primary approach,'*[52] with land transaction evidence to be used as a cross-check to the EUV plus premium.

Guidance on premiums / land value adjustments

3.22 Despite the clarity the PPG brings, there is still uncertainty on how the premium is calculated. This was highlighted in the research undertaken by Sarah Sayce: *'Overall, the 'EUV plus' approach was favoured by the majority of respondents, despite the recognition that* ***the premium element can be difficult to assess in some circumstances****.'*[53]

3.23 The PPG explains 'The premium should provide a reasonable incentive for a land owner to bring forward land for development while allowing a sufficient contribution to fully comply with policy requirements.

[51] MHCLG, 09 May 2019, PPG, Paragraph: 014 Reference ID: 10-014-20190509
[52] RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England, paragraph 5.7.6
[53] Sayce, S, et al, January 2017, viability and the planning system: the relationship between economic viability testing, land values and affordable housing in London, page 6

Plan makers should establish a reasonable premium to the landowner for the purpose of assessing the viability of their plan. This will be an iterative process informed by professional judgement and must be based upon the best available evidence informed by cross sector collaboration.'[54]

3.24 In helping to inform the professional judgement, a balance needs to be struck between the competing interests (developers, landowners and the aims of the planning) *'to secure maximum benefits in the public interest through the granting of planning permission.'*[55]

3.25 In considering suitable premiums to apply we are mindful of the following:

- **RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England** – the RICS acknowledge that *'[t]here is no standard amount for the premium and the setting of realistic policy requirements that satisfy the reasonable incentive test behind the setting of the premium is a very difficult judgement'*[56] The RICS guidance further explains that *'[f]or a plan-making FVA, the EUV and the premium is likely to be the same for the same development typology, but it would be expected that a site that required higher costs to enable development would achieve a lower residual value. This should be taken account of in different site typologies at the plan-making stage.'*[57]
- **The Harman Report** [58] - published in response to the introduction of viability becoming more prominent in the planning system post the introduction of the NPPF. Although the Harman Report pre-dates the current iteration of the PPG on viability it does recommend the EUV plus approach to determine land value for planning purposes. The Harman report also advocates that when assessing an appropriate Benchmark Land Value, consideration should be given to *'the fact that future plan policy requirements will have an impact on land values and owners' expectations.'* [59] Harman does acknowledge that reference to market values will provide a useful 'sense check' on the Benchmark Land Values that are being used in the appraisal model; however*, 'it is not recommended that these are used as the basis for input into a model.'*[60] It also acknowledges that for large greenfield sites, '*land owners are rarely forced or distressed sellers, and generally take a much longer term view over the merits or otherwise of disposing of their asset.'*[61] It refers to these 'prospective sellers' as *'potentially making a once in a lifetime decision over whether to sell an asset*

[54] MHCLG, 09 May 2019, PPG, Paragraph: 016 Reference ID: 10-016-20190509
[55] MHCLG, 24 July 2018, PPG, 3.21Paragraph: 010 Reference ID: 10-010-20180724
[56] RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England, paragraph 5.3.3
[57] Ibid, paragraph 5.3.7
[58] Local Housing Delivery Group Chaired by Sir John Harman, 20 June 2012, Viability Testing Local Plans, Advice for planning practitioners
[59] Ibid, page 29
[60] Ibid
[61] Ibid, page 30

that may have been in the family, trust or institution's ownership for many generations.'[62] In these circumstances, Harman states that for these greenfield sites that *'the uplift to current use value sought by the landowner will invariably be significantly higher than in an urban context and requires very careful consideration.'*[63]

- **HCA Area Wide Viability Model** - although now a dated document, the HCA Area Wide Viability Model (Annex 1 Transparent Viability Assumptions) provides guidance on the size of the premium. The guidance states that '*Benchmarks and evidence from planning appeals tend to be in a range of 10% to 30% above EUV in urban areas. For greenfield land, benchmarks tend to be in a range of 10 to 20 times agricultural value'.*[64]
- **Inspector's Post-Hearing Letter to North Essex Authorities** – the Inspector's letter is in relation to, amongst other things, the viability evidence of three proposed garden communities in North Essex. The three Garden Communities would provide up to 43,000 dwellings in total. The majority of land for the Garden Communities is in agricultural use, and the Inspector recognised that the EUV for this use would be around £10,000 per gross acre. In this case, the Inspector was of the opinion that around a x10 multiple (£100,000 per gross acre) would provide sufficient incentive for a landowner to sell. But given *'the necessarily substantial requirements of the Plan's policies'* a price '*below £100,000/acre could be capable of providing a competitive return to a willing landowner'.*[65] The Inspector, however, judged that '*it is extremely doubtful that, for the proposed GCs, a land price below £50,000/acre – half the figure that appears likely to reflect current market expectations – would provide a sufficient incentive to a landowner. The margin of viability is therefore likely to lie somewhere between a price of £50,000 and £100,000 per acre [gross].'*[66]
- **Parkhurst Road v SSCLG & LBI (2018)** - The High Court case between Parkhurst Road Limited (Claimant) and Secretary of State for Communities and Local Government and The Council of the London Borough of Islington (Defendant/s) addresses the issue of land valuation and the circularity of land values which are not appraised on a policy compliant basis. In this case it was common ground that the existing use was redundant and so the existing use value ("EUV") was "negligible". There was no alternative form of development which could generate a higher value for an alternative use ("AUV") than the development proposed by Parkhurst. The site did not suffer from abnormal constraints or costs. LBI contended that there was considerable "headroom" in the valuation of such a site enabling it to provide a substantial amount of affordable housing in accordance with policy requirements. Furthermore, that the achievement of that objective was being frustrated by

[62] Ibid
[63] Ibid
[64] HCA, August 2010, Area Wide Viability Model (Annex 1 Transparent Viability Assumptions)
[65] Planning Inspectorate,15 May 2020, Examination of the Shared Strategic Section 1 Plan - North Essex Authorities, Paragraph 204
[66] Ibid, Paragraph 205

Parkhurt's use of a 'greatly inflated' BLV for the site which failed properly to reflect those requirements. Mr Justice Holgate dismissed the challenge and agreed with LBI that what is to be regarded as comparable market evidence, or a "market norm", should "reflect policy requirements" in order to avoid the "circularity" problem.

- **Land Value Capture report (Sept 2018)** - The House of Commons - Housing, Communities and Local Government Committee has published a report into the principles of land values capture. This defines land value capture, the scope for capturing additional land value and the lessons learned from past attempts to capture uplifts in land value. It reviews improving existing mechanisms, potential legislative reforms and alternative approaches to land value capture. Paragraph 109 of the report states […] the extent to which the 'no-scheme' principle would reduce value "very much depends on the circumstances". For land in the middle of the countryside, which would not otherwise receive planning permission for housing, the entire development value could be attributed to the scheme. However, […] most work was undertaken within constrained urban areas—such as town extensions and redevelopments—where the hope value was much higher. Hence it is important to consider the policy context for infrastructure and investment when considering land values. For example, where existing agricultural land in the green belt is being considered for housing allocations, the entire uplift in value is attributable to the policy decision (without which there can be no development).
- **Land at Warburton Lane, Trafford (Appeal Ref: APP/Q4245/W/19/3243720)** - planning appeal for up to 400 dwellings, appeal dismissed. The Inspector preferred the Council's approach to land value. The Council used agricultural land value of £8,000 per acre. They applied a x10 premium to the net developable area of 33.75 acres and £8,000 per acre to the remainder of the site. The total benchmark land value of £2,900,000. The total site area is 62 acres (25 hectares). The benchmark land value equated to £116,000 per gross hectare (£46,945 per gross acre) / 5.87 multiplier on the agricultural land value of £8,000 per acre. In considering the premium the Inspector noted that, '*there is no evidence that I have seen that says the premium should be any particular value. The important point is that it should be sufficient to incentivise the landowner to sell the land and should also be the minimum incentive for such a sale to take place'*. It was relevant to note that, '*in this case one of the two landowners had agreed in the option agreement to sell the land for whatever is left after a standard residual assessment'* and therefore had accepted lower minimum / BLV requirements.

Brownfield / greenfield land economics

3.26 CIL has its roots in the perceived windfall profit arising from the release of greenfield land by the planning system to accommodate new residential sites and urban extensions[67]. However, lessons from previous attempts to tax betterment[68] show that this is particularly difficult to achieve effectively without stymieing development. It is even harder to apply the concept to brownfield redevelopment schemes with all attendant costs and risks. The difference between greenfield and brownfield scheme economics is usually important to understand for affordable housing targets; plan viability and CIL rate setting.

3.27 The timing of redevelopment and regeneration of brownfield land particularly is determined by the relationship between the value of the site in its current [low value] use ("Existing Use Value") and the value of the site in its redeveloped [higher value] use – less the costs of redevelopment. Any planning gain which impacts on these costs will have an effect on the timing of redevelopment. This is relevant to consider when setting the 'appropriate balance'.

3.28 Fundamentally, CIL (and together with S106 etc.) is a form of 'tax' on development as a contribution to infrastructure. By definition, any differential rate of CIL/S106 will have a distorting effect on the pattern of land uses. The question as to how this will distort the market will depend upon how the CIL (and/or S106) is applied.

3.29 Also, consideration must be given to the 'incidence' of the tax i.e. who ultimately is responsible for paying it i.e. the developer out of profit, or the landowner out of price (or a bit from each).

3.30 This is particularly relevant in the context of brownfield sites in the town centres and built up areas. Any CIL on brownfield redevelopment sites will impact on the timing and rate of redevelopment. This will have a direct effect on economic development, jobs and growth.

3.31 In the brownfield context redevelopment takes place at a point in time when buildings are economically obsolete (as opposed to physically obsolete). Over time the existing use value of buildings falls as the operating costs increase, depreciation kicks in and the rent falls by comparison with modern equivalent buildings. In contrast the value of the next best alternative use of the site increases over time due to development pressure in the urban context (assuming there is general economic growth in the economy). Physical obsolescence occurs when the decreasing existing use value crosses the rising alternative use value.

3.32 However, this is not the trigger for redevelopment. Redevelopment requires costs to be incurred on site demolition, clearance, remediation, and new build construction costs. These costs have

[67] See Barker Review (2004) and Housing Green Paper (2007)
[68] the 2007 Planning Gain Supplement, 1947 'Development Charge', 1967 'Betterment Levy' and the 1973 'Development Gains Tax' have all ended in repeal

to be deducted from the alternative use value 'curve'. The effect is to extend the time period to achieve the point where redevelopment is viable.

3.33 This is absolutely fundamental for the viability and redevelopment of brownfield sites. Any tariff, tax or obligation which increases the costs of redevelopment will depress the net alternative use value and simply extend the timescale to when the alternative use value exceeds the existing use value to precipitate redevelopment.

3.34 Contrast this with the situation for development on greenfield land. Greenfield sites are constrained by the planning designation. Once a site is 'released' for development there is significant step-up in development value – which makes the development economics much more accommodating than brownfield redevelopment. There is much more scope to capture development gain, without postponing the timing of development.

3.35 That said, there are some other important considerations to take into account when assessing the viability of greenfield sites. This is discussed in the Harman Report[69].

3.36 The existing use value may be only very modest for agricultural use and on the face of it the landowner stands to make a substantial windfall to residential land values. However, there will be a lower benchmark (Benchmark Land Value) where the land owner will simply not sell. This is particularly the case where a landowner *'is potentially making a once in a lifetime decision over whether to sell an asset that may have been in the family, trust or institution's ownership for many generations.'*[70] Accordingly, the 'windfall' over the existing use value will have to be a sufficient incentive to release the land and forgo the future investment returns.

3.37 Another very important consideration is the promotional cost of strategic greenfield sites. For example, in larger scale urban extension sites such as the Strategic Sites (e.g. Cambourne etc) identified as emerging site allocations, there will be significant investment in time and resources required to promote these sites through the development plan process. The benchmark land value therefore needs to take into account of the often-substantial planning promotion costs, option fees etc. and the return required by the promoters of such sites. *'This should be borne in mind when considering the [benchmark] land value adopted for large sites and, in turn, the risks to delivery of adopting too low a [benchmark] that does not adequately and reasonably reflect the economics of site promotion…'* [71]

3.38 This difference between the development 'gain' in the context of a greenfield windfall site and the slow-burn redevelopment of brownfield sites is absolutely fundamental to the success of any

[69] Local Housing Delivery Group, Local Government Association / Home Builders Federation / NHBC (20 June 2012) Viability Testing Local Plans, Advice for planning practitioners, Edition 1 (the 'Harman' report) pp 29-31
[70] Local Housing Delivery Group, Local Government Association / Home Builders Federation / NHBC (20 June 2012) Viability Testing Local Plans, Advice for planning practitioners, Edition 1 (the 'Harman' report) page 30
[71] Local Housing Delivery Group, Local Government Association / Home Builders Federation / NHBC (20 June 2012) Viability Testing Local Plans, Advice for planning practitioners, Edition 1 (the 'Harman' report) page 31

regime to capture development gain such as CIL. It is also key to the 'incidence' of the tax i.e. whether the developer or the land owner carries the burden of the tax.

3.39 In the case of Cambridgeshire there are a number of housing sites coming forward which are both greenfield and brownfield sites and therefore we have appraised both greenfield and brownfield scheme typologies.

Land economics summary

3.40 A very important aspect when considering area-wide viability is an appreciation of how the property market for development land works in practice.

3.41 Developers have to secure sites and premises in a competitive environment and therefore have to equal or exceed the landowners' aspirations as to value for the landowner to sell. From the developers' perspective, this price has to be agreed often many years before commencement of the development. The developer has to subsume all the risk of: ground conditions; obtaining planning permission; funding the development; finding a tenant/occupier; increases in constructions costs; and changes to the economy and market demand etc. This is a significant amount of work for the developer to manage; but this is the role of the developer and to do so the developer is entitled to a normal developer's profit.

3.42 The developer will appraise all of the above costs and risks to arrive at their view of the residual site value of a particular site.

3.43 To mitigate some of these risks developers and landowners often agree to share some of these risks by entering into arrangements such as: Market Value options based on a planning outcome; 'subject to planning' land purchases; promotion agreements; and / or overage agreements whereby the developer shares any 'super-profit' over the normal benchmark.

3.44 From the landowners' perspective, they will have a preconceived concept of the value or worth of their site. This could be fairly straight-forward to value, for example, in the case of greenfield agricultural land which is subject to per hectare benchmarks. However, in the case of brownfield sites, the existing use value could be a lot more subjective depending upon: the previous use of the property; the condition of the premises; contamination; and/or any income from temporary lets, car parking and advertising hoardings etc. Also, whilst (say) a former manufacturing building could have been state-of-the-art when it was first purchased by the landowner, in a redevelopment context it might now be the subject of depreciation and obsolescence which the landowner finds difficult to reconcile. Accordingly, the existing use value is much more subjective in a brownfield context.

Hope Value

3.45 Furthermore, where there is a possibility of development the landowner will often have regard to 'hope value'. Hope value is the *element of* market value of a property in excess of the existing use value, reflecting the prospect of some more valuable future use or development. It takes account of the uncertain nature or extent of such prospects, including the time which would elapse before one could expect planning permission to be obtained or any relevant constraints overcome, so as to enable the more valuable use to be implemented. Therefore, in a rising market, landowners may often have high aspirations of value beyond that which the developer can justify in terms of risk and in a falling market the land owner my simply 'do nothing' and not sell in the prospect of a better market returning in the future. The actual amount paid in any particular transaction is the purchase price and this crystallises the value for the landowner.

3.46 Note that hope value is represented in the EUV premium and can never be in excess of policy compliant market value (RLV), given RICS guidance on the valuation of development sites.

3.47 Hence land 'value' and 'price' are two very different concepts which need to be understood fully when formulating planning policy and CIL. The incidence of any S106 tariff or CIL to a certain extent depends on this relationship and the individual circumstances. For example, a farmer with a long-term greenfield site might have limited 'value' aspirations for agricultural land – but huge 'price' aspirations for residential development. Whereas an existing factory owner has a much higher value in terms of sunk costs and investment into the existing use and the tipping point between this and redevelopment is much more marginal.

3.48 Current guidance is clear that the land value assessment needs to be based on Existing Use plus premium and not a Market Value approach. Although the assessment of the Existing Use can be informed by comparable evidence the uncertainty lies in how the premium is calculated. Whatever is the resulting land value (i.e. Existing Use plus Premium) the PPG is clear that this must reflect the cost of complying with policies: '*the total cost of all relevant policy requirements including contributions towards affordable housing and infrastructure, Community Infrastructure Levy charges, and any other relevant policies or standards. These costs should be taken into account when defining benchmark land value.*'[72]

How to interpret the viability appraisals

3.49 We have undertaken viability testing using a bespoke Microsoft Excel model. The model calculates the viability surplus/deficiency for each scenario with results displayed in a series of tables.

3.50 The accompany sensitivity tables (see example in Table 3-1) work on the basis that the variables run through the appraisals to generate multiple results of surplus/deficient against the given

[72] MHCLG, 24 July 2018, PPG, Paragraph: 012 Reference ID: 10-012-20180724

variables. The example in Table 3-1 assumes a baseline position of 30% affordable housing and £0 per unit S106 - this produces a surplus of £2.25 million. This same surplus is circled in the sensitivity results table because they represent the same assumption in the appraisal. We can see through the sensitivity testing that should S106 increase to £10,000 per unit (as an appraisal input) the deficit decreases to £1,448,749.

Table 3-1 Example of development appraisal sensitivity tables

BALANCE								
Surplus/(Deficit)			**902,304** £ per ha		**365,158** £ per acre			**2,255,761**
SENSITIVITY ANALYSIS								
					AH - % on site 30%			
Balance (RLV - TLV)	2,255,761	20%	25%	30%	35%	40%	45%	50%
	-	2,886,241	2,571,001	2,255,761	1,940,521	1,625,281	1,310,042	994,802
	2,500	2,684,488	2,369,248	2,054,008	1,738,768	1,423,528	1,108,289	793,049
	5,000	2,482,735	2,167,495	1,852,255	1,537,015	1,221,776	906,536	591,296
	7,500	2,280,982	1,965,742	1,650,502	1,335,262	1,020,023	704,783	389,543
	10,000	2,079,229	1,763,989	1,448,749	1,133,510	818,270	503,030	187,790
Site Specific S106	13,000	1,837,125	1,521,886	1,206,646	891,406	576,166	260,927	(54,313)
0	15,000	1,675,723	1,360,483	1,045,244	730,004	414,764	99,524	(215,716)
	17,500	1,473,970	1,158,730	843,491	528,251	213,011	(102,229)	(417,468)
	20,000	1,272,217	956,978	641,738	326,498	11,258	(303,982)	(619,221)
	22,500	1,070,464	755,225	439,985	124,745	(190,495)	(505,735)	(820,974)
	25,000	868,712	553,472	238,232	(77,008)	(392,248)	(707,487)	(1,022,727)
	27,500	666,959	351,719	36,479	(278,761)	(594,001)	(909,240)	(1,224,480)
	30,000	465,206	149,966	(165,274)	(480,514)	(795,753)	(1,110,993)	(1,426,233)
	32,500	263,453	(51,787)	(367,027)	(682,267)	(997,506)	(1,312,746)	(1,627,986)
	35,000	61,700	(253,540)	(568,780)	(884,019)	(1,199,259)	(1,514,499)	(1,829,739)
	37,500	(140,053)	(455,293)	(770,533)	(1,085,772)	(1,401,012)	(1,716,252)	(2,031,492)
	40,000	(341,806)	(657,046)	(972,285)	(1,287,525)	(1,602,765)	(1,918,005)	(2,233,245)
	42,500	(543,559)	(858,799)	(1,174,038)	(1,489,278)	(1,804,518)	(2,119,758)	(2,434,997)
	45,000	(745,312)	(1,060,551)	(1,375,791)	(1,691,031)	(2,006,271)	(2,321,511)	(2,636,750)
	47,500	(947,065)	(1,262,304)	(1,577,544)	(1,892,784)	(2,208,024)	(2,523,264)	(2,838,503)
	50,000	(1,148,817)	(1,464,057)	(1,779,297)	(2,094,537)	(2,409,777)	(2,725,016)	(3,040,256)

Source: AspinallVerdi, December 2020

Stakeholder engagement

3.51 This report is a follow up to the high-level strategic options assessment undertaken last year (November 2020). In this respect, we have not undertaken any further stakeholder engagement at this time, other than as described in 3.53.

3.52 Stakeholder engagement, including a consultation workshop, will be undertaken at the next stage of our work, particularly leading up to the draft Local Plan stage.

Strategic site engagement

3.53 At this time, stakeholder engagement has been limited to the North East Cambridge AAP, where the plan making process is at a more advanced stage. Further details of the Cambridge East Airport strategic site will be developed for the draft plan, and it is acknowledged that Cambourne is identified as a broad location in the policy proposals rather than providing a specific site.

4 Local Policy Context

4.1 This section sets out the local policy context for our viability assessment.

4.2 Cambridge City Council and South Cambridgeshire District Councils both adopted Local Plans in 2018. These plan to deliver at least 33,500 homes between 2011 and 2031. They were informed by an infrastructure delivery plan and viability assessment. This includes major developments on the edge of Cambridge, and new settlements at Northstowe, Waterbeach and Bourn Airfield. Whilst both Councils considered adopting a CIL this was not taken forward, and developer funding for infrastructure has been secured via section 106.

4.3 Both Councils plans currently seek a minimum of 40% affordable housing on qualifying sites subject to viability.

Adjacent authority policies

4.4 The property market for development is a continuum across boundaries within Cambridgeshire and beyond. It is therefore relevant to consider the Affordable Housing targets and CIL requirements in surrounding authorities/districts. That said, every local jurisdiction has unique economic circumstances and geography which could result in different FVA evidence. For example, Cambridge is the centre of the City Region and is a core city and Greater Cambridge is a more rural area which is also part of the Cambridge functional economic area.

4.5 Table 4-1 summarises the approach taken in adjacent authorities to affordable housing policy.

Table 4-1 - Adjacent Authorities Policies

Authority	Affordable Housing Policy	Residential CIL £ psm	Retail and Commercial CIL £ psm
Huntingdonshire (adopted 2019, CIL rates relate to 2020)	40%	£127.31	All A Class uses 500 sq m or less £59.91 All A Class uses >500 sq m £149.78 All Class C1 uses £89.87 All Class C2 £67.40 Health (D1) £97.35 All other uses - £0
Uttlesford (Local Plan withdrawn from examination in 2020)	40%	N/a	N/a
East Cambridgeshire	30% – 40%	£40 - £90	Retail & sui-generis akin to retail £120 All other uses £0
Fenland	20% - 35%	N/A	N/A

Source: AspinallVerdi, 2021

4.6 The above table demonstrates that overall, there are a wide variety of requirements, with some authorities requiring just 20% affordable housing in lower value areas up to a maximum of a 40% requirement in higher value zones. Even within districts, affordable housing policies usually contain a wide range, for example Fenland ranges from a 20% - 35% affordable housing requirement.

Greater Cambridge Local Plan First Proposals 2021

4.7 The Greater Cambridge Local Plan is intended to replace the Council's current local plans:

- South Cambridgeshire Local Plan (2018)
- Cambridge Local Plan (2018)

4.8 The Greater Cambridge Local Plan will cover the period to 2041. Having consulted on issues and options in 2020, the Councils have now developed preferred options for the plan, and are carrying out a 'First Proposals' consultation in late 2021. This remains part of the regulation 18 stages of plan making, and it is intended to carry out further consultation on a draft Local Plan in 2022, also still at the regulation 18 stage.

4.9 The First Proposals identify the preferred level of development and sites that would allocate to respond to that need. It also identifies a series of policy approaches, seeking to consult before preparing the draft Local Plan. We have reviewed the proposals identified in the First Proposals to explore their viability implications, acknowledging that further work will be required as the draft plan is developed and refined.

Emerging Policies

4.10 We have been provided with a schedule of proposed policies that form part of the First Proposals by the Greater Cambridge Shared Planning Service.

4.11 The policies matrix identifies the policy proposals which have a direct, indirect or no impact on viability. Where necessary, it sets out the assumption we have made to mitigate the policy and identifies the source of this assumption. A full detailed policies matrix has been prepared and is provided in Appendix 1.

4.12 Those key draft policies that have a direct impact on viability are summarised in the tables below. Table 4.2 lists those policies where we have included a specific, bespoke cost within our appraisals to account for their impact. These are the policies that will be the focus of our recommendations later in this report.

4.13 Table 4.3 lists those policies which whilst they do have an impact on cost, we have not included a bespoke cost within the appraisal, for instance, in the selection of development typologies, or where costs would form part of the standard assessment of professional fees.

4.14 A number of these policies have been added or amended since the November 2020 report. As such, the outputs of our viability testing have evolved to reflect these additional costs, and as a result, the surpluses previously identified will likely reduce as the policy costs are layered into our testing.

4.15 In the event that any of the policies in Table 4.3 later have an identified cost attributed to them, e.g. as a S106 contribution, this could come out of the surplus (if any).

Table 4-2 - Key Policy Proposals Directly Impacting on Viability

Policy	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
CC/NZ1: Net zero carbon new buildings	Direct	For the purposes of our plan viability assessment, the net zero carbon cost has been explicitly included in our appraisals. This has been informed by the Greater Cambridge Net Zero Carbon Study (Bioregional, Etude, Currie & Brown, 2021). We have included the below costs in our assessment. These costs are that which is required over and above the baseline cost of properties built by a medium-sized developer, building several hundred homes per year. These costs allow for installation of a heat pump, mechanical ventilation with heat recovery (MVHR) and photovoltaics (full breakdown included in tables 7 – 10) Semi-detached house: £12,880 (10% increase on cost) Mid-terrace: £13,985 (13% increase on cost) Flats: £7,568 – based on 40 flats (5% increase on cost)
CC/WE: Water efficiency in new developments	Direct	Code Level 3 and 4 (105l) are already included in our testing. An extra over cost has been included for additional water standards costs with reference to Code for Sustainable Homes levels 5 and 6 (Housing Standards Review Cost Impacts report, DCLG 2014). Baseline allowance of £9 per unit to Code levels 3 & 4, and £2,697 to achieve Code levels 5 & 6 based on Department of Communities and Local Government Housing Standards Review Cost Impact, September 2014 by EC Harris. We have index linked this by 2% per annum and applied a combined £3,109 per dwelling.
BG/BG: Biodiversity and geodiversity	Direct	For the purposes of our viability assessment, we have assumed that the relevant cost of professional reports (e.g. Biodiversity Action Plans (BAPs) and / or Geodiversity Action Plans (GAPs) and mitigation strategies etc.) is included in the professional fee budget. We have assumed that the cost of relevant mitigation is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost and the net-biodiversity gain costs etc; Where there are particularly nature conservation issues that arise from particularly sensitive development sites, that this is

		known to the developer as part of their site due diligence, the costs of mitigation should be factored into the price paid for the land. Costs associated with these requirements are included within our use of appropriate local construction cost benchmarks and external works cost benchmarks which developers will take into consideration biodiversity requirements (which developers have been delivering). Note that in the future the government is committed to mandating biodiversity net gain on sites. It is anticipated the Environment Bill will be ratified in 2021, with the requirements to be implemented in 2023. For the purposes of our plan viability assessment, the biodiversity net gain/habitats charge has been explicitly included in our appraisals. We have included a Net gain delivery cost of £1,211 per housing unit for greenfield development and £289 per housing unit for brownfield development. This is based upon the East regional cost (central estimate) in the Net gain delivery cost tables (Tables 16 and 17) from the DEFRA Biodiversity net gain and local nature recovery strategies Impact Assessment 15/10/2019, inclusive of an increase in cost to achieve 20% net gain.
GP/GB: Protecting and enhancing the Cambridge Green Belt	Direct	Green Belt land is currently constrained by the green belt policy. They, therefore, have a very low Existing Use Value (EUV) as agricultural land etc. Where green belt sites are released for development there is a significant uplift in land value for the proposed use (e.g. residential development). The loss mitigation is to be paid for out of this land value uplift. In this respect, we have included £1,000 per unit S106 cost for Green Belt Loss Mitigation. We have also explicitly taken into consideration: • the net to gross site area of the site to include a large landscaping buffer (the land cost of which is included in the land value assumptions/calculations) • external works costs to include walking and cycling routes, planning, SuDs etc
H/AH: Affordable Housing	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals. Note that in accordance with the PPG, policy requirements, particularly for affordable housing, should be set at a level that takes account of affordable housing and infrastructure needs and allows for the planned types of sites and development to be deliverable, without the need for further viability assessment at the decision-making stage. (Paragraph: 002 Reference ID: 10-002-20190509, Revision date: 09 05 2019). In carrying out our appraisals, we have assumed the following tenure(s):

		• 25% First Homes (with a 30% discount compared to the open market value) • 15% shared ownership • 10% social rent • 50% affordable rent (rents are set at 60% of market rents in Cambridge and 70% of market rents in South Cambs).
H/SS: Residential Space Standards and accessible homes	Direct	This policy sets out design principles that new development should follow in order to ensure that housing standards are maintained. We have developed our scheme typologies (see Typologies Matrix) having regard to the house sizes that have been developed and sold recently (see the Residential Market Paper). We have applied the Nationally Described Space Standard (NDSS) within our appraisals as the minimum standard. This policy also ensures there is an adequate supply for housing for an aging population and for people with disabilities. M4(2) Category 2 - Accessible and adaptable dwellings – are dwellings that provide a higher level of accessibility that is beneficial to a wide range of people who occupy or visit the dwelling, and provides particular benefit to older and disabled people, including some wheelchair users. M4(3) Category 3 - Wheelchair user dwellings – are dwellings that are suitable, or potentially suitable through adaptation, to be occupied by wheelchair users. This has a cost implication for development. In addition to the baseline BCIS construction cost we have made extra-over allowance for these optional Building Regulations requirements to demonstrate that this is achievable: + £586 per unit for accessible and adaptable housing M4(2) Category 2 + £11,386 per unit for wheelchair adaptable dwellings M4(3) Category 3. This is based on the DCLG housing Standards Review, Final Implementation Impact Assessment, March 2015, paragraphs 153 and 157, which we have increased by 2% per annum.
I/EV: Parking and Electric Vehicles	Direct	For the purposes of our viability assessment, we have included £1,000 per unit for EV charging (and £2,500 for a multi-charging point for every 4 x flats). These costs are based on research and commentary undertaken by Bioregional and Currie and Brown. For the purpose of viability, we have assumed that parking for cars and cycling is included within the externals allowance we have included.
I/EI: Energy Infrastructure Masterplanning	Direct	This policy has a direct impact on the development costs. As the IDP documents do not contain any specific infrastructure costs, we have made assumptions on the level of infrastructure required – please refer to I/ID.

I/ID: Infrastructure and Delivery	Direct	This policy has a direct impact on the development costs. As the IDP documents do not contain any specific infrastructure costs, and this is a high level assessment at this stage, we have made assumptions on the level of infrastructure that would be required, based on the typologies as follows: Urban A & C (AAP): £30,000 per dwelling Cambridge East: £30,000 per dwelling Cambourne: £30,000 per dwelling Urban B: £0 Edge of Cambridge (greenfield): £20,000 per dwelling Edge of Cambridge (brownfield): £15,000 per dwelling New settlement: £30,000 per dwelling Dispersal villages: £10,000 per dwelling More detailed work will be undertaken at the draft plan stage.

Source: AspinallVerdi, 2021

Table 4-3 - Key Policies Directly Impacting on Viability

Policy	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
CC/DC: Designing for a changing climate	Direct	All developers need to address managing heat risk for their buildings to be marketable. We assume that the heat mitigation can be built into the design at no additional cost.
CC/FM: Flooding and integrated water management	Direct	For the purposes of our viability assessment, we have assumed that the cost of professional fees for the relevant Flood Risk Assessments and Drainage Strategy reports etc. are included within our overall professional fee budget. This policy is to ensure the appropriate management and treatment of surface and foul water disposal to reduce the flood risk in the Plan area. It states that development proposals should include the use of sustainable drainage systems. There are associated costs with this policy and therefore it has a direct impact on viability. It is important to stress that developers should consider drainage solutions at the outset of their scheme design and factor in the costs when acquiring sites. These are not new and unknown costs. The cost of foul and surface water drainage and SUDs etc. is included in the cost of the external works within our appraisals. Where there are sites with abnormal costs associated with flood mitigation (e.g. sites in Flood Zone 2 or 3), these costs should be deducted from the price of the land. I.e. one cannot pay the same price for land which is not subject to flooding, compared to land which is constrained by flooding.
BG/GI: Green infrastructure	Direct	This policy is to promote health, wellbeing and equality by safeguarding and improving open space. The policy outlines the need for a contribution from new residential development

		towards the provision of open space. This is taken into consideration within our viability assessment through: • the net-to-gross developable area assumptions as part of the BLV calculations; • the density assumption (dph) which is to allow for the relevant open space; • External works costs which allow for relevant open space costs; • any specific S106 contributions sought by the LPA.
BG/TC: Improving Tree Canopy Cover and the Tree Population	Direct	For the purposes of our viability assessment, we have assumed that the relevant cost of professional fees (accredited arboriculturist) is included in the professional fee budget. We have assumed that the cost of relevant tree and hedgerow planting etc. is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost and the net-biodiversity gain costs include for the relevant landscaping and tree planting etc. Where there are particularly mature trees (TPOs etc.) and hedgerow to be protected, that this is known to the developer as part of their site due diligence and the costs of mitigation is factored into the price paid for the land. I.e. one cannot pay the same price for land which is cleared as a developer platform, compared to land which is constrained by mature trees and hedgerows.
BGRC: River Corridors	Direct	For the purposes of our viability assessment, we have assumed that the relevant cost of professional reports is included in the professional fee budget. We have assumed that the cost of relevant mitigation is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost. Where there are particularly nature conservation issues that arise from particularly sensitive development sites, that this is known to the developer as part of their site due diligence, the costs of mitigation should be factored into the price paid for the land.
BG/EO: Providing and enhancing open spaces	Direct	This policy is to promote health, wellbeing and equality by safeguarding and improving open space. The policy outlines the need for a contribution from new residential development towards the provision of open space. This is taken into consideration within our viability assessment through: • the net-to-gross developable area assumptions as part of the BLV calculations; • the density assumption (dph) which is to allow for the relevant open space; • External works costs which allow for relevant open space costs;

		• Site specific S106 contributions – where available (see Typologies Matrix). Our scheme Typologies Matrix and viability appraisals are also able to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
WS/HD: Creating healthy new developments	Direct	For the purposes of our viability assessment, we have assumed that the relevant cost of professional fees for the Health Impact Assessment is included in the professional fee budget.
WSCF: Community, Sports, and Leisure Facilities	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
WS/HS: Pollution, health and safety	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the Contaminated Land Reports etc is included in the professional fee budget.
GP/PP1: Place/context sensitive design (responding to context / place first approach)	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the Design and Access Statement is included in the professional fee budget.
GP/LC: Protection and enhancement of landscape character	Direct	This policy is an over-arching policy which links other more detailed policies described herein/above. For the purposes of our viability assessment, we have assumed that the relevant cost of professional designers etc. to achieve high-quality design is included in the professional fee budget. It is in developers own interests to achieve high-quality, well-placed design as this adds value (as is demonstrated by the Building Better, Building Beautiful Commission report (January 2020)). Well-designed place should therefore add to value and make development more viable.
GP/QD: Creating high quality development	Direct	This policy sets out design principles that new development should follow to ensure Greater Cambridge's different characteristics and qualities are maintained and enhanced. There is therefore a direct impact on the construction cost. Notwithstanding this, the minimum design standard is the Building Regulations and therefore the cost of compliance is reflected in the BCIS costs that we have used within our appraisals. Note also that good design leads to high quality environments which are reflected in the value of real estate. We have used current values (and costs) within our appraisals. For the purposes of our viability assessment we have assumed that the relevant cost of professional designers etc. to achieve high-quality design is included in the professional fee budget.

GP/QP: Achieving high quality landscape and public realm	Direct	The cost of public realm assets is included in the cost of the external works within our appraisals.
GP/HA: Conservation and Enhancement of Heritage Assets	Direct	This policy has a direct impact on our viability assessment given that there is a cost associated with these policy requirements from developments in conservation areas and other historic environment assets. We have used current costs based on the BCIS and rebased them to the Cambridge & South Cambridge areas which take into consideration costs of 'typical' development across the Greater Cambridge authorities. We acknowledge that construction costs are likely to be higher within designated heritage environments, but values are also likely to be higher. Furthermore, developments involving heritage assets are likely to require a bespoke approach to viability e.g. enabling development and/or grants. For the purposes of our viability assessment, we have assumed that the relevant cost of professional fees for the required heritage statement(s) is included in the professional fee budget.
GP/CC: Adapting Heritage Assets to Climate Change	Direct	As above.
J/NE: New Employment Development Proposals	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/AL: Protecting the Best Agricultural land	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/AW: Affordable Workspace and creative industries	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
J/EP: Supporting a range of facilities in employment parks	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/RC: Retail and Centres	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/VA: Visitor Accommodation, Attractions and Facilities	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/FD: Faculty Development and Specialist/Language Schools	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.

H/ES: Exception Sites for Affordable Housing	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
H/HM: Housing Mix	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/HD: Housing Density	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/SH: Specialist Housing and homes for Older People	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/BR: Build to Rent Homes	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/SA: Student Accommodation	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/DC: Dwellings in the Countryside	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
I/ST: Sustainable Transport and Connectivity	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the required transport documents is included in the professional fee budget.
I/DI: Digital infrastructure	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the required connectivity documents is included in the professional fee budget. For the purpose of viability, we have assumed that the broadband infrastructure/street furniture is included within the externals allowance we have included.

Source: AspinallVerdi, 2021

5 Developing viability scenarios

5.1 We now set out the scenarios to use in our viability testing. As we have explained in chapter 3 it is not necessary to test every proposed development in the plan, but a typology approach is acceptable.

5.2 The RICS explains that *'[d]evelopment typologies should be representative of the development that is planned and reflect the characteristics of groups of sites identified in the proposed land supply. These typologies will be a combination of site typologies (e.g. greenfield or brownfield) and scheme typologies (e.g. houses or flats for sale or build to rent, other specialist housing, and commercial or mixed-use schemes).'*[73]

Residential typologies / value zones

5.3 Generic residential typologies are developed through the following analysis:

- Different sales values based on the detailed analysis undertaken in the Residential Property Market Report in Appendix 3. This is to establish whether the testing can be varied by sales values/market areas. The RICS explains *'Since value is often highly location-dependent, assessors should identify the high- and low-value locations within a plan area. Areawide assessments should test typologies in different value bands to reflect value variations within an LPA area based on the available evidence. Failure to do this could have a serious impact on the delivery of government policy to decrease the dependence on viability appraisals at the decision-taking stage of the planning process.'*[74]
- The pattern of proposed development referenced back to the analysis of sales values to assess whether sites are coming forward in 'single area of value' or multiple areas of value – this is to support, or otherwise, to vary the testing by sale values.
- Pattern of proposed development – greenfield/brownfield, number of units and development density cross-referenced with values – this is to support varying the testing by land use type, size and density – all of which change the development economics.
- Dwelling types and mix – here we consider the area's need for market and affordable tenures and the type of housing (e.g. 1, 2, 3, 4-bed plus units).

5.4 Although we have set out the analysis in stages, in reality, there have been multiple iterations across all the stages to establish the final typologies used in the testing. In establishing the typologies, we have also been mindful that they represent the '*majority of the unconsented land*

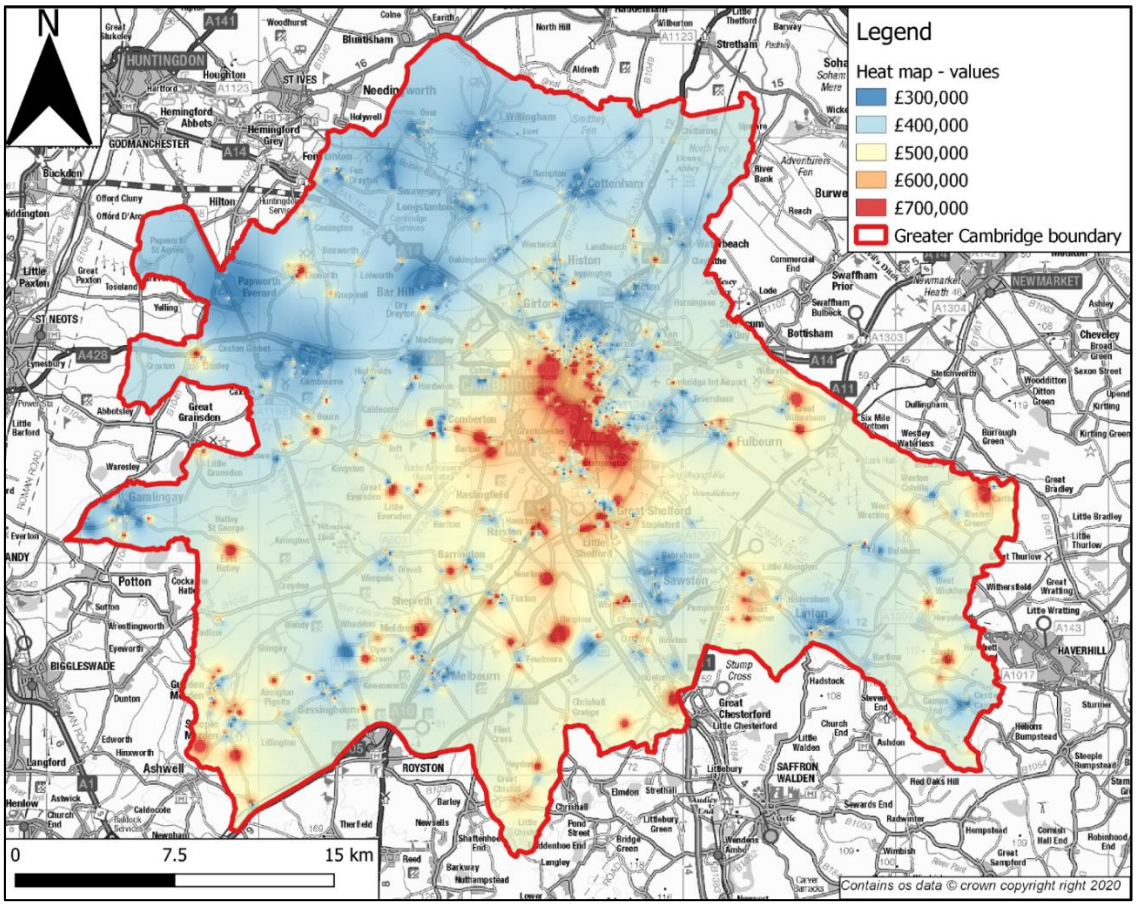
[73]RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England, paragraph 3.3.6
[74] Ibid, paragraph 4.2.8

supply that is likely to come forward for development during the policy period under consideration.'[75]

Establishing the value zones

5.5 To establish the zones to use in the testing we have analysed values across the GCSP area. Our detailed analysis of the residential market is set out in Chapter 2 of the Property Market Report in Appendix 3. This was initially undertaken in 2020, and we have undertaken a further review as part of this update. As illustrated in the heatmap in Figure 5-1 and supported by the detailed analysis in the Property Market Report, there is some price variation across the GCSP area on a price per unit basis. The lowest value areas identified in our analysis shown in Figure 5-1 are in north Cambridgeshire, with the highest values in certain parts of Cambridge City.

Figure 5-1 Value Heatmap

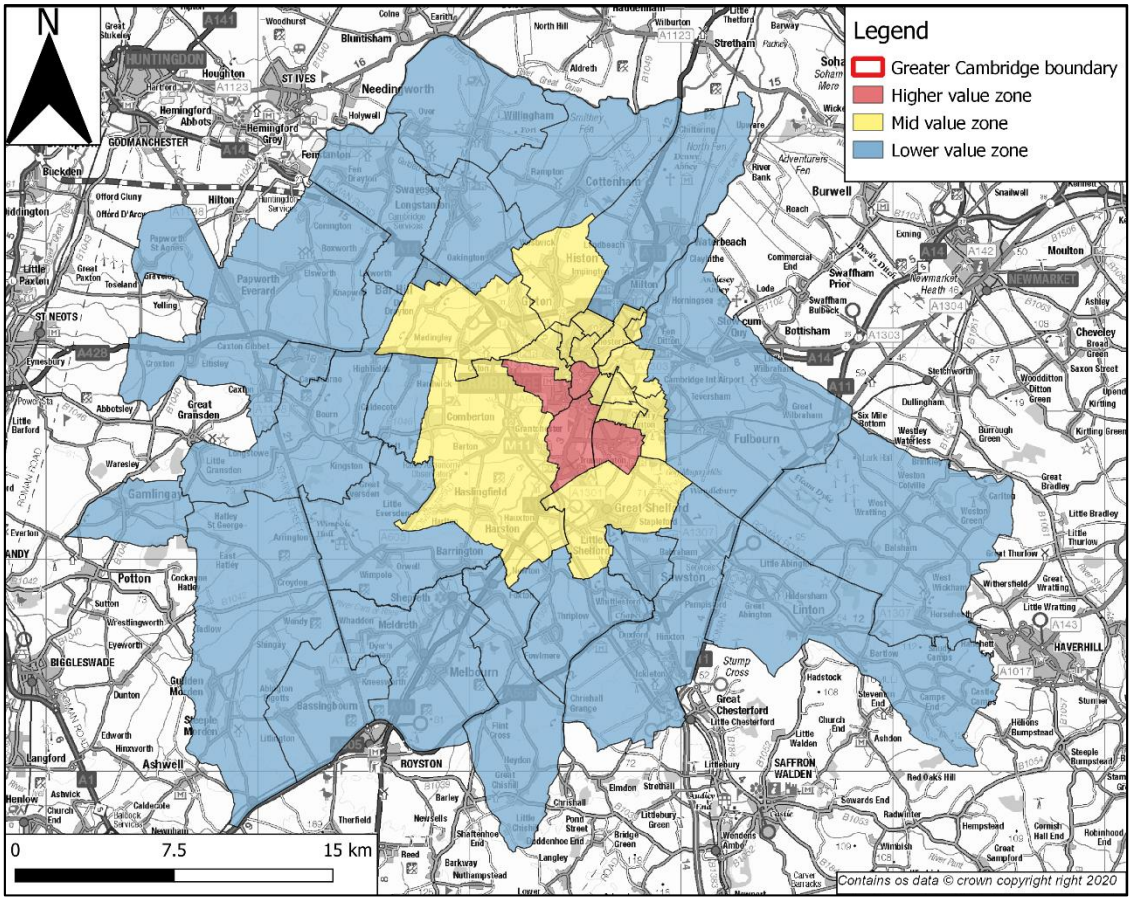


Source: AspinallVerdi Figure 2-3, Residential Property Market Report in Appendix 3 (Aug 2021)

[75] Harman, June 2012, Viability Testing of Local Plans: Advice for planning practitioners, page 42

5.6 As we established in our Market Report in Appendix 3, based on the evidence of sale values there is justification to vary the viability testing across three value zones – see Figure 5-2.

Figure 5-2 Value zones used in viability testing



Source: AspinallVerdi, Residential Property Market Report in Appendix 3 (Aug 2021)

5.7 In establishing the value zones in Figure 5-2, ward boundaries have been used, as not only do they provide a clear definable boundary they represent the 'best fit' for the variation in property prices.

5.8 The lower value zones comprise those wards to the periphery of Cambridgeshire; the mid value zone is around the edge of Cambridge; and the higher value zone is the core of Cambridge City. The electoral wards for each value area are set out in Figure 5-2.

Table 5-1 Value zone by electoral ward

Value zone	Wards
Higher value area	Trumpington; Newnham; Queen Edith's; Market
Mid Value zone	Harston & Comberton; Girton; Shelford; Histon & Impington; Milton & Waterbeach; Castle; East Chesterton; Arbury; West Chesterton;

Value zone	Wards
	King's Hedges; Coleridge; Cherry Hinton; Abbey; Petersfield; Romsey
Lower value area	Caxton & Papworth; Balsham; The Mordens; Bassingbourn; Gamlingay; Caldecote; Melbourn; Barrington; Foxton; Whittlesford; Duxford; Linton; Over & Willingham; Milton & Waterbeach; Cottenham; Fen Ditton & Fulbourn; Sawston; Hardwick; Swavesey; Longstanton; Cambourne; Bar Hill

Source: AspinallVerdi (2020)

5.9 The values adopted in each of these zones are set out in Table 5-2 – details of how these values are derived are set out in Chapter 2 of the Property Market Report in Appendix 3.

Table 5-2 Proposed sale values in viability testing

Typology	Unit Size sqm	Unit Price	£psm
Higher value zone			
Studio	40	£280,000	£7,000
1 bed flat	50	£330,000	£6,600
2 bed flat	75	£455,000	£6,067
3 bed flat	86	£500,000	£5,814
Mid value zone			
Studio	40	£265,000	£6,625
1 bed flat	50	£300,000	£6,000
2 bed flat	70	£365,000	£5,214
3 bed flat	86	£410,000	£4,767
4 bed flat	99	£450,000	£4,545
2 bed house	75	£400,000	£5,333
3 bed house	97	£500,000	£5,155
4 bed house	150	£670,000	£4,467
Lower value zone			

Typology	Unit Size sqm	Unit Price	£psm
2 bed house	75	£350,000	£4,667
3 bed house	97	£425,000	£4,381
4 bed house	150	£550,000	£3,667

Source: AspinallVerdi, Residential Property Market Report in Appendix 3 (August 2021)

5.10 The proposed unit sizes used in Table 5-2 are within the range of the minimum recommended space standards (see Figure 5-3). Therefore, they are considered reasonable and robust as they reflect both the aims of the draft plan in providing a range of type of housing and what the market will deliver.

Figure 5-3 New build residential minimum space standards

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) *			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0
	8p	125	132	138	

*Where a 1b1p has a shower room instead of a bathroom, the floor area may be reduced from 39m2 to 37m2, as shown bracketed.
Source: MHCLG, Technical housing standards – nationally described space standard, March 2015

5.11 The above unit sizes are based upon current design standards and applied to the relevant typology unit mix. One of the impacts of the Covid-19 pandemic has been demand for larger homes with more space (e.g. to accommodate working from home (WFH)). At present this is manifest in purchasers buying larger homes, for example a 3-bed house rather than a 2-bed house in order to accommodate a study room. We have not seen, to date, a wholesale fundamental redesign of house types to incorporate dedicated working-from-home space. Our unit sizes and values are therefore appropriate at the date of this report.

5.12 For flatted schemes, we have made the following assumption, based on the text contained in the North East Cambridge AAP: Ensure that a minimum of 5 m2 of private outdoor space is provided for a 1-2 person (bedspace) dwelling and an extra 1 m2 is provided for each additional person (bedspace). This can be provided as private balconies or shared private communal outdoor space, which can be rooftop or podium garden space (having regard to *Policy 7: Legible streets and spaces* in relation to landscaping and trees). The minimum depth and width of all balconies and other private external spaces must be 1500mm to ensure adequate circulation space. Private outdoor space must have adequate outlook, orientation and privacy and be of practical shape

and utility. In respect of flats, our Plan-level data is not specific enough to establish the additional costs and values of providing balconies and/or roof-terraces. Anecdotal evidence would suggest that these types of private amenity spaces will be sought-after by purchasers and this will be reflected in the rate of sales and/or price of units. Therefore again, this policy is not overly onerous as developers will respond to the market with relevant products/typologies. Future trends and changes should be monitored to incorporate into future reviews.

Residential typologies

5.13 The residential typologies that we have devised are set out in Table 5-3. These were developed to inform consideration of the choices available to the plan, and were used in the viability report accompanying the strategic options testing published in November 2020. This report is available to view on the Greater Cambridge shared planning website. The residential typologies have been informed by our professional judgement based on comparable developments. These typologies were issued to the GCSP for review and agreed before our testing. The typologies are also compliant with technical and minimum space standards.[76] And though certain elements like density have been inputted as a starting point we have used sensitivity testing to vary these.

5.14 The large scenarios i.e. Edge of Cambridge A and B, D and E; New Settlement A and B; have had dwelling numbers determined by how many units can be delivered over the plan period, again based on the work carried out in November 2020. The overall sizes of the developments of a number of these sites would be larger, with more units delivered after the plan period. The strategic nature of the assessment means testing the whole site (i.e. the elements beyond the plan period) will not provide any meaningful analysis. In the assessment, *values and costs are assessed on either a £ psm, per unit or £ per hectare and results displayed on £ per unit basis.* Therefore, increasing the site area to yield more units will generate the same results. Meaningful analysis of increasing the number of units will start to occur once the site testing evolves e.g. once infrastructure costs become "lump sums" and these costs can then be spread across the number of units.

Strategic-site testing

5.15 Following up the work we completed in November 2020, we were asked to update the testing to reflect the policy approaches in the First Proposals and the emerging draft local plan policies.

5.16 There are three 'Strategic' large sites which we have been asked to assess in particular. Given that specific site proposals are still being developed at this stage, we have proceeded on the basis that they will fall into one of the generic typologies. The closest typologies are as follows:

[76] Department for Communities and Local Government (now The Ministry of Housing, Communities and Local Government's, March 2015, Technical housing standards – nationally described space standard

- North East Cambridge – based on Urban A typology;
- Cambourne – based on the New Settlement B typology;
- Cambridge Airport – based on the Edge of Cambridge greenfield typology.

5.17 For simplicity purposes, we have outlined these typologies in Table 5-3 as well as our generic typologies. Given that there are considerable 'unknowns' for both the Cambridge East Airport and Cambourne sites, we have assumed a 1,000 unit typology that would be typical of development in this area. Until more information is available, we have modelled an assessment with high level cost input for infrastructure on a £ per unit basis.

Table 5-3 Residential typologies

Appraisal Ref.	Appraisal Description	Housing Capacity (# units)	Market Area / Value Zone	Greenfield / Brownfield	Gross Site Area (ha)	Net to Gross ratio (%)	Net Developable Site Area (ha)	Development Density (net)
A	Urban A	700	Mid	Brownfield	13.33	70%	9.33	75.0
B	Urban B	50	Higher	Brownfield	0.35	90%	0.33	158.7
C	Urban C	700	Mid	Brownfield	3.11	75%	2.33	300.1
D	Edge of Cambridge A	3,870	Mid	Greenfield	193.50	50%	96.75	40.0
E	Edge of Cambridge B	1,935	Mid	Greenfield	96.75	50%	48.38	40.0
F	Edge of Cambridge C	500	Mid	Greenfield	17.86	70%	12.50	40.0
G	Edge of Cambridge D	3,870	Mid	Brownfield	193.50	50%	96.75	40.0
H	Edge of Cambridge E	1,935	Mid	Brownfield	96.75	50%	48.38	40.0
I	New Settlement A	5,120	Lower	Greenfield	256.00	50%	128.00	40.0
J	New Settlement B	2,560	Lower	Greenfield	128.00	50%	64.00	40.0

Appraisal Ref.	Appraisal Description	Housing Capacity (# units)	Market Area / Value Zone	Greenfield / Brownfield	Gross Site Area (ha)	Net to Gross ratio (%)	Net Developable Site Area (ha)	Development Density (net)
K	Dispersal villages A	50	Lower	Greenfield	1.85	90%	1.67	30.0
L	Dispersal villages B	50	Lower	Brownfield	1.85	90%	1.67	30.0
M	Dispersal villages C	250	Lower	Greenfield	9.52	75%	7.14	35.0
N	Dispersal villages D	250	Lower	Brownfield	9.52	75%	7.14	35.0
O	Build to Rent	1,000	Higher	Brownfield	3.7	90%	3.33	300
P	North East Cambridge AAP	700	Mid	Brownfield	13.33	70%	9.33	75.0
Q	Cambridge East Airport	1,000	Mid	Greenfield / brownfield	17	60%	10.20	98.0
R	Cambourne	1,000	Lower	Greenfield	37	60%	22.22	45.0

Source: AspinallVerdi, 2021

Build to rent (BTR)

5.18 As we have explained in our Residential Market Report in Appendix 3. Build to Rent is becoming increasingly attractive to institutional investors as house prices continue to price potential homeowners out of the market, forcing them to remain in rented accommodation. We have undertaken viability testing on Build to Rent.

5.19 Our testing has been modelled based on GPSP's proposed BTR policy of 40% affordable homes (in the form of Affordable Private Rent) on a Build to Rent development, with a 20% discount compared to market rent.

5.20 We have chosen to test the build to rent scheme similar to the flatted residential typologies that we have tested, albeit with a larger internal gross to net differential due to the requirements to provide more communal spaces with a BTR product. Moreover, management costs would also be reduced from any rental income which leads to the net rental income. We have split the 1,000 unit typology into three phases. In reality, a developer would seek to complete and then sell blocks through the development period, generating cash inflows.

5.21 At the stage, we envisage BTR schemes to come forward on brownfield sites in the higher value zone. Our methodology to test a BTR scenarios includes the following headline steps:

- Assess total build costs;
- Assess gross income generation;
- Assess operating expenditure;
- Net income capitalisation.

5.22 We have tested the following typology and assumptions in Table 5-4.

Table 5-4 BTR scenario

Units	Gross density (dph)	Value zone	Brownfield / greenfield	Internal gross to net	Management costs	Phases
1,000	300	High	Brownfield	80%	26%	3

Source: AspinallVerdi, 2021

5.23 Where this is part of a mixed development, this will contribute towards the overall 40% affordable homes to be delivered. However, in reality it is unlikely that developers would build BTR as part of a mixed-use development. It would most likely be built out separately, therefore our modelling will test whether it is viable as a stand-alone scheme.

Non-residential typologies

5.24 As per our instruction, at this point we have not undertaken any further testing of any non-residential typologies.

5.25 In this respect, the typologies remain unchanged from the Strategic Spatial Options Report November 2020. These are as follows:

- Science Park (R&D space)
  - 5,000 sqm Net Internal Area (NIA) – 85% gross to net
  - Site coverage 40%
  - Brownfield and greenfield
- Cambridge town centre Office
  - 5,000 sqm NIA – 85% gross to net
  - Site coverage 70%
  - Brownfield
- Cambridge fringe office park
  - 2,000 sqm NIA – 85% gross to net
  - Site coverage 40%
  - Brownfield and greenfield
- Rural office park
  - 2,000 sqm NIA – 85% gross to net
  - Site coverage 40%
  - Greenfield
- Industrial Class E (light industrial)/B2
  - 200 sqm GIA
  - Site coverage 40%
  - Greenfield and brownfield
- Industrial B2/B8
  - 5,000 sqm GIA
  - Site coverage 40%
  - Brownfield and greenfield

6 Appraisal inputs & assumptions

6.1 This section of the report sets out the inputs and assumptions that we have used in the development appraisals. First, we outline the values used across all uses, then build costs, policy costs and then finally land values.

Value inputs

Residential market value inputs & assumptions

6.2 Based on our Residential Market Report in Appendix 3 we have used the sale values set out in Table 6-1. These are informed by a comprehensive analysis of market evidence and are reflective of new build achieved sale values, both on a unit and a £ psm basis, in each of the value zones. The value data collated demonstrated that prices across the study area are variable. In line with the recommended approach stipulated in Paragraph 011 of the Viability PPG, we have disregarded any outliers in the data. Furthermore, given the wide range of unit sizes for each typology delivered in the District we have not averaged out the values as this could distort the analysis (e.g. averaging values on a £ psm then applying the average to the unit sizes in the study could result in very high/very low unit prices not seen in the District). Our approach is supported by the RICS which highlights that using average figures has limitations.[77]

6.3 Through this iterative process, we have considered proposed unit sizes, proposed development densities and sold prices (on a unit basis and £ psm) to formulate our opinion of values. Our final adopted values fall within the range of evidence gathered in Chapter 2 of the Property Market Report (Appendix 3).

Table 6-1 Market value appraisal inputs

Typology	Unit Size sqm	Unit Price	£psm
Higher value zone			
Studio	40	£280,000	£7,000
1 bed flat	50	£330,000	£6,600
2 bed flat	75	£455,000	£6,067
3 bed flat	86	£500,000	£5,814
Mid value zone			

[77] RICS, March 2021 (effective from 01 July 2021), Assessing viability in planning under the National Planning Policy Framework 2019 for England, paragraph 4.2.10

Studio	40	£265,000	£6,625
1 bed flat	50	£300,000	£6,000
2 bed flat	70	£365,000	£5,214
3 bed flat	86	£410,000	£4,767
4 bed flat	99	£450,000	£4,545
2 bed house	75	£400,000	£5,333
3 bed house	97	£500,000	£5,155
4 bed house	150	£670,000	£4,467
Lower value zone			
2 bed house	75	£350,000	£4,667
3 bed house	97	£425,000	£4,381
4 bed house	150	£550,000	£3,667

Source: Residential Market Report Appendix 3, 2021

Affordable housing value inputs & assumptions

6.4 We have considered the Council's Affordable Housing SPD 2019 which includes information and guidanceon transfer values. We have used this in conjunction with our experience of affordable housing values in the area in defining the following transfer values:

- First Homes 70% of OMV (open market value)
- Shared ownership 70% of OMV
- Social Rent 50% of OMV
- Affordable rent 60% of OMV in Cambridge, 70% in South Cambridge.

6.5 In our modelling, we have initially only modelled 60% of OMV on the affordable housing, given that if this is viable, then by implication 70% would also be viable.

6.6 The tenure mix is:

- 25% First Homes
- 15% shared ownership
- 10% social rent
- 50% affordable rent.

6.7 The discount on the affordable home ownership products is the same as for First Homes. The only difference between the two tenures is the £250,000 absolute price cap on First Homes. This has been taken into consideration in our analysis (see section 7).

6.8 Given the PPG guidance for First Homes published by government on 24 May 2021, our First Homes appraisals become the baseline scenario as First Homes are now a requirement.

BTR Value inputs & assumptions

6.9 Based on our Market Report in Appendix 3 we have used the values set in Table 6-2 in our appraisals for BTR.

Table 6-2 BTR scenario

Units	Gross density (dph)	Gross rent pcm	Gross rent pa	Yield
1,000	300	Studio - £1,200 1 bed - £1,600 2 bed - £2,150 3 bed - £2,750	Studio - £14,400 1 bed - £19,200 2 bed - £25,800 3 bed - £33,000	4.00%

Source: AspinallVerdi, 2021

6.10 In our analysis we have assumed 25.8% allowance for management, maintenance and other costs associated with running the business – this is known as 'leakage'. This is based on the most recent evidence published by Knight Frank which is from 2019. [78]

6.11 Based on the above we have adjusted our gross rents to account for this leakage. We have then capitalised our net rent per annum at a yield of 4.0%. Table 6-3 outlines the total capital value per unit assumed in our testing.

Table 6-3 Build to rent capital values

Type	Gross rent pcm	Gross rent pa	Net rent pa	Capital value @ 4.0% yield
Studio	£1,200	£14,400	£10,685	£267,120
1 bed	£1,600	£19,200	£14,246	£356,160
2 bed	£2,150	£25,800	£19,144	£478,590
3 bed	£2,750	£33,000	£24,486	£612,150

Source: AspinallVerdi, 2021

Employment value inputs & assumptions

[78] Knight Frank, 2019, Residential Investment Report

6.12 Based on our Commercial Market Report in Appendix 7 we have used the rents, yield and rent-free/void periods as set out in Table 6-4. Note that these have not changed from previously (November 2020)

Table 6-4 Non-residential rents and yields appraisal inputs

Scenario	GIA sqm (sqft)	Rent psm (psf)	Yield	Rent-free/void
Science park (R&D space)	5,000 (53,819)	£387.50 (£36)	5.25%	12
Cambridge CBD Office	5,000 (53,819)	£495.13 (£46)	5.25%	12
Cambridge Fringe Office Park	2,000 (21,527)	£387.50 (£36)	5.5%	12
Rural office park	2,000 (21,527)	£269.09 (£2)	6.5%	12
Industrial Class E (light industrial)	200 (2,153)	£145.31 (£13.50)	6.0%	6
Industrial B2/B8	5,000 (53,819)	£134.55 (£12.50)	5.5%	6

Source: AspinallVerdi, 2020

Build costs inputs & assumptions

6.13 Table 6-5 sets out our build cost inputs and assumptions used in our appraisals.

Table 6-5 Appraisal build cost inputs & assumptions

Element	Cost	Comment
Build cost – houses	£1,234 psm	*'Build costs based on appropriate data, for example, that of the Building Cost Information Service.'*[79] Based on median BCIS[79] costs for estate housing generally re-based for Cambridge City.
Build cost – flats	£1,381 psm	Based on median BCIS[79] costs for flats generally re-based for Cambridge City.
BTR	£1,601 psm	As above, flats 6-storey and above.
Science park (R&D space)	£2,289 psm	BCIS median build costs 'generally' for research facilities, re-based to Cambridge City

[79] MHCLG, 24 July 2018, PPG, Paragraph: 012 Reference ID: 10-012-20180724

Element	Cost	Comment
Cambridge CBD Office	£1,912 psm	BCIS median build costs 'generally' for offices (air-con), re-based to Cambridge City
Cambridge Fringe Office Park	£1,912 psm	BCIS median build costs 'generally' for offices (air con), re-based to Cambridge City
Rural office park	£1,856 psm	BCIS median build costs 'generally' for offices (air con), re-based to Cambridge City
Industrial Class E (light industrial)	£812 psm	BCIS median build costs 'generally' for warehouse/stores, re-based to Cambridge City
Industrial B2/B8	£812 psm	BCIS median build costs 'generally' for warehouse/stores, re-based to Cambridge City
External works	20% of build costs for New Settlements A and B 15% of build costs for all other typologies	External works will vary, depending on on-site requirements, but this can be inclusive of but no limited to: landscaping, utilities, foul and surface water drainage, street lighting, yard area/car parks etc). Industry norms and other schemes coming forward in the Borough.
Site prep / infrastructure	£0 - £30,000 per dwelling. Urban A & C: £30,000 Urban B: £0 (covered by externals allowance) Edge of Cambridge (greenfield): £20,000 Edge of Cambridge (brownfield): £15,000 New Settlement: £30,000 Dispersal villages: £10,000 BTR: £15,000	Costs are in relation to opening up the site, including; site prep, spine road, site servicing, site preparation and other major infrastructure costs. At this stage we do not know the infrastructure requirements for these sites therefore at this stage we have included a cost allowance, typically associated with strategic sites as a cautionary approach until further details are known. Costs based on strategic infrastructure cost range set out in the Harman Report.[80] These will require updating when more information becomes available from Stantec's infrastructure study. Some scenarios may see significantly higher infrastructure costs which will have a negative impact on viability
S106 Contributions	£1,000	This sum will cover green belt mitigation. Further sums may be added to future iterations once known.

[80] Local Housing Delivery Group Chaired by Sir John Harman, 20 June 2012, Viability Testing Local Plans, Advice for planning practitioners, page 44

Element	Cost	Comment
Site abnormals – applied to brownfield development only	£110,000 per net developable acre	Site abnormals will vary significantly from site to site. We have assumed our allowance includes the cost for demolition and remediation. We have had regard to HCA (now Homes England) guidance on dereliction, demolition and remediation costs, March 2015, along with comparable and other schemes coming forward in the locality.
Statutory Planning Fees (Residential)	Based on national formula.	Based on national formula.
Planning Application Professional Fees, Surveys and reports	Calculated as a three times multiplier to national formula above.	Calculated as a three times multiplier to national formula above.
Professional fees	10% of BCIS build cost	Typically ranges between 6% - 10%, based on industry norms and other schemes coming forward in the area. This is therefore considered to be at the 'top end of the range'.
Contingency	5% of BCIS build cost	Typically ranges between 3% - 5%, based on industry norms and other schemes coming forward in the area. 5% is a substantial contingency for greenfield sites, where we would often assume 3% (however, there is substantial viability margin in Cambridgeshire).
Residential – Sale Agents Costs	1.5%	Source: Page 35 Harman report and comparable schemes
Residential – Sale Legal Costs	0.5%	As above.
Residential – Marketing and Promotion	1.5%	As above.
Marketing and Promotion – commercial	1.0% GDV	As above.
Letting Agents Costs (BTR and employment)	15.0% rental value	Based on industry norms and other schemes coming forward in the locality.
Letting Legal Costs	5.0% rental value	Ditto
Investment Sale Agents Costs	1.0% GDV	Ditto

Element	Cost	Comment
Investment Sale Legal Costs	0.50% GDV	Ditto
Profit on market housing	20.0% on GDV	'*For the purpose of plan making an assumption of 15-20% of gross development value (GDV) may be considered a suitable return to developers in order to establish the viability of plan policies. Plan makers may choose to apply alternative figures where there is evidence to support this according to the type, scale and risk profile of planned development.*'[81] This is therefore at the top end of the range in order to be conservative. Please also see the sensitivity analysis within the appraisals (appended).
Profit on affordable housing	6.0% on GDV	*'A lower figure may be more appropriate in consideration of delivery of affordable housing in circumstances where this guarantees an end sale at a known value and reduces risk. Alternative figures may also be appropriate for different development types.'*[81] This is to reflect the lower risk of bulk disposal to a Registered Provider.
Profit on BTR	15% on GDV	BTR can be assessed on Internal Rate of Return (IRR) basis rather than profit on GDV or cost. The IRR varies greatly from scheme to scheme and developer to developer. As this is assessment is non-developer specific we have used a reasonable benchmark profit assessed on GDV based on other schemes we have recently assessed.
Profit on retail, office and industrial	20% of build costs	Commercial development is assessed by way of profit on costs and not GDV to reflect the developer who then sells the completed scheme onto an investor.
Interest	7.5%	Gross interest inclusive of fees. Interest is added to the all construction costs and benchmark land value as we assume the schemes are 100% debt financed, of which there will also be a fee attributable to the arrangement of a development loan, this is inclusive within the global figure. Industry norms and other schemes coming forward in the locality.
SDLT on land value	Up to 5.0%	Based on HMRC variable rate formula.
Agents fee on land value	1.0%	Industry norms and other schemes coming forward in the locality.

[81] MHCLG, 05 May 2019, PPG, Paragraph: 018 Reference ID: 10-018-20190509

Element	Cost	Comment
Legal fee on land value	0.5%	As above.
Gross to net of general needs flats, offices and BTR	90%	Based on schemes we have analysed previously.
Internal gross to net of BTR	80%	As above.

IDP costs

6.14 Stantec UK with LUC have been appointed by the Greater Cambridge Shared Planning Service to produce an Infrastructure Delivery Plan (IDP) to guide and support the preferred spatial strategy for Greater Cambridge Local Plan.

6.15 We have been provided with an interim stage report in the preparation of IDP, setting out the high-level infrastructure implications of the range strategic spatial options that GCSP have developed to help develop the preferred option for the Local Plan's spatial strategy. The IDP will be developed further to inform the draft Local Plan stage, which will provide us with specific cost items for testing for the viability assessment to accompany the draft plan.

6.16 As previously stated, in the absence of detailed costings at this time, we have assumed an infrastructure cost of £30,000 per dwelling on most scenarios.

Timescale and Phasing

6.17 Timescales reflect both the development period and the sales period. These inputs are reflected in the appraisals through the cashflow.

Residential timescales (including strategic sites)

6.18 Table 6-6 sets out our timing inputs used in the residential appraisals, this takes account of the pre-construction and preparatory works "lead-in", then the time taken to construct and complete the development "build period" and the time taken to sell all of the units "sale period". It is assumed that the sales of the affordable housing units occur during the build period, in line with how the market operates on a "golden brick" payment basis. Sale period for houses commences 9 months after the construction of units and continues 9 months post-construction. For flats we have assumed market sales commence on build complete of the units.

6.19 There are other assumptions that we have made, these are listed below:

- We have assumed that all typologies have a single land payment upfront.
- We have assumed that all policy contributions are paid on the month of sale (i.e. occupation) of first unit.

Table 6-6 Appraisal timing inputs

Typology	Unit types	No of Dwellings	Lead in time	Construction period	Sales / Rent period
Urban A	Flats and Houses	700	18 months	60 months	60 months (commencing 12 months after start of construction)
Urban B	Flats	50	12 months	18 months	18 months (commencing 6 months after start of construction)
Urban C	Flats	700	18 months	48 months	48 months (commencing 18 months after start of construction)
Edge of Cambridge A	Houses	3,870	18 months	93 months	93 months (commencing 6 months after start of construction)
Edge of Cambridge B	Houses	1,935	18 months	93 months	93 months (commencing 6 months after start of construction)
Edge of Cambridge C	Houses	500	18 months	48 months	48 months (commencing 6 months after start of construction)
Edge of Cambridge D	Houses	3,870	18 months	93 months	93 months (commencing 6 months after start of construction)
Edge of Cambridge E	Houses	1,935	18 months	93 months	93 months (commencing 6 months after start of construction)
New Settlement A	Houses	5,120	18 months	123 months	123 months (commencing 6 months after start of construction)
New Settlement B	Houses	2,560	18 months	123 months	123 months (commencing 6 months after start of construction)
Dispersal villages A	Houses	50	12 months	18 months	18 months (commencing 6 months after start of construction)
Dispersal villages B	Houses	50	12 months	18 months	18 months (commencing 6 months after start of construction)
Dispersal villages C	Houses	250	18 months	36 months	36 months (commencing 6 months after start of construction)
Dispersal villages D	Houses	250	18 months	36 months	36 months (commencing 6 months after start of construction)

BTR (3x phases)	Flats	1,000	18 months	80 months	80 months (each phase sold on completion over development period)
Strategic sites					
North East Cambridge AAP	Flats and Houses	700	18 months	60 months	60 months (commencing 12 months after start of construction)
Cambridge East Airport	Flats and Houses	1000	18 months	86 months	86 months (commencing 12 months after start of construction)
Cambourne	Flats and Houses	1000	18 months	86 months	86 months (commencing 12 months after start of construction)

Source: AspinallVerdi, 2021

Non-residential timescales

6.20 Table 6-7 sets out the timescales used in the non-residential testing appraisals. It is assumed the investments of the completed schemes are sold on build completion of the units.

Table 6-7 Non-residential scenarios timescales

Typology	Lead in time	Construction period	Sales period
Science Park (R&D space)	12 months	24 months	Sold fully let on practical completion (PC)
Cambridge TC Office	12 months	24 months	Sold fully let on PC
Cambridge fringe office park	12 months	18 months	Sold fully let on PC
Rural office park	12 months	18 months	Sold fully let on PC
Industrial Class E (light industrial)/B2	12 months	12 months	Sold fully let on PC
Industrial B2/B8	12 months	18 months	Sold fully let on PC

Source: AspinallVerdi, 2021

Benchmark land value assessment

6.21 As we have set out in Chapter 3 of this report the recommended approach to establishing benchmark land value (BLV) for planning purposes is the Existing Use Value (EUV) plus a premium method (EUV+). It is therefore important to understand the types of sites coming forward and then make an assessment of values with reference to comparable evidence.

Residential sites – greenfield land value assessment

6.22 In a greenfield context, we consider the existing use to be agricultural land for any potential proposed development in the draft Local Plan. Appendix 4 sets out our evidence and research into land values. Our evidence suggests that an EUV of £10,000 per acre would be a robust starting point. We have then applied a 10x multiplier to this to establish a benchmark land value for our viability testing purposes.

6.23 We have used agricultural land values because this is the closest use that reflects the existing use of the greenfield development sites coming forward. We do recognise that some of the greenfield sites differ in their uses, for example, former playing pitches and bare land. But there is no evidence readily available to base a value for these existing uses. Therefore, in taking a pragmatic approach we have used agricultural land values for all greenfield sites because there are few alternatives uses other than agricultural.

Residential sites – brownfield land value assessment

6.24 Our evidence for brownfield land indicates an EUV in the region of £250,000 to £650,000 per acre. In light of this evidence, we believe that an EUV of £400,000 per acre would be a robust starting point. We have then applied a 20% premium to establish a benchmark land value for our Local Plan testing.

Residential sites – conclusion land value assessment

6.25 We have not varied the land values by our value zones as there is no evidence to suggest this is required.

6.26 The benchmark land values, do in our opinion, strike that balance between the competing interests (developers, landowners and the aims of the planning system) whilst still securing the maximum benefits in the public interest through the granting of planning permission – therefore meeting the aims of the PPG.

6.27 Should the residual land value exceed the benchmark land value once all abnormal and policies costs are taken into account in the appraisal, then there is scope for the landowner to secure a

higher premium. Should any site-specific assessments incur any additional costs that have not been allowed for in our benchmark land value assessments then these costs need to be reflected in a reduced land value. In this respect, these brownfield BLVs are considered to be conservative and provide an inherent 'buffer' as sites which are the most obsolete are likely to come forward more quickly and at conceivably lower values.

6.28 Table 6-8 also provides the assessment of gross site area and net developable area, these are based on comparable schemes. Due to the nature of the site, we have treated Cambridge East Airport as being 15% brownfield and 85% greenfield. Therefore, we have used a blended land value assessment for this site which has resulted in a higher uplift multiplier of 15.7x. As more details are revealed, this land value assumption may need to be revisted.

Table 6-8 Land value development appraisal inputs

Typology	Ref.	Greenfield /Brownfield	EUV -					Uplift Multiplier	BLV -	
			(per acre) (gross)	(per ha) (gross)	Net: Gross (%)	(per acre) (net)	(per ha) (net)	x [X] x [Y]%	(per acre) (net developable)	(per ha) (net developable) (rounded)
Residential	Urban A	Brownfield	£400,000	£988,400	70%	£571,429	£1,412,000	20%	£685,714	£1,694,400
Residential	Urban B	Brownfield	£400,000	£988,400	90%	£444,444	£1,098,222	20%	£533,333	£1,317,900
Residential	Urban C	Brownfield	£400,000	£988,400	75%	£533,333	£1,317,867	20%	£640,000	£1,581,400
Residential	Edge A	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	10.0	£200,000	£494,200
Residential	Edge B	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	10.0	£200,000	£494,200
Residential	Edge C	Greenfield	£10,000	£24,710	70%	£14,286	£35,300	10.0	£142,857	£353,000
Residential	Edge D	Brownfield	£400,000	£988,400	50%	£800,000	£1,976,800	20%	£960,000	£2,372,200
Residential	Edge E	Brownfield	£400,000	£988,400	50%	£800,000	£1,976,800	20%	£960,000	£2,372,200
Residential	New Settlement A	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	10.0	£200,000	£494,200
Residential	New Settlement B	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	10.0	£200,000	£494,200
Residential	Dispersal Villages A	Greenfield	£10,000	£24,710	90%	£11,111	£27,456	10.0	£111,111	£274,600
Residential	Dispersal Villages B	Brownfield	£400,000	£988,400	90%	£444,444	£1,098,222	20%	£533,333	£1,317,900
Residential	Dispersal Villages C	Greenfield	£10,000	£24,710	75%	£13,333	£32,947	10.0	£133,333	£329,500
Residential	Dispersal Villages D	Brownfield	£400,000	£988,400	75%	£533,333	£1,317,867	20%	£640,000	£1,581,400
Residential	BTR	Brownfield	£400,000	£988,400	90%	£444,444	£1,098,222	20%	£533,333	£1,317,900
Residential	AAP housing and flatted	Brownfield	£400,000	£988,400	70%	£571,429	£1,412,000	20%	£685,714	£1,694,400
Residential	Cambridge East Airport	Greenfield	£10,000	£24,710	60%	£16,667	£41,183	15.7	£261,667	£646,600
Residential	Cambourne	Greenfield	£10,000	£24,710	60%	£16,667	£41,183	10.0	£166,667	£411,800

Source: AspinallVerdi, 2021

BTR - land value assessment

6.29 It is assumed that BTR will come forward on brownfield sites (e.g. in the urban centre). Therefore, we have used the same land values that we have used in the general needs residential viability testing.

BLV caveats

6.30 It is important to note that the BLV's contained herein are for 'high-level' plan/CIL viability purposes and the appraisals should be read in the context of the BLV sensitivity table (contained within the appraisals). The BLV's included herein are generic and include healthy premiums to provide a viability buffer for plan making purposes.

6.31 In the majority of circumstances, we would expect the RLV of a scheme on a policy compliant basis to be greater than the EUV (and also the BLV including premium) herein and therefore viable.

However, there may be site specific circumstances (e.g. brownfield sites or sites with particularly challenging demolition, contamination or other constraints) which result in a RLV which is less than the BLV herein. It is important to emphasise that the adoption of a particular BLV £ in the base-case appraisal typologies in no way implies that this figure can be used by applicants to negotiate site specific planning applications where these constraints exist. In these circumstances, the site-specific BLV should be thoroughly evidenced having regard to the EUV of the site in accordance with the PPG. This report is for plan-making purposes and is without prejudice to future site-specific planning applications.

7 Residential viability results

7.1 We set out below the results of our viability appraisals. For ease of reference, the results are set out by market area and follow our typologies matrix. Where necessary, we provide comments on any nuances in the results.

7.2 The residential appraisals are appended in full at Appendix 5. These include a summary table at the end of each batch of appraisals (by grouping as described below).

7.3 Note that in the discussion below we have rounded the values for ease of interpretation.

7.4 The appraisal results include a series of sensitivity tables. In the results below, we have summarised the sensitivity tables of change in percentage of affordable housing v change in S106 cost per unit. The other sensitivity tables included in the appendices are:

- Change in percentage of affordable housing v change in developer contribution cost per unit.
- Change in percentage of affordable housing v change in developer contribution cost £psm.
- Change in percentage of affordable housing v change in build costs.
- Change in percentage of affordable housing v change in sale values.
- Change in percentage of affordable housing v change in benchmark land value.
- Change in percentage of affordable housing v change in dwellings per hectare.[82]
- Change in percentage of affordable housing v change in profit.

7.5 At this early strategic stage, a number of our scenarios have similar inputs and underlying assumptions. Until more information is known around the sites and infrastructure it is difficult to vary further. This means that results for scenarios are similar in some cases.

Urban

7.6 A summary of the viability results is shown in Table 7-1 – the appraisals are contained in Appendix 5. All of our results are shown on a surplus per dwelling basis. Our testing shows that all scenarios are viable with 40% affordable housing. All three urban scenarios produce a surplus above the benchmarked land value, although Urban C produces a smaller surplus in comparison to A and B, due to it being an entirely flatted scheme on a brownfield site with a high BLV. Nevertheless, it is still a considerable figure.

7.7 Depending on the policies devised by the GCSP, additional policy costs may need to be deducted from the surplus. In addition to this, any further infrastructure costs above and beyond our high-

[82] Density is varied on net dph basis. As density is increased the amount of land required on a gross and net basis reduces. This in turn decreases the overall land value and improves viability. For example, the scenarios 'Edge of Cambridge A' includes 3,870 units at a site gross to net of 50%. The net density is 40dph meaning the gross site size is 193.5 ha with a site cost of £47.8m. If the net density is increased to 50dph the gross site size is 154.8 ha with a site cost of £38.25m.

level assumptions will need to be deducted from the surplus. This is dependent on the emerging Infrastructure Delivery Plan.

Table 7-1 Urban typologies – results surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling[83]				
Urban A	700	£80,000	£65,000	£60,000
Urban B	50	£64,000	£60,000	£56,000
Urban C	700	£20,000	£18,000	£14,000

Source: AspinallVerdi (August 2021)

Edge of Cambridge

7.8 A summary of the viability results is shown in Table 7-2 – the appraisals are contained in Appendix 5). All of our results are shown on a surplus per dwelling basis. Our testing shows that all scenarios are viable with 40% affordable housing. We have included an allowance of £15,000 unit for brownfield and £20,000 per unit for greenfield for infrastructure. Again, all scenarios produce a significant surplus above the benchmarked land value with this surplus available to fund additional policy costs.

Table 7-2 Edge of Cambridge typologies – results surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling				
Edge of Cambridge A	3,870	£105,000	£100,000	£95,000
Edge of Cambridge B	1,953	£105,000	£100,000	£95,000
Edge of Cambridge C	500	£110,000	£105,000	£95,000

[83] In a number of our scenarios the amount of surplus reported is the same even when affordable housing is varied. This is due to the scale we use to vary the surplus in our sensitivity testing. This level of detail is sufficient at this stage and will be refined in later iterations of the report.

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Edge of Cambridge D	3,870	£55,000	£45,000	£40,000
Edge of Cambridge E	1,935	£58,000	£50,000	£44,000

Source: AspinallVerdi (August 2021)

New Settlements

7.9 A summary of the viability results is shown in Table 7-3 – the appraisals are contained in Appendix 4. All of our results are shown on a surplus per dwelling basis. Our testing shows that all scenarios are viable with 40% affordable housing. We have included an allowance of £30,000 per unit for infrastructure. Again, all scenarios produce a significant surplus above the benchmarked land value with this surplus available to fund additional policy costs (shown in Table 7-3).

Table 7-3 New settlements typologies – results surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling				
New Settlement A	5,120	£40,000	£35,000	£30,000
New Settlement B	2,560	£36,000	£32,000	£26,000

Source: AspinallVerdi (August 2021)

Dispersal Villages

7.10 A summary of the viability results is shown in Table 7-4 – the appraisals are contained in Appendix 5. All of our results are shown on a surplus per dwelling basis. We have included an allowance of £30,000 per unit for infrastructure. All scenarios produce a significant surplus above the benchmarked land value with this surplus available to fund additional policy costs.

Table 7-4 Dispersal villages typologies – results surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling				
Dispersal villages A	50	£65,000	£60,000	£55,000
Dispersal villages B	50	£25,000	£20,000	£15,000
Dispersal villages C	250	£70,000	£65,000	£60,000
Dispersal villages D	250	£25,000	£20,000	£15,000

Source: AspinallVerdi (August 2021)

8 Strategic sites results

8.1 We have carried out detailed analysis of 3x strategic sites. These are potential site allocations which, by virtue of their size, would have a significant impact on the overall housing numbers in the Plan if they were unable to be delivered.

8.2 We have appraised the following strategic sites:

- North East Cambridge Area Action Plan (NEC AAP) – 700 units
- Cambridge East Airport – 1,000 units
- Cambourne – 1,000 units

8.3 As previously discussed, these sites have been tested at a high level, and generate a surplus at this stage. This surplus could support the *emerging* infrastructure costs, but we recommend further testing at the plan making and decision-making stage as updated infrastructure requirements and costs are identified, particularly given how sensitive large sites are to cashflow issues.

Strategic site viability results

8.4 The 3x strategic sites have positive RLVs when modelled using the typologies in Appendix 2, with significant surplus balances:

- The NEC AAP site has a surplus of £44.5m.
- Cambridge East Airport has a surplus of £81m.
- Cambourne has a surplus of £34.9m.

8.5 The surplus on a per unit basis is shown in Table 8-1, the results are shown in Appendix 6.

Table 8-1 – Strategic Sites Results – surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling				
North East Cambridge AAP	700	£75,000	£70,000	£60,000
Cambridge East Airport	1,000	£95,000	£85,000	£80,000
Cambourne	1,000	£42,000	£36,000	£32,000

Source: AspinallVerdi, August 2021

8.6 This suggests that, assuming traditional housing mixes, all sites have significant flexibility to absorb substantial S106/CIL or infrastructure costs beyond the £30,000 per dwelling assumption that has been adopted.

8.7 As specific infrastructure costs emerge, the surplus is likely to be at least partially eroded, but at present there is a healthy headroom for affordable housing and other policy aspirations to be met. Close monitoring of the infrastructure cost plans is advised. This will include the NEC AAP where more detailed work is already underway.

9 Built to rent viability results

9.1 Our viability testing results for build to rent are set out in Appendix 8. The surplus on a per unit basis is shown in Table 9-1.

Table 9-1 – Build to rent results – surplus per dwelling

Typology	Number of units	Affordable housing level		
		35%	40%	45%
Surplus per dwelling				
BTR (Stradbroke)	1,000	£107,000	£100,000	£101,000

Source: AspinallVerdi, August 2021

9.2 This suggests that, assuming three phases of development, build to rent development has significant flexibility to absorb substantial S106/CIL or infrastructure costs beyond the £15,000 per dwelling assumption that has been adopted.

9.3 As specific infrastructure costs emerge, the surplus is likely to be at least partially eroded, but at present there is a healthy headroom for affordable housing and other policy aspirations to be met. Close monitoring of the infrastructure cost plans is advised. This will include the NEC AAP where more detailed work is already underway.

10 Employment uses

10.1 Our viability testing results for science park (R&D space), industrial and office uses are set out in Appendix 9. Our results show that all uses tested are viable, apart from rural office parks, with differing levels of surplus £ psm of development. Rural office parks are only marginally unviable, small changes to rents or investment yield would render this scenario viable also.

Table 10-1 Commercial testing results

Typology	Greenfield/ Brownfield	Surplus per sqm of development
Science Park (R&D space)	Greenfield	£800 psm
Science Park (R&D space)	Brownfield	£500 psm
Cambridge TC Office	Brownfield	£2,250 psm
Cambridge fringe office park	Greenfield	£1,200 psm
Cambridge fringe office park	Brownfield	£900 psm
Rural office park	Greenfield	Unviable
Industrial Class E (light industrial)/B2	Greenfield	£450 psm
Industrial Class E (light industrial)/B2	Brownfield	£150 psm
Industrial B2/B8	Greenfield	£400 psm
Industrial B2/B8	Brownfield	£100 psm

Source: AspinallVerdi (September 2020)

11 Conclusions and Recommendations

11.1 This section sets out our conclusions and recommendations.

11.2 Based on our appraisals and inputs, all of the typologies tested can deliver:

- 40% affordable housing;
- Infrastructure contributions identified and costed in this report (up to £30,000 per unit, subject to the typology);
- S106 contributions identified and costed in this report
- any additional costs that we have identified and costed in this report (i.e., Future Homes Standards), and
- a surplus available for infrastructure, CIL or additional S106 costs.

11.3 The surplus in all scenarios for most typologies is substantial, although in the case of Dispersal Village B and D (both brownfield sites), the surplus is substantially smaller, and these positive residuals should be treated cautiously. Urban C also has a substantially lower surplus due to its being flatted development on a brownfield site with a high BLV.

11.4 In terms of the strategic sites, all three are viable where the scheme is traditional housing, again with very comfortable surplus figures.

11.5 We stress again that as specific infrastructure costs emerge, the surplus will be at least partially eroded, but at present, there is a healthy headroom for affordable housing and other policy aspirations to be met, particularly as the costs for transport emerge. Close monitoring of the infrastructure cost plans is advised. This will include the NEC AAP where more detailed work is already underway to identify a more in-depth analysis of the viability of this scheme, beyond the whole plan viability assumptions we have made in this part of our study.

11.6 It is important to note that whilst our work shows that the schemes are viable, further work and consultation is required to ensure that the schemes are deliverable, i.e., demonstrating that the sites are technically deliverable and that the landowner's value aspirations are reasonable.

Best Practice

11.7 We recommend that, in accordance with best practice, the plan wide viability is reviewed on a regular basis to ensure that the Local Plan remains relevant as the property market cycle(s) change. This is even more pertinent due to the Covid-19 pandemic which has created market uncertainty throughout the period of this study.

11.8 Furthermore, to facilitate the process of review, we recommend that the Councils continue monitor the development appraisal parameters herein, but particularly data on land values across the area.

Appendix 1 – Policies Matrix

Appendix 2 – Typologies Matrix

Appendix 3 – Residential Market Report

Appendix 4 – Land Value Report

Appendix 5 – Area Wide Residential Appraisals

Appendix 6 – Strategic Site Appraisals

Appendix 7 – Commercial Market Report

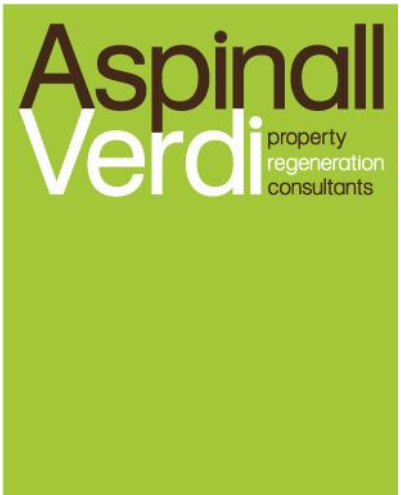
Appendix 8 – BTR Appraisals

Appendix 9 – Commercial Appraisals

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Greater Cambridge Viability and Delivery Assessment

Greater Cambridge Local Plan - The Preferred Options (Regulation 18: Preferred Options 2021)

This policies matrix sets out the emerging draft Preferred Options policies and describes how we have incorporated the cumulative impact of the policies into the viability assessment. The matrix 'sign-posts' the reader to particular cost and values evidence which reads across into the financial appraisals.

* Those policies with a Direct impact on viability include policies such as affordable housing, minimum housing standards etc. that have a quantifiable impact on viability. These have been explicitly factored into our economic viability appraisals through cost and value assumption etc.

Those policies with an Indirect impact have been incorporated into the viability study indirectly through the property market cost and value assumptions adopted e.g. market values, benchmark land value and BICS costs etc. It is important to note that all the policies have an indirect impact on viability. The Greater Cambridgeshire Local Plan sets the 'framework' for the property market to operate within. All the spatial policies have an indirect impact on viability through the operation of the property market (price mechanism).

Some policies are for very narrow specific circumstances of Development Management. These policies have no material impact on the value and cost assumptions for the viability Plan-making viability assessment.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
Climate Change			
CC/NZ1: Net zero carbon new buildings	That the policy set specific requirements regarding the energy needs of new buildings and how renewable energy should be used to generate that energy requirement… …Consideration is also given to the carbon associated with the construction process and the materials used to construct new buildings, known as embodied carbon, as well as reducing the performance gap through the use of Assured Performance processes. The technical requirements proposed below have been informed by our Net Zero Carbon Study (2021). Net Zero Carbon Buildings – operational emissions	Direct	This policy is to set targets for reaching net zero carbon status on new housing developments. For the purposes of our plan viability assessment the net zero carbon cost has been explicitly included in our appraisals. This has been informed by the Greater Cambridge Net Zero Carbon Study (Bioregional, Etude, Currie & Brown, 2021). We have included the below costs in our assessment. These costs are that which is required over and above the baseline cost of properties built by a medium-sized developer, building several hundred homes per year.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Part A: All housing and non-domestic buildings should achieve a specific space heating demand as follows: All new dwellings should have a space heating demand of 15-20 kWh per meter squared per year All non-domestic buildings should achieve a space heating demand of 15-20 kWh per meter squared per year All heating should be provided through low carbon fuels (not fossil fuels). No new developments should be connected to the gas grid. Part B: Total Energy Use Intensity (EUI) targets are achieved (set out in kWh per m2 per year), as follows: All dwellings should achieve an EUI of no more than 35 kWh per m2. Non domestic buildings should achieve a specified EUI, dependent on building type… Part C: Renewable energy should be generated on-site for all new developments… Where it is not practicable to generate enough renewable energy on-site, it must be demonstrated that at least 120 kWh per meter squared of building footprint, per annum is generated. Where a development of multiple buildings is concerned, the renewable energy generation requirement should be calculated and demonstrated across the whole development … Part D: Offsetting to only be used in certain circumstances (e.g. insufficient roof space to generate renewable energy) …, the development must be futureproofed to enable future occupiers to easily retrofit or upgrade buildings and/or infrastructure in the future … All developments must demonstrate use of an assured performance method in order to ensure that the buildings' operational energy performance reflects design intentions and addresses the performance gap.		These costs allow for installation of a heat pump, mechanical ventilation with heat recovery (MVHR) and photovoltaics (ful breakdown included in tables 7 – 10) Semi-detached house: £12,880 (10% increase on cost) Mid-terrace: £13,985 (13% increase on cost) Flats: £7,568 – based on 40 flats (5% increase on cost)

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Residential developments of 150 homes or more and non-residential development of 1,000 m2 or more should … demonstrate actions to reduce life-cycle carbon emissions.		
CC/WE: Water efficiency in new developments	Set the level of water efficiency that new developments must comply with: • Require 80 litres/person/day in new residential developments unless …impracticable. • Require Non-residential development to achieve full credits for category Wat 01 of BREEAM unless demonstrated impracticable.	Direct	Code Level 3 and 4 (105l) are already included in our testing. Extra over cost included for additional water standards costs with reference to Code for Sustainable Homes levels 5 and 6 (Housing Standards Review Cost Impacts report, DCLG 2014). Baseline allowance of £9 per unit to Code levels 3 & 4, and £2,697 to achieve Code levels 5 & 6 based on Department of Communities and Local Government Housing Standards Review Cost Impact, September 2014 by EC Harris. We have index linked this by 2% per annum and applied a combined £3,109 per dwelling.
CC/DC: Designing for a changing climate	Set out how the design of developments should take account of our changing climate…. 1. All new dwellings to be designed to achieve a low overheating risk… 2. All non-domestic buildings to be designed to achieve a low overheating risk using the cooling hierarchy… 3. All developments take a design led approach to climate change adaptation with approaches integrated into architectural design. For overheating, proposals should follow the cooling hierarchy as follows: a. Passive design b. Passive/natural cooling c. Mixed mode cooling	Direct	It is important for all developers to address managing heat risk for their buildings to be marketable. We assume that the heat mitigation can be built into the design at no additional cost.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	d. Full building mechanical ventilation/cooling system, ensuring the lowest carbon/energy options and only considered after all other elements of the hierarchy have been utilised. 4. All development proposals must utilise site wide approaches to reduce climate risks, including the integration of sustainable drainage systems; cool materials and urban greening; enhanced treescape integrated green spaces…		
CC/FM: Flooding and integrated water management	Address management of flood risk and implementation of integrated water management including sustainable drainage in new development. • Development will be directed to the areas with the least likelihood of flooding from all sources and taking into account climate change. • Developments will be required to provide integrated water management, including sustainable drainage systems (SuDS), where surface water is managed close to its source and on the surface where reasonably practicable to do so. SuDS and green /brown roofs should provide multiple benefits (such as biodiversity and amenity). All hard surfaces must be permeable where reasonably practicable. Appropriate measures for future management will need to be demonstrated and secured. Potential flood risk from developments will need to be fully addressed. The plan will set out the approach to runoff rates, including that peak runoff rate should be no greater for the developed site than it was for the undeveloped site.	Direct	For the purposes of our viability assessment we have assumed that the cost of professional fees for the relevant Flood Risk Assessments and Drainage Strategy reports etc are included within our overall professional fee budget. This policy is to ensure the appropriate management and treatment of surface and foul water disposal to reduce the flood risk in the Plan area. It states that development proposals should include the use of sustainable drainage systems. There are associated costs with this policy and therefore it has a direct impact on viability. It is important to stress that developers should consider drainage solutions at the outset of their scheme design and factor in the costs when acquiring sites. These are not new and unknown costs. The cost of foul and surface water drainage and SUDs etc is include in the cost of the external works within our appraisals.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
			Where there are sites with abnormal costs associated with flood mitigation (e.g. sites in Flood Zone 2 or 3), these costs should be deducted from the price of the land. I.e. one cannot pay the same price for land which is not subject to flooding, compared to land which is constrained by flooding.
CC/RE: Renewable energy projects and infrastructure	Support renewable energy generation and associated infrastructure to help support the transition to net zero carbon. 1. Provide a positive policy framework for the development of stand-alone renewable energy projects including associated infrastructure such as battery storage and upgrades to grid capacity; 2. Identify broad areas of potential suitability for different types of renewable energy, informed by CRIF and landscape sensitivity study; 3. Indicate support for community led projects. 4. Identify a set of criteria which will apply to all renewable energy projects… 5. In relation to wind energy… demonstrate that the planning impacts identified by affected local communities have been fully addressed… 6. …demonstrate very special circumstances in the Green Belt….	Indirect	This policy is about the provision of energy infrastructure. It is not subject to specific policy obligations (e.g., affordable housing, CIL etc) over and above site-specific mitigation. There is no direct impact on Plan viability, but the lack of provision for waste will impact on the deliverability of new homes and employment.
CC/CE: Reducing Waste and supporting the circular economy	Minimise construction waste and ensure that new development is designed to support sustainable waste management by end user. • Follow the waste hierarchy and the 5 r's of waste management: Refuse, Reduce, Reuse, Repurpose, Recycle. • provide adequate, flexible and easily accessible storage space and collection systems in line with the requirements of the RECAP Waste Management Design Guide (or successor documents).	Indirect	This policy is about the provision of waste infrastructure. It is not subject to specific policy obligations over and above site-specific mitigation. There is no direct impact on Plan viability, but the lack of provision for waste will impact on the deliverability of new homes and employment. We have assumed the cost of the Circular Economy Statement will be included in professional fees.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• All major developments should submit a Circular Economy Statement, either as a stand-alone document or as part of the CEMP.		
CCCS: Supporting land based carbon sequestration	Control development of land capable of becoming an important carbon sink, by supporting…the creation of land and habitats that play a role as carbon sinks and protect existing carbon sinks from development in particular unimproved peat. Promote approaches that minimise soil disturbance, compaction and disposal during construction projects	Indirect	This will have an impact on the amount of land available for development. This has an indirect impact on the viability assessment on the price of land and Benchmark Land Value assumptions.
Bodiversity & Green Spaces			
BG/BG: Biodiversity and geodiversity	This policy addresses biodiversity requirements for all new development, including the approach to Biodiversity Net Gain (which requires developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were in before development, and is expressed as a percentage). It will also control development affecting sites of biodiversity and geodiversity importance. The policy will require development to achieve a minimum 20% biodiversity net gain (BNG), noting that: • BNG calculations should be submitted using the Defra Biodiversity Metric 3.0 or its successor • BNG should be delivered on site where this will be effective, recognising that for smaller sites in particular greater and more long-lasting biodiversity enhancements may be achieved via contributions towards larger scale projects. • Where off-site habitat measures are required, they must be consistent with the strategic aims of the Greater Cambridge green infrastructure network strategic initiatives	Direct	For the purposes of our viability assessment, we have assumed that the relevant cost of professional reports (e.g. Biodiversity Action Plans (BAPs) and / or Geodiversity Action Plans (GAPs) and mitigation strategies etc.) is included in the professional fee budget. We have assumed that the cost of relevant mitigation is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost and the net-biodiversity gain costs etc; Where there are particularly nature conservation issues that arise from particularly sensitive development sites, that this is known to the developer as part of their site due diligence, the costs of mitigation should be factored into the price paid for the land. Costs associated with these requirements are included within our use of appropriate local

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• The Councils will seek to use planning conditions to secure on site habitat creation and its long-term management, and obligations where BNG is on land outside the applicant's control The policy will also seek wider environmental net gains. Ways of measuring this are currently being developed at a national level, and at the draft plan stage we will review whether and how to implement this policy requirement. The policy will state that development proposals affecting sites of biodiversity or geological importance will not normally be permitted. Exceptions will only be made where the benefits significantly outweigh any adverse impacts. In such cases where development is permitted, we will require that the intrinsic natural features of particular interest are safeguarded or enhanced. The policy will require development to mitigate evidenced recreational impacts on designated biodiversity and geodiversity sites, including applying Natural England's Impact Risk Zones for Sites of Special Scientific importance.		construction cost benchmarks and external works cost benchmarks which developers will take into consideration biodiversity requirements (which developers have been delivering). Note that in the future the government is committed to mandating biodiversity net gain on sites. It is anticipated the Environment Bill will be ratified in 2021, with the requirements to be implemented in 2023. For the purposes of our plan viability assessment the biodiversity net gain/habitats charge has been explicitly included in our appraisals. We have included a Net gain delivery cost of £1,211 per housing unit for greenfield development and £289 per housing unit for brownfield development. This is based upon the East regional cost (central estimate) in the Net gain delivery cost tables (Tables 16 and 17) from the DEFRA Biodiversity net gain and local nature recovery strategies Impact Assessment 15/10/2019, inclusive of an increase in cost to achieve 20% net gain.
BG/GI: Green infrastructure	The policy will require all development proposals – appropriate to its type, scale and location - to include green infrastructure, providing … varied benefits for people, wildlife and planet: To support successful delivery of green infrastructure, the policy will require proposals to demonstrate that green infrastructure has been planned as an integral part of the development, so that it informs the overall development design, and so that natural features are retained in situ; Across all phases of development; To be successful for the lifetime of the development, including providing plans for management, maintenance and funding.	Direct	This policy is to promote health, wellbeing and equality by safeguarding and improving open space. The policy outlines the need for a contribution from new residential development towards the provision of open space. This is taken into consideration within our viability assessment through: • the net-to-gross developable area assumptions as part of the BLV calculations; • the density assumption (dph) which is to allow for the relevant open space;

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Beyond setting out green infrastructure design principles as above, we are exploring whether this policy should require development to meet a green infrastructure standard such as Building with Nature. We would welcome your views on this topic, and will confirm the preferred approach at draft plan stage. The policy will also require development proposals to protect and enhance the wider green infrastructure network in accordance with a number of named site specific initiatives.		• External works costs which allow for relevant open space costs;
BG/TC: Improving Tree Canopy Cover and the Tree Population	This policy requires development proposals to preserve, protect and increase the amount and distribution of tree canopy cover… tree population… existing trees of value… existing hedgerows and the surrounding land…provide appropriate replacement tree or hedgerow planting…the provision of new woodland in appropriate locations.	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees (accredited arboriculturist) is included in the professional fee budget. We have assumed that the cost of relevant tree and hedgerow planting etc is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost and the net-biodiversity gain costs include for the relevant landscaping and tree planting etc; Where there are particularly mature trees (TPOs etc) and hedgerow to be protected, that this is known to the developer as part of their site due diligence and the costs of mitigation is factored into the price paid for the land. I.e. one cannot pay the same price for land which is cleared as a developer platform, compared to land which is constrained by mature trees and hedgerows.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
BGRC: River Corridors	The policy will require development located along the River Cam and its tributaries to protect, enhance and restore natural features… Protect and enhance the existing landscape of river corridors, referring to the Greater Cambridge Landscape Character Assessment… Ensure that the location, scale and design of development, protects and enhances the character, visual amenity and historic significance of river corridors and connected locations, including in particular considering views to and from rivers. Support enhanced access to, from and along river corridors for walking and cycling, whilst balancing this with the need to protect and enhance habitats for biodiversity, including:	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional reports is included in the professional fee budget. We have assumed that the cost of relevant mitigation is included in: • the net-to-gross site area assumption in terms of land take; • the external works cost; Where there are particularly nature conservation issues that arise from particularly sensitive development sites, that this is known to the developer as part of their site due diligence, the costs of mitigation should be factored into the price paid for the land.
BG/PO: Protecting open spaces	The Local Plan will continue to identify and protect open spaces, including village greens, parks, recreation areas, allotments, community orchards and Protected Village Amenity Areas, and Local Green Space.	Indirect	This will have an impact on the amount of land available for development. This has an indirect impact on the viability assessment on the price of land and Benchmark Land Value assumptions.
BG/EO: Providing and enhancing open spaces	Open space and recreation provision will be required to be provided by new development. Provision will be onsite where appropriate, if not financial contributions will be sought to help improve off site facilitates. This includes space for sports pitches, play space for children and teenagers, and more informal spaces, such as for dog walking. Allotments and other community food growing opportunities such as community orchards will also be sought. It is also important that green spaces are multi-functional, to help people to socialise and relax as well as encourage healthier lifestyles. The Councils have adopted open space standards, set out in their current local plans. These establish the quantity and accessibility of open space	Direct	This policy is to promote health, wellbeing and equality by safeguarding and improving open space. The policy outlines the need for a contribution from new residential development towards the provision of open space. This is taken into consideration within our viability assessment through: • the net-to-gross developable area assumptions as part of the BLV calculations; • the density assumption (dph) which is to allow for the relevant open space;

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	that should be provided, when it should be on site or is used to guide the scale of financial contribution required, guided by local opportunities and constraints. These standards are different for Cambridge and South Cambridgeshire, reflecting the differences between the City with its urban character and formal parks for example, and the more rural environment of the villages. . A review of the standards will be carried out to inform the draft plan to ensure they are up to date.		• External works costs which allow for relevant open space costs; • Site specific S106 contributions – where available (see Typologies Matrix). Our scheme Typologies Matrix and viability appraisals are also able to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
Wellbeing & Inclusion			
WS/HD: Creating healthy new developments	Integrate health considerations into policies across the Plan. Require health principles to be applied to new developments, drawing on the ten principles developed from the Healthy New Towns initiative. Require Health Impact Assessments to accompany planning applications (at a level of detail appropriate to the scale and nature of the application) with an updated approach to reflect good practice. Explore a policy which restricts the development of new hot-food takeaway premises close to schools or leisure centres and limits the concentration of hot food takeaway premises...	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the Health Impact Assessment is included in the professional fee budget.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
WSCF: Community, Sports, and Leisure Facilities	The Local Plan will require appropriate community, cultural, education, sports and leisure provision to meet the needs generated by new developments. The scale and range of this provision or contribution will need to address a wide variety of needs, including different age groups, of people with disabilities, and faith groups. In large scale developments and new communities, community development strategies will be required, to explore how places will become communities, and how early residents will be supported. These strategies may include cultural and public art activities, to help bring together new communities at an early stage of their development and should help foster greater community interaction and place making. It is also important that school places are made available in line with new residential developments in appropriate locations and in a timely manner.	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
WS/MU: Meanwhile uses during long term redevelopments	This policy will seek meanwhile uses on vacant sites or in underused buildings as part of the phased development of major development sites. These meanwhile uses will support the local community and contribute to the vibrancy of the area as new communities develop.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
WS/IO: Creating inclusive employment and business opportunities through new developments	Ensure new developments support the skills and training needs of local residents and provide opportunities for local businesses through local training and skills opportunities, for example apprenticeships… provide access for local businesses to supply chain opportunities in various stages of development.	Indirect	We have assumed this cost will be absorbed by overhead and profit/contingency so would not directly impact viability. Further it is in the same interests of the construction industry and services/manufacturing/logistics etc industries to have a strong labour pool to draw upon.
WS/HS: Pollution, health and safety	Take account of sources of pollution: • Require that development does not lead to or is subject to significant adverse effects as a result of noise, vibration, odour, light pollution; Ensure… that the land is suitable for the end use; Address impacts on air	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the Contaminated Land Reports etc is included in the professional fee budget.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	quality (including requiring Air Quality Management strategies to be prepared where appropriate)		
Delivering Great Places			
GP/PP1: Place/context sensitive design (responding to context / place first approach)	The policy will require all applicants to demonstrate how their proposals sustain and enhance the unique qualities of the Greater Cambridge area and the subtleties in the different landscape and settlement forms. … The policy will require all planning applications to include a comprehensive design and access statement that address this context.	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the Design and Access Statement is included in the professional fee budget.
GP/LC: Protection and enhancement of landscape character	The Greater Cambridge Local Plan will support development that respects, retains or enhances local landscape character (as set out in the Greater Cambridge Landscape Character Assessment). It will…require mitigation of loss of landscape features; protect important green gaps such as between Longstanton and Northstowe. • Protect and enhance the setting of Cambridge and other settlements, and strengthen or recreate the well-defined and vegetated edge of Cambridge. • Continue to protect identified Important Countryside Frontages in South Cambridgeshire.	Direct	This policy is an over-arching policy which links other more detailed policies described herein/above. For the purposes of our viability assessment we have assumed that the relevant cost of professional designers etc. to achieve high-quality design is included in the professional fee budget. It is in developers own interests to achieve high-quality, well-placed design as this adds value (as is demonstrated by the Building Better, Building Beautiful Commission report (January 2020). Well-designed place should therefore add to value and make development more viable.
GP/GB: Protecting and enhancing the Cambridge Green Belt	Guide the consideration of development proposals in the Green Belt. The Local Plan policy will include the established local purposes of the Cambridge Green Belt, which are to: • preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre • maintain and enhance the quality of its setting	Direct	Green Belt land is currently constrained by the green belt policy. They therefore have a very low Existing Use Value (EUV) as agricultural land etc. Where green belt sites are released for development there is a significant uplift in land value for the proposed use (e.g. residential development). The loss mitigation is to be paid for out of this land value uplift.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• prevent communities in the environs of Cambridge from merging into one another and with the city. • support enhancement of the Green Belt, such as for recreation and biodiversity.		In this respect we have included £1,000 per unit S106 cost for Green Belt Loss Mitigation. We have also explicitly taken into consideration: • the net to gross site area of the site to include a large landscaping buffer (the land cost of which is included in the land value assumptions/calculations) • external works costs to include walking and cycling routes, planning, SuDs etc
GP/QD: Creating high quality development	This policy will require proposals to demonstrate how they meet the following expectations: • Designed with communities in mind: • Ensure that buildings are orientated to provide natural surveillance and maximise opportunities to create active ground floor uses. • Create active edges on to public space by locating appropriate uses, as well as entrances and windows of habitable rooms next to the street. • Use design to minimise adverse impact on neighbouring buildings and spaces in terms of privacy and overlooking, sunlight and daylight, overshadowing and other micro climate considerations, artificial lighting, vibration, noise, fumes and odour, and other forms of pollution. • Introduce mixed uses proposals in a way that can benefit all occupants where appropriate, avoiding the mixing of incompatible uses • • Create local connections:	Direct	This policy sets out design principles that new development should follow in order to ensure Greater Cambridge's different characteristics and qualities are maintained and enhanced. There is therefore a direct impact on the construction cost. Notwithstanding this, the minimum design standard is the Building Regulations and therefore the cost of compliance is reflected in the BCIS costs that we have used within our appraisals. Note also that good design leads to high quality environments which are reflected in the value of real estate. We have used current values (and costs) within our appraisals. For the purposes of our viability assessment we have assumed that the relevant cost of professional designers etc. to achieve high-quality design is included in the professional fee budget.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• Ensure building entrances and exits are convenient, safe and accessible for all users throughout the day and night, with lighting and security features successfully integrated into the design. • • Are climate-positive: • Create robust and adaptable building forms that can be successfully adapted and reused, extending their lifespan and reducing the carbon impacts of demolition • Successfully integrate functional needs such as refuse, recycling, and bicycle parking does not negatively impact on the existing building or the amenity of neighbouring properties • • Contribute and respond to local character: • Provide a comprehensive design approach that achieves the successful integration of buildings, routes and spaces between buildings, topography, townscape and landscape. • Create attractive and appropriately-scaled built frontages to positively enhance streets and/or public spaces in both urban and rural settings. • Use materials and details that are of high quality, that will age well and be easy to maintain, and if an extension or alteration, reflect, or successfully contrast with, the existing building form, through the use of materials and architectural detailing. • Ensure that development proposals successfully integrate functional aspects such as waste and recycling, bicycle parking and car parking. • Any proposal for a structure that breaks the existing skyline and/or is significantly taller than the surrounding built form will need to demonstrate through visual assessment or appraisal with		

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	supporting accurate visual representations, how the proposals enhance the existing landscape and townscape and do not cause unacceptable impact on the historic environment. Major schemes should share a native 3-D file for assessment. •		
GP/QP: Achieving high quality landscape and public realm	Proposals will be required to demonstrate how they: Enabling local communities: • Ensure new and enhanced existing routes are designed inclusively, prioritising a pedestrian led movement hierarchy including generous and level footways that avoids street clutter. • Include seating, drinking water fountains, shade and shelter, bicycle parking, street lighting, signage and public art, designed in a coordinated and needs-led approach which does not obstruct the public realm or create street clutter. • Parking should not reduce the functionality of open spaces, and if on street should be inset in an expanded footway to allow pedestrian movements when not occupied. Enhance connectivity: • Ensure that new and existing public realm seamlessly connects, and that the quality and function of existing routes are enhanced. • Establish streets and open spaces that are well defined, and which clearly demarcate public and private space. • Create streets that respond to their levels of use while not allowing vehicular traffic to dominate. Respond to climate: • Be landscape led, by retaining and enhancing existing features including trees, natural habitats, boundary treatments and historic street	Direct	The cost of public realm assets is included in the cost of the external works within our appraisals.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	furniture and/or surfaces that positively contribute to the quality and character of an area. • Ensure species are selected that enhance biodiversity through the use of native planting and/or species capable of adapting to our changing climate. • Integrate surface water management through design to enable pedestrian accessibility and planting, retaining existing natural features where possible, do not pave over front gardens if this is compromised. • Factor microclimate into design proposals and that public spaces receive adequate sunlight. Integrate with local character • Respond to its context and relate to the character and intended function of the spaces and surrounding buildings through the use of high quality and well detailed materials that are easily maintained. • Ensure that the right growing conditions and future management regimes for landscape schemes are secured and implemented, and ensure that space for trees and other planting is incorporated that is appropriate to the scale of buildings. • Provide appropriate types of open space whether in urban or more rural places that link into other sequences of existing or new landscape spaces and wider settings.		
GP/HA: Conservation and Enhancement of Heritage Assets	Proposals affecting heritage assets will be considered in accordance with the guidance set out in the National Planning Policy Framework. Recognising the important contribution heritage assets of various types make to Cambridge and South Cambridgeshire, the policy	Direct	This policy has a direct impact on our viability assessment given that there is a cost associated with these policy requirements from developments in conservation areas and other historic environment assets.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	will require that proposals properly consider the historic environment and make a positive contribution to local character. Development will be required to demonstrate how it preserves or enhances the significance of the heritage assets of the Greater Cambridge, their setting and the wider townscape, including views into, within and out of conservation areas. The local plan will also continue to recognise the importance of local heritage assets (including buildings of local importance). We will include the criteria for the selection of these assets.		We have used current costs based on the BCIS and rebased them to the Cambridge & South Cambridge areas which take into consideration costs of 'typical' development across the Greater Cambridge authorities. We acknowledge that construction costs are likely to be higher within designated heritage environments, but values are also likely to be higher. Furthermore, developments involving heritage assets are likely to require a bespoke approach to viability e.g. enabling development and/or grants. For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the required heritage statement(s) is included in the professional fee budget.
GP/CC: Adapting Heritage Assets to Climate Change	The policy will require proposals to take a 'whole building' approach to undertaking works to heritage assets to enhance environmental performance; Support proposals which seek to undo the damage caused by previous inappropriate interventions (e.g. removal of cement render and replacement with breathable options); Give consideration to measures that will reduce carbon emissions and assist with adaptation to our changing climate (for example external shading or property level flood protection).	Direct	Ditto
GP/PH: Protection of public houses	Safeguard public houses, only allow their loss to other uses where they are no longer needed within the community as a public house or other form of community facility, demonstrated by evidence of effective marketing and exploration of options to make it viable.	Indirect	The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
Jobs			

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
J/NE: New Employment Development Proposals	Detail the considerations that will determine whether proposals for employment development in urban areas, villages, and the countryside are acceptable.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/RE: Supporting the rural economy	Support proposals for diversification schemes which enable continued operation of agricultural and other land based rural businesses particularly where they are engaged in sustainable land management or renewable / low carbon energy, where they are appropriate in scale to their location and, where possible, reuse existing buildings. Support the re-use of rural buildings in the countryside for employment purposes, where they are of permanent and substantial construction and in keeping with their surroundings. Allow the replacement of such buildings where it would bring about environmental improvement and a more sustainable development.		
J/AL: Protecting the Best Agricultural land	Restrict development which would lead to the irreversible loss of the best agricultural land (Grades 1, 2 or 3a) unless it is allocated in the local plan to meet development needs, or sustainability considerations and the need for the development are sufficient to override the need to protect the agricultural value of the land.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/PB: Protecting existing business space	Protect employment land from loss to other uses in Cambridge (including specific protection for industrial sites), villages, and countryside. Where loss is proposed, it will need to be justified by evidence that it is no longer needed (by being effectively marketed).	Indirect	The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
J/RW: Enabling Remote Working	Address how the plan can support remote working, and working at home.	Indirect	The implementation of this policy will impact the real estate market through the quality of the environment

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			and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
J/AW: Affordable Workspace and creative industries	Support development proposals that incorporate an element of affordable workspace, at rents maintained below the market rate. This includes provision of creative and artists' workspace, rehearsal and performance space and makerspace. Require affordable workspace as a proportion of larger commercial developments. Affordable workspace can be defined as workspace that has a rental value below the market rate (generally, 80% of the market rate or less). If on-site provision is not possible, require financial contributions for equivalent off-site provision.	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.
J/EP: Supporting a range of facilities in employment parks	Support appropriately scaled leisure, eating and social hub facilities where they support the functioning of the employment area, and they are primarily aimed at meeting the needs of workers on site.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/RC: Retail and Centres	Support the retention of retail and leisure uses as well the revitalisation of high streets… Support the development of village shops… Develop a specific approach for Cambridge city centre including its shopping centres and primary shopping area designations... Require new vibrant centres in new communities, to meet the day to day of local communities, by requiring new centres of appropriate scales to be creating in our strategic new developments.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
J/VA: Visitor Accommodation, Attractions and Facilities	The Greater Cambridge Local Plan will respond to Identify, sites for the need for new visitor accommodation such as hotels and aparthotels to meet identified need. This will be informed by new assessments of visitor accommodation needs that will be completed to inform the draft plan stage.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Support the development of new hotels and other types of dedicated visitor accommodation that do not involve the loss of residential accommodation within and on the edge of Cambridge. Support for visitor accommodation within development frameworks in South Cambridgeshire where the scale and type of development is directly related to the role and function of the centre and supports its vitality. Permit new visitor accommodation outside development frameworks in South Cambridgeshire by the change of use / conversion / replacement of suitable buildings and by small scale new developments appropriate to local circumstances.		
J/FD: Faculty Development and Specialist/Language Schools	The policy will outline how new faculty and specialist facilities/development will be supported, and the principles that need to be satisfied… The policy will also explain how the development of existing and new specialist colleges and/or language schools will be permitted where they provide residential accommodation, social and amenity facilities for all non-local students…	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
Homes			
H/AH: Affordable Housing	National planning policy expects affordable housing to be provided on site, and only allows affordable homes to be sought on developments of 10 dwellings or more. Require 40% of new homes on sites of 10 or more dwellings to be affordable, with a few exceptions… Mixed tenure developments that include Build to Rent homes should make up any shortfall in affordable homes within the Build to Rent element on the remainder of the development, so that overall the development delivers 40% affordable homes. Set out that the affordable housing tenures provided should include the requirements as set out in national planning policy and guidance – the first	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals. Note that in accordance with the PPG, policy requirements, particularly for affordable housing, should be set at a level that takes account of affordable housing and infrastructure needs and

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	at least 25% of the affordable homes on the development to be First Homes, with at least 10% of all new homes on the development to be provided as affordable home ownership products. Set out the proportion of the different affordable housing tenures for the remaining up to 75% of the affordable homes (after the at least 25% First Homes have been accounted for)…. Set out that affordable homes must be designed to be indiscernible from market homes, and that affordable homes should be distributed throughout the site in small groups or clusters… The affordable homes should be provided on-site except for in the circumstances set out in paragraph 62 of the NPPF.		allows for the planned types of sites and development to be deliverable, without the need for further viability assessment at the decision-making stage. (Paragraph: 002 Reference ID: 10-002-20190509, Revision date: 09 05 2019) In carrying out our appraisals, we have assumed the following tenure(s): • 25% First Homes (with a 30% discount compared to the open market value) • 15% shared ownership • 10% social rent • 50% affordable rent (rents are set at 60% of market rents in Cambridge and 70% of market rents in South Cambs)
H/ES: Exception Sites for Affordable Housing	This policy will support exception sites in appropriate locations, typically adjoining existing settlements, and that are proportionate in scale to those settlements where there is an identified need. A small amount of market housing will be allowed on exception sites where it can be justified on viability grounds. The use of such market housing in the form of custom and self-build housing will be supported. Community-led housing will also be supported on exception sites where it meets an identified need for affordable housing. First Homes are a specific kind of discounted market sale housing and fall within the definition of affordable housing for planning purposes. The policy will be tailored to ensure First Homes exception sites are complementary to rather than compete with rural exception sites. This could be through, for example, the use of locally specific criteria to determine eligibility in rural parishes.	Direct	Our scheme Typologies Matrix and viability appraisals are specifically designed to test the viability of this policy in the context of the cumulative impact of all of the new policies herein. The drafting of this policy is an iterative process having regard to the results of the viability appraisals and specifically the sensitivity appraisals.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
H/HM: Housing Mix	Ensure that new housing is generally of a size and type to meet the housing needs of different groups in the community. Require new housing developments of 10 or more dwellings to provide an appropriate mix of housing sizes (number of bedrooms), with the proportions of dwellings of each size to be guided by the housing mix for each tenure and for Cambridge and South Cambridgeshire as set out in the recommendations from the Cambridgeshire and West Suffolk Housing Needs of Specific Groups study. As the proportion of dwellings of each size is provided as a range, this allows flexibility for local circumstances. Exceptions will be allowed where an alternative housing mix is justified by site specific circumstances, such as local character, affordable housing demand on the councils' housing registers the built form of the new development, and the existing housing mix in the surrounding area. On new developments encourage the delivery of a mix of types of homes – houses, flats and bungalows – proportionally across all market and affordable tenures… Encourage applicants to work collaboratively with a Registered Provider, the relevant Councils housing team, and the Greater Cambridge Shared Planning service, to discuss the housing mix for a new development ahead of the submission of a planning application.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix. The mix is shown within Appendix 2 Typologies.
H/HD: Housing Density	The policy will seek to deliver site specific appropriate net densities across Greater Cambridge, taking advantage of opportunities to deliver higher densities on sites with good accessibility subject to local character considerations. We propose to apply a design-led approach to determine the optimum development capacity of sites in order to make the best use of land. A design-led approach to optimising site capacity requires consideration of design options to determine the most appropriate form of development that responds to a site's context and capacity for growth, existing and planned supporting	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	infrastructure, local character, and other local circumstances. We want to encourage higher densities in locations which are, or will be, highly accessible by walking, cycling and public transport.		
H/GL: Garden land and subdivision of existing plots	The policy will continue the approach of the current Cambridge and South Cambridgeshire local plans by resisting inappropriate development of residential gardens and the subdivision of existing plots. This will be done by reference to a range of factors including local character, adequacy of remaining amenity space, trees, heritage and biodiversity. The policy will also seek to stop development that would compromise the potential of other land to be brought forward for development.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
H/SS: Residential Space Standards and accessible homes	Ensure that all new residential developments provide a high standard of amenity for existing and future users through requiring that they meet or exceed national internal space standards or it's successor, provide direct access to private amenity space, and that there is appropriate provision of accessible and adaptable homes. New homes created through residential conversions and…changes of use… should seek to meet or exceed the nationally described residential space standards. Affordable housing for rent homes are designed to meet the nationally described residential space standards for the maximum number of bedspaces for that size and type of dwelling. All new homes to be Building Regulations M4(2) 'accessible and adaptable' dwellings. Exceptions only where it can be demonstrated that site specific circumstances, in addition to the other requirements for the development, make the proposed development impractical, unachievable or unviable. 5% of affordable homes on new developments that include 20 or more affordable homes to be Building Regulations M4(3) 'wheelchair user' dwellings, to be provided as Building Regulations M4(3)(a) 'wheelchair adaptable' dwellings unless the Council has identified a need for Building	Direct	This policy sets out design principles that new development should follow in order to ensure that housing standards are maintained. We have developed our scheme typologies (see Typologies Matrix) having regard to the house sizes that have been developed and sold recently (see the Residential Market Paper). We have applied the Nationally Described Space Standard (NDSS) within our appraisals as the minimum standard. This policy also ensures there is an adequate supply for housing for an aging population and for people with disabilities. M4(2) Category 2 - Accessible and adaptable dwellings – are dwellings that provide a higher level of accessibility that is beneficial to a wide range of people who occupy or visit the dwelling, and provides particular benefit to older and disabled people, including some wheelchair users. M4(3) Category 3 - Wheelchair user dwellings – are dwellings that are suitable, or potentially suitable

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Regulations M4(3)(b) 'wheelchair accessible' dwellings. Exceptions only where it can be demonstrated that there is no evidence of need. All newly created homes (through conversion, change of use, or new build) to have direct access to private amenity space.		through adaptation, to be occupied by wheelchair users. This has a cost implication for development. In addition to the baseline BCIS construction cost we have made extra-over allowance for these optional Building Regulations requirements to demonstrate that this is achievable: + £586 per unit for accessible and adaptable housing M4(2) Category 2 + £11,386 per unit for wheelchair adaptable dwellings M4(3) Category 3. This is based on the DCLG housing Standards Review, Final Implementation Impact Assessment, March 2015, paragraphs 153 and 157, which we have increased by 2% per annum.
H/SH: Specialist Housing and homes for Older People	Provide policy guidance for specialist housing designed and designated for occupation by older people, disabled people, vulnerable people with specific housing needs and for those wishing to live together as a community (co-housing). Carry forward the criteria based policy for considering proposals for new specialist housing (falling within Use Class C2, but excluding student accommodation) as included in the adopted Cambridge Local Plan 2018, but with the policy applying to the whole of Greater Cambridge. The criteria will ensure that new specialist housing is provided where there is a need, in suitably accessible locations, and without resulting in an excessive concentration of such housing.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/CB: Self and Custom Build Homes	Require that 5% of all homes in residential developments of 20 dwellings or more are for custom and self-build.	No overall Impact	No additional cost, given plots can be sold at full value and any plots not sold after 12 months will revert to developer.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Include a mechanism within the policy to allow for plots identified to be for self and custom build homes to be delivered by the developer or others if the plot has not been sold as a self or custom build plot after at least 12 months of appropriate marketing.		We have not appraised any self-build schemes explicitly. All our residential typologies are on the basis that land can be acquired and developed into a new unit (including appropriate allowance for profit). Where self-building involves plot sales and/or part completed units (e.g. foundations, or 'wind and watertight') the working assumption is that the developers' profit is commensurate with the development work undertaken and therefore there is sufficient development surplus to incentivise the self-builder to complete the unit.
H/BR: Build to Rent Homes	require that proposals for Build to Rent developments, or the amount of Build to Rent within a mixed tenure development, do not create an over-concentration of this tenure in a local area, are distributed across the development (if part of a wider mixed use or mixed tenure development), and meet specific criteria in terms of ownership and management, covenants, and tenancies. No more than 10% of the total housing on a mixed tenure development of 500 or more dwellings should be Build to Rent. Build to Rent developments should meet the requirements as set out in the Greater Cambridge Housing Strategy Annexe 9: Build to Rent (Cambridge City Council and South Cambridgeshire District Council, June 2021) or a successor document. • The policy will require at least 20% of homes on a Build to Rent development of 10 or more homes to be affordable private rented, and make clear that these homes will contribute towards the overall 40% affordable homes to be provided on a mixed tenure development. Affordable private rented homes must be designed to be indiscernible	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	from market homes and that the affordable homes should be distributed throughout the site in small groups or clusters.As new homes, all Build to Rent developments must meet the nationally described residential space standards and accessible homes standards, • Set out that the affordable private rented homes must be designed to be indiscernible from market homes and that affordable homes should be distributed throughout the site in small groups or clusters.		
H/MO: Houses in Multiple Occupation (HMOs)	Set the standards that proposals for HMOs must meet, and provide the criteria to be used when considering proposals for new HMOs.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
H/SA: Student Accommodation	Outline the type and location of development that will be permitted Support the identified growth for student accommodation over the next ten years Support new Purpose-Built Student Accommodation that reduces demand for private accommodation occupied by full-time students.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.
H/DC: Dwellings in the Countryside	Address the types of residential development that may be acceptable in the countryside. The policy will have a number of sub-components addressing: replacement dwellings in the countryside; extensions to existing dwellings in the countryside; new countryside dwellings of exceptional quality; the reuse of buildings in the countryside for residential use; and, dwellings to support a rural based business. Each sub-component will have its own policy requirements for the development to be acceptable, and it is proposed that these are carried forward from the South Cambridgeshire Local Plan 2018.	Direct	In determining the relevant scheme typologies, we have had regard to the requirements of this policy. The relevant density assumption and unit mix is set out on the Typologies Matrix.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
H/RM: Residential Moorings	Support the provision of new residential moorings by setting out the criteria to be used when considering proposals for them.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
H/RC: Residential Caravan sites	Support the provision of new residential caravan sites by setting out the criteria to be used when considering proposals for them.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
H/GT: Gypsy and Traveller and Travelling Show People sites	The policy will make provision for the housing needs of Gypsies and Travellers and Travelling Showpeople over the plan period.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
H/CH: Community-led housing	Recognise that community led housing developments will be brought forward within Greater Cambridge, and set out that any proposals for these uses will be considered against the policies applicable to residential developments. Rural exception sites for affordable housing (see H/ES above) and self and custom build homes (see H/CB) are examples of developments that can be brought forward as community led housing developments.		
Infrastructure			

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
I/ST: Sustainable Transport and Connectivity	This policy will seek to deliver sustainable and inclusive communities by minimising the need to travel and reducing distances, whilst ensuring there is effective and sufficient sustainable transport mode choice and improved connectivity for everyone of any ability. Developments which would have significant impacts would be refused. Developers will be required to submit documentation, including a Transport Assessment (integrating a Low Emissions Strategy), Travel Plan, and Health Impact Assessment … to demonstrate how many trips will be generated by the development, their impacts … and how they will be accommodated and addressed, maximising opportunities for sustainable travel. Innovative and flexible solutions will be sought … Appropriate to the scale and nature of the proposals developers will be required to contribute to improvements to public transport and deliver new and improved sustainable active travel connections… This policy will improve opportunities for seamless interchange between different modes, for example at travel hubs, and address the whole journey …	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the required transport documents is included in the professional fee budget.
I/EV: Parking and Electric Vehicles	Address the provision and accommodation of cycle and vehicle parking, including infrastructure for electric vehicle charging. Developments will be required to deliver, safe, secure, and convenient cycle parking at homes, businesses, and key destinations including travel hubs. It is proposed to continue to set minimum standards for numbers of cycle spaces. The quantity and type of car parking will be informed by the mix of land uses, location and accessibility of the development by walking, cycling and public transport, to ensure an appropriate level to accommodate local needs (including the need for disabled people parking) whilst avoiding a proliferation of car parking in locations with good accessibility. The policy will require parking to be accommodated within the public realm to improve the quality of place, will encourage innovative and flexible	Direct	For the purposes of our viability assessment we have included £1,000 per unit for EV charging (and £2,500 for a multi-charging point for every 4 x flats). These costs are based on research and commentary undertaken by Bioregional and Currie and Brown. For the purpose of viability, we have assumed that parking for cars and cycling is included within the externals allowance we have included.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	solutions to reduce car parking in appropriate locations, such as through smart parking and the provision of car clubs and shared parking, including car barns on the edge of accessible larger developments, whilst avoiding displacement parking. Vehicle parking should include electric charging infrastructure (with appropriate grid reinforcement), which should be designed into the public realm, to address the national commitment to phase out petrol and diesel cars. Charging infrastructure should be able to accommodate other vehicles including mobility scooters, electric cycles and electrification of the bus fleet. Where car parking is provided, it is proposed that electric car charging points (minimum of 7kW) should be included at all developments at the following levels: • Dwellings with private parking: 1 charge point per dwelling (100% active) • Communal parking areas: 1 charge per parking space (50% active, 50% passive) • Employment: 30% with active charge points, and 30% with passive. • Retail: 20% of bays with active charge points, and 20% with passive. • transport. Controlling parking levels in accessible locations is part of this.		
I/FD: Freight and Delivery Consolidation	Seek opportunities to reduce the number of freight and servicing vehicles and their environmental impact on Greater Cambridge, particularly at peak times, while promoting movement of freight by rail and sustainable transport modes. Support development/enhancement and safeguarding of local delivery hubs, where they accord with other policies in the plan, provided they do	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	not cause unacceptable impacts on Greater Cambridge's strategic road networks, and:		
I/SI: Safeguarding important infrastructure	This policy will safeguard important infrastructure from the impacts of development to ensure the continuation of the infrastructure purpose and to also support sustainable growth and meet any demand that growth will place on the area.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
I/AD: Aviation Development	Control development proposals related to aviation, and set out in what circumstances, and how, developments should take account of aviation safety.	Indirect	This is a strategic level policy. The implementation of this policy will impact the real estate market through the quality of the environment and the strength of the economy created. This will impact real estate values (and costs e.g. land) over time through the price mechanism.
I/EI: Energy Infrastructure Masterplanning	Require energy masterplans for strategic developments to consider the capacity of infrastructure to support the development, any necessary reinforcements and the approach to energy provision to support net zero carbon development and the electrification of transport giving consideration to site wide approaches. The policy will also seek to ensure that land required to support the reinforcement of existing electricity infrastructure, for example land adjacent to existing primary sub stations, is safeguarded from other forms of development.	Direct	This policy has a direct impact on the development costs. As the IDP documents do not contain any specific infrastructure costs, we have made assumptions on the level of infrastructure required – please refer to I/ID.
I/ID: Infrastructure and Delivery	Only permit development if there is, or will be, sufficient infrastructure capacity to support and meet all the requirements arising from the new development cumulatively, at the time when they are needed. Developers	Direct	This policy has a direct impact on the development costs.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	will be required to deliver infrastructure directly, or contribute through planning obligations, community infrastructure levy or its successor. Development will not be permitted on a site where it forms part of a larger site and there would be a requirement for infrastructure provision if developed as a whole. Infrastructure needs will be informed by an Infrastructure Delivery Plan and schedule which will accompany later stages of the Local Plan.		As the IDP documents do not contain any specific infrastructure costs, and this is a high level assessment at this stage, we have made assumptions on the level of infrastructure that would be required, based on the typologies as follows: Urban A & C (AAP): £30,000 per dwelling Cambridge East: £30,000 per dwelling Cambourne: £30,000 per dwelling Urban B: £0 Edge of Cambridge (greenfield): £20,000 per dwelling Edge of Cambridge (brownfield): £15,000 per dwelling New settlement: £30,000 per dwelling Dispersal villages: £10,000 per dwelling More detailed work will be undertaken at the draft plan stage.
I/DI: Digital infrastructure	Development proposals will be expected to provide gigabit capable connections, via multiple providers. where available, to each premise. In locations where gigabit capable connectivity is currently available: • The development will be expected to include the infrastructure to connect to these services and make them available to occupiers. In locations where gigabit capable connectivity is not currently available:	Direct	For the purposes of our viability assessment we have assumed that the relevant cost of professional fees for the required connectivity documents is included in the professional fee budget. For the purpose of viability, we have assumed that the broadband infrastructure/street furniture is included within the externals allowance we have included.

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• Applicants will be expected to demonstrate that they have engaged a range of providers to upgrade infrastructure to deliver gigabit capable connections. • Where one or more providers have agreed to provide gigabit capable connectivity, the development should be designed to connect to this service and make it available to occupiers. • Where no agreement can be reached to provide gigabit capable connectivity at the present time, Superfast Broadband may be considered as an alternative. In addition, the development will be expected to incorporate dedicated telecommunications ducting to enable the provision of gigabit capable connectivity in the future. In all cases, to encourage competition and consumer choice, this will include the provision of multiple ducts to enable several providers to access the site. Gigabit capable broadband connectivity delivers download speeds of up to 1Gbps, the equivalent of 1,000Mbps. This compares to Superfast Broadband which provides speeds of 30 Mbps or more.		

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	Mobile phone infrastructure Major development proposals of 250 homes or 10,000m2 must carry out an assessment of whether the current mobile coverage and capacity is suitable for the proposed new development. In locations where mobile coverage is deemed suitable: No further action is required however the design of the development should consider the impact of building design on mobile coverage for existing and future occupants and take appropriate action to mitigate any adverse impacts. In locations where mobile coverage is either available but the quality is poor and/or is expected to be impacted by capacity constraints or where coverage is not currently available: • Applicants will be expected to demonstrate that they have engaged with Mobile Network Operators (MNOs) to determine a strategy to ensure that mobile coverage can be improved and maintained at the site. • Where one or more MNOs agree to make improvements to their mobile coverage it must be confirmed whether this will be via: a. MNOs adjusting their existing assets to improve coverage for the new development.		

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	b. MNOs and the applicant agreeing a location for additional masts and/or aerials for which the applicant will facilitate installation including the provision of power, full fibre connectivity and maintenance access. c. Any other approach agreed with the MNO. Where no agreement can be reached to improve mobile coverage at the present time, the applicant must ensure that an appropriate location(s) for new mobile infrastructure is made available for future use, this can be in the form of roof-space, building frontage space, highways space or other land, all of which must have suitable access arrangements in place for installation and maintenance for the life of the installed asset. A suitable power supply and fibre connection must be made available to the location(s). **Small cell mobile communications technology** Development proposals of 30 homes or 1,000m2 employment space must include suitable infrastructure that would support any future rollout of the latest small cell mobile communications technology. For example: • Require the design of street furniture in such a way that the installation of telecoms equipment and other sensors can be included and easily maintained without causing disruption.		

Policy	Policy Contents […paraphrased where appropriate for ease]	Impact on Viability *	Implications for Local Plan and CIL Viability Assessment
	• Ensure that fibre connections are easily accessible to enable connection to street furniture such as street lighting columns to facilitate future improvements. As the micro cell technology is still in development the Local Authority will provide the latest guidance on the design requirements. **Publicly accessible Wi-fi** Encourage premises and spaces where there are significant levels of use by members of the public to have regular access to provide publicly accessible Wi-Fi.		

L:_Client Projects\2004 Cambridge WPV_Greater Cambridge Planning\2107 Policies Matrix\210728 Greater Cambridgeshire Policies Matrix_v4.docx

210826 Greater Cambridgeshire Typologies Matrix_v4 - Residential Typologies

Draft for Consultation

			Site Typology								CIL - Baseline [5]	Affordable Housing Requirements							Scheme Typology																			
Appraisal Ref.	Appraisal Description	Housing Capacity	Market Area / Value Zone	Greenfield / Brownfield	Gross Site Area (ha) [1]	Net to Gross ratio (%)	Net Developable Site Area (ha)	Net Developable Site Area (acres)	Development Density [1]	Sub-total Policy Costs		AH Target [6]	AH Basis [6]	AH Tenure Mix [6]:		Shared Ownership (% of AH)			Unit Types	Market H	Market Housing Mix [8]:							Afforda	Affordable Tenures Housing Mix: [8]							Cat. M4(2)	Cat. M4(3)
		(# units)							(dph net)	(£ per unit)	(£/psm)	(%)	(on-site, CSum, or NA)	First Homes (% of AH)	Shared Ownership (% of AH)	Social Rented (% of AH)	Affordable Rent (% of AH)	Total check		Studio	1B F	2B F	3B F	2B H	3B H	4B H	Total	Studio	1B F	2B F	3B F	1B H	2B H	3B H	4B H	Total	[9]	
A	Urban A	700	Mid	Brownfield	13.33	70%	9.33	23.06	75		£0	40%	On-site	25%	15%	10%	50%	100%	Flats and Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
B	Urban B	50	Higher	Brownfield	0.35	95%	0.33	0.82	150		£0	40%	On-site	25%	15%	10%	50%	100%	Flats	5.0%	30.0%	50.0%	15.0%				100.0%		7.5%	30.0%		37.5%	25.0%			100.0%	100%	5%
C	Urban C	700	Mid	Brownfield	3.11	75%	2.33	5.76	300		£0	40%	On-site	25%	15%	10%	50%	100%	Flats	5.0%	30.0%	50.0%	15.0%				100.0%		7.5%	30.0%		37.5%	25.0%			100.0%	100%	5%
D	Edge of Cambridge A	3870	Mid	Greenfield	193.50	50%	96.75	239.07	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
E	Edge of Cambridge B	1935	Mid	Greenfield	96.75	50%	48.38	119.55	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
F	Edge of Cambridge C	500	Mid	Greenfield	17.86	70%	12.50	30.89	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
G	Edge of Cambridge D	3870	Mid	Brownfield	193.50	50%	96.75	239.07	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
H	Edge of Cambridge E	1935	Mid	Brownfield	96.75	50%	48.38	119.55	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
I	New Settlement A	5120	Lower	Greenfield	256.00	50%	128.00	316.29	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%			20.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
J	New Settlement B	2560	Lower	Greenfield	128.00	50%	64.00	158.14	40		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
K	Dispersal villages A	50	Lower	Greenfield	1.85	90%	1.67	4.13	30		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%			20.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
L	Dispersal villages B	50	Lower	Brownfield	1.85	90%	1.67	4.13	30		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%			20.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
M	Dispersal villages C	250	Lower	Greenfield	9.52	75%	7.14	17.64	35		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%			20.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
N	Dispersal villages D	250	Lower	Brownfield	9.52	75%	7.14	17.64	35		£0	40%	On-site	25%	15%	10%	50%	100%	Houses		5.0%			20.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
O	Build to Rent	1000	Higher	Brownfield	3.70	90%	3.33	8.23	300		£0	40%	On-site	0%	0%	0%	100%	100%	Flats	5.0%	30.0%	50.0%	15.0%				100.0%	7.5%	30.0%	37.5%	25.0%					100.0%	100%	5%
Strategic Sites																																				
P	North East Cambridge AAP	700	Mid	Brownfield	13.33	70%	9.33	23.06	75		£0	40%	On-site	25%	15%	10%	50%	100%	Flats and Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
Q	Cambridge East Airport	1000	Mid	Greenfield/ Brownfield	17.00	60%	10.20	25.20	98		£0	40%	On-site	25%	15%	10%	50%	100%	Flats and Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%
R	Cambourne	1000	Lower	Greenfield	37.00	60%	22.20	54.86	45		£0	40%	On-site	25%	15%	10%	50%	100%	Flats and Houses		5.0%	10.0%		10.0%	45.0%	30.0%	100.0%		30.0%	18.8%			18.8%	25.0%	7.5%	100.0%	100%	5%

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Appraisal Ref.	Appraisal Description	Housing Capacity	Market Area / Value Zone	Greenfield / Brownfield	Gross Site Area (ha) [1]	Net to Gross ratio (%)	Net Developable Site Area (ha)	Net Developable Site Area (acres)	Development Density [1]	Sub-total Policy Costs		AH Target [6]	AH Basis [6]	AH Tenure Mix [6]:		Shared Ownership (% of AH)			Unit Types	Market H	Market Housing Mix [8]:							Afforda	Affordable Tenures Housing Mix: [8]								Cat. M4(2)	Cat. M4(3)
		(# units)							(dph net)	(£ per unit)	(£/psm)	(%)	(on-site, CSum, or NA)	First Homes (% of AH)	Shared Ownership (% of AH)	Social Rented (% of AH)	Affordable Rent (% of AH)	Total check		Studio	1B F	2B F	3B F	2B H	3B H	4B H	Total	Studio	1B F	2B F	3B F	1B H	2B H	3B H	4B H	Total	[9]	
																											-									-		

Notes

[1] Site density assumptions based on Policy HQP2

[2] based on Monitoring data: 8 units 0% AH - off-site AH 8.9.25

[3] Policy ENS2 - Cost taken from Biodiversity Net Gain and Local

[4] Policy 22 for electric charging vehicles - cost

[5] CIL zones

[6] Policy HQP3 on affordable housing

[7] NPPF requirement for minimum 10% affordable home

[8] Mix based on HEDNA in accordance with M4 (2) and M4 (3) based on policy HQP2

[9]

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First Proposals Consultation Stage

Appendix 3

Residential Property Market Report

Greater Cambridge Shared Planning

August 2021

Quality Assurance

Date of Report	20 August 2021
Version	V4
Filename and path	L:_Client Projects\2004 Cambridge WPV_Greater Cambridge Planning_Reports\2107 Residential Market Paper\210820 Greater Cambridge Resi Market Report_v4.docx
Prepared by	Lawrence Owho, Consultant Ed Tyler, Senior Consultant
Checked by	Brett Devenish, Director
Date	25 August 2021
Authorised by	Ben Aspinall, Managing Director
Date	

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1 Introduction

1.1 This residential market report has been used to inform our assessment for the Greater Cambridge Local Plan development viability testing; and the viability assessment of the North East Cambridgeshire AAP (NECAAP). This report draws on data from recognised published data such as CoStar, EGi, Land Registry, Rightmove.co.uk, Zoopla, Energy Performance Certificates (EPCs), published reports and agent consultations.

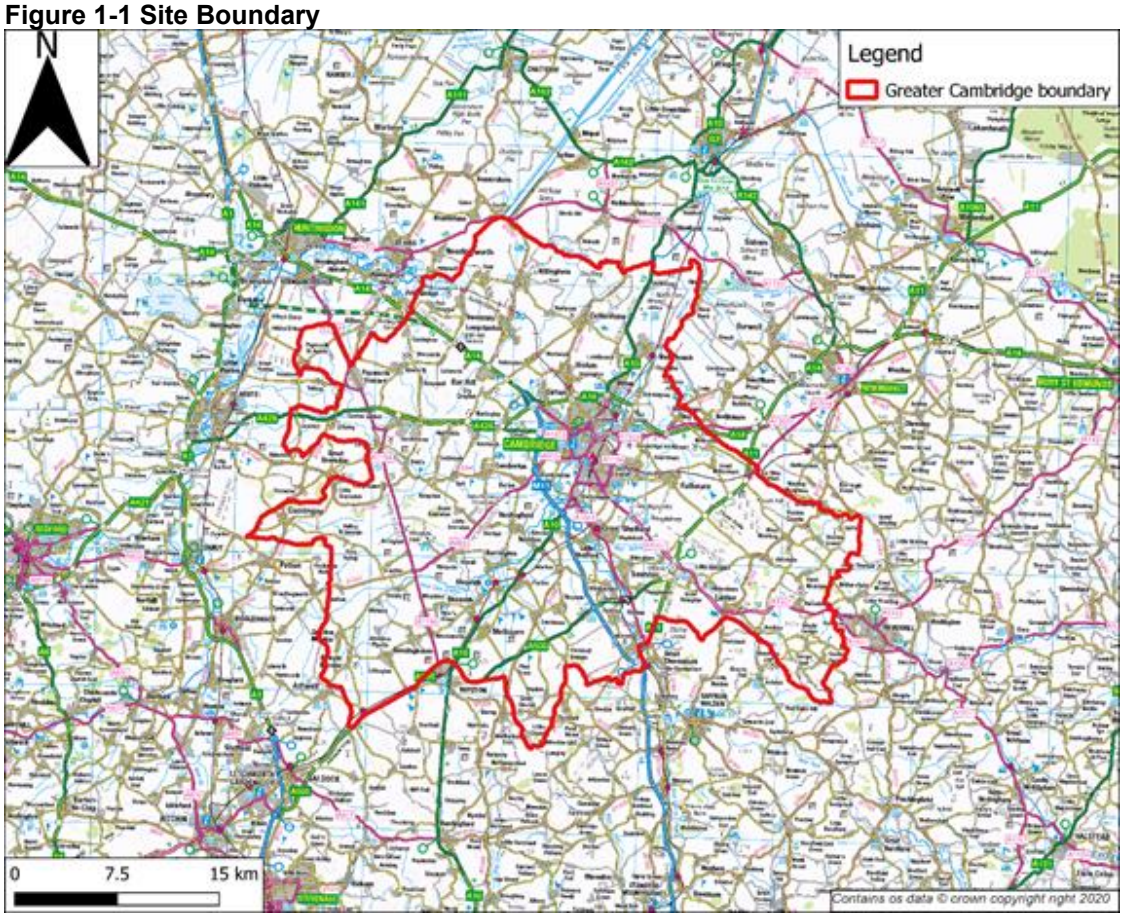
1.2 Our market assessment considers the following markets:

- General needs residential
- Build to rent (BTR)
- Older person's accommodation
- Student accommodation

Study area

1.3 This market report considers the Greater Cambridge area. As set out in Figure 1-1 the Greater Cambridge area comprises the urban area of Cambridge City and the more rural area of South Cambridgeshire.

Figure 1-1 Site Boundary



Source: AspinallVerdi, 2020

Novel Coronavirus (Covid-19)

1.4 The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on 11 March 2020, has impacted global financial markets. In the second quarter of 2020, the United Kingdom entered the deepest recession in modern history which has consequently impacted property market activity.

1.5 Many agents and commentators anticipated house prices would fall as a result of the nationally-imposed lockdown and consequent freeze in property market activity. However, as restrictions were eased during the summer of 2020, many agents reported surges in interest and uplifting activity. This has been attributed to the combination of pent-up demand and the introduction of the stamp duty holiday.[1]

1.6 Market commentators have also noticed that buyers have reappraised the benefits of urban living, with increasing numbers of buyers seeking larger spaces to work from home and an increased priority for private external space. As this trend has grown, some agents in well-connected,

[1] The Guardian, 2020. Hope for some, heartbreak for others as house prices go through the roof.

greener locations are noticing that demand is increasing house prices. As a result, there are likely to be both winners and losers in the property market over the coming months and years.[2]

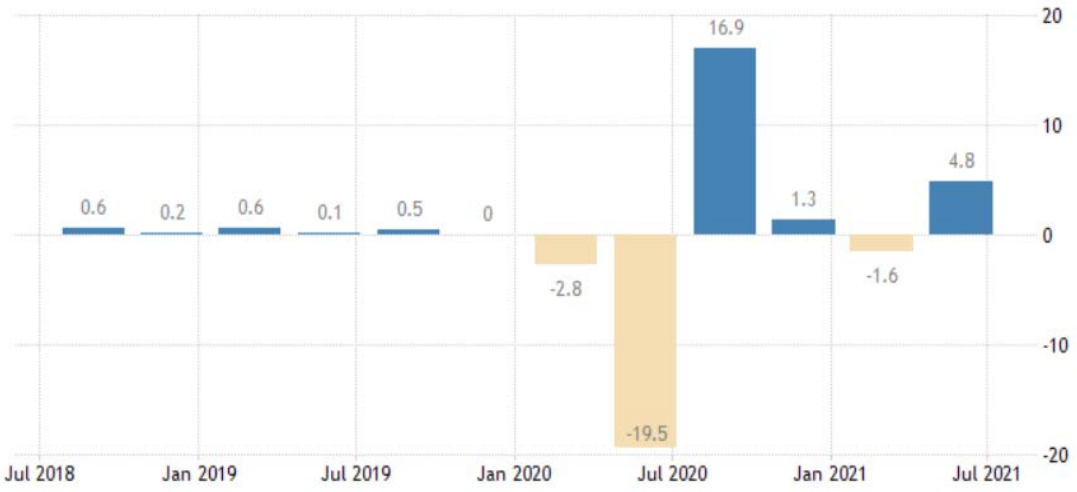
1.7 Due to these uncertainties, we recommend that when policy makers are making decisions based on viability evidence in the current climate, they must ensure there is an adequate "viability buffer". In essence, a degree of caution should be taken when imposing planning policies and more surplus should be left as the profitability and viability of development may reduce.

[2] The Guardian, 2020. Escape to the country: how Covid is driving an exodus from Britain's cities

Impact on the local economy

1.8 The pandemic has a significant impact on the UK economy, shows that since lockdown the UK economy (gross domestic product (GDP)) has had multiple periods of GDP falls, coinciding with the strictest lockdown periods. The UK was in recession at the end of the 2nd quarter of 2020, before rebounding as sectors re-opened, before a smaller fall in January 2021, which again has rebounded with the success of the vaccine programme and relaxation/removal of restrictions.

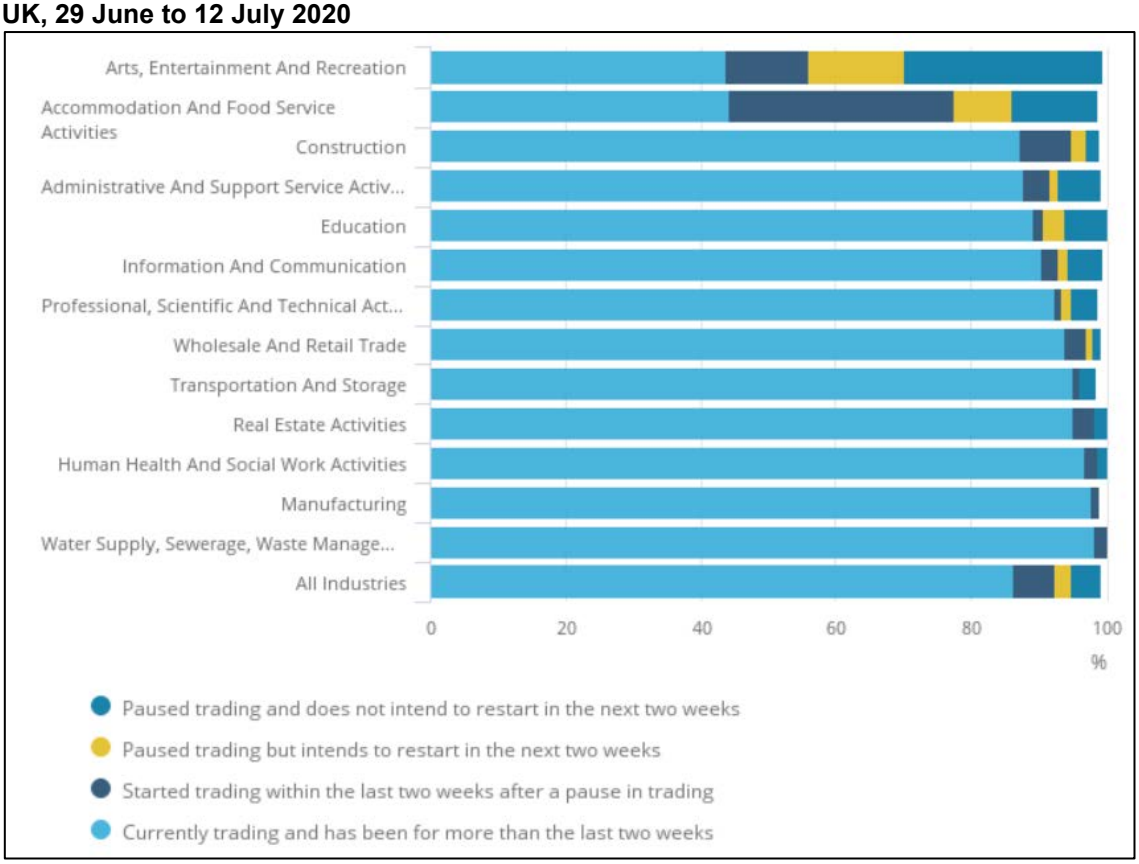
Figure 1-2 UK GDP growth last 3 years



Source: Office for National Statistics

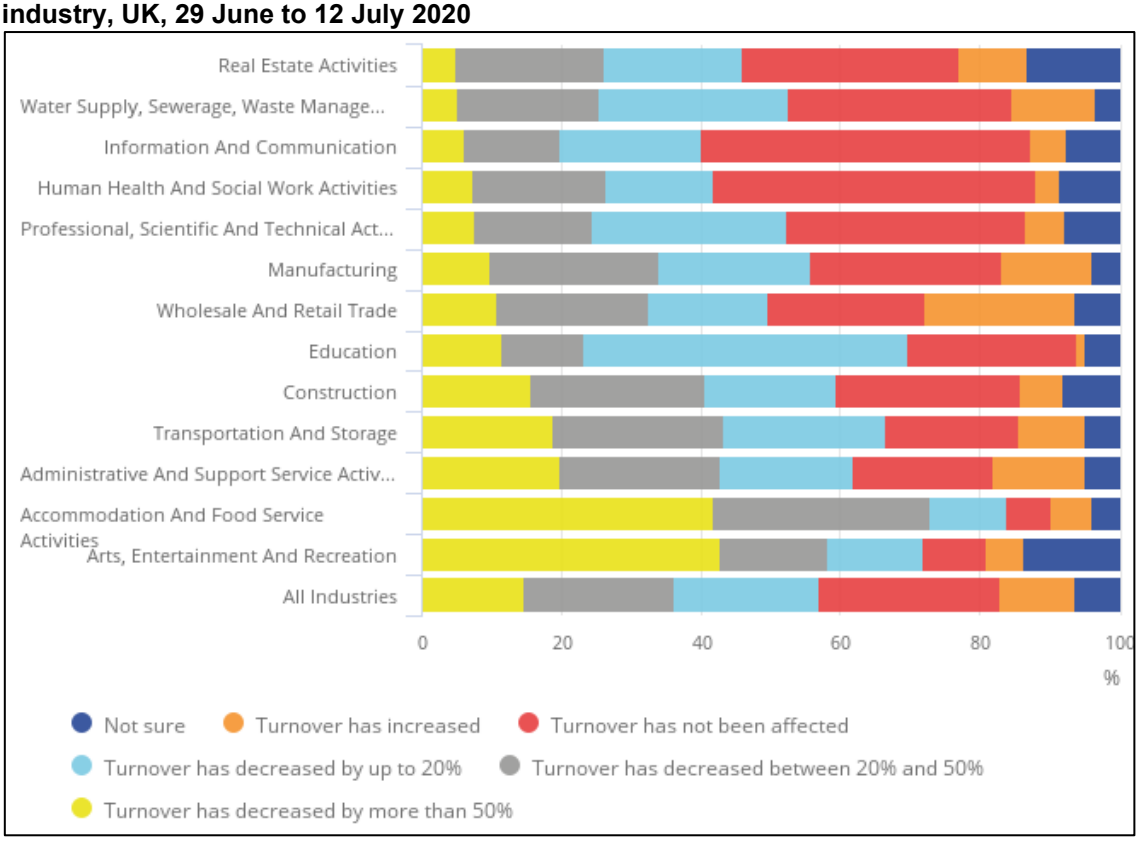
1.9 As shown in Figure 1-3, all sectors have been affected by the pandemic through pausing in trading. The arts and the service sectors, then followed by construction, have been particularly hard hit and continually being affected despite easing of restrictions. Due to the pandemic, a large percentage of businesses in all sectors are seeing a reduction in turnover (see Figure 1-4).

Figure 1-3 Percentage of businesses, current trading status, broken down by industry, UK, 29 June to 12 July 2020



Source: Office for National Statistics – Business Impact of Coronavirus (Covid-19) Survey

Figure 1-4 Effect on turnover, businesses who are continuing to trade, broken down by industry, UK, 29 June to 12 July 2020



Source: Office for National Statistics – Business Impact of Coronavirus (Covid-19) Survey

Impact on the property market

1.10 Due to the national lockdown, sales were held in abeyance and with the time-lag of recording data the full impacts of the virus on the property market have only recently began to be shown. The UK government took action to protect the housing market, the most significant of which was the stamp duty holiday which has only recently begun to be tapered down (as of June 2021). Pent up demand, relocations and the stamp duty holiday all fuelled a significant rise in house prices nationally, which was approximately 13% on the year to June 2021[3].

Conclusion

1.11 Agents speculate whether this house price growth is sustainable and overall though there is increased uncertainty in the markets. It is our recommendation that that this market report is periodically updated as more data becomes available.

[3] HM Land Registry, 2021, UK House Price Index for June 2021

2 Residential Market Assessment

2.1 For context, we firstly provide an overview of market conditions at a national, regional and local scale. We then analyse second-hand sales evidence and new-build development data in terms of achieved and asking prices to ensure the value assumptions and inputs adopted within the financial appraisals are robust.

Residential market overview

2.2 Since the global financial crisis, the residential market in England & Wales has generally been in a period of growth. The growth was initially seen in London, which responded to the quickest to the financial crisis. This growth then rippled out to the southeast and regions. But this growth in values has not been spread equally across England & Wales. Those regions that have performed well are located within an hour's commute to London, commonly known as the 'golden hour' for commuters. As London has faced affordability issues, those locations within an hour commute have become more attractive as they often better value money for those wishing to buy, or upsize.

Greater Cambridge market overview

2.3 Drivers for the residential market in Cambridge include:

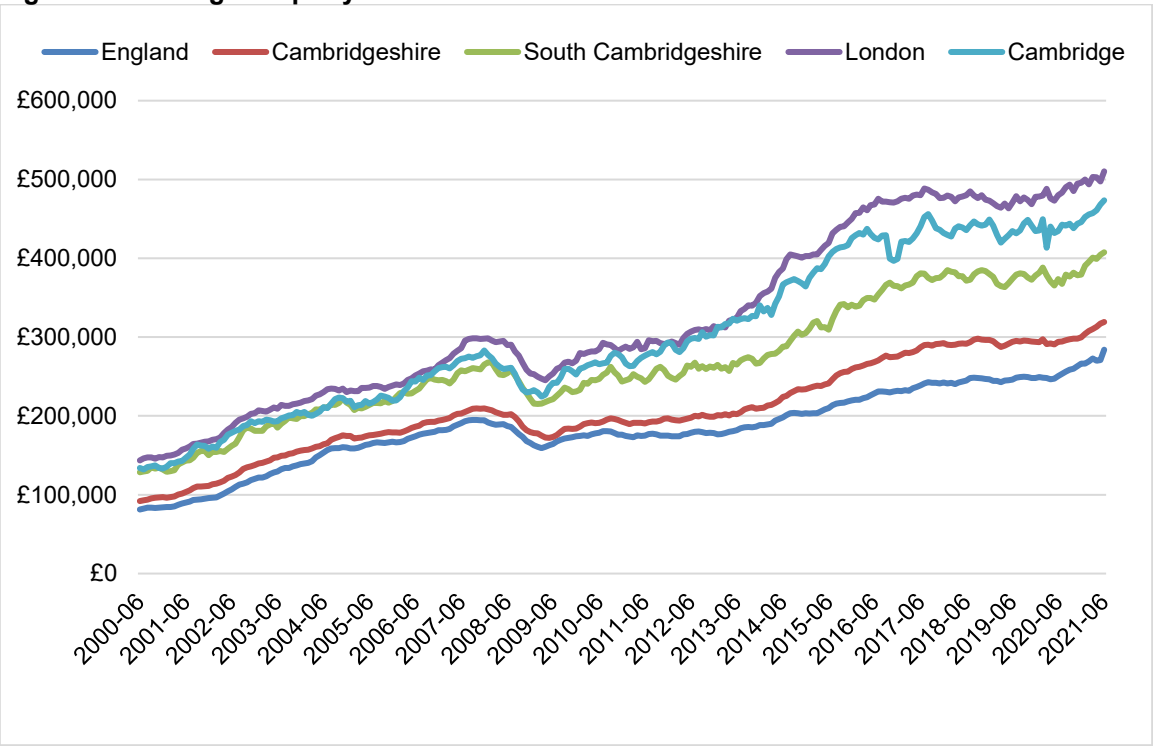
- the historic nature of the city not only makes the city attractive to live in but constrains development,
- the global leading university attracts high-quality students and academics, and
- the high concentration of global leading pharmaceuticals and tech companies create high-value jobs.
- Greater Cambridge falls within the one-hour commute time to London which helps drive residential demand

Average property prices

2.4 The strong nature of the Greater Cambridge market is illustrated in the very high average values achieved. Figure 2-1 shows the average property prices (new and re-sales) recorded on the Land Registry. The analysis shows that average prices in the two local authority areas (South Cambridgeshire and Cambridge City) have constantly out-performed that of the wider county and England. With average prices for Cambridge much closer to that of London than the England average.

2.5 Land Registry report that current average prices in South Cambridgeshire are £407,000 and Cambridge £473,000. These values compare to £284,000 for England and £510,000 for London.

Figure 2-1 Average Property Prices

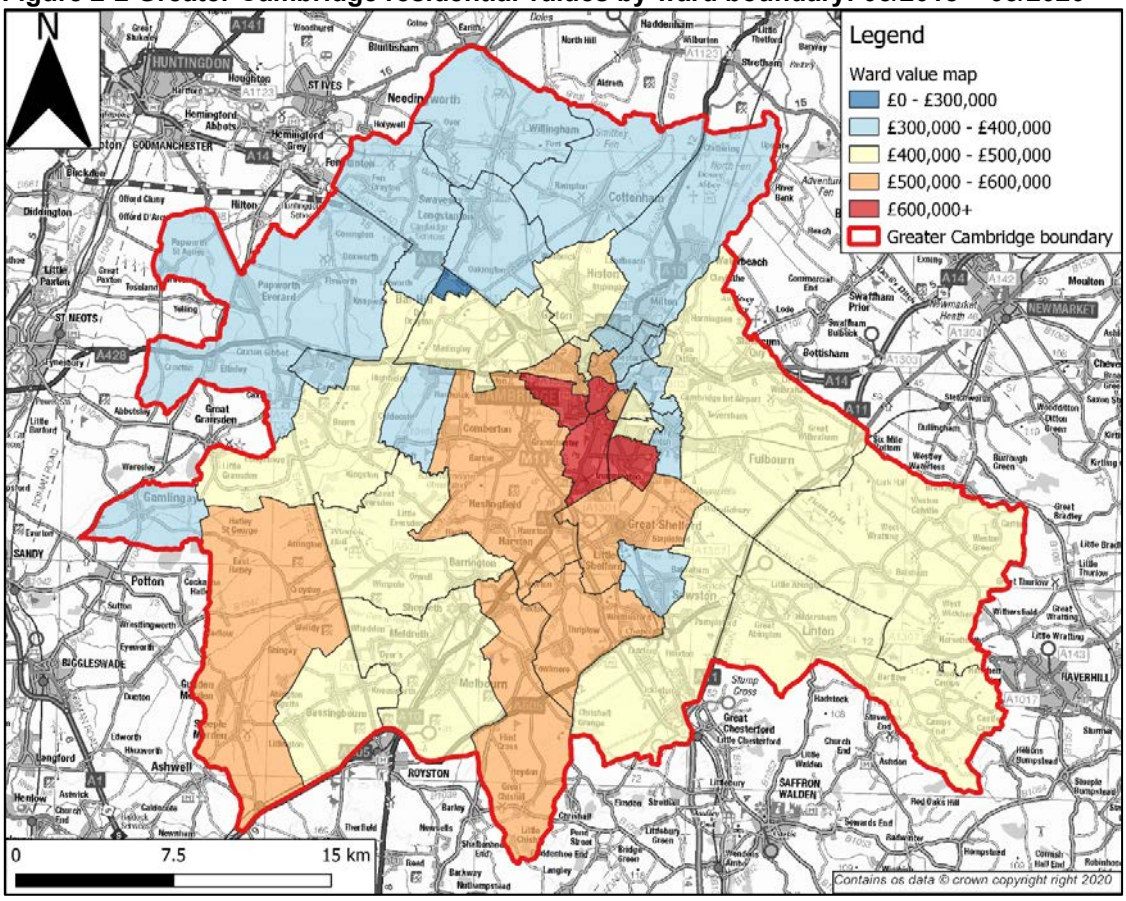


Source: Land Registry, accessed August 2021

2.6 Analysis has been undertaken of Land Registry data of sold prices for re-sales on a price per unit basis over the last two years across Greater Cambridge (Cambridge City & South Cambridgeshire).

2.7 The map in Figure 2-2 shows property prices grouped in value bands analysed against ward boundaries. The analysis shows higher values on a price per unit concentrated mainly in Cambridge City, with a corridor of medium value extending southward from Cambridge city to parts of Melbourn. There is also a clear band of lower value extending east and north from Milton. This is despite there being several new build developments in the lower value areas such as the Northstowe development by Taylor Wimpey/David Wilson and Trinity fields in Cambourne. Even though there is likely to be a 'new build premium' for these developments average prices are still significantly lower than central Cambridge.

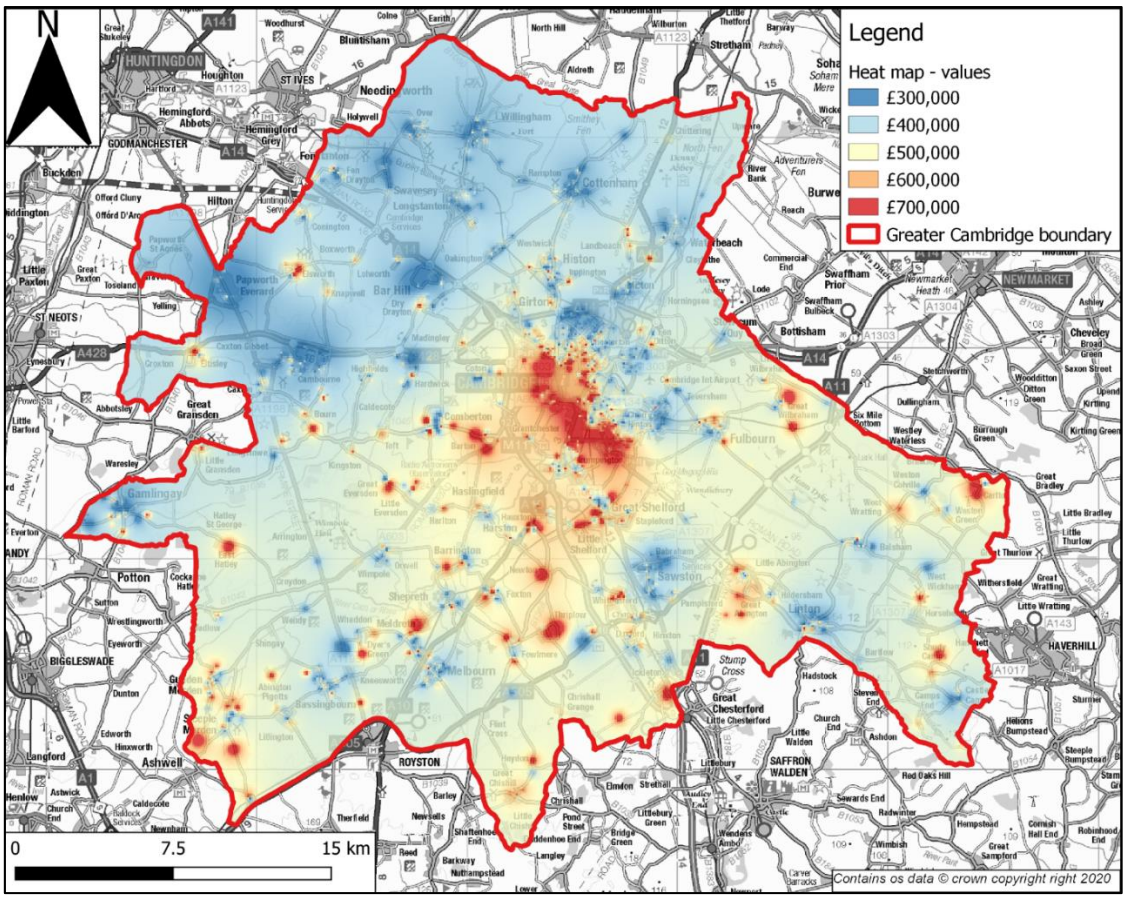
Figure 2-2 Greater Cambridge residential values by ward boundary: 05/2018 – 05/2020



Source: Land Registry Sale Value data, Basemap ArcGIS online, August 2020

2.8 The map in Figure 2-3 is the same Land Registry data expressed a “heatmap.” The data is not “fixed” against ward boundary boundaries thus allowing for finer grain analysis of the areas of higher, mid and lower values. The red/orange colours represent higher average prices and the blue colours represent the lower values. The analysis shows an emphasis on the lower-value area to the north for Greater Cambridge, but also reveal ‘pockets’ of lower value in Cambridge city and the medium value areas to the south. There are further ‘pockets’ of lower-value areas dispersed across Greater Cambridge but the most significant concentration of lower value property prices is to the north and east of Cambridge. There are ‘pockets’ of higher value dispersed among the lower value areas to the north and east, these higher value areas are achieved in smaller villages in rural areas. The heatmap also further illustrates that, despite the volume of new developments in areas such as Cambourne and Northstowe, the prices being achieved are comparatively lower value. This is due to the very higher property prices being achieved in Cambridge and the fact that Cambourne and Northstowe are newer, less established settlements, with fewer amenities.

Figure 2-3 - Greater Cambridge residential values expressed as a heatmap: 05/2018 – 05/2020

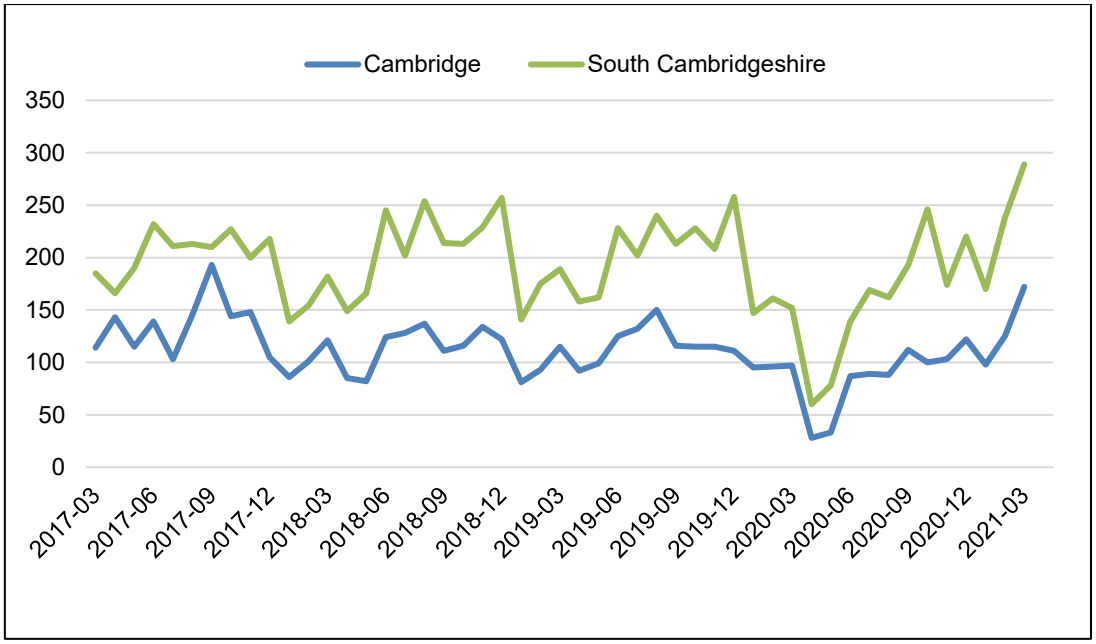


Source: Land Registry Sale Value data, Basemap ArcGIS online, August 2020

Impact of Covid-19 on values

2.9 As demonstrated in Figure 2-4, during the first national lockdown in March 2020 caused by the global pandemic, the number of sales fell sharply due to uncertainty in the market and restrictions on movement. As the first lockdown eased in the summer of 2020, sale volumes recovered through a combination of delayed transactions completing and government support. The government announced on 08 July 2020 that from that date until 30 September 2021 there will be a SDLT holiday for properties up to the value of £500,000.

Figure 2-4 Greater Cambridge sales volumes 2017 – Present

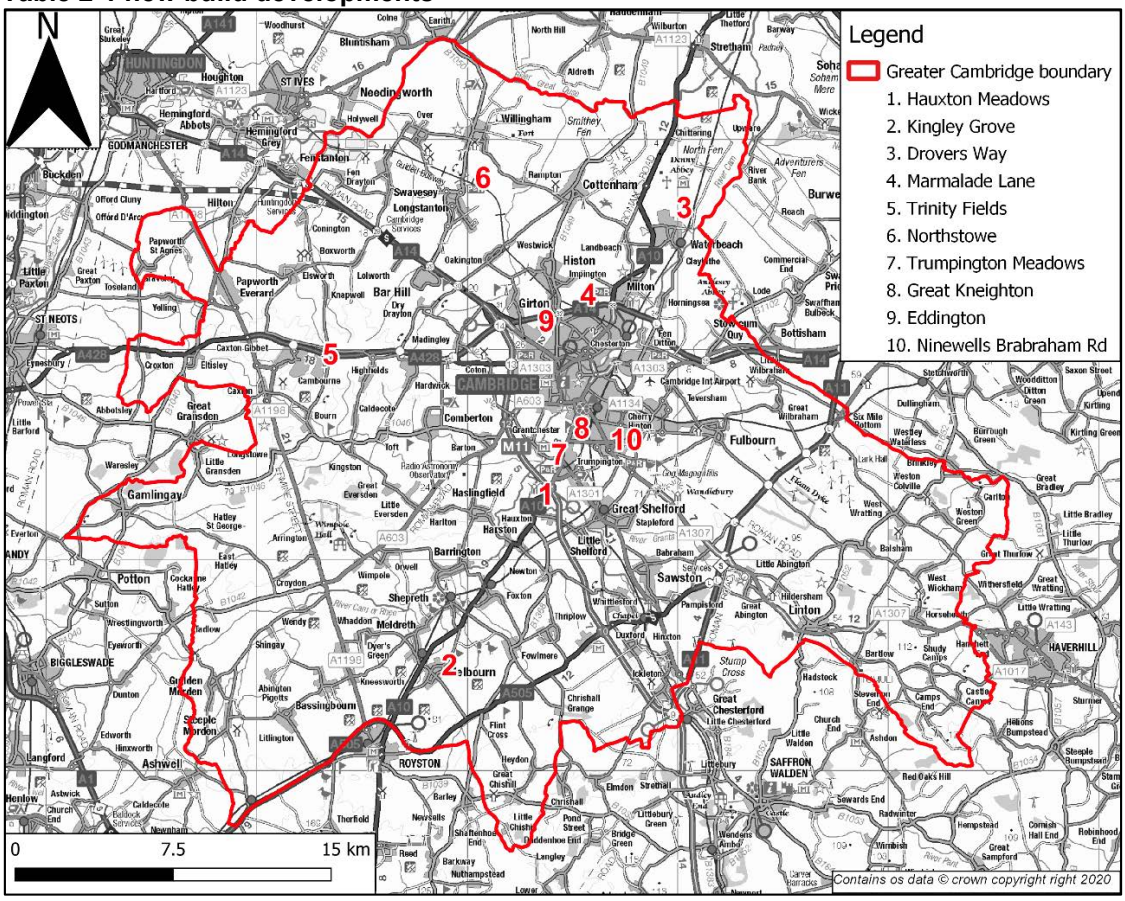


Source: Land Registry, accessed August 2020

New build sale prices

2.11 We now undertake a detailed analysis of new build sale values recorded on Land Registry. This data has been analysed on a £ psm basis through cross-referencing with EPC data. The EPC certificate data provides evidence of the unit sizes but does not record the number of bedrooms per property. Evidence of the number of beds has been taken from the Councils' planning portal, Rightmove, Zoopla and Prime Location; although, it has not been possible to reconcile all property types. Where the number of beds for the property is known, this has been recorded. Where the number of beds is not known this has been left 'blank' in our analysis. The tables of the new build sold prices summarise sale values for each typology and number of beds. We also display tables including all properties sold for the unit typology – this includes those where the number of beds is not known i.e. total sales per typology. The data covers approximately 2.5 years of sales (March 2018 – August 2021), the full analysis is contained in Appendix 1. Table 2-1 shows the spatial distribution of these new build developments.

Table 2-1 new build developments



Source: AspinallVerdi and Land Registry

South Cambridgeshire

2.12 Table 2-2 shows new build sold prices for Hauxton Meadows (south of Trumpington and M11), which is a Redrow development that has delivered a mix of 200 terraced, semi-detached and detached homes. Of the transactions identified, the majority were detached units (75%) which recorded large variation in values of £3,254 - £5,703 psm. Semi-detached properties have a lesser variance of between £4,245 - £4,303 psm.

Table 2-2 - Analysis of new build sold prices - Hauxton Meadows

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	9	109	£359,950	£479,950	£3,779	£5,538
Detached	45	136	£359,950	£827,950	£3,254	£5,703
Semi-Detached	6	122	£517,950	£524,950	£4,245	£4,303

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

2.13 Table 2-3 shows new build sold prices for the Kingley Grove development at Melbourn. It is a Hopkins Homes development that delivered 2, 3, 4 and 5-bedroom properties. The number of sales for both semi-detached and detached properties are similar, with £psm for the former being between £3,937 and £4,583, and for the latter between £3,066 and £4,344 psm.

Table 2-3 - Analysis of new build sold prices - Kingley Grove

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	4	85	£279,995	£455,000	£4,063	£4,667
Detached	11	180	£500,000	£859,995	£3,066	£4,344
Semi-Detached	10	81	£274,995	£419,995	£3,937	£4,583

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

2.14 Table 2-4 shows new build sold prices for the Drovers Way development in Waterbeach. It is a development by Bovis Homes, delivering 57 terraced, semi-detached and detached properties. The majority of sales have been detached units which range from £2,883 to £4,565 psm, whereas the semi-detached units achieved values range from £3,479 to £6,000 psm.

Table 2-4 - Analysis of new build sold prices - Drovers Way

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	11	92	£271,995	£612,500	£3,294	£4,667
Detached	38	126	£385,995	£699,995	£2,883	£4,565
Semi-Detached	24	79	£278,995	£431,000	£3,479	£6,000

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

2.15 Table 2-5 shows new build sold prices for Marmalade Lane, northeast of Cambridge. It is a cohousing development by K1 cohousing that delivered 42 1, 2, 3 and 4 bedroom properties. Marmalade Lane is seen as Cambridge's first cohousing community. The development is described as being designed to help residents get to know the neighbours easier and enjoy a sense of community. The majority of transactions have been flatted properties (70%) which range in value for £2,199 to £5,462 psm whereas £psm for terraced properties range from £2,970 to £3,863 psm.

Table 2-5 - Analysis of new build sold prices – Marmalade Lane

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	7	119	£382,100	£515,000	£2,970	£3,863
Flat	17	78	£257,849	£359,700	£2,199	£5,462

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

2.16 Table 2-6 shows new build sold prices for the Trinity Fields development in the settlement of Cambourne. The development consists of 2, 3, 4 & 5-bedroom houses and was built by Taylor Wimpey. £psm paid for terraced properties range from £2,724 to £4,068 whereas prices achieved for semi-detached properties were higher at £3,014 to £4,519 psm. Detached properties achieved the highest £psm variance of between £2,554 - £4,314 psm.

Table 2-6 - Analysis of new build sold prices - Trinity Fields

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	4	68	£201,600	£268,500	£2,724	£4,068
Detached	64	144	£290,000	£605,000	£2,554	£4,314
Semi-Detached	27	90	£274,995	£364,995	£3,014	£4,519
Flat	5	52	£200,000	£205,000	£3,846	£3,942

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

2.17 Table 2-7 shows new build sold prices for the Northstowe development. This development delivered a mix of 1, 2, 3, 4, & 5 bedroom properties and was built by Barratt Homes, David Wilson Homes and Taylor Wimpey. Prices achieved are generally lower than those from developments located in Cambridge City. Terraced properties achieved values from £2,963 to £4,508. £psm for semi-detached properties range from £2,744 to £4,524. The majority of sales were detached units which achieved values from £2,730 to £4,488 psm.

Table 2-7 - Analysis of new build sold prices – Northstowe

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	40	85	£250,000	£444,995	£2,963	£4,508
Detached	172	133	£262,995	£618,995	£2,730	£4,488
Semi-Detached	49	86	£274,995	£379,995	£2,744	£4,524
Flat	30	65	£199,995	£264,995	£3,125	£4,674

Source: Land Registry, South Cambridgeshire District Council planning portal, accessed August 2021

Cambridge City

2.18 Approximately 33% of recent new build sales in Greater Cambridge has occurred in Cambridge City. The majority of new build sales in the city have been in large new neighbourhoods such as Trumpington Meadows.

2.19 Table 2-8 shows new build sold prices for the Trumpington Meadows development, 3 miles from Cambridge city centre. The development consisted of 1, 2, 3, 4 and 5-bedroom flats and houses and was built by Barratt Homes. The prices recorded at Trumpington Meadows range from £3,080 - £6,948 psm with the majority being for flatted housing.

Table 2-8 - Analysis of new build sold prices (including number of beds) - Trumpington Meadows

Typology	No. of beds	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Flat	1	8	52	£299,995	£339,995	£5,263	£6,812
Flat	2	44	76	£350,000	£535,000	£4,756	£6,948
Flat	3	4	101	£449,995	£629,995	£4,091	£6,429
Flat	4	3	138	£425,000	£479,995	£3,080	£3,478
Detached	3	2	110	£599,995	£599,995	£5,455	£5,455
Detached	4	2	138	£599,995	£669,995	£4,348	£4,855
Detached	5	2	157	£719,995	£799,995	£4,645	£5,063
Semi Detached	4	10	135	£630,000	£779,995	£4,565	£5,923
Semi Detached	5	2	158	£740,000	£779,995	£4,684	£4,937
Terraced	3	1	107	£599,995	£599,995	£5,607	£5,607
Terraced	4	6	138	£599,995	£624,995	£4,348	£4,529

Source: Land Registry, Cambridge City Council planning portal, accessed August 2021

2.20 Table 2-9 shows new build sold prices for Great Kneighton, Cambridge. It is a new neighbourhood development by Countryside and Bovis Homes with a mix of 1, 2, 3,4 - and 5-bedroom properties. The data shows that the majority of units recently sold are flats and terraced. In contrast, semi-detached properties represent the smallest number of sales. £psm paid for flatted properties has the widest range while semi-detached has the narrowest range. Also, it is noticeable that semi-detached properties have the highest average unit size which is not typically seen in South Cambridgeshire but is common across Cambridge City. The scheme also has some of the highest achieved pieces in greater Cambridge with max sold prices for terraced and detached properties at £1,500,000 and £1,328,250 respectively.

Table 2-9 - Analysis of new build sold prices - Great Kneighton

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	61	168	£550,000	£1,500,000	£3,737	£5,280
Detached	25	205	£589,995	£1,328,250	£3,779	£5,263
Semi Detached	15	229	£675,000	£1,250,000	£3,597	£4,966
Flat	46	79	£213,000	£850,000	£3,550	£7,051

Source: Land Registry, Cambridge City Council planning portal, accessed August 2021

2.21 Table 2-10 shows the new build sold prices for Eddington, Cambridge. It is a new neighbourhood located in the northeast of the city centre. It is a development by The University of Cambridge which will deliver 3,000 Studio, 1, 2, 3, 4 and 5-bedroom properties. The data in Table 2-10shows that the units sold at the scheme are comparable in size to the units at the other developments in the city. The scheme also has some of the highest max £psm prices in Cambridge City.

Table 2-10 - Analysis of new build sold prices - Eddington, Cambridge

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	7	165	£589,995	£1,099,950	£4,307	£6,522
Detached	12	124	£574,995	£1,020,000	£4,380	£6,348
Semi Detached	3	137	£599,995	£689,995	£4,380	£5,036
Flat	47	70	£295,000	£855,000	£4,654	£8,021

Source: Land Registry, Cambridge City Council planning portal, accessed August 2021

2.22 Table 2-11 shows new build sold prices for Ninewells. It is Hill Group development which delivered a mix of 1, 2, 4 and 5-bed properties. £psm paid for terraced, detached and semi-detached units are between £5,000 psm and £6,284. Flatted properties achieved the largest range of £psm between £4,878 - £8,182. Average sizes for all typologies are generally within the range of the previous schemes identified.

Table 2-11 - Analysis of new build sold prices – Ninewells Brabraham Road

Typology	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Terraced	20	182	£675,000	£1,250,000	£4,234	£6,284
Detached	12	176	£690,000	£1,250,000	£4,481	£6,092
Semi Detached	3	209	£905,000	£1,235,000	£4,750	£5,000
Flat	11	69	£349,950	£526,350	£4,878	£8,182

Source: Land Registry, Cambridge City Council planning portal, accessed August 2021

New build quoting prices

2.23 Comparable analysis of new build available properties has been undertaken to gain an understanding of the location of new build schemes and their quoting prices – this is set out in Table 2-12. There is a large volume of new build housing schemes currently on the market.

2.24 The analysis of quoting prices shows that new build units range from 1 bed flats to 5 bed detached houses. Most of the 1-bed flats are being advertised in Cambridge city with prices ranging between £195,000 - £380,000. 2-bed flats and houses are more prevalent across the entire area with prices ranging between £235,000 - £689,950 with the lower priced flat being located on a small 8-unit scheme in Meldreth. There are other types of 2 bed properties including terraced, semidetached and detached across Greater Cambridge. Prices for these range between £274,000 and £420,000. 3-bedroom properties also differ in type with flats, semidetached, terraced and bungalows all being marketed. Prices for these range between £325,000 and £799,950. The 4-bed properties range in price between £400,000 and £1,150,000, and 5-bed properties range between £465,000 and £975,000. The large range of data is an account of a large amount of development in Greater Cambridge. With activity from volume housebuilders as well as smaller local and regional developers.

Table 2-12 - New build quoting prices

Address	Developer	Typology	Quoting prices
Cambridge City			
Great Kneighton, Cambridge	Countryside, Bovis Homes, Crest Nicholson	-	1 bed flat: £325,000 2 bed flat: £375,000 - £419,950 3 bedroom flat: £499,950 – 649,950 5 bedroom detached: £875,000 - £950,000
Trumpington Meadows, Cambridge	Barratt Homes	-	1 bed flat: £329,995 2 bed flat: £382,995 - £554,995 3 bedroom detached: £565,995 4 bed semi: £796,995 5 bed semi: £789,995 - £796,995
Ironworks, CB1	Hill Residential	Development of 118 dwellings – mix of; studio, 1, 2, 3 and 4-bedroom properties	1 bed flat: £299,950 - £344,950 2 bed flat: £439,950 - £444,950 3 bed semi: £519,995 4 bed detached: £580,995 - £595,995

Address	Developer	Typology	Quoting prices
Timber Works, CB1	Hill Residential	Development of 1, 2, 3 and 4-bedroom properties	2 bed flat: £432,950 - £444,950 3 bed semi: £659,950 4 bed terraced: £759,950
Darwin Green, Huntingdon Road, Cambridge	Barratt Homes	Development of 1, 2, 3 and 4 bedroom properties	1 bed flat: £319,995 2 bed flat: £381,995 - £394,995 2 bed terraced: £619,950 4 bed semi: £749,950
Athena, Eddington Avenue, Cambridge	Hill residential	Development of 249 dwellings – mix of studio, 1, 2, 3, 4 and 5-bedroom properties	Studio: £319,950 1 bed flat: £339,950 - £359,950 2 bed flat: £444,950 - £689,950 3 bedroom terraced: £699,950 - £799,950 4 bed terraced: £899,950 - £1,149,950 5 bed semi: £759,995 5 bed detached: £1,799,950
Station Square, Cambridge	Weston homes	Development of 89 dwellings – mix of 1 and 2 bedroom properties	1 bed flat: £385,000 2 bed flat: £665,000 - £695,000
Marleigh, Newmarket Road, Cambridge	Marshall & Hill residential	Development of 1,300 dwellings – mix of; 1, 2, 3, 4 and 5 beds	1 bed flat: £284,950 - £294,950 2 bed flat: £369,950 - £399,950 2 bed coach: £424,950 - £434,950 3 bed semi: £524,950 3 bed detached: £647,500 4 bed semi: £719,950 5 bed semi: £719,950 5 bed detached: £724,950
South Cambridgeshire			
Bloor Homes At Swavesey, Off Fen Drayton Road, Swavesey	Bloor Homes		2 bed semi: £297,000 - £377,950 3 bed bungalow: £415,000 4 bed detached: £430,000 - £455,000

Address	Developer	Typology	Quoting prices
Meridian Fields, Hardwick, Cambridge	Hill Residential		2 bed semi: £369,950 - 3 bed semi: £434,950 - £499,950 4 bed detached: £529,950
The Birdlings, West Street, Comberton	Beechwood Estates & Development	Development of 90 dwellings	4 bed detached: £660,000 5 bed detached: £975,000
Croft End, Hurdleditch Road, Cambridgeshire	Croudace Homes		2 bed detached: £375,000 - £420,000 3 bed semi: £425,000 - £450,000 3 bed detached: £500,000 4 bed detached: £575,000 - £750,000
Sycamore View, Westacre, Meldreth,	Bushmead Homes		2 bed detached: £367,500 2 bed semi: £351,750 3 bed detached: £446,250 4 bed detached: £575,000 - £682,500
Victoria Place, Meldreth		Comprising 8 dwellings mix of 1 and 2 bed apartments	1 bed flat: £200,000 2 bed flat: £235,000
Victoria Heights, Victoria Way, Melbourn	Granary Developments		3 bed detached: £600,000 4 bed detached: £750,000 - £1,150,000
Kingley Grove, Melbourn	Hopkins Homes		2 bed detached: £300,000 3 bed semi: £420,000 - £490,000 4 bed detached: £540,000 - £680,000 5 bed detached: £835,000 - £870,000
The Grove, Rockmill End, Willingham, Cambridgeshire	Kier Living	Comprising 2 bedroom bungalows and 2, 3, 4 & 5 bedroom houses,	2 bed semi: £274,995 3 bed detached: £357,995 4 bed detached: £474,995 - £479,995

Address	Developer	Typology	Quoting prices
The Boulevards, Station Road, Longstanton, Northstowe	Linden Homes	Comprising 2, 3, 4, and 5 bedroom houses	2 bed terraced: £280,000 - £295,00 3 bed terraced: £325,000 - £350,000 3 bed semi: £340,000 4 bed semi: £365,000 - £440,000
Varsity Grange Pathfinder Way Northstowe	Taylor Wimpey	Comprising 3, 4 & 5 bedroom homes	4 bed detached: £455,000 - £480,000
Winstone at Northstowe, Crabtree Road,	David Wilson homes	Comprising 2, 3, 4 and 5 bedroom homes	2 bed flat: £252,495 3 bed terraced: £332,995 - £385,995 3 bed semi: £374,995 - £413,995 4 bed detached: £413,995 - £581,995 5 bed detached: £624,995
Bower Place, Oakington Road, Cottenham	Bellway Homes	50 dwellings - development of 3, 4 and 5-bedroom homes	2 bed terraced: £300,000 3 bed semi: £347,000 - £375,000 3 bed detached: £383,000 - £385,000 4 bed semi: £400,000 - £430,995 4 bed detached: £415,000 - £614,995 5 bed detached: £465,000 - £749,995
Burlington Place,, Station Road, Foxton	Hill Residential	Mix of 2, 3 and 4 bed homes	2 bed semi: £399,950 3 bed semi: £479,950 4 bed detached: £599,950
Station Road, Histon	-		1 bed flat: £269,995 - £279,995
The Orchards, Linton Road, Great Abington	Hill Residential	45 dwellings - mix of new 2, 3, 4 and 5 bed houses and bungalow	4 bed bungalow: £599,950 4 bed bungalow: £699,950

Address	Developer	Typology	Quoting prices
Farriers Yard, Balsham, Cambridge	Hill Residential	Farriers Yard mix of 3, 4 and 5 beds homes.	4 bed semi: £549,950 - £579,950 5 bed detached: £750,000

Source: Developer websites, Rightmove, accessed August 2021, AspinallVerdi

Residential agent consultation

2.25 Telephone consultations have been undertaken with local estates agents active across the Greater Cambridge area, to supplement the desk-based research. The telephone consultations were undertaken in August 2020. We have chosen to target agents based in Cambridge, Cottenham and Cambourne due to their status as the main settlements in Greater Cambridge. Below are the summarised responses:

- The Stamp duty holiday announced by the government as part of its Covid-19 economic boosting measured has helped to keep the market stable.
- Cambridge city is the highest value area by a significant margin due to its employment offer and the presence of the University of Cambridge. House Prices have been increasing in recent years and the market is healthy despite the Covid-19 pandemic, however, it will take a few more months for the full effects of the pandemic to be realised
- The Orchard park/ Arbury areas are considered to be lower value areas.
- Especially in Cambridge, the Covid-19 pandemic has led to properties with gardens and other outdoor space become in more desirable
- Chesterton and Waterbeach are increasingly more desirable with the market being healthy in these areas. Demand is coming from mostly young families.

2.26 Agents gave a broad indication of what values they could achieve for new build properties across the Greater Cambridge area – see Table 2-13. In some cases, these bandings are large as there is a significant variation in specification over the area. Some specific developments may exceed the higher banding but the bulk of new development is within the range.

Table 2-13 - Proposed sale prices across Greater Cambridge

Address	Typology	Agents quoting unit prices
Cambridge	1 bed flatted	£200,000-£350,000
	2 bed flatted	£375,000-£550,000
	3 bed flat	£430,000-£600,000
	3 bed semi-detached	£450,000-£650,000
	3 bed detached	£475,000-£700,000
	4 bed detached	£600,000+

	5 bed detached	£750,000+
Cambourne	2 bed semi-detached	£300,000-£400,000
	3 bed semi-detached	£400,000-£500,000
	4 bed detached	£520,000+
Cottenham	2 bed semi-detached	£250,000+
	3 bed semi-detached	£325,000+
	3 bed detached	£350,000+
	4 bed semi detached	£400,000+
	4 bed detached	£420,000+

Source: Residential agents Greater Cambridge, August 2020

Residential market conclusions

2.27 The values to be adopted in our testing are set out in Table 2-14. We have decided to test three distinct value zones as shown in Figure 2-5. The NECAAP will fall in the mid-value zone analysis. These values will be subject to review once more details on the type of proposed developments are kown.

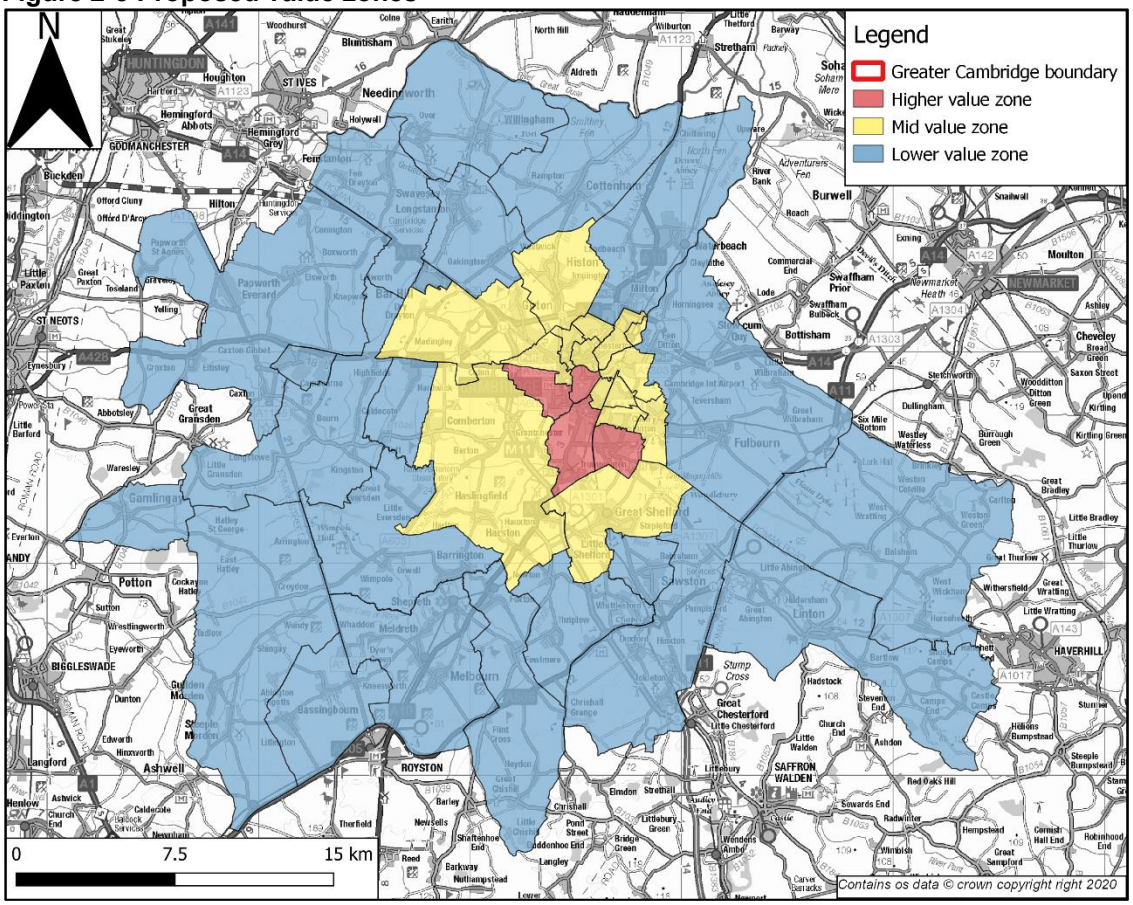
Table 2-14 - Proposed housing development sales prices

Typology	Unit Size sqm	Unit Price	£psm
Higher value zone			
Studio	40	£280,000	£7,000
1-bed flat	50	£330,000	£6,600
2-bed flat	75	£455,000	£6,067
3-bed flat	86	£500,000	£5,814
Mid value zone			
Studio	40	£265,000	£6,625
1-bed flat	50	£300,000	£6,000
2-bed flat	70	£365,000	£5,214
3-bed flat	86	£410,000	£4,767
4-bed flat	99	£450,000	£4,545
2-bed house	75	£400,000	£5,333
3-bed house	97	£500,000	£5,155
4-bed house	150	£670,000	£4,467
Lower value zone			
1-bed flat	50	£250,000	£5,000
2-bed flat	61	£300,000	£4,918

Typology	Unit Size sqm	Unit Price	£psm
2-bed house	75	£350,000	£4,667
3-bed house	97	£425,000	£4,381
4-bed house	150	£550,000	£3,667
5-bed house	200	£700,000	£3,500

Source: AspinallVerdi, 2021

Figure 2-5 Proposed value zones



Source: AspinallVerdi, 2021

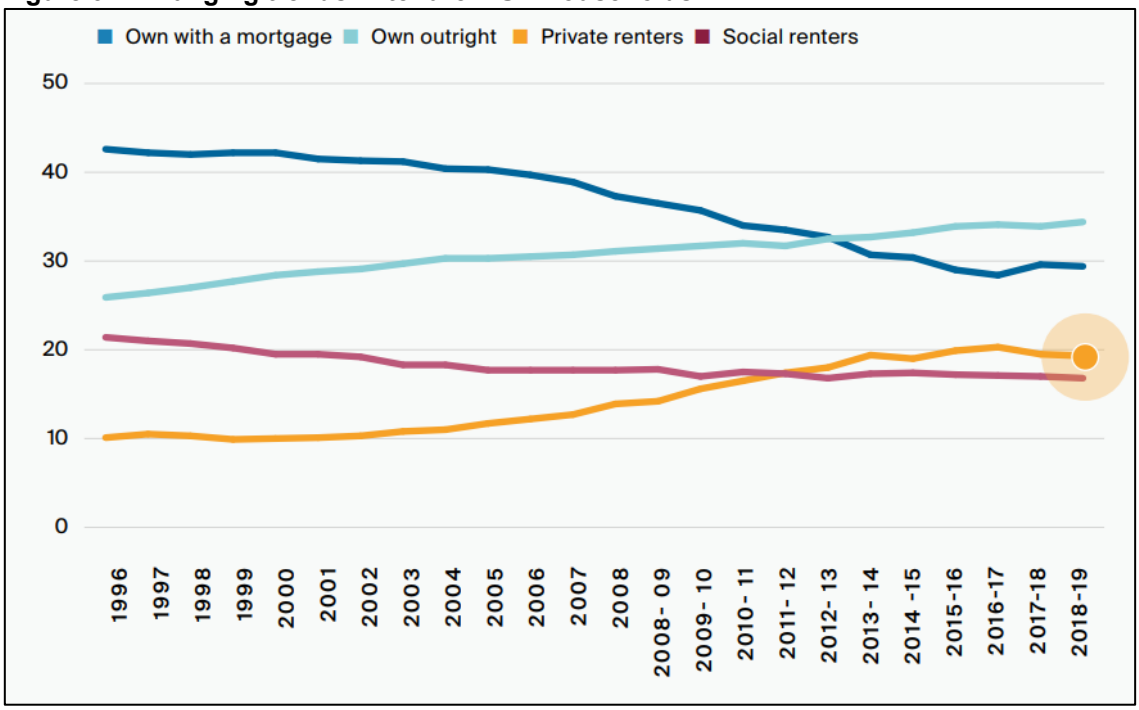
3 Build to Rent market assessment

Introduction

3.1 As households have been priced out of being able to purchase homes, residents have been forced into the private rental sector. In a bid to raise accommodation standards and reduce the number of rogue landlords the Government has been seeking to encourage investors/developers to deliver Build to Rent (BTR) housing. The Government in 2012 launched the BTR Fund to deliver schemes by offering finance/grants. Many benefits have been identified in relation to the BTR model, such as the provision of higher quality management other than an individual private landlord; tenants are offered longer tenancies on more favourable terms and higher-standard amenities are often provided, such as on-site gyms, communal lounges and cinema rooms.

3.2 Savills report that since 2013 the sector has expanded rapidly, with over 30,000 homes completed and a further 110,000 planned which are to be built, let and managed by professional investors as homes to rent. Investment in BTR totalled £2.6bn in 2018 – an 11% increase from 2017 and the highest level since 2014. [4] This trend is supported by the changing trends in the tenure of households. Figure 3-1 shows that the amount of private rents has increased in the last 10 years while the number of property owners with a mortgage has steadily decreased.

Figure 3-1 Changing trends in tenure – UK households



Source: Knight Frank and ONS, 2020

[4] Savills, 2019. Build to Rent

3.3 The institutional investment market has continued to be attracted to the BTR sector in the UK. Both domestic and international investors alike have deployed capital to expanding their footprint in the market. Lead by North America, global investors are seeking a stable cash flow in uncertain times. Where we have seen commercial occupiers struggling to pay rent, from March to August 2020 the average rent collection rate for institutional BTR schemes was 95.2%.[5] International investment in the sector is set to grow as development volumes increase throughout the country.[6] As the commercial market continues to weaken with retail leading the way, BTR is ever becoming an attractive investment even though yields are poorer than from traditional commercial property investments.

3.4 Not only have we seen an increase in the number of BTR schemes, the scale of new development, and subsequent investments, has continued to grow. At present, the size of the average of completed schemes is 212 units. When we consider homes that are under construction this increases to 264 units, this increases further to 316 units for schemes that have planning permission granted. Though 'mega' schemes, of over 500 units, are still in the minority this part of the sectors is contributing to growth.[7]

Market rents overview

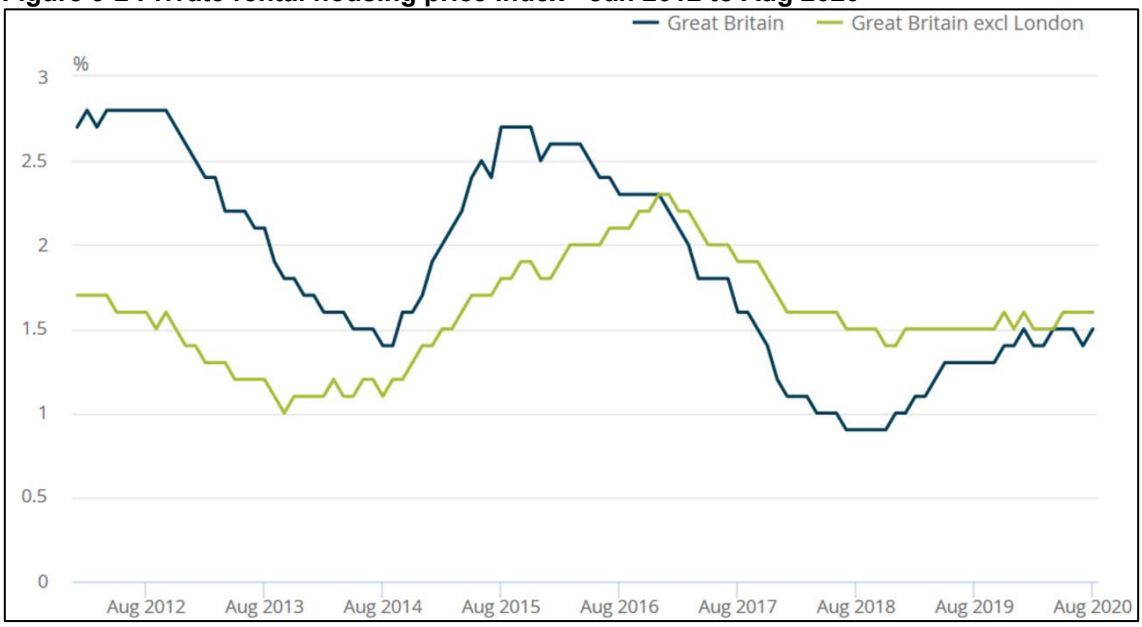
3.5 The UK rental market has performed inconsistently over the past few years. There has been a broad slowdown in the UK annual growth rate in the period between 2016 – 2018[8], however recent reports are generally showing growth in rental prices across the country. The Office of National Statistics[9] reports that:

- Private rental prices paid by tenants in the UK rose by 1.3% in the 12 months to October 2019, unchanged since May 2019.
- In England, private rental prices grew by 1.4% in the 12 months to October 2019.
- London private rental prices rose by 0.9% in the 12 months to October 2019.

3.6 The October 2019 RICS Residential Market Survey reported a slight acceleration in tenant demand, however there is a simultaneous decline in new landlord instructions and thus increasingly constrained supply. It was projected that every UK region/county was expected to see an increase in rents over the coming three months.[10] Historically residential rents in the UK have continued to grow even when borrowing rates for mortgages are at historic lows. Figure 3-2 shows that since 2012 rents in Great Britain (excluding London) have grown between 1 – 2.3% per annum.

[5] Knight Frank & Homeviews, 2020, Multi Housing
[6] Ibid
[7] Ibid
[8] ONS, 2019. Index of Private Housing Rental Prices.
[9] Office for National Statistics, 2019. Index of Private Housing Rental Prices, UK. October 2019.
[10] RICS, 2019. October 2019: UK Residential Market Survey

Figure 3-2 Private rental housing price index - Jan 2012 to Aug 2020



Source: ONS, 2020

3.7 The ONS data in Table 3-1 shows that rents in both South Cambridgeshire and Cambridge City are considerably higher than national and regional medians. This is for a number of reasons, including higher residential sale values in the area, higher average wages, proximity to London. In additional Cambridge City has high demand for residential rental accommodation created by the significant number of students studying at the University of Cambridge.

Table 3-1 Median all monthly rents April 2020 to March 2021

	England	East England	South Cambs	Cambridge City
Rent	£730 pcm	£800 pcm	£1,000 pcm	£1,200 pcm
% more/less than National	n/a	+9.5%	+37.0%	+64.4%
% more/less than East	-8.75%	n/a	+25%	+50.0%

Source: ONS, 2021

Greater Cambridge BTR market

Achieved rents

3.8 Table 3-2 and Table 3-3 shows achieved monthly rents for new and second-hand properties across Greater Cambridge since April 2019.

Table 3-2 - South Cambridgeshire District Achieved Monthly Rents

Type	Sample	Mean	Lower Quartile	Median	Upper Quartile
Studio	10	£670	£590	£650	£700

1-Bed	140	£799	£700	£793	£875
2-Bed	470	£979	£850	£950	£1,100
3-Bed	560	£1,078	£950	£1,025	£1,180
4 or more Bed	220	£1,537	£1,250	£1,490	£1,700

Source: ONS, accessed August 2021.

Table 3-3 - Cambridge City Achieved Monthly Rents

Type	Sample	Mean	Lower Quartile	Median	Upper Quartile
Studio	90	£790	£725	£755	£850
1-Bed	570	£1,008	£850	£975	£1,150
2-Bed	920	£1,255	£1,075	£1,219	£1,400
3-Bed	460	£1,408	£1,200	£1,350	£1,550
4 or more Bed	220	£2,048	£1,630	£1,900	£2,300

Source: ONS, accessed August 2021.

3.9 The data shows that the difference in median monthly rents increases in conjunction with the size of the property. For example, the difference in median rents between a studio and 1-bedroom flat is £125 pcm, whereas the difference between 2- and 3-bedroom rents is more pronounced at £320 pcm. The data also further illustrates the significant differences between prices in Cambridge City and South Cambridgeshire, with 2 bed achieved rents in Cambridge city being 35% greater than those in South Cambridgeshire.

Asking rents

3.10 Due to a lack of BTR development, we have not been able to find any evidence of asking rents in Greater Cambridge. We have therefore looked for flatted accommodation with a specification to BTR properties. These are all exclusively located in and around Cambridge City Centre. Table 3-4 shows the current rents pcm for studio flats across Cambridge City. We have not included the number of studios being marketed for higher rents up to £1,400 per month. These units target students rather than the general market. This market is dealt with in a separate section.

3.11 Table 3-4 shows there are few relevant studios in Cambridge City. Rents for the most modern spaces are around £950 pcm. We would assume that a build to rent product would achieve a premium over these values as they would include communal space and other amenities such as a gym etc.

Table 3-4 – Studio rental listings

Address	Size	Quoting rent	Comments
Addenbrookes Road	n/a	£950 pcm	Unfurnished

Address	Size	Quoting rent	Comments
East Road	n/a	£950 pcm	Furnished. Shared courtyard garden, roof terrace, laundry room and integral secure bike storage area
Greengates Court, 149 Histon Road, Cambridge	n/a	£925 pcm	Unfurnished. Balcony and communal bike storage.

Source: Rightmove, accessed August 2021.

3.12 Table 3-5 shows rents for 1 bed spaces vary considerably between £1,950 pcm and £1,250 pcm. The highest rents include all bills and are located in central areas. Some of the comparables include facilities that we would expect to see in build to rent properties i.e. a gym and communal areas.

Table 3-5 – 1 bed rental listings

Address	Size	Quoting rent	Comments
Flat 2, Victoria Avenue, Cambridge, Cambridgeshire, CB4	n/a	£1,950 pcm	Includes all bills and council tax. Flat is available on short- and long-term lease.
Newton Court, Kingsley Walk, Cambridge	51 sqm	£1,450 pcm	Includes use of gym, concierge service. Includes heating bills
The Oak Building, Rudduck Way, Eddington, Cambridge	n/a	£1,300 pcm	New Build, unfurnished
		£1,275 pcm	
		£1,250 pcm	

Source: Rightmove, accessed August 2021

3.13 Table 3-6 shows that rents for 2 bed flats vary considerably, ranging between £2,750 pcm and £1,500 pcm. highest rents include all bills and are located in central areas. Some of the comparables include facilities that we would expect to see in build to rent properties i.e. a gym and communal areas.

Table 3-6 – 2 bed rental listings

Address	Size	Quoting rent	Comments
Mill Park, Cambridge, CB1	n/a	£2,750 pcm	Furnished, Penthouse with parking. Bills not included
Flamsteed Close, Cambridge, CB1	n/a	£2,600 pcm	New build. Furnished and includes all bills and parking
The Belvedere, Homerton Street, Cambridge, CB2	119 sqm	£2,200 pcm	Furnished. Includes gym complex with swimming pool. Development serviced by porters.
	n/a	£1,950 pcm	

Address	Size	Quoting rent	Comments
Marlowe House, Kingsley Walk, Cambridge, CB5	77 sqm	£1,950 pcm	Furnished. Use of onsite gym. Secure parking and concierge service.
Meade House, Mill Park, Cambridge	n/a	£1,750 pcm	Furnished. Includes parking.
Green Lane, Trumpington	n/a	£1,665 pcm	Furnished. Includes parking.
The Oak Building, Rudduck Way, Cambridge, Cambridgeshire	79 sqm	£1,500 pcm	New build. Furnished.

Source: Rightmove, accessed August 2021

3.14 There is less evidence available for 3 bed properties as these are not as common in new build flatted developments. Table 3-7 shows rents for 3 bed flats are around £2,750 pcm. All listings are in central Cambridge. Some of the comparables include facilities that we would expect to see in build to rent properties i.e. a gym and communal areas.

Table 3-7 – 3 bed rental listings

Address	Size	Quoting rent	Comments
The Belvedere, Homerton Street, Cambridge, CB2	n/a	£2,750 pcm	Unfurnished. Includes gym complex with swimming pool. Development serviced by porters.
Keynes House, Kingsley Walk, Cambridge	n/a	£2,750 pcm	Unfurnished. Includes car parking and bike storage, on site gym and concierge
Parkside Place, Parkside, Cambridge, CB1	118 sqm	£2,700 psm	Part furnished. Includes car parking.

Source: Rightmove, accessed August 2021

3.15 There is no comparable evidence of new build 4 bed units currently being advertised on Rightmove.

3.16 Current asking rents for flatted accommodation with specifications akin to build to rent properties range from £1,250 - £2,450 pcm for a 1 bed and £1,995 - £3,300 for a 2 bed. The asking rents shown in Table 3-4 are higher per unit type than the median rents recorded from the VOA data for Cambridge City in Table 3-3. This suggests that rental prices have grown since April 2019; a trend which is seemingly supported in the latest RICS residential market report. On the whole, rental values are considered more transient than sales prices and are susceptible to more immediate fluctuation. The increases increase in rental values since the time of the VOA data period is therefore considered likely.

BTR Yields

3.17 We are aware that Brookgate has revealed plans for 1,000 build to rent units but it is too early in the process to find details on the yield. We have therefore reviewed evidence from market reports and forecasts for build to rent yields - see Table 3-8

Table 3-8 - Build to Rent Yields

Source	Net Yield
Bidwells [11]	3.14%
Knight Frank [12]	4.00% - 4.25%
CBRE [13]	3.75%
KentReliance [14]	4.1%

Sources: Knight Frank, Bidwells, KentReliance & CBRE, accessed August 2021

Conclusion

3.18 Based on the above evidence we have that there are two sets of values adopted for BTR for the higher and mid value zones, these are as follows:

Table 3-9 Build to rent values

Typology	Unit Size sqm	Rent pcm	Rent pa
Higher value zone			
Studio	40	£1,200	£14,400
1-bed flat	50	£1,600	£19,200
2-bed flat	70	£2,150	£25,800
3-bed flat	86	£2,750	£33,000
4-bed flat	99	£3,000	£36,000
Mid value zone			
Studio	40	£1,000	£12,000
1-bed flat	50	£1,350	£16,200
2-bed flat	70	£1,600	£19,200
3-bed flat	86	£1,950	£23,400
4-bed flat	99	£2,200	£26,400

Source: AspinallVerdi 2020

[11] Bidwells, 2019. Our View on Build To Rent. Cambridge yield.
[12] Knight Frank, 2019. Residential Yield Guide December 2019. South East Prime (NIY).
[13] CBRE, 2020. United Kingdom Residential Investment Marketview Q2 2020. Outer London/ South East prime yields.
[14] KentReliance, 2019. Buy to Let Britain Report. Average yield for the east region.

4 Older people's accommodation market assessment

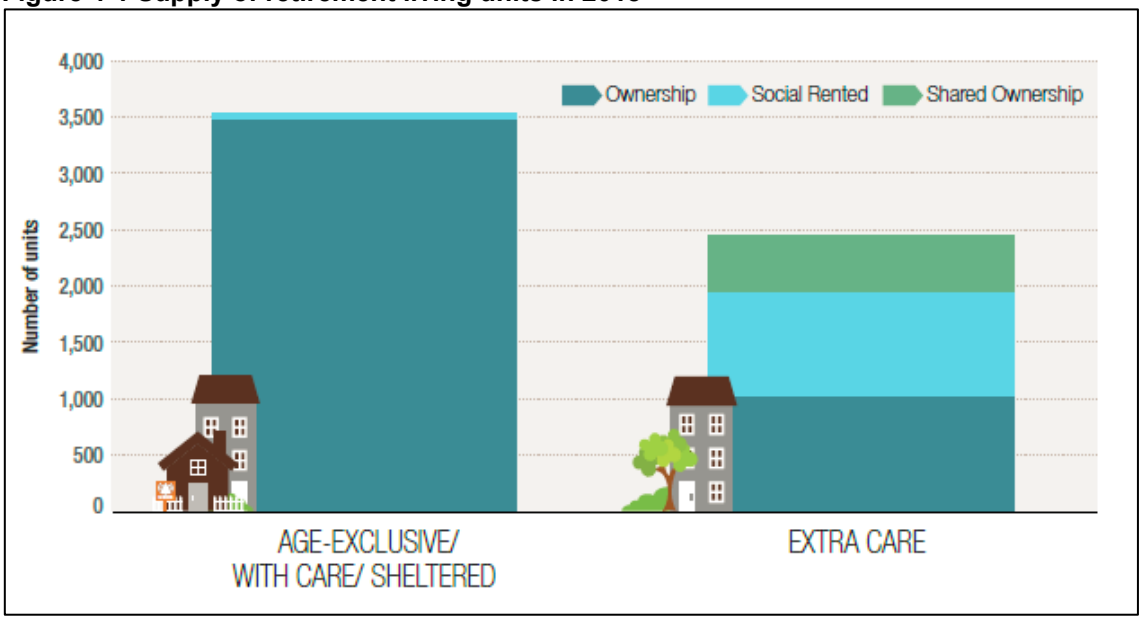
4.1 With an ageing population, the demand for forms of specialist accommodation for older people is growing. This type of specialist accommodation usually takes the form of retirement living (typically over 55 accommodation), housing with support, and housing with care. We define these below:

- **Age Restricted-Exclusive / Sheltered / Retirement Housing** – This is accommodation that is built specifically for sale or rent to older people e.g. McCarthy and Stone or Churchill. They comprise self-contained units (apartments) with communal facilities and a live-in or mobile scheme manager and alarm call systems in case of emergency.
- **Assisted Living / Extra Care / Very Sheltered Housing** - This is similar to the Sheltered Housing but is designed to enable residents to retain their independence as they grow older and their need for support and/or care increases. Residents still occupy their own self-contained home within blocks of flats, estates of bungalows or retirement 'villages' but often enjoy enhanced communal accommodation and occupants may also be offered individual care and assistance from support staff, within the complex, 24 hours per day.
- **Close Care or Assisted Living Housing** – This is normally situated within the grounds of a care home and takes the form of self-contained, independent flats or bungalows. Units may be rented or purchased by the occupier. Residents will also have access to the care home's other facilities and will normally have some form of direct communication with the care home, for emergencies. There may well be an arrangement whereby, the care home management will buy-back the property if it becomes necessary for them to move into the care home.
- **Care Homes / Residential care homes** - Living accommodation for older people and employ staff who provide residents with personal care, such as washing and dressing. Residents normally occupy their own single room but have access to other communal facilities.
- **Care Homes with Nursing / Nursing Homes** – Similar to a residential home but, they offer the full time service of qualified nursing. Such accommodation is suited to residents who are physically or mentally less capable and require a higher level of care.

4.2 Figure 4-1 shows the supply of retirement living units in 2018 and demonstrates that the majority of supply is delivered through age-restricted / exclusive or sheltered housing for sale[15]. With extra-care schemes, the tenure split is more widely spread with social rented and shared ownership options.

[15] The increasing supply of age restrict housing may be due to developers bringing forward schemes classed as C2 rather than C3. This can enable them to avoid affordable housing provision. Even though these schemes are classed as C2 they often provide minimal 'on site care'.

Figure 4-1 Supply of retirement living units in 2018



Source: Knight FRANK, Retirement Housing Market Update Q1 2018, using Elderly Accommodation Council

4.3 Our focus is on age restricted schemes which are more likely to be developed by the private sector and are most similar to C3 Use housing. C2 Use Residential Institutions such as residential care homes and nursing homes are specialist developments (valued on a turnover or 'profits' basis) and are not considered in this analysis. Some of these schemes are developed by housing associations and others by the private sector and/or charities and all will have a different status in terms of liability for Affordable Housing (and CIL (for example, Charitable Organisations are exempt from CIL)).

Greater Cambridge older person's accommodation market

Older person's accommodation premiums

4.4 Research by The Retirement Housing Group[16] (RHG) indicates that sheltered housing values carry a premium over general needs housing – this analysis is set out in Table 4-1.

Table 4-1 - Sheltered housing and ECH sales values premiums

Typology	Assumption
Sheltered housing unit prices	In higher value areas -

[16] RHG Retirement Housing Group, Retirement Housing Viability Base Data (April 2013) / Briefing Paper for CIL Practitioners Retirement Housing and the Community Infrastructure Levy (June 2013) by Churchill Retirement Living and McCarthy and Stone

Typology	Assumption
	• 10-15% premium to private market 1 – 2 bed flats Or, in lower value areas (where no apartment scheme comparables) – • 75% value of 3-bed semi-detached house for a 1 bed sheltered housing unit, and • 100% value of 3-bed semi-detached house for a 2 bed sheltered housing unit

Source: Retirement Housing Group 2013

4.5 When we apply the RHG rule of thumb approach (using the lower value rates) to our sales values (see Table 2-14) it generates the following adjusted values for sheltered housing:

- 1-bed flat at £250,000 a 10% - 15% premium equates to £275,000 - £287,500
- 2-bed flat at £300,000 a 10% - 15% premium equates to £330,000 - £345,000

New build sold prices

4.6 There have been no new build sales recorded on Land registry in Greater Cambridge since 2015, we have therefore looked at schemes in the wider Cambridgeshire area. Table 4-2 shows the flats which have sold at the Roslyn Court development in Ely. It consists of 57 new 1- and 2-bedroom apartments available for sale and rent to people aged 70 and over. Highwood Mill is the most recent example of new-build retirement accommodation, with the first sales completing in 2018.

4.7 The analysis shows that although there is a large difference in the average size of the 1 bed and 2 bed units from 56 sqm to 92 sqm, the units follow the general trend with prices on a £psm basis for 2 beds being lower than those for 1 beds. The achieved prices are slightly in excess of the RHG rule of thumb.

Table 4-2 - Achieved values for over 70s accommodation

Typology	No. of beds	Number of sales	Average size Sqm	Sold value min	Sold value max	£psm Min	£ psm Max
Flat	1	29	56	£143,107	£259,950	£2,467	£4,482
Flat	2	14	92	£193,851	£249,303	£1,771	£3,145

Source: Land Registry, EPC

New build quoting prices

4.8 Table 4-3 summarizes asking prices relating to retirement housing for three schemes in the area. Warburton House by BPHA, Mill View by Domovo and Moorhouse Lodge by Churchill

Retirement. The analysis shows that the quoting prices are mostly lower than the RHG rule of thumb with the Warburton House scheme higher.

Table 4-3 - Asking prices for sheltered housing

Scheme name	No. of listings	Unit size sqm	1 Bed – quoting price	2 Bed – quoting price
Warburton House, Ninewells, Cambridge (Over 55s) (sheltered housing)	6	Unknown	-	£377,500
Mill View, St Edmunds Way, Hauxton (Over 55s (extra care housing)	12	Unknown	-	£362,500
Moorhouse Lodge, Huntingdon (Over 60s) (sheltered housing)	5	Unknown	£200,000 - £240,000	-

Source: Rightmove, Sharetobuy

Conclusions older person's accommodation

4.9 Based on our analysis of the specialist housing sector we have used the values as set out in Table 4-4. In light of no evidence for the extra-care product, we have applied a premium over our sheltered housing assumptions as recommended by the RHG.

Table 4-4 -Older person's accommodation values inputs

Type	Average unit size sqm	Unit price
Sheltered Housing 1-Bed	55	£230,000
Sheltered Housing 2-Bed	70	£350,000

Source: AspinallVerdi

5 Student accommodation market assessment

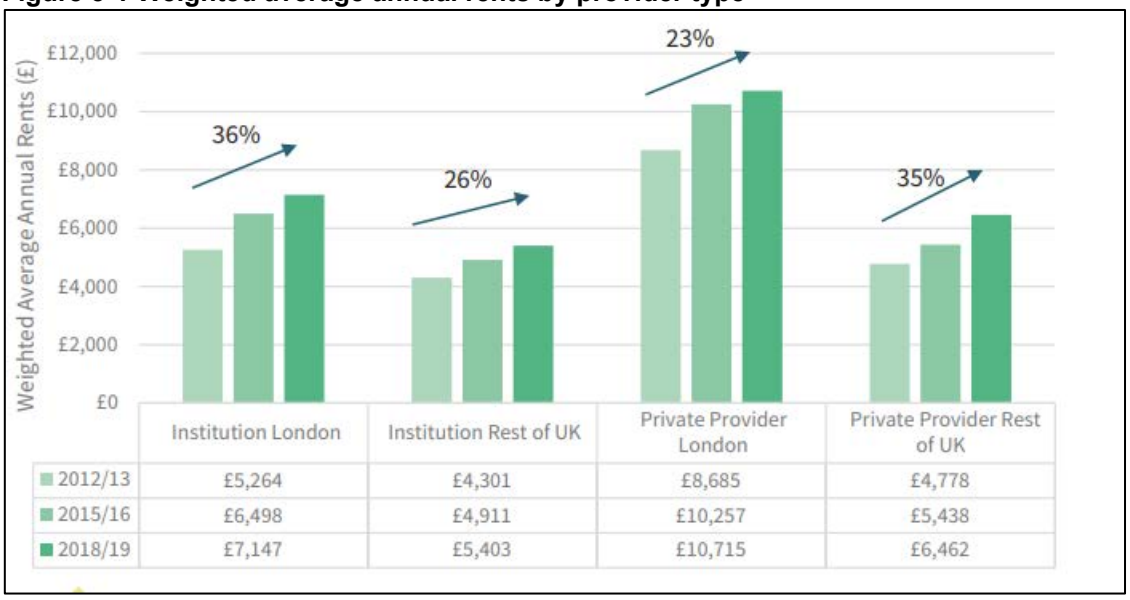
Introduction

5.1 In December 2019 UCAS reported[17] that 541,240 people were accepted through UCAS to start an undergraduate course in the 2019 cycle, an increase of 1.5% increase in 2018. Students from the UK accounted for 85.79% of applicants, outside the EU 8.34% and inside the EU 5.87%.

5.2 Nationally, demand for purpose-built student accommodation is acute due to supply not keeping pace with demand. JLL report that *'Despite a five year decline in domestic 18-year olds, the sector has seen an increase of 114,000 UK full time students over the same period, further compounding the supply side challenge.'*[18] In the East of England, since 2014, the number of available student beds has increased by 4,808 while the demand for beds has increased by 7,945. [19]

5.3 Average weekly rents for student accommodation is currently at £147, with The National Union of Students (NUS) and Unipol reporting that the *'In 2018/19 the overall average weekly rent stands at £147, an increase of five per cent since last year, of 8.9 per cent on 2015/16 and 31.3 per cent since 2011/12.'*[20] This is also illustrated in Figure 5-1, which shows the average weighted annual rents in London and the rest of the UK.

Figure 5-1 Weighted average annual rents by provider type



Source: NUS, Unipol, 2018/19, Accommodation costs survey

[17] UCAS, December 2019, End of cycle report 2019
[18] JLL, 2019, UK Student Housing Report
[19] JLL, 2019, UK Student Housing Report
[20] NUS, Unipol, 2018/19, Accommodation costs survey

5.4 Contract lengths for student accommodation are typically not for the full 52-week period. NUS and Unipol report that 'Nationally, the average contract length is 40 weeks for institutional and 46 weeks for private accommodation. The university figure is unchanged from 2015/16.[21]'

5.5 Due to the Covid-19 pandemic, there are expected to be a number of significant changes to the number and type of rentals being taken up by students. One of these is that universities are expecting fewer students on campus overall as it is anticipated that fewer students will enrol and those that do will have their lessons remotely. FE News reports that '*student accommodation providers are expecting a big drop in rentals this year as classes will be moving to various online platforms.*'[22]

5.6 Also, there is expected to be significantly lower demand from international students as international travel is still heavily disrupted. CNBC reports that '*international travel is still disrupted with many countries prohibiting flights from areas with large infection rates. In addition, there will be a 14-day compulsory quarantine for those arriving in the U.K. from June 8 onward. These steps could put many international students off studying in the U.K. in the new academic year*'[23]

5.7 All of these factors mean that student accommodation providers are generally negative but the short term outlook, with CNBC reporting that '*Unite Students, one of the largest student accommodation providers and owners in the U.K., said in April it expected a loss between 16% and 20% in rents for the 2019/20 academic year. Empiric Student Property, another firm in the U.K., said in May it expected a drop of up to 12% in income for the current year.'*[24]

Greater Cambridge student accommodation market

5.8 Greater Cambridge benefits from the University of Cambridge and Anglia Ruskin University. The University of Cambridge is one of the best universities in the world with a Times World University Ranking of 3rd in 2020. It provides a wide variety of full-time and part-time, undergraduate and postgraduate courses in the following areas: art, design and architecture, business and law, performing arts and social sciences, science, engineering and computing, and health, social care and education. The University had an estimated 23,247 students enrolled as of 2019.

Rents

5.9 Table 5-1 summaries the quoting rents for several student schemes in Cambridge. Prices for studio apartments range between £189 - £342 per week while prices of ensuite rooms range between £170 – £230 per week.

[21] NUS, Unipol, 2018/19, Accommodation costs survey
[22] FE News, 2020, The New Normal: How Student Accommodation Will Change In The UK After Covid-19
[23] CNBC, 2020, Student housing in the UK is no longer a 'bullet-proof' investment after the coronavirus crisis
[24] CNBC, 2020, Student housing in the UK is no longer a 'bullet-proof' investment after the coronavirus crisis

Table 5-1 - Summary of student accommodation rents

Scheme name	Typology	Price per week	No. of weeks
The Railyard	Studio	£200 - £278	43 - 51
Brunswick House	Ensuite	£172 - £218	43 - 51
Anglia House	Ensuite	£170 - £230	43 - 51
	Studio	£250 - £257	51
Nido Castle Hill	Studio	£207 - £286	43 - 51
	Ensuite	£180 - £190	43 - 51
The Cam Foundry	Shared house/ensuite	£154 - £179	41 - 51
Study Inn Cambridge	Studio	£189 - £244	43-51
Student Castle Cambridge	Studio	£242 - £342	43-51

Source: Providers websites, August 2020

Student accommodation investment yields

5.10 Pre-Covid-19, student investments were considered an attractive proposition, with income being considered relatively secure over a fixed period and the sector has seen rental growth. Cushman & Wakefield report that *'Private sector rental growth between 2018 and 2019 is slightly lower than in previous years at 2.6% overall.'*[25]

5.11 As a result of Covid-19, experts are warning that student accommodation is no longer a low-risk investment that it once was with CNBC reporting that *'Student accommodation has been a '"bullet-proof" investment, but experts predict it's now on track for a year of disruption due to the coronavirus crisis and its impact on the property market.'*[26]

5.12 With regards to investment yields, Figure 5-2 shows that pre-Covid-19, investment yields were generally compressing except for the secondary regional market. Super prime regional yields were at 5.25%.

[25]Cushman & Wakefield, 2016/17, UK Student accommodation report
[26] CNBC, 2020, Student housing in the UK is no longer a 'bullet-proof' investment after the coronavirus crisis

Figure 5-2 Direct let net initial yields 2019

	Net initial yield	Trend
London	4.00%	▼ Down
Super prime regional	4.75%	▼ Down
Prime regional	5.25%	▼ Down
Secondary regional	6.00%	▲ Up

Source: Savills, The Sky's The Limit? 2019

5.13 Table 5-2 sets out student investment sales recorded on EGi. There is limited evidence in Cambridge available on EGi so we have looked in the wider area. The evidence shows that recent student investment sales with direct lets have achieved yields between 4.77% and 9.82% this is dependent on the location, quality of nearby universities, competing supply and specification of the building.

Table 5-2 - Student accommodation investment sales

Deal Date	Address	No. of beds	Price	Yield %	Cap value per bed space	Vendor	Purchaser	Comments
01/07/18	Brunswick House, Newmarket, CB8 8HR	251	£38m	4.77	£151,394	Apache Capital Partners	Cambridgeshire County Council	Direct let - 231 en-suite cluster flats and 20 self-contained studio flats
19/12/18	Apollo House & The Annex, Butts, Coventry, CV1 3GN	161	£5.5m	9.82	£34,161	-	L1 Property	Direct let – 161 shared rooms
27/06/18	Roman House, Friar Gate, Derby, DE1 1XB	126	£8.6m	6.22	£68,253	Catalyst Capital	Northridge Capital	Direct let – 72 studios and 54 'twin studios'

Source: EGi, accessed August 2020

Conclusions student accommodation

5.14 Based on the market analysis a suitable weekly rent for an en-suite is £200 per week over a 46-week period. Assuming a direct let a net initial yield of 4.75% is appropriate.

First Proposals Consultation Stage

Appendix 4

Greater Cambridge Land Value Report

Greater Cambridge Shared Planning

August 2021

Private and Confidential

1 Introduction

1.1 As set out in section 4 of our Viability Appraisal report, the (benchmark) land value assumption(s) are fundamental in terms of Plan viability. We set out below our approach to land values for the Viability Assessment, before reviewing land values across the Greater Cambridge Local Authority area in order to inform our assumptions for the Benchmark Land Values (BLV) used in the appraisals.

1.2 The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on 11 March 2020, has impacted global financial markets. In the second quarter of 2020, the United Kingdom entered the deepest recession in modern history which have consequently impacted property market activity.

1.3 Many agents and commentators anticipated house prices would fall as a result of the nationally-imposed lockdown and consequent freeze in property market activity. However, as restrictions were eased during the summer of 2020, many agents reported surges in interest and uplifting activity. This has been attributed to the combination of pent-up demand and the introduction of the stamp duty holiday.[1] The stamp duty holiday is now being phased out through to September 2021.

1.4 Market commentators have also noticed that buyers have reappraised the benefits of urban living, with increasing numbers of buyers seeking larger spaces to work from home and an increased priority for private external space. As this trend has grown, some agents in well-connected, greener locations are noticing that demand is increasing house prices. As a result, there are likely to be both winners and losers in the property market over the coming months and years and the delivery of the Local Plan should be monitored (and the Plan updated as appropriate).

1.5 Due to these uncertainties, we recommend that when policy makers are making decisions based on viability evidence in the current climate, they must ensure there is an adequate "viability buffer". In essence, a degree of caution should be taken when imposing planning policies and more surplus should be left as the profitability and viability of development may reduce.

1.6 This report includes the following sections:

2) Land Value Approach	This section details how the land value is calculated using the residual valuation method.
3) UK Residential Development Land	This section provides background context to residential development land values at the national and regional level.

[1] The Guardian, 2020. Hope for some, heartbreak for others as house prices go through the roof.

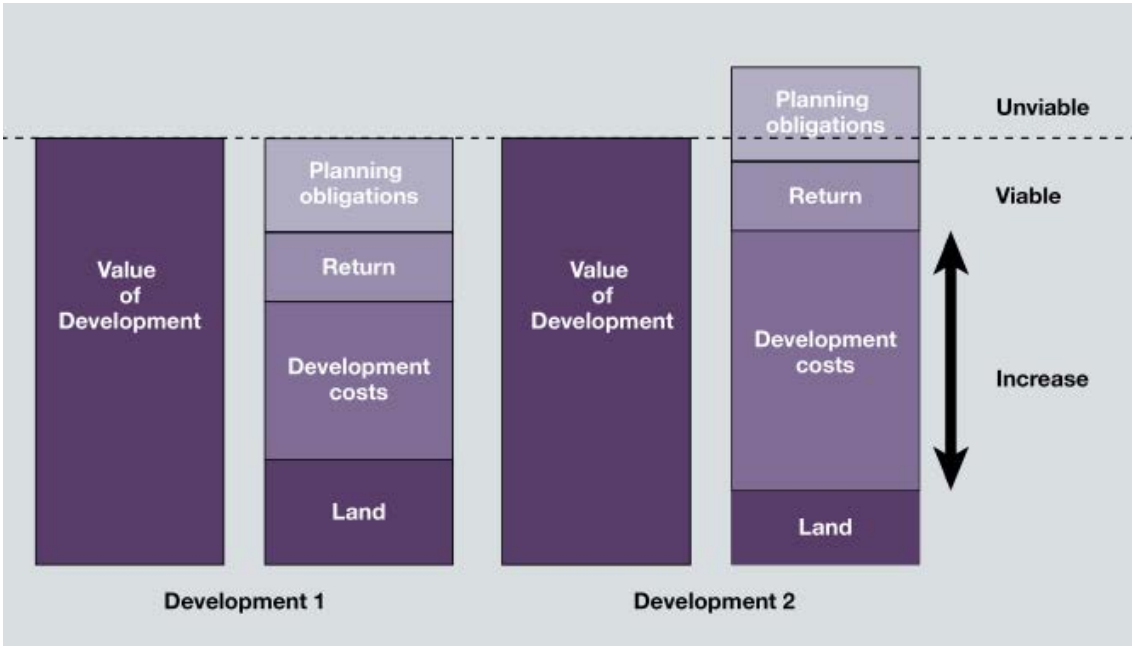
4) Evidence Base Review	Provides a review of the existing market evidence from previous studies and reports in respect of the Greater Cambridge area.
5) Agricultural Land Values	This section reviews the agricultural land market within Greater Cambridge District and provides commentary on agricultural land values (including paddock land).
6) Residential Development Land Values	This section reviews the market for residential development land within Greater Cambridge District and provides commentary on greenfield and brownfield land values.
7) Benchmark Land Value Assumptions	This section concludes our land value paper by outlining our BLV assumptions for the different Site Typologies.

2 Land Value Approach

2.1 In a development context, the land value is calculated using a residual approach – the Residual Land Value (RLV).

2.2 The RLV is calculated by the summation of the total value of the development, less the development costs, planning obligations, developers return/profit to give the land value. This is illustrated on the following diagram (see Table 2-1).

Table 2-1 - Development Viability



Source: Royal Institution of Chartered Surveyors (RICS) Financial Viability in Planning, 1st edition Guidance Note (August 2012)

2.3 In Development 1 above, the value of the development less the development costs and planning obligations is sufficient to generate a sufficient return and land value – the scheme is fundamentally viable.

2.4 In Development 2, the development costs have increased such that the sum of the costs is greater than the value of the development – the scheme is fundamentally unviable.

2.5 In order to determine whether development is viable in the context of area-wide studies, the NPPF (February 2019) is silent on the requirements of landowners and developers[2]. It now simply states that, '*all viability assessments, including any undertaken at the plan-making stage, should reflect the recommended approach in national planning guidance, including standardised inputs, and should be made publicly available'*.[3]

2.6 For the purposes of CIL rate setting the Planning Practice Guidance states that a '*charging authority should draw on existing data wherever it is available. Sources of data can include (but are not limited to): land registry records of transactions; real estate licensed software packages; real estate market reports; real estate research; estate agent websites; property auction results;*

[2] Previously paragraph 173 of the NPPF (2012) stated that 'to ensure viability, the policy costs should provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable'.
[3] Paragraph 57, February 2019, Ministry of Housing, Communities and Local Government, National Planning Policy Framework

valuation office agency data; public sector estate/property teams' locally held evidence'[4] And that, '*when deciding the levy rates, an authority must strike an appropriate balance between additional investment to support development and the potential effect on the viability of developments*.[5]

2.7 The PPG Viability provides guidance on the land values and particularly benchmark land values for the purposes of viability assessment:

- How should land value be defined for the purpose of viability assessment? – '*a benchmark land value should be established on the basis of the existing use value (EUV) of the land, plus a premium for the landowner'*. Paragraph: 013 Reference ID: 10-013-20190509 Revision date: 09 05 2019
- What factors should be considered to establish benchmark land value? – '*In plan making, the landowner premium should be tested and balanced against emerging policies'*. Paragraph: 014 Reference ID: ID: 10-014-20190509, Revision date: 09 05 2019 [our emphasis]
- What is meant by existing use value in viability assessment? – '*EUV is the value of the land in its existing use. Existing use value is not the price paid and should disregard hope value. Existing use values will vary depending on the type of site and development types. EUV can be established in collaboration between plan makers, developers and landowners by assessing the value of the specific site or type of site using published sources of information such as agricultural or industrial land values, or if appropriate capitalised rental levels at an appropriate yield (excluding any hope value for development)*'. Paragraph: 015 Reference ID: 10-015-20190509, Revision date: 09 05 2019
- How should the premium to the landowner be defined for viability assessment? – '*The premium should provide a reasonable incentive for a land owner to bring forward land for development while allowing a sufficient contribution to comply with policy requirements'*. Paragraph: 016 Reference ID: 10-016-20190509, Revision date: 09 05 2019

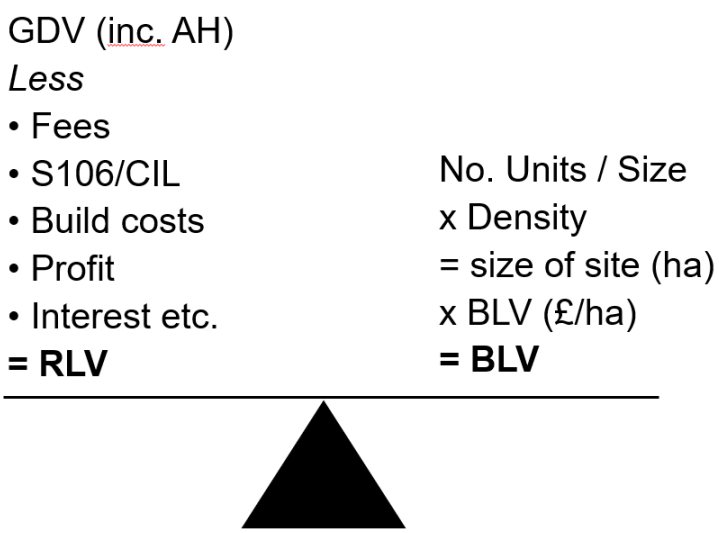
2.8 The above PPG guidance is described in detail in the main report (section 2 – National Policy Context). The PPG does not provide any guidance on the quantum of premiums. One therefore has to 'triangulate' the BLV based on market evidence.

2.9 Hence for plans and schemes to be viable the RLV has to be tested against the benchmark which would enable sites to come forward – the Benchmark Land Value (BLV). This is illustrated on the following diagram.

[4] How should development be valued for the purposes of the levy?, Paragraph: 020 Reference ID: 25-020-20190901, Revision date: 01 09 2019

[5] How are Community Infrastructure Levy rates set?, Paragraph: 010 Reference ID: 25-010-20190901, Revision date: 01 09 2019

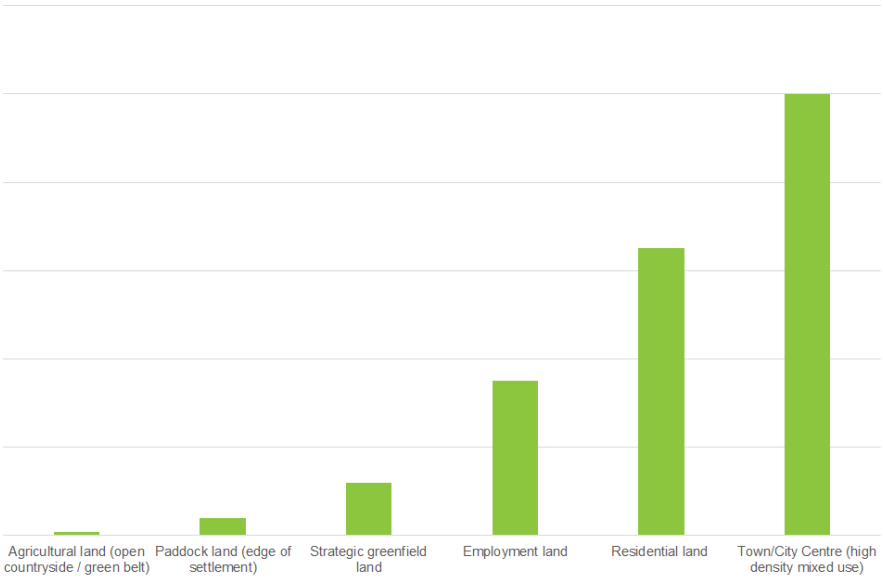
Figure 2.1 - Balance between RLV and BLV



Source: AspinallVerdi (© Copyright)

2.10 The fundamental question is, '*what is the appropriate BLV?'* The land market is not perfect but there is a generally accepted hierarchy of values based on the supply and demand for different uses. This is illustrated on an indicative basis in the following chart (Table 2-2).

Table 2-2 - Indicative Land Value Hierarchy



Source: AspinallVerdi (© Copyright)

2.11 Note that the value of individual sites depends on the specific location and site characteristics. In order for development to take place (particularly in the brownfield land context) the value of the alternative land use has to be significantly above the existing use value to cover the costs of site acquisition and all the cost of redevelopment (including demolition and construction costs) and developers profit / return for risk. In a Plan-wide context we can only be broad-brush in terms of the BLV as we can only appraise a representative sample of hypothetical development typologies.

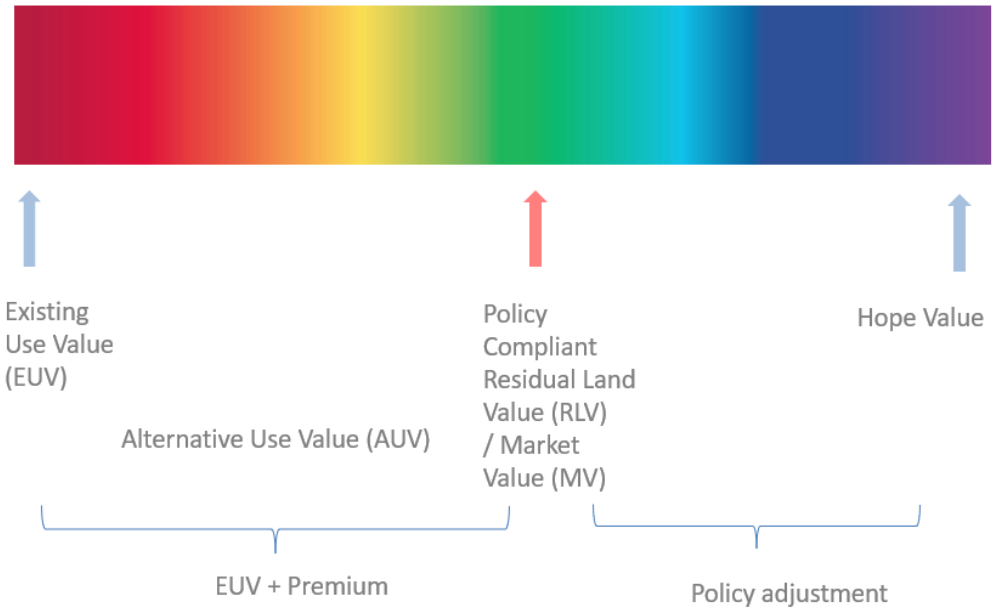
2.12 Note also that some vendors have different motivations for selling sites and releasing land. Some investors take a very long-term view of returns, where as other vendors could be forced sellers (e.g. when a bank forecloses).

2.13 Finally, 'hope value' has a big influence over land prices. Hope value is the element of value in excess of the existing use value, reflecting the prospect of some more valuable future use or development. The PPG specifically states that hope value (and the price paid) should be disregarded from the EUV. However, hope value is a fundamental part of the market mechanism and therefore is relevant in the context of the *premium.*

2.14 The diagram below illustrates these concepts. It is acknowledged that there has to be a premium over EUV in order to incentivise the land owner to sell. This 'works' in the context of greenfield agricultural land, where the values are well established, however, it works less well in urban areas where there is competition for land among a range of alternative uses. In an urban context, it begs the question EUV *"for what use?"* It is impossible to appraise every single possible permutation of the existing use (having regard to any associated legacy costs[6]) and development potential.

[6] E.g. Existing buildings to be demolished and/or contamination requiring remediation.

Table 2-3 - Benchmark Land Value Approaches



Source: AspinallVerdi (June 2019)

2.15 In this context, the Harman report *'allows realistic scope to provide for policy requirements and is capable of adjusting to local circumstances by altering the percentage of premium used in the model. The precise figure that should be used as an appropriate premium above current use value should be determined locally. But it is important that there is [Market Value] evidence that it represents a sufficient premium to persuade landowners to sell'*.[7]

2.16 The HCA (now Homes England) Area Wide Viability Model (Annex 1 Transparent Viability Assumptions) is the only source of specific guidance on the size of the premium. The guidance states:

There is some practitioner convention on the required premium above EUV, but this is some way short of consensus and the views of Planning Inspectors at Examination of Core Strategy have varied. Benchmarks and evidence from planning appeals tend to be in a range of ***10% to 30% above EUV in urban areas.*** *For* ***greenfield land, benchmarks tend to be in a range of 10 to 20 times agricultural value.***[8]

2.17 The RICS provides a more market facing approach based on Market Value less an adjustment for emerging policy (say, 25%). This approach has also been endorsed in the Mayor of London

[7] Viability Testing Local Plans Advice for planning practitioners - Local Housing Delivery Group - Chaired by Sir John Harman (June 2012), page 29
[8] HCA Area Wide Viability Model (Annex 1 Transparent Viability Assumptions), August 2010, Transparent Assumptions v3.2 06/08/10

CIL Inspectors Report (Jan 2012); Greater Norwich CIL Inspectors Report (Dec 2012); and the Sandwell CIL Inspectors Report (Dec 2014).

2.18 Greater emphasis is now being placed on the existing use value (EUV) + premium approach to planning viability to break the circularity of ever-increasing land values. Due to ever increasing land values (partly driven by developers negotiating a reduction in policy obligations on grounds of 'viability') we are finding that the range between existing use value (EUV) and 'Market Values' and especially asking prices is getting larger. Therefore (say) 20 x EUV and (say) 25% reduction from 'Market Value' may not 'meet in the middle' and it is therefore a matter of professional judgement what the BLV should be (based on the evidence). Our BLV's are set out in Table 6-1 – at the end of this paper.

2.19 In order to provide comprehensive analysis, we also set out a variety of sensitivities in terms of changes to profit and BLV assumptions – these are shown for each of the typologies on the appraisals appended (with an explanation of how to interpret the sensitivities in section 4 of the main Viability Assessment report).

2.20 The following paper and summary values are derived from our land value database based on the existing evidence base, web-based research, agent research and stakeholder consultation.

3 UK Residential Development Land

3.1 This section provides background context to residential development land values at a national and regional level.

Development Land

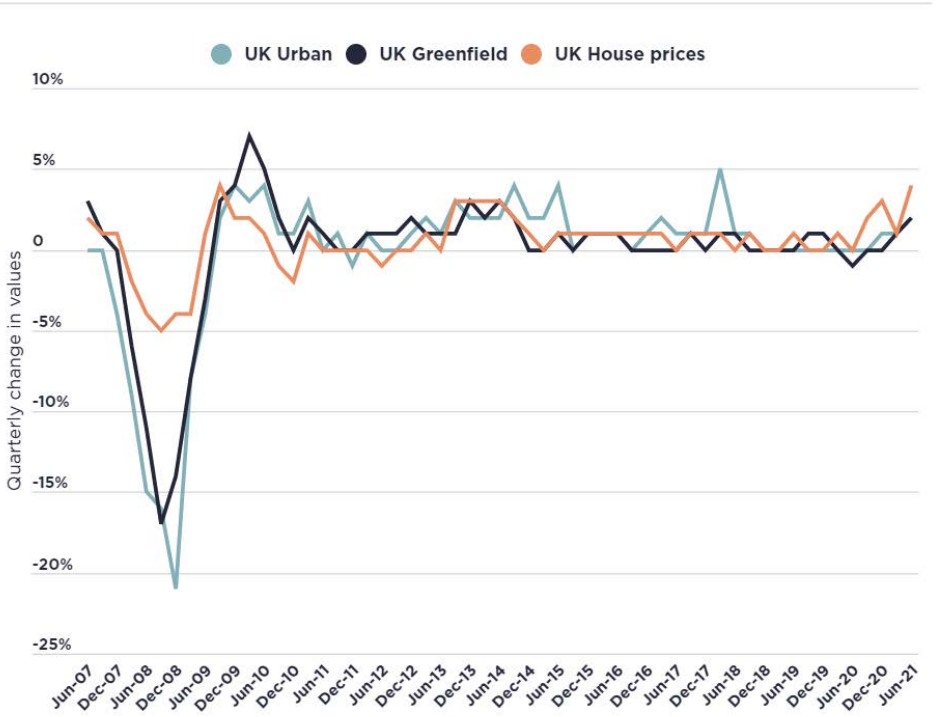
3.2

3.3 Figure 3.1 shows the impact of the global financial crisis (GFC) on development land values with greenfield and urban land both dropping to approximately half their peak values by June 2009. Even now 10+ years since the GFC land values are still yet to return to their previous peak before the GFC. In recent years the growth in value for both greenfield and urban land has begun to plateau, particularly for urban land with it maintaining an index of 80 through December 2017 – June 2020. Savills report that the Covid-19 lockdown in March slowed transactions of development land significantly; however, confidence is up from the start of the pandemic with sales rates beginning to 'bounce back' strongly.

3.4 Savills have previously suggested high sales values may only be temporary, but a year later house prices grew nationally by 13.4%. The peak may be imminent as restrictions ease, and the stamp duty holiday and furlough scheme ends.

3.5 Savills report in their recent survey of their development teams that a net balance of 79% have reported that there were new sites coming onto the market, which is a significant change from the 22% net balance reported in January.

Figure 3.1 - UK Greenfield and Urban Residential Land Value Change

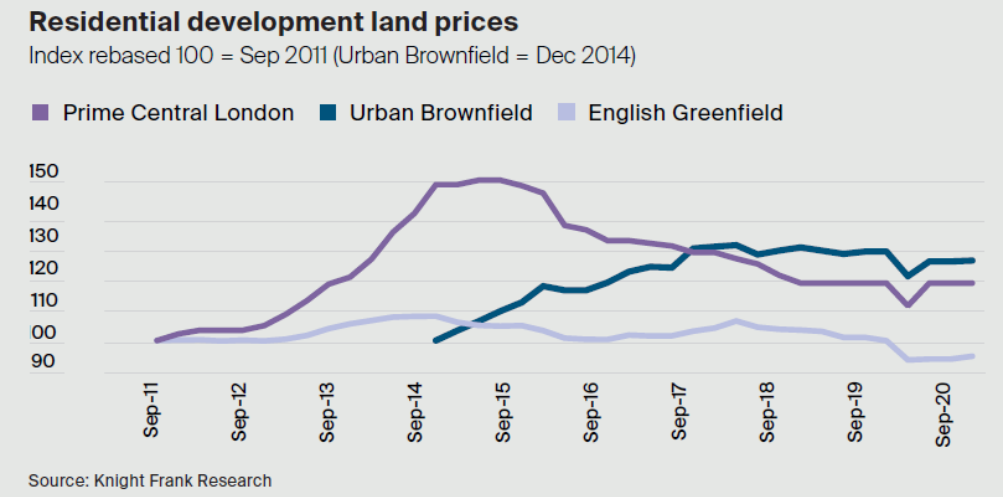


Source: Savills (Q2, 2021)

3.6 Savills also report that there is an increase in demand for land, with a net balance of 82% of their agents reporting increasing bid levels over the last quarter compared to normal levels.

3.7 Knight Frank produce a quarterly Residential Development Land Index Report. The latest report covers Q1 2021. They present a confident outlook, with 55% of respondents anticipating an increase in land values next quarter. This is following a small increase of 0.4-0.9% in Q1, though this is tempered by an annual decrease of 2.2-4.8%. They report a lack of overall supply in the market which is resulting in planning delays, particularly to land being allocated in Local Plans across England. Availability of land (or lack thereof) is cited as the greatest potential impact on the housebuilding sector looking forward through 2021.

Figure 3.2 - Residential Development Land Prices



Source: Knight Frank Residential Development Land Index (Q1, 2021)

3.8 In our opinion, land values have also hit a 'ceiling' in around 2017-2018. Since the Brexit referendum vote there has been ongoing political and economic uncertainty, followed by changes to the PPG on viability and now Covid-19.

3.9 All of these are factors that have will restrict development land value growth (both greenfield and brownfield), in particular: the economic challenges and risks of Covid-19; increased build costs due to labour shortages; supply chain issues but also increasing emphasis on sustainability to achieve carbon net zero by 2050. The impact of the cost of achieving net zero on land pricing was highlighted prior to Covid-19 in the Q4 2019 residential development land market update by Savills[9].

3.10 In a brownfield context specifically, Covid-19 has accelerated the decline of the retail and leisure market, whilst posing a threat to the future of the office market. The impact is likely to increase vacancies and reduce rental and capital valuations which will feed into land pricing. As a result, there is likely to be increased opportunity for redevelopment in town and city centres, with landowners potentially forced to sell. Distressed sales is a trend picked up by Savills Research in their land market report[10].

3.11 It is difficult to predict how the land market and pricing will react and this will have to be monitored moving forwards. If the experience of the GFC is used as an example, then we can anticipate a reduction in both greenfield and brownfield development land values. However, this may take some time to feed through into the market and data, with a reduced number of land deals taking place. Measures such as the furlough scheme which has prolonged employment may impact the

[9] Savills Research, Residential Development Land Q4 2019, page 2
[10] Savills Research, Residential Development Land Q2 2020, page 1

economy and demand from house buyers as the scheme is wound down in the second half of 2021.

3.12 Despite these challenges, development market activity will continue as the Government sees the sector as a way of driving the economic recovery. There also remains a 'housing shortage' which will have only been exacerbated by development stalling through the pandemic. The Savills Research paper highlights a mixed response to land acquisitions from the sector at present. Housing associations are said to be acting more competitive using grant to support acquisitions. In comparison, some larger housebuilders are acting more cautiously and focusing on their committed pipelines whilst others such as Taylor Wimpey have raised £500 million of capital funding to finance acquisitions[9].

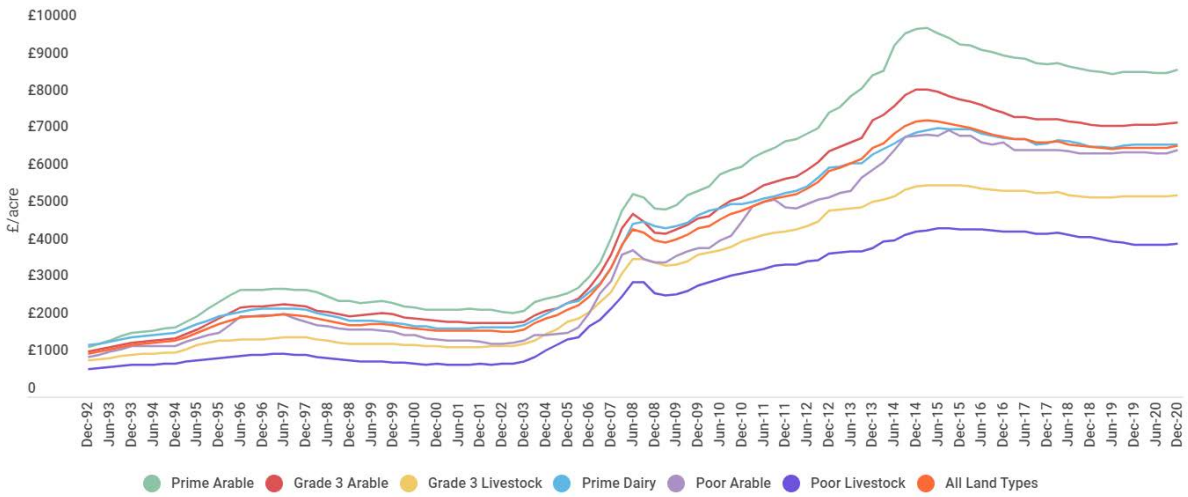
Agricultural land

3.13 Whilst understanding the development land market is important, with the changes to the PPG on viability as set out above in Chapter 2, exploring agricultural land values is equally as important to understand. This informs the Benchmark Land Value of greenfield allocations.

3.14 Figure 3.3 below shows the long-term trend in average agricultural land values by type. It shows that following a relatively small drop in the average price post GFC (by approximately £500 per acre), there was a sustained period of growth up to early 2015. At this point prime arable land achieved on average just short of £10,000 per acre. Since then, there has been a slight negative trend with the average price for prime arable land at £8,715 per acre at the end of 2019., however it looks like a small increase in beginning to take effect, in part due to low supply.

3.15 According to Savills Research, this downwards trend has been influenced by weakness in commodity pricing during 2014 which started to drag average prices down. Then in 2016 the Brexit referendum vote resulted in material uncertainty over the future prosperity of UK agriculture. Despite publishing its own UK agricultural and environmental policy changes in 2018, not much policy has been legislated and ongoing negotiations around an exit deal continue to slow the rural land market.

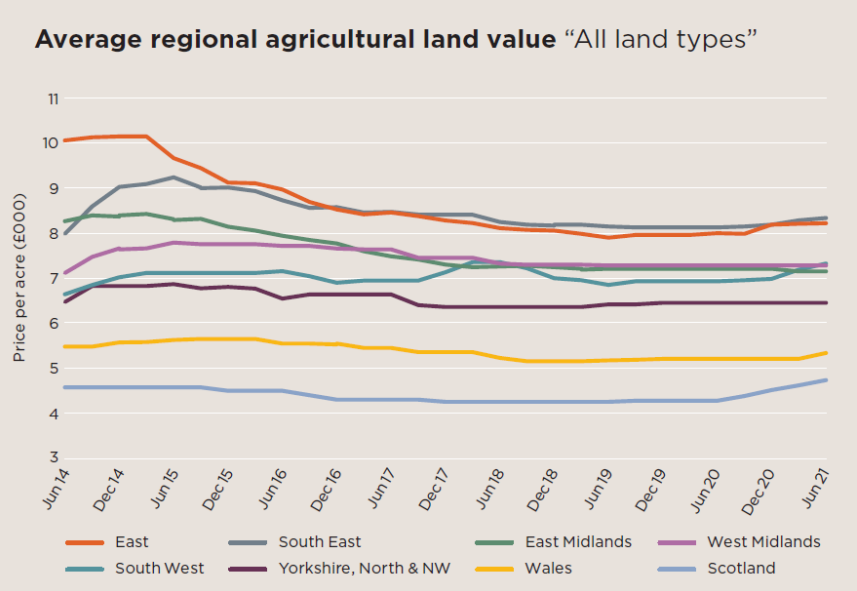
Figure 3.3 - Average Agricultural Land Values Per Acre (by land type)



Source: Savills Research

3.16 On a regional level, the Eastern region which Greater Cambridge will fall into is second only to the South East in terms of value per acre, in the region of £8,000-8,500 per acre (see figure 3.4). This compares to a national average of £6,875 per acre.

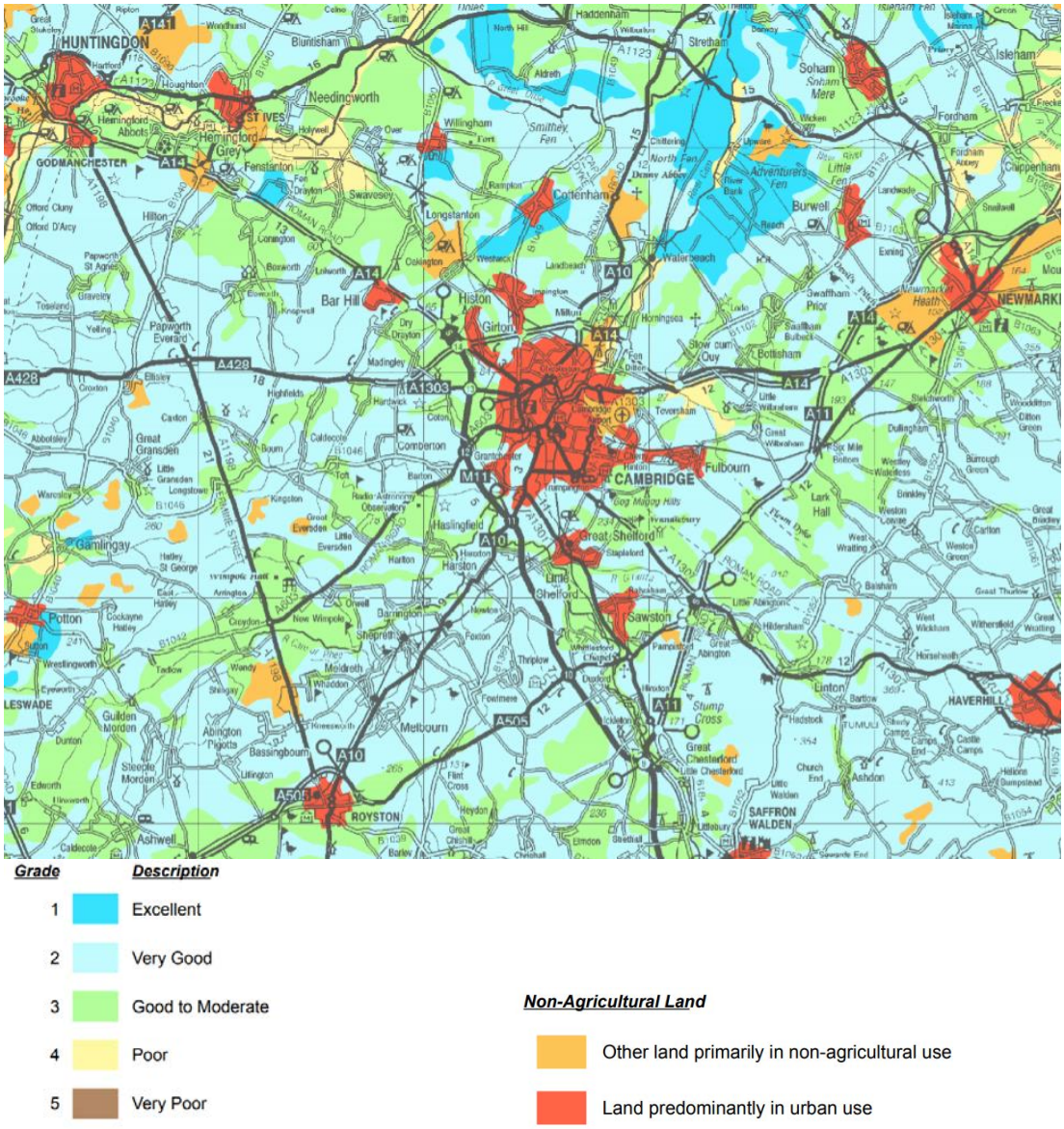
Figure 3.4 - Average Agricultural Land Values Per Acre (by region)



Source: Savills Research

3.17 Figure 3.5 below shows the quality of agricultural land in Cambridge which illustrates that generally the land is rated very good (Grade 2) and good to moderate (Grade 3). The land along the river Cam as it bisects the A14 is typically poor quality, with little other 'poor' (Grade 4) quality land in the area.

Figure 3.5 - Agricultural Land Classification Map, Eastern Region



Source: Natural England

3.18 The RICS Farmland Market Directory Full Year 2020 puts average prices for farmland in the East between £9,959 to £13,909 per acre.

3.19 As with development land, the graphics above do not yet provide any indication as to how the market will respond to Covid-19. Both Savills[11] and Knight Frank[12] cite a shortage in supply of land as an issue in terms of market constraint that means limited deals are taking place. Knight Frank indicate that Covid-19 may result in farmland being seen as attractive, safe investment

[11] https://www.savills.co.uk/property-values/rural-land-values.aspx
[12] https://www.knightfrank.co.uk/research/article/2020-03-24-covid-rural-update

which could stimulate demand and result in price growth akin to that post Global Financial Crisis. Their optimism is tempered by the ongoing uncertainty which remains around Brexit (which forced the current downward trends. However, they are cautiously optimistic that the slight increase in land over the last 6 months will continue to see a recover in supply, although this is not yet evident in the East, which is on the wrong side of a regional disparity in supply.

3.20 Savills also highlight the potential impact of the net zero agenda, which could result in farming businesses being asked to offset their carbon emissions at farm level; these areas of less productive farmland may be of increasing importance to the business itself for carbon sequestration and reaching a net zero target.

3.21 As with development land, the market will have to be closely monitored moving forwards but we consider it unlikely prices for agricultural land are going to increase significantly in the short to medium term. In the following chapter, we consider more regional and local evidence to inform our Benchmark Land Value assumptions for both greenfield and brownfield scenarios.

4 Agricultural Land Values

4.1 Agricultural land values will vary dependent upon a number of variables including access, water supply, topography and quality of soil / ground conditions. In determining a value per acre / hectare (ha) for agricultural land, we have searched EGi and CoStar for land sales and online databases for asking prices for land. We have also consulted with agents and industry.

Agricultural Land Sales

4.2 There are limited transactions of farmland in and around Cambridgeshire. Due to this shortage of evidence we have extended our search beyond Cambridgeshire.

Table 4-1 - Agricultural Land Transactions

Address	Date	Site Area (acres / ha)	Price Paid	£ per acre / £ per hectare	Comment
Land west of Stoke Road, Stoke Ferry PE55	2021	581.31 ac / 235.25 ha	£5,340,000	£9,186 per ac / £22,699 per ha	Bare arable land
Alder Farm, Wimblington, PE15	2021	223.37 ac / 90.40 ha	£2,150,000	£9,625 per ac / £23,784 per ha	Arable land and 2x bungalows
Pooly Farm, Northwold, Norfolk, IP26	2021	324.37 ac / 131.27 ha	£3,000,000	£9,249 per ac / £22,854	Mixed arable and pasture land with woodland
Daintree Farm	2019	112 ac / 45.32 ha	£812,000	£7,250 per ac / £17,915 per ha	Bare arable land

Source: AspinallVerdi, 2021

4.3 Land sales ranged from £7,2550 to £9,625 per acre.

Table 4-2 - Agricultural Land Asking Prices

Address	Site Area (acres / ha)	Asking Price	£ per acre / £ per hectare
Goredike Bank, Gorefield, Wisbech, PE13 4QF, Cambridgeshire	143 acres/57.87 ha	£1,125,000	£7,867 per ac / 19,440 per ha
Hill Farm, Church Road, Wentworth, Ely, CB6 3QE	127.43 acres/51.57 ha	£1,400,000	£10,986 per ac / £27,147 per ha

Address	Site Area (acres / ha)	Asking Price	£ per acre / £ per hectare
Lower Glebe Farm, Glatton	179.83 acres/72.78ha	£1,350,000	£7,507 per ac / £18,550 per ha
Arable Land, Crowland Road, Eye Green, Peterborough, Cambridgeshire, PE6 7TP	79,67 acres/32.24 ha	£612,500	£7,688 per ac / £18,997 per ha

Source: AspinallVerdi '200924 SDC Land Values Research_v4'

4.4 The following arable land is currently for sale for agricultural purposes:

- Crowland Road, Eye Green, Peterborough 79.67 acres / 32.24 ha £612,500 £7,689 per acre / £18,988 [er ha

4.5 We have also found 2 greenfield agricultural sites advertised for sale that benefits from hope value. This is:

- Hill Farm, Newborough, Peterborough, PE6 7RX, Cambridgeshire 166.50 acres/67.38 ha £5,000,000 £30,030 per acre/£74,204 per ha

- Mayfield Heath Farm, Sapley Road, Huntingdon, Cambridgeshire 13.30 acres/5.38 ha £545,000 £40,977 per acre/£101,255 per ha

4.6 We have had reference to the latest version of the MHCLG 'Land value estimates for policy appraisal'. The evidence is prepared by the VOA from April 2019. The figure for the Greater Cambridge and Greater Peterborough area is £8,498 per acre.

4.7 The evidence indicates land values sit in the region of £7,000 - £11,000 per acre. In light of this evidence, we believe that an EUV of £10,000 per acre would be a robust starting point.

Paddock Land Values

4.8 We classify paddock land as small scale agricultural / 'pony paddock' land which is on the edge of an existing settlement and generally 1 acre in size. This type of land typically has 'hope value' attached, perhaps due to a lapsed extant planning permission or that the site (or a neighbouring site) has been identified as one with development potential.

4.9 No paddock land listings were found in Cambridgeshire, so we extended our search elsewhere. The closest we could find were in the Oxfordshire areas. Below are the ones from South Oxfordshire:

Table 4-3 - Paddock Land Transactions

Land Address/Site Name	Site Area (acres)	Value £	Value (£/acres)	Value (£/ha)	Date of Evidence
Nuffield, Henley on Thames	7.43	£250,000	£33,647	£83,143	June 2021
Timbers Lane, Nuffield, Henley on Thames	2.50	£200,000	£32,415	£80,097	June 2021
Timbers Lane, Nuffield, Henley on Thames	13.98	£375,000	£26,824	£66,282	June 2021
Lot 7 – Land Behind 80 High Street, Dorchester-on-Thames	1.15 (0.47 ha)	£50,000	£43,478	£107,435	July 2017
Land at Fieldside, Long Wittenham, Abingdon	0.30 (0.12 ha)	£25,000	£83,333	£205,917	July 2017
Land at Wells Farmhouse, Haseley Road, Little Milton, Oxfordshire, OX44 7PP	3.48 (1.41 ha)	£100,000	£28,736	£71,007	July 2017

5 Residential Development Land

5.1 For the purpose of this research, residential development land is land which has either obtained planning permission or has outline planning consent for residential use and/or is allocated for residential development within the Council's adopted policy documents.

5.2 As with agricultural land, we have utilised EGi, CoStar and the existing evidence base for transactional evidence as well as the asking values of sites currently listed on Rightmove and local agent websites to determine a value per acre / hectare. Depending upon the availability of information, this process tries to gauge an understanding into what typical market values are for residential land (greenfield and/or brownfield).

5.3 Careful consideration has to be given to whether the values are aspirational and / or may not represent policy compliant market values. It should be noticed that within our database of evidence we have carried out background research wherever possible into the planning consent the site has, and whether that is policy compliant or not. More weight is given to evidence which is policy compliant. However, it is difficult to be certain that developers have not offered values (and landowners have not asked for values) which are not sustainable in planning policy terms and therefore challenge viability at detailed planning stage. This practice is contrary to the NPPF/PPG (February 2019).

5.4 We also recognise that it is difficult to generalise what a 'typical' greenfield or brownfield residential development site is worth across a District given that all sites are unique. It is therefore important to reiterate that this is a plan-wide study and thus the purpose of our research is to establish a suitable Benchmark Land Value for the respective typologies of development to be appraised, utilising both existing use and market values for greenfield and brownfield land. The BLV does not mean that this is the price that the land has to transact at in the District – it is simply the benchmark for Plan viability purposes.

Greenfield Sites

5.5 We have found the following transactions for greenfield residential land within Cambridgeshire:

Table 5-1 - Greenfield Development Land Achieved Values

Address	Date of Evidence	Site Area (acres / ha)	Value £	£ per acre / £ per hectare	Comment
Sheepfold Lane, South Cambridgeshire, CB23	26/05/2021	19.20 acres/7.77 ha	£12,900,000	£671,875 per acre/£1,660,203 per ha	Policy compliant open market transaction with planning approved for 275 dwellings.
Land east of Cardinal West, Godmanchester, Huntingdon	02/04/2020	7.14 acres / 2.89 hectares	£3,270,000	£457,983 per acre / £1,131,487 per hectare	Policy compliant transaction with outline permission for 59 dwellings
Huntingdon Rd - North West Cambridge Development Land, CB3 0LG	21/11/2019	4.65 acres/1.88 ha	£5,521,036	£1,129,255 per acre/2,790,389 per ha	Non policy compliant development land
2 Cromwell Rd, St Neots Cambridgeshire, PE19 1QN	17/01/2020	5.44 acres/2.20 ha	£2,399,013	£440,995 per acre/£1,089/699 per ha	Site is allocated for 80 dwellings
St Mary's Road, Huntingdon Cambridgeshire, PE26 2SL	16/11/2018	6.31 acres/2.55 ha	£1,296,345	£205,443 per acre/£507,650 per ha	

Source: AspinallVerdi Research

5.6 We are aware of one greenfield residential development site advertised for sale (at the time of writing):

- Residential Development Siteland South Of 119-139 Main Street, Yaxley Nr. Peterborough, PE7 3LP – 1 acre (0.40 hectares), located in Yaxley, marketed on EGi as residential development land, situated immediately south of Peterborough. This is urban infill land abutting existing residential development. The asking price is £720,000, equating to £720,000 per acre (1,779,120 per hectare)

5.7 We have had reference to the latest version of the MHCLG 'Land value estimates for policy appraisal'. The evidence is prepared by the VOA from April 2019. The Cambridge Local Authority area figure is £6,250,000 per hectare. It is important to note that this figure assumes no affordable housing, and is based on a hypothetical site of 1 ha (35 two storeys, 2/3/4 bed dwellings, total floor area of 3,150 sqm) with no abnormals and low risk e.g. existing road frontage, no flood risk, with planning permission etc, and a net developable area of 80% of gross.

Brownfield Sites

5.8 We have found evidence of 4 x transactions for brownfield residential development land within the District. These are summarised in Table 5-2.

Table 5-2 - Brownfield Development Land Achieved Values

Address	Date of Evidence	Site Area (acres / ha)	Value £	£ per acre / £ per hectare	Comment
Plots 7 & 8 Fletton Quays, Peterborough, PE2 8TY	01/03/2021	1.41 acres/0.57 ha	£900,000	£638,298 per acre/£1,577,234 per ha	This plot is located along the river Nene, just outside the Cambridgeshire district in Peterborough
Maskew Avenue, Peterborough, PE1 2BT	09/11/2020	8.63 acres / 3.49 ha	£5,000,000	£579,374 per acre / £1,432,664 per hectare	Derelict land alongside a retail park sold to a JV for industrial/commercial uses
Lakes Business Park, Potton Road, Fenstanton, PE28 9QR	07/09/2020	3.44 acres/1.39 hectares	£1,700,000	£494,186 per acre/1,221,134 per ha	The plot is located on Lakes Business Park at the junctions of the A14 and A1096 close to the historic market town of St Ives. St Ives is North West of Cambridge and North of London.
Elm High Rd - Land at Wisbech Campus PE13 2SJ	02/10/2020	13.72 acres/5.55 ha	£3,684,177	£268,526 per acre/£663,528 per ha	Around 137 homes will be built on the former site of College of West Anglia in Wisbech.
Plot 202, Lancaster Way Business Park, Lancaster Way, Ely, CB6 3NW.	01/02/2018	1.75 acres/ 0.71 ha	£700,000	£400,000 per gross acre / £988,400 per gross ha	
Development plot Lancaster Way Business Park, Lancaster Way CB6 3NW	01/04/2019	1.56 acres/ 0.63 ha	£678,600	£435,000 per gross acre / £1,074,885 per ha	

Address	Date of Evidence	Site Area (acres / ha)	Value £	£ per acre / £ per hectare	Comment
Plots 7 and 8, Lakes Business Park, Potton Road, Fenstanton, PE28 9QR	01/02/2019	1.6 acre/ 0.65 ha	£618,000	£386,250 per acre / £954,423 per ha	

Source: AspinallVerdi Research

6 Benchmark Land Value Assumptions

Residential sites – greenfield land value assessment

6.1 In a greenfield context, we consider the existing use to be agricultural land for any potential proposed development in the draft Local Plan. This report sets out our evidence and research into land values. Our evidence suggests that an EUV of £10,000 per acre would be a robust starting point. We have then applied a 10x multiplier to this to establish a benchmark land value for our viability testing purposes

6.2 We have used agricultural land values because this is the closest use that reflects the existing use of the greenfield development sites coming forward. We do recognise that some of the greenfield sites differ in their uses, for example, former playing pitches and bare land. But there is no evidence readily available to base a value for these existing uses. Therefore, in taking a pragmatic approach we have used agricultural land values for all greenfield sites because there are few alternatives uses other than agricultural.

Residential sites – brownfield land value assessment

6.3 Our evidence for brownfield land indicates an EUV in the region of £250,000 to £650,000 per acre. In light of this evidence, we believe that an EUV of £400,000 per acre would be a robust starting point. We have then applied a 20% premium to establish a benchmark land value for our Local Plan testing.

Residential sites – conclusion land value assessment

6.4 We have not varied the land values by our value zones as there is no evidence to suggest this is required.

6.5 The benchmark land values, do in our opinion, strike that balance between the competing interests (developers, landowners and the aims of the planning system) whilst still securing the maximum benefits in the public interest through the granting of planning permission – therefore meeting the aims of the PPG.

6.6 Should the residual land value exceed the benchmark land value once all abnormal and policies costs are taken into account in the appraisal, then there is scope for the landowner to secure a higher premium. Should any site-specific assessments incur any additional costs that have not been allowed for in our benchmark land value assessments then these costs need to be reflected in a reduced land value. In this respect these brownfield BLVs are considered to be conservative and provide an inherent ‘buffer’ as

sites which are the most obsolete are likely to come forward more quickly and at conceivably lower values.

6.7 The table below summarises our benchmark land value assumptions for plan making purposes.

Table 6-1 - Benchmark Land Value Summary Table

Typology	Ref.	Greenfield /Brownfield	EUV -					Uplift Multiplier	BLV -	
			(per acre) (gross)	(per ha) (gross)	Net: Gross (%)	(per acre) (net)	(per ha) (net)	x [X] x [Y]%	(per acre) (net developable)	(per ha) (net developable) (rounded)
Residential	AAP (1)	Brownfield	£400,000	£988,400	70%	£571,429	£1,412,000	20%	£685,714	£1,693,714
Residential	AAP (2)	Brownfield	£400,000	£988,400	75%	£533,333	£1,317,867	20%	£640,000	£1,580,800
Residential	Cambridge East Airport	Greenfield	£10,000	£24,710	60%	£16,667	£41,183	11.2	£202,817	£500,958
Residential	Cambourne	Greenfield	£10,000	£24,710	60%	£16,667	£41,183	9.0	£166,667	£411,667
Residential	Urban A	Brownfield	£400,000	£988,400	70%	£571,429	£1,412,000	20%	£685,714	£1,693,714
Residential	Urban B	Brownfield	£400,000	£988,400	95%	£421,053	£1,040,421	20%	£505,263	£1,248,000
Residential	Urban C	Brownfield	£400,000	£988,400	75%	£533,333	£1,317,867	20%	£640,000	£1,580,800
Residential	Edge A	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	9.0	£200,000	£494,000
Residential	Edge B	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	9.0	£200,000	£494,000
Residential	Edge C	Greenfield	£10,000	£24,710	70%	£14,286	£35,300	9.0	£142,857	£352,857
Residential	Edge D	Brownfield	£400,000	£988,400	50%	£800,000	£1,976,800	20%	£960,000	£2,371,200
Residential	Edge E	Brownfield	£400,000	£988,400	50%	£800,000	£1,976,800	20%	£960,000	£2,371,200
Residential	New Settlement A	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	9.0	£200,000	£494,000
Residential	New Settlement B	Greenfield	£10,000	£24,710	50%	£20,000	£49,420	9.0	£200,000	£494,000
Residential	Dispersal villages A	Greenfield	£10,000	£24,710	90%	£11,111	£27,456	9.0	£111,111	£274,444
Residential	Dispersal villages B	Brownfield	£400,000	£988,400	90%	£444,444	£1,098,222	20%	£533,333	£1,317,333
Residential	Dispersal villages C	Greenfield	£10,000	£24,710	75%	£13,333	£32,947	9.0	£133,333	£329,333
Residential	Dispersal villages D	Brownfield	£400,000	£988,400	75%	£533,333	£1,317,867	20%	£640,000	£1,580,800

Source: AspinallVerdi, 2021

BLV Caveats

6.8 It is important to note that the EUVs/BLV's contained herein are for 'high-level' Plan / CIL viability purposes and the appraisals should be read in the context of the BLV sensitivity table (contained within the appraisals). It is important to emphasise that the adoption of a particular BLV £ in the base-case appraisal typologies in no way implies that this figure can be used by applicants to negotiate site specific planning applications. Where sites have obvious abnormal costs, these costs should be deducted from the value of the land. The land value for site specific viability appraisals should be thoroughly evidenced having regard to the existing use value of the site (as is best practice in the NPPG). This report is for plan-making purposes and is 'without prejudice' to future site-specific planning applications.

6.9 Furthermore, we are not saying that land can only be acquired in the District for these EUVs/ BLV's. As the appraisals show there is often a surplus between the RLV and BLV which could be put to a stronger land bid or retained as profit. Conversely, if a site has high abnormal costs then then land may be worth less than the BLV presented. Furthermore, the sensitivity scenarios show the impact on the surplus (i.e. difference between RLV and BLV) for various levels of BLV and profit (%).

Call for Evidence

6.10 The BLV assumptions are fundamental to the Plan/CIL viability as, if landowners minimum land value expectations cannot be achieved due to Policy obligation this could lead to under-delivery.

6.11 We are therefore keen to obtain further land value evidence to add to our database. We would welcome more comparable land value evidence for all land uses (residential, commercial and retail). We need specific details of:

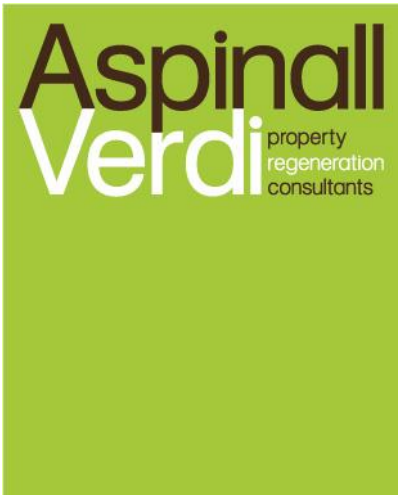
- the transaction date;
- net and gross site area;
- price paid;
- greenfield / brownfield (existing use);
- planning consent (including affordable housing % and S106 details);
- abnormal costs.

6.12 Any confidential information will be treated as such.

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		700	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	42.0	18.8%	52.5	14%	94.5
3 bed House	45.0%	189.0	25.0%	70.0	37%	259.0
4 bed House	30.0%	126.0	7.5%	21.0	21%	147.0
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	21.0	30.0%	84.0	15%	105.0
2 bed Flat	10.0%	42.0	18.8%	52.5	14%	94.5
Total number of units	100.0%	420.0	100.0%	280.0	100%	700.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	3,150	33,906	3,938	42,383	7,088	76,289
3 bed House	18,333	197,335	6,790	73,087	25,123	270,422
4 bed House	18,900	203,438	2,604	28,029	21,504	231,467
5 bed House	0	0	0	0	0	0
1 bed Flat	1,235	13,297	4,941	53,186	6,176	66,483
2 bed Flat	3,459	37,230	4,324	46,538	7,782	83,769
	45,077	485,206	22,596	243,224	67,673	728,430
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	37,800,000
3 bed House	500,000	5,155	479	129,500,000
4 bed House	670,000	4,467	415	98,490,000
5 bed House	0	#DIV/0!	#DIV/0!	0
1 bed Flat	300,000	6,000	557	31,500,000
2 bed Flat	365,000	5,214	484	34,492,500
				331,782,500

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	0	50%	0	40%	0	70%	0	70%
1 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	42.0	@	400,000		16,800,000
3 bed House	189.0	@	500,000		94,500,000
4 bed House	126.0	@	670,000		84,420,000
5 bed House	0.0	@	0		-
1 bed Flat	21.0	@	300,000		6,300,000
2 bed Flat	42.0	@	365,000		15,330,000
	420.0				217,350,000
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	26.3	@	200,000		5,250,000
3 bed House	35.0	@	250,000		8,750,000
4 bed House	10.5	@	335,000		3,517,500
5 bed House	0.0	@	0		-
1 bed Flat	42.0	@	150,000		6,300,000
2 bed Flat	26.3	@	182,500		4,790,625
	140.0				28,608,125
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	5.3	@	160,000		840,000
3 bed House	7.0	@	200,000		1,400,000
4 bed House	2.1	@	268,000		562,800
5 bed House	0.0	@	0		-
1 bed Flat	8.4	@	120,000		1,008,000
2 bed Flat	5.3	@	146,000		766,500
	28.0				4,577,300
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	13.1	@	250,000		3,281,250
3 bed House	17.5	@	250,000		4,375,000
4 bed House	5.3	@	250,000		1,312,500
5 bed House	0.0	@	0		-
1 bed Flat	21.0	@	210,000		4,410,000
2 bed Flat	13.1	@	250,000		3,281,250
	70.0				16,660,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	7.9	@	280,000		2,205,000
3 bed House	10.5	@	350,000		3,675,000
4 bed House	3.2	@	469,000		1,477,350
5 bed House	0.0	@	0		-
1 bed Flat	12.6	@	210,000		2,646,000
2 bed Flat	7.9	@	255,500		2,012,063
	42.0	280.0			12,015,413
Sub-total GDV Residential	**700**				**279,210,838**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	52,571,663
	777 £ psm (total GIA sqm)			75,102 £ per unit (total units)	
Grant	280	AH units @	0 per unit		-
Total GDV					**279,210,838**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(112,559)
Planning Application Professional Fees, Surveys and reports						(340,000)
CIL		45,077	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(6,446,440)
	Net zero carbon flats	5%	build cost			(963,857)
	Green belt loss mitigation	1,000	per dwelling			(700,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	700	units @	0 per unit		-
S106 analysis:	868,960 £ per ha	2.90%	% of GDV	11,586 £ per unit (total u	(8,110,297)	
AH Commuted Sum		67,673	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**Urban A**				
No Units:	**700**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

cont./

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				9.33	ha @	123,550	£ per ha (if brownfield)		(1,153,133)
Net Biodiveristy Gain @ 20%				700	units @	289	£ per unit		(202,419)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			700	units @	30,000	per unit		(21,000,000)
Infra. Costs analysis:		2,250,000	£ per ha	7.52%	% of GDV	30,000	£ per unit (total ui	(21,000,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				7,088	sqm @	1,234	psm		(8,745,975)
3 bed House				25,123	sqm @	1,234	psm		(31,001,782)
4 bed House				21,504	sqm @	1,234	psm		(26,535,936)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				6,176	sqm @	1,381	psm		(8,529,706)
2 bed Flat			67,673	7,782	sqm @	1,381	psm		(10,747,429)
External works				85,560,828	@	15.0%			(12,834,124)
Ext. Works analysis:						18,334	£per unit		
M4(2) Category 2 Housing	Aff units		280	units @	100% @	586	£ per unit		(164,080)
M4(3) Category 3 Housing	Aff units		280	units @	5% @	11,386	£ per unit		(159,404)
M4(2) Category 2 Housing	Mrkt units		420	units @	100% @	586	£ per unit		(246,120)
M4(3) Category 3 Housing	Mrkt units		420	units @	5% @	11,386	£ per unit		(239,106)
Carbon/Energy Reduction/FHS			700	units @		0	£ per unit		-
EV Charging Points - Houses			501	units @		1,000	£ per unit		(500,500)
EV Charging Points - Flats			50	units @		625	£ per unit		(31,172)
Water Efficiency			700	units @		3,106	£ per unit		(2,174,200)
Contingency (on construction)				124,265,087	@	5.0%			(6,213,254)
Professional Fees				124,265,087	@	10.0%			(12,426,509)
Disposal Costs -									
OMS Marketing and Promotion				217,350,000	OMS @	3.00%	9,315	£ per unit	(6,520,500)
Residential Sales Agent Costs				217,350,000	OMS @	1.00%	3,105	£ per unit	(2,173,500)
Residential Sales Legal Costs				217,350,000	OMS @	0.25%	776	£ per unit	(543,375)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							13,211	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(1,849,297)
Developers Profit -									
Profit on OMS				217,350,000		20.00%			(43,470,000)
Margin on AH				61,860,838		6.00%	on AH values		(3,711,650)
Profit analysis:				279,210,838		16.90%	blended GDV	(47,181,650)	
				162,564,377		29.02%	on costs	(47,181,650)	
TOTAL COSTS									**(209,746,027)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									69,464,810
SDLT				69,464,810	@	HMRC formula			(3,462,741)
Acquisition Agent fees				69,464,810	@	1.0%			(694,648)
Acquisition Legal fees				69,464,810	@	0.5%			(347,324)
Interest on Land				69,464,810	@	7.50%			(5,209,861)
Residual Land Value									**59,750,237**
RLV analysis:		85,357	£ per plot	6,401,811	£ per ha	2,590,777	£ per acre		
						21.40%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				75.0	dph				
Site Area (Net)				9.33	ha	23.06	acres		
Benchmark Land Value (Net)		22,592	£ per plot	1,694,399	£ per ha	685,714	£ per acre		**15,814,393**
BLV analysis:		Density		7,251	sqm/ha	31,585	sqft/ac		

BALANCE									
Surplus/(Deficit)				**4,707,412**	£ per ha	**1,905,063**	£ per acre		**43,935,843**

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Scheme Ref:	**Urban A**				
No Units:	**700**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	1000.00	250,582	214,950	179,318	143,685	108,053	72,421	36,783
	1010.00	227,754	193,679	159,591	125,476	91,361	57,246	23,131
CIL £psm	1020.00	204,896	172,345	139,795	107,244	74,669	42,071	9,474
0.00	1030.00	182,038	151,011	119,984	88,958	57,931	26,897	(4,183)
	1040.00	159,138	129,677	100,174	70,671	41,168	11,666	(17,840)
	1050.00	136,181	108,253	80,326	52,385	24,406	(3,573)	(31,552)
	1060.00	113,224	86,827	60,430	34,033	7,635	(18,812)	(45,267)
	1070.00	90,236	65,401	40,534	15,667	(9,200)	(34,067)	(58,982)
	1080.00	67,177	43,898	20,618	(2,698)	(26,035)	(49,371)	(72,707)
	1090.00	44,119	22,377	634	(21,108)	(42,869)	(64,675)	(86,481)
	1100.00	21,024	856	(19,350)	(39,555)	(59,760)	(79,980)	(100,255)
	1110.00	(2,138)	(20,743)	(39,348)	(58,001)	(76,670)	(95,338)	(114,029)
	1120.00	(25,301)	(42,362)	(59,423)	(76,483)	(93,579)	(110,710)	(127,841)
	1130.00	(48,520)	(63,980)	(79,497)	(95,013)	(110,530)	(126,082)	(141,676)
	1140.00	(71,790)	(85,692)	(99,594)	(113,543)	(127,516)	(141,488)	(155,511)
	1150.00	(95,060)	(107,410)	(119,761)	(132,111)	(144,502)	(156,930)	(169,358)
	1160.00	(118,421)	(129,149)	(139,928)	(150,727)	(161,526)	(172,372)	(183,256)
	1170.00	(141,801)	(150,970)	(160,138)	(169,343)	(178,591)	(187,839)	(197,153)
	1180.00	(165,210)	(172,791)	(180,401)	(188,011)	(195,655)	(203,352)	(211,051)
	1190.00	(188,703)	(194,673)	(200,663)	(206,715)	(212,766)	(218,865)	(225,010)
	1200.00	(212,195)	(216,599)	(221,003)	(225,419)	(229,912)	(234,404)	(238,972)
	1210.00	(235,780)	(238,534)	(241,364)	(244,202)	(247,057)	(249,991)	(252,934)
	1220.00	(259,389)	(260,569)	(261,749)	(262,996)	(264,267)	(265,577)	(266,953)
	1230.00	(283,049)	(282,603)	(282,209)	(281,815)	(281,495)	(281,201)	(280,981)
	1240.00	(306,776)	(304,713)	(302,670)	(300,702)	(298,734)	(296,863)	(295,009)
	1250.00	(330,526)	(326,858)	(323,214)	(319,589)	(316,047)	(312,524)	(309,098)

TABLE 2

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	50,000	1,098,711	914,959	730,871	546,352	361,304	175,503	(11,371)
	55,000	961,350	777,156	592,546	407,425	221,525	34,620	(153,835)
Site Specific S106	60,000	823,440	638,740	453,522	267,548	80,611	(107,764)	(298,266)
11,586	65,000	684,935	499,585	313,570	126,602	(61,693)	(251,951)	(445,248)
	70,000	545,648	359,593	172,594	(15,622)	(205,645)	(398,384)	(595,546)
	75,000	405,615	218,585	30,426	(159,422)	(351,680)	(547,737)	(750,198)
	80,000	264,576	76,453	(113,212)	(305,075)	(500,245)	(700,829)	(907,159)
	85,000	122,480	(67,002)	(258,526)	(453,003)	(652,101)	(857,370)	(1,065,313)
	90,000	(20,863)	(212,098)	(405,954)	(603,831)	(807,838)	(1,014,951)	(1,224,836)
	95,000	(165,679)	(359,063)	(555,946)	(758,306)	(964,969)	(1,173,846)	(1,385,787)
	100,000	(312,270)	(508,335)	(709,110)	(915,048)	(1,123,192)	(1,333,935)	(1,548,078)
	105,000	(460,943)	(660,427)	(865,477)	(1,072,829)	(1,282,543)	(1,495,280)	(1,711,912)
	110,000	(612,125)	(815,945)	(1,022,778)	(1,231,679)	(1,443,183)	(1,658,053)	(1,877,092)
	115,000	(766,446)	(972,858)	(1,181,070)	(1,391,608)	(1,605,019)	(1,822,067)	(2,043,898)
	120,000	(923,117)	(1,130,708)	(1,340,376)	(1,552,630)	(1,768,028)	(1,987,440)	(2,751,921)

TABLE 3

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	15.0%	2,958,137	2,742,194	2,526,252	2,310,309	2,094,367	1,878,424	1,662,456
	16.0%	2,856,825	2,647,637	2,438,448	2,229,260	2,020,072	1,810,883	1,601,670
Profit	17.0%	2,755,514	2,553,079	2,350,645	2,148,211	1,945,777	1,743,342	1,540,883
20.0%	18.0%	2,654,202	2,458,522	2,262,842	2,067,162	1,871,482	1,675,801	1,480,096
	19.0%	2,552,891	2,363,965	2,175,039	1,986,113	1,797,187	1,608,260	1,419,309
	20.0%	2,451,579	2,269,407	2,087,235	1,905,063	1,722,891	1,540,720	1,358,522

TABLE 4

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	600,000	2,537,293	2,355,121	2,172,949	1,990,777	1,808,605	1,626,434	1,444,236
	620,000	2,517,293	2,335,121	2,152,949	1,970,777	1,788,605	1,606,434	1,424,236
BLV (£ per acre)	640,000	2,497,293	2,315,121	2,132,949	1,950,777	1,768,605	1,586,434	1,404,236
685,714	660,000	2,477,293	2,295,121	2,112,949	1,930,777	1,748,605	1,566,434	1,384,236
	680,000	2,457,293	2,275,121	2,092,949	1,910,777	1,728,605	1,546,434	1,364,236
	700,000	2,437,293	2,255,121	2,072,949	1,890,777	1,708,605	1,526,434	1,344,236
	720,000	2,417,293	2,235,121	2,052,949	1,870,777	1,688,605	1,506,434	1,324,236
	740,000	2,397,293	2,215,121	2,032,949	1,850,777	1,668,605	1,486,434	1,304,236
	760,000	2,377,293	2,195,121	2,012,949	1,830,777	1,648,605	1,466,434	1,284,236
	780,000	2,357,293	2,175,121	1,992,949	1,810,777	1,628,605	1,446,434	1,264,236
	800,000	2,337,293	2,155,121	1,972,949	1,790,777	1,608,605	1,426,434	1,244,236
	820,000	2,317,293	2,135,121	1,952,949	1,770,777	1,588,605	1,406,434	1,224,236
	840,000	2,297,293	2,115,121	1,932,949	1,750,777	1,568,605	1,386,434	1,204,236
	860,000	2,277,293	2,095,121	1,912,949	1,730,777	1,548,605	1,366,434	1,184,236
	880,000	2,257,293	2,075,121	1,892,949	1,710,777	1,528,605	1,346,434	1,164,236
	900,000	2,237,293	2,055,121	1,872,949	1,690,777	1,508,605	1,326,434	1,144,236

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	35	748,696	663,682	578,650	493,596	408,542	323,489	238,422
	40	961,556	864,398	767,239	670,058	572,854	475,650	378,446
Density (dph)	45	1,174,417	1,065,113	955,810	846,507	737,166	627,811	518,457
75.0	50	1,387,277	1,265,829	1,144,381	1,022,933	901,478	779,973	658,468
	55	1,600,137	1,466,545	1,332,952	1,199,359	1,065,766	932,134	798,479
	60	1,812,998	1,667,260	1,521,523	1,375,785	1,230,048	1,084,296	938,489
	65	2,025,858	1,867,976	1,710,094	1,552,211	1,394,329	1,236,447	1,078,500
	70	2,238,719	2,068,692	1,898,665	1,728,637	1,558,610	1,388,583	1,218,511
	75	2,451,579	2,269,407	2,087,235	1,905,063	1,722,891	1,540,720	1,358,522
	80	2,664,440	2,470,123	2,275,806	2,081,490	1,887,173	1,692,856	1,498,533
	85	2,877,300	2,670,839	2,464,377	2,257,916	2,051,454	1,844,992	1,638,531

TABLE 6

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	98%	2,542,249	2,359,120	2,175,991	1,992,861	1,809,677	1,626,490	1,443,303
	100%	2,451,579	2,269,407	2,087,235	1,905,063	1,722,891	1,540,720	1,358,522
Build Cost	102%	2,360,734	2,179,577	1,998,420	1,817,263	1,636,024	1,454,784	1,273,544
100%	104%	2,269,889	2,089,679	1,909,456	1,729,233	1,549,011	1,368,769	1,188,435
(105% = 5% increase)	106%	2,178,817	1,999,612	1,820,407	1,641,165	1,461,852	1,282,538	1,103,195
	108%	2,087,734	1,909,480	1,731,187	1,552,894	1,374,601	1,196,172	1,017,742
	110%	1,996,441	1,819,168	1,641,895	1,464,510	1,287,103	1,109,663	932,092
	112%	1,905,108	1,728,754	1,552,371	1,375,988	1,199,477	1,022,933	846,245
	114%	1,813,545	1,638,185	1,462,758	1,287,239	1,111,695	935,988	760,175
	116%	1,721,933	1,547,441	1,372,949	1,198,349	1,023,671	848,834	673,854
	118%	1,630,071	1,456,593	1,282,945	1,109,290	935,428	761,444	587,253
	120%	1,538,100	1,365,481	1,192,785	1,019,956	846,961	673,788	500,345

TABLE 7

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	80%	893,092	814,560	736,028	657,496	578,964	500,431	421,899
	82%	1,050,163	961,181	872,198	783,215	694,232	605,249	516,266
Market Values	84%	1,206,837	1,107,435	1,008,034	908,632	809,231	709,829	610,428
100%	86%	1,363,176	1,253,383	1,143,591	1,033,799	924,006	814,214	704,379
(105% = 5% increase)	88%	1,519,242	1,399,082	1,278,923	1,158,763	1,038,579	918,371	798,163
	90%	1,675,098	1,544,591	1,414,043	1,283,489	1,152,936	1,022,382	891,829
	92%	1,830,699	1,689,818	1,548,937	1,408,056	1,267,175	1,126,294	985,373
	94%	1,986,121	1,834,926	1,683,732	1,532,537	1,381,283	1,230,028	1,078,774
	96%	2,141,437	1,979,888	1,818,339	1,656,790	1,495,241	1,333,692	1,172,135
	98%	2,296,527	2,124,692	1,952,857	1,781,022	1,609,139	1,437,236	1,265,333
	100%	2,451,579	2,269,407	2,087,235	1,905,063	1,722,891	1,540,720	1,358,522
	102%	2,606,441	2,414,004	2,221,566	2,029,105	1,836,596	1,644,087	1,451,579
	104%	2,761,250	2,558,492	2,355,734	2,152,975	1,950,217	1,747,455	1,544,610
	106%	2,915,984	2,702,974	2,489,901	2,276,822	2,063,744	1,850,665	1,637,586
	108%	3,070,571	2,847,255	2,623,939	2,400,623	2,177,270	1,953,871	1,730,471
	110%	3,225,158	2,991,536	2,757,914	2,524,293	2,290,671	2,057,050	1,823,357
	112%	3,379,664	3,135,811	2,891,889	2,647,962	2,404,035	2,160,107	1,916,180
	114%	3,534,049	3,279,904	3,025,758	2,771,613	2,517,398	2,263,165	2,008,932
	116%	3,688,434	3,423,997	3,159,559	2,895,121	2,630,683	2,366,223	2,101,684
	118%	3,842,820	3,568,089	3,293,359	3,018,629	2,743,899	2,469,169	2,194,436
	120%	3,997,058	3,712,119	3,427,160	3,142,137	2,857,115	2,572,092	2,287,070

TABLE 8

Balance (RLV - BLV £ per acre)	1,905,063	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	5,000	2,485,129	2,309,700	2,134,244	1,958,787	1,783,331	1,607,874	1,432,418
	10,000	2,518,625	2,349,907	2,181,188	2,012,470	1,843,752	1,675,029	1,506,288
Grant (£ per unit)	15,000	2,552,122	2,390,103	2,228,083	2,066,064	1,904,045	1,742,026	1,580,007
-	20,000	2,585,618	2,430,298	2,274,978	2,119,659	1,964,339	1,809,019	1,653,699
	25,000	2,619,115	2,470,494	2,321,873	2,173,253	2,024,628	1,875,954	1,727,281
	30,000	2,652,611	2,510,690	2,368,762	2,226,772	2,084,783	1,942,793	1,800,803
	35,000	2,686,108	2,550,854	2,415,549	2,280,243	2,144,937	2,009,632	1,874,287
	40,000	2,719,579	2,590,958	2,462,336	2,333,714	2,205,092	2,076,393	1,947,648
	45,000	2,752,999	2,631,061	2,509,123	2,387,185	2,265,162	2,143,085	2,021,009
	50,000	2,786,418	2,671,164	2,555,910	2,440,591	2,325,184	2,209,777	2,094,279
	55,000	2,819,837	2,711,267	2,602,683	2,493,945	2,385,207	2,276,415	2,167,487

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Urban A
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Urban A**
No Units:	700
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	279,210,838
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,586
Site Specific S106 Total (£)	8,110,297
Sub-total CIL+S106 (£ per unit)	11,586
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	21,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	41,586
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.90%
Developers Profit (% on costs)	29.02%
Developers Profit Total (£)	47,181,650
Land Value KPI's	
RLV (£/acre)	2,590,777
RLV (£/ha)	6,401,811
RLV (% of GDV)	21.40%
RLV Total (£)	59,750,237
BLV (£/acre)	685,714
BLV (£/ha)	1,694,399
BLV Total (£)	15,814,393
Surplus/Deficit (£/acre) [RLV-BLV]	1,905,063
Surplus/Deficit (£/ha)	4,707,412
Surplus/Deficit Total (£)	43,935,843
Surplus/Deficit (per unit)	62,765
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Urban B
No Units: 50 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		50	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
Studio	5.0%	1.5	7.5%	1.5	6%	3.0
1 bed flat	30.0%	9.0	30.0%	6.0	30%	15.0
2 bed flat	50.0%	15.0	37.5%	7.5	45%	22.5
3 bed flat	15.0%	4.5	25.0%	5.0	19%	9.5
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Total number of units	100.0%	30.0	100.0%	20.0	100%	50.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
Studio	40.0	431	85.0%	47.1	507
1 bed flat	50.0	538	85.0%	58.8	633
2 bed flat	75.0	807	85.0%	88.2	950
3 bed flat	86.0	926	85.0%	101.2	1,089
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AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
Studio	40.0	431	85.0%	47.1	507
1 bed flat	50.0	538	85.0%	58.8	633
2 bed flat	75.0	807	85.0%	88.2	950
3 bed flat	86.0	926	85.0%	101.2	1,089
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[blank]	0.0	0	85.0%	0.0	0

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
Studio	71	760	71	760	141	1,520
1 bed flat	529	5,699	353	3,799	882	9,498
2 bed flat	1,324	14,246	662	7,123	1,985	21,370
3 bed flat	455	4,901	506	5,445	961	10,346
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	2,379	25,605	1,591	17,127	3,970	42,733
AH % by floor area:			40.08%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
Studio	265,000	6,625	615	795,000
1 bed flat	300,000	6,000	557	4,500,000
2 bed flat	365,000	4,867	452	8,212,500
3 bed flat	410,000	4,767	443	3,895,000
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				17,402,500

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
Studio	132,500	50%	106,000	40%	185,500	70%	185,500	70%
1 bed flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%
2 bed flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
3 bed flat	205,000	50%	164,000	40%	250,000	70%	287,000	70%
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Scheme Ref: Urban B
No Units: 50 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
Studio	1.5	@	265,000		397,500
1 bed flat	9.0	@	300,000		2,700,000
2 bed flat	15.0	@	365,000		5,475,000
3 bed flat	4.5	@	410,000		1,845,000
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	30.0				10,417,500
Affordable Rent GDV -					
Studio	0.8	@	132,500		99,375
1 bed flat	3.0	@	150,000		450,000
2 bed flat	3.8	@	182,500		684,375
3 bed flat	2.5	@	205,000		512,500
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	10.0				1,746,250
Social Rent GDV -					
Studio	0.2	@	106,000		15,900
1 bed flat	0.6	@	120,000		72,000
2 bed flat	0.8	@	146,000		109,500
3 bed flat	0.5	@	164,000		82,000
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	2.0				279,400
First Homes GDV -					
Studio	0.4	@	185,500		69,563
1 bed flat	1.5	@	210,000		315,000
2 bed flat	1.9	@	250,000		468,750
3 bed flat	1.3	@	250,000		312,500
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	5.0				1,165,813
Intermediate GDV -					
Studio	0.2	@	185,500		41,738
1 bed flat	0.9	@	210,000		189,000
2 bed flat	1.1	@	255,500		287,438
3 bed flat	0.8	@	287,000		215,250
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	3.0	20.0			733,425
Sub-total GDV Residential	**50**				**14,342,388**
AH on-site cost analysis:	771 £ psm (total GIA sqm)			£MV (no AH) less £GDV (inc. AH)	3,060,113
				61,202 £ per unit (total units)	
Grant	20	AH units @	0	per unit	-
Total GDV					**14,342,388**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(23,100)
Planning Application Professional Fees, Surveys and reports							(70,000)
CIL		2,379	sqm (Market only	0.00	£ psm		-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				
	Net zero carbon flats	5%	build cost				(274,129)
	Green belt loss mitigation	1,000	per dwelling				(50,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	50	units @	0	per unit		-
S106 analysis:	1,944,771 £ per ha	2.26%	% of GDV	6,483	£ per unit (total u	(324,129)	
AH Commuted Sum		3,970	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Urban B**				
No Units:	**50**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref:	**Urban B**								
No Units:	**50**	**Location / Value Zone:**		**Mid**		**Development Scenario:**		**Brownfield**	
Notes:									
Construction Costs -									
Site Clearance, Demolition & Remediation				0.17	ha @	123,550	£ per ha (if brownfield)		(20,592)
Net Biodiveristy Gain @ 20%				50	units @	289	£ per unit		(14,459)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			50	units @	0	per unit		-
Infra. Costs analysis:		-	£ per ha	0.00%	% of GDV	0	£ per unit (total ur	-	
Studio				141	sqm @	1,381	psm		(194,965)
1 bed flat				882	sqm @	1,381	psm		(1,218,529)
2 bed flat				1,985	sqm @	1,381	psm		(2,741,691)
3 bed flat				961	sqm @	1,381	psm		(1,327,385)
[blank]				-	sqm @	1,381	psm		-
[blank]				-	sqm @	1,381	psm		-
[blank]			3,970	-	sqm @	1,381	psm		-
External works				5,482,570	@	15.0%			(822,386)
Ext. Works analysis:						16,448	£per unit		
M4(2) Category 2 Housing	Aff units		20	units @	100%	@	586	£ per unit	(11,720)
M4(3) Category 3 Housing	Aff units		20	units @	5%	@	11,386	£ per unit	(11,386)
M4(2) Category 2 Housing	Mrkt units		30	units @	100%	@	586	£ per unit	(17,580)
M4(3) Category 3 Housing	Mrkt units		30	units @	5%	@	11,386	£ per unit	(17,079)
Carbon/Energy Reduction/FHS			50	units @			0	£ per unit	-
EV Charging Points - Houses			50	units @			1,000	£ per unit	(50,000)
EV Charging Points - Flats			50	units @			625	£ per unit	(31,250)
Water Efficiency			50	units @			3,106	£ per unit	(155,300)
Contingency (on construction)				6,634,321	@	5.0%			(331,716)
Professional Fees				6,634,321	@	10.0%			(663,432)
Disposal Costs -									
OMS Marketing and Promotion				10,417,500	OMS @	3.00%	6,251	£ per unit	(312,525)
Residential Sales Agent Costs				10,417,500	OMS @	1.00%	2,084	£ per unit	(104,175)
Residential Sales Legal Costs				10,417,500	OMS @	0.25%	521	£ per unit	(26,044)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							9,055	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(83,876)
Developers Profit -									
Profit on OMS				10,417,500		20.00%			(2,083,500)
Margin on AH				3,924,888		6.00%	on AH values		(235,493)
Profit analysis:				14,342,388		16.17%	blended GDV	(2,318,993)	
				8,583,317		27.02%	on costs	(2,318,993)	
TOTAL COSTS									**(10,902,310)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									3,440,078
SDLT				3,440,078	@	HMRC formula			(161,504)
Acquisition Agent fees				3,440,078	@	1.0%			(34,401)
Acquisition Legal fees				3,440,078	@	0.5%			(17,200)
Interest on Land				3,440,078	@	7.50%			(258,006)
Residual Land Value									**2,968,967**
RLV analysis:	59,379	£ per plot		17,813,800	£ per ha	7,209,146	£ per acre		
						20.70%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				300.0	dph				
Site Area (Net)				0.17	ha	0.41	acres		
Benchmark Land Value (Net)	4,393	£ per plot		1,317,866	£ per ha	533,333	£ per acre		**219,644**
BLV analysis:		Density		23,820	sqm/ha	103,762	sqft/ac		

BALANCE									
Surplus/(Deficit)				**16,495,934**	£ per ha	**6,675,813**	£ per acre		**2,749,322**

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Scheme Ref:	**Urban B**				
No Units:	**50**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Urban B
No Units: 50 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 25%	30%	35%	40%	45%	50%	55%
	250.00	6,311,239	6,009,238	5,707,237	5,405,236	5,103,235	4,801,235	4,499,234
	260.00	6,247,565	5,949,809	5,652,053	5,354,297	5,056,541	4,758,785	4,461,029
CIL £psm	270.00	6,183,891	5,890,380	5,596,869	5,303,358	5,009,847	4,716,336	4,422,825
0.00	280.00	6,120,217	5,830,951	5,541,685	5,252,419	4,963,153	4,673,887	4,384,520
	290.00	6,056,543	5,771,522	5,486,501	5,201,480	4,916,459	4,631,364	4,346,141
	300.00	5,992,870	5,712,093	5,431,317	5,150,541	4,869,680	4,588,721	4,307,762
	310.00	5,929,196	5,652,664	5,376,133	5,099,467	4,822,773	4,546,078	4,269,383
	320.00	5,865,522	5,593,157	5,320,726	5,048,296	4,775,865	4,503,434	4,231,004
	330.00	5,801,622	5,533,456	5,265,290	4,997,124	4,728,957	4,460,791	4,192,625
	340.00	5,737,657	5,473,755	5,209,853	4,945,952	4,682,050	4,418,148	4,154,246
	350.00	5,673,692	5,414,055	5,154,417	4,894,780	4,635,142	4,375,504	4,115,867
	360.00	5,609,727	5,354,354	5,098,981	4,843,608	4,588,234	4,332,861	4,077,488
	370.00	5,545,762	5,294,653	5,043,545	4,792,436	4,541,327	4,290,218	4,039,109
	380.00	5,481,797	5,234,953	4,988,108	4,741,264	4,494,419	4,247,575	4,000,730
	390.00	5,417,832	5,175,252	4,932,672	4,690,092	4,447,511	4,204,931	3,962,351
	400.00	5,353,868	5,115,552	4,877,236	4,638,920	4,400,604	4,162,288	3,923,972
	410.00	5,289,903	5,055,851	4,821,799	4,587,748	4,353,696	4,119,645	3,885,593
	420.00	5,225,938	4,996,150	4,766,363	4,536,576	4,306,789	4,077,001	3,847,214
	430.00	5,161,973	4,936,450	4,710,927	4,485,404	4,259,881	4,034,358	3,808,835
	440.00	5,098,008	4,876,749	4,655,490	4,434,232	4,212,973	3,991,715	3,770,423
	450.00	5,034,043	4,817,048	4,600,054	4,383,019	4,165,964	3,948,909	3,731,854
	460.00	4,969,902	4,757,133	4,544,363	4,331,594	4,118,824	3,906,055	3,693,285
	470.00	4,905,621	4,697,137	4,488,653	4,280,169	4,071,685	3,863,201	3,654,717
	480.00	4,841,340	4,637,141	4,432,942	4,228,744	4,024,545	3,820,347	3,616,148
	490.00	4,777,059	4,577,145	4,377,232	4,177,319	3,977,406	3,777,492	3,577,579
	500.00	4,712,777	4,517,149	4,321,522	4,125,894	3,930,266	3,734,638	3,539,010

TABLE 2

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 25%	30%	35%	40%	45%	50%	55%
	40,000	3,599,448	3,186,791	2,773,746	2,359,337	1,944,929	1,530,521	1,116,113
	42,000	3,380,886	2,968,229	2,553,862	2,139,454	1,725,046	1,310,638	896,230
Site Specific S106	44,000	3,162,324	2,748,387	2,333,979	1,919,571	1,505,163	1,090,755	675,087
6,483	46,000	2,942,912	2,528,504	2,114,096	1,699,688	1,285,279	870,284	453,875
	48,000	2,723,029	2,308,620	1,894,212	1,479,804	1,065,396	649,071	232,662
	50,000	2,503,145	2,088,737	1,674,329	1,259,921	844,268	427,859	11,450
	52,000	2,283,262	1,868,854	1,454,446	1,039,464	623,055	206,646	(209,763)
	54,000	2,063,379	1,648,971	1,234,563	818,252	401,843	(14,566)	(432,043)
	56,000	1,843,495	1,429,087	1,013,449	597,040	180,630	(235,779)	(654,593)
	58,000	1,623,612	1,208,645	792,236	375,827	(40,582)	(458,304)	(877,142)
	60,000	1,403,729	987,433	571,024	154,615	(262,015)	(680,853)	(1,099,692)
	62,000	1,182,629	766,220	349,811	(66,598)	(484,564)	(903,403)	(1,322,327)
	64,000	961,417	545,008	128,599	(288,276)	(707,114)	(1,125,953)	(1,546,222)
	66,000	740,205	323,795	(92,614)	(510,825)	(929,664)	(1,348,502)	(1,770,117)
	68,000	518,992	102,583	(314,536)	(733,375)	(1,152,213)	(1,572,248)	(1,994,012)

TABLE 3

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 25%	30%	35%	40%	45%	50%	55%
	15.0%	9,258,248	8,760,004	8,261,760	7,763,516	7,265,273	6,767,029	6,268,785
	16.0%	8,986,322	8,506,207	8,026,091	7,545,976	7,065,860	6,585,745	6,105,630
Profit	17.0%	8,714,396	8,252,409	7,790,422	7,328,435	6,866,448	6,404,461	5,942,474
20.0%	18.0%	8,442,470	7,998,612	7,554,753	7,110,894	6,667,036	6,223,177	5,779,319
	19.0%	8,170,545	7,744,814	7,319,084	6,893,354	6,467,624	6,041,893	5,616,163
	20.0%	7,898,619	7,491,017	7,083,415	6,675,813	6,268,211	5,860,609	5,453,008

TABLE 4

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 25%	30%	35%	40%	45%	50%	55%
	600,000	7,831,952	7,424,350	7,016,748	6,609,146	6,201,544	5,793,942	5,386,341
	620,000	7,811,952	7,404,350	6,996,748	6,589,146	6,181,544	5,773,942	5,366,341
BLV (£ per acre)	640,000	7,791,952	7,384,350	6,976,748	6,569,146	6,161,544	5,753,942	5,346,341
533,333	660,000	7,771,952	7,364,350	6,956,748	6,549,146	6,141,544	5,733,942	5,326,341
	680,000	7,751,952	7,344,350	6,936,748	6,529,146	6,121,544	5,713,942	5,306,341
	700,000	7,731,952	7,324,350	6,916,748	6,509,146	6,101,544	5,693,942	5,286,341
	720,000	7,711,952	7,304,350	6,896,748	6,489,146	6,081,544	5,673,942	5,266,341
	740,000	7,691,952	7,284,350	6,876,748	6,469,146	6,061,544	5,653,942	5,246,341
	760,000	7,671,952	7,264,350	6,856,748	6,449,146	6,041,544	5,633,942	5,226,341
	780,000	7,651,952	7,244,350	6,836,748	6,429,146	6,021,544	5,613,942	5,206,341
	800,000	7,631,952	7,224,350	6,816,748	6,409,146	6,001,544	5,593,942	5,186,341
	820,000	7,611,952	7,204,350	6,796,748	6,389,146	5,981,544	5,573,942	5,166,341
	840,000	7,591,952	7,184,350	6,776,748	6,369,146	5,961,544	5,553,942	5,146,341
	860,000	7,571,952	7,164,350	6,756,748	6,349,146	5,941,544	5,533,942	5,126,341
	880,000	7,551,952	7,144,350	6,736,748	6,329,146	5,921,544	5,513,942	5,106,341
	900,000	7,531,952	7,124,350	6,716,748	6,309,146	5,901,544	5,493,942	5,086,341

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Scheme Ref: Urban B
No Units: 50 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	290	7,615,842	7,221,827	6,827,812	6,433,797	6,039,781	5,645,766	5,251,751
	300	7,898,619	7,491,017	7,083,415	6,675,813	6,268,211	5,860,609	5,453,008
Density (dph)	310	8,181,395	7,760,207	7,339,018	6,917,830	6,496,641	6,075,452	5,654,264
300.0	320	8,464,172	8,029,397	7,594,622	7,159,846	6,725,071	6,290,296	5,855,520
	330	8,746,949	8,298,587	7,850,225	7,401,863	6,953,501	6,505,139	6,056,777
	340	9,029,726	8,567,777	8,105,828	7,643,879	7,181,931	6,719,982	6,258,033
	350	9,312,502	8,836,967	8,361,431	7,885,896	7,410,360	6,934,825	6,459,289
	360	9,595,279	9,106,157	8,617,035	8,127,912	7,638,790	7,149,668	6,660,546
	370	9,878,056	9,375,347	8,872,638	8,369,929	7,867,220	7,364,511	6,861,802
	380	10,160,833	9,644,537	9,128,241	8,611,945	8,095,650	7,579,354	7,063,058
	390	10,443,609	9,913,727	9,383,844	8,853,962	8,324,080	7,794,197	7,264,315

TABLE 6

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	8,220,168	7,812,900	7,405,633	6,998,365	6,590,862	6,183,313	5,775,765
	100%	7,898,619	7,491,017	7,083,415	6,675,813	6,268,211	5,860,609	5,453,008
Build Cost	102%	7,576,183	7,168,528	6,760,872	6,353,217	5,945,561	5,537,905	5,130,169
100%	104%	7,253,748	6,846,039	6,438,329	6,030,620	5,622,460	5,214,228	4,805,996
(105% = 5% increase)	106%	6,931,313	6,523,253	6,114,967	5,706,681	5,298,394	4,890,108	4,481,822
	108%	6,607,690	6,199,349	5,791,009	5,382,669	4,974,329	4,565,426	4,156,320
	110%	6,283,840	5,875,446	5,467,052	5,058,098	4,648,938	4,239,777	3,830,617
	112%	5,959,991	5,550,988	5,141,773	4,732,558	4,323,344	3,913,591	3,503,365
	114%	5,634,825	5,225,556	4,816,287	4,406,859	3,996,578	3,586,298	3,175,564
	116%	5,309,448	4,900,125	4,490,010	4,079,675	3,669,340	3,258,050	2,846,457
	118%	4,983,660	4,573,271	4,162,881	3,752,292	3,340,645	2,928,997	2,515,901
	120%	4,656,640	4,246,196	3,835,052	3,423,350	3,011,334	2,598,126	2,184,016

TABLE 7

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	3,726,788	3,596,893	3,466,998	3,337,103	3,207,208	3,077,312	2,947,417
	82%	4,146,793	3,988,898	3,831,002	3,673,107	3,515,211	3,357,316	3,199,420
Market Values	84%	4,565,363	4,379,614	4,193,865	4,008,116	3,822,367	3,636,618	3,450,869
100%	86%	4,983,751	4,770,110	4,556,468	4,342,827	4,129,185	3,915,544	3,701,902
(105% = 5% increase)	88%	5,401,362	5,160,020	4,918,677	4,677,335	4,435,992	4,194,469	3,952,935
	90%	5,818,316	5,549,177	5,280,037	5,010,898	4,741,759	4,472,619	4,203,480
	92%	6,235,270	5,938,334	5,641,397	5,344,461	5,047,525	4,750,589	4,453,652
	94%	6,651,510	6,327,049	6,002,588	5,678,024	5,353,291	5,028,558	4,703,825
	96%	7,067,213	6,715,038	6,362,863	6,010,689	5,658,514	5,306,339	4,953,997
	98%	7,482,916	7,103,028	6,723,139	6,343,251	5,963,363	5,583,474	5,203,586
	100%	7,898,619	7,491,017	7,083,415	6,675,813	6,268,211	5,860,609	5,453,008
	102%	8,313,666	7,878,703	7,443,691	7,008,375	6,573,060	6,137,745	5,702,429
	104%	8,728,299	8,265,693	7,803,088	7,340,482	6,877,877	6,414,880	5,951,851
	106%	9,142,932	8,652,684	8,162,436	7,672,189	7,181,941	6,691,693	6,201,273
	108%	9,557,565	9,039,675	8,521,785	8,003,895	7,486,005	6,968,115	6,450,225
	110%	9,972,197	9,426,665	8,881,133	8,335,601	7,790,069	7,244,537	6,699,005
	112%	10,386,738	9,813,656	9,240,482	8,667,307	8,094,133	7,520,959	6,947,785
	114%	10,800,481	10,200,121	9,599,760	8,999,014	8,398,197	7,797,381	7,196,564
	116%	11,214,224	10,586,281	9,958,338	9,330,394	8,702,261	8,073,803	7,445,344
	118%	11,627,968	10,972,441	10,316,915	9,661,389	9,005,862	8,350,225	7,694,124
	120%	12,041,711	11,358,602	10,675,492	9,992,383	9,309,274	8,626,165	7,942,904

TABLE 8

Balance (RLV - BLV £ per acre)	6,675,813	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	8,032,002	7,651,176	7,270,267	6,889,358	6,508,450	6,127,541	5,746,632
	10,000	8,164,971	7,810,837	7,456,704	7,102,570	6,748,437	6,394,303	6,040,170
Grant (£ per unit)	15,000	8,297,940	7,970,400	7,642,860	7,315,321	6,987,781	6,660,241	6,332,701
-	20,000	8,430,909	8,129,963	7,829,017	7,528,071	7,227,125	6,926,179	6,625,233
	25,000	8,563,878	8,289,525	8,015,173	7,740,821	7,466,469	7,192,116	6,917,764
	30,000	8,696,847	8,449,088	8,201,330	7,953,571	7,705,813	7,458,054	7,209,841
	35,000	8,829,815	8,608,651	8,387,486	8,166,321	7,944,890	7,723,136	7,501,381
	40,000	8,962,784	8,768,213	8,573,642	8,378,674	8,183,424	7,988,173	7,792,922
	45,000	9,095,753	8,927,776	8,759,451	8,590,704	8,421,957	8,253,210	8,084,462
	50,000	9,228,722	9,087,220	8,944,977	8,802,733	8,660,490	8,518,246	8,375,973
	55,000	9,361,691	9,246,243	9,130,503	9,014,763	8,899,023	8,783,283	8,666,625

NOTES

Cells highlighted in yellow are input cells
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Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Urban B
No Units: 50 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Urban B**
No Units:	50
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	14,342,388
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	6,483
Site Specific S106 Total (£)	324,129
Sub-total CIL+S106 (£ per unit)	6,483
Site Infrastructure (£ per unit)	-
Site Infrastructure Total (£)	-
Sub-total CIL+S106+Infrastructure (£ per unit)	6,483
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.17%
Developers Profit (% on costs)	27.02%
Developers Profit Total (£)	2,318,993
Land Value KPI's	
RLV (£/acre)	7,209,146
RLV (£/ha)	17,813,800
RLV (% of GDV)	20.70%
RLV Total (£)	2,968,967
BLV (£/acre)	533,333
BLV (£/ha)	1,317,866
BLV Total (£)	219,644
Surplus/Deficit (£/acre) [RLV-BLV]	6,675,813
Surplus/Deficit (£/ha)	16,495,934
Surplus/Deficit Total (£)	2,749,322
Surplus/Deficit (per unit)	54,986
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		700	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
Studio	5.0%	21.0	7.5%	21.0	6%	42.0
1 bed flat	30.0%	126.0	30.0%	84.0	30%	210.0
2 bed flat	50.0%	210.0	37.5%	105.0	45%	315.0
3 bed flat	15.0%	63.0	25.0%	70.0	19%	133.0
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Total number of units	100.0%	420.0	100.0%	280.0	100%	700.0

	Net area per unit		Net to Gross %	Gross (GIA) per unit	
OMS Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
Studio	40.0	431	85.0%	47.1	507
1 bed flat	50.0	538	85.0%	58.8	633
2 bed flat	75.0	807	85.0%	88.2	950
3 bed flat	86.0	926	85.0%	101.2	1,089
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	Net area per unit		Net to Gross %	Gross (GIA) per unit	
AH Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
Studio	40.0	431	85.0%	47.1	507
1 bed flat	50.0	538	85.0%	58.8	633
2 bed flat	75.0	807	85.0%	88.2	950
3 bed flat	86.0	926	85.0%	101.2	1,089
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	Mkt Units GIA		AH units GIA		Total GIA (all units)	
Total Gross Floor areas -	(sqm)	(sqft)	(sqm)	(sqft)	(sqm)	(sqft)
Studio	988	10,637	988	10,637	1,976	21,275
1 bed flat	7,412	79,780	4,941	53,186	12,353	132,966
2 bed flat	18,529	199,449	9,265	99,724	27,794	299,173
3 bed flat	6,374	68,610	7,082	76,234	13,456	144,844
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	33,304	358,476	22,276	239,782	55,580	598,258
AH % by floor area:			40.08%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
Studio	265,000	6,625	615	11,130,000
1 bed flat	300,000	6,000	557	63,000,000
2 bed flat	365,000	4,867	452	114,975,000
3 bed flat	410,000	4,767	443	54,530,000
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				243,635,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
Studio	132,500	50%	106,000	40%	185,500	70%	185,500	70%
1 bed flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%
2 bed flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
3 bed flat	205,000	50%	164,000	40%	250,000	70%	287,000	70%
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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
Studio	21.0	@	265,000		5,565,000
1 bed flat	126.0	@	300,000		37,800,000
2 bed flat	210.0	@	365,000		76,650,000
3 bed flat	63.0	@	410,000		25,830,000
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	420.0				145,845,000
Affordable Rent GDV -					
Studio	10.5	@	132,500		1,391,250
1 bed flat	42.0	@	150,000		6,300,000
2 bed flat	52.5	@	182,500		9,581,250
3 bed flat	35.0	@	205,000		7,175,000
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	140.0				24,447,500
Social Rent GDV -					
Studio	2.1	@	106,000		222,600
1 bed flat	8.4	@	120,000		1,008,000
2 bed flat	10.5	@	146,000		1,533,000
3 bed flat	7.0	@	164,000		1,148,000
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	28.0				3,911,600
First Homes GDV -					
Studio	5.3	@	185,500		973,875
1 bed flat	21.0	@	210,000		4,410,000
2 bed flat	26.3	@	250,000		6,562,500
3 bed flat	17.5	@	250,000		4,375,000
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	70.0				16,321,375
Intermediate GDV -					
Studio	3.2	@	185,500		584,325
1 bed flat	12.6	@	210,000		2,646,000
2 bed flat	15.8	@	255,500		4,024,125
3 bed flat	10.5	@	287,000		3,013,500
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	42.0	280.0			10,267,950
Sub-total GDV Residential	**700**				**200,793,425**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	42,841,575
	771 £ psm (total GIA sqm)			61,202 £ per unit (total units)	
Grant	280	AH units @	0	per unit	-
Total GDV					**200,793,425**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(112,559)
Planning Application Professional Fees, Surveys and reports							(340,000)
CIL		33,304	sqm (Market only		0.00 £ psm		-
CIL analysis:		0.00%	% of GDV		0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				
	Net zero carbon flats	5%	build cost				(3,837,799)
	Green belt loss mitigation	1,000	per dwelling				(700,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	700	units @	0	per unit		-
S106 analysis:	1,944,771 £ per ha	2.26%	% of GDV	6,483	£ per unit (total u	(4,537,799)	
AH Commuted Sum		55,580	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Urban C**				
No Units:	**700**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				2.33	ha @	123,550	£ per ha (if brownfield)		(288,283)
Net Biodiveristy Gain @ 20%				700	units @	289	£ per unit		(202,419)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			700	units @	30,000	per unit		(21,000,000)
Infra. Costs analysis:	9,000,000	£ per ha		10.46%	% of GDV	30,000	£ per unit (total ui	(21,000,000)	
Studio				1,976	sqm @	1,381	psm		(2,729,506)
1 bed flat				12,353	sqm @	1,381	psm		(17,059,412)
2 bed flat				27,794	sqm @	1,381	psm		(38,383,676)
3 bed flat				13,456	sqm @	1,381	psm		(18,583,386)
[blank]				-	sqm @	1,381	psm		-
[blank]				-	sqm @	1,381	psm		-
[blank]			55,580	-	sqm @	1,381	psm		-
External works				76,755,980	@	15.0%			(11,513,397)
Ext. Works analysis:						16,448	£per unit		
M4(2) Category 2 Housing	Aff units		280	units @	100% @	586	£ per unit		(164,080)
M4(3) Category 3 Housing	Aff units		280	units @	5% @	11,386	£ per unit		(159,404)
M4(2) Category 2 Housing	Mrkt units		420	units @	100% @	586	£ per unit		(246,120)
M4(3) Category 3 Housing	Mrkt units		420	units @	5% @	11,386	£ per unit		(239,106)
Carbon/Energy Reduction/FHS			700	units @		0	£ per unit		-
EV Charging Points - Houses			700	units @		1,000	£ per unit		(700,000)
EV Charging Points - Flats			700	units @		625	£ per unit		(437,500)
Water Efficiency			700	units @		3,106	£ per unit		(2,174,200)
Contingency (on construction)				113,880,489	@	5.0%			(5,694,024)
Professional Fees				113,880,489	@	10.0%			(11,388,049)
Disposal Costs -									
OMS Marketing and Promotion				145,845,000	OMS @	3.00%	6,251	£ per unit	(4,375,350)
Residential Sales Agent Costs				145,845,000	OMS @	1.00%	2,084	£ per unit	(1,458,450)
Residential Sales Legal Costs				145,845,000	OMS @	0.25%	521	£ per unit	(364,613)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							8,869	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(6,579,471)
Developers Profit -									
Profit on OMS				145,845,000		20.00%			(29,169,000)
Margin on AH				54,948,425		6.00%	on AH values		(3,296,906)
Profit analysis:				200,793,425		16.17%	blended GDV	(32,465,906)	
				148,740,804		21.83%	on costs	(32,465,906)	
TOTAL COSTS									**(181,206,710)**

RESIDUAL LAND VALUE (RLV)						
Residual Land Value (gross)						19,586,715
SDLT			19,586,715	@	HMRC formula	(968,836)
Acquisition Agent fees			19,586,715	@	1.0%	(195,867)
Acquisition Legal fees			19,586,715	@	0.5%	(97,934)
Interest on Land			19,586,715	@	7.50%	(1,469,004)
Residual Land Value						**16,855,075**
RLV analysis:	24,079	£ per plot	7,223,604	£ per ha	2,923,352	£ per acre
					8.39%	% RLV / GDV

BENCHMARK LAND VALUE (BLV)							
Residential Density (Net)			300.0	dph			
Site Area (Net)			2.33	ha	5.77	acres	
Benchmark Land Value (Net)	5,271	£ per plot	1,581,440	£ per ha	640,000	£ per acre	**3,690,027**
BLV analysis:		Density	23,820	sqm/ha	103,762	sqft/ac	

BALANCE					
Surplus/(Deficit)	**5,642,164**	£ per ha	**2,283,352**	£ per acre	**13,165,049**

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Scheme Ref:	**Urban C**				
No Units:	**700**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	250.00	1,645,011	1,370,729	1,096,416	822,102	546,730	271,276	(5,149)
	260.00	1,571,521	1,302,109	1,032,697	763,011	492,488	221,965	(49,797)
CIL £psm	270.00	1,497,999	1,233,489	968,978	703,838	438,246	172,415	(94,445)
0.00	280.00	1,424,478	1,164,868	905,259	644,665	384,004	122,806	(139,093)
	290.00	1,350,956	1,096,248	841,222	585,492	329,762	73,197	(183,741)
	300.00	1,277,434	1,027,628	777,118	526,319	275,521	23,588	(228,389)
	310.00	1,203,912	958,881	713,014	467,146	220,996	(26,021)	(273,244)
	320.00	1,130,390	889,846	648,910	407,973	166,426	(75,630)	(318,162)
	330.00	1,056,816	820,811	584,806	348,800	111,856	(125,238)	(363,080)
	340.00	982,850	751,776	520,701	289,420	57,286	(174,847)	(407,998)
	350.00	908,884	682,741	456,597	229,889	2,716	(224,527)	(452,916)
	360.00	834,918	613,705	392,493	170,359	(51,853)	(274,436)	(497,834)
	370.00	760,951	544,670	328,079	110,828	(106,423)	(324,344)	(542,751)
	380.00	686,985	475,635	263,587	51,297	(160,993)	(374,253)	(587,669)
	390.00	613,019	406,425	199,096	(8,233)	(215,737)	(424,162)	(632,587)
	400.00	539,053	336,972	134,604	(67,764)	(270,636)	(474,071)	(677,768)
	410.00	464,927	267,520	70,113	(127,295)	(325,536)	(523,980)	(722,958)
	420.00	390,514	198,067	5,621	(186,983)	(380,436)	(573,888)	(768,147)
	430.00	316,101	128,615	(58,871)	(246,874)	(435,335)	(623,797)	(813,337)
	440.00	241,687	59,163	(123,362)	(306,764)	(490,235)	(673,923)	(858,526)
	450.00	167,274	(10,290)	(188,175)	(366,655)	(545,135)	(724,134)	(903,716)
	460.00	92,861	(79,742)	(253,056)	(426,545)	(600,034)	(774,344)	(948,905)
	470.00	18,447	(149,439)	(317,938)	(486,436)	(655,015)	(824,555)	(994,094)
	480.00	(55,966)	(219,312)	(382,819)	(546,326)	(710,246)	(874,765)	(1,039,345)
	490.00	(130,668)	(289,184)	(447,700)	(606,217)	(765,478)	(924,975)	(1,084,808)
	500.00	(205,531)	(359,056)	(512,582)	(666,233)	(820,709)	(975,186)	(1,130,270)

TABLE 2

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	10,000	2,242,992	1,848,009	1,452,850	1,056,267	659,033	260,302	(140,212)
	12,000	1,997,400	1,602,240	1,205,862	809,012	410,284	10,340	(391,381)
Site Specific S106	14,000	1,751,631	1,355,458	958,608	560,266	160,891	(240,077)	(643,202)
6,483	16,000	1,505,054	1,108,204	710,248	311,442	(89,362)	(491,843)	(896,489)
	18,000	1,257,799	860,230	461,499	61,190	(340,538)	(744,248)	(1,150,506)
	20,000	1,010,212	611,481	211,741	(189,234)	(592,304)	(997,535)	(1,405,324)
	22,000	761,463	362,292	(38,512)	(441,000)	(845,293)	(1,251,959)	(1,661,568)
	24,000	512,715	112,039	(289,695)	(693,051)	(1,098,593)	(1,506,892)	(1,918,521)
	26,000	262,591	(138,391)	(541,461)	(946,338)	(1,353,412)	(1,763,250)	(2,176,429)
	28,000	12,338	(390,157)	(794,097)	(1,200,046)	(1,608,574)	(2,020,254)	(2,435,665)
	30,000	(238,853)	(641,922)	(1,047,384)	(1,454,865)	(1,864,933)	(2,278,163)	(2,695,647)
	32,000	(490,618)	(895,142)	(1,301,499)	(1,710,257)	(2,121,988)	(2,537,269)	(2,956,683)
	34,000	(742,900)	(1,148,429)	(1,556,317)	(1,966,615)	(2,379,896)	(2,796,941)	(3,219,004)
	36,000	(996,188)	(1,402,952)	(1,811,939)	(2,223,721)	(2,638,873)	(3,057,977)	(3,482,109)
	38,000	(1,249,587)	(1,657,770)	(2,068,298)	(2,481,630)	(2,898,341)	(3,319,806)	(3,746,310)

TABLE 3

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	15.0%	4,819,473	4,337,029	3,854,042	3,371,056	2,886,881	2,402,582	1,916,834
	16.0%	4,547,548	4,083,232	3,618,373	3,153,515	2,687,469	2,221,298	1,753,678
Profit	17.0%	4,275,622	3,829,434	3,382,704	2,935,974	2,488,057	2,040,014	1,590,523
20.0%	18.0%	4,003,696	3,575,637	3,147,035	2,718,434	2,288,645	1,858,730	1,427,367
	19.0%	3,731,770	3,321,839	2,911,366	2,500,893	2,089,232	1,677,446	1,264,212
	20.0%	3,459,844	3,068,042	2,675,697	2,283,352	1,889,820	1,496,162	1,101,056

TABLE 4

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	600,000	3,499,844	3,108,042	2,715,697	2,323,352	1,929,820	1,536,162	1,141,056
	620,000	3,479,844	3,088,042	2,695,697	2,303,352	1,909,820	1,516,162	1,121,056
BLV (£ per acre)	640,000	3,459,844	3,068,042	2,675,697	2,283,352	1,889,820	1,496,162	1,101,056
640,000	660,000	3,439,844	3,048,042	2,655,697	2,263,352	1,869,820	1,476,162	1,081,056
	680,000	3,419,844	3,028,042	2,635,697	2,243,352	1,849,820	1,456,162	1,061,056
	700,000	3,399,844	3,008,042	2,615,697	2,223,352	1,829,820	1,436,162	1,041,056
	720,000	3,379,844	2,988,042	2,595,697	2,203,352	1,809,820	1,416,162	1,021,056
	740,000	3,359,844	2,968,042	2,575,697	2,183,352	1,789,820	1,396,162	1,001,056
	760,000	3,339,844	2,948,042	2,555,697	2,163,352	1,769,820	1,376,162	981,056
	780,000	3,319,844	2,928,042	2,535,697	2,143,352	1,749,820	1,356,162	961,056
	800,000	3,299,844	2,908,042	2,515,697	2,123,352	1,729,820	1,336,162	941,056
	820,000	3,279,844	2,888,042	2,495,697	2,103,352	1,709,820	1,316,162	921,056
	840,000	3,259,844	2,868,042	2,475,697	2,083,352	1,689,820	1,296,162	901,056
	860,000	3,239,844	2,848,042	2,455,697	2,063,352	1,669,820	1,276,162	881,056
	880,000	3,219,844	2,828,042	2,435,697	2,043,352	1,649,820	1,256,162	861,056
	900,000	3,199,844	2,808,042	2,415,697	2,023,352	1,629,820	1,236,162	841,056

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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	35	(218,569)	(264,365)	(310,292)	(356,219)	(402,311)	(448,455)	(494,754)
	40	(149,154)	(201,467)	(253,926)	(306,413)	(359,034)	(411,721)	(464,627)
Density (dph)	45	(79,740)	(138,592)	(197,559)	(256,608)	(315,756)	(375,030)	(434,500)
300.0	50	(10,326)	(75,717)	(141,192)	(206,802)	(272,479)	(338,339)	(404,372)
	55	59,088	(12,842)	(84,826)	(156,997)	(229,202)	(301,648)	(374,245)
	60	128,503	50,034	(28,459)	(107,191)	(185,925)	(264,957)	(344,118)
	65	197,917	112,909	27,901	(57,385)	(142,678)	(228,266)	(313,991)
	70	267,331	175,784	84,237	(7,580)	(99,433)	(191,575)	(283,864)
	75	336,745	238,659	140,573	42,226	(56,189)	(154,884)	(253,736)
	80	406,160	301,534	196,909	92,031	(12,944)	(118,193)	(223,609)
	85	475,574	364,410	253,245	141,837	30,301	(81,502)	(193,482)

TABLE 6

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	98%	3,825,049	3,433,915	3,042,781	2,650,947	2,258,664	1,866,102	1,472,506
	100%	3,459,844	3,068,042	2,675,697	2,283,352	1,889,820	1,496,162	1,101,056
Build Cost	102%	3,092,976	2,700,570	2,307,380	1,913,661	1,519,260	1,124,039	727,500
100%	104%	2,725,188	2,331,406	1,937,625	1,542,429	1,146,961	749,986	351,811
(105% = 5% increase)	106%	2,355,556	1,961,067	1,565,722	1,169,634	772,597	373,977	(26,038)
	108%	1,984,546	1,589,139	1,192,432	795,252	396,270	(4,012)	(406,073)
	110%	1,612,516	1,215,354	817,733	418,688	18,141	(384,007)	(788,322)
	112%	1,238,402	840,339	441,232	40,420	(361,814)	(766,036)	(1,172,811)
	114%	863,071	463,901	62,826	(339,494)	(743,621)	(1,150,122)	(1,559,569)
	116%	486,667	85,358	(317,047)	(721,079)	(1,127,305)	(1,536,294)	(1,948,622)
	118%	108,016	(294,472)	(698,409)	(1,104,514)	(1,513,122)	(1,924,578)	(2,340,000)
	120%	(271,771)	(675,611)	(1,081,780)	(1,490,111)	(1,901,040)	(2,315,139)	(2,733,730)

TABLE 7

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	80%	(1,081,642)	(1,178,054)	(1,274,678)	(1,371,303)	(1,468,410)	(1,565,912)	(1,663,672)
	82%	(617,388)	(744,031)	(870,883)	(997,734)	(1,125,211)	(1,252,992)	(1,381,235)
Market Values	84%	(155,775)	(312,565)	(469,412)	(626,258)	(783,980)	(941,796)	(1,100,369)
100%	86%	303,181	116,557	(70,067)	(256,923)	(444,548)	(632,172)	(820,934)
(105% = 5% increase)	88%	759,749	543,548	327,347	110,473	(106,748)	(324,393)	(542,795)
	90%	1,214,209	968,618	722,829	476,207	229,584	(17,999)	(265,817)
	92%	1,666,786	1,391,975	1,116,299	840,456	564,223	287,179	9,557
	94%	2,117,700	1,813,194	1,508,296	1,203,398	897,382	591,287	283,930
	96%	2,566,617	2,232,815	1,899,012	1,564,444	1,229,458	893,804	557,458
	98%	3,013,779	2,651,208	2,288,074	1,924,344	1,560,417	1,195,344	829,723
	100%	3,459,844	3,068,042	2,675,697	2,283,352	1,889,820	1,496,162	1,101,056
	102%	3,904,221	3,483,401	3,062,581	2,640,639	2,218,520	1,795,440	1,371,840
	104%	4,347,584	3,898,153	3,447,708	2,997,263	2,546,032	2,094,140	1,641,205
	106%	4,788,229	4,311,017	3,832,638	3,352,765	2,872,695	2,391,878	1,910,212
	108%	5,226,032	4,721,223	4,215,269	3,707,832	3,198,571	2,688,876	2,178,176
	110%	5,661,709	5,129,305	4,595,797	4,060,834	3,524,063	2,985,127	2,445,807
	112%	6,095,480	5,535,469	4,974,414	4,411,950	3,847,712	3,281,330	2,712,433
	114%	6,527,561	5,939,919	5,351,310	4,761,357	4,169,682	3,575,903	2,979,059
	116%	6,958,170	6,342,859	5,726,676	5,109,232	4,490,136	3,868,994	3,244,970
	118%	7,387,493	6,744,489	6,100,698	5,455,748	4,809,235	4,160,750	3,509,498
	120%	7,815,303	7,145,009	6,473,565	5,801,079	5,127,137	4,451,318	3,772,778

TABLE 8

Balance (RLV - BLV £ per acre)	2,283,352	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	5,000	3,610,740	3,249,725	2,888,229	2,526,245	2,164,262	1,801,614	1,438,501
	10,000	3,761,636	3,430,800	3,099,963	2,769,127	2,437,517	2,105,895	1,774,274
Grant (£ per unit)	15,000	3,912,532	3,611,875	3,311,218	3,010,561	2,709,904	2,409,246	2,108,252
-	20,000	4,063,157	3,792,950	3,522,472	3,251,994	2,981,516	2,711,038	2,440,560
	25,000	4,213,162	3,973,027	3,732,892	3,492,757	3,252,622	3,012,487	2,772,352
	30,000	4,362,599	4,152,381	3,942,163	3,731,945	3,521,727	3,311,509	3,101,276
	35,000	4,511,736	4,331,080	4,150,367	3,969,654	3,788,936	3,607,835	3,426,734
	40,000	4,660,084	4,509,028	4,357,587	4,205,979	4,054,140	3,901,920	3,749,377
	45,000	4,808,267	4,686,152	4,563,904	4,441,016	4,317,739	4,194,022	4,069,431
	50,000	4,955,731	4,862,784	4,769,228	4,674,858	4,579,838	4,484,008	4,387,209
	55,000	5,103,000	5,038,776	4,973,627	4,907,599	4,840,543	4,772,315	4,702,767

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Urban C
No Units: 700 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Urban C**
No Units:	700
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	200,793,425
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	6,483
Site Specific S106 Total (£)	4,537,799
Sub-total CIL+S106 (£ per unit)	6,483
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	21,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	36,483
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.17%
Developers Profit (% on costs)	21.83%
Developers Profit Total (£)	32,465,906
Land Value KPI's	
RLV (£/acre)	2,923,352
RLV (£/ha)	7,223,604
RLV (% of GDV)	8.39%
RLV Total (£)	16,855,075
BLV (£/acre)	640,000
BLV (£/ha)	1,581,440
BLV Total (£)	3,690,027
Surplus/Deficit (£/acre) [RLV-BLV]	2,283,352
Surplus/Deficit (£/ha)	5,642,164
Surplus/Deficit Total (£)	13,165,049
Surplus/Deficit (per unit)	18,807
Plan Viability comments	Viable

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		3,870	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	232.2	18.8%	290.3	14%	522.5
3 bed House	45.0%	1,044.9	25.0%	387.0	37%	1,431.9
4 bed House	30.0%	696.6	7.5%	116.1	21%	812.7
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	116.1	30.0%	464.4	15%	580.5
2 bed Flat	10.0%	232.2	18.8%	290.3	14%	522.5
Total number of units	100.0%	2,322.0	100.0%	1,548.0	100%	3,870.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	17,415	187,453	21,769	234,317	39,184	421,770
3 bed House	101,355	1,090,979	37,539	404,066	138,894	1,495,046
4 bed House	104,490	1,124,721	14,396	154,962	118,886	1,279,683
5 bed House	0	0	0	0	0	0
1 bed Flat	6,829	73,511	27,318	294,045	34,147	367,556
2 bed Flat	19,122	205,831	23,903	257,289	43,025	463,120
	249,212	2,682,496	124,925	1,344,679	374,137	4,027,175
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	208,980,000
3 bed House	500,000	5,155	479	715,950,000
4 bed House	670,000	4,467	415	544,509,000
5 bed House	725,000	#DIV/0!	#DIV/0!	0
1 bed Flat	365,000	7,300	678	211,882,500
2 bed Flat	365,000	5,214	484	190,694,250
				1,872,015,750

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	362,500	50%	290,000	40%	250,000	70%	507,500	70%
1 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	232.2	@	400,000		92,880,000
3 bed House	1,044.9	@	500,000		522,450,000
4 bed House	696.6	@	670,000		466,722,000
5 bed House	0.0	@	725,000		-
1 bed Flat	116.1	@	365,000		42,376,500
2 bed Flat	232.2	@	365,000		84,753,000
	2,322.0				1,209,181,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	145.1	@	200,000		29,025,000
3 bed House	193.5	@	250,000		48,375,000
4 bed House	58.1	@	335,000		19,446,750
5 bed House	0.0	@	362,500		-
1 bed Flat	232.2	@	182,500		42,376,500
2 bed Flat	145.1	@	182,500		26,485,313
	774.0				165,708,563
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	29.0	@	160,000		4,644,000
3 bed House	38.7	@	200,000		7,740,000
4 bed House	11.6	@	268,000		3,111,480
5 bed House	0.0	@	290,000		-
1 bed Flat	46.4	@	146,000		6,780,240
2 bed Flat	29.0	@	146,000		4,237,650
	154.8				26,513,370
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	72.6	@	250,000		18,140,625
3 bed House	96.8	@	250,000		24,187,500
4 bed House	29.0	@	250,000		7,256,250
5 bed House	0.0	@	250,000		-
1 bed Flat	116.1	@	250,000		29,025,000
2 bed Flat	72.6	@	250,000		18,140,625
	387.0				96,750,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	43.5	@	280,000		12,190,500
3 bed House	58.1	@	350,000		20,317,500
4 bed House	17.4	@	469,000		8,167,635
5 bed House	0.0	@	507,500		-
1 bed Flat	69.7	@	255,500		17,798,130
2 bed Flat	43.5	@	255,500		11,123,831
	232.2	1,548.0			69,597,596
Sub-total GDV Residential	**3,870**				**1,567,751,029**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	304,264,721
	813 £ psm (total GIA sqm)			78,621 £ per unit (total units)	
Grant	1,548	AH units @	0 per unit		-
Total GDV					**1,567,751,029**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(550,019)
Planning Application Professional Fees, Surveys and reports						(1,650,000)
CIL		249,212	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(35,639,604)
	Net zero carbon flats	5%	build cost			(5,328,751)
	Green belt loss mitigation	1,000	per dwelling			(3,870,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	3,870	units @	0 per unit		-
S106 analysis:	463,446 £ per ha	2.86%	% of GDV	11,586 £ per unit (total u	(44,838,355)	
AH Commuted Sum		374,137	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**Edge A**				
No Units:	**3870**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				96.75	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				3,870	units @	1,211	£ per unit		(4,688,195)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			3,870	units @	20,000	per unit		(77,400,000)
Infra. Costs analysis:	800,000	£ per ha		4.94%	% of GDV	20,000	£ per unit (total ui	(77,400,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				39,184	sqm @	1,234	psm		(48,352,748)
3 bed House				138,894	sqm @	1,234	psm		(171,395,566)
4 bed House				118,886	sqm @	1,234	psm		(146,705,818)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				34,147	sqm @	1,381	psm		(47,157,088)
2 bed Flat			374,137	43,025	sqm @	1,381	psm		(59,417,931)
External works				473,029,151	@	15.0%			(70,954,373)
Ext. Works analysis:						18,334	£per unit		
M4(2) Category 2 Housing	Aff units		1,548	units @	100% @	586	£ per unit		(907,128)
M4(3) Category 3 Housing	Aff units		1,548	units @	5% @	11,386	£ per unit		(881,276)
M4(2) Category 2 Housing	Mrkt units		2,322	units @	100% @	586	£ per unit		(1,360,692)
M4(3) Category 3 Housing	Mrkt units		2,322	units @	5% @	11,386	£ per unit		(1,321,915)
Carbon/Energy Reduction/FHS			3,870	units @		0	£ per unit		-
EV Charging Points - Houses			2,767	units @		1,000	£ per unit		(2,767,050)
EV Charging Points - Flats			276	units @		625	£ per unit		(172,336)
Water Efficiency			3,870	units @		3,106	£ per unit		(12,020,220)
Contingency (on construction)				645,502,336	@	5.0%			(32,275,117)
Professional Fees				645,502,336	@	10.0%			(64,550,234)
Disposal Costs -									
OMS Marketing and Promotion				1,209,181,500	OMS @	3.00%	9,374	£ per unit	(36,275,445)
Residential Sales Agent Costs				1,209,181,500	OMS @	1.00%	3,125	£ per unit	(12,091,815)
Residential Sales Legal Costs				1,209,181,500	OMS @	0.25%	781	£ per unit	(3,022,954)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							13,282	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(3,027,726)
Developers Profit -									
Profit on OMS				1,209,181,500		20.00%			(241,836,300)
Margin on AH				358,569,529		6.00%	on AH values		(21,514,172)
Profit analysis:				1,567,751,029		16.80%	blended GDV	(263,350,472)	
				843,794,000		31.21%	on costs	(263,350,472)	
TOTAL COSTS									**(1,107,144,472)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									460,606,557
SDLT				460,606,557	@	HMRC formula			(23,019,828)
Acquisition Agent fees				460,606,557	@	1.0%			(4,606,066)
Acquisition Legal fees				460,606,557	@	0.5%			(2,303,033)
Interest on Land				460,606,557	@	7.50%			(34,545,492)
Residual Land Value									**396,132,139**
RLV analysis:	102,360	£ per plot		4,094,389	£ per ha	1,656,977	£ per acre		
						25.27%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				40.0	dph				
Site Area (Net)				96.75	ha	239.07	acres		
Benchmark Land Value (Net)	12,355	£ per plot		494,200	£ per ha	200,000	£ per acre		**47,813,850**
BLV analysis:		Density		3,867	sqm/ha	16,845	sqft/ac		

BALANCE									
Surplus/(Deficit)				**3,600,189**	£ per ha	**1,456,977**	£ per acre		**348,318,289**

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Scheme Ref:	**Edge A**				
No Units:	**3870**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	500.00	1,172,521	1,116,723	1,060,926	1,005,128	949,322	893,494	837,665
	510.00	1,161,210	1,106,167	1,051,123	996,080	941,018	885,945	830,871
CIL £psm	520.00	1,149,900	1,095,610	1,041,321	987,032	932,714	878,396	824,077
0.00	530.00	1,138,589	1,085,054	1,031,519	977,974	924,410	870,846	817,283
	540.00	1,127,279	1,074,498	1,021,716	968,915	916,106	863,297	810,488
	550.00	1,115,969	1,063,941	1,011,910	959,856	907,802	855,748	803,694
	560.00	1,104,658	1,053,385	1,002,096	950,797	899,498	848,199	796,900
	570.00	1,093,348	1,042,826	992,282	941,738	891,194	840,650	790,103
	580.00	1,082,037	1,032,257	982,468	932,679	882,890	833,101	783,300
	590.00	1,070,723	1,021,688	972,654	923,620	874,586	825,551	776,498
	600.00	1,059,399	1,011,120	962,840	914,561	866,282	818,002	769,695
	610.00	1,048,075	1,000,551	953,026	905,502	857,978	810,445	762,892
	620.00	1,036,752	989,982	943,213	896,443	849,674	802,887	756,089
	630.00	1,025,428	979,413	933,399	887,384	841,369	795,328	749,287
	640.00	1,014,104	968,844	923,585	878,325	833,055	787,770	742,484
	650.00	1,002,780	958,276	913,771	869,266	824,741	780,211	735,681
	660.00	991,457	947,707	903,957	860,200	816,426	772,652	728,879
	670.00	980,133	937,138	894,143	851,130	808,112	765,094	722,076
	680.00	968,809	926,569	884,322	842,059	799,797	757,535	715,273
	690.00	957,485	916,000	874,495	832,989	791,483	749,977	708,471
	700.00	946,162	905,420	864,669	823,919	783,169	742,418	701,668
	710.00	934,832	894,838	854,843	814,849	774,854	734,860	694,861
	720.00	923,494	884,256	845,017	805,778	766,540	727,301	688,049
	730.00	912,156	873,674	835,191	796,708	758,225	719,743	681,238
	740.00	900,819	863,092	825,365	787,638	749,911	712,176	674,426
	750.00	889,481	852,510	815,539	778,568	741,596	704,608	667,614

TABLE 2

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	50,000	1,035,441	941,866	848,240	754,574	660,817	566,974	473,017
	55,000	965,102	871,474	777,813	684,055	590,222	496,281	402,200
Site Specific S106	60,000	894,708	801,048	707,294	613,470	519,545	425,485	331,240
11,586	65,000	824,282	730,532	636,718	542,808	448,770	354,571	260,130
	70,000	753,771	659,966	566,072	472,055	377,883	283,513	188,849
	75,000	683,214	589,335	495,339	401,195	306,868	212,282	117,337
	80,000	612,598	518,615	424,507	330,213	235,710	140,872	45,567
	85,000	541,879	447,796	353,558	259,094	164,355	69,216	(26,520)
	90,000	471,081	376,876	282,478	187,823	92,814	(2,715)	(99,016)
	95,000	400,188	305,841	211,251	116,351	21,010	(74,984)	(172,011)
	100,000	329,186	234,675	139,862	44,674	(51,086)	(147,689)	(245,649)
	105,000	258,059	163,340	68,272	(27,280)	(123,545)	(220,921)	(320,156)
	110,000	186,791	91,830	(3,547)	(99,542)	(196,454)	(294,840)	(395,825)
	115,000	115,365	20,119	(75,651)	(172,192)	(269,924)	(369,663)	(473,127)
	120,000	43,730	(51,844)	(148,082)	(245,308)	(344,125)	(445,704)	(552,856)

TABLE 3

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	15.0%	2,008,848	1,897,387	1,785,926	1,674,465	1,562,969	1,451,465	1,339,960
	16.0%	1,954,476	1,846,640	1,738,804	1,630,967	1,523,097	1,415,217	1,307,337
Profit	17.0%	1,900,104	1,795,893	1,691,681	1,587,470	1,483,224	1,378,969	1,274,714
20.0%	18.0%	1,845,732	1,745,145	1,644,559	1,543,972	1,443,351	1,342,721	1,242,091
	19.0%	1,791,360	1,694,398	1,597,436	1,500,474	1,403,478	1,306,473	1,209,467
	20.0%	1,736,988	1,643,651	1,550,314	1,456,977	1,363,605	1,270,225	1,176,844

TABLE 4

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	600,000	1,336,988	1,243,651	1,150,314	1,056,977	963,605	870,225	776,844
	620,000	1,316,988	1,223,651	1,130,314	1,036,977	943,605	850,225	756,844
BLV (£ per acre)	640,000	1,296,988	1,203,651	1,110,314	1,016,977	923,605	830,225	736,844
200,000	660,000	1,276,988	1,183,651	1,090,314	996,977	903,605	810,225	716,844
	680,000	1,256,988	1,163,651	1,070,314	976,977	883,605	790,225	696,844
	700,000	1,236,988	1,143,651	1,050,314	956,977	863,605	770,225	676,844
	720,000	1,216,988	1,123,651	1,030,314	936,977	843,605	750,225	656,844
	740,000	1,196,988	1,103,651	1,010,314	916,977	823,605	730,225	636,844
	760,000	1,176,988	1,083,651	990,314	896,977	803,605	710,225	616,844
	780,000	1,156,988	1,063,651	970,314	876,977	783,605	690,225	596,844
	800,000	1,136,988	1,043,651	950,314	856,977	763,605	670,225	576,844
	820,000	1,116,988	1,023,651	930,314	836,977	743,605	650,225	556,844
	840,000	1,096,988	1,003,651	910,314	816,977	723,605	630,225	536,844
	860,000	1,076,988	983,651	890,314	796,977	703,605	610,225	516,844
	880,000	1,056,988	963,651	870,314	776,977	683,605	590,225	496,844
	900,000	1,036,988	943,651	850,314	756,977	663,605	570,225	476,844

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	35	1,494,864	1,413,194	1,331,524	1,249,854	1,168,154	1,086,446	1,004,739
	40	1,736,988	1,643,651	1,550,314	1,456,977	1,363,605	1,270,225	1,176,844
Density (dph)	45	1,979,111	1,874,107	1,769,103	1,664,099	1,559,056	1,454,003	1,348,950
40.0	50	2,221,235	2,104,563	1,987,892	1,871,221	1,754,506	1,637,781	1,521,055
	55	2,463,358	2,335,020	2,206,681	2,078,343	1,949,957	1,821,559	1,693,161
	60	2,705,481	2,565,476	2,425,470	2,285,465	2,145,407	2,005,337	1,865,266
	65	2,947,605	2,795,932	2,644,260	2,492,587	2,340,858	2,189,115	2,037,372
	70	3,189,728	3,026,389	2,863,049	2,699,709	2,536,309	2,372,893	2,209,477
	75	3,431,852	3,256,845	3,081,838	2,906,831	2,731,759	2,556,671	2,381,583
	80	3,673,975	3,487,301	3,300,627	3,113,953	2,927,210	2,740,449	2,553,688
	85	3,916,099	3,717,758	3,519,416	3,321,075	3,122,661	2,924,227	2,725,794

TABLE 6

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	98%	1,784,342	1,690,477	1,596,612	1,502,747	1,408,882	1,314,989	1,221,080
	100%	1,736,988	1,643,651	1,550,314	1,456,977	1,363,605	1,270,225	1,176,844
Build Cost	102%	1,689,634	1,596,824	1,504,015	1,411,164	1,318,312	1,225,460	1,132,582
100%	104%	1,642,280	1,549,989	1,457,666	1,365,342	1,273,019	1,180,669	1,088,293
(105% = 5% increase)	106%	1,594,906	1,503,111	1,411,316	1,319,521	1,227,698	1,135,851	1,044,003
	108%	1,547,499	1,456,233	1,364,966	1,273,670	1,182,351	1,091,032	999,666
	110%	1,500,092	1,409,354	1,318,583	1,227,794	1,137,004	1,046,172	955,320
	112%	1,452,686	1,362,439	1,272,178	1,181,917	1,091,619	1,001,296	910,946
	114%	1,405,237	1,315,505	1,225,773	1,136,007	1,046,214	956,404	866,540
	116%	1,357,774	1,268,571	1,179,336	1,090,073	1,000,803	911,469	822,114
	118%	1,310,311	1,221,606	1,132,872	1,044,138	955,338	866,530	777,646
	120%	1,262,818	1,174,613	1,086,409	998,146	909,872	821,532	733,152

TABLE 7

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	80%	908,752	870,504	832,248	793,991	755,735	717,479	679,218
	82%	991,759	947,989	904,219	860,449	816,679	772,883	729,086
Market Values	84%	1,074,718	1,025,441	976,159	926,855	877,551	828,247	778,943
100%	86%	1,157,634	1,102,829	1,048,024	993,219	938,414	883,585	828,748
(105% = 5% increase)	88%	1,240,489	1,180,187	1,119,884	1,059,551	999,218	938,886	878,552
	90%	1,323,321	1,257,497	1,191,673	1,125,849	1,060,023	994,163	928,302
	92%	1,406,109	1,334,796	1,263,460	1,192,114	1,120,768	1,049,422	978,052
	94%	1,488,863	1,412,034	1,335,204	1,258,375	1,181,511	1,104,643	1,027,775
	96%	1,571,618	1,489,271	1,406,925	1,324,578	1,242,232	1,159,864	1,077,474
	98%	1,654,303	1,566,478	1,478,645	1,390,782	1,302,918	1,215,055	1,127,173
	100%	1,736,988	1,643,651	1,550,314	1,456,977	1,363,605	1,270,225	1,176,844
	102%	1,819,672	1,720,823	1,621,974	1,523,124	1,424,275	1,325,394	1,226,497
	104%	1,902,304	1,797,984	1,693,634	1,589,272	1,484,911	1,380,549	1,276,150
	106%	1,984,926	1,875,098	1,765,269	1,655,420	1,545,546	1,435,672	1,325,798
	108%	2,067,548	1,952,212	1,836,875	1,721,538	1,606,182	1,490,795	1,375,409
	110%	2,150,171	2,029,326	1,908,481	1,787,636	1,666,791	1,545,919	1,425,020
	112%	2,232,742	2,106,433	1,980,087	1,853,734	1,727,381	1,601,028	1,474,631
	114%	2,315,308	2,183,496	2,051,683	1,919,832	1,787,970	1,656,109	1,524,242
	116%	2,397,875	2,260,558	2,123,241	1,985,923	1,848,560	1,711,191	1,573,822
	118%	2,480,412	2,337,620	2,194,798	2,051,977	1,909,150	1,766,272	1,623,395
	120%	2,562,931	2,414,650	2,266,356	2,118,030	1,969,704	1,821,354	1,672,968

TABLE 8

Balance (RLV - BLV £ per acre)	1,456,977	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	5,000	1,754,511	1,664,679	1,574,847	1,485,015	1,395,180	1,305,308	1,215,435
	10,000	1,772,035	1,685,708	1,599,380	1,513,053	1,426,725	1,340,391	1,254,027
Grant (£ per unit)	15,000	1,789,559	1,706,736	1,623,914	1,541,091	1,458,268	1,375,445	1,292,618
-	20,000	1,807,083	1,727,765	1,648,447	1,569,129	1,489,811	1,410,493	1,331,175
	25,000	1,824,596	1,748,793	1,672,980	1,597,167	1,521,354	1,445,540	1,369,727
	30,000	1,842,103	1,769,808	1,697,513	1,625,205	1,552,897	1,480,588	1,408,280
	35,000	1,859,611	1,790,817	1,722,023	1,653,229	1,584,435	1,515,636	1,446,832
	40,000	1,877,118	1,811,826	1,746,533	1,681,241	1,615,949	1,550,656	1,485,364
	45,000	1,894,625	1,832,835	1,771,044	1,709,253	1,647,462	1,585,671	1,523,880
	50,000	1,912,133	1,853,843	1,795,554	1,737,264	1,678,975	1,620,685	1,562,396
	55,000	1,929,640	1,874,852	1,820,064	1,765,276	1,710,488	1,655,700	1,600,912

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Edge A
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Edge A**
No Units:	3870
Location / Value Zone:	Mid
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	1,567,751,029
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,586
Site Specific S106 Total (£)	44,838,355
Sub-total CIL+S106 (£ per unit)	11,586
Site Infrastructure (£ per unit)	20,000
Site Infrastructure Total (£)	77,400,000
Sub-total CIL+S106+Infrastructure (£ per unit)	31,586
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.80%
Developers Profit (% on costs)	31.21%
Developers Profit Total (£)	263,350,472
Land Value KPI's	
RLV (£/acre)	1,656,977
RLV (£/ha)	4,094,389
RLV (% of GDV)	25.27%
RLV Total (£)	396,132,139
BLV (£/acre)	200,000
BLV (£/ha)	494,200
BLV Total (£)	47,813,850
Surplus/Deficit (£/acre) [RLV-BLV]	1,456,977
Surplus/Deficit (£/ha)	3,600,189
Surplus/Deficit Total (£)	348,318,289
Surplus/Deficit (per unit)	90,005
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		1,935	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	116.1	18.8%	145.1	14%	261.2
3 bed House	45.0%	522.5	25.0%	193.5	37%	716.0
4 bed House	30.0%	348.3	7.5%	58.1	21%	406.4
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	58.1	30.0%	232.2	15%	290.3
2 bed Flat	10.0%	116.1	18.8%	145.1	14%	261.2
Total number of units	100.0%	1,161.0	100.0%	774.0	100%	1,935.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	8,708	93,727	10,884	117,158	19,592	210,885
3 bed House	50,678	545,490	18,770	202,033	69,447	747,523
4 bed House	52,245	562,360	7,198	77,481	59,443	639,841
5 bed House	0	0	0	0	0	0
1 bed Flat	3,415	36,756	13,659	147,022	17,074	183,778
2 bed Flat	9,561	102,916	11,951	128,645	21,513	231,560
	124,606	1,341,248	62,462	672,339	187,068	2,013,587
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	104,490,000
3 bed House	500,000	5,155	479	357,975,000
4 bed House	670,000	4,467	415	272,254,500
5 bed House	725,000	#DIV/0!	#DIV/0!	0
1 bed Flat	365,000	7,300	678	105,941,250
2 bed Flat	365,000	5,214	484	95,347,125
				936,007,875

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	362,500	50%	290,000	40%	250,000	70%	507,500	70%
1 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	116.1	@	400,000		46,440,000
3 bed House	522.5	@	500,000		261,225,000
4 bed House	348.3	@	670,000		233,361,000
5 bed House	0.0	@	725,000		-
1 bed Flat	58.1	@	365,000		21,188,250
2 bed Flat	116.1	@	365,000		42,376,500
	1,161.0				604,590,750
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	72.6	@	200,000		14,512,500
3 bed House	96.8	@	250,000		24,187,500
4 bed House	29.0	@	335,000		9,723,375
5 bed House	0.0	@	362,500		-
1 bed Flat	116.1	@	182,500		21,188,250
2 bed Flat	72.6	@	182,500		13,242,656
	387.0				82,854,281
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	14.5	@	160,000		2,322,000
3 bed House	19.4	@	200,000		3,870,000
4 bed House	5.8	@	268,000		1,555,740
5 bed House	0.0	@	290,000		-
1 bed Flat	23.2	@	146,000		3,390,120
2 bed Flat	14.5	@	146,000		2,118,825
	77.4				13,256,685
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	36.3	@	250,000		9,070,313
3 bed House	48.4	@	250,000		12,093,750
4 bed House	14.5	@	250,000		3,628,125
5 bed House	0.0	@	250,000		-
1 bed Flat	58.1	@	250,000		14,512,500
2 bed Flat	36.3	@	250,000		9,070,313
	193.5				48,375,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	21.8	@	280,000		6,095,250
3 bed House	29.0	@	350,000		10,158,750
4 bed House	8.7	@	469,000		4,083,818
5 bed House	0.0	@	507,500		-
1 bed Flat	34.8	@	255,500		8,899,065
2 bed Flat	21.8	@	255,500		5,561,916
	116.1	774.0			34,798,798
Sub-total GDV Residential	**1,935**				**783,875,514**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	152,132,361
	813 £ psm (total GIA sqm)			78,621 £ per unit (total units)	
Grant	774	AH units @	0 per unit		-
Total GDV					**783,875,514**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(282,989)
Planning Application Professional Fees, Surveys and reports						(850,000)
CIL		124,606	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(17,819,802)
	Net zero carbon flats	5%	build cost			(2,664,375)
	Green belt loss mitigation	1,000	per dwelling			(1,935,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	1,935	units @	0 per unit		-
S106 analysis:	463,446 £ per ha	2.86%	% of GDV	11,586 £ per unit (total u	(22,419,177)	
AH Commuted Sum		187,068	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**Edge B**				
No Units:	**1935**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

cont./

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				48.38	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				1,935	units @	1,211	£ per unit		(2,344,098)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			1,935	units @	20,000	per unit		(38,700,000)
Infra. Costs analysis:		800,000	£ per ha		4.94% % of GDV		20,000 £ per unit (total ui	(38,700,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				19,592	sqm @	1,234	psm		(24,176,374)
3 bed House				69,447	sqm @	1,234	psm		(85,697,783)
4 bed House				59,443	sqm @	1,234	psm		(73,352,909)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				17,074	sqm @	1,381	psm		(23,578,544)
2 bed Flat			187,068	21,513	sqm @	1,381	psm		(29,708,966)
External works				236,514,575	@	15.0%			(35,477,186)
Ext. Works analysis:						18,334	£per unit		
M4(2) Category 2 Housing	Aff units		774	units @	100% @	586	£ per unit		(453,564)
M4(3) Category 3 Housing	Aff units		774	units @	5% @	11,386	£ per unit		(440,638)
M4(2) Category 2 Housing	Mrkt units		1,161	units @	100% @	586	£ per unit		(680,346)
M4(3) Category 3 Housing	Mrkt units		1,161	units @	5% @	11,386	£ per unit		(660,957)
Carbon/Energy Reduction/FHS			1,935	units @		0	£ per unit		-
EV Charging Points - Houses			1,384	units @		1,000	£ per unit		(1,383,525)
EV Charging Points - Flats			138	units @		625	£ per unit		(86,168)
Water Efficiency			1,935	units @		3,106	£ per unit		(6,010,110)
Contingency (on construction)				322,751,168	@	5.0%			(16,137,558)
Professional Fees				322,751,168	@	10.0%			(32,275,117)
Disposal Costs -									
OMS Marketing and Promotion				604,590,750	OMS @	3.00%	9,374 £ per unit		(18,137,723)
Residential Sales Agent Costs				604,590,750	OMS @	1.00%	3,125 £ per unit		(6,045,908)
Residential Sales Legal Costs				604,590,750	OMS @	0.25%	781 £ per unit		(1,511,477)
Affordable Sale Legal Costs							lump sum		(10,000)
Disposal Cost analysis:							13,284 £ per unit		
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(1,523,970)
Developers Profit -									
Profit on OMS				604,590,750		20.00%			(120,918,150)
Margin on AH				179,284,764		6.00%	on AH values		(10,757,086)
Profit analysis:				783,875,514		16.80%	blended GDV	(131,675,236)	
				421,945,086		31.21%	on costs	(131,675,236)	
TOTAL COSTS									**(553,620,322)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									230,255,192
SDLT				230,255,192	@	HMRC formula			(11,502,260)
Acquisition Agent fees				230,255,192	@	1.0%			(2,302,552)
Acquisition Legal fees				230,255,192	@	0.5%			(1,151,276)
Interest on Land				230,255,192	@	7.50%			(17,269,139)
Residual Land Value									**198,029,965**
RLV analysis:		102,341	£ per plot	4,093,643	£ per ha	1,656,675	£ per acre		
						25.26%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				40.0	dph				
Site Area (Net)				48.38	ha	119.53	acres		
Benchmark Land Value (Net)		12,355	£ per plot	494,200	£ per ha	200,000	£ per acre		**23,906,925**
BLV analysis:		Density		3,867	sqm/ha	16,845	sqft/ac		

BALANCE									
Surplus/(Deficit)				**3,599,443**	£ per ha	**1,456,675**	£ per acre		**174,123,040**

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Scheme Ref:	**Edge B**				
No Units:	**1935**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,456,675	25%	30%	35%	40%	45%	50%	55%
	500.00	1,172,212	1,116,415	1,060,617	1,004,820	949,012	893,183	837,355
	510.00	1,160,902	1,105,859	1,050,815	995,772	940,708	885,634	830,561
CIL £psm	520.00	1,149,592	1,095,302	1,041,013	986,722	932,404	878,085	823,766
0.00	530.00	1,138,281	1,084,746	1,031,210	977,663	924,100	870,536	816,972
	540.00	1,126,971	1,074,189	1,021,408	968,604	915,796	862,987	810,178
	550.00	1,115,660	1,063,633	1,011,599	959,545	907,492	855,438	803,384
	560.00	1,104,350	1,053,076	1,001,785	950,486	899,187	847,888	796,589
	570.00	1,093,039	1,042,516	991,972	941,427	890,883	840,339	789,790
	580.00	1,081,729	1,031,947	982,158	932,368	882,579	832,790	782,988
	590.00	1,070,412	1,021,378	972,344	923,310	874,275	825,241	776,185
	600.00	1,059,089	1,010,809	962,530	914,251	865,971	817,691	769,382
	610.00	1,047,765	1,000,240	952,716	905,192	857,667	810,133	762,580
	620.00	1,036,441	989,672	942,902	896,133	849,363	802,574	755,777
	630.00	1,025,117	979,103	933,088	887,074	841,057	795,015	748,974
	640.00	1,013,794	968,534	923,274	878,015	832,742	787,457	742,171
	650.00	1,002,470	957,965	913,460	868,956	824,428	779,898	735,369
	660.00	991,146	947,396	903,646	859,887	816,114	772,340	728,566
	670.00	979,822	936,827	893,833	850,817	807,799	764,781	721,763
	680.00	968,499	926,259	884,009	841,747	799,485	757,223	714,961
	690.00	957,175	915,689	874,183	832,677	791,170	749,664	708,158
	700.00	945,851	905,107	864,357	823,606	782,856	742,106	701,355
	710.00	934,519	894,525	854,530	814,536	774,541	734,547	694,546
	720.00	923,182	883,943	844,704	805,466	766,227	726,988	687,735
	730.00	911,844	873,361	834,878	796,395	757,913	719,430	680,923
	740.00	900,506	862,779	825,052	787,325	749,598	711,861	674,111
	750.00	889,168	852,197	815,226	778,255	741,284	704,293	667,300

TABLE 2

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,456,675	25%	30%	35%	40%	45%	50%	55%
	50,000	1,035,130	941,556	847,927	754,259	660,502	566,657	472,698
	55,000	964,792	871,161	777,498	683,741	589,905	495,962	401,878
Site Specific S106	60,000	894,396	800,735	706,979	613,153	519,225	425,164	330,915
11,586	65,000	823,970	730,218	636,401	542,489	448,449	354,248	259,802
	70,000	753,456	659,649	565,753	471,733	377,559	283,185	188,516
	75,000	682,898	589,016	495,018	400,871	306,543	211,952	117,003
	80,000	612,280	518,296	424,183	329,887	235,380	140,538	45,227
	85,000	541,560	447,475	353,232	258,766	164,023	68,879	(26,864)
	90,000	470,759	376,553	282,150	187,493	92,477	(3,057)	(99,367)
	95,000	399,865	305,515	210,921	116,016	20,671	(75,333)	(172,369)
	100,000	328,860	234,347	139,529	44,337	(51,430)	(148,043)	(246,015)
	105,000	257,731	163,008	67,935	(27,622)	(123,896)	(221,282)	(320,534)
	110,000	186,461	91,495	(3,886)	(99,888)	(196,810)	(295,211)	(396,216)
	115,000	115,030	19,780	(75,995)	(172,545)	(270,287)	(370,044)	(473,537)
	120,000	43,393	(52,186)	(148,430)	(245,666)	(344,498)	(446,098)	(553,289)

TABLE 3

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,456,675	25%	30%	35%	40%	45%	50%	55%
	15.0%	2,008,546	1,897,085	1,785,624	1,674,163	1,562,665	1,451,161	1,339,656
	16.0%	1,954,174	1,846,338	1,738,502	1,630,665	1,522,792	1,414,913	1,307,033
Profit	17.0%	1,899,802	1,795,590	1,691,379	1,587,168	1,482,919	1,378,665	1,274,410
20.0%	18.0%	1,845,430	1,744,843	1,644,257	1,543,670	1,443,047	1,342,417	1,241,786
	19.0%	1,791,058	1,694,096	1,597,134	1,500,172	1,403,174	1,306,168	1,209,163
	20.0%	1,736,686	1,643,349	1,550,012	1,456,675	1,363,301	1,269,920	1,176,540

TABLE 4

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,456,675	25%	30%	35%	40%	45%	50%	55%
	600,000	1,336,686	1,243,349	1,150,012	1,056,675	963,301	869,920	776,540
	620,000	1,316,686	1,223,349	1,130,012	1,036,675	943,301	849,920	756,540
BLV (£ per acre)	640,000	1,296,686	1,203,349	1,110,012	1,016,675	923,301	829,920	736,540
200,000	660,000	1,276,686	1,183,349	1,090,012	996,675	903,301	809,920	716,540
	680,000	1,256,686	1,163,349	1,070,012	976,675	883,301	789,920	696,540
	700,000	1,236,686	1,143,349	1,050,012	956,675	863,301	769,920	676,540
	720,000	1,216,686	1,123,349	1,030,012	936,675	843,301	749,920	656,540
	740,000	1,196,686	1,103,349	1,010,012	916,675	823,301	729,920	636,540
	760,000	1,176,686	1,083,349	990,012	896,675	803,301	709,920	616,540
	780,000	1,156,686	1,063,349	970,012	876,675	783,301	689,920	596,540
	800,000	1,136,686	1,043,349	950,012	856,675	763,301	669,920	576,540
	820,000	1,116,686	1,023,349	930,012	836,675	743,301	649,920	556,540
	840,000	1,096,686	1,003,349	910,012	816,675	723,301	629,920	536,540
	860,000	1,076,686	983,349	890,012	796,675	703,301	609,920	516,540
	880,000	1,056,686	963,349	870,012	776,675	683,301	589,920	496,540
	900,000	1,036,686	943,349	850,012	756,675	663,301	569,920	476,540

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	1,456,675	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	1,494,600	1,412,930	1,331,260	1,249,590	1,167,888	1,086,180	1,004,472
	40	1,736,686	1,643,349	1,550,012	1,456,675	1,363,301	1,269,920	1,176,540
Density (dph)	45	1,978,771	1,873,767	1,768,763	1,663,759	1,558,713	1,453,660	1,348,607
40.0	50	2,220,857	2,104,186	1,987,514	1,870,843	1,754,126	1,637,400	1,520,675
	55	2,462,943	2,334,604	2,206,266	2,077,927	1,949,539	1,821,141	1,692,742
	60	2,705,028	2,565,023	2,425,017	2,285,012	2,144,951	2,004,881	1,864,810
	65	2,947,114	2,795,441	2,643,769	2,492,096	2,340,364	2,188,621	2,036,877
	70	3,189,200	3,025,860	2,862,520	2,699,180	2,535,776	2,372,361	2,208,945
	75	3,431,286	3,256,279	3,081,272	2,906,265	2,731,189	2,556,101	2,381,012
	80	3,673,371	3,486,697	3,300,023	3,113,349	2,926,602	2,739,841	2,553,080
	85	3,915,457	3,717,116	3,518,775	3,320,433	3,122,014	2,923,581	2,725,147

TABLE 6

Balance (RLV - BLV £ per acre)	1,456,675	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	1,784,040	1,690,175	1,596,310	1,502,445	1,408,580	1,314,685	1,220,776
	100%	1,736,686	1,643,349	1,550,012	1,456,675	1,363,301	1,269,920	1,176,540
Build Cost	102%	1,689,332	1,596,522	1,503,712	1,410,860	1,318,008	1,225,156	1,132,276
100%	104%	1,641,977	1,549,685	1,457,362	1,365,038	1,272,714	1,180,363	1,087,986
(105% = 5% increase)	106%	1,594,602	1,502,807	1,411,012	1,319,216	1,227,392	1,135,544	1,043,697
	108%	1,547,195	1,455,928	1,364,662	1,273,364	1,182,045	1,090,726	999,357
	110%	1,499,788	1,409,050	1,318,277	1,227,487	1,136,697	1,045,863	955,012
	112%	1,452,381	1,362,133	1,271,872	1,181,611	1,091,310	1,000,988	910,635
	114%	1,404,931	1,315,199	1,225,467	1,135,698	1,045,906	956,094	866,230
	116%	1,357,468	1,268,265	1,179,028	1,089,764	1,000,493	911,159	821,801
	118%	1,310,005	1,221,298	1,132,564	1,043,830	955,027	866,218	777,333
	120%	1,262,509	1,174,305	1,086,100	997,836	909,562	821,219	732,837

TABLE 7

Balance (RLV - BLV £ per acre)	1,456,675	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	908,442	870,192	831,935	793,679	755,422	717,166	678,903
	82%	991,449	947,679	903,909	860,139	816,367	772,570	728,773
Market Values	84%	1,074,410	1,025,132	975,848	926,544	877,241	827,937	778,633
100%	86%	1,157,325	1,102,520	1,047,715	992,910	938,105	883,275	828,437
(105% = 5% increase)	88%	1,240,183	1,179,881	1,119,575	1,059,243	998,910	938,577	878,241
	90%	1,323,015	1,257,191	1,191,367	1,125,543	1,059,715	993,854	927,994
	92%	1,405,804	1,334,492	1,263,154	1,191,808	1,120,462	1,049,116	977,743
	94%	1,488,559	1,411,729	1,334,900	1,258,070	1,181,205	1,104,337	1,027,469
	96%	1,571,314	1,488,967	1,406,621	1,324,274	1,241,928	1,159,558	1,077,168
	98%	1,654,001	1,566,176	1,478,341	1,390,478	1,302,614	1,214,751	1,126,867
	100%	1,736,686	1,643,349	1,550,012	1,456,675	1,363,301	1,269,920	1,176,540
	102%	1,819,370	1,720,521	1,621,672	1,522,822	1,423,973	1,325,090	1,226,193
	104%	1,902,004	1,797,684	1,693,332	1,588,970	1,484,609	1,380,247	1,275,845
	106%	1,984,626	1,874,798	1,764,969	1,655,118	1,545,244	1,435,370	1,325,496
	108%	2,067,248	1,951,912	1,836,575	1,721,238	1,605,880	1,490,493	1,375,107
	110%	2,149,871	2,029,026	1,908,181	1,787,336	1,666,491	1,545,616	1,424,718
	112%	2,232,444	2,106,135	1,979,787	1,853,434	1,727,081	1,600,728	1,474,329
	114%	2,315,010	2,183,198	2,051,385	1,919,532	1,787,671	1,655,809	1,523,940
	116%	2,397,577	2,260,260	2,122,943	1,985,626	1,848,260	1,710,891	1,573,522
	118%	2,480,116	2,337,322	2,194,501	2,051,679	1,908,850	1,765,972	1,623,095
	120%	2,562,635	2,414,354	2,266,058	2,117,732	1,969,406	1,821,054	1,672,668

TABLE 8

Balance (RLV - BLV £ per acre)	1,456,675	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	1,754,209	1,664,377	1,574,545	1,484,713	1,394,876	1,305,003	1,215,131
	10,000	1,771,733	1,685,406	1,599,078	1,512,751	1,426,423	1,340,086	1,253,723
Grant (£ per unit)	15,000	1,789,257	1,706,434	1,623,611	1,540,789	1,457,966	1,375,143	1,292,314
-	20,000	1,806,781	1,727,463	1,648,145	1,568,827	1,489,509	1,410,191	1,330,873
	25,000	1,824,296	1,748,491	1,672,678	1,596,865	1,521,052	1,445,238	1,369,425
	30,000	1,841,804	1,769,508	1,697,211	1,624,903	1,552,594	1,480,286	1,407,978
	35,000	1,859,311	1,790,517	1,721,723	1,652,929	1,584,135	1,515,334	1,446,530
	40,000	1,876,818	1,811,526	1,746,233	1,680,941	1,615,649	1,550,356	1,485,064
	45,000	1,894,325	1,832,535	1,770,744	1,708,953	1,647,162	1,585,371	1,523,580
	50,000	1,911,833	1,853,543	1,795,254	1,736,964	1,678,675	1,620,385	1,562,096
	55,000	1,929,340	1,874,552	1,819,764	1,764,976	1,710,188	1,655,400	1,600,612

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Edge B
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Edge B**
No Units:	1935
Location / Value Zone:	Mid
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	783,875,514
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,586
Site Specific S106 Total (£)	22,419,177
Sub-total CIL+S106 (£ per unit)	11,586
Site Infrastructure (£ per unit)	20,000
Site Infrastructure Total (£)	38,700,000
Sub-total CIL+S106+Infrastructure (£ per unit)	31,586
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.80%
Developers Profit (% on costs)	31.21%
Developers Profit Total (£)	131,675,236
Land Value KPI's	
RLV (£/acre)	1,656,675
RLV (£/ha)	4,093,643
RLV (% of GDV)	25.26%
RLV Total (£)	198,029,965
BLV (£/acre)	200,000
BLV (£/ha)	494,200
BLV Total (£)	23,906,925
Surplus/Deficit (£/acre) [RLV-BLV]	1,456,675
Surplus/Deficit (£/ha)	3,599,443
Surplus/Deficit Total (£)	174,123,040
Surplus/Deficit (per unit)	89,986
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		500	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	30.0	18.8%	37.5	14%	67.5
3 bed House	45.0%	135.0	25.0%	50.0	37%	185.0
4 bed House	30.0%	90.0	7.5%	15.0	21%	105.0
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	15.0	30.0%	60.0	15%	75.0
2 bed Flat	10.0%	30.0	18.8%	37.5	14%	67.5
Total number of units	100.0%	300.0	100.0%	200.0	100%	500.0

	Net area per unit		Net to Gross %	Gross (GIA) per unit	
OMS Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

	Net area per unit		Net to Gross %	Gross (GIA) per unit	
AH Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

	Mkt Units GIA		AH units GIA		Total GIA (all units)	
Total Gross Floor areas -	(sqm)	(sqft)	(sqm)	(sqft)	(sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	2,250	24,219	2,813	30,273	5,063	54,492
3 bed House	13,095	140,953	4,850	52,205	17,945	193,158
4 bed House	13,500	145,313	1,860	20,021	15,360	165,334
5 bed House	0	0	0	0	0	0
1 bed Flat	882	9,498	3,529	37,990	4,412	47,488
2 bed Flat	2,471	26,593	3,088	33,241	5,559	59,835
	32,198	346,576	16,140	173,731	48,338	520,307
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	27,000,000
3 bed House	500,000	5,155	479	92,500,000
4 bed House	670,000	4,467	415	70,350,000
5 bed House	725,000	#DIV/0!	#DIV/0!	0
1 bed Flat	365,000	7,300	678	27,375,000
2 bed Flat	365,000	5,214	484	24,637,500
				241,862,500

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	362,500	50%	290,000	40%	250,000	70%	507,500	70%
1 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	30.0	@	400,000		12,000,000
3 bed House	135.0	@	500,000		67,500,000
4 bed House	90.0	@	670,000		60,300,000
5 bed House	0.0	@	725,000		-
1 bed Flat	15.0	@	365,000		5,475,000
2 bed Flat	30.0	@	365,000		10,950,000
	300.0				156,225,000
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	18.8	@	200,000		3,750,000
3 bed House	25.0	@	250,000		6,250,000
4 bed House	7.5	@	335,000		2,512,500
5 bed House	0.0	@	362,500		-
1 bed Flat	30.0	@	182,500		5,475,000
2 bed Flat	18.8	@	182,500		3,421,875
	100.0				21,409,375
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	3.8	@	160,000		600,000
3 bed House	5.0	@	200,000		1,000,000
4 bed House	1.5	@	268,000		402,000
5 bed House	0.0	@	290,000		-
1 bed Flat	6.0	@	146,000		876,000
2 bed Flat	3.8	@	146,000		547,500
	20.0				3,425,500
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	9.4	@	250,000		2,343,750
3 bed House	12.5	@	250,000		3,125,000
4 bed House	3.8	@	250,000		937,500
5 bed House	0.0	@	250,000		-
1 bed Flat	15.0	@	250,000		3,750,000
2 bed Flat	9.4	@	250,000		2,343,750
	50.0				12,500,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	5.6	@	280,000		1,575,000
3 bed House	7.5	@	350,000		2,625,000
4 bed House	2.3	@	469,000		1,055,250
5 bed House	0.0	@	507,500		-
1 bed Flat	9.0	@	255,500		2,299,500
2 bed Flat	5.6	@	255,500		1,437,188
	30.0	200.0			8,991,938
Sub-total GDV Residential	**500**				**202,551,813**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	39,310,688
	813 £ psm (total GIA sqm)			78,621 £ per unit (total units)	
Grant	200	AH units @	0 per unit		-
Total GDV					**202,551,813**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(84,959)
Planning Application Professional Fees, Surveys and reports							(250,000)
CIL		32,198	sqm (Market only		0.00 £ psm		-
CIL analysis:		0.00%	% of GDV		0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				(4,604,600)
	Net zero carbon flats	7500	build cost				(1,068,750)
	Green belt loss mitigation	1,000	per dwelling				(500,000)
	Year 4						
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	500	units @	0	per unit		-
S106 analysis:	493,868 £ per ha	3.05%	% of GDV	12,347	£ per unit (total u	(6,173,350)	
AH Commuted Sum		48,338	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Edge C**				
No Units:	**500**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				12.50	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				500	units @	1,211	£ per unit		(605,710)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			500	units @	20,000	per unit		(10,000,000)
Infra. Costs analysis:		800,000	£ per ha	4.94%	% of GDV	20,000	£ per unit (total ui	(10,000,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				5,063	sqm @	1,234	psm		(6,247,125)
3 bed House				17,945	sqm @	1,234	psm		(22,144,130)
4 bed House				15,360	sqm @	1,234	psm		(18,954,240)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				4,412	sqm @	1,381	psm		(6,092,647)
2 bed Flat			48,338	5,559	sqm @	1,381	psm		(7,676,735)
External works				61,114,877	@	15.0%			(9,167,232)
Ext. Works analysis:						18,334	£per unit		
M4(2) Category 2 Housing	Aff units		200	units @	100% @	586	£ per unit		(117,200)
M4(3) Category 3 Housing	Aff units		200	units @	5% @	11,386	£ per unit		(113,860)
M4(2) Category 2 Housing	Mrkt units		300	units @	100% @	586	£ per unit		(175,800)
M4(3) Category 3 Housing	Mrkt units		300	units @	5% @	11,386	£ per unit		(170,790)
Carbon/Energy Reduction/FHS			500	units @		0	£ per unit		-
EV Charging Points - Houses			358	units @		1,000	£ per unit		(357,500)
EV Charging Points - Flats			36	units @		625	£ per unit		(22,266)
Water Efficiency			500	units @		3,106	£ per unit		(1,553,000)
Contingency (on construction)				83,398,235	@	5.0%			(4,169,912)
Professional Fees				83,398,235	@	10.0%			(8,339,823)
Disposal Costs -									
OMS Marketing and Promotion				156,225,000	OMS @	3.00%	9,374	£ per unit	(4,686,750)
Residential Sales Agent Costs				156,225,000	OMS @	1.00%	3,125	£ per unit	(1,562,250)
Residential Sales Legal Costs				156,225,000	OMS @	0.25%	781	£ per unit	(390,563)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							13,299	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(491,990)
Developers Profit -									
Profit on OMS				156,225,000		20.00%			(31,245,000)
Margin on AH				46,326,813		6.00%	on AH values		(2,779,609)
Profit analysis:				202,551,813		16.80%	blended GDV	(34,024,609)	
				109,557,831		31.06%	on costs	(34,024,609)	
TOTAL COSTS									**(143,582,440)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									58,969,372
SDLT				58,969,372	@	HMRC formula			(2,937,969)
Acquisition Agent fees				58,969,372	@	1.0%			(589,694)
Acquisition Legal fees				58,969,372	@	0.5%			(294,847)
Interest on Land				58,969,372	@	7.50%			(4,422,703)
Residual Land Value									**50,724,160**
RLV analysis:		101,448	£ per plot	4,057,933	£ per ha	1,642,223	£ per acre		
						25.04%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				40.0	dph				
Site Area (Net)				12.50	ha	30.89	acres		
Benchmark Land Value (Net)		8,825	£ per plot	353,000	£ per ha	142,857	£ per acre		**4,412,496**
BLV analysis:			Density	3,867	sqm/ha	16,845	sqft/ac		

BALANCE									
Surplus/(Deficit)				**3,704,933**	£ per ha	**1,499,366**	£ per acre		**46,311,665**

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Scheme Ref:	**Edge C**				
No Units:	**500**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,499,366	25%	30%	35%	40%	45%	50%	55%
	500.00	1,214,954	1,158,788	1,102,622	1,046,457	990,291	934,125	877,956
	510.00	1,203,610	1,148,201	1,092,791	1,037,382	981,972	926,563	871,137
CIL £psm	520.00	1,192,267	1,137,614	1,082,960	1,028,307	973,654	918,997	864,318
0.00	530.00	1,180,924	1,127,027	1,073,130	1,019,233	965,335	911,421	857,499
	540.00	1,169,580	1,116,439	1,063,299	1,010,158	957,008	903,844	850,680
	550.00	1,158,237	1,105,852	1,053,468	1,001,080	948,674	896,268	843,862
	560.00	1,146,893	1,095,265	1,043,637	991,988	940,340	888,691	837,043
	570.00	1,135,550	1,084,678	1,033,788	982,897	932,006	881,115	830,224
	580.00	1,124,205	1,074,071	1,023,938	973,805	923,671	873,538	823,405
	590.00	1,112,840	1,063,464	1,014,088	964,713	915,337	865,962	816,586
	600.00	1,101,475	1,052,857	1,004,239	955,621	907,003	858,385	809,767
	610.00	1,090,110	1,042,250	994,389	946,529	898,669	850,808	802,948
	620.00	1,078,745	1,031,643	984,540	937,437	890,335	843,232	796,129
	630.00	1,067,380	1,021,035	974,690	928,345	882,000	835,655	789,310
	640.00	1,056,016	1,010,428	964,841	919,254	873,666	828,079	782,491
	650.00	1,044,651	999,821	954,991	910,162	865,332	820,502	775,673
	660.00	1,033,286	989,214	945,142	901,070	856,998	812,926	768,854
	670.00	1,021,921	978,607	935,292	891,978	848,664	805,349	762,035
	680.00	1,010,556	968,000	925,443	882,886	840,329	797,773	755,209
	690.00	999,191	957,392	915,593	873,794	831,995	790,190	748,376
	700.00	987,827	946,785	905,744	864,702	823,653	782,598	741,543
	710.00	976,462	936,178	895,892	855,597	815,301	775,006	734,710
	720.00	965,096	925,559	886,023	846,487	806,950	767,414	727,878
	730.00	953,708	914,931	876,153	837,376	798,599	759,822	721,045
	740.00	942,320	904,302	866,284	828,266	790,248	752,230	714,212
	750.00	930,932	893,673	856,414	819,156	781,897	744,638	707,379

TABLE 2

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,499,366	25%	30%	35%	40%	45%	50%	55%
	50,000	1,077,430	983,352	889,260	795,062	700,843	606,503	512,055
	55,000	1,006,836	912,721	818,523	724,292	629,953	535,504	440,918
Site Specific S106	60,000	936,183	841,984	747,742	653,402	558,953	464,377	369,612
12,347	65,000	865,446	771,192	676,852	582,402	487,835	393,091	298,107
	70,000	794,642	700,302	605,851	511,294	416,570	321,618	226,374
	75,000	723,752	629,299	534,753	440,050	345,129	249,928	154,350
	80,000	652,748	558,211	463,526	368,640	273,481	177,990	81,987
	85,000	581,670	486,985	392,119	297,035	201,597	105,735	9,196
	90,000	510,443	415,598	320,547	225,204	129,447	33,119	(64,110)
	95,000	439,078	344,058	248,780	153,119	56,954	(39,968)	(138,089)
	100,000	367,569	272,334	176,789	80,747	(15,924)	(113,612)	(212,931)
	105,000	295,887	200,396	104,495	8,011	(89,311)	(187,996)	(288,916)
	110,000	224,003	128,215	31,895	(65,147)	(163,324)	(263,300)	(366,495)
	115,000	151,887	55,730	(41,090)	(138,848)	(238,093)	(339,849)	(446,212)
	120,000	79,508	(17,107)	(114,534)	(213,216)	(313,878)	(418,082)	(526,704)

TABLE 3

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,499,366	25%	30%	35%	40%	45%	50%	55%
	15.0%	2,052,644	1,940,722	1,828,800	1,716,854	1,604,893	1,492,931	1,380,970
	16.0%	1,998,271	1,889,975	1,781,678	1,673,357	1,565,020	1,456,683	1,348,346
Profit	17.0%	1,943,899	1,839,227	1,734,555	1,629,859	1,525,147	1,420,435	1,315,723
20.0%	18.0%	1,889,527	1,788,480	1,687,433	1,586,361	1,485,274	1,384,187	1,283,100
	19.0%	1,835,155	1,737,733	1,640,310	1,542,864	1,445,401	1,347,939	1,250,477
	20.0%	1,780,783	1,686,985	1,593,188	1,499,366	1,405,528	1,311,691	1,217,853

TABLE 4

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	1,499,366	25%	30%	35%	40%	45%	50%	55%
	600,000	1,323,640	1,229,842	1,136,045	1,042,223	948,385	854,548	760,710
	620,000	1,303,640	1,209,842	1,116,045	1,022,223	928,385	834,548	740,710
BLV (£ per acre)	640,000	1,283,640	1,189,842	1,096,045	1,002,223	908,385	814,548	720,710
142,857	660,000	1,263,640	1,169,842	1,076,045	982,223	888,385	794,548	700,710
	680,000	1,243,640	1,149,842	1,056,045	962,223	868,385	774,548	680,710
	700,000	1,223,640	1,129,842	1,036,045	942,223	848,385	754,548	660,710
	720,000	1,203,640	1,109,842	1,016,045	922,223	828,385	734,548	640,710
	740,000	1,183,640	1,089,842	996,045	902,223	808,385	714,548	620,710
	760,000	1,163,640	1,069,842	976,045	882,223	788,385	694,548	600,710
	780,000	1,143,640	1,049,842	956,045	862,223	768,385	674,548	580,710
	800,000	1,123,640	1,029,842	936,045	842,223	748,385	654,548	560,710
	820,000	1,103,640	1,009,842	916,045	822,223	728,385	634,548	540,710
	840,000	1,083,640	989,842	896,045	802,223	708,385	614,548	520,710
	860,000	1,063,640	969,842	876,045	782,223	688,385	594,548	500,710
	880,000	1,043,640	949,842	856,045	762,223	668,385	574,548	480,710
	900,000	1,023,640	929,842	836,045	742,223	648,385	554,548	460,710

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	1,499,366	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	35	1,540,328	1,458,255	1,376,182	1,294,088	1,211,980	1,129,872	1,047,764
	40	1,780,783	1,686,985	1,593,188	1,499,366	1,405,528	1,311,691	1,217,853
Density (dph)	45	2,021,238	1,915,716	1,810,194	1,704,644	1,599,077	1,493,509	1,387,942
40.0	50	2,261,693	2,144,446	2,027,199	1,909,922	1,792,625	1,675,328	1,558,031
	55	2,502,148	2,373,176	2,244,205	2,115,200	1,986,173	1,857,146	1,728,120
	60	2,742,603	2,601,907	2,461,210	2,320,477	2,179,721	2,038,965	1,898,208
	65	2,983,058	2,830,637	2,678,216	2,525,755	2,373,269	2,220,783	2,068,297
	70	3,223,513	3,059,367	2,895,222	2,731,033	2,566,817	2,402,602	2,238,386
	75	3,463,968	3,288,098	3,112,227	2,936,311	2,760,366	2,584,420	2,408,475
	80	3,704,423	3,516,828	3,329,233	3,141,589	2,953,914	2,766,239	2,578,564
	85	3,944,878	3,745,558	3,546,239	3,346,867	3,147,462	2,948,057	2,748,652

TABLE 6

Balance (RLV - BLV £ per acre)	1,499,366	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	98%	1,827,896	1,733,548	1,639,199	1,544,850	1,450,502	1,356,123	1,261,734
	100%	1,780,783	1,686,985	1,593,188	1,499,366	1,405,528	1,311,691	1,217,853
Build Cost	102%	1,733,670	1,640,401	1,547,115	1,453,830	1,360,544	1,267,259	1,173,953
100%	104%	1,686,494	1,593,760	1,501,027	1,408,293	1,315,560	1,222,784	1,129,993
(105% = 5% increase)	106%	1,639,301	1,547,120	1,454,938	1,362,747	1,270,509	1,178,271	1,086,033
	108%	1,592,109	1,500,479	1,408,813	1,317,128	1,225,443	1,133,758	1,042,073
	110%	1,544,905	1,453,773	1,362,641	1,271,509	1,180,377	1,089,241	998,035
	112%	1,497,627	1,407,048	1,316,469	1,225,890	1,135,294	1,044,642	953,989
	114%	1,450,349	1,360,323	1,270,297	1,180,239	1,090,141	1,000,042	909,944
	116%	1,403,071	1,313,599	1,224,075	1,134,531	1,044,987	955,442	865,807
	118%	1,355,793	1,266,804	1,177,814	1,088,824	999,830	910,750	821,670
	120%	1,308,424	1,219,988	1,131,552	1,043,108	954,583	866,058	777,492

TABLE 7

Balance (RLV - BLV £ per acre)	1,499,366	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	80%	952,249	913,580	874,910	836,241	797,571	758,901	720,232
	82%	1,035,335	991,144	946,940	902,730	858,519	814,309	770,099
Market Values	84%	1,118,312	1,068,589	1,018,866	969,143	919,420	869,697	819,966
100%	86%	1,201,288	1,146,033	1,090,779	1,035,524	980,269	925,015	869,760
(105% = 5% increase)	88%	1,284,164	1,223,409	1,162,654	1,101,899	1,041,119	980,332	919,546
	90%	1,367,019	1,300,741	1,234,462	1,168,183	1,101,904	1,035,626	969,332
	92%	1,449,874	1,378,072	1,306,270	1,234,467	1,162,665	1,090,862	1,019,060
	94%	1,532,636	1,455,348	1,378,060	1,300,751	1,223,425	1,146,099	1,068,773
	96%	1,615,383	1,532,579	1,449,774	1,366,970	1,284,165	1,201,336	1,118,486
	98%	1,698,129	1,609,810	1,521,489	1,433,168	1,344,847	1,256,526	1,168,199
	100%	1,780,783	1,686,985	1,593,188	1,499,366	1,405,528	1,311,691	1,217,853
	102%	1,863,437	1,764,129	1,664,821	1,565,513	1,466,206	1,366,856	1,267,502
	104%	1,946,091	1,841,273	1,736,455	1,631,637	1,526,819	1,422,000	1,317,150
	106%	2,028,727	1,918,416	1,808,088	1,697,760	1,587,431	1,477,103	1,366,775
	108%	2,111,301	1,995,504	1,879,708	1,763,883	1,648,044	1,532,206	1,416,367
	110%	2,193,874	2,072,573	1,951,272	1,829,970	1,708,657	1,587,308	1,465,959
	112%	2,276,448	2,149,642	2,022,835	1,896,029	1,769,223	1,642,411	1,515,552
	114%	2,359,022	2,226,710	2,094,399	1,962,088	1,829,777	1,697,465	1,565,144
	116%	2,441,595	2,303,779	2,165,963	2,028,147	1,890,331	1,752,514	1,614,698
	118%	2,524,109	2,380,829	2,237,527	2,094,206	1,950,884	1,807,563	1,664,242
	120%	2,606,616	2,457,836	2,309,055	2,160,264	2,011,438	1,862,612	1,713,786

TABLE 8

Balance (RLV - BLV £ per acre)	1,499,366	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	5,000	1,798,332	1,708,045	1,617,757	1,527,470	1,437,166	1,346,844	1,256,522
	10,000	1,815,882	1,729,104	1,642,326	1,555,549	1,468,771	1,381,993	1,295,191
Grant (£ per unit)	15,000	1,833,431	1,750,164	1,666,896	1,583,628	1,500,360	1,417,092	1,333,824
-	20,000	1,850,981	1,771,223	1,691,465	1,611,707	1,531,949	1,452,191	1,372,433
	25,000	1,868,530	1,792,282	1,716,034	1,639,786	1,563,538	1,487,290	1,411,042
	30,000	1,886,080	1,813,342	1,740,603	1,667,865	1,595,127	1,522,389	1,449,651
	35,000	1,903,629	1,834,401	1,765,173	1,695,944	1,626,709	1,557,466	1,488,224
	40,000	1,921,179	1,855,460	1,789,728	1,723,991	1,658,253	1,592,516	1,526,778
	45,000	1,938,728	1,876,495	1,814,263	1,752,030	1,689,797	1,627,565	1,565,332
	50,000	1,956,253	1,897,525	1,838,797	1,780,069	1,721,342	1,662,614	1,603,886
	55,000	1,973,777	1,918,554	1,863,332	1,808,109	1,752,886	1,697,663	1,642,440

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Edge C
No Units: 500 **Location / Value Zone:** Mid **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Edge C**
No Units:	500
Location / Value Zone:	Mid
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	202,551,813
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	12,347
Site Specific S106 Total (£)	6,173,350
Sub-total CIL+S106 (£ per unit)	12,347
Site Infrastructure (£ per unit)	20,000
Site Infrastructure Total (£)	10,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	32,347
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.80%
Developers Profit (% on costs)	31.06%
Developers Profit Total (£)	34,024,609
Land Value KPI's	
RLV (£/acre)	1,642,223
RLV (£/ha)	4,057,933
RLV (% of GDV)	25.04%
RLV Total (£)	50,724,160
BLV (£/acre)	142,857
BLV (£/ha)	353,000
BLV Total (£)	4,412,496
Surplus/Deficit (£/acre) [RLV-BLV]	1,499,366
Surplus/Deficit (£/ha)	3,704,933
Surplus/Deficit Total (£)	46,311,665
Surplus/Deficit (per unit)	92,623
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		3,870	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	232.2	18.8%	290.3	14%	522.5
3 bed House	45.0%	1,044.9	25.0%	387.0	37%	1,431.9
4 bed House	30.0%	696.6	7.5%	116.1	21%	812.7
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	116.1	30.0%	464.4	15%	580.5
2 bed Flat	10.0%	232.2	18.8%	290.3	14%	522.5
Total number of units	100.0%	2,322.0	100.0%	1,548.0	100%	3,870.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	17,415	187,453	21,769	234,317	39,184	421,770
3 bed House	101,355	1,090,979	37,539	404,066	138,894	1,495,046
4 bed House	104,490	1,124,721	14,396	154,962	118,886	1,279,683
5 bed House	0	0	0	0	0	0
1 bed Flat	6,829	73,511	27,318	294,045	34,147	367,556
2 bed Flat	19,122	205,831	23,903	257,289	43,025	463,120
	249,212	2,682,496	124,925	1,344,679	374,137	4,027,175
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	208,980,000
3 bed House	500,000	5,155	479	715,950,000
4 bed House	670,000	4,467	415	544,509,000
5 bed House	725,000	#DIV/0!	#DIV/0!	0
1 bed Flat	365,000	7,300	678	211,882,500
2 bed Flat	365,000	5,214	484	190,694,250
				1,872,015,750

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	362,500	50%	290,000	40%	250,000	70%	507,500	70%
1 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	232.2	@	400,000		92,880,000
3 bed House	1,044.9	@	500,000		522,450,000
4 bed House	696.6	@	670,000		466,722,000
5 bed House	0.0	@	725,000		-
1 bed Flat	116.1	@	365,000		42,376,500
2 bed Flat	232.2	@	365,000		84,753,000
	2,322.0				1,209,181,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	145.1	@	200,000		29,025,000
3 bed House	193.5	@	250,000		48,375,000
4 bed House	58.1	@	335,000		19,446,750
5 bed House	0.0	@	362,500		-
1 bed Flat	232.2	@	182,500		42,376,500
2 bed Flat	145.1	@	182,500		26,485,313
	774.0				165,708,563
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	29.0	@	160,000		4,644,000
3 bed House	38.7	@	200,000		7,740,000
4 bed House	11.6	@	268,000		3,111,480
5 bed House	0.0	@	290,000		-
1 bed Flat	46.4	@	146,000		6,780,240
2 bed Flat	29.0	@	146,000		4,237,650
	154.8				26,513,370
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	72.6	@	250,000		18,140,625
3 bed House	96.8	@	250,000		24,187,500
4 bed House	29.0	@	250,000		7,256,250
5 bed House	0.0	@	250,000		-
1 bed Flat	116.1	@	250,000		29,025,000
2 bed Flat	72.6	@	250,000		18,140,625
	387.0				96,750,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	43.5	@	280,000		12,190,500
3 bed House	58.1	@	350,000		20,317,500
4 bed House	17.4	@	469,000		8,167,635
5 bed House	0.0	@	507,500		-
1 bed Flat	69.7	@	255,500		17,798,130
2 bed Flat	43.5	@	255,500		11,123,831
	232.2	1,548.0			69,597,596
Sub-total GDV Residential	**3,870**				**1,567,751,029**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	304,264,721
	813 £ psm (total GIA sqm)			78,621 £ per unit (total units)	
Grant	1,548	AH units @	0 per unit		-
Total GDV					**1,567,751,029**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(550,019)
Planning Application Professional Fees, Surveys and reports						(1,650,000)
CIL		249,212	sqm (Market only	0.00	£ psm	-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)	
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(35,639,604)
	Net zero carbon flats	5%	build cost			(5,328,751)
	Green belt loss mitigation	1,000	per dwelling			(3,870,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	3,870	units @	0	per unit	-
S106 analysis:	463,446 £ per ha	2.86%	% of GDV	11,586	£ per unit (total u	(44,838,355)
AH Commuted Sum		374,137	sqm (total)	0	£ psm	-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**Edge D**				
No Units:	**3870**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				96.75	ha @	110,000	£ per ha (if brownfield)		(10,642,500)
Net Biodiveristy Gain @ 20%				3,870	units @	1,211	£ per unit		(4,688,195)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			3,870	units @	15,000	per unit		(58,050,000)
Infra. Costs analysis:		600,000	£ per ha	3.70%	% of GDV	15,000	£ per unit (total ui	(58,050,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				39,184	sqm @	1,234	psm		(48,352,748)
3 bed House				138,894	sqm @	1,234	psm		(171,395,566)
4 bed House				118,886	sqm @	1,234	psm		(146,705,818)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				34,147	sqm @	1,381	psm		(47,157,088)
2 bed Flat			374,137	43,025	sqm @	1,381	psm		(59,417,931)
External works				473,029,151	@	15.0%			(70,954,373)
Ext. Works analysis:						18,334	£per unit		
M4(2) Category 2 Housing	Aff units		1,548	units @	100% @	586	£ per unit		(907,128)
M4(3) Category 3 Housing	Aff units		1,548	units @	5% @	11,386	£ per unit		(881,276)
M4(2) Category 2 Housing	Mrkt units		2,322	units @	100% @	586	£ per unit		(1,360,692)
M4(3) Category 3 Housing	Mrkt units		2,322	units @	5% @	11,386	£ per unit		(1,321,915)
Carbon/Energy Reduction/FHS			3,870	units @		0	£ per unit		-
EV Charging Points - Houses			2,767	units @		1,000	£ per unit		(2,767,050)
EV Charging Points - Flats			276	units @		625	£ per unit		(172,336)
Water Efficiency			3,870	units @		3,106	£ per unit		(12,020,220)
Contingency (on construction)				636,794,836	@	5.0%			(31,839,742)
Professional Fees				636,794,836	@	10.0%			(63,679,484)
Disposal Costs -									
OMS Marketing and Promotion				1,209,181,500	OMS @	3.00%	9,374	£ per unit	(36,275,445)
Residential Sales Agent Costs				1,209,181,500	OMS @	1.00%	3,125	£ per unit	(12,091,815)
Residential Sales Legal Costs				1,209,181,500	OMS @	0.25%	781	£ per unit	(3,022,954)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							13,282	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(4,873,973)
Developers Profit -									
Profit on OMS				1,209,181,500		20.00%			(241,836,300)
Margin on AH				358,569,529		6.00%	on AH values		(21,514,172)
Profit analysis:				1,567,751,029		16.80%	blended GDV	(263,350,472)	
				835,626,622		31.52%	on costs	(263,350,472)	
TOTAL COSTS									**(1,098,977,094)**

RESIDUAL LAND VALUE (RLV)						
Residual Land Value (gross)						468,773,935
SDLT			468,773,935	@	HMRC formula	(23,428,197)
Acquisition Agent fees			468,773,935	@	1.0%	(4,687,739)
Acquisition Legal fees			468,773,935	@	0.5%	(2,343,870)
Interest on Land			468,773,935	@	7.50%	(35,158,045)
Residual Land Value						**403,156,084**
RLV analysis:	104,175	£ per plot	4,166,988	£ per ha	1,686,357 £ per acre	
					25.72% % RLV / GDV	

BENCHMARK LAND VALUE (BLV)							
Residential Density (Net)			40.0	dph			
Site Area (Net)			96.75	ha	239.07	acres	
Benchmark Land Value (Net)	59,304	£ per plot	2,372,160	£ per ha	960,000	£ per acre	**229,506,480**
BLV analysis:		Density	3,867	sqm/ha	16,845	sqft/ac	

BALANCE							
Surplus/(Deficit)			**1,794,828**	£ per ha	**726,357**	£ per acre	**173,649,604**

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Scheme Ref:	**Edge D**				
No Units:	**3870**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	500.00	441,436	385,607	329,779	273,938	218,070	162,203	106,335
	510.00	430,112	375,038	319,965	264,868	209,756	154,644	99,526
CIL £psm	520.00	418,788	364,469	310,151	255,797	201,441	147,086	92,714
0.00	530.00	407,464	353,901	300,327	246,727	193,127	139,527	85,903
	540.00	396,141	343,332	290,501	237,657	184,813	131,969	79,091
	550.00	384,817	332,763	280,675	228,586	176,498	124,410	72,279
	560.00	373,493	322,181	270,849	219,516	168,184	116,841	65,468
	570.00	362,169	311,599	261,022	210,446	159,869	109,273	58,656
	580.00	350,837	301,017	251,196	201,376	151,555	101,704	51,844
	590.00	339,500	290,435	241,370	192,305	143,238	94,136	45,033
	600.00	328,162	279,853	231,544	183,235	134,913	86,567	38,221
	610.00	316,824	269,271	221,718	174,165	126,588	78,998	31,409
	620.00	305,486	258,689	211,892	165,095	118,262	71,430	24,598
	630.00	294,148	248,107	202,066	156,012	109,937	63,861	17,786
	640.00	282,810	237,525	192,239	146,930	101,611	56,293	10,974
	650.00	271,473	226,943	182,410	137,848	93,286	48,724	4,155
	660.00	260,135	216,361	172,570	128,766	84,961	41,156	(2,666)
	670.00	248,797	205,779	162,731	119,683	76,635	33,587	(9,487)
	680.00	237,459	195,183	152,892	110,601	68,310	26,019	(16,308)
	690.00	226,121	184,588	143,053	101,519	59,985	18,440	(23,129)
	700.00	214,769	173,992	133,214	92,437	51,659	10,861	(29,950)
	710.00	203,416	163,396	123,375	83,354	43,334	3,282	(36,771)
	720.00	192,064	152,800	113,536	74,272	34,999	(4,297)	(43,593)
	730.00	180,711	142,204	103,697	65,190	26,662	(11,876)	(50,414)
	740.00	169,358	131,608	93,858	56,105	18,325	(19,455)	(57,235)
	750.00	158,005	121,012	84,019	47,010	9,988	(27,034)	(64,056)

TABLE 2

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	-	1,006,506	913,125	819,745	726,357	632,923	539,488	446,038
	5,000	936,400	843,019	749,613	656,179	562,744	469,281	375,782
Site Specific S106	10,000	866,294	772,869	679,435	586,000	492,524	399,025	305,500
11,586	15,000	796,125	702,691	609,257	515,768	422,269	328,736	235,162
	20,000	725,947	632,510	539,011	445,512	351,972	258,398	164,767
	25,000	655,753	562,254	468,755	375,208	281,634	188,002	94,328
	30,000	585,498	491,999	398,444	304,870	211,236	117,566	23,809
	35,000	515,242	421,680	328,106	234,470	140,805	47,048	(46,788)
	40,000	444,916	351,342	257,705	164,043	70,286	(23,539)	(117,464)
	45,000	374,578	280,939	187,279	93,524	(291)	(94,200)	(188,234)
	50,000	304,174	210,513	116,763	22,957	(70,937)	(164,949)	(259,114)
	55,000	233,748	140,001	46,205	(47,673)	(141,665)	(235,802)	(330,119)
	60,000	163,240	69,453	(24,412)	(118,393)	(212,493)	(306,774)	(401,264)
	65,000	92,701	(1,164)	(95,129)	(189,208)	(283,433)	(377,880)	(472,585)
	70,000	22,085	(71,866)	(165,923)	(260,121)	(354,497)	(449,136)	(544,102)

TABLE 3

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	15.0%	1,278,366	1,166,862	1,055,357	943,845	832,287	720,728	609,154
	16.0%	1,223,994	1,116,115	1,008,235	900,348	792,414	684,480	576,531
Profit	17.0%	1,169,622	1,065,367	961,112	856,850	752,541	648,232	543,908
20.0%	18.0%	1,115,250	1,014,620	913,990	813,352	712,668	611,984	511,284
	19.0%	1,060,878	963,873	866,867	769,855	672,795	575,736	478,661
	20.0%	1,006,506	913,125	819,745	726,357	632,923	539,488	446,038

TABLE 4

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	600,000	1,366,506	1,273,125	1,179,745	1,086,357	992,923	899,488	806,038
	620,000	1,346,506	1,253,125	1,159,745	1,066,357	972,923	879,488	786,038
BLV (£ per acre)	640,000	1,326,506	1,233,125	1,139,745	1,046,357	952,923	859,488	766,038
960,000	660,000	1,306,506	1,213,125	1,119,745	1,026,357	932,923	839,488	746,038
	680,000	1,286,506	1,193,125	1,099,745	1,006,357	912,923	819,488	726,038
	700,000	1,266,506	1,173,125	1,079,745	986,357	892,923	799,488	706,038
	720,000	1,246,506	1,153,125	1,059,745	966,357	872,923	779,488	686,038
	740,000	1,226,506	1,133,125	1,039,745	946,357	852,923	759,488	666,038
	760,000	1,206,506	1,113,125	1,019,745	926,357	832,923	739,488	646,038
	780,000	1,186,506	1,093,125	999,745	906,357	812,923	719,488	626,038
	800,000	1,166,506	1,073,125	979,745	886,357	792,923	699,488	606,038
	820,000	1,146,506	1,053,125	959,745	866,357	772,923	679,488	586,038
	840,000	1,126,506	1,033,125	939,745	846,357	752,923	659,488	566,038
	860,000	1,106,506	1,013,125	919,745	826,357	732,923	639,488	546,038
	880,000	1,086,506	993,125	899,745	806,357	712,923	619,488	526,038
	900,000	1,066,506	973,125	879,745	786,357	692,923	599,488	506,038

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	754,285	672,577	590,869	509,119	427,364	345,609	263,805
	40	1,006,506	913,125	819,745	726,357	632,923	539,488	446,038
Density (dph)	45	1,258,727	1,153,674	1,048,621	943,568	838,481	733,367	628,253
40.0	50	1,510,948	1,394,222	1,277,497	1,160,771	1,044,039	927,246	810,453
	55	1,763,149	1,634,771	1,506,373	1,377,975	1,249,577	1,121,125	992,653
	60	2,015,343	1,875,320	1,735,249	1,595,178	1,455,108	1,315,004	1,174,853
	65	2,267,537	2,115,864	1,964,125	1,812,382	1,660,638	1,508,884	1,357,053
	70	2,519,731	2,356,391	2,193,001	2,029,585	1,866,169	1,702,754	1,539,252
	75	2,771,925	2,596,918	2,421,877	2,246,789	2,071,700	1,896,612	1,721,452
	80	3,024,119	2,837,444	2,650,753	2,463,992	2,277,231	2,090,470	1,903,652
	85	3,276,312	3,077,971	2,879,629	2,681,195	2,482,762	2,284,329	2,085,852

TABLE 6

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	1,053,913	960,004	866,095	772,186	678,270	584,307	490,343
	100%	1,006,506	913,125	819,745	726,357	632,923	539,488	446,038
Build Cost	102%	959,099	866,247	773,386	680,481	587,575	494,662	401,692
100%	104%	911,692	819,358	726,981	634,604	542,226	449,786	357,346
(105% = 5% increase)	106%	864,271	772,423	680,576	588,728	496,822	404,911	312,961
	108%	816,808	725,489	634,171	542,798	451,417	360,010	268,555
	110%	769,345	678,555	587,716	496,864	405,998	315,074	224,131
	112%	721,882	631,574	541,252	450,927	360,533	270,139	179,663
	114%	674,374	584,581	494,788	404,932	315,068	225,141	135,185
	116%	626,852	537,588	448,270	358,936	269,558	180,142	90,651
	118%	579,329	490,549	401,745	312,913	224,028	135,093	46,104
	120%	531,768	443,494	355,207	266,853	178,472	90,028	1,501

TABLE 7

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	177,344	139,062	100,779	62,497	24,205	(14,109)	(52,424)
	82%	260,480	216,683	172,886	129,066	85,237	41,407	(2,429)
Market Values	84%	343,566	294,249	244,911	195,574	146,237	96,881	47,504
100%	86%	426,573	371,735	316,897	262,059	207,181	152,304	97,426
(105% = 5% increase)	88%	509,538	449,205	388,837	328,465	268,094	207,708	147,290
	90%	592,454	526,593	460,733	394,871	328,966	263,061	197,153
	92%	675,334	603,981	532,593	461,205	389,817	318,399	246,960
	94%	758,166	681,298	604,430	527,537	450,621	373,706	296,764
	96%	840,997	758,607	676,217	593,827	511,426	428,983	346,539
	98%	923,751	835,888	748,004	660,092	572,179	484,260	396,288
	100%	1,006,506	913,125	819,745	726,357	632,923	539,488	446,038
	102%	1,089,252	990,363	891,466	792,568	693,666	594,709	495,753
	104%	1,171,937	1,067,575	963,186	858,772	754,357	649,930	545,451
	106%	1,254,622	1,144,748	1,034,874	924,975	815,044	705,113	595,150
	108%	1,337,307	1,221,920	1,106,534	991,148	875,731	760,282	644,834
	110%	1,419,955	1,299,093	1,178,194	1,057,296	936,397	815,452	694,487
	112%	1,502,577	1,376,224	1,249,854	1,123,443	997,032	870,622	744,139
	114%	1,585,199	1,453,338	1,321,477	1,189,591	1,057,668	925,745	793,792
	116%	1,667,822	1,530,452	1,393,083	1,255,714	1,118,304	980,868	843,432
	118%	1,750,434	1,607,566	1,464,689	1,321,811	1,178,934	1,035,991	893,043
	120%	1,833,001	1,684,675	1,536,295	1,387,909	1,239,524	1,091,114	942,654

TABLE 8

Balance (RLV - BLV £ per acre)	726,357	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	1,024,047	934,175	844,303	754,431	664,531	574,609	484,687
	10,000	1,041,589	955,225	868,861	782,497	696,133	609,730	523,320
Grant (£ per unit)	15,000	1,059,130	976,275	893,419	810,564	727,708	644,851	561,953
-	20,000	1,076,663	997,325	917,977	838,630	759,283	679,936	600,586
	25,000	1,094,186	1,018,373	942,535	866,696	790,858	715,019	639,180
	30,000	1,111,710	1,039,402	967,093	894,763	822,432	750,102	677,771
	35,000	1,129,234	1,060,430	991,627	922,823	854,007	785,185	716,362
	40,000	1,146,758	1,081,459	1,016,160	950,861	885,562	820,263	754,954
	45,000	1,164,282	1,102,487	1,040,693	978,899	917,105	855,311	793,516
	50,000	1,181,805	1,123,516	1,065,227	1,006,937	948,648	890,358	832,069
	55,000	1,199,329	1,144,545	1,089,760	1,034,975	980,190	925,406	870,621

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Edge D
No Units: 3870 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Edge D**
No Units:	3870
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	1,567,751,029
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,586
Site Specific S106 Total (£)	44,838,355
Sub-total CIL+S106 (£ per unit)	11,586
Site Infrastructure (£ per unit)	15,000
Site Infrastructure Total (£)	58,050,000
Sub-total CIL+S106+Infrastructure (£ per unit)	26,586
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.80%
Developers Profit (% on costs)	31.52%
Developers Profit Total (£)	263,350,472
Land Value KPI's	
RLV (£/acre)	1,686,357
RLV (£/ha)	4,166,988
RLV (% of GDV)	25.72%
RLV Total (£)	403,156,084
BLV (£/acre)	960,000
BLV (£/ha)	2,372,160
BLV Total (£)	229,506,480
Surplus/Deficit (£/acre) [RLV-BLV]	726,357
Surplus/Deficit (£/ha)	1,794,828
Surplus/Deficit Total (£)	173,649,604
Surplus/Deficit (per unit)	44,871
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		1,935	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	116.1	18.8%	145.1	14%	261.2
3 bed House	45.0%	522.5	25.0%	193.5	37%	716.0
4 bed House	30.0%	348.3	7.5%	58.1	21%	406.4
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	58.1	30.0%	232.2	15%	290.3
2 bed Flat	10.0%	116.1	18.8%	145.1	14%	261.2
Total number of units	100.0%	1,161.0	100.0%	774.0	100%	1,935.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	8,708	93,727	10,884	117,158	19,592	210,885
3 bed House	50,678	545,490	18,770	202,033	69,447	747,523
4 bed House	52,245	562,360	7,198	77,481	59,443	639,841
5 bed House	0	0	0	0	0	0
1 bed Flat	3,415	36,756	13,659	147,022	17,074	183,778
2 bed Flat	9,561	102,916	11,951	128,645	21,513	231,560
	124,606	1,341,248	62,462	672,339	187,068	2,013,587
AH % by floor area:			33.39%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	104,490,000
3 bed House	500,000	5,155	479	357,975,000
4 bed House	670,000	4,467	415	272,254,500
5 bed House	725,000	#DIV/0!	#DIV/0!	0
1 bed Flat	365,000	7,300	678	105,941,250
2 bed Flat	365,000	5,214	484	95,347,125
				936,007,875

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	362,500	50%	290,000	40%	250,000	70%	507,500	70%
1 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	116.1	@	400,000		46,440,000
3 bed House	522.5	@	500,000		261,225,000
4 bed House	348.3	@	670,000		233,361,000
5 bed House	0.0	@	725,000		-
1 bed Flat	58.1	@	365,000		21,188,250
2 bed Flat	116.1	@	365,000		42,376,500
	1,161.0				604,590,750
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	72.6	@	200,000		14,512,500
3 bed House	96.8	@	250,000		24,187,500
4 bed House	29.0	@	335,000		9,723,375
5 bed House	0.0	@	362,500		-
1 bed Flat	116.1	@	182,500		21,188,250
2 bed Flat	72.6	@	182,500		13,242,656
	387.0				82,854,281
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	14.5	@	160,000		2,322,000
3 bed House	19.4	@	200,000		3,870,000
4 bed House	5.8	@	268,000		1,555,740
5 bed House	0.0	@	290,000		-
1 bed Flat	23.2	@	146,000		3,390,120
2 bed Flat	14.5	@	146,000		2,118,825
	77.4				13,256,685
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	36.3	@	250,000		9,070,313
3 bed House	48.4	@	250,000		12,093,750
4 bed House	14.5	@	250,000		3,628,125
5 bed House	0.0	@	250,000		-
1 bed Flat	58.1	@	250,000		14,512,500
2 bed Flat	36.3	@	250,000		9,070,313
	193.5				48,375,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	21.8	@	280,000		6,095,250
3 bed House	29.0	@	350,000		10,158,750
4 bed House	8.7	@	469,000		4,083,818
5 bed House	0.0	@	507,500		-
1 bed Flat	34.8	@	255,500		8,899,065
2 bed Flat	21.8	@	255,500		5,561,916
	116.1	774.0			34,798,798
Sub-total GDV Residential	**1,935**				**783,875,514**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	152,132,361
	813 £ psm (total GIA sqm)			78,621 £ per unit (total units)	
Grant	774	AH units @	0 per unit		-
Total GDV					**783,875,514**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(282,989)
Planning Application Professional Fees, Surveys and reports						(850,000)
CIL		124,606	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(17,819,802)
	Net zero carbon flats	5%	build cost			(2,664,375)
	Green belt loss mitigation	1,000	per dwelling			(1,935,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	1,935	units @	0 per unit		-
S106 analysis:	463,446 £ per ha	2.86%	% of GDV	11,586 £ per unit (total u	(22,419,177)	
AH Commuted Sum		187,068	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**Edge E**				
No Units:	**1935**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation			48.38	ha @	110,000	£ per ha (if brownfield)			(5,321,250)
Net Biodiveristy Gain @ 20%			1,935	units @	1,211	£ per unit			(2,344,098)
Site Infrastructure costs -	Year 1		0						-
	Year 2		0						-
	Year 3		0						-
	Year 4		0						-
	Year 5		0						-
	Year 6		0						-
	Year 7		0						-
	Year 8		0						-
	Year 9		0						-
	Year 10		0						-
	Year 11		0						-
	Year 12		0						-
	Year 13		0						-
	Year 14		0						-
	Year 15		0						-
	total		1,935	units @	15,000	per unit			(29,025,000)
Infra. Costs analysis:		600,000 £ per ha	3.70%	% of GDV	15,000	£ per unit (total ui	(29,025,000)		
1 bed House			-	sqm @	1,234	psm			-
2 bed House			19,592	sqm @	1,234	psm			(24,176,374)
3 bed House			69,447	sqm @	1,234	psm			(85,697,783)
4 bed House			59,443	sqm @	1,234	psm			(73,352,909)
5 bed House			-	sqm @	1,234	psm			-
1 bed Flat			17,074	sqm @	1,381	psm			(23,578,544)
2 bed Flat		187,068	21,513	sqm @	1,381	psm			(29,708,966)
External works			236,514,575	@	15.0%				(35,477,186)
Ext. Works analysis:					18,334	£per unit			
M4(2) Category 2 Housing	Aff units		774	units @	100%	@	586	£ per unit	(453,564)
M4(3) Category 3 Housing	Aff units		774	units @	5%	@	11,386	£ per unit	(440,638)
M4(2) Category 2 Housing	Mrkt units		1,161	units @	100%	@	586	£ per unit	(680,346)
M4(3) Category 3 Housing	Mrkt units		1,161	units @	5%	@	11,386	£ per unit	(660,957)
Carbon/Energy Reduction/FHS			1,935	units @			0	£ per unit	-
EV Charging Points - Houses			1,384	units @			1,000	£ per unit	(1,383,525)
EV Charging Points - Flats			138	units @			625	£ per unit	(86,168)
Water Efficiency			1,935	units @			3,106	£ per unit	(6,010,110)
Contingency (on construction)			318,397,418	@	5.0%				(15,919,871)
Professional Fees			318,397,418	@	10.0%				(31,839,742)
Disposal Costs -									
OMS Marketing and Promotion			604,590,750	OMS @	3.00%		9,374	£ per unit	(18,137,723)
Residential Sales Agent Costs			604,590,750	OMS @	1.00%		3,125	£ per unit	(6,045,908)
Residential Sales Legal Costs			604,590,750	OMS @	0.25%		781	£ per unit	(1,511,477)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							13,284	£ per unit	
Interest (on Development Costs) -			7.50%	APR	0.604%	pcm			(2,447,676)
Developers Profit -									
Profit on OMS			604,590,750		20.00%				(120,918,150)
Margin on AH			179,284,764		6.00%	on AH values			(10,757,086)
Profit analysis:			783,875,514		16.80%	blended GDV	(131,675,236)		
			417,861,980		31.51%	on costs	(131,675,236)		
TOTAL COSTS									**(549,537,216)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									234,338,298
SDLT			234,338,298	@	HMRC formula				(11,706,415)
Acquisition Agent fees			234,338,298	@	1.0%				(2,343,383)
Acquisition Legal fees			234,338,298	@	0.5%				(1,171,691)
Interest on Land			234,338,298	@	7.50%				(17,575,372)
Residual Land Value									**201,541,437**
RLV analysis:	104,156 £ per plot		4,166,231	£ per ha	1,686,051	£ per acre			
					25.71%	% RLV / GDV			

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)			40.0	dph					
Site Area (Net)			48.38	ha	119.53	acres			
Benchmark Land Value (Net)	59,304 £ per plot		2,372,160	£ per ha	960,000	£ per acre			**114,753,240**
BLV analysis:	Density		3,867	sqm/ha	16,845	sqft/ac			

BALANCE									
Surplus/(Deficit)			**1,794,071**	£ per ha	**726,051**	£ per acre			**86,788,197**

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Scheme Ref:	**Edge E**				
No Units:	**1935**	**Location / Value Zone:**	**Mid**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	726,051	25%	30%	35%	40%	45%	50%	55%
	500.00	441,125	385,297	329,468	273,625	217,758	161,890	106,023
	510.00	429,801	374,728	319,654	264,555	209,443	154,332	99,211
CIL £psm	520.00	418,478	364,159	309,840	255,485	201,129	146,773	92,400
0.00	530.00	407,154	353,590	300,014	246,414	192,814	139,215	85,588
	540.00	395,830	343,021	290,188	237,344	184,500	131,656	78,776
	550.00	384,506	332,450	280,362	228,274	176,186	124,095	71,965
	560.00	373,183	321,868	270,536	219,204	167,871	116,526	65,153
	570.00	361,859	311,286	260,710	210,133	159,557	108,958	58,341
	580.00	350,525	300,704	250,884	201,063	151,242	101,389	51,530
	590.00	339,187	290,122	241,057	191,993	142,924	93,821	44,718
	600.00	327,849	279,540	231,231	182,922	134,598	86,252	37,906
	610.00	316,511	268,958	221,405	173,852	126,273	78,684	31,095
	620.00	305,174	258,376	211,579	164,780	117,947	71,115	24,283
	630.00	293,836	247,794	201,753	155,697	109,622	63,547	17,471
	640.00	282,498	237,212	191,927	146,615	101,297	55,978	10,660
	650.00	271,160	226,630	182,095	137,533	92,971	48,410	3,838
	660.00	259,822	216,048	172,256	128,451	84,646	40,841	(2,983)
	670.00	248,484	205,465	162,417	119,369	76,321	33,273	(9,804)
	680.00	237,146	194,869	152,578	110,286	67,995	25,702	(16,625)
	690.00	225,807	184,273	142,738	101,204	59,670	18,123	(23,446)
	700.00	214,454	173,677	132,899	92,122	51,344	10,544	(30,267)
	710.00	203,102	163,081	123,060	83,040	43,019	2,965	(37,088)
	720.00	191,749	152,485	113,221	73,957	34,682	(4,614)	(43,910)
	730.00	180,396	141,889	103,382	64,875	26,345	(12,193)	(50,731)
	740.00	169,043	131,293	93,543	55,788	18,008	(19,772)	(57,552)
	750.00	157,690	120,697	83,704	46,693	9,671	(27,351)	(64,373)

TABLE 2

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	726,051	25%	30%	35%	40%	45%	50%	55%
	40,000	444,606	351,031	257,392	163,728	69,971	(23,856)	(117,783)
	42,000	416,470	322,882	229,222	135,521	41,762	(52,103)	(146,071)
Site Specific S106	44,000	388,335	294,712	201,051	107,313	13,515	(80,375)	(174,390)
11,586	46,000	360,200	266,541	172,863	79,106	(14,732)	(108,663)	(202,721)
	48,000	332,031	238,371	144,655	50,887	(42,978)	(136,951)	(231,061)
	50,000	303,861	210,201	116,448	22,640	(71,256)	(165,271)	(259,438)
	52,000	275,691	181,998	88,241	(5,607)	(99,544)	(193,602)	(287,815)
	54,000	247,520	153,790	60,011	(33,853)	(127,832)	(221,938)	(316,232)
	56,000	219,340	125,583	31,765	(62,136)	(156,152)	(250,314)	(344,657)
	58,000	191,132	97,375	3,518	(90,424)	(184,483)	(278,691)	(373,117)
	60,000	162,925	69,136	(24,729)	(118,712)	(212,814)	(307,100)	(401,592)
	62,000	134,717	40,889	(53,017)	(147,033)	(241,191)	(335,525)	(430,105)
	64,000	106,508	12,643	(81,304)	(175,364)	(269,568)	(363,971)	(458,631)
	66,000	78,261	(15,609)	(109,592)	(203,695)	(297,968)	(392,445)	(487,207)
	68,000	50,014	(43,897)	(137,913)	(232,068)	(326,392)	(420,940)	(515,801)

TABLE 3

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	726,051	25%	30%	35%	40%	45%	50%	55%
	15.0%	1,278,062	1,166,558	1,055,053	943,539	831,981	720,422	608,846
	16.0%	1,223,690	1,115,810	1,007,931	900,041	792,108	684,174	576,223
Profit	17.0%	1,169,318	1,065,063	960,808	856,544	752,235	647,926	543,599
20.0%	18.0%	1,114,946	1,014,316	913,686	813,046	712,362	611,678	510,976
	19.0%	1,060,574	963,569	866,563	769,548	672,489	575,430	478,353
	20.0%	1,006,202	912,821	819,441	726,051	632,616	539,182	445,729

TABLE 4

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	726,051	25%	30%	35%	40%	45%	50%	55%
	600,000	1,366,202	1,272,821	1,179,441	1,086,051	992,616	899,182	805,729
	620,000	1,346,202	1,252,821	1,159,441	1,066,051	972,616	879,182	785,729
BLV (£ per acre)	640,000	1,326,202	1,232,821	1,139,441	1,046,051	952,616	859,182	765,729
960,000	660,000	1,306,202	1,212,821	1,119,441	1,026,051	932,616	839,182	745,729
	680,000	1,286,202	1,192,821	1,099,441	1,006,051	912,616	819,182	725,729
	700,000	1,266,202	1,172,821	1,079,441	986,051	892,616	799,182	705,729
	720,000	1,246,202	1,152,821	1,059,441	966,051	872,616	779,182	685,729
	740,000	1,226,202	1,132,821	1,039,441	946,051	852,616	759,182	665,729
	760,000	1,206,202	1,112,821	1,019,441	926,051	832,616	739,182	645,729
	780,000	1,186,202	1,092,821	999,441	906,051	812,616	719,182	625,729
	800,000	1,166,202	1,072,821	979,441	886,051	792,616	699,182	605,729
	820,000	1,146,202	1,052,821	959,441	866,051	772,616	679,182	585,729
	840,000	1,126,202	1,032,821	939,441	846,051	752,616	659,182	565,729
	860,000	1,106,202	1,012,821	919,441	826,051	732,616	639,182	545,729
	880,000	1,086,202	992,821	899,441	806,051	712,616	619,182	525,729
	900,000	1,066,202	972,821	879,441	786,051	692,616	599,182	505,729

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	726,051	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	754,019	672,311	590,603	508,851	427,096	345,341	263,535
	40	1,006,202	912,821	819,441	726,051	632,616	539,182	445,729
Density (dph)	45	1,258,385	1,153,332	1,048,279	943,226	838,136	733,023	627,909
40.0	50	1,510,568	1,393,842	1,277,117	1,160,391	1,043,656	926,863	810,070
	55	1,762,734	1,634,353	1,505,955	1,377,557	1,249,159	1,120,704	992,232
	60	2,014,890	1,874,863	1,734,793	1,594,722	1,454,651	1,314,545	1,174,393
	65	2,267,046	2,115,373	1,963,631	1,811,887	1,660,144	1,508,386	1,356,555
	70	2,519,202	2,355,862	2,192,469	2,029,053	1,865,637	1,702,221	1,538,716
	75	2,771,358	2,596,351	2,421,307	2,246,218	2,071,130	1,896,042	1,720,878
	80	3,023,514	2,836,840	2,650,145	2,463,384	2,276,623	2,089,862	1,903,040
	85	3,275,671	3,077,329	2,878,983	2,680,549	2,482,116	2,283,682	2,085,201

TABLE 6

Balance (RLV - BLV £ per acre)	726,051	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	1,053,609	959,700	865,791	771,882	677,964	584,000	490,037
	100%	1,006,202	912,821	819,441	726,051	632,616	539,182	445,729
Build Cost	102%	958,795	865,943	773,080	680,174	587,269	494,353	401,384
100%	104%	911,388	819,051	726,675	634,298	541,918	449,478	357,038
(105% = 5% increase)	106%	863,965	772,117	680,270	588,422	496,513	404,603	312,650
	108%	816,502	725,183	633,864	542,490	451,109	359,699	268,245
	110%	769,039	678,249	587,407	496,556	405,688	314,764	223,818
	112%	721,576	631,266	540,944	450,617	360,223	269,827	179,350
	114%	674,066	584,273	494,480	404,621	314,757	224,828	134,870
	116%	626,543	537,280	447,960	358,626	269,245	179,830	90,336
	118%	579,021	490,239	401,435	312,600	223,716	134,778	45,787
	120%	531,457	443,183	354,894	266,540	178,157	89,713	1,184

TABLE 7

Balance (RLV - BLV £ per acre)	726,051	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	177,030	138,747	100,465	62,182	23,888	(14,426)	(52,741)
	82%	260,167	216,371	172,574	128,752	84,922	41,092	(2,745)
Market Values	84%	343,255	293,936	244,599	195,262	145,924	96,566	47,189
100%	86%	426,262	371,425	316,587	261,746	206,869	151,991	97,114
(105% = 5% increase)	88%	509,230	448,897	388,526	328,155	267,783	207,395	146,977
	90%	592,145	526,285	460,424	394,561	328,655	262,750	196,841
	92%	675,028	603,673	532,285	460,896	389,508	318,088	246,649
	94%	757,860	680,991	604,123	527,229	450,313	373,397	296,453
	96%	840,691	758,301	675,911	593,520	511,118	428,674	346,231
	98%	923,447	835,584	747,698	659,786	571,873	483,951	395,980
	100%	1,006,202	912,821	819,441	726,051	632,616	539,182	445,729
	102%	1,088,950	990,059	891,161	792,264	693,359	594,403	495,446
	104%	1,171,635	1,067,273	962,882	858,468	754,053	649,624	545,145
	106%	1,254,320	1,144,446	1,034,572	924,671	814,740	704,809	594,844
	108%	1,337,005	1,221,618	1,106,232	990,846	875,427	759,978	644,530
	110%	1,419,655	1,298,791	1,177,892	1,056,994	936,095	815,148	694,183
	112%	1,502,277	1,375,924	1,249,552	1,123,141	996,730	870,318	743,835
	114%	1,584,899	1,453,038	1,321,177	1,189,289	1,057,366	925,443	793,488
	116%	1,667,522	1,530,152	1,392,783	1,255,414	1,118,001	980,566	843,130
	118%	1,750,136	1,607,266	1,464,389	1,321,511	1,178,634	1,035,689	892,741
	120%	1,832,703	1,684,377	1,535,995	1,387,609	1,239,224	1,090,812	942,352

TABLE 8

Balance (RLV - BLV £ per acre)	726,051	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	1,023,743	933,871	843,999	754,127	664,225	574,303	484,380
	10,000	1,041,285	954,921	868,557	782,193	695,829	609,424	523,013
Grant (£ per unit)	15,000	1,058,826	975,971	893,115	810,260	727,404	644,545	561,646
-	20,000	1,076,361	997,020	917,673	838,326	758,979	679,631	600,279
	25,000	1,093,884	1,018,070	942,231	866,392	790,553	714,714	638,875
	30,000	1,111,408	1,039,100	966,789	894,459	822,128	749,797	677,467
	35,000	1,128,932	1,060,128	991,325	922,521	853,703	784,880	716,058
	40,000	1,146,456	1,081,157	1,015,858	950,559	885,260	819,961	754,649
	45,000	1,163,980	1,102,185	1,040,391	978,597	916,803	855,009	793,214
	50,000	1,181,503	1,123,214	1,064,924	1,006,635	948,346	890,056	831,767
	55,000	1,199,027	1,144,242	1,089,458	1,034,673	979,888	925,104	870,319

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Edge E
No Units: 1935 **Location / Value Zone:** Mid **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Edge E**
No Units:	1935
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	783,875,514
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,586
Site Specific S106 Total (£)	22,419,177
Sub-total CIL+S106 (£ per unit)	11,586
Site Infrastructure (£ per unit)	15,000
Site Infrastructure Total (£)	29,025,000
Sub-total CIL+S106+Infrastructure (£ per unit)	26,586
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.80%
Developers Profit (% on costs)	31.51%
Developers Profit Total (£)	131,675,236
Land Value KPI's	
RLV (£/acre)	1,686,051
RLV (£/ha)	4,166,231
RLV (% of GDV)	25.71%
RLV Total (£)	201,541,437
BLV (£/acre)	960,000
BLV (£/ha)	2,372,160
BLV Total (£)	114,753,240
Surplus/Deficit (£/acre) [RLV-BLV]	726,051
Surplus/Deficit (£/ha)	1,794,071
Surplus/Deficit Total (£)	86,788,197
Surplus/Deficit (per unit)	44,852
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		5,120	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	25.0%	768.0	18.75%	384.0	23%	1,152.0
3 bed House	45.0%	1,382.4	25.0%	512.0	37%	1,894.4
4 bed House	30.0%	921.6	7.5%	153.6	21%	1,075.2
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	0.0%	0.0	30.0%	614.4	12%	614.4
2 bed Flat	0.0%	0.0	18.8%	384.0	8%	384.0
Total number of units	100.0%	3,072.0	100.0%	2,048.0	100%	5,120.0

	Net area per unit		Net to Gross %	Gross (GIA) per unit	
OMS Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

	Net area per unit		Net to Gross %	Gross (GIA) per unit	
AH Unit Floor areas -	(sqm)	(sqft)	%	(sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

	Mkt Units GIA		AH units GIA		Total GIA (all units)	
Total Gross Floor areas -	(sqm)	(sqft)	(sqm)	(sqft)	(sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	57,600	620,001	28,800	310,001	86,400	930,002
3 bed House	134,093	1,443,363	49,664	534,579	183,757	1,977,942
4 bed House	138,240	1,488,003	19,046	205,014	157,286	1,693,017
5 bed House	0	0	0	0	0	0
1 bed Flat	0	0	36,141	389,020	36,141	389,020
2 bed Flat	0	0	27,558	296,628	27,558	296,628
	329,933	3,551,367	161,209	1,735,242	491,142	5,286,609
AH % by floor area:			32.82%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	403,200,000
3 bed House	425,000	4,381	407	805,120,000
4 bed House	550,000	3,667	341	591,360,000
5 bed House	0	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	153,600,000
2 bed Flat	300,000	4,918	457	115,200,000
				2,068,480,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	0	50%	0	40%	0	70%	0	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	768.0	@	350,000		268,800,000
3 bed House	1,382.4	@	425,000		587,520,000
4 bed House	921.6	@	550,000		506,880,000
5 bed House	0.0	@	0		-
1 bed Flat	0.0	@	250,000		-
2 bed Flat	0.0	@	300,000		-
	3,072.0				1,363,200,000
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	192.0	@	175,000		33,600,000
3 bed House	256.0	@	212,500		54,400,000
4 bed House	76.8	@	275,000		21,120,000
5 bed House	0.0	@	0		-
1 bed Flat	307.2	@	125,000		38,400,000
2 bed Flat	192.0	@	150,000		28,800,000
	1,024.0				176,320,000
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	38.4	@	140,000		5,376,000
3 bed House	51.2	@	170,000		8,704,000
4 bed House	15.4	@	220,000		3,379,200
5 bed House	0.0	@	0		-
1 bed Flat	61.4	@	100,000		6,144,000
2 bed Flat	38.4	@	120,000		4,608,000
	204.8				28,211,200
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	96.0	@	245,000		23,520,000
3 bed House	128.0	@	250,000		32,000,000
4 bed House	38.4	@	250,000		9,600,000
5 bed House	0.0	@	0		-
1 bed Flat	153.6	@	175,000		26,880,000
2 bed Flat	96.0	@	210,000		20,160,000
	512.0				112,160,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	57.6	@	245,000		14,112,000
3 bed House	76.8	@	297,500		22,848,000
4 bed House	23.0	@	385,000		8,870,400
5 bed House	0.0	@	0		-
1 bed Flat	92.2	@	175,000		16,128,000
2 bed Flat	57.6	@	210,000		12,096,000
	307.2	2,048.0			74,054,400
Sub-total GDV Residential	**5,120**				**1,753,945,600**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	314,534,400
	640 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	2,048	AH units @	0 per unit		-
Total GDV					**1,753,945,600**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(722,519)
Planning Application Professional Fees, Surveys and reports						(2,170,000)
CIL		329,933	sqm (Market only	0.00	£ psm	-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)	
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(53,086,208)
	Net zero carbon flats	5%	build cost			(4,398,404)
	Green belt loss mitigation	1,000	per dwelling			(5,120,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	5,120	units @	0	per unit	-
S106 analysis:	489,099 £ per ha	3.57%	% of GDV	12,227	£ per unit (total u	(62,604,612)
AH Commuted Sum		491,142	sqm (total)	0	£ psm	-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**New settlement A**				
No Units:	**5120**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				128.00	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				5,120	units @	1,211	£ per unit		(6,202,470)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			5,120	units @	30,000	per unit		(153,600,000)
Infra. Costs analysis:	1,200,000	£ per ha		8.76%	% of GDV	30,000	£ per unit (total ui	(153,600,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				86,400	sqm @	1,234	psm		(106,617,600)
3 bed House				183,757	sqm @	1,234	psm		(226,755,891)
4 bed House				157,286	sqm @	1,234	psm		(194,091,418)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				36,141	sqm @	1,381	psm		(49,910,965)
2 bed Flat			491,142	27,558	sqm @	1,381	psm		(38,057,111)
External works				615,432,984	@	20.0%			(123,086,597)
Ext. Works analysis:						24,040	£per unit		
M4(2) Category 2 Housing	Aff units		2,048	units @	100% @	586	£ per unit		(1,200,128)
M4(3) Category 3 Housing	Aff units		2,048	units @	5% @	11,386	£ per unit		(1,165,926)
M4(2) Category 2 Housing	Mrkt units		3,072	units @	100% @	586	£ per unit		(1,800,192)
M4(3) Category 3 Housing	Mrkt units		3,072	units @	5% @	11,386	£ per unit		(1,748,890)
Carbon/Energy Reduction/FHS			5,120	units @		0	£ per unit		-
EV Charging Points - Houses			4,122	units @		1,000	£ per unit		(4,121,600)
EV Charging Points - Flats			250	units @		625	£ per unit		(156,000)
Water Efficiency			5,120	units @		3,106	£ per unit		(15,902,720)
Contingency (on construction)				924,417,507	@	5.0%			(46,220,875)
Professional Fees				924,417,507	@	10.0%			(92,441,751)
Disposal Costs -									
OMS Marketing and Promotion				1,363,200,000	OMS @	3.00%	7,988	£ per unit	(40,896,000)
Residential Sales Agent Costs				1,363,200,000	OMS @	1.00%	2,663	£ per unit	(13,632,000)
Residential Sales Legal Costs				1,363,200,000	OMS @	0.25%	666	£ per unit	(3,408,000)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							11,318	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(7,630,862)
Developers Profit -									
Profit on OMS				1,363,200,000		20.00%			(272,640,000)
Margin on AH				390,745,600		6.00%	on AH values		(23,444,736)
Profit analysis:				1,753,945,600		16.88%	blended GDV	(296,084,736)	
				1,194,154,126		24.79%	on costs	(296,084,736)	
TOTAL COSTS									**(1,490,238,862)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									263,706,738
SDLT				263,706,738	@	HMRC formula			(13,174,837)
Acquisition Agent fees				263,706,738	@	1.0%			(2,637,067)
Acquisition Legal fees				263,706,738	@	0.5%			(1,318,534)
Interest on Land				263,706,738	@	7.50%			(19,778,005)
Residual Land Value									**226,798,294**
RLV analysis:	44,297	£ per plot		1,771,862	£ per ha	717,063	£ per acre		
						12.93%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				40.0	dph				
Site Area (Net)				128.00	ha	316.29	acres		
Benchmark Land Value (Net)	12,355	£ per plot		494,200	£ per ha	200,000	£ per acre		**63,257,600**
BLV analysis:		Density		3,837	sqm/ha	16,715	sqft/ac		

BALANCE									
Surplus/(Deficit)				**1,277,662**	£ per ha	**517,063**	£ per acre		**163,540,694**

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Scheme Ref:	**New settlement A**				
No Units:	**5120**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	517,063	25%	30%	35%	40%	45%	50%	55%
	250.00	462,114	404,233	346,274	288,211	230,010	171,647	113,058
	260.00	450,690	393,559	336,343	279,019	221,570	163,948	106,102
CIL £psm	270.00	439,253	382,870	326,401	269,827	213,130	156,248	99,147
0.00	280.00	427,815	372,180	316,459	260,635	204,677	148,549	92,186
	290.00	416,378	361,489	306,517	251,443	196,223	140,838	85,218
	300.00	404,941	350,799	296,574	242,241	187,768	133,124	78,249
	310.00	393,504	340,109	286,627	233,034	179,314	125,411	71,280
	320.00	382,050	329,405	276,669	223,826	170,853	117,697	64,306
	330.00	370,596	318,698	266,711	214,619	162,384	109,975	57,323
	340.00	359,142	307,991	256,753	205,410	153,914	102,247	50,340
	350.00	347,688	297,284	246,795	196,187	145,445	94,519	43,358
	360.00	336,232	286,575	236,825	186,964	136,972	86,790	36,366
	370.00	324,760	275,851	226,850	177,740	128,487	79,052	29,369
	380.00	313,289	265,127	216,875	168,517	120,002	71,309	22,372
	390.00	301,817	254,403	206,901	159,280	111,517	63,566	15,374
	400.00	290,345	243,679	196,919	150,040	103,028	55,823	8,363
	410.00	278,863	232,943	186,927	140,801	94,527	48,065	1,351
	420.00	267,373	222,201	176,936	131,561	86,026	40,307	(5,661)
	430.00	255,883	211,459	166,944	122,307	77,525	32,548	(12,682)
	440.00	244,393	200,717	156,946	113,051	69,015	24,783	(19,709)
	450.00	232,897	189,965	146,936	103,794	60,498	17,009	(26,736)
	460.00	221,388	179,205	136,927	94,535	51,981	9,235	(33,770)
	470.00	209,879	168,445	126,918	85,262	43,463	1,459	(40,812)
	480.00	198,370	157,684	116,898	75,988	34,929	(6,332)	(47,854)
	490.00	186,855	146,912	106,870	66,714	26,394	(14,122)	(54,903)
	500.00	175,326	136,133	96,843	57,430	17,860	(21,913)	(61,961)

TABLE 2

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	517,063	25%	30%	35%	40%	45%	50%	55%
	-	746,995	670,422	593,785	517,063	440,233	363,242	286,069
	5,000	676,386	599,744	523,019	446,191	369,211	292,061	214,657
Site Specific S106	10,000	605,702	528,976	452,149	375,179	298,047	220,680	142,992
12,227	15,000	534,932	458,106	381,148	304,026	226,688	149,065	71,025
	20,000	464,064	387,116	310,004	232,696	155,116	77,163	(1,329)
	25,000	393,085	315,983	238,705	161,167	83,283	4,920	(74,158)
	30,000	321,962	244,706	167,206	89,389	11,133	(67,757)	(147,612)
	35,000	250,698	173,234	95,478	17,316	(61,409)	(140,989)	(221,892)
	40,000	179,262	101,555	23,483	(55,108)	(134,448)	(214,928)	(297,287)
	45,000	107,629	29,621	(48,847)	(127,979)	(208,107)	(289,813)	(374,255)
	50,000	35,751	(42,615)	(121,571)	(201,408)	(282,587)	(366,002)	(453,561)
	55,000	(36,402)	(115,216)	(194,800)	(275,544)	(358,153)	(444,037)	(536,531)
	60,000	(108,902)	(188,267)	(268,648)	(350,614)	(435,225)	(524,838)	(625,786)
	65,000	(181,800)	(261,880)	(343,312)	(426,936)	(514,465)	(610,065)	(725,733)
	70,000	(255,205)	(336,198)	(419,033)	(505,003)	(596,993)	(703,071)	(830,297)

TABLE 3

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	517,063	25%	30%	35%	40%	45%	50%	55%
	15.0%	978,657	886,641	794,559	702,392	610,119	517,684	425,066
	16.0%	932,324	843,397	754,404	665,326	576,142	486,796	397,267
Profit	17.0%	885,992	800,153	714,250	628,260	542,165	455,907	369,467
20.0%	18.0%	839,660	756,910	674,095	591,195	508,187	425,019	341,668
	19.0%	793,327	713,666	633,940	554,129	474,210	394,131	313,868
	20.0%	746,995	670,422	593,785	517,063	440,233	363,242	286,069

TABLE 4

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	517,063	25%	30%	35%	40%	45%	50%	55%
	600,000	346,995	270,422	193,785	117,063	40,233	(36,758)	(113,931)
	620,000	326,995	250,422	173,785	97,063	20,233	(56,758)	(133,931)
BLV (£ per acre)	640,000	306,995	230,422	153,785	77,063	233	(76,758)	(153,931)
200,000	660,000	286,995	210,422	133,785	57,063	(19,767)	(96,758)	(173,931)
	680,000	266,995	190,422	113,785	37,063	(39,767)	(116,758)	(193,931)
	700,000	246,995	170,422	93,785	17,063	(59,767)	(136,758)	(213,931)
	720,000	226,995	150,422	73,785	(2,937)	(79,767)	(156,758)	(233,931)
	740,000	206,995	130,422	53,785	(22,937)	(99,767)	(176,758)	(253,931)
	760,000	186,995	110,422	33,785	(42,937)	(119,767)	(196,758)	(273,931)
	780,000	166,995	90,422	13,785	(62,937)	(139,767)	(216,758)	(293,931)
	800,000	146,995	70,422	(6,215)	(82,937)	(159,767)	(236,758)	(313,931)
	820,000	126,995	50,422	(26,215)	(102,937)	(179,767)	(256,758)	(333,931)
	840,000	106,995	30,422	(46,215)	(122,937)	(199,767)	(276,758)	(353,931)
	860,000	86,995	10,422	(66,215)	(142,937)	(219,767)	(296,758)	(373,931)
	880,000	66,995	(9,578)	(86,215)	(162,937)	(239,767)	(316,758)	(393,931)
	900,000	46,995	(29,578)	(106,215)	(182,937)	(259,767)	(336,758)	(413,931)

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	517,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	628,620	561,620	494,562	427,430	360,204	292,837	225,310
	40	746,995	670,422	593,785	517,063	440,233	363,242	286,069
Density (dph)	45	865,369	779,225	693,008	606,695	520,262	433,648	346,827
40.0	50	983,743	888,028	792,232	696,328	600,291	504,053	407,586
	55	1,102,118	996,831	891,455	785,961	680,321	574,458	468,345
	60	1,220,492	1,105,634	990,678	875,594	760,350	644,864	529,103
	65	1,338,866	1,214,436	1,089,901	965,227	840,379	715,269	589,862
	70	1,457,241	1,323,239	1,189,124	1,054,860	920,408	785,674	650,620
	75	1,575,615	1,432,042	1,288,347	1,144,492	1,000,437	856,079	711,379
	80	1,693,989	1,540,845	1,387,570	1,234,125	1,080,466	926,485	772,137
	85	1,812,364	1,649,648	1,486,794	1,323,758	1,160,495	996,890	832,896

TABLE 6

Balance (RLV - BLV £ per acre)	517,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	795,863	718,786	641,642	564,417	487,093	409,638	332,028
	100%	746,995	670,422	593,785	517,063	440,233	363,242	286,069
Build Cost	102%	698,065	622,014	545,884	469,653	393,301	316,765	240,013
100%	104%	649,104	573,565	497,931	422,182	346,295	270,200	193,852
(105% = 5% increase)	106%	600,104	525,065	449,919	374,640	299,202	223,533	147,551
	108%	551,036	476,495	401,839	327,021	252,015	176,744	101,116
	110%	501,919	427,866	353,685	279,316	204,727	129,839	54,515
	112%	452,745	379,170	305,448	231,518	157,331	82,775	7,722
	114%	403,508	330,399	257,120	183,611	109,789	35,550	(39,293)
	116%	354,197	281,545	208,694	135,579	62,112	(11,865)	(86,568)
	118%	304,807	232,600	160,162	87,424	14,257	(59,504)	(134,141)
	120%	255,329	183,556	111,512	39,103	(33,791)	(107,397)	(182,078)

TABLE 7

Balance (RLV - BLV £ per acre)	517,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	30,122	136	(29,974)	(60,240)	(90,710)	(121,434)	(152,498)
	82%	102,839	68,216	33,464	(1,426)	(36,503)	(71,820)	(107,453)
Market Values	84%	175,196	135,920	96,537	57,010	17,314	(22,602)	(62,819)
100%	86%	247,266	203,337	159,310	115,143	70,822	26,290	(18,512)
(105% = 5% increase)	88%	319,107	270,523	221,836	173,031	124,077	74,926	25,515
	90%	390,744	337,499	284,164	230,722	177,123	123,345	69,322
	92%	462,233	404,328	346,333	288,231	230,003	171,587	112,947
	94%	533,579	471,008	408,360	345,609	282,723	219,677	156,406
	96%	604,808	537,573	470,263	402,860	335,327	267,641	199,740
	98%	675,942	604,040	532,067	460,005	387,827	315,488	242,951
	100%	746,995	670,422	593,785	517,063	440,233	363,242	286,069
	102%	817,962	736,734	655,429	574,044	492,555	410,915	329,101
	104%	888,865	802,970	717,010	630,961	544,805	458,515	372,055
	106%	959,719	869,146	778,515	687,805	596,992	506,052	414,942
	108%	1,030,526	935,280	839,975	744,598	649,126	553,535	457,770
	110%	1,101,272	1,001,367	901,401	801,353	701,219	600,966	500,546
	112%	1,172,002	1,067,405	962,767	858,061	753,262	648,344	543,280
	114%	1,242,667	1,133,423	1,024,107	914,726	805,262	695,689	585,969
	116%	1,313,331	1,199,387	1,085,410	971,371	857,244	743,001	628,613
	118%	1,383,933	1,265,342	1,146,685	1,027,965	909,169	790,268	671,234
	120%	1,454,534	1,331,252	1,207,928	1,084,552	961,089	837,525	713,815

TABLE 8

Balance (RLV - BLV £ per acre)	517,063	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	764,643	691,627	618,556	545,411	472,171	398,816	325,302
	10,000	782,292	712,832	643,325	573,746	504,096	434,353	364,476
Grant (£ per unit)	15,000	799,941	734,032	668,064	602,056	535,988	469,841	403,597
-	20,000	817,589	755,211	692,804	630,365	567,861	505,303	442,671
	25,000	835,234	776,389	717,540	658,638	599,710	540,738	481,705
	30,000	852,861	797,568	742,249	686,911	631,541	576,132	520,684
	35,000	870,489	818,741	766,957	715,167	663,349	611,513	559,631
	40,000	888,117	839,894	791,665	743,405	695,146	646,854	598,552
	45,000	905,744	861,047	816,350	771,643	726,913	682,184	637,428
	50,000	923,372	882,200	841,028	799,857	758,681	717,481	676,281
	55,000	940,982	903,353	865,707	828,061	790,415	752,768	715,108

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: New settlement A
No Units: 5120 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**New settlement A**
No Units:	5120
Location / Value Zone:	Lower
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	1,753,945,600
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	12,227
Site Specific S106 Total (£)	62,604,612
Sub-total CIL+S106 (£ per unit)	12,227
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	153,600,000
Sub-total CIL+S106+Infrastructure (£ per unit)	42,227
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.88%
Developers Profit (% on costs)	24.79%
Developers Profit Total (£)	296,084,736
Land Value KPI's	
RLV (£/acre)	717,063
RLV (£/ha)	1,771,862
RLV (% of GDV)	12.93%
RLV Total (£)	226,798,294
BLV (£/acre)	200,000
BLV (£/ha)	494,200
BLV Total (£)	63,257,600
Surplus/Deficit (£/acre) [RLV-BLV]	517,063
Surplus/Deficit (£/ha)	1,277,662
Surplus/Deficit Total (£)	163,540,694
Surplus/Deficit (per unit)	31,942
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		5,120	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	307.2	18.8%	384.0	14%	691.2
3 bed House	45.0%	1,382.4	25.0%	512.0	37%	1,894.4
4 bed House	30.0%	921.6	7.5%	153.6	21%	1,075.2
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	153.6	30.0%	614.4	15%	768.0
2 bed Flat	10.0%	307.2	18.8%	384.0	14%	691.2
Total number of units	100.0%	3,072.0	100.0%	2,048.0	100%	5,120.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	23,040	248,000	28,800	310,001	51,840	558,001
3 bed House	134,093	1,443,363	49,664	534,579	183,757	1,977,942
4 bed House	138,240	1,488,003	19,046	205,014	157,286	1,693,017
5 bed House	0	0	0	0	0	0
1 bed Flat	9,035	97,255	36,141	389,020	45,176	486,275
2 bed Flat	22,046	237,302	27,558	296,628	49,604	533,930
	326,454	3,513,924	161,209	1,735,242	487,663	5,249,165
AH % by floor area:			33.06%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	241,920,000
3 bed House	425,000	4,381	407	805,120,000
4 bed House	550,000	3,667	341	591,360,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	192,000,000
2 bed Flat	300,000	4,918	457	207,360,000
				2,037,760,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	307.2	@	350,000		107,520,000
3 bed House	1,382.4	@	425,000		587,520,000
4 bed House	921.6	@	550,000		506,880,000
5 bed House	0.0	@	700,000		-
1 bed Flat	153.6	@	250,000		38,400,000
2 bed Flat	307.2	@	300,000		92,160,000
	3,072.0				1,332,480,000
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	192.0	@	175,000		33,600,000
3 bed House	256.0	@	212,500		54,400,000
4 bed House	76.8	@	275,000		21,120,000
5 bed House	0.0	@	350,000		-
1 bed Flat	307.2	@	125,000		38,400,000
2 bed Flat	192.0	@	150,000		28,800,000
	1,024.0				176,320,000
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	38.4	@	140,000		5,376,000
3 bed House	51.2	@	170,000		8,704,000
4 bed House	15.4	@	220,000		3,379,200
5 bed House	0.0	@	280,000		-
1 bed Flat	61.4	@	100,000		6,144,000
2 bed Flat	38.4	@	120,000		4,608,000
	204.8				28,211,200
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	96.0	@	245,000		23,520,000
3 bed House	128.0	@	250,000		32,000,000
4 bed House	38.4	@	250,000		9,600,000
5 bed House	0.0	@	250,000		-
1 bed Flat	153.6	@	175,000		26,880,000
2 bed Flat	96.0	@	210,000		20,160,000
	512.0				112,160,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	57.6	@	245,000		14,112,000
3 bed House	76.8	@	297,500		22,848,000
4 bed House	23.0	@	385,000		8,870,400
5 bed House	0.0	@	490,000		-
1 bed Flat	92.2	@	175,000		16,128,000
2 bed Flat	57.6	@	210,000		12,096,000
	307.2	2,048.0			74,054,400
Sub-total GDV Residential	**5,120**				**1,723,225,600**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	314,534,400
	645 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	2,048	AH units @	0 per unit		-
Total GDV					**1,723,225,600**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(722,519)
Planning Application Professional Fees, Surveys and reports						(2,170,000)
CIL		326,454	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(47,151,104)
	Net zero carbon flats	5%	build cost			(6,544,575)
	Green belt loss mitigation	1,000	per dwelling			(5,120,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	5,120	units @	0 per unit		-
S106 analysis:	459,497 £ per ha	3.41%	% of GDV	11,487 £ per unit (total u	(58,815,679)	
AH Commuted Sum		487,663	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref:	**New settlement B**				
No Units:	**2560**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

cont./

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				128.00	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				5,120	units @	1,211	£ per unit		(6,202,470)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			5,120	units @	30,000	per unit		(153,600,000)
Infra. Costs analysis:		1,200,000	£ per ha	8.91%	% of GDV	30,000	£ per unit (total ui	(153,600,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				51,840	sqm @	1,234	psm		(63,970,560)
3 bed House				183,757	sqm @	1,234	psm		(226,755,891)
4 bed House				157,286	sqm @	1,234	psm		(194,091,418)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				45,176	sqm @	1,381	psm		(62,388,706)
2 bed Flat			487,663	49,604	sqm @	1,381	psm		(68,502,799)
External works				615,709,374	@	20.0%			(123,141,875)
Ext. Works analysis:						24,051	£per unit		
M4(2) Category 2 Housing	Aff units		2,048	units @	100% @	586	£ per unit		(1,200,128)
M4(3) Category 3 Housing	Aff units		2,048	units @	5% @	11,386	£ per unit		(1,165,926)
M4(2) Category 2 Housing	Mrkt units		3,072	units @	100% @	586	£ per unit		(1,800,192)
M4(3) Category 3 Housing	Mrkt units		3,072	units @	5% @	11,386	£ per unit		(1,748,890)
Carbon/Energy Reduction/FHS			5,120	units @		0	£ per unit		-
EV Charging Points - Houses			3,661	units @		1,000	£ per unit		(3,660,800)
EV Charging Points - Flats			365	units @		625	£ per unit		(228,000)
Water Efficiency			5,120	units @		3,106	£ per unit		(15,902,720)
Contingency (on construction)				924,360,375	@	5.0%			(46,218,019)
Professional Fees				924,360,375	@	10.0%			(92,436,037)
Disposal Costs -									
OMS Marketing and Promotion				1,332,480,000	OMS @	3.00%	7,808	£ per unit	(39,974,400)
Residential Sales Agent Costs				1,332,480,000	OMS @	1.00%	2,603	£ per unit	(13,324,800)
Residential Sales Legal Costs				1,332,480,000	OMS @	0.25%	651	£ per unit	(3,331,200)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							11,063	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(7,505,279)
Developers Profit -									
Profit on OMS				1,332,480,000		20.00%			(266,496,000)
Margin on AH				390,745,600		6.00%	on AH values		(23,444,736)
Profit analysis:				1,723,225,600		16.83%	blended GDV	(289,940,736)	
				1,188,868,309		24.39%	on costs	(289,940,736)	
TOTAL COSTS									**(1,478,809,045)**

RESIDUAL LAND VALUE (RLV)						
Residual Land Value (gross)						244,416,555
SDLT			244,416,555	@	HMRC formula	(12,210,328)
Acquisition Agent fees			244,416,555	@	1.0%	(2,444,166)
Acquisition Legal fees			244,416,555	@	0.5%	(1,222,083)
Interest on Land			244,416,555	@	7.50%	(18,331,242)
Residual Land Value						**210,208,737**
RLV analysis:	41,056	£ per plot	1,642,256	£ per ha	664,612	£ per acre
					12.20%	% RLV / GDV

BENCHMARK LAND VALUE (BLV)							
Residential Density (Net)			40.0	dph			
Site Area (Net)			128.00	ha	316.29	acres	
Benchmark Land Value (Net)	12,355	£ per plot	494,200	£ per ha	200,000	£ per acre	**63,257,600**
BLV analysis:		Density	3,810	sqm/ha	16,596	sqft/ac	

BALANCE					
Surplus/(Deficit)	**1,148,056**	£ per ha	**464,612**	£ per acre	**146,951,137**

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Scheme Ref:	**New settlement B**				
No Units:	**2560**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	464,612	25%	30%	35%	40%	45%	50%	55%
	250.00	399,520	345,787	291,964	238,034	183,971	129,727	75,241
	260.00	388,203	335,209	282,127	228,939	175,606	122,097	68,346
CIL £psm	270.00	376,887	324,632	272,289	219,842	167,240	114,465	61,450
0.00	280.00	365,570	314,054	262,452	210,731	158,875	106,833	54,555
	290.00	354,254	303,476	252,605	201,621	150,506	99,200	47,649
	300.00	342,922	292,883	242,752	192,511	142,126	91,558	40,740
	310.00	331,589	282,289	232,898	183,400	133,746	83,911	33,831
	320.00	320,255	271,695	223,045	174,279	125,366	76,265	26,921
	330.00	308,922	261,101	213,189	165,153	116,983	68,618	19,997
	340.00	297,586	250,501	203,320	156,027	108,588	60,959	13,074
	350.00	286,235	239,890	193,451	146,901	100,192	53,297	6,151
	360.00	274,884	229,279	183,581	137,765	91,797	45,636	(781)
	370.00	263,533	218,668	173,712	128,623	83,397	37,971	(7,718)
	380.00	252,183	208,056	163,826	119,481	74,985	30,294	(14,656)
	390.00	240,818	197,427	153,939	110,339	66,574	22,617	(21,598)
	400.00	229,449	186,798	144,053	101,184	58,163	14,941	(28,551)
	410.00	218,080	176,170	134,166	92,025	49,741	7,252	(35,503)
	420.00	206,711	165,540	124,262	82,867	41,313	(441)	(42,458)
	430.00	195,330	154,894	114,358	73,706	32,886	(8,133)	(49,426)
	440.00	183,942	144,247	104,454	64,530	24,454	(15,834)	(56,394)
	450.00	172,554	133,600	94,544	55,354	16,010	(23,542)	(63,363)
	460.00	161,167	122,948	84,622	46,178	7,566	(31,251)	(70,348)
	470.00	149,764	112,282	74,700	36,991	(879)	(38,966)	(77,332)
	480.00	138,357	101,616	64,778	27,797	(9,340)	(46,691)	(84,319)
	490.00	126,949	90,951	54,840	18,603	(17,802)	(54,417)	(91,319)
	500.00	115,539	80,271	44,899	9,402	(26,263)	(62,149)	(98,320)

TABLE 2

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	464,612	25%	30%	35%	40%	45%	50%	55%
	20,000	398,457	325,834	253,053	180,052	106,750	33,052	(41,226)
	22,000	370,060	297,387	224,524	151,427	78,007	4,137	(70,385)
Site Specific S106	24,000	341,645	268,903	195,964	122,765	49,212	(24,845)	(99,634)
11,487	26,000	313,206	240,397	167,377	94,063	20,362	(53,899)	(128,997)
	28,000	284,743	211,868	138,751	65,317	(8,549)	(83,037)	(158,476)
	30,000	256,260	183,297	110,082	36,522	(37,525)	(112,272)	(188,092)
	32,000	227,741	154,701	81,376	7,673	(66,573)	(141,601)	(217,864)
	34,000	199,207	126,076	52,627	(21,235)	(95,695)	(171,051)	(247,814)
	36,000	170,630	97,400	23,831	(50,206)	(124,910)	(200,625)	(277,963)
	38,000	142,026	68,689	(5,016)	(79,246)	(154,220)	(230,341)	(308,344)
	40,000	113,394	39,937	(33,921)	(108,359)	(183,635)	(260,220)	(338,992)
	42,000	84,718	11,141	(62,886)	(137,551)	(213,168)	(290,280)	(369,955)
	44,000	56,002	(17,706)	(91,919)	(166,843)	(242,837)	(320,548)	(401,284)
	46,000	27,248	(46,607)	(121,023)	(196,229)	(272,654)	(351,062)	(433,057)
	48,000	(1,550)	(75,567)	(150,203)	(225,730)	(302,638)	(381,852)	(465,365)

TABLE 3

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	464,612	25%	30%	35%	40%	45%	50%	55%
	15.0%	907,917	820,614	733,234	645,765	558,168	470,431	382,484
	16.0%	862,629	778,345	693,984	609,535	524,956	440,238	355,311
Profit	17.0%	817,341	736,076	654,734	573,304	491,745	410,046	328,138
20.0%	18.0%	772,052	693,807	615,484	537,073	458,533	379,854	300,965
	19.0%	726,764	651,538	576,234	500,842	425,322	349,662	273,792
	20.0%	681,475	609,269	536,984	464,612	392,111	319,469	246,619

TABLE 4

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	464,612	25%	30%	35%	40%	45%	50%	55%
	600,000	281,475	209,269	136,984	64,612	(7,889)	(80,531)	(153,381)
	620,000	261,475	189,269	116,984	44,612	(27,889)	(100,531)	(173,381)
BLV (£ per acre)	640,000	241,475	169,269	96,984	24,612	(47,889)	(120,531)	(193,381)
200,000	660,000	221,475	149,269	76,984	4,612	(67,889)	(140,531)	(213,381)
	680,000	201,475	129,269	56,984	(15,388)	(87,889)	(160,531)	(233,381)
	700,000	181,475	109,269	36,984	(35,388)	(107,889)	(180,531)	(253,381)
	720,000	161,475	89,269	16,984	(55,388)	(127,889)	(200,531)	(273,381)
	740,000	141,475	69,269	(3,016)	(75,388)	(147,889)	(220,531)	(293,381)
	760,000	121,475	49,269	(23,016)	(95,388)	(167,889)	(240,531)	(313,381)
	780,000	101,475	29,269	(43,016)	(115,388)	(187,889)	(260,531)	(333,381)
	800,000	81,475	9,269	(63,016)	(135,388)	(207,889)	(280,531)	(353,381)
	820,000	61,475	(10,731)	(83,016)	(155,388)	(227,889)	(300,531)	(373,381)
	840,000	41,475	(30,731)	(103,016)	(175,388)	(247,889)	(320,531)	(393,381)
	860,000	21,475	(50,731)	(123,016)	(195,388)	(267,889)	(340,531)	(413,381)
	880,000	1,475	(70,731)	(143,016)	(215,388)	(287,889)	(360,531)	(433,381)
	900,000	(18,525)	(90,731)	(163,016)	(235,388)	(307,889)	(380,531)	(453,381)

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	464,612	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	571,291	508,110	444,861	381,535	318,097	254,536	190,791
	40	681,475	609,269	536,984	464,612	392,111	319,469	246,619
Density (dph)	45	791,660	710,427	629,108	547,688	466,124	384,403	302,446
40.0	50	901,844	811,586	721,231	630,765	540,138	449,337	358,273
	55	1,012,029	912,744	813,354	713,841	614,152	514,270	414,101
	60	1,122,213	1,013,903	905,477	796,918	688,166	579,204	469,928
	65	1,232,398	1,115,062	997,600	879,994	762,180	644,138	525,755
	70	1,342,582	1,216,220	1,089,723	963,071	836,193	709,072	581,583
	75	1,452,767	1,317,379	1,181,846	1,046,147	910,207	774,005	637,410
	80	1,562,951	1,418,537	1,273,969	1,129,224	984,221	838,939	693,237
	85	1,673,135	1,519,696	1,366,092	1,212,300	1,058,235	903,873	749,065

TABLE 6

Balance (RLV - BLV £ per acre)	464,612	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	730,541	657,808	585,010	512,125	439,135	366,019	292,724
	100%	681,475	609,269	536,984	464,612	392,111	319,469	246,619
Build Cost	102%	632,354	560,667	488,899	417,029	345,011	272,828	200,401
100%	104%	583,186	512,018	440,755	369,376	297,828	226,082	154,058
(105% = 5% increase)	106%	533,972	463,314	392,546	321,648	250,554	179,230	107,575
	108%	484,706	414,546	344,263	273,829	203,182	132,248	60,934
	110%	435,372	365,708	295,899	225,912	155,680	85,125	14,105
	112%	385,968	316,790	247,446	177,890	108,057	37,829	(32,945)
	114%	336,492	267,786	198,897	129,757	60,277	(9,654)	(80,247)
	116%	286,938	218,687	150,224	81,471	12,331	(57,356)	(127,849)
	118%	237,295	169,485	101,430	33,041	(35,812)	(105,318)	(175,809)
	120%	187,551	120,172	52,496	(15,566)	(84,184)	(153,584)	(224,200)

TABLE 7

Balance (RLV - BLV £ per acre)	464,612	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	(19,767)	(46,508)	(73,383)	(100,426)	(127,681)	(155,214)	(183,109)
	82%	51,447	20,183	(11,213)	(42,760)	(74,507)	(106,502)	(138,843)
Market Values	84%	122,281	86,474	50,560	14,492	(21,754)	(58,234)	(95,033)
100%	86%	192,804	152,457	112,006	71,420	30,664	(10,318)	(51,589)
(105% = 5% increase)	88%	263,074	218,187	173,201	128,085	82,812	37,325	(8,437)
	90%	333,149	283,716	234,188	184,532	134,734	84,736	34,475
	92%	403,052	349,067	294,992	240,809	186,471	131,954	77,191
	94%	472,822	414,286	355,659	296,925	238,066	179,018	119,745
	96%	542,474	479,379	416,206	352,923	289,515	225,941	162,145
	98%	612,020	544,366	476,639	408,815	340,860	272,758	204,438
	100%	681,475	609,269	536,984	464,612	392,111	319,469	246,619
	102%	750,854	674,092	597,255	520,325	443,278	366,094	288,710
	104%	820,168	738,843	657,449	575,966	494,371	412,645	330,725
	106%	889,433	803,538	717,582	631,545	545,402	459,133	372,671
	108%	958,644	868,191	777,669	687,073	596,380	505,559	414,557
	110%	1,027,800	932,788	837,718	742,562	647,313	551,929	456,392
	112%	1,096,939	997,344	897,703	797,992	698,185	598,257	498,176
	114%	1,166,011	1,061,874	957,669	853,391	749,027	644,553	539,911
	116%	1,235,082	1,126,355	1,017,590	908,760	799,838	690,798	581,614
	118%	1,304,093	1,190,823	1,077,490	964,087	850,605	737,016	623,286
	120%	1,373,103	1,255,250	1,137,353	1,019,399	901,360	783,208	664,914

TABLE 8

Balance (RLV - BLV £ per acre)	464,612	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	699,134	630,474	561,756	492,962	424,072	355,061	285,881
	10,000	716,783	651,678	586,527	521,310	456,009	390,605	325,080
Grant (£ per unit)	15,000	734,431	672,883	611,279	549,624	487,909	426,115	364,224
-	20,000	752,080	694,069	636,018	577,934	519,799	461,595	403,315
	25,000	769,729	715,247	660,757	606,221	551,648	497,031	442,352
	30,000	787,359	736,426	685,474	634,494	583,492	532,439	481,347
	35,000	804,987	757,604	710,182	662,760	615,299	567,827	520,308
	40,000	822,615	778,759	734,890	690,998	647,106	603,173	559,234
	45,000	840,242	799,912	759,581	719,236	678,873	638,511	598,115
	50,000	857,870	821,065	784,260	747,455	710,641	673,808	636,975
	55,000	875,483	842,218	808,939	775,659	742,380	709,100	675,802

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: New settlement B
No Units: 2560 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**New settlement B**
No Units:	2560
Location / Value Zone:	Lower
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	1,723,225,600
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,487
Site Specific S106 Total (£)	58,815,679
Sub-total CIL+S106 (£ per unit)	11,487
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	153,600,000
Sub-total CIL+S106+Infrastructure (£ per unit)	41,487
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.83%
Developers Profit (% on costs)	24.39%
Developers Profit Total (£)	289,940,736
Land Value KPI's	
RLV (£/acre)	664,612
RLV (£/ha)	1,642,256
RLV (% of GDV)	12.20%
RLV Total (£)	210,208,737
BLV (£/acre)	200,000
BLV (£/ha)	494,200
BLV Total (£)	63,257,600
Surplus/Deficit (£/acre) [RLV-BLV]	464,612
Surplus/Deficit (£/ha)	1,148,056
Surplus/Deficit Total (£)	146,951,137
Surplus/Deficit (per unit)	28,701
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		50	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	20.0%	6.0	18.8%	3.8	20%	9.8
3 bed House	45.0%	13.5	25.0%	5.0	37%	18.5
4 bed House	30.0%	9.0	7.5%	1.5	21%	10.5
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	1.5	30.0%	6.0	15%	7.5
2 bed Flat	0.0%	0.0	18.8%	3.8	8%	3.8
Total number of units	100.0%	30.0	100.0%	20.0	100%	50.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	450	4,844	281	3,027	731	7,871
3 bed House	1,310	14,095	485	5,220	1,795	19,316
4 bed House	1,350	14,531	186	2,002	1,536	16,533
5 bed House	0	0	0	0	0	0
1 bed Flat	88	950	353	3,799	441	4,749
2 bed Flat	0	0	269	2,897	269	2,897
	3,198	34,420	1,574	16,946	4,772	51,366
AH % by floor area:			32.99%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	3,412,500
3 bed House	425,000	4,381	407	7,862,500
4 bed House	550,000	3,667	341	5,775,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	1,875,000
2 bed Flat	300,000	4,918	457	1,125,000
				20,050,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	6.0	@	350,000		2,100,000
3 bed House	13.5	@	425,000		5,737,500
4 bed House	9.0	@	550,000		4,950,000
5 bed House	0.0	@	700,000		-
1 bed Flat	1.5	@	250,000		375,000
2 bed Flat	0.0	@	300,000		-
	30.0				13,162,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	1.9	@	175,000		328,125
3 bed House	2.5	@	212,500		531,250
4 bed House	0.8	@	275,000		206,250
5 bed House	0.0	@	350,000		-
1 bed Flat	3.0	@	125,000		375,000
2 bed Flat	1.9	@	150,000		281,250
	10.0				1,721,875
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.4	@	140,000		52,500
3 bed House	0.5	@	170,000		85,000
4 bed House	0.2	@	220,000		33,000
5 bed House	0.0	@	280,000		-
1 bed Flat	0.6	@	100,000		60,000
2 bed Flat	0.4	@	120,000		45,000
	2.0				275,500
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.9	@	245,000		229,688
3 bed House	1.3	@	250,000		312,500
4 bed House	0.4	@	250,000		93,750
5 bed House	0.0	@	250,000		-
1 bed Flat	1.5	@	175,000		262,500
2 bed Flat	0.9	@	210,000		196,875
	5.0				1,095,313
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.6	@	245,000		137,813
3 bed House	0.8	@	297,500		223,125
4 bed House	0.2	@	385,000		86,625
5 bed House	0.0	@	490,000		-
1 bed Flat	0.9	@	175,000		157,500
2 bed Flat	0.6	@	210,000		118,125
	3.0	20.0			723,188
Sub-total GDV Residential	**50**				**16,978,375**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	3,071,625
	644 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	20	AH units @	0 per unit		-
Total GDV					**16,978,375**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(23,100)
Planning Application Professional Fees, Surveys and reports							(70,000)
CIL		3,198	sqm (Market only	0.00	£ psm		-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				(499,100)
	Net zero carbon flats	5%	build cost				(49,046)
	Green belt loss mitigation	1,000	per dwelling				(50,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	50	units @	0	per unit		-
S106 analysis:	358,887 £ per ha	3.52%	% of GDV	11,963	£ per unit (total u	(598,146)	
AH Commuted Sum		4,772	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Dispersal villages A**				
No Units:	**50**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

cont./

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				1.67	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				50	units @	1,211	£ per unit		(60,571)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			50	units @	10,000	per unit		(500,000)
Infra. Costs analysis:	300,000	£ per ha		2.94%	% of GDV	10,000	£ per unit (total ui	(500,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				731	sqm @	1,234	psm		(902,363)
3 bed House				1,795	sqm @	1,234	psm		(2,214,413)
4 bed House				1,536	sqm @	1,234	psm		(1,895,424)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				441	sqm @	1,381	psm		(609,265)
2 bed Flat			4,772	269	sqm @	1,381	psm		(371,651)
External works				5,993,116	@	15.0%			(898,967)
Ext. Works analysis:						17,979	£per unit		
M4(2) Category 2 Housing	Aff units		20	units @	100%	@	586	£ per unit	(11,720)
M4(3) Category 3 Housing	Aff units		20	units @	5%	@	11,386	£ per unit	(11,386)
M4(2) Category 2 Housing	Mrkt units		30	units @	100%	@	586	£ per unit	(17,580)
M4(3) Category 3 Housing	Mrkt units		30	units @	5%	@	11,386	£ per unit	(17,079)
Carbon/Energy Reduction/FHS			50	units @			0	£ per unit	-
EV Charging Points - Houses			39	units @			1,000	£ per unit	(38,750)
EV Charging Points - Flats			3	units @			625	£ per unit	(1,758)
Water Efficiency			50	units @			3,106	£ per unit	(155,300)
Contingency (on construction)				7,706,227	@	5.0%			(385,311)
Professional Fees				7,706,227	@	10.0%			(770,623)
Disposal Costs -									
OMS Marketing and Promotion				13,162,500	OMS @	3.00%	7,898	£ per unit	(394,875)
Residential Sales Agent Costs				13,162,500	OMS @	1.00%	2,633	£ per unit	(131,625)
Residential Sales Legal Costs				13,162,500	OMS @	0.25%	658	£ per unit	(32,906)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							11,388	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(116,441)
Developers Profit -									
Profit on OMS				13,162,500		20.00%			(2,632,500)
Margin on AH				3,815,875		6.00%	on AH values		(228,953)
Profit analysis:				16,978,375		16.85%	blended GDV	(2,861,453)	
				10,239,254		27.95%	on costs	(2,861,453)	
TOTAL COSTS									**(13,100,706)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									3,877,669
SDLT				3,877,669	@	HMRC formula			(183,383)
Acquisition Agent fees				3,877,669	@	1.0%			(38,777)
Acquisition Legal fees				3,877,669	@	0.5%			(19,388)
Interest on Land				3,877,669	@	7.50%			(290,825)
Residual Land Value									**3,345,295**
RLV analysis:	66,906	£ per plot		2,007,177	£ per ha	812,293	£ per acre		
						19.70%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				30.0	dph				
Site Area (Net)				1.67	ha	4.12	acres		
Benchmark Land Value (Net)	9,152	£ per plot		274,555	£ per ha	111,111	£ per acre		**457,592**
BLV analysis:		Density		2,863	sqm/ha	12,472	sqft/ac		

BALANCE									
Surplus/(Deficit)				**1,732,622**	£ per ha	**701,182**	£ per acre		**2,887,703**

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Scheme Ref:	**Dispersal villages A**				
No Units:	**50**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	250.00	655,281	613,400	571,518	529,637	487,756	445,860	403,920
	260.00	646,683	605,374	564,066	522,758	481,450	440,099	398,735
CIL £psm	270.00	638,084	597,349	556,614	515,879	475,126	434,338	393,551
0.00	280.00	629,486	589,324	549,162	509,000	468,789	428,578	388,366
	290.00	620,887	581,299	541,710	502,087	462,452	422,817	383,182
	300.00	612,289	573,273	534,234	495,175	456,115	417,056	377,997
	310.00	603,690	565,228	526,745	488,262	449,779	411,296	372,812
	320.00	595,070	557,163	519,256	481,349	443,442	405,535	367,628
	330.00	586,429	549,098	511,767	474,436	437,105	399,774	362,443
	340.00	577,788	541,033	504,278	467,523	430,768	394,013	357,259
	350.00	569,147	532,968	496,789	460,611	424,432	388,253	352,074
	360.00	560,506	524,903	489,301	453,698	418,095	382,492	346,889
	370.00	551,865	516,838	481,812	446,785	411,758	376,731	341,679
	380.00	543,224	508,774	474,323	439,872	405,421	370,964	336,467
	390.00	534,583	500,709	466,834	432,959	399,085	365,173	331,255
	400.00	525,942	492,644	459,345	426,047	392,721	359,382	326,043
	410.00	517,301	484,579	451,856	419,110	386,350	353,590	320,830
	420.00	508,660	476,514	444,341	412,161	379,980	347,799	315,618
	430.00	500,016	468,414	436,813	405,211	373,609	342,008	310,406
	440.00	491,329	460,307	429,284	398,261	367,239	336,216	305,194
	450.00	482,642	452,199	421,755	391,312	360,869	330,425	299,982
	460.00	473,955	444,091	414,227	384,362	354,498	324,634	294,770
	470.00	465,268	435,983	406,698	377,413	348,128	318,843	289,557
	480.00	456,581	427,875	399,169	370,463	341,757	313,051	284,345
	490.00	447,894	419,767	391,641	363,514	335,387	307,260	279,108
	500.00	439,207	411,660	384,112	356,564	329,016	301,446	273,866

TABLE 2

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	-	869,382	813,328	757,274	701,182	645,066	588,949	532,832
	5,000	815,999	759,882	703,765	647,649	591,532	535,404	479,192
Site Specific S106	10,000	762,465	706,348	650,231	594,050	537,837	481,625	425,413
11,963	15,000	708,907	652,695	596,483	540,271	484,059	427,743	371,401
	20,000	655,129	598,917	542,704	486,381	430,039	373,698	317,202
	25,000	601,350	545,019	488,677	432,336	375,878	319,374	262,752
	30,000	547,315	490,974	434,555	378,051	321,514	264,813	207,990
	35,000	493,232	436,727	380,223	323,575	266,874	209,952	153,019
	40,000	438,900	382,337	325,636	268,846	211,913	154,981	98,048
	45,000	384,398	327,696	270,808	213,875	156,943	100,010	42,989
	50,000	329,702	272,770	215,837	158,904	101,972	44,891	(12,314)
	55,000	274,731	217,799	160,866	103,934	46,794	(10,412)	(67,617)
	60,000	219,761	162,828	105,895	48,696	(8,509)	(65,715)	(123,174)
	65,000	164,790	107,804	50,599	(6,607)	(63,813)	(121,274)	(178,812)
	70,000	109,707	52,501	(4,705)	(61,910)	(119,373)	(176,911)	(234,609)

TABLE 3

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	15.0%	1,041,171	973,664	906,158	838,614	771,044	703,475	635,905
	16.0%	1,006,813	941,597	876,381	811,127	745,849	680,570	615,291
Profit	17.0%	972,455	909,530	846,604	783,641	720,653	657,664	594,676
20.0%	18.0%	938,097	877,462	816,827	756,155	695,457	634,759	574,061
	19.0%	903,740	845,395	787,051	728,669	670,261	611,854	553,447
	20.0%	869,382	813,328	757,274	701,182	645,066	588,949	532,832

TABLE 4

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	600,000	380,493	324,439	268,385	212,293	156,177	100,060	43,943
	620,000	360,493	304,439	248,385	192,293	136,177	80,060	23,943
BLV (£ per acre)	640,000	340,493	284,439	228,385	172,293	116,177	60,060	3,943
111,111	660,000	320,493	264,439	208,385	152,293	96,177	40,060	(16,057)
	680,000	300,493	244,439	188,385	132,293	76,177	20,060	(36,057)
	700,000	280,493	224,439	168,385	112,293	56,177	60	(56,057)
	720,000	260,493	204,439	148,385	92,293	36,177	(19,940)	(76,057)
	740,000	240,493	184,439	128,385	72,293	16,177	(39,940)	(96,057)
	760,000	220,493	164,439	108,385	52,293	(3,823)	(59,940)	(116,057)
	780,000	200,493	144,439	88,385	32,293	(23,823)	(79,940)	(136,057)
	800,000	180,493	124,439	68,385	12,293	(43,823)	(99,940)	(156,057)
	820,000	160,493	104,439	48,385	(7,707)	(63,823)	(119,940)	(176,057)
	840,000	140,493	84,439	28,385	(27,707)	(83,823)	(139,940)	(196,057)
	860,000	120,493	64,439	8,385	(47,707)	(103,823)	(159,940)	(216,057)
	880,000	100,493	44,439	(11,615)	(67,707)	(123,823)	(179,940)	(236,057)
	900,000	80,493	24,439	(31,615)	(87,707)	(143,823)	(199,940)	(256,057)

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	1,032,797	967,401	902,005	836,565	771,095	705,625	640,156
	40	1,196,213	1,121,474	1,046,736	971,947	897,124	822,302	747,480
Density (dph)	45	1,359,628	1,275,547	1,191,466	1,107,329	1,023,154	938,979	854,803
30.0	50	1,523,044	1,429,620	1,336,197	1,242,711	1,149,183	1,055,655	962,127
	55	1,686,459	1,583,694	1,480,928	1,378,094	1,275,213	1,172,332	1,069,451
	60	1,849,875	1,737,767	1,625,659	1,513,476	1,401,242	1,289,009	1,176,775
	65	2,013,290	1,891,840	1,770,390	1,648,858	1,527,272	1,405,685	1,284,099
	70	2,176,706	2,045,913	1,915,120	1,784,240	1,653,301	1,522,362	1,391,423
	75	2,340,121	2,199,986	2,059,851	1,919,623	1,779,331	1,639,038	1,498,746
	80	2,503,537	2,354,059	2,204,582	2,055,005	1,905,360	1,755,715	1,606,070
	85	2,666,952	2,508,132	2,349,313	2,190,387	2,031,389	1,872,392	1,713,394

TABLE 6

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	904,806	848,343	791,881	735,419	678,957	622,479	565,953
	100%	869,382	813,328	757,274	701,182	645,066	588,949	532,832
Build Cost	102%	833,953	778,246	722,539	666,832	611,125	555,418	499,692
100%	104%	798,373	743,076	687,779	632,482	577,185	521,803	466,414
(105% = 5% increase)	106%	762,793	707,906	653,018	598,066	543,090	488,113	433,136
	108%	727,213	672,682	618,118	563,553	508,988	454,423	399,747
	110%	691,498	637,345	583,192	529,039	474,843	420,571	366,300
	112%	655,749	602,008	548,267	494,426	440,568	386,710	332,762
	114%	620,000	566,625	513,181	459,737	406,293	352,725	299,134
	116%	584,138	531,108	478,078	425,032	371,856	318,681	265,391
	118%	548,208	495,592	442,914	390,155	337,396	284,505	231,570
	120%	512,277	459,965	407,622	355,279	302,782	250,266	197,566

TABLE 7

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	340,602	319,628	298,654	277,680	256,684	235,680	214,676
	82%	393,897	369,370	344,843	320,316	295,789	271,262	246,735
Market Values	84%	447,042	419,003	390,965	362,926	334,872	306,792	278,712
100%	86%	500,109	468,533	436,957	405,380	373,804	342,228	310,651
(105% = 5% increase)	88%	553,064	517,997	482,930	447,834	412,720	377,606	342,492
	90%	605,927	567,336	528,745	490,154	451,563	412,972	374,332
	92%	658,790	616,675	574,560	532,444	490,329	448,214	406,098
	94%	711,487	665,906	620,326	574,735	529,096	483,456	437,816
	96%	764,169	715,076	665,984	616,891	567,799	518,698	469,534
	98%	816,851	764,246	711,641	659,037	606,432	553,827	501,223
	100%	869,382	813,328	757,274	701,182	645,066	588,949	532,832
	102%	921,906	862,350	802,795	743,239	683,684	624,070	564,441
	104%	974,430	911,373	848,315	785,258	722,201	659,144	596,050
	106%	1,026,953	960,395	893,836	827,278	760,719	694,160	627,601
	108%	1,079,342	1,009,348	939,354	869,297	799,236	729,176	659,116
	110%	1,131,731	1,058,245	984,758	911,272	837,754	764,192	690,630
	112%	1,184,120	1,107,141	1,030,162	953,183	876,204	799,208	722,144
	114%	1,236,509	1,156,037	1,075,565	995,094	914,622	834,151	753,659
	116%	1,288,897	1,204,933	1,120,969	1,037,005	953,041	869,077	785,112
	118%	1,341,232	1,253,829	1,166,373	1,078,916	991,459	904,002	816,546
	120%	1,393,509	1,302,633	1,211,757	1,120,827	1,029,878	938,928	847,979

TABLE 8

Balance (RLV - BLV £ per acre)	701,182	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	882,728	829,344	775,959	722,574	669,187	615,751	562,314
	10,000	896,075	845,360	794,644	743,929	693,214	642,498	591,783
Grant (£ per unit)	15,000	909,422	861,376	813,330	765,284	717,237	669,191	621,145
-	20,000	922,768	877,391	832,015	786,638	741,261	695,885	650,508
	25,000	936,115	893,407	850,700	807,993	765,285	722,578	679,870
	30,000	949,461	909,423	869,385	829,347	789,299	749,232	709,165
	35,000	962,808	925,439	888,049	850,642	813,234	775,826	738,418
	40,000	976,155	941,414	906,665	871,917	837,168	802,420	767,671
	45,000	989,459	957,370	925,281	893,192	861,103	829,014	796,924
	50,000	1,002,756	973,326	943,896	914,467	885,037	855,607	826,135
	55,000	1,016,053	989,282	962,512	935,742	908,971	882,160	855,289

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Dispersal villages A
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Dispersal villages A**
No Units:	50
Location / Value Zone:	Lower
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	16,978,375
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,963
Site Specific S106 Total (£)	598,146
Sub-total CIL+S106 (£ per unit)	11,963
Site Infrastructure (£ per unit)	10,000
Site Infrastructure Total (£)	500,000
Sub-total CIL+S106+Infrastructure (£ per unit)	21,963
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.85%
Developers Profit (% on costs)	27.95%
Developers Profit Total (£)	2,861,453
Land Value KPI's	
RLV (£/acre)	812,293
RLV (£/ha)	2,007,177
RLV (% of GDV)	19.70%
RLV Total (£)	3,345,295
BLV (£/acre)	111,111
BLV (£/ha)	274,555
BLV Total (£)	457,592
Surplus/Deficit (£/acre) [RLV-BLV]	701,182
Surplus/Deficit (£/ha)	1,732,622
Surplus/Deficit Total (£)	2,887,703
Surplus/Deficit (per unit)	57,754
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		50	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	20.0%	6.0	18.8%	3.8	20%	9.8
3 bed House	45.0%	13.5	25.0%	5.0	37%	18.5
4 bed House	30.0%	9.0	7.5%	1.5	21%	10.5
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	1.5	30.0%	6.0	15%	7.5
2 bed Flat	0.0%	0.0	18.8%	3.8	8%	3.8
Total number of units	100.0%	30.0	100.0%	20.0	100%	50.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	450	4,844	281	3,027	731	7,871
3 bed House	1,310	14,095	485	5,220	1,795	19,316
4 bed House	1,350	14,531	186	2,002	1,536	16,533
5 bed House	0	0	0	0	0	0
1 bed Flat	88	950	353	3,799	441	4,749
2 bed Flat	0	0	269	2,897	269	2,897
	3,198	34,420	1,574	16,946	4,772	51,366
AH % by floor area:			32.99%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	3,412,500
3 bed House	425,000	4,381	407	7,862,500
4 bed House	550,000	3,667	341	5,775,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	1,875,000
2 bed Flat	300,000	4,918	457	1,125,000
				20,050,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	6.0	@	350,000		2,100,000
3 bed House	13.5	@	425,000		5,737,500
4 bed House	9.0	@	550,000		4,950,000
5 bed House	0.0	@	700,000		-
1 bed Flat	1.5	@	250,000		375,000
2 bed Flat	0.0	@	300,000		-
	30.0				13,162,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	1.9	@	175,000		328,125
3 bed House	2.5	@	212,500		531,250
4 bed House	0.8	@	275,000		206,250
5 bed House	0.0	@	350,000		-
1 bed Flat	3.0	@	125,000		375,000
2 bed Flat	1.9	@	150,000		281,250
	10.0				1,721,875
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.4	@	140,000		52,500
3 bed House	0.5	@	170,000		85,000
4 bed House	0.2	@	220,000		33,000
5 bed House	0.0	@	280,000		-
1 bed Flat	0.6	@	100,000		60,000
2 bed Flat	0.4	@	120,000		45,000
	2.0				275,500
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.9	@	245,000		229,688
3 bed House	1.3	@	250,000		312,500
4 bed House	0.4	@	250,000		93,750
5 bed House	0.0	@	250,000		-
1 bed Flat	1.5	@	175,000		262,500
2 bed Flat	0.9	@	210,000		196,875
	5.0				1,095,313
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	0.6	@	245,000		137,813
3 bed House	0.8	@	297,500		223,125
4 bed House	0.2	@	385,000		86,625
5 bed House	0.0	@	490,000		-
1 bed Flat	0.9	@	175,000		157,500
2 bed Flat	0.6	@	210,000		118,125
	3.0	20.0			723,188
Sub-total GDV Residential	**50**				**16,978,375**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	3,071,625
	644 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	20	AH units @	0 per unit		-
Total GDV					**16,978,375**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(23,100)
Planning Application Professional Fees, Surveys and reports							(70,000)
CIL		3,198	sqm (Market only	0.00	£ psm		-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				(499,100)
	Net zero carbon flats	5%	build cost				(49,046)
	Green belt loss mitigation	1,000	per dwelling				(50,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	50	units @	0	per unit		-
S106 analysis:	358,887 £ per ha	3.52%	% of GDV	11,963	£ per unit (total u	(598,146)	
AH Commuted Sum		4,772	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Dispersal villages B**				
No Units:	**50**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

Construction Costs -										
Site Clearance, Demolition & Remediation				1.67	ha @	110,000	£ per ha (if brownfield)			(183,333)
Net Biodiveristy Gain @ 20%				50	units @	1,211	£ per unit			(60,571)
Site Infrastructure costs -	Year 1			0						-
	Year 2			0						-
	Year 3			0						-
	Year 4			0						-
	Year 5			0						-
	Year 6			0						-
	Year 7			0						-
	Year 8			0						-
	Year 9			0						-
	Year 10			0						-
	Year 11			0						-
	Year 12			0						-
	Year 13			0						-
	Year 14			0						-
	Year 15			0						-
	total			50	units @	10,000	per unit			(500,000)
Infra. Costs analysis:		300,000	£ per ha		2.94%	% of GDV	10,000	£ per unit (total ui	(500,000)	
1 bed House				-	sqm @	1,234	psm			-
2 bed House				731	sqm @	1,234	psm			(902,363)
3 bed House				1,795	sqm @	1,234	psm			(2,214,413)
4 bed House				1,536	sqm @	1,234	psm			(1,895,424)
5 bed House				-	sqm @	1,234	psm			-
1 bed Flat				441	sqm @	1,381	psm			(609,265)
2 bed Flat			4,772	269	sqm @	1,381	psm			(371,651)
External works				5,993,116	@	15.0%				(898,967)
Ext. Works analysis:						17,979	£per unit			
M4(2) Category 2 Housing	Aff units		20	units @	100%	@	586	£ per unit		(11,720)
M4(3) Category 3 Housing	Aff units		20	units @	5%	@	11,386	£ per unit		(11,386)
M4(2) Category 2 Housing	Mrkt units		30	units @	100%	@	586	£ per unit		(17,580)
M4(3) Category 3 Housing	Mrkt units		30	units @	5%	@	11,386	£ per unit		(17,079)
Carbon/Energy Reduction/FHS			50	units @			0	£ per unit		-
EV Charging Points - Houses			39	units @			1,000	£ per unit		(38,750)
EV Charging Points - Flats			3	units @			625	£ per unit		(1,758)
Water Efficiency			50	units @			3,106	£ per unit		(155,300)
Contingency (on construction)				7,889,560	@	5.0%				(394,478)
Professional Fees				7,889,560	@	10.0%				(788,956)
Disposal Costs -										
OMS Marketing and Promotion				13,162,500	OMS @	3.00%	7,898	£ per unit		(394,875)
Residential Sales Agent Costs				13,162,500	OMS @	1.00%	2,633	£ per unit		(131,625)
Residential Sales Legal Costs				13,162,500	OMS @	0.25%	658	£ per unit		(32,906)
Affordable Sale Legal Costs								lump sum		(10,000)
Disposal Cost analysis:							11,388	£ per unit		
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm			(147,803)
Developers Profit -										
Profit on OMS				13,162,500		20.00%				(2,632,500)
Margin on AH				3,815,875		6.00%	on AH values			(228,953)
Profit analysis:				16,978,375		16.85%	blended GDV	(2,861,453)		
				10,481,450		27.30%	on costs	(2,861,453)		
TOTAL COSTS										**(13,342,902)**

RESIDUAL LAND VALUE (RLV)										
Residual Land Value (gross)										3,635,473
SDLT				3,635,473	@	HMRC formula				(171,274)
Acquisition Agent fees				3,635,473	@	1.0%				(36,355)
Acquisition Legal fees				3,635,473	@	0.5%				(18,177)
Interest on Land				3,635,473	@	7.50%				(272,660)
Residual Land Value										**3,137,007**
RLV analysis:		62,740	£ per plot	1,882,204	£ per ha	761,718	£ per acre			
						18.48%	% RLV / GDV			

BENCHMARK LAND VALUE (BLV)										
Residential Density (Net)				30.0	dph					
Site Area (Net)				1.67	ha	4.12	acres			
Benchmark Land Value (Net)		43,929	£ per plot	1,317,866	£ per ha	533,333	£ per acre			**2,196,443**
BLV analysis:		Density		2,863	sqm/ha	12,472	sqft/ac			

BALANCE										
Surplus/(Deficit)				**564,338**	£ per ha	**228,385**	£ per acre			**940,564**

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Scheme Ref:	**Dispersal villages B**				
No Units:	**50**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	228,385	25%	30%	35%	40%	45%	50%	55%
	250.00	182,160	140,220	98,281	56,341	14,401	(27,538)	(69,478)
	260.00	173,519	132,155	90,792	49,428	8,065	(33,299)	(74,690)
CIL £psm	270.00	164,878	124,090	83,303	42,515	1,728	(39,059)	(79,902)
0.00	280.00	156,237	116,025	75,814	35,603	(4,609)	(44,826)	(85,115)
	290.00	147,596	107,960	68,325	28,690	(10,946)	(50,617)	(90,327)
	300.00	138,955	99,895	60,836	21,777	(17,282)	(56,409)	(95,539)
	310.00	130,314	91,830	53,347	14,864	(23,649)	(62,200)	(100,751)
	320.00	121,673	83,766	45,858	7,951	(30,019)	(67,991)	(105,963)
	330.00	113,032	75,701	38,370	1,003	(36,390)	(73,782)	(111,175)
	340.00	104,391	67,636	30,868	(5,946)	(42,760)	(79,574)	(116,388)
	350.00	95,750	59,571	23,339	(12,896)	(49,130)	(85,365)	(121,600)
	360.00	87,109	51,466	15,810	(19,845)	(55,501)	(91,156)	(126,812)
	370.00	78,434	43,358	8,282	(26,795)	(61,871)	(96,948)	(132,024)
	380.00	69,747	35,250	753	(33,744)	(68,242)	(102,739)	(137,245)
	390.00	61,061	27,142	(6,776)	(40,694)	(74,612)	(108,530)	(142,487)
	400.00	52,374	19,035	(14,304)	(47,643)	(80,983)	(114,324)	(147,729)
	410.00	43,687	10,927	(21,833)	(54,593)	(87,353)	(120,149)	(152,971)
	420.00	35,000	2,819	(29,362)	(61,543)	(93,733)	(125,973)	(158,212)
	430.00	26,313	(5,289)	(36,890)	(68,492)	(100,140)	(131,797)	(163,454)
	440.00	17,626	(13,397)	(44,419)	(75,472)	(106,546)	(137,621)	(168,696)
	450.00	8,939	(21,504)	(51,968)	(82,461)	(112,953)	(143,445)	(173,938)
	460.00	252	(29,630)	(59,540)	(89,450)	(119,360)	(149,269)	(179,179)
	470.00	(8,456)	(37,784)	(67,111)	(96,439)	(125,766)	(155,094)	(184,421)
	480.00	(17,192)	(45,937)	(74,683)	(103,428)	(132,173)	(160,918)	(189,663)
	490.00	(25,929)	(54,091)	(82,254)	(110,417)	(138,579)	(166,742)	(194,910)
	500.00	(34,665)	(62,245)	(89,826)	(117,406)	(144,986)	(172,566)	(200,184)

TABLE 2

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	228,385	25%	30%	35%	40%	45%	50%	55%
	-	396,735	340,618	284,501	228,385	172,268	116,087	59,874
	5,000	343,201	287,084	230,944	174,732	118,520	62,308	6,093
Site Specific S106	10,000	289,590	233,378	177,166	120,954	64,731	8,390	(47,952)
11,963	15,000	235,812	179,599	123,369	67,028	10,686	(45,665)	(102,169)
	20,000	182,007	125,665	69,324	12,983	(43,493)	(99,997)	(156,620)
	25,000	127,962	71,621	15,184	(41,321)	(97,858)	(154,559)	(211,365)
	30,000	73,860	17,356	(39,148)	(95,797)	(152,498)	(209,403)	(266,336)
	35,000	19,528	(37,035)	(93,736)	(150,509)	(207,441)	(264,374)	(321,306)
	40,000	(34,974)	(91,676)	(148,547)	(205,480)	(262,412)	(319,345)	(376,349)
	45,000	(89,653)	(146,585)	(203,518)	(260,450)	(317,383)	(374,446)	(431,652)
	50,000	(144,623)	(201,556)	(258,489)	(315,421)	(372,544)	(429,749)	(486,955)
	55,000	(199,594)	(256,527)	(313,459)	(370,641)	(427,847)	(485,052)	(542,494)
	60,000	(254,565)	(311,533)	(368,739)	(425,944)	(483,150)	(540,594)	(598,132)
	65,000	(309,631)	(366,836)	(424,042)	(481,247)	(538,693)	(596,231)	(653,911)
	70,000	(364,934)	(422,139)	(479,345)	(536,793)	(594,331)	(651,949)	(709,885)

TABLE 3

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	228,385	25%	30%	35%	40%	45%	50%	55%
	15.0%	568,524	500,955	433,385	365,816	298,246	230,613	162,948
	16.0%	534,166	468,887	403,608	338,329	273,051	207,707	142,333
Profit	17.0%	499,808	436,820	373,832	310,843	247,855	184,802	121,718
20.0%	18.0%	465,451	404,753	344,055	283,357	222,659	161,897	101,104
	19.0%	431,093	372,685	314,278	255,871	197,463	138,992	80,489
	20.0%	396,735	340,618	284,501	228,385	172,268	116,087	59,874

TABLE 4

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	228,385	25%	30%	35%	40%	45%	50%	55%
	600,000	330,068	273,951	217,834	161,718	105,601	49,420	(6,793)
	620,000	310,068	253,951	197,834	141,718	85,601	29,420	(26,793)
BLV (£ per acre)	640,000	290,068	233,951	177,834	121,718	65,601	9,420	(46,793)
533,333	660,000	270,068	213,951	157,834	101,718	45,601	(10,580)	(66,793)
	680,000	250,068	193,951	137,834	81,718	25,601	(30,580)	(86,793)
	700,000	230,068	173,951	117,834	61,718	5,601	(50,580)	(106,793)
	720,000	210,068	153,951	97,834	41,718	(14,399)	(70,580)	(126,793)
	740,000	190,068	133,951	77,834	21,718	(34,399)	(90,580)	(146,793)
	760,000	170,068	113,951	57,834	1,718	(54,399)	(110,580)	(166,793)
	780,000	150,068	93,951	37,834	(18,282)	(74,399)	(130,580)	(186,793)
	800,000	130,068	73,951	17,834	(38,282)	(94,399)	(150,580)	(206,793)
	820,000	110,068	53,951	(2,166)	(58,282)	(114,399)	(170,580)	(226,793)
	840,000	90,068	33,951	(22,166)	(78,282)	(134,399)	(190,580)	(246,793)
	860,000	70,068	13,951	(42,166)	(98,282)	(154,399)	(210,580)	(266,793)
	880,000	50,068	(6,049)	(62,166)	(118,282)	(174,399)	(230,580)	(286,793)
	900,000	30,068	(26,049)	(82,166)	(138,282)	(194,399)	(250,580)	(306,793)

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	228,385	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	560,176	494,706	429,236	363,767	298,297	232,802	167,221
	40	723,616	648,794	573,971	499,149	424,327	349,504	274,568
Density (dph)	45	887,057	802,882	718,706	634,531	550,356	466,181	381,915
30.0	50	1,050,498	956,970	863,442	769,913	676,385	582,857	489,262
	55	1,213,938	1,111,057	1,008,177	905,296	802,415	699,534	596,609
	60	1,377,371	1,265,145	1,152,912	1,040,678	928,444	816,211	703,956
	65	1,540,787	1,419,233	1,297,647	1,176,060	1,054,474	932,887	811,301
	70	1,704,202	1,573,321	1,442,382	1,311,442	1,180,503	1,049,564	918,625
	75	1,867,617	1,727,409	1,587,117	1,446,825	1,306,533	1,166,241	1,025,949
	80	2,031,033	1,881,497	1,731,852	1,582,207	1,432,562	1,282,917	1,133,272
	85	2,194,448	2,035,585	1,876,587	1,717,589	1,558,592	1,399,594	1,240,596

TABLE 6

Balance (RLV - BLV £ per acre)	228,385	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	432,302	375,788	319,262	262,735	206,208	149,681	93,152
	100%	396,735	340,618	284,501	228,385	172,268	116,087	59,874
Build Cost	102%	361,155	305,448	249,741	193,997	138,197	82,397	26,596
100%	104%	325,575	270,261	214,872	159,484	104,095	48,707	(6,757)
(105% = 5% increase)	106%	289,900	234,924	179,947	124,970	69,994	14,896	(40,204)
	108%	254,151	199,587	145,022	90,406	35,720	(18,965)	(73,686)
	110%	218,402	164,249	109,989	55,717	1,445	(52,890)	(107,314)
	112%	182,602	128,744	74,886	21,028	(32,927)	(86,934)	(140,981)
	114%	146,671	93,227	39,783	(13,795)	(67,387)	(121,029)	(174,801)
	116%	110,741	57,679	4,504	(48,672)	(101,915)	(155,268)	(208,710)
	118%	74,729	21,970	(30,789)	(83,638)	(136,572)	(189,592)	(242,735)
	120%	38,605	(13,738)	(66,197)	(118,714)	(171,315)	(224,038)	(276,760)

TABLE 7

Balance (RLV - BLV £ per acre)	228,385	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	(133,314)	(154,318)	(175,322)	(196,325)	(217,334)	(238,386)	(259,438)
	82%	(79,806)	(104,341)	(128,915)	(153,488)	(178,062)	(202,635)	(227,208)
Market Values	84%	(26,511)	(54,591)	(82,671)	(110,751)	(138,831)	(166,937)	(195,080)
100%	86%	26,712	(4,865)	(36,482)	(68,115)	(99,748)	(131,381)	(163,014)
(105% = 5% increase)	88%	79,779	44,665	9,551	(25,563)	(60,677)	(95,851)	(131,037)
	90%	132,831	94,195	55,543	16,891	(21,761)	(60,413)	(99,065)
	92%	185,694	143,579	101,464	59,345	17,155	(25,035)	(67,225)
	94%	238,558	192,918	147,279	101,639	56,000	10,344	(35,384)
	96%	291,371	242,257	193,093	143,930	94,766	45,602	(3,562)
	98%	344,053	291,448	238,844	186,220	133,532	80,844	28,156
	100%	396,735	340,618	284,501	228,385	172,268	116,087	59,874
	102%	449,402	389,788	330,159	270,530	210,901	151,272	91,592
	104%	501,926	438,869	375,812	312,676	249,535	186,394	123,253
	106%	554,450	487,891	421,333	354,774	288,168	221,515	154,862
	108%	606,974	536,914	466,853	396,793	326,733	256,636	186,471
	110%	659,498	585,936	512,374	438,812	365,250	291,688	218,080
	112%	711,907	634,928	557,895	480,832	403,768	326,704	249,641
	114%	764,296	683,824	603,352	522,851	442,286	361,720	281,155
	116%	816,684	732,720	648,756	564,792	480,803	396,736	312,670
	118%	869,073	781,616	694,160	606,703	519,246	431,752	344,184
	120%	921,462	830,513	739,563	648,614	557,665	466,715	375,698

TABLE 8

Balance (RLV - BLV £ per acre)	228,385	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	410,136	356,699	303,263	249,826	196,389	142,953	89,487
	10,000	423,537	372,780	322,024	271,268	220,511	169,755	118,998
Grant (£ per unit)	15,000	436,918	388,862	340,785	292,709	244,633	196,557	148,480
-	20,000	450,265	404,888	359,511	314,134	268,755	223,359	177,963
	25,000	463,611	420,904	378,196	335,489	292,782	250,074	207,367
	30,000	476,958	436,920	396,882	356,844	316,805	276,767	236,729
	35,000	490,304	452,936	415,567	378,198	340,829	303,461	266,092
	40,000	503,651	468,951	434,252	399,553	364,853	330,154	295,454
	45,000	516,998	484,967	452,937	420,907	388,877	356,801	324,712
	50,000	530,344	500,983	471,622	442,254	412,824	383,394	353,965
	55,000	543,691	516,999	490,299	463,529	436,758	409,988	383,218

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Dispersal villages B
No Units: 50 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Dispersal villages B**
No Units:	50
Location / Value Zone:	Lower
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	16,978,375
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,963
Site Specific S106 Total (£)	598,146
Sub-total CIL+S106 (£ per unit)	11,963
Site Infrastructure (£ per unit)	10,000
Site Infrastructure Total (£)	500,000
Sub-total CIL+S106+Infrastructure (£ per unit)	21,963
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.85%
Developers Profit (% on costs)	27.30%
Developers Profit Total (£)	2,861,453
Land Value KPI's	
RLV (£/acre)	761,718
RLV (£/ha)	1,882,204
RLV (% of GDV)	18.48%
RLV Total (£)	3,137,007
BLV (£/acre)	533,333
BLV (£/ha)	1,317,866
BLV Total (£)	2,196,443
Surplus/Deficit (£/acre) [RLV-BLV]	228,385
Surplus/Deficit (£/ha)	564,338
Surplus/Deficit Total (£)	940,564
Surplus/Deficit (per unit)	18,811
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		250	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	20.0%	30.0	18.8%	18.8	20%	48.8
3 bed House	45.0%	67.5	25.0%	25.0	37%	92.5
4 bed House	30.0%	45.0	7.5%	7.5	21%	52.5
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	7.5	30.0%	30.0	15%	37.5
2 bed Flat	0.0%	0.0	18.8%	18.8	8%	18.8
Total number of units	100.0%	150.0	100.0%	100.0	100%	250.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	2,250	24,219	1,406	15,137	3,656	39,356
3 bed House	6,548	70,477	2,425	26,102	8,973	96,579
4 bed House	6,750	72,656	930	10,010	7,680	82,667
5 bed House	0	0	0	0	0	0
1 bed Flat	441	4,749	1,765	18,995	2,206	23,744
2 bed Flat	0	0	1,346	14,484	1,346	14,484
	15,989	172,101	7,872	84,729	23,860	256,829
AH % by floor area:			32.99%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	17,062,500
3 bed House	425,000	4,381	407	39,312,500
4 bed House	550,000	3,667	341	28,875,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	9,375,000
2 bed Flat	300,000	4,918	457	5,625,000
				100,250,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	30.0	@	350,000		10,500,000
3 bed House	67.5	@	425,000		28,687,500
4 bed House	45.0	@	550,000		24,750,000
5 bed House	0.0	@	700,000		-
1 bed Flat	7.5	@	250,000		1,875,000
2 bed Flat	0.0	@	300,000		-
	150.0				65,812,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	9.4	@	175,000		1,640,625
3 bed House	12.5	@	212,500		2,656,250
4 bed House	3.8	@	275,000		1,031,250
5 bed House	0.0	@	350,000		-
1 bed Flat	15.0	@	125,000		1,875,000
2 bed Flat	9.4	@	150,000		1,406,250
	50.0				8,609,375
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	1.9	@	140,000		262,500
3 bed House	2.5	@	170,000		425,000
4 bed House	0.8	@	220,000		165,000
5 bed House	0.0	@	280,000		-
1 bed Flat	3.0	@	100,000		300,000
2 bed Flat	1.9	@	120,000		225,000
	10.0				1,377,500
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	4.7	@	245,000		1,148,438
3 bed House	6.3	@	250,000		1,562,500
4 bed House	1.9	@	250,000		468,750
5 bed House	0.0	@	250,000		-
1 bed Flat	7.5	@	175,000		1,312,500
2 bed Flat	4.7	@	210,000		984,375
	25.0				5,476,563
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	2.8	@	245,000		689,063
3 bed House	3.8	@	297,500		1,115,625
4 bed House	1.1	@	385,000		433,125
5 bed House	0.0	@	490,000		-
1 bed Flat	4.5	@	175,000		787,500
2 bed Flat	2.8	@	210,000		590,625
	15.0	100.0			3,615,938
Sub-total GDV Residential	**250**				**84,891,875**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	15,358,125
	644 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	100	AH units @	0 per unit		-
Total GDV					**84,891,875**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(50,459)
Planning Application Professional Fees, Surveys and reports							(150,000)
CIL		15,989	sqm (Market only		0.00 £ psm		-
CIL analysis:		0.00%	% of GDV		0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				(2,495,500)
	Net zero carbon flats	5%	build cost				(245,229)
	Green belt loss mitigation	1,000	per dwelling				(250,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	250	units @		0 per unit		-
S106 analysis:	418,702 £ per ha	3.52%	% of GDV		11,963 £ per unit (total u	(2,990,729)	
AH Commuted Sum		23,860	sqm (total)		0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Dispersal villages C**				
No Units:	**250**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

cont./

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				7.14	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				250	units @	1,211	£ per unit		(302,855)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			250	units @	10,000	per unit		(2,500,000)
Infra. Costs analysis:		350,000	£ per ha		2.94%	% of GDV	10,000	£ per unit (total ui	(2,500,000)
1 bed House				-	sqm @	1,234	psm		-
2 bed House				3,656	sqm @	1,234	psm		(4,511,813)
3 bed House				8,973	sqm @	1,234	psm		(11,072,065)
4 bed House				7,680	sqm @	1,234	psm		(9,477,120)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				2,206	sqm @	1,381	psm		(3,046,324)
2 bed Flat			23,860	1,346	sqm @	1,381	psm		(1,858,257)
External works				29,965,578	@	15.0%			(4,494,837)
Ext. Works analysis:						17,979	£per unit		
M4(2) Category 2 Housing	Aff units		100	units @	100%	@	586	£ per unit	(58,600)
M4(3) Category 3 Housing	Aff units		100	units @	5%	@	11,386	£ per unit	(56,930)
M4(2) Category 2 Housing	Mrkt units		150	units @	100%	@	586	£ per unit	(87,900)
M4(3) Category 3 Housing	Mrkt units		150	units @	5%	@	11,386	£ per unit	(85,395)
Carbon/Energy Reduction/FHS			250	units @			0	£ per unit	-
EV Charging Points - Houses			194	units @			1,000	£ per unit	(193,750)
EV Charging Points - Flats			14	units @			625	£ per unit	(8,789)
Water Efficiency			250	units @			3,106	£ per unit	(776,500)
Contingency (on construction)				38,531,134	@	5.0%			(1,926,557)
Professional Fees				38,531,134	@	10.0%			(3,853,113)
Disposal Costs -									
OMS Marketing and Promotion				65,812,500	OMS @	3.00%	7,898	£ per unit	(1,974,375)
Residential Sales Agent Costs				65,812,500	OMS @	1.00%	2,633	£ per unit	(658,125)
Residential Sales Legal Costs				65,812,500	OMS @	0.25%	658	£ per unit	(164,531)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							11,228	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(342,854)
Developers Profit -									
Profit on OMS				65,812,500		20.00%			(13,162,500)
Margin on AH				19,079,375		6.00%	on AH values		(1,144,763)
Profit analysis:				84,891,875		16.85%	blended GDV	(14,307,263)	
				50,651,877		28.25%	on costs	(14,307,263)	
TOTAL COSTS									**(64,959,140)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									19,932,735
SDLT				19,932,735	@	HMRC formula			(986,137)
Acquisition Agent fees				19,932,735	@	1.0%			(199,327)
Acquisition Legal fees				19,932,735	@	0.5%			(99,664)
Interest on Land				19,932,735	@	7.50%			(1,494,955)
Residual Land Value									**17,152,652**
RLV analysis:		68,611	£ per plot	2,401,371	£ per ha	971,822	£ per acre		
						20.21%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				35.0	dph				
Site Area (Net)				7.14	ha	17.65	acres		
Benchmark Land Value (Net)		9,413	£ per plot	329,466	£ per ha	133,333	£ per acre		**2,353,327**
BLV analysis:		Density		3,340	sqm/ha	14,551	sqft/ac		

BALANCE									
Surplus/(Deficit)				**2,071,905**	£ per ha	**838,489**	£ per acre		**14,799,325**

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Scheme Ref:	**Dispersal villages C**				
No Units:	**250**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Greenfield**
Notes:					

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	838,489	25%	30%	35%	40%	45%	50%	55%
	250.00	789,039	739,569	690,081	640,565	591,049	541,533	492,017
	260.00	779,140	730,330	681,480	632,625	583,771	534,917	486,062
CIL £psm	270.00	769,240	721,071	672,878	624,685	576,493	528,300	480,096
0.00	280.00	759,339	711,808	664,277	616,746	569,215	521,683	474,125
	290.00	749,414	702,545	655,675	608,806	561,936	515,067	468,154
	300.00	739,489	693,282	647,074	600,866	554,658	508,444	462,182
	310.00	729,564	684,018	638,472	592,926	547,380	501,809	456,211
	320.00	719,640	674,755	629,871	584,986	540,102	495,175	450,240
	330.00	709,715	665,492	621,269	577,046	532,811	488,540	444,269
	340.00	699,790	656,229	612,668	569,107	525,513	481,905	438,298
	350.00	689,865	646,966	604,066	561,159	518,215	475,271	432,327
	360.00	679,941	637,703	595,465	553,197	510,917	468,636	426,356
	370.00	670,016	628,440	586,853	545,236	503,619	462,002	420,384
	380.00	660,091	619,176	578,228	537,274	496,321	455,367	414,413
	390.00	650,166	609,893	569,603	529,313	489,023	448,732	408,442
	400.00	640,232	600,605	560,978	521,351	481,725	442,098	402,455
	410.00	630,280	591,316	552,353	513,390	474,427	435,463	396,467
	420.00	620,328	582,028	543,728	505,428	467,128	428,824	390,478
	430.00	610,376	572,740	535,103	497,467	459,830	422,171	384,490
	440.00	600,424	563,451	526,478	489,505	452,532	415,517	378,501
	450.00	590,472	554,163	517,853	481,544	445,213	408,863	372,512
	460.00	580,520	544,874	509,228	473,579	437,894	402,209	366,524
	470.00	570,568	535,586	500,603	465,594	430,574	395,555	360,535
	480.00	560,617	526,297	491,963	457,609	423,255	388,901	354,547
	490.00	550,665	517,002	483,313	449,624	415,936	382,247	348,558
	500.00	540,710	507,686	474,663	441,640	408,616	375,593	342,570

TABLE 2

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	838,489	25%	30%	35%	40%	45%	50%	55%
	20,000	788,864	722,880	656,823	590,765	524,673	458,508	392,298
	25,000	726,864	660,806	594,749	528,595	462,430	396,166	329,840
Site Specific S106	30,000	664,790	598,682	532,517	466,327	400,034	333,663	267,180
11,963	35,000	602,604	536,439	470,195	403,902	337,486	270,966	204,282
	40,000	540,356	474,063	407,749	341,309	274,751	208,039	141,111
	45,000	477,931	411,572	345,132	278,537	211,795	144,847	77,572
	50,000	415,395	348,931	282,323	215,552	148,583	81,291	13,600
	55,000	352,717	286,106	219,309	152,313	85,011	17,337	(50,947)
	60,000	289,862	223,061	156,037	88,731	21,075	(47,157)	(116,215)
	65,000	226,797	159,761	92,451	24,806	(43,375)	(112,337)	(182,495)
	70,000	163,485	96,171	28,531	(39,616)	(108,460)	(178,402)	(250,009)
	75,000	99,891	32,255	(35,857)	(104,606)	(174,349)	(245,660)	(317,828)
	80,000	35,980	(32,097)	(100,778)	(170,351)	(241,312)	(313,460)	(386,037)
	85,000	(28,338)	(96,949)	(166,378)	(237,057)	(309,111)	(381,564)	(454,602)
	90,000	(93,121)	(162,445)	(232,872)	(304,763)	(377,090)	(449,969)	(523,548)

TABLE 3

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	838,489	25%	30%	35%	40%	45%	50%	55%
	15.0%	1,236,613	1,157,350	1,078,088	998,825	919,563	840,295	760,965
	16.0%	1,196,529	1,119,938	1,043,348	966,758	890,168	813,573	736,914
Profit	17.0%	1,156,445	1,082,527	1,008,609	934,691	860,772	786,850	712,864
20.0%	18.0%	1,116,360	1,045,115	973,869	902,623	831,377	760,127	688,813
	19.0%	1,076,276	1,007,703	939,129	870,556	801,982	733,404	664,763
	20.0%	1,036,192	970,291	904,390	838,489	772,587	706,682	640,712

TABLE 4

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	838,489	25%	30%	35%	40%	45%	50%	55%
	600,000	569,525	503,624	437,723	371,822	305,920	240,015	174,045
	620,000	549,525	483,624	417,723	351,822	285,920	220,015	154,045
BLV (£ per acre)	640,000	529,525	463,624	397,723	331,822	265,920	200,015	134,045
133,333	660,000	509,525	443,624	377,723	311,822	245,920	180,015	114,045
	680,000	489,525	423,624	357,723	291,822	225,920	160,015	94,045
	700,000	469,525	403,624	337,723	271,822	205,920	140,015	74,045
	720,000	449,525	383,624	317,723	251,822	185,920	120,015	54,045
	740,000	429,525	363,624	297,723	231,822	165,920	100,015	34,045
	760,000	409,525	343,624	277,723	211,822	145,920	80,015	14,045
	780,000	389,525	323,624	257,723	191,822	125,920	60,015	(5,955)
	800,000	369,525	303,624	237,723	171,822	105,920	40,015	(25,955)
	820,000	349,525	283,624	217,723	151,822	85,920	20,015	(45,955)
	840,000	329,525	263,624	197,723	131,822	65,920	15	(65,955)
	860,000	309,525	243,624	177,723	111,822	45,920	(19,985)	(85,955)
	880,000	289,525	223,624	157,723	91,822	25,920	(39,985)	(105,955)
	900,000	269,525	203,624	137,723	71,822	5,920	(59,985)	(125,955)

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	838,489	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	1,036,192	970,291	904,390	838,489	772,587	706,682	640,712
	40	1,203,267	1,127,952	1,052,636	977,320	902,005	826,684	751,290
Density (dph)	45	1,370,342	1,285,612	1,200,882	1,116,152	1,031,422	946,686	861,868
35.0	50	1,537,417	1,443,273	1,349,128	1,254,984	1,160,839	1,066,688	972,446
	55	1,704,492	1,600,933	1,497,374	1,393,815	1,290,256	1,186,690	1,083,024
	60	1,871,567	1,758,594	1,645,620	1,532,647	1,419,674	1,306,692	1,193,602
	65	2,038,642	1,916,254	1,793,867	1,671,479	1,549,091	1,426,694	1,304,180
	70	2,205,717	2,073,915	1,942,113	1,810,310	1,678,508	1,546,696	1,414,758
	75	2,372,792	2,231,576	2,090,359	1,949,142	1,807,925	1,666,698	1,525,335
	80	2,539,867	2,389,236	2,238,605	2,087,974	1,937,342	1,786,701	1,635,913
	85	2,706,943	2,546,897	2,386,851	2,226,805	2,066,760	1,906,703	1,746,491

TABLE 6

Balance (RLV - BLV £ per acre)	838,489	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	1,077,104	1,010,781	944,428	878,055	811,683	745,310	678,937
	100%	1,036,192	970,291	904,390	838,489	772,587	706,682	640,712
Build Cost	102%	995,211	929,781	864,351	798,922	733,454	667,958	602,461
100%	104%	954,229	889,271	824,305	759,281	694,257	629,233	564,173
(105% = 5% increase)	106%	913,247	848,713	784,162	719,611	655,060	590,451	525,815
	108%	872,176	808,098	744,020	679,942	615,780	551,619	487,432
	110%	831,088	767,483	703,849	640,162	576,474	512,749	448,961
	112%	790,000	726,809	663,595	600,382	537,116	473,803	410,448
	114%	748,820	686,081	623,341	560,532	497,694	434,812	371,856
	116%	707,618	645,353	582,998	520,635	458,223	395,744	333,181
	118%	666,400	604,513	542,625	480,681	418,679	356,599	294,444
	120%	625,077	563,665	502,185	440,660	379,061	317,402	255,591

TABLE 7

Balance (RLV - BLV £ per acre)	838,489	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	422,160	397,040	371,920	346,784	321,632	296,481	271,329
	82%	483,915	454,682	425,445	396,207	366,970	337,733	308,489
Market Values	84%	545,514	512,202	478,890	445,577	412,260	378,906	345,551
100%	86%	607,065	569,685	532,276	494,857	457,438	420,019	382,600
(105% = 5% increase)	88%	668,517	627,041	585,565	544,088	502,610	461,085	419,560
	90%	729,930	684,397	638,824	593,250	547,677	502,104	456,519
	92%	791,249	741,632	692,015	642,397	592,743	543,073	493,403
	94%	852,569	798,864	745,158	691,453	637,748	584,041	530,274
	96%	913,791	856,050	798,302	740,509	682,715	624,922	567,129
	98%	974,992	913,170	851,349	789,528	727,683	665,802	603,920
	100%	1,036,192	970,291	904,390	838,489	772,587	706,682	640,712
	102%	1,097,316	1,027,391	957,430	887,449	817,468	747,487	677,504
	104%	1,158,411	1,084,413	1,010,414	936,410	862,348	788,287	714,226
	106%	1,219,506	1,141,435	1,063,363	985,291	907,220	829,088	750,946
	108%	1,280,548	1,198,456	1,116,312	1,034,167	952,023	869,878	787,667
	110%	1,341,551	1,255,394	1,169,238	1,083,043	996,826	910,608	824,387
	112%	1,402,554	1,312,330	1,222,107	1,131,883	1,041,629	951,338	861,048
	114%	1,463,556	1,369,266	1,274,976	1,180,686	1,086,395	992,068	897,705
	116%	1,524,530	1,426,202	1,327,845	1,229,488	1,131,131	1,032,774	934,362
	118%	1,585,453	1,483,089	1,380,714	1,278,290	1,175,866	1,073,442	971,018
	120%	1,646,377	1,539,951	1,433,525	1,327,092	1,220,601	1,114,110	1,007,620

TABLE 8

Balance (RLV - BLV £ per acre)	838,489	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	1,051,652	988,849	926,041	863,233	800,425	737,616	674,808
	10,000	1,067,082	1,007,402	947,692	887,977	828,262	768,546	708,831
Grant (£ per unit)	15,000	1,082,513	1,025,919	969,324	912,721	856,099	799,476	742,854
-	20,000	1,097,943	1,044,435	990,927	937,419	883,911	830,403	776,877
	25,000	1,113,374	1,062,952	1,012,530	962,108	911,686	861,264	810,842
	30,000	1,128,805	1,081,469	1,034,133	986,797	939,461	892,125	844,789
	35,000	1,144,235	1,099,985	1,055,735	1,011,486	967,236	922,986	878,736
	40,000	1,159,666	1,118,502	1,077,338	1,036,175	994,991	953,807	912,623
	45,000	1,175,096	1,137,019	1,098,918	1,060,813	1,022,709	984,605	946,500
	50,000	1,190,526	1,155,501	1,120,476	1,085,452	1,050,427	1,015,402	980,377
	55,000	1,205,924	1,173,980	1,142,035	1,110,090	1,078,145	1,046,200	1,014,227

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Dispersal villages C
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Greenfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Dispersal villages C**
No Units:	250
Location / Value Zone:	Lower
Development Scenario:	Greenfield
Notes:	0
Total GDV (£)	84,891,875
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,963
Site Specific S106 Total (£)	2,990,729
Sub-total CIL+S106 (£ per unit)	11,963
Site Infrastructure (£ per unit)	10,000
Site Infrastructure Total (£)	2,500,000
Sub-total CIL+S106+Infrastructure (£ per unit)	21,963
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.85%
Developers Profit (% on costs)	28.25%
Developers Profit Total (£)	14,307,263
Land Value KPI's	
RLV (£/acre)	971,822
RLV (£/ha)	2,401,371
RLV (% of GDV)	20.21%
RLV Total (£)	17,152,652
BLV (£/acre)	133,333
BLV (£/ha)	329,466
BLV Total (£)	2,353,327
Surplus/Deficit (£/acre) [RLV-BLV]	838,489
Surplus/Deficit (£/ha)	2,071,905
Surplus/Deficit Total (£)	14,799,325
Surplus/Deficit (per unit)	59,197
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		250	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	20.0%	30.0	18.8%	18.8	20%	48.8
3 bed House	45.0%	67.5	25.0%	25.0	37%	92.5
4 bed House	30.0%	45.0	7.5%	7.5	21%	52.5
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	7.5	30.0%	30.0	15%	37.5
2 bed Flat	0.0%	0.0	18.8%	18.8	8%	18.8
Total number of units	100.0%	150.0	100.0%	100.0	100%	250.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	2,250	24,219	1,406	15,137	3,656	39,356
3 bed House	6,548	70,477	2,425	26,102	8,973	96,579
4 bed House	6,750	72,656	930	10,010	7,680	82,667
5 bed House	0	0	0	0	0	0
1 bed Flat	441	4,749	1,765	18,995	2,206	23,744
2 bed Flat	0	0	1,346	14,484	1,346	14,484
	15,989	172,101	7,872	84,729	23,860	256,829
AH % by floor area:			32.99%	AH % by floor area due to mix		

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	17,062,500
3 bed House	425,000	4,381	407	39,312,500
4 bed House	550,000	3,667	341	28,875,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	9,375,000
2 bed Flat	300,000	4,918	457	5,625,000
				100,250,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	30.0	@	350,000		10,500,000
3 bed House	67.5	@	425,000		28,687,500
4 bed House	45.0	@	550,000		24,750,000
5 bed House	0.0	@	700,000		-
1 bed Flat	7.5	@	250,000		1,875,000
2 bed Flat	0.0	@	300,000		-
	150.0				65,812,500
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	9.4	@	175,000		1,640,625
3 bed House	12.5	@	212,500		2,656,250
4 bed House	3.8	@	275,000		1,031,250
5 bed House	0.0	@	350,000		-
1 bed Flat	15.0	@	125,000		1,875,000
2 bed Flat	9.4	@	150,000		1,406,250
	50.0				8,609,375
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	1.9	@	140,000		262,500
3 bed House	2.5	@	170,000		425,000
4 bed House	0.8	@	220,000		165,000
5 bed House	0.0	@	280,000		-
1 bed Flat	3.0	@	100,000		300,000
2 bed Flat	1.9	@	120,000		225,000
	10.0				1,377,500
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	4.7	@	245,000		1,148,438
3 bed House	6.3	@	250,000		1,562,500
4 bed House	1.9	@	250,000		468,750
5 bed House	0.0	@	250,000		-
1 bed Flat	7.5	@	175,000		1,312,500
2 bed Flat	4.7	@	210,000		984,375
	25.0				5,476,563
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	2.8	@	245,000		689,063
3 bed House	3.8	@	297,500		1,115,625
4 bed House	1.1	@	385,000		433,125
5 bed House	0.0	@	490,000		-
1 bed Flat	4.5	@	175,000		787,500
2 bed Flat	2.8	@	210,000		590,625
	15.0	100.0			3,615,938
Sub-total GDV Residential	**250**				**84,891,875**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	15,358,125
	644 £ psm (total GIA sqm)			61,433 £ per unit (total units)	
Grant	100	AH units @	0 per unit		-
Total GDV					**84,891,875**

DEVELOPMENT COSTS							
Initial Payments -							
Statutory Planning Fees (Residential)							(50,459)
Planning Application Professional Fees, Surveys and reports							(150,000)
CIL		15,989	sqm (Market only	0.00	£ psm		-
CIL analysis:		0.00%	% of GDV	0	£ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling				(2,495,500)
	Net zero carbon flats	5%	build cost				(245,229)
	Green belt loss mitigation	1,000	per dwelling				(250,000)
	Year 4	0					-
	Year 5	0					-
	Year 6	0					-
	Year 7	0					-
	Year 8	0					-
	Year 9	0					-
	Year 10	0					-
	Year 11	0					-
	Year 12	0					-
	Year 13	0					-
	Year 14	0					-
	Year 15	0					-
	total	250	units @	0	per unit		-
S106 analysis:	418,702 £ per ha	3.52%	% of GDV	11,963	£ per unit (total u	(2,990,729)	
AH Commuted Sum		23,860	sqm (total)	0	£ psm		-
Comm. Sum analysis:		0.00%	% of GDV				

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Scheme Ref:	**Dispersal villages D**				
No Units:	**250**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Brownfield**
Notes:					

cont./

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

Construction Costs -									
Site Clearance, Demolition & Remediation				7.14	ha @	110,000	£ per ha (if brownfield)		(785,714)
Net Biodiveristy Gain @ 20%				250	units @	1,211	£ per unit		(302,855)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			250	units @	10,000	per unit		(2,500,000)
Infra. Costs analysis:	350,000	£ per ha		2.94%	% of GDV	10,000	£ per unit (total ui	(2,500,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				3,656	sqm @	1,234	psm		(4,511,813)
3 bed House				8,973	sqm @	1,234	psm		(11,072,065)
4 bed House				7,680	sqm @	1,234	psm		(9,477,120)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				2,206	sqm @	1,381	psm		(3,046,324)
2 bed Flat			23,860	1,346	sqm @	1,381	psm		(1,858,257)
External works				29,965,578	@	15.0%			(4,494,837)
Ext. Works analysis:						17,979	£per unit		
M4(2) Category 2 Housing	Aff units		100	units @	100%	@	586	£ per unit	(58,600)
M4(3) Category 3 Housing	Aff units		100	units @	5%	@	11,386	£ per unit	(56,930)
M4(2) Category 2 Housing	Mrkt units		150	units @	100%	@	586	£ per unit	(87,900)
M4(3) Category 3 Housing	Mrkt units		150	units @	5%	@	11,386	£ per unit	(85,395)
Carbon/Energy Reduction/FHS			250	units @			0	£ per unit	-
EV Charging Points - Houses			194	units @			1,000	£ per unit	(193,750)
EV Charging Points - Flats			14	units @			625	£ per unit	(8,789)
Water Efficiency			250	units @			3,106	£ per unit	(776,500)
Contingency (on construction)				39,316,848	@	5.0%			(1,965,842)
Professional Fees				39,316,848	@	10.0%			(3,931,685)
Disposal Costs -									
OMS Marketing and Promotion				65,812,500	OMS @	3.00%	7,898	£ per unit	(1,974,375)
Residential Sales Agent Costs				65,812,500	OMS @	1.00%	2,633	£ per unit	(658,125)
Residential Sales Legal Costs				65,812,500	OMS @	0.25%	658	£ per unit	(164,531)
Affordable Sale Legal Costs								lump sum	(10,000)
Disposal Cost analysis:							11,228	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(484,425)
Developers Profit -									
Profit on OMS				65,812,500		20.00%			(13,162,500)
Margin on AH				19,079,375		6.00%	on AH values		(1,144,763)
Profit analysis:				84,891,875		16.85%	blended GDV	(14,307,263)	
				51,697,020		27.68%	on costs	(14,307,263)	
TOTAL COSTS									**(66,004,283)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									18,887,592
SDLT				18,887,592	@	HMRC formula			(933,880)
Acquisition Agent fees				18,887,592	@	1.0%			(188,876)
Acquisition Legal fees				18,887,592	@	0.5%			(94,438)
Interest on Land				18,887,592	@	7.50%			(1,416,569)
Residual Land Value									**16,253,830**
RLV analysis:	65,015	£ per plot		2,275,536	£ per ha	920,897	£ per acre		
						19.15%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				35.0	dph				
Site Area (Net)				7.14	ha	17.65	acres		
Benchmark Land Value (Net)	45,184	£ per plot		1,581,440	£ per ha	640,000	£ per acre		**11,296,000**
BLV analysis:		Density		3,340	sqm/ha	14,551	sqft/ac		

BALANCE									
Surplus/(Deficit)				**694,096**	£ per ha	**280,897**	£ per acre		**4,957,830**

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Scheme Ref:	**Dispersal villages D**				
No Units:	**250**	**Location / Value Zone:**	**Lower**	**Development Scenario:**	**Brownfield**
Notes:					

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	280,897	25%	30%	35%	40%	45%	50%	55%
	0.00	478,755	412,836	346,866	280,897	214,927	148,933	82,876
	10.00	468,879	403,596	338,287	272,977	207,668	142,317	76,921
CIL £psm	20.00	459,003	394,356	329,707	265,058	200,408	135,700	70,966
0.00	30.00	449,106	385,117	321,127	257,138	193,148	129,084	65,011
	40.00	439,207	375,877	312,548	249,218	185,878	122,467	59,056
	50.00	429,307	366,638	303,968	241,299	178,600	115,851	53,102
	60.00	419,408	357,398	295,388	233,379	171,322	109,234	47,147
	70.00	409,508	348,158	286,809	225,459	164,043	102,618	41,192
	80.00	399,608	338,919	278,229	217,529	156,765	96,001	35,237
	90.00	389,709	329,679	269,650	209,589	149,487	89,384	29,271
	100.00	379,809	320,440	261,070	201,650	142,209	82,768	23,300
	110.00	369,910	311,200	252,489	193,710	134,931	76,151	17,329
	120.00	360,010	301,960	243,887	185,770	127,652	69,535	11,358
	130.00	350,111	292,721	235,286	177,830	120,374	62,918	5,387
	140.00	340,211	283,479	226,684	169,890	113,096	56,292	(585)
	150.00	330,311	274,216	218,083	161,950	105,818	49,658	(6,556)
	160.00	320,412	264,952	209,482	154,011	98,540	43,023	(12,527)
	170.00	310,499	255,689	200,880	146,071	91,262	36,388	(18,498)
	180.00	300,574	246,426	192,279	138,131	83,977	29,754	(24,469)
	190.00	290,649	237,163	183,677	130,191	76,679	23,119	(30,440)
	200.00	280,724	227,900	175,076	122,251	69,381	16,485	(36,411)
	210.00	270,799	218,637	166,474	114,311	62,083	9,850	(42,382)
	220.00	260,875	209,374	157,873	106,353	54,784	3,215	(48,354)
	230.00	250,950	200,110	149,271	98,392	47,486	(3,419)	(54,340)
	240.00	241,025	190,847	140,670	90,430	40,188	(10,054)	(60,328)
	250.00	231,100	181,584	132,048	82,469	32,890	(16,688)	(66,317)

TABLE 2

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	280,897	25%	30%	35%	40%	45%	50%	55%
	-	478,755	412,836	346,866	280,897	214,927	148,933	82,876
	5,000	416,889	350,920	284,950	218,974	152,917	86,859	20,768
Site Specific S106	10,000	354,973	289,003	222,958	156,900	90,843	24,690	(41,475)
11,963	15,000	292,998	226,941	160,884	94,777	28,612	(37,585)	(103,878)
	20,000	230,925	164,864	98,698	32,533	(33,717)	(100,009)	(166,439)
	25,000	168,785	102,620	36,445	(29,848)	(96,176)	(162,616)	(229,194)
	30,000	106,542	40,313	(25,980)	(92,353)	(158,800)	(225,409)	(292,178)
	35,000	44,181	(22,112)	(88,530)	(155,014)	(221,624)	(288,422)	(355,461)
	40,000	(18,266)	(84,707)	(151,229)	(217,868)	(284,684)	(351,738)	(419,090)
	45,000	(80,884)	(147,443)	(214,111)	(280,948)	(348,014)	(415,370)	(483,148)
	50,000	(143,658)	(210,354)	(277,212)	(344,290)	(411,650)	(479,410)	(547,742)
	55,000	(206,598)	(273,476)	(340,566)	(407,930)	(475,673)	(543,953)	(613,018)
	60,000	(269,740)	(336,843)	(404,210)	(471,935)	(540,163)	(609,141)	(679,218)
	65,000	(333,119)	(400,490)	(468,197)	(536,392)	(605,265)	(675,146)	(746,602)
	70,000	(396,770)	(464,460)	(532,633)	(601,411)	(671,123)	(742,253)	(814,401)

TABLE 3

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	280,897	25%	30%	35%	40%	45%	50%	55%
	15.0%	679,176	599,895	520,564	441,233	361,902	282,547	203,128
	16.0%	639,092	562,483	485,824	409,166	332,507	255,824	179,078
Profit	17.0%	599,008	525,071	451,085	377,099	303,112	229,101	155,027
20.0%	18.0%	558,923	487,659	416,345	345,031	273,717	202,379	130,977
	19.0%	518,839	450,247	381,606	312,964	244,322	175,656	106,926
	20.0%	478,755	412,836	346,866	280,897	214,927	148,933	82,876

TABLE 4

Balance (RLV - BLV £ per acre)	Affordable Housing - % on site 40%							
	280,897	25%	30%	35%	40%	45%	50%	55%
	600,000	518,755	452,836	386,866	320,897	254,927	188,933	122,876
	620,000	498,755	432,836	366,866	300,897	234,927	168,933	102,876
BLV (£ per acre)	640,000	478,755	412,836	346,866	280,897	214,927	148,933	82,876
640,000	660,000	458,755	392,836	326,866	260,897	194,927	128,933	62,876
	680,000	438,755	372,836	306,866	240,897	174,927	108,933	42,876
	700,000	418,755	352,836	286,866	220,897	154,927	88,933	22,876
	720,000	398,755	332,836	266,866	200,897	134,927	68,933	2,876
	740,000	378,755	312,836	246,866	180,897	114,927	48,933	(17,124)
	760,000	358,755	292,836	226,866	160,897	94,927	28,933	(37,124)
	780,000	338,755	272,836	206,866	140,897	74,927	8,933	(57,124)
	800,000	318,755	252,836	186,866	120,897	54,927	(11,067)	(77,124)
	820,000	298,755	232,836	166,866	100,897	34,927	(31,067)	(97,124)
	840,000	278,755	212,836	146,866	80,897	14,927	(51,067)	(117,124)
	860,000	258,755	192,836	126,866	60,897	(5,073)	(71,067)	(137,124)
	880,000	238,755	172,836	106,866	40,897	(25,073)	(91,067)	(157,124)
	900,000	218,755	152,836	86,866	20,897	(45,073)	(111,067)	(177,124)

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

TABLE 5

Balance (RLV - BLV £ per acre)	280,897	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	35	478,755	412,836	346,866	280,897	214,927	148,933	82,876
	40	645,830	570,515	495,141	419,747	344,354	268,960	193,479
Density (dph)	45	812,905	728,175	643,416	558,598	473,780	388,962	304,082
35.0	50	979,980	885,836	791,690	697,448	603,206	508,964	414,685
	55	1,147,055	1,043,496	939,937	836,299	732,633	628,966	525,288
	60	1,314,130	1,201,157	1,088,183	975,149	862,059	748,969	635,878
	65	1,481,205	1,358,818	1,236,430	1,114,000	991,485	868,971	746,456
	70	1,648,280	1,516,478	1,384,676	1,252,850	1,120,912	988,973	857,034
	75	1,815,355	1,674,139	1,532,922	1,391,701	1,250,338	1,108,975	967,612
	80	1,982,431	1,831,799	1,681,168	1,530,537	1,379,764	1,228,977	1,078,190
	85	2,149,506	1,989,460	1,829,414	1,669,368	1,509,190	1,348,979	1,188,768

TABLE 6

Balance (RLV - BLV £ per acre)	280,897	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	98%	519,737	453,364	386,991	320,567	254,124	187,682	121,234
	100%	478,755	412,836	346,866	280,897	214,927	148,933	82,876
Build Cost	102%	437,717	372,220	306,724	241,227	175,685	110,101	44,518
100%	104%	396,629	331,605	266,581	201,488	136,379	71,270	6,069
(105% = 5% increase)	106%	355,541	290,979	226,344	161,708	97,073	32,337	(32,402)
	108%	314,413	250,251	186,090	121,918	57,654	(6,609)	(70,969)
	110%	273,211	209,523	145,810	82,021	18,233	(45,651)	(109,561)
	112%	232,009	168,751	105,437	42,124	(21,287)	(84,719)	(148,279)
	114%	190,741	127,903	65,065	2,124	(60,832)	(123,904)	(187,048)
	116%	149,418	87,055	24,582	(37,897)	(100,486)	(163,130)	(225,901)
	118%	108,089	46,086	(15,916)	(78,024)	(140,172)	(202,463)	(264,882)
	120%	66,637	5,111	(56,519)	(118,177)	(179,985)	(241,894)	(303,961)

TABLE 7

Balance (RLV - BLV £ per acre)	280,897	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	80%	(136,658)	(161,836)	(187,030)	(212,225)	(237,419)	(262,629)	(287,877)
	82%	(74,725)	(104,005)	(133,286)	(162,566)	(191,863)	(221,199)	(250,535)
Market Values	84%	(12,921)	(46,276)	(79,630)	(113,020)	(146,429)	(179,839)	(213,262)
100%	86%	48,808	11,366	(26,106)	(63,578)	(101,049)	(138,550)	(176,088)
(105% = 5% increase)	88%	110,407	68,882	27,356	(14,170)	(55,759)	(97,348)	(138,937)
	90%	171,957	126,374	80,742	35,110	(10,522)	(56,175)	(101,882)
	92%	233,409	183,740	134,070	84,390	34,651	(15,088)	(64,827)
	94%	294,846	241,095	187,328	133,562	79,795	25,978	(27,867)
	96%	356,165	298,372	240,579	182,724	124,860	66,996	9,092
	98%	417,485	355,604	293,722	231,841	169,925	107,965	46,004
	100%	478,755	412,836	346,866	280,897	214,927	148,933	82,876
	102%	539,956	469,975	399,993	329,953	259,895	189,838	119,747
	104%	601,156	527,095	453,034	378,973	304,863	230,718	156,572
	106%	662,353	584,216	506,074	427,933	349,792	271,598	193,364
	108%	723,448	641,303	559,115	476,894	394,672	312,451	230,156
	110%	784,543	698,325	612,108	525,854	439,553	353,251	266,948
	112%	845,638	755,347	665,057	574,766	484,433	394,052	303,670
	114%	906,685	812,369	718,006	623,642	529,279	434,852	340,391
	116%	967,687	869,330	770,955	672,518	574,082	475,645	377,111
	118%	1,028,690	926,266	823,842	721,394	618,885	516,375	413,831
	120%	1,089,693	983,202	876,711	770,220	663,687	557,105	450,522

TABLE 8

Balance (RLV - BLV £ per acre)	280,897	Affordable Housing - % on site 40% 25%	30%	35%	40%	45%	50%	55%
	5,000	494,220	431,412	368,569	305,700	242,832	179,963	117,069
	10,000	509,685	449,970	390,255	330,504	270,736	210,967	151,199
Grant (£ per unit)	15,000	525,150	468,528	411,906	355,284	298,640	241,972	185,304
-	20,000	540,615	487,086	433,557	380,028	326,499	272,969	219,408
	25,000	556,080	505,644	455,208	404,772	354,336	303,899	253,463
	30,000	571,545	524,202	476,859	429,516	382,173	334,830	287,486
	35,000	587,010	542,760	498,510	454,260	410,010	365,760	321,509
	40,000	602,475	561,318	520,161	479,004	437,847	396,690	355,530
	45,000	617,940	579,866	541,788	503,710	465,633	427,555	389,478
	50,000	633,374	598,382	563,391	528,399	493,408	458,416	423,425
	55,000	648,804	616,899	584,994	553,088	521,183	489,277	457,372

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: Dispersal villages D
No Units: 250 **Location / Value Zone:** Lower **Development Scenario:** Brownfield
Notes:

[KPI's for Report Summary Table]

[note that this table is combined with other similar Scheme Typologies as a Summary table]

[please check that is captures the required KPI's that you would like carried forward to the Summary Table]

Scheme Ref:	**Dispersal villages D**
No Units:	250
Location / Value Zone:	Lower
Development Scenario:	Brownfield
Notes:	0
Total GDV (£)	84,891,875
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	11,963
Site Specific S106 Total (£)	2,990,729
Sub-total CIL+S106 (£ per unit)	11,963
Site Infrastructure (£ per unit)	10,000
Site Infrastructure Total (£)	2,500,000
Sub-total CIL+S106+Infrastructure (£ per unit)	21,963
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.85%
Developers Profit (% on costs)	27.68%
Developers Profit Total (£)	14,307,263
Land Value KPI's	
RLV (£/acre)	920,897
RLV (£/ha)	2,275,536
RLV (% of GDV)	19.15%
RLV Total (£)	16,253,830
BLV (£/acre)	640,000
BLV (£/ha)	1,581,440
BLV Total (£)	11,296,000
Surplus/Deficit (£/acre) [RLV-BLV]	280,897
Surplus/Deficit (£/ha)	694,096
Surplus/Deficit Total (£)	4,957,830
Surplus/Deficit (per unit)	19,831
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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210726 Cambridge strategic options residential appraisals_v3 - Summary Table

Scheme Ref:	Urban A	Urban B	Urban C	Edge A	Edge B	Edge C	Edge D	Edge E	New settlement A	New settlement B	Dispersal villages A	Dispersal villages B	Dispersal villages C	Dispersal villages D
No Units:	700	50	700	3870	1935	500	3870	1935	5120	2560	50	50	250	250
Location / Value Zone:	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Lower	Lower	Lower	Lower	Lower	Lower
Development Scenario:	Brownfield	Brownfield	Brownfield	Greenfield	Greenfield	Greenfield	Brownfield	Brownfield	Greenfield	Greenfield	Greenfield	Brownfield	Greenfield	Brownfield
Notes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total GDV (£)	279,210,838	14,342,388	200,793,425	1,567,751,029	783,875,514	202,551,813	1,567,751,029	783,875,514	1,753,945,600	1,723,225,600	16,978,375	16,978,375	84,891,875	84,891,875
Policy Assumptions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AH Target % (& mix):	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Affordable Rent:	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Social Rent:	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
First Homes:	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
CIL (£ psm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIL (£ per unit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIL Total (£)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Site Specific S106 (£ per unit)	11,586	6,483	6,483	11,586	11,586	12,347	11,586	11,586	12,227	11,487	11,963	11,963	11,963	11,963
Site Specific S106 Total (£)	8,110,297	324,129	4,537,799	44,838,355	22,419,177	6,173,350	44,838,355	22,419,177	62,604,812	58,815,679	598,146	598,146	2,990,729	2,990,729
Sub-total CIL+S106 (£ per unit)	11,586	6,483	6,483	11,586	11,586	12,347	11,586	11,586	12,227	11,487	11,963	11,963	11,963	11,963
Site Infrastructure (£ per unit)	30,000	-	30,000	20,000	20,000	20,000	15,000	15,000	30,000	30,000	10,000	10,000	10,000	10,000
Site Infrastructure Total (£)	21,000,000	-	21,000,000	77,400,000	38,700,000	10,000,000	58,050,000	29,025,000	153,600,000	153,600,000	500,000	500,000	2,500,000	2,500,000
Sub-total CIL+S106+Infrastructure (£ per unit)	41,586	6,483	36,483	31,586	31,586	32,347	26,586	26,586	42,227	41,487	21,963	21,963	21,963	21,963
Profit KPI's	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Developers Profit (% on OMS)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Developers Profit (% on AH)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Developers Profit (% blended)	16.90%	16.17%	16.17%	16.80%	16.80%	16.80%	16.80%	16.80%	16.88%	16.83%	16.85%	16.85%	16.85%	16.85%
Developers Profit (% on costs)	29.02%	27.02%	21.83%	31.21%	31.21%	31.06%	31.52%	31.51%	24.79%	24.39%	27.95%	27.30%	28.25%	27.68%
Developers Profit Total (£)	47,181,650	2,318,993	32,465,906	263,350,472	131,675,236	34,024,609	263,350,472	131,675,236	296,084,736	289,940,736	2,861,453	2,861,453	14,307,263	14,307,263
Land Value KPI's	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RLV (£/acre)	2,590,777	7,209,146	2,923,352	1,656,977	1,656,675	1,642,223	1,686,357	1,686,051	717,063	664,612	812,293	761,718	971,822	920,897
RLV (£/ha)	6,401,811	17,813,800	7,223,604	4,094,389	4,093,643	4,057,933	4,166,988	4,166,231	1,771,862	1,642,258	2,007,177	1,882,204	2,401,371	2,275,536
RLV (% of GDV)	21.40%	20.70%	8.39%	25.27%	25.26%	25.04%	25.72%	25.71%	12.93%	12.20%	19.70%	18.48%	20.21%	19.15%
RLV Total (£)	£59,750,237	£2,968,967	£16,855,075	£396,132,139	£198,029,965	£50,724,160	£403,156,084	£201,541,437	£226,798,294	£210,208,737	£3,345,295	£3,137,007	£17,152,652	£16,253,830
BLV (£/acre)	£685,714	£533,333	£640,000	£200,000	£200,000	£142,857	£960,000	£960,000	£200,000	£200,000	£111,111	£533,333	£133,333	£640,000
BLV (£/ha)	£1,694,399	£1,317,866	£1,581,440	£494,200	£494,200	£353,000	£2,372,160	£2,372,160	£494,200	£494,200	£274,555	£1,317,866	£329,466	£1,581,440
BLV Total (£)	£15,814,393	£219,644	£3,690,027	£47,813,850	£23,906,925	£4,412,496	£229,506,480	£114,753,240	£63,257,600	£63,257,600	£457,592	£2,196,443	£2,353,327	£11,296,000
Surplus/Deficit (£/acre) [RLV-BLV]	£1,905,063	£6,675,813	£2,283,352	£1,456,977	£1,456,675	£1,499,366	£726,357	£726,051	£517,063	£464,612	£701,182	£228,385	£838,469	£280,897
Surplus/Deficit (£/ha)	£4,707,412	£16,495,934	£5,642,164	£3,600,189	£3,599,443	£3,704,933	£1,794,828	£1,794,071	£1,277,662	£1,148,056	£1,732,622	£564,338	£2,071,905	£894,096
Surplus/Deficit Total (£)	£43,935,843	£2,749,322	£13,165,049	£348,318,289	£174,123,040	£46,311,665	£173,649,604	£86,788,197	£163,540,694	£146,951,137	£2,887,703	£940,564	£14,799,325	£4,957,830
Surplus/Deficit (per unit)	£62,765	£54,986	£18,807	£90,005	£89,986	£92,623	£44,871	£44,852	£31,942	£28,701	£57,754	£18,811	£59,197	£19,831
Plan Viability comments	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable	Viable

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Scheme Ref	AAP housing and flatted				
No Units	700	**Location / Value Zone**	Mid	**Development Scenario**	Brownfield
Notes					

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		700	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	42.0	18.8%	52.5	14%	94.5
3 bed House	45.0%	189.0	25.0%	70.0	37%	259.0
4 bed House	30.0%	126.0	7.5%	21.0	21%	147.0
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	21.0	30.0%	84.0	15%	105.0
2 bed Flat	10.0%	42.0	18.8%	52.5	14%	94.5
Total number of units	100.0%	420.0	100.0%	280.0	100%	700.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	70.0	753	85.0%	82.4	886

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	3,150	33,906	3,938	42,383	7,088	76,289
3 bed House	18,333	197,335	6,790	73,087	25,123	270,422
4 bed House	18,900	203,438	2,604	28,029	21,504	231,467
5 bed House	0	0	0	0	0	0
1 bed Flat	1,235	13,297	4,941	53,186	6,176	66,483
2 bed Flat	3,459	37,230	4,324	46,538	7,782	83,769
	45,077	485,206	22,596	243,224	67,673	728,430
AH % by floor area:			33.39% AH % by floor area due to mix			

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	37,800,000
3 bed House	500,000	5,155	479	129,500,000
4 bed House	670,000	4,467	415	98,490,000
5 bed House	0	#DIV/0!	#DIV/0!	0
1 bed Flat	300,000	6,000	557	31,500,000
2 bed Flat	365,000	5,214	484	34,492,500
				331,782,500

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	0	50%	0	40%	0	70%	0	70%
1 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref	AAP housing and flatted				
No Units	700	**Location / Value Zone**	Mid	**Development Scenario**	Brownfield
Notes					

GROSS DEVELOPMENT VALUE

OMS GDV -	(part houses due to % mix)			
1 bed House	0.0	@	0	-
2 bed House	42.0	@	400,000	16,800,000
3 bed House	189.0	@	500,000	94,500,000
4 bed House	126.0	@	670,000	84,420,000
5 bed House	0.0	@	0	-
1 bed Flat	21.0	@	300,000	6,300,000
2 bed Flat	42.0	@	365,000	15,330,000
	420.0			217,350,000
Affordable Rent GDV -				
1 bed House	0.0	@	0	-
2 bed House	26.3	@	200,000	5,250,000
3 bed House	35.0	@	250,000	8,750,000
4 bed House	10.5	@	335,000	3,517,500
5 bed House	0.0	@	0	-
1 bed Flat	42.0	@	150,000	6,300,000
2 bed Flat	26.3	@	182,500	4,790,625
	140.0			28,608,125
Social Rent GDV -				
1 bed House	0.0	@	0	-
2 bed House	5.3	@	160,000	840,000
3 bed House	7.0	@	200,000	1,400,000
4 bed House	2.1	@	268,000	562,800
5 bed House	0.0	@	0	-
1 bed Flat	8.4	@	120,000	1,008,000
2 bed Flat	5.3	@	146,000	766,500
	28.0			4,577,300
First Homes GDV -				
1 bed House	0.0	@	0	-
2 bed House	13.1	@	250,000	3,281,250
3 bed House	17.5	@	250,000	4,375,000
4 bed House	5.3	@	250,000	1,312,500
5 bed House	0.0	@	0	-
1 bed Flat	21.0	@	210,000	4,410,000
2 bed Flat	13.1	@	250,000	3,281,250
	70.0			16,660,000
Intermediate GDV -				
1 bed House	0.0	@	0	-
2 bed House	7.9	@	280,000	2,205,000
3 bed House	10.5	@	350,000	3,675,000
4 bed House	3.2	@	469,000	1,477,350
5 bed House	0.0	@	0	-
1 bed Flat	12.6	@	210,000	2,646,000
2 bed Flat	7.9	@	255,500	2,012,063
	42.0	280.0		12,015,413
Sub-total GDV Residential	**700**			**279,210,838**
AH on-site cost analysis:	777 £ psm (total GIA sqm)		£MV (no AH) less £GDV (inc. AH)	52,571,663
			75,102 £ per unit (total units)	
Grant	280	AH units @	0 per unit	-
Total GDV				**279,210,838**

DEVELOPMENT COSTS

Initial Payments -						
Statutory Planning Fees (Residential)						(112,559)
Planning Application Professional Fees, Surveys and reports						(340,000)
CIL		45,077	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(6,446,440)
	Net zero carbon flats	5%	build cost			(963,857)
	Green belt loss mitigation	1,000	per dwelling			(105,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	700	units @	0 per unit		-
S106 analysis:	805,210 £ per ha	2.69%	% of GDV	10,736 £ per unit (total u	(7,515,297)	
AH Commuted Sum		67,673	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref	**AAP housing and flatted**				
No Units	**700**	**Location / Value Zone**	**Mid**	**Development Scenario**	**Brownfield**
Notes					

cont./

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Scheme Ref	AAP housing and flatted							
No Units	700	**Location / Value Zone**		Mid	**Development Scenario**		Brownfield	
Notes								
Construction Costs -								
Site Clearance, Demolition & Remediation			9.33	ha @	123,550	£ per ha (if brownfield)		(1,153,133)
Net Biodiveristy Gain @ 20%			700	units @	289	£ per unit		(202,419)
Site Infrastructure costs -	Year 1		0					-
	Year 2		0					-
	Year 3		0					-
	Year 4		0					-
	Year 5		0					-
	Year 6		0					-
	Year 7		0					-
	Year 8		0					-
	Year 9		0					-
	Year 10		0					-
	Year 11		0					-
	Year 12		0					-
	Year 13		0					-
	Year 14		0					-
	Year 15		0					-
	total		700	units @	30,000	per unit		(21,000,000)
Infra. Costs analysis:	2,250,000 £ per ha		7.52%	% of GDV	30,000	£ per unit (total ur	(21,000,000)	
1 bed House			-	sqm @	1,234	psm		-
2 bed House			7,088	sqm @	1,234	psm		(8,745,975)
3 bed House			25,123	sqm @	1,234	psm		(31,001,782)
4 bed House			21,504	sqm @	1,234	psm		(26,535,936)
5 bed House			-	sqm @	1,234	psm		-
1 bed Flat			6,176	sqm @	1,381	psm		(8,529,706)
2 bed Flat		67,673	7,782	sqm @	1,381	psm		(10,747,429)
External works			85,560,828	@	15.0%			(12,834,124)
Ext. Works analysis:					18,334	£per unit		
M4(2) Category 2 Housing	Aff units	280	units @	100% @	586	£ per unit		(164,080)
M4(3) Category 3 Housing	Aff units	280	units @	5% @	11,386	£ per unit		(159,404)
M4(2) Category 2 Housing	Mrkt units	420	units @	100% @	586	£ per unit		(246,120)
M4(3) Category 3 Housing	Mrkt units	420	units @	5% @	11,386	£ per unit		(239,106)
Carbon/Energy Reduction/FHS		700	units @		0	£ per unit		-
EV Charging Points - Houses		501	units @		1,000	£ per unit		(500,500)
EV Charging Points - Flats		50	units @		625	£ per unit		(31,172)
Water Efficiency		700	units @		3,109	£ per unit		(2,176,300)
Contingency (on construction)			124,267,187	@	5.0%			(6,213,359)
Professional Fees			124,267,187	@	10.0%			(12,426,719)
Disposal Costs -								
OMS Marketing and Promotion			217,350,000	OMS @	3.00%	9,315 £ per unit		(6,520,500)
Residential Sales Agent Costs			217,350,000	OMS @	1.00%	3,105 £ per unit		(2,173,500)
Residential Sales Legal Costs			217,350,000	OMS @	0.25%	776 £ per unit		(543,375)
Affordable Sale Legal Costs						lump sum		(10,000)
Disposal Cost analysis:						13,211 £ per unit		
Interest (on Development Costs) -			7.50%	APR	0.604%	pcm		(1,787,022)
Developers Profit -								
Profit on OMS			217,350,000		20.00%			(43,470,000)
Margin on AH			61,860,838		6.00%	on AH values		(3,711,650)
Profit analysis:			279,210,838		16.90%	blended GDV	(47,181,650)	
			161,909,517		29.14%	on costs	(47,181,650)	
TOTAL COSTS								**(209,091,167)**

RESIDUAL LAND VALUE (RLV)								
Residual Land Value (gross)								70,119,670
SDLT			70,119,670	@	HMRC formula			(3,495,484)
Acquisition Agent fees			70,119,670	@	1.0%			(701,197)
Acquisition Legal fees			70,119,670	@	0.5%			(350,598)
Interest on Land			70,119,670	@	7.50%			(5,258,975)
Residual Land Value								**60,313,416**
RLV analysis:	86,162 £ per plot		6,462,152	£ per ha	2,615,197	£ per acre		
					21.60%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)								
Residential Density (Net)			75.0	dph				
Site Area (Net)			9.33	ha	23.06	acres		
Benchmark Land Value (Net)	22,592 £ per plot		1,694,399	£ per ha	685,714	£ per acre		**15,814,393**
BLV analysis:	Density		7,251	sqm/ha	31,585	sqft/ac		

BALANCE								
Surplus/(Deficit)			**4,767,752**	£ per ha	**1,929,483**	£ per acre		**44,499,023**

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Scheme Ref	**AAP housing and flatted**				
No Units	**700**	**Location / Value Zone**	**Mid**	**Development Scenario**	**Brownfield**
Notes					

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Scheme Ref	**AAP housing and flatted**				
No Units	**700**	**Location / Value Zone**	**Mid**	**Development Scenario**	**Brownfield**
Notes					

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	500.00	1,391,588	1,281,250	1,170,913	1,060,575	950,225	839,864	729,504
	525.00	1,336,791	1,230,089	1,123,387	1,016,684	909,982	803,280	696,577
CIL £psm	550.00	1,281,914	1,178,870	1,075,826	972,783	869,739	766,695	663,651
0.00	575.00	1,227,032	1,127,635	1,028,238	928,840	829,443	730,045	630,648
	600.00	1,171,982	1,076,255	980,528	884,800	789,073	693,345	597,618
	625.00	1,116,932	1,024,875	932,818	840,760	748,703	656,645	564,579
	650.00	1,061,756	973,370	884,985	796,599	708,213	619,827	531,442
	675.00	1,006,527	921,823	837,119	752,415	667,712	583,008	498,304
	700.00	951,198	870,182	789,166	708,149	627,133	546,117	465,100
	725.00	895,783	818,461	741,139	663,817	586,495	509,173	431,851
	750.00	840,272	766,655	693,039	619,422	545,805	472,188	398,571
	775.00	784,664	714,754	644,845	574,935	505,026	435,116	365,206
	800.00	728,940	662,756	596,571	530,387	464,202	398,018	331,833
	825.00	673,133	610,669	548,205	485,741	423,277	360,813	298,349
	850.00	617,164	558,447	499,730	441,013	382,297	323,580	264,863
	875.00	561,133	506,168	451,185	396,203	341,220	286,237	231,255
	900.00	504,907	453,695	402,484	351,272	300,061	248,849	197,638
	925.00	448,575	401,146	353,718	306,289	258,828	211,365	163,902
	950.00	392,129	348,464	304,798	261,132	217,467	173,801	130,136
	975.00	335,465	295,610	255,755	215,901	176,046	136,171	96,268
	1000.00	278,669	242,640	206,610	170,563	134,487	98,410	62,333
	1025.00	221,723	189,529	157,293	125,057	92,822	60,586	28,330
	1050.00	164,578	136,200	107,822	79,443	51,065	22,649	(5,793)
	1075.00	107,217	82,713	58,210	33,707	9,159	(15,410)	(39,979)
	1100.00	49,661	29,051	8,442	(12,207)	(32,884)	(53,561)	(74,265)
	1125.00	(8,110)	(24,805)	(41,518)	(58,284)	(75,051)	(91,822)	(108,674)

TABLE 2

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	50,000	1,125,393	941,357	757,044	572,360	387,171	201,265	14,334
	55,000	988,249	803,816	619,027	433,679	247,706	60,722	(127,667)
Site Specific S106	60,000	850,528	665,607	480,187	294,121	107,110	(81,238)	(271,604)
-	65,000	712,187	526,695	340,536	153,498	(34,809)	(224,941)	(417,945)
	70,000	573,203	386,950	199,886	11,620	(178,322)	(370,820)	(567,478)
	75,000	433,365	246,274	58,050	(131,706)	(323,816)	(519,478)	(721,199)
	80,000	292,662	104,479	(85,167)	(276,880)	(471,758)	(671,725)	(877,984)
	85,000	150,908	(38,629)	(230,047)	(424,262)	(622,861)	(827,922)	(1,035,962)
	90,000	7,910	(183,243)	(376,938)	(574,391)	(777,943)	(985,264)	(1,195,182)
	95,000	(136,526)	(329,734)	(526,288)	(728,067)	(934,893)	(1,143,861)	(1,355,900)
	100,000	(282,617)	(478,426)	(678,725)	(884,666)	(1,092,934)	(1,303,770)	(1,517,948)
	105,000	(430,754)	(629,873)	(834,687)	(1,042,172)	(1,252,103)	(1,464,886)	(1,681,480)
	110,000	(581,371)	(784,707)	(991,802)	(1,200,782)	(1,412,411)	(1,627,336)	(1,846,442)
	115,000	(734,950)	(941,431)	(1,149,906)	(1,360,525)	(1,574,023)	(1,791,165)	(2,012,911)
	120,000	(891,430)	(1,099,091)	(1,309,024)	(1,521,359)	(1,736,844)	(1,956,249)	(2,581,353)

TABLE 3

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	15.0%	2,983,537	2,767,291	2,551,032	2,334,729	2,118,426	1,902,123	1,685,820
	16.0%	2,882,226	2,672,734	2,463,228	2,253,680	2,044,131	1,834,582	1,625,033
Profit	17.0%	2,780,914	2,578,177	2,375,425	2,172,630	1,969,836	1,767,041	1,564,246
20.0%	18.0%	2,679,603	2,483,619	2,287,622	2,091,581	1,895,541	1,699,500	1,503,459
	19.0%	2,578,291	2,389,062	2,199,819	2,010,532	1,821,246	1,631,959	1,442,673
	20.0%	2,476,980	2,294,504	2,112,015	1,929,483	1,746,951	1,564,418	1,381,886

TABLE 4

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	600,000	2,562,694	2,380,218	2,197,729	2,015,197	1,832,665	1,650,132	1,467,600
	620,000	2,542,694	2,360,218	2,177,729	1,995,197	1,812,665	1,630,132	1,447,600
BLV (£ per acre)	640,000	2,522,694	2,340,218	2,157,729	1,975,197	1,792,665	1,610,132	1,427,600
685,714	660,000	2,502,694	2,320,218	2,137,729	1,955,197	1,772,665	1,590,132	1,407,600
	680,000	2,482,694	2,300,218	2,117,729	1,935,197	1,752,665	1,570,132	1,387,600
	700,000	2,462,694	2,280,218	2,097,729	1,915,197	1,732,665	1,550,132	1,367,600
	720,000	2,442,694	2,260,218	2,077,729	1,895,197	1,712,665	1,530,132	1,347,600
	740,000	2,422,694	2,240,218	2,057,729	1,875,197	1,692,665	1,510,132	1,327,600
	760,000	2,402,694	2,220,218	2,037,729	1,855,197	1,672,665	1,490,132	1,307,600
	780,000	2,382,694	2,200,218	2,017,729	1,835,197	1,652,665	1,470,132	1,287,600
	800,000	2,362,694	2,180,218	1,997,729	1,815,197	1,632,665	1,450,132	1,267,600
	820,000	2,342,694	2,160,218	1,977,729	1,795,197	1,612,665	1,430,132	1,247,600
	840,000	2,322,694	2,140,218	1,957,729	1,775,197	1,592,665	1,410,132	1,227,600
	860,000	2,302,694	2,120,218	1,937,729	1,755,197	1,572,665	1,390,132	1,207,600
	880,000	2,282,694	2,100,218	1,917,729	1,735,197	1,552,665	1,370,132	1,187,600
	900,000	2,262,694	2,080,218	1,897,729	1,715,197	1,532,665	1,350,132	1,167,600

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Scheme Ref AAP housing and flatted
No Units 700 **Location / Value Zone** Mid **Development Scenario** Brownfield
Notes

TABLE 5

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	35	760,596	675,414	590,232	505,051	419,838	334,615	249,392
	40	975,157	877,806	780,455	683,105	585,754	488,366	390,968
Density (dph)	45	1,189,717	1,080,198	970,678	861,159	751,639	642,117	532,544
75.0	50	1,404,278	1,282,589	1,160,901	1,039,213	917,524	795,836	674,121
	55	1,618,838	1,484,981	1,351,124	1,217,267	1,083,410	949,553	815,695
	60	1,833,380	1,687,373	1,541,347	1,395,321	1,249,295	1,103,269	957,243
	65	2,047,914	1,889,764	1,731,570	1,573,375	1,415,180	1,256,985	1,098,791
	70	2,262,447	2,092,136	1,921,793	1,751,429	1,581,065	1,410,702	1,240,338
	75	2,476,980	2,294,504	2,112,015	1,929,483	1,746,951	1,564,418	1,381,886
	80	2,691,513	2,496,873	2,302,232	2,107,537	1,912,836	1,718,134	1,523,433
	85	2,906,046	2,699,241	2,492,435	2,285,591	2,078,721	1,871,851	1,664,981

TABLE 6

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	98%	2,567,597	2,384,109	2,200,621	2,017,134	1,833,646	1,650,158	1,466,642
	100%	2,476,980	2,294,504	2,112,015	1,929,483	1,746,951	1,564,418	1,381,886
Build Cost	102%	2,386,235	2,204,718	2,023,200	1,841,682	1,660,165	1,478,626	1,297,023
100%	104%	2,295,390	2,114,887	1,934,384	1,753,801	1,573,215	1,392,630	1,212,045
(105% = 5% increase)	106%	2,204,473	2,024,905	1,845,337	1,665,770	1,486,202	1,306,525	1,126,846
	108%	2,113,389	1,934,839	1,756,268	1,577,610	1,398,952	1,220,294	1,041,507
	110%	2,022,252	1,844,614	1,666,976	1,489,339	1,311,602	1,133,829	956,001
	112%	1,930,919	1,754,302	1,577,604	1,400,854	1,224,103	1,047,211	870,297
	114%	1,839,512	1,663,785	1,488,059	1,312,256	1,136,368	960,413	784,334
	116%	1,747,921	1,573,196	1,398,335	1,223,473	1,048,468	873,407	698,138
	118%	1,656,196	1,482,361	1,308,484	1,134,464	960,374	786,138	611,683
	120%	1,564,334	1,391,392	1,218,402	1,045,276	872,059	698,612	524,938

TABLE 7

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	80%	919,649	840,756	761,863	682,970	604,061	525,153	446,245
	82%	1,076,535	987,201	897,867	808,533	719,179	629,822	540,466
Market Values	84%	1,233,065	1,133,319	1,033,573	933,801	834,028	734,255	634,482
100%	86%	1,389,300	1,279,138	1,168,977	1,058,815	948,653	838,492	728,330
(105% = 5% increase)	88%	1,545,209	1,424,683	1,304,156	1,183,629	1,063,102	942,576	822,049
	90%	1,700,909	1,570,037	1,439,164	1,308,292	1,177,419	1,046,514	915,593
	92%	1,856,460	1,715,258	1,574,018	1,432,773	1,291,527	1,150,281	1,009,035
	94%	2,011,776	1,860,219	1,708,662	1,557,105	1,405,547	1,253,990	1,102,396
	96%	2,166,977	2,005,118	1,843,259	1,681,357	1,519,446	1,357,534	1,195,622
	98%	2,322,028	2,149,833	1,977,637	1,805,442	1,633,246	1,461,050	1,288,812
	100%	2,476,980	2,294,504	2,112,015	1,929,483	1,746,951	1,564,418	1,381,886
	102%	2,631,789	2,438,993	2,246,197	2,053,401	1,860,605	1,667,786	1,474,917
	104%	2,786,593	2,583,481	2,380,364	2,177,248	1,974,131	1,771,015	1,567,898
	106%	2,941,179	2,727,813	2,514,447	2,301,080	2,087,658	1,874,221	1,660,784
	108%	3,095,766	2,872,094	2,648,422	2,424,750	2,201,078	1,977,406	1,753,669
	110%	3,250,322	3,016,375	2,782,397	2,548,419	2,314,441	2,080,463	1,846,486
	112%	3,404,707	3,160,500	2,916,293	2,672,086	2,427,805	2,183,521	1,939,238
	114%	3,559,092	3,304,593	3,050,093	2,795,594	2,541,094	2,286,579	2,031,990
	116%	3,713,477	3,448,686	3,183,894	2,919,102	2,654,310	2,389,518	2,124,727
	118%	3,867,746	3,592,736	3,317,694	3,042,610	2,767,526	2,492,442	2,217,358
	120%	4,021,950	3,736,660	3,451,369	3,166,079	2,880,742	2,595,365	2,309,989

TABLE 8

Balance (RLV - BLV £ per acre)	1,929,483	Affordable Housing - % on site 40%						
		25%	30%	35%	40%	45%	50%	55%
	5,000	2,510,476	2,334,700	2,158,924	1,983,148	1,807,372	1,631,573	1,455,756
	10,000	2,543,973	2,374,896	2,205,819	2,036,742	1,867,666	1,698,589	1,529,512
Grant (£ per unit)	15,000	2,577,469	2,415,092	2,252,714	2,090,337	1,927,959	1,765,582	1,603,204
-	20,000	2,610,966	2,455,287	2,299,609	2,143,931	1,988,243	1,832,530	1,676,816
	25,000	2,644,462	2,495,483	2,346,457	2,197,427	2,048,398	1,899,368	1,750,339
	30,000	2,677,935	2,535,590	2,393,244	2,250,898	2,108,553	1,966,207	1,823,845
	35,000	2,711,355	2,575,693	2,440,031	2,304,369	2,168,707	2,032,974	1,897,206
	40,000	2,744,774	2,615,796	2,486,818	2,357,840	2,228,766	2,099,666	1,970,567
	45,000	2,778,193	2,655,899	2,533,605	2,411,219	2,288,789	2,166,358	2,043,852
	50,000	2,811,613	2,696,003	2,580,333	2,464,572	2,348,811	2,232,995	2,117,060
	55,000	2,845,032	2,736,106	2,627,018	2,517,926	2,408,827	2,299,548	2,190,268

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref	AAP housing and flatted				
No Units	700	**Location / Value Zone**	Mid	**Development Scenario**	Brownfield
Notes					

Scheme Ref:	**AAP housing and flatted**
No Units:	700
Location / Value Zone:	Mid
Development Scenario:	Brownfield
Notes:	[insert any relevant notes, comments or issues to highlight here]
Total GDV (£)	279,210,838
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	10,736
Site Specific S106 Total (£)	7,515,297
Sub-total CIL+S106 (£ per unit)	10,736
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	21,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	40,736
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.90%
Developers Profit (% on costs)	29.14%
Developers Profit Total (£)	47,181,650
Land Value KPI's	
RLV (£/acre)	2,615,197
RLV (£/ha)	6,462,152
RLV (% of GDV)	21.60%
RLV Total (£)	60,313,416
BLV (£/acre)	685,714
BLV (£/ha)	1,694,399
BLV Total (£)	15,814,393
Surplus/Deficit (£/acre) [RLV-BLV]	1,929,483
Surplus/Deficit (£/ha)	4,767,752
Surplus/Deficit Total (£)	44,499,023
Surplus/Deficit (per unit)	63,570
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref	Cambridge East Airport				
No Units	1000	**Location / Value Zone**	Mid	**Development Scenario**	Greenfield/brownfield
Notes	Site sits partly in mid value, part low value				

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		1,000	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	60.0	18.8%	75.0	14%	135.0
3 bed House	45.0%	270.0	25.0%	100.0	37%	370.0
4 bed House	30.0%	180.0	7.5%	30.0	21%	210.0
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	30.0	30.0%	120.0	15%	150.0
2 bed Flat	10.0%	60.0	18.8%	75.0	14%	135.0
Total number of units	100.0%	600.0	100.0%	400.0	100%	1,000.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	4,500	48,438	5,625	60,547	10,125	108,985
3 bed House	26,190	281,907	9,700	104,410	35,890	386,317
4 bed House	27,000	290,626	3,720	40,042	30,720	330,667
5 bed House	0	0	0	0	0	0
1 bed Flat	1,765	18,995	7,059	75,981	8,824	94,976
2 bed Flat	4,306	46,348	5,382	57,935	9,688	104,283
	63,761	686,313	31,486	338,914	95,247	1,025,228
AH % by floor area:			33.06% AH % by floor area due to mix			

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	400,000	5,333	495	54,000,000
3 bed House	500,000	5,155	479	185,000,000
4 bed House	670,000	4,467	415	140,700,000
5 bed House		#DIV/0!	#DIV/0!	0
1 bed Flat	300,000	6,000	557	45,000,000
2 bed Flat	365,000	5,984	556	49,275,000
				473,975,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	200,000	50%	160,000	40%	250,000	70%	280,000	70%
3 bed House	250,000	50%	200,000	40%	250,000	70%	350,000	70%
4 bed House	335,000	50%	268,000	40%	250,000	70%	469,000	70%
5 bed House	0	50%	0	40%	0	70%	0	70%
1 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%
2 bed Flat	182,500	50%	146,000	40%	250,000	70%	255,500	70%

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Scheme Ref	Cambridge East Airport				
No Units	1000	**Location / Value Zone**	Mid	**Development Scenario**	Greenfield/brownfield
Notes	Site sits partly in mid value, part low value				

GROSS DEVELOPMENT VALUE					
OMS GDV -	(part houses due to % mix)				
1 bed House	0.0	@	0		-
2 bed House	60.0	@	400,000		24,000,000
3 bed House	270.0	@	500,000		135,000,000
4 bed House	180.0	@	670,000		120,600,000
5 bed House	0.0	@	0		-
1 bed Flat	30.0	@	300,000		9,000,000
2 bed Flat	60.0	@	365,000		21,900,000
	600.0				310,500,000
Affordable Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	37.5	@	200,000		7,500,000
3 bed House	50.0	@	250,000		12,500,000
4 bed House	15.0	@	335,000		5,025,000
5 bed House	0.0	@	0		-
1 bed Flat	60.0	@	150,000		9,000,000
2 bed Flat	37.5	@	182,500		6,843,750
	200.0				40,868,750
Social Rent GDV -					
1 bed House	0.0	@	0		-
2 bed House	7.5	@	160,000		1,200,000
3 bed House	10.0	@	200,000		2,000,000
4 bed House	3.0	@	268,000		804,000
5 bed House	0.0	@	0		-
1 bed Flat	12.0	@	120,000		1,440,000
2 bed Flat	7.5	@	146,000		1,095,000
	40.0				6,539,000
First Homes GDV -					
1 bed House	0.0	@	0		-
2 bed House	18.8	@	250,000		4,687,500
3 bed House	25.0	@	250,000		6,250,000
4 bed House	7.5	@	250,000		1,875,000
5 bed House	0.0	@	0		-
1 bed Flat	30.0	@	210,000		6,300,000
2 bed Flat	18.8	@	250,000		4,687,500
	100.0				23,800,000
Intermediate GDV -					
1 bed House	0.0	@	0		-
2 bed House	11.3	@	280,000		3,150,000
3 bed House	15.0	@	350,000		5,250,000
4 bed House	4.5	@	469,000		2,110,500
5 bed House	0.0	@	0		-
1 bed Flat	18.0	@	210,000		3,780,000
2 bed Flat	11.3	@	255,500		2,874,375
	60.0	400.0			17,164,875
Sub-total GDV Residential	**1,000**				**398,872,625**
AH on-site cost analysis:				£MV (no AH) less £GDV (inc. AH)	75,102,375
	789 £ psm (total GIA sqm)			75,102 £ per unit (total units)	
Grant	400	AH units @	0 per unit		-
Total GDV					**398,872,625**

DEVELOPMENT COSTS						
Initial Payments -						
Statutory Planning Fees (Residential)						(153,959)
Planning Application Professional Fees, Surveys and reports						(460,000)
CIL		63,761	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(9,209,200)
	Net zero carbon flats	5%	build cost			(1,278,237)
	Green belt loss mitigation	1,000	per dwelling			(150,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	1,000	units @	0 per unit		-
S106 analysis:	1,042,469 £ per ha	2.67%	% of GDV	10,637 £ per unit (total u	(10,637,437)	
AH Commuted Sum		95,247	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref	**Cambridge East Airport**				
No Units	**1000**	**Location / Value Zone**	**Mid**	**Development Scenario**	**Greenfield/brownfield**
Notes	Site sits partly in mid value, part low value				

cont./

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Scheme Ref	Cambridge East Airport								
No Units	1000	**Location / Value Zone**		Mid	**Development Scenario**		Greenfield/brownfield		
Notes	Site sits partly in mid value, part low value								
Construction Costs -									
Site Clearance, Demolition & Remediation				10.20	ha @	0	£ per ha (if brownfield)		-
Net Biodiveristy Gain @ 20%				1,000	units @	1,211	£ per unit		(1,211,420)
Site Infrastructure costs -	Year 1			0					-
	Year 2			0					-
	Year 3			0					-
	Year 4			0					-
	Year 5			0					-
	Year 6			0					-
	Year 7			0					-
	Year 8			0					-
	Year 9			0					-
	Year 10			0					-
	Year 11			0					-
	Year 12			0					-
	Year 13			0					-
	Year 14			0					-
	Year 15			0					-
	total			1,000	units @	30,000	per unit		(30,000,000)
Infra. Costs analysis:	2,940,000	£ per ha		7.52%	% of GDV	30,000	£ per unit (total ur	(30,000,000)	
1 bed House				-	sqm @	1,234	psm		-
2 bed House				10,125	sqm @	1,234	psm		(12,494,250)
3 bed House				35,890	sqm @	1,234	psm		(44,288,260)
4 bed House				30,720	sqm @	1,234	psm		(37,908,480)
5 bed House				-	sqm @	1,234	psm		-
1 bed Flat				8,824	sqm @	1,381	psm		(12,185,294)
2 bed Flat			95,247	9,688	sqm @	1,381	psm		(13,379,453)
External works				120,255,737	@	15.0%			(18,038,361)
Ext. Works analysis:						18,038	£per unit		
M4(2) Category 2 Housing	Aff units		400	units @	100% @	586	£ per unit		(234,400)
M4(3) Category 3 Housing	Aff units		400	units @	5% @	11,386	£ per unit		(227,720)
M4(2) Category 2 Housing	Mrkt units		600	units @	100% @	586	£ per unit		(351,600)
M4(3) Category 3 Housing	Mrkt units		600	units @	5% @	11,386	£ per unit		(341,580)
Carbon/Energy Reduction/FHS			1,000	units @		0	£ per unit		-
EV Charging Points - Houses			715	units @		1,000	£ per unit		(715,000)
EV Charging Points - Flats			71	units @		625	£ per unit		(44,531)
Water Efficiency			1,000	units @		3,109	£ per unit		(3,109,000)
Contingency (on construction)				174,529,349	@	5.0%			(8,726,467)
Professional Fees				174,529,349	@	10.0%			(17,452,935)
Disposal Costs -									
OMS Marketing and Promotion				310,500,000	OMS @	3.00%	9,315	£ per unit	(9,315,000)
Residential Sales Agent Costs				310,500,000	OMS @	1.00%	3,105	£ per unit	(3,105,000)
Residential Sales Legal Costs				310,500,000	OMS @	0.25%	776	£ per unit	(776,250)
Affordable Sale Legal Costs							lump sum		(10,000)
Disposal Cost analysis:							13,206	£ per unit	
Interest (on Development Costs) -				7.50%	APR	0.604%	pcm		(4,466,421)
Developers Profit -									
Profit on OMS				310,500,000		20.00%			(62,100,000)
Margin on AH				88,372,625		6.00%	on AH values		(5,302,358)
Profit analysis:				398,872,625		16.90%	blended GDV	(67,402,358)	
				229,632,819		29.35%	on costs	(67,402,358)	
TOTAL COSTS									**(297,035,176)**

RESIDUAL LAND VALUE (RLV)									
Residual Land Value (gross)									101,837,449
SDLT				101,837,449	@	HMRC formula			(5,081,372)
Acquisition Agent fees				101,837,449	@	1.0%			(1,018,374)
Acquisition Legal fees				101,837,449	@	0.5%			(509,187)
Interest on Land				101,837,449	@	7.50%			(7,637,809)
Residual Land Value									**87,590,706**
RLV analysis:	87,591	£ per plot		8,583,889	£ per ha	3,473,852	£ per acre		
						21.96%	% RLV / GDV		

BENCHMARK LAND VALUE (BLV)									
Residential Density (Net)				98.0	dph				
Site Area (Net)				10.20	ha	25.21	acres		
Benchmark Land Value (Net)	6,598	£ per plot		646,579	£ per ha	261,667	£ per acre		**6,597,747**
BLV analysis:		Density		9,334	sqm/ha	40,661	sqft/ac		

BALANCE									
Surplus/(Deficit)				**7,937,310**	£ per ha	**3,212,185**	£ per acre		**80,992,959**

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Scheme Ref	**Cambridge East Airport**				
No Units	**1000**	**Location / Value Zone**	**Mid**	**Development Scenario**	**Greenfield/brownfield**
Notes	Site sits partly in mid value, part low value				

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Scheme Ref	Cambridge East Airport				
No Units	1000	**Location / Value Zone**	Mid	**Development Scenario**	Greenfield/brownfield
Notes	Site sits partly in mid value, part low value				

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	3,212,185	25%	30%	35%	40%	45%	50%	55%
	500.00	2,517,008	2,374,463	2,231,898	2,089,333	1,946,768	1,804,166	1,661,504
	525.00	2,446,316	2,308,466	2,170,615	2,032,764	1,894,842	1,756,906	1,618,971
CIL £psm	550.00	2,375,605	2,242,468	2,109,277	1,976,087	1,842,857	1,709,647	1,576,381
0.00	575.00	2,304,807	2,176,323	2,047,839	1,919,355	1,790,869	1,662,303	1,533,737
	600.00	2,233,918	2,110,160	1,986,402	1,862,576	1,738,748	1,614,920	1,491,093
	625.00	2,162,987	2,043,897	1,924,807	1,805,718	1,686,628	1,567,510	1,448,343
	650.00	2,091,913	1,977,562	1,863,211	1,748,835	1,634,418	1,520,002	1,405,585
	675.00	2,020,821	1,911,156	1,801,490	1,691,824	1,582,158	1,472,493	1,362,770
	700.00	1,949,558	1,844,643	1,739,728	1,634,814	1,529,842	1,424,868	1,319,894
	725.00	1,878,277	1,778,067	1,677,858	1,577,648	1,477,438	1,377,229	1,276,997
	750.00	1,806,818	1,711,372	1,615,926	1,520,481	1,424,994	1,329,497	1,234,000
	775.00	1,735,320	1,644,601	1,553,881	1,463,162	1,372,443	1,281,723	1,191,004
	800.00	1,663,659	1,577,717	1,491,775	1,405,833	1,319,851	1,233,867	1,147,883
	825.00	1,591,917	1,510,724	1,429,532	1,348,339	1,267,146	1,185,954	1,104,761
	850.00	1,520,047	1,443,646	1,367,245	1,290,819	1,214,386	1,137,954	1,061,522
	875.00	1,448,032	1,376,405	1,304,778	1,233,151	1,161,525	1,089,898	1,018,271
	900.00	1,375,935	1,309,095	1,242,255	1,175,415	1,108,575	1,041,735	974,895
	925.00	1,303,630	1,241,611	1,179,591	1,117,571	1,055,552	993,532	931,503
	950.00	1,231,209	1,174,005	1,116,800	1,059,596	1,002,392	945,188	887,984
	975.00	1,158,666	1,106,293	1,053,919	1,001,545	949,172	896,798	844,424
	1000.00	1,085,902	1,038,379	990,857	943,334	895,811	848,289	800,766
	1025.00	1,012,983	970,323	927,663	885,003	842,343	799,683	757,023
	1050.00	939,903	902,123	864,343	826,564	788,784	751,005	713,220
	1075.00	866,644	833,757	800,861	767,964	735,068	702,172	669,275
	1100.00	793,143	765,163	737,183	709,203	681,223	653,243	625,263
	1125.00	719,431	696,388	673,345	650,301	627,258	604,215	581,162

TABLE 2

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	3,212,185	25%	30%	35%	40%	45%	50%	55%
	50,000	2,156,315	1,918,719	1,680,678	1,442,103	1,202,814	962,556	720,968
	55,000	1,977,831	1,739,723	1,501,096	1,261,750	1,021,497	779,977	536,676
Site Specific S106	60,000	1,798,768	1,560,090	1,320,686	1,080,438	838,986	595,906	350,439
-	65,000	1,619,081	1,379,622	1,139,379	897,995	655,103	410,038	161,760
	70,000	1,438,558	1,198,320	957,004	714,244	469,532	221,968	(29,939)
	75,000	1,257,261	1,016,006	773,384	528,992	281,994	31,229	(225,513)
	80,000	1,074,973	832,522	588,343	341,889	92,067	(162,879)	(426,138)
	85,000	891,589	647,680	401,643	152,626	(100,837)	(361,263)	(633,528)
	90,000	706,968	461,298	212,955	(39,310)	(297,469)	(565,228)	(850,297)
	95,000	520,896	273,104	21,868	(234,462)	(498,772)	(776,686)	(1,073,567)
	100,000	333,121	82,750	(172,069)	(433,675)	(706,238)	(997,341)	(1,299,602)
	105,000	143,387	(110,179)	(369,570)	(638,012)	(921,865)	(1,221,542)	(1,528,764)
	110,000	(48,680)	(306,247)	(571,465)	(849,085)	(1,144,680)	(1,448,473)	(1,761,046)
	115,000	(243,521)	(506,119)	(778,948)	(1,068,746)	(1,369,769)	(1,678,253)	(1,996,519)
	120,000	(441,760)	(710,804)	(993,733)	(1,292,265)	(1,597,460)	(1,910,950)	(2,738,246)

TABLE 3

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	3,212,185	25%	30%	35%	40%	45%	50%	55%
	15.0%	4,580,219	4,300,761	4,021,294	3,741,707	3,462,119	3,182,519	2,902,773
	16.0%	4,447,839	4,177,206	3,906,565	3,635,802	3,365,040	3,094,265	2,823,345
Profit	17.0%	4,315,458	4,053,651	3,791,835	3,529,898	3,267,961	3,006,012	2,743,917
20.0%	18.0%	4,183,078	3,930,096	3,677,105	3,423,994	3,170,882	2,917,758	2,664,489
	19.0%	4,050,698	3,806,541	3,562,376	3,318,090	3,073,803	2,829,505	2,585,060
	20.0%	3,918,317	3,682,986	3,447,646	3,212,185	2,976,725	2,741,251	2,505,632

TABLE 4

Balance (RLV - BLV £ per acre)		Affordable Housing - % on site 40%						
	3,212,185	25%	30%	35%	40%	45%	50%	55%
	600,000	3,579,984	3,344,653	3,109,313	2,873,852	2,638,392	2,402,918	2,167,299
	620,000	3,559,984	3,324,653	3,089,313	2,853,852	2,618,392	2,382,918	2,147,299
BLV (£ per acre)	640,000	3,539,984	3,304,653	3,069,313	2,833,852	2,598,392	2,362,918	2,127,299
261,667	660,000	3,519,984	3,284,653	3,049,313	2,813,852	2,578,392	2,342,918	2,107,299
	680,000	3,499,984	3,264,653	3,029,313	2,793,852	2,558,392	2,322,918	2,087,299
	700,000	3,479,984	3,244,653	3,009,313	2,773,852	2,538,392	2,302,918	2,067,299
	720,000	3,459,984	3,224,653	2,989,313	2,753,852	2,518,392	2,282,918	2,047,299
	740,000	3,439,984	3,204,653	2,969,313	2,733,852	2,498,392	2,262,918	2,027,299
	760,000	3,419,984	3,184,653	2,949,313	2,713,852	2,478,392	2,242,918	2,007,299
	780,000	3,399,984	3,164,653	2,929,313	2,693,852	2,458,392	2,222,918	1,987,299
	800,000	3,379,984	3,144,653	2,909,313	2,673,852	2,438,392	2,202,918	1,967,299
	820,000	3,359,984	3,124,653	2,889,313	2,653,852	2,418,392	2,182,918	1,947,299
	840,000	3,339,984	3,104,653	2,869,313	2,633,852	2,398,392	2,162,918	1,927,299
	860,000	3,319,984	3,084,653	2,849,313	2,613,852	2,378,392	2,142,918	1,907,299
	880,000	3,299,984	3,064,653	2,829,313	2,593,852	2,358,392	2,122,918	1,887,299
	900,000	3,279,984	3,044,653	2,809,313	2,573,852	2,338,392	2,102,918	1,867,299

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Scheme Ref	Cambridge East Airport				
No Units	1000	**Location / Value Zone**	Mid	**Development Scenario**	Greenfield/brownfield
Notes	Site sits partly in mid value, part low value				

TABLE 5

Affordable Housing - % on site 40%

Balance (RLV - BLV £ per acre)	3,212,185	25%	30%	35%	40%	45%	50%	55%
	35	1,231,185	1,147,138	1,063,088	978,995	894,901	810,804	726,654
	40	1,444,449	1,348,395	1,252,338	1,156,232	1,060,125	964,014	867,843
Density (dph)	45	1,657,714	1,549,653	1,441,589	1,333,469	1,225,350	1,117,224	1,009,032
98.0	50	1,870,978	1,750,911	1,630,840	1,510,707	1,390,574	1,270,434	1,150,220
	55	2,084,243	1,952,169	1,820,090	1,687,944	1,555,798	1,423,644	1,291,409
	60	2,297,507	2,153,427	2,009,341	1,865,181	1,721,022	1,576,854	1,432,598
	65	2,510,772	2,354,684	2,198,592	2,042,419	1,886,246	1,730,064	1,573,787
	70	2,724,036	2,555,942	2,387,842	2,219,656	2,051,470	1,883,274	1,714,975
	75	2,937,301	2,757,200	2,577,093	2,396,893	2,216,694	2,036,485	1,856,164
	80	3,150,565	2,958,458	2,766,344	2,574,131	2,381,918	2,189,695	1,997,353
	85	3,363,830	3,159,716	2,955,594	2,751,368	2,547,142	2,342,905	2,138,541

TABLE 6

Affordable Housing - % on site 40%

Balance (RLV - BLV £ per acre)	3,212,185	25%	30%	35%	40%	45%	50%	55%
	98%	4,035,031	3,798,327	3,561,622	3,324,918	3,088,182	2,851,346	2,614,509
	100%	3,918,317	3,682,986	3,447,646	3,212,185	2,976,725	2,741,251	2,505,632
Build Cost	102%	3,801,603	3,567,522	3,333,437	3,099,352	2,865,168	2,630,927	2,396,625
100%	104%	3,684,647	3,451,938	3,219,189	2,986,327	2,753,465	2,520,475	2,287,431
(105% = 5% increase)	106%	3,567,687	3,336,214	3,104,730	2,873,224	2,641,562	2,409,881	2,178,012
	108%	3,450,482	3,220,376	2,990,168	2,759,887	2,529,532	2,299,047	2,068,405
	110%	3,333,248	3,104,349	2,875,449	2,646,414	2,417,313	2,188,020	1,958,585
	112%	3,215,767	2,988,245	2,760,528	2,532,804	2,304,860	2,076,793	1,848,527
	114%	3,098,206	2,871,873	2,645,482	2,418,926	2,192,221	1,965,342	1,738,206
	116%	2,980,450	2,755,386	2,530,217	2,304,868	2,079,371	1,853,642	1,627,596
	118%	2,862,515	2,638,734	2,414,733	2,190,611	1,966,284	1,741,666	1,516,673
	120%	2,744,456	2,521,818	2,299,064	2,076,131	1,852,922	1,629,389	1,405,410

TABLE 7

Affordable Housing - % on site 40%

Balance (RLV - BLV £ per acre)	3,212,185	25%	30%	35%	40%	45%	50%	55%
	80%	1,878,120	1,778,022	1,677,923	1,577,825	1,477,726	1,377,567	1,277,394
	82%	2,083,807	1,970,111	1,856,357	1,742,602	1,628,848	1,515,074	1,401,231
Market Values	84%	2,288,965	2,161,678	2,034,342	1,906,974	1,779,606	1,652,234	1,524,765
100%	86%	2,493,688	2,352,833	2,211,931	2,070,987	1,930,043	1,789,085	1,648,032
(105% = 5% increase)	88%	2,698,034	2,543,643	2,389,172	2,234,687	2,080,202	1,925,668	1,771,067
	90%	2,902,060	2,734,114	2,566,118	2,398,122	2,230,125	2,062,020	1,893,904
	92%	3,105,779	2,924,298	2,742,817	2,561,336	2,379,782	2,198,180	2,016,577
	94%	3,309,204	3,114,261	2,919,319	2,724,311	2,529,249	2,334,187	2,139,025
	96%	3,512,444	3,304,058	3,095,582	2,887,080	2,678,579	2,469,999	2,261,356
	98%	3,715,506	3,493,583	3,271,659	3,049,736	2,827,724	2,605,664	2,383,587
	100%	3,918,317	3,682,986	3,447,646	3,212,185	2,976,725	2,741,251	2,505,632
	102%	4,121,074	3,872,231	3,623,382	3,374,533	3,125,637	2,876,638	2,627,640
	104%	4,323,558	4,061,329	3,799,101	3,536,743	3,274,377	3,012,010	2,749,477
	106%	4,526,041	4,250,314	3,974,586	3,698,859	3,423,070	3,147,186	2,871,301
	108%	4,728,279	4,439,194	4,150,072	3,860,846	3,571,619	3,282,361	2,992,959
	110%	4,930,503	4,627,936	4,325,370	4,022,804	3,720,107	3,417,382	3,114,617
	112%	5,132,594	4,816,678	4,500,630	4,184,582	3,868,534	3,552,371	3,236,147
	114%	5,334,577	5,005,203	4,675,830	4,346,361	4,016,832	3,687,302	3,357,637
	116%	5,536,559	5,193,721	4,850,882	4,508,043	4,165,129	3,822,118	3,479,107
	118%	5,738,374	5,382,219	5,025,934	4,669,630	4,313,326	3,956,934	3,600,441
	120%	5,940,136	5,570,530	5,200,924	4,831,216	4,461,446	4,091,677	3,721,775

TABLE 8

Affordable Housing - % on site 40%

Balance (RLV - BLV £ per acre)	3,212,185	25%	30%	35%	40%	45%	50%	55%
	5,000	3,962,059	3,735,475	3,508,892	3,282,309	3,055,617	2,828,922	2,602,227
	10,000	4,005,800	3,787,965	3,570,130	3,352,295	3,134,460	2,916,580	2,698,650
Grant (£ per unit)	15,000	4,049,541	3,840,455	3,631,368	3,422,281	3,213,195	3,004,108	2,795,021
-	20,000	4,093,220	3,892,915	3,692,606	3,492,268	3,291,929	3,091,591	2,891,252
	25,000	4,136,877	3,945,304	3,753,730	3,562,156	3,370,583	3,179,009	2,987,436
	30,000	4,180,534	3,997,692	3,814,850	3,632,008	3,449,166	3,266,324	3,083,482
	35,000	4,224,192	4,050,081	3,875,970	3,701,860	3,527,749	3,353,639	3,179,514
	40,000	4,267,849	4,102,470	3,937,091	3,771,691	3,606,255	3,440,819	3,275,383
	45,000	4,311,506	4,154,854	3,998,134	3,841,413	3,684,693	3,527,972	3,371,252
	50,000	4,355,152	4,207,146	4,059,141	3,911,136	3,763,131	3,615,115	3,466,999
	55,000	4,398,728	4,259,438	4,120,149	3,980,859	3,841,529	3,702,114	3,562,698

NOTES

Cells highlighted in yellow are input cells

Cells highlighted in green are sensitivity input cells

Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref	Cambridge East Airport				
No Units	1000	**Location / Value Zone**	Mid	**Development Scenario**	Greenfield/brownfield
Notes	Site sits partly in mid value, part low value				

Scheme Ref:	**Cambridge East Airport**
No Units:	1000
Location / Value Zone:	Mid
Development Scenario:	Greenfield/brownfield
Notes:	Site sits partly in mid value, part low value
Total GDV (£)	398,872,625
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	10,637
Site Specific S106 Total (£)	10,637,437
Sub-total CIL+S106 (£ per unit)	10,637
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	30,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	40,637
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.90%
Developers Profit (% on costs)	29.35%
Developers Profit Total (£)	67,402,358
Land Value KPI's	
RLV (£/acre)	3,473,852
RLV (£/ha)	8,583,889
RLV (% of GDV)	21.96%
RLV Total (£)	87,590,706
BLV (£/acre)	261,667
BLV (£/ha)	646,579
BLV Total (£)	6,597,747
Surplus/Deficit (£/acre) [RLV-BLV]	3,212,185
Surplus/Deficit (£/ha)	7,937,310
Surplus/Deficit Total (£)	80,992,959
Surplus/Deficit (per unit)	80,993
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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Scheme Ref	Cambourne				
No Units	1000	Location / Value Zone	Lower	Development Scenario	Greenfield
Notes					

ASSUMPTIONS - RESIDENTIAL USES

Total number of units in scheme		1,000	Units	
AH Policy requirement (% Target)		40%		
AH tenure split %	Affordable Rent:		50.0%	
	Social Rent:		10.0%	60.0% % Rented
	First Homes:		25.0%	
	Other Intermediate (LCHO/Sub-Market etc.):		15.0%	16.0% % of total (>10% for NPPF para 64.)
Open Market Sale (OMS) housing		60%		
		100%	100.0%	
CIL Rate (£ psm)		0.00	£ psm	

Unit mix -	Mkt Units mix%	MV # units	AH mix%	AH # units	Overall mix%	Total # units
1 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
2 bed House	10.0%	60.0	18.8%	75.0	14%	135.0
3 bed House	45.0%	270.0	25.0%	100.0	37%	370.0
4 bed House	30.0%	180.0	7.5%	30.0	21%	210.0
5 bed House	0.0%	0.0	0.0%	0.0	0%	0.0
1 bed Flat	5.0%	30.0	30.0%	120.0	15%	150.0
2 bed Flat	10.0%	60.0	18.8%	75.0	14%	135.0
Total number of units	100.0%	600.0	100.0%	400.0	100%	1,000.0

OMS Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	150.0	1,615		150.0	1,615
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

AH Unit Floor areas -	Net area per unit (sqm)	(sqft)	Net to Gross % %	Gross (GIA) per unit (sqm)	(sqft)
1 bed House	0.0	0		0.0	0
2 bed House	75.0	807		75.0	807
3 bed House	97.0	1,044		97.0	1,044
4 bed House	124.0	1,335		124.0	1,335
5 bed House	0.0	0		0.0	0
1 bed Flat	50.0	538	85.0%	58.8	633
2 bed Flat	61.0	657	85.0%	71.8	772

Total Gross Floor areas -	Mkt Units GIA (sqm)	(sqft)	AH units GIA (sqm)	(sqft)	Total GIA (all units) (sqm)	(sqft)
1 bed House	0	0	0	0	0	0
2 bed House	4,500	48,438	5,625	60,547	10,125	108,985
3 bed House	26,190	281,907	9,700	104,410	35,890	386,317
4 bed House	27,000	290,626	3,720	40,042	30,720	330,667
5 bed House	0	0	0	0	0	0
1 bed Flat	1,765	18,995	7,059	75,981	8,824	94,976
2 bed Flat	4,306	46,348	5,382	57,935	9,688	104,283
	63,761	686,313	31,486	338,914	95,247	1,025,228
AH % by floor area:			33.06% AH % by floor area due to mix			

Open Market Sales values (£) -	£ OMS (per unit)	£psm	£psf	total MV £ (no AH)
1 bed House	0	#DIV/0!	#DIV/0!	0
2 bed House	350,000	4,667	434	47,250,000
3 bed House	425,000	4,381	407	157,250,000
4 bed House	550,000	3,667	341	115,500,000
5 bed House	700,000	#DIV/0!	#DIV/0!	0
1 bed Flat	250,000	5,000	465	37,500,000
2 bed Flat	300,000	4,918	457	40,500,000
				398,000,000

Affordable Housing values (£) -	Aff. Rent £	% of MV	Social Rent £	% of MV	First Homes £	% of MV	Intermediate £	% of MV
1 bed House	0	50%	0	40%	0	70%	0	70%
2 bed House	175,000	50%	140,000	40%	245,000	70%	245,000	70%
3 bed House	212,500	50%	170,000	40%	250,000	70%	297,500	70%
4 bed House	275,000	50%	220,000	40%	250,000	70%	385,000	70%
5 bed House	350,000	50%	280,000	40%	250,000	70%	490,000	70%
1 bed Flat	125,000	50%	100,000	40%	175,000	70%	175,000	70%
2 bed Flat	150,000	50%	120,000	40%	210,000	70%	210,000	70%

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Scheme Ref	Cambourne				
No Units	1000	**Location / Value Zone**	Lower	**Development Scenario**	Greenfield
Notes					

GROSS DEVELOPMENT VALUE

OMS GDV -	(part houses due to % mix)			
1 bed House	0.0	@	0	-
2 bed House	60.0	@	350,000	21,000,000
3 bed House	270.0	@	425,000	114,750,000
4 bed House	180.0	@	550,000	99,000,000
5 bed House	0.0	@	700,000	-
1 bed Flat	30.0	@	250,000	7,500,000
2 bed Flat	60.0	@	300,000	18,000,000
	600.0			260,250,000
Affordable Rent GDV -				
1 bed House	0.0	@	0	-
2 bed House	37.5	@	175,000	6,562,500
3 bed House	50.0	@	212,500	10,625,000
4 bed House	15.0	@	275,000	4,125,000
5 bed House	0.0	@	350,000	-
1 bed Flat	60.0	@	125,000	7,500,000
2 bed Flat	37.5	@	150,000	5,625,000
	200.0			34,437,500
Social Rent GDV -				
1 bed House	0.0	@	0	-
2 bed House	7.5	@	140,000	1,050,000
3 bed House	10.0	@	170,000	1,700,000
4 bed House	3.0	@	220,000	660,000
5 bed House	0.0	@	280,000	-
1 bed Flat	12.0	@	100,000	1,200,000
2 bed Flat	7.5	@	120,000	900,000
	40.0			5,510,000
First Homes GDV -				
1 bed House	0.0	@	0	-
2 bed House	18.8	@	245,000	4,593,750
3 bed House	25.0	@	250,000	6,250,000
4 bed House	7.5	@	250,000	1,875,000
5 bed House	0.0	@	250,000	-
1 bed Flat	30.0	@	175,000	5,250,000
2 bed Flat	18.8	@	210,000	3,937,500
	100.0			21,906,250
Intermediate GDV -				
1 bed House	0.0	@	0	-
2 bed House	11.3	@	245,000	2,756,250
3 bed House	15.0	@	297,500	4,462,500
4 bed House	4.5	@	385,000	1,732,500
5 bed House	0.0	@	490,000	-
1 bed Flat	18.0	@	175,000	3,150,000
2 bed Flat	11.3	@	210,000	2,362,500
	60.0	400.0		14,463,750
Sub-total GDV Residential	**1,000**			**336,567,500**
AH on-site cost analysis:	645 £ psm (total GIA sqm)		£MV (no AH) less £GDV (inc. AH)	61,432,500
			61,433 £ per unit (total units)	
Grant	400	AH units @	0 per unit	-
Total GDV				**336,567,500**

DEVELOPMENT COSTS

Initial Payments -						
Statutory Planning Fees (Residential)						(153,959)
Planning Application Professional Fees, Surveys and reports						(460,000)
CIL		63,761	sqm (Market only	0.00 £ psm		-
CIL analysis:		0.00%	% of GDV	0 £ per unit (total units)		
Site Specific S106 Contributions	Net zero carbon housing	12,880	per dwelling			(9,209,200)
	Net zero carbon flats	5%	build cost			(1,278,237)
	Green belt loss mitigation	1,000	per dwelling			(150,000)
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	1,000	units @	0 per unit		-
S106 analysis:	478,685 £ per ha	3.16%	% of GDV	10,637 £ per unit (total u	(10,637,437)	
AH Commuted Sum		95,247	sqm (total)	0 £ psm		-
Comm. Sum analysis:		0.00%	% of GDV			

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Scheme Ref	**Cambourne**				
No Units	**1000**	**Location / Value Zone**	**Lower**	**Development Scenario**	**Greenfield**
Notes					

cont./

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Scheme Ref	Cambourne			Development Scenario	Greenfield	
No Units	1000	Location / Value Zone	Lower			
Notes						
Construction Costs -						
Site Clearance, Demolition & Remediation		22.22	ha @	0	£ per ha (if brownfield)	-
Net Biodiveristy Gain @ 20%		1,000	units @	1,211	£ per unit	(1,211,420)
Site Infrastructure costs -	Year 1	0				-
	Year 2	0				-
	Year 3	0				-
	Year 4	0				-
	Year 5	0				-
	Year 6	0				-
	Year 7	0				-
	Year 8	0				-
	Year 9	0				-
	Year 10	0				-
	Year 11	0				-
	Year 12	0				-
	Year 13	0				-
	Year 14	0				-
	Year 15	0				-
	total	1,000	units @	30,000	per unit	(30,000,000)
Infra. Costs analysis:	1,350,000 £ per ha	8.91%	% of GDV	30,000	£ per unit (total ur	(30,000,000)
1 bed House		-	sqm @	1,234	psm	-
2 bed House		10,125	sqm @	1,234	psm	(12,494,250)
3 bed House		35,890	sqm @	1,234	psm	(44,288,260)
4 bed House		30,720	sqm @	1,234	psm	(37,908,480)
5 bed House		-	sqm @	1,234	psm	-
1 bed Flat		8,824	sqm @	1,381	psm	(12,185,294)
2 bed Flat	95,247	9,688	sqm @	1,381	psm	(13,379,453)
External works		120,255,737	@	15.0%		(18,038,361)
Ext. Works analysis:				18,038	£per unit	
M4(2) Category 2 Housing	Aff units	400	units @	100% @	586 £ per unit	(234,400)
M4(3) Category 3 Housing	Aff units	400	units @	5% @	11,386 £ per unit	(227,720)
M4(2) Category 2 Housing	Mrkt units	600	units @	100% @	586 £ per unit	(351,600)
M4(3) Category 3 Housing	Mrkt units	600	units @	5% @	11,386 £ per unit	(341,580)
Carbon/Energy Reduction/FHS		1,000	units @		0 £ per unit	-
EV Charging Points - Houses		715	units @		1,000 £ per unit	(715,000)
EV Charging Points - Flats		71	units @		625 £ per unit	(44,531)
Water Efficiency		1,000	units @		3,109 £ per unit	(3,109,000)
Contingency (on construction)		174,529,349	@	5.0%		(8,726,467)
Professional Fees		174,529,349	@	10.0%		(17,452,935)
Disposal Costs -						
OMS Marketing and Promotion		260,250,000	OMS @	3.00%	7,808 £ per unit	(7,807,500)
Residential Sales Agent Costs		260,250,000	OMS @	1.00%	2,603 £ per unit	(2,602,500)
Residential Sales Legal Costs		260,250,000	OMS @	0.25%	651 £ per unit	(650,625)
Affordable Sale Legal Costs					lump sum	(10,000)
Disposal Cost analysis:					11,071 £ per unit	
Interest (on Development Costs) -		7.50%	APR	0.604% pcm		(5,616,914)
Developers Profit -						
Profit on OMS		260,250,000		20.00%		(52,050,000)
Margin on AH		76,317,500		6.00%	on AH values	(4,579,050)
Profit analysis:		336,567,500		16.83%	blended GDV	(56,629,050)
		228,647,687		24.77%	on costs	(56,629,050)
TOTAL COSTS						**(285,276,737)**

RESIDUAL LAND VALUE (RLV)						
Residual Land Value (gross)						51,290,763
SDLT		51,290,763	@	HMRC formula		(2,554,038)
Acquisition Agent fees		51,290,763	@	1.0%		(512,908)
Acquisition Legal fees		51,290,763	@	0.5%		(256,454)
Interest on Land		51,290,763	@	7.50%		(3,846,807)
Residual Land Value						**44,120,556**
RLV analysis:	44,121 £ per plot	1,985,425	£ per ha	803,491	£ per acre	
				13.11%	% RLV / GDV	

BENCHMARK LAND VALUE (BLV)						
Residential Density (Net)		45.0	dph			
Site Area (Net)		22.22	ha	54.91	acres	
Benchmark Land Value (Net)	9,152 £ per plot	411,834	£ per ha	166,667	£ per acre	**9,151,870**
BLV analysis:	Density	4,286	sqm/ha	18,671	sqft/ac	

BALANCE						
Surplus/(Deficit)		**1,573,591**	£ per ha	**636,824**	£ per acre	**34,968,686**

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Scheme Ref	**Cambourne**				
No Units	**1000**	**Location / Value Zone**	**Lower**	**Development Scenario**	**Greenfield**
Notes					

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Scheme Ref	Cambourne				
No Units	1000	**Location / Value Zone**	Lower	**Development Scenario**	Greenfield
Notes					

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV £ per acre) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	250.00	552,507	492,615	432,624	372,509	312,241	251,793	191,098
	260.00	539,267	480,220	421,078	361,817	302,408	242,821	182,969
CIL £psm	270.00	526,027	467,824	409,533	351,125	292,575	233,820	174,836
0.00	280.00	512,756	455,426	397,987	340,433	282,719	224,820	166,678
	290.00	499,475	442,992	386,412	329,707	272,852	215,820	158,520
	300.00	486,195	430,558	374,829	318,980	262,986	206,791	150,359
	310.00	472,899	418,124	363,246	308,253	253,103	197,759	142,171
	320.00	459,577	405,661	351,643	297,500	243,203	188,727	133,983
	330.00	446,255	393,187	340,022	286,736	233,303	179,668	125,791
	340.00	432,929	380,713	328,401	275,973	223,387	170,603	117,572
	350.00	419,564	368,216	316,765	265,186	213,452	161,539	109,354
	360.00	406,199	355,701	305,105	254,386	203,517	152,444	101,125
	370.00	392,834	343,186	293,445	243,585	193,564	143,346	92,875
	380.00	379,425	330,649	281,768	232,758	183,593	134,244	84,626
	390.00	366,016	318,092	270,068	221,920	173,623	125,113	76,356
	400.00	352,606	305,535	258,368	211,082	163,626	115,981	68,074
	410.00	339,152	292,951	246,645	200,209	153,619	106,834	59,792
	420.00	325,698	280,351	234,904	189,332	143,611	97,668	51,477
	430.00	312,234	267,751	223,162	178,447	133,566	88,501	43,163
	440.00	298,734	255,113	211,386	167,530	123,521	79,304	34,831
	450.00	285,233	242,468	199,603	156,613	113,459	70,102	26,483
	460.00	271,709	229,815	187,810	145,672	103,376	60,886	18,132
	470.00	258,161	217,125	175,983	134,714	93,293	51,648	9,749
	480.00	244,613	204,435	164,156	123,751	83,172	42,409	1,367
	490.00	231,021	191,714	152,299	112,752	73,050	33,134	(7,042)
	500.00	217,425	178,978	140,428	101,752	62,904	23,858	(15,460)

TABLE 2

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	24,000	484,699	402,373	319,734	236,651	152,991	68,547	(17,040)
	26,000	451,290	368,815	285,971	202,629	118,654	33,755	(52,447)
Site Specific S106	28,000	417,807	335,160	252,090	168,466	84,119	(1,257)	(88,165)
-	30,000	384,241	301,398	218,083	134,155	49,405	(36,534)	(124,242)
	32,000	350,585	267,523	183,941	99,687	14,470	(72,093)	(160,718)
	34,000	316,824	233,532	149,656	65,021	(20,683)	(107,963)	(197,640)
	36,000	282,952	199,416	115,221	30,171	(56,107)	(144,182)	(235,075)
	38,000	248,971	165,158	80,626	(4,897)	(91,810)	(180,805)	(273,103)
	40,000	214,872	130,755	45,837	(40,188)	(127,823)	(217,858)	(311,808)
	42,000	180,647	96,197	10,854	(75,750)	(164,181)	(255,424)	(351,302)
	44,000	146,287	61,478	(24,338)	(111,587)	(200,929)	(293,557)	(391,718)
	46,000	111,769	26,576	(59,767)	(147,734)	(238,119)	(332,338)	(432,619)
	48,000	77,094	(8,536)	(95,455)	(184,226)	(275,793)	(371,889)	(473,729)
	50,000	42,253	(43,843)	(131,417)	(221,097)	(314,021)	(412,310)	(515,075)
	52,000	7,239	(79,407)	(167,688)	(258,398)	(352,887)	(453,211)	(556,682)

TABLE 3

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	15.0%	1,135,221	1,037,118	938,931	840,621	742,186	643,566	544,733
	16.0%	1,084,271	989,565	894,775	799,862	704,823	609,599	514,164
Profit	17.0%	1,033,322	942,012	850,619	759,102	667,460	575,633	483,594
20.0%	18.0%	982,372	894,459	806,463	718,343	630,098	541,667	453,024
	19.0%	931,423	846,907	762,307	677,583	592,735	507,701	422,455
	20.0%	880,474	799,354	718,151	636,824	555,372	473,734	391,885

TABLE 4

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	600,000	447,141	366,021	284,818	203,491	122,039	40,401	(41,448)
	620,000	427,141	346,021	264,818	183,491	102,039	20,401	(61,448)
BLV (£ per acre)	640,000	407,141	326,021	244,818	163,491	82,039	401	(81,448)
166,667	660,000	387,141	306,021	224,818	143,491	62,039	(19,599)	(101,448)
	680,000	367,141	286,021	204,818	123,491	42,039	(39,599)	(121,448)
	700,000	347,141	266,021	184,818	103,491	22,039	(59,599)	(141,448)
	720,000	327,141	246,021	164,818	83,491	2,039	(79,599)	(161,448)
	740,000	307,141	226,021	144,818	63,491	(17,961)	(99,599)	(181,448)
	760,000	287,141	206,021	124,818	43,491	(37,961)	(119,599)	(201,448)
	780,000	267,141	186,021	104,818	23,491	(57,961)	(139,599)	(221,448)
	800,000	247,141	166,021	84,818	3,491	(77,961)	(159,599)	(241,448)
	820,000	227,141	146,021	64,818	(16,509)	(97,961)	(179,599)	(261,448)
	840,000	207,141	126,021	44,818	(36,509)	(117,961)	(199,599)	(281,448)
	860,000	187,141	106,021	24,818	(56,509)	(137,961)	(219,599)	(301,448)
	880,000	167,141	86,021	4,818	(76,509)	(157,961)	(239,599)	(321,448)
	900,000	147,141	66,021	(15,182)	(96,509)	(177,961)	(259,599)	(341,448)

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Scheme Ref	Cambourne				
No Units	1000	**Location / Value Zone**	Lower	**Development Scenario**	Greenfield
Notes					

TABLE 5

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	35	647,776	584,682	521,524	458,270	394,919	331,423	267,762
	40	764,125	692,018	619,837	547,547	475,145	402,579	329,824
Density (dph)	45	880,474	799,354	718,151	636,824	555,372	473,734	391,885
45.0	50	996,823	906,689	816,464	726,100	635,598	544,890	453,946
	55	1,113,172	1,014,025	914,777	815,377	715,825	616,046	516,008
	60	1,229,520	1,121,361	1,013,090	904,654	796,051	687,202	578,069
	65	1,345,869	1,228,696	1,111,403	993,930	876,278	758,357	640,130
	70	1,462,218	1,336,032	1,209,716	1,083,207	956,504	829,513	702,192
	75	1,578,567	1,443,368	1,308,029	1,172,484	1,036,731	900,669	764,253
	80	1,694,916	1,550,703	1,406,342	1,261,761	1,116,957	971,824	826,314
	85	1,811,265	1,658,039	1,504,655	1,351,037	1,197,184	1,042,980	888,376

TABLE 6

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	98%	935,033	853,363	771,632	689,786	607,837	525,754	443,472
	100%	880,474	799,354	718,151	636,824	555,372	473,734	391,885
Build Cost	102%	825,789	745,203	664,514	583,689	502,696	421,504	340,042
100%	104%	770,965	690,899	610,707	530,357	449,818	369,038	287,927
(105% = 5% increase)	106%	715,991	636,428	556,718	476,828	396,723	316,299	235,487
	108%	660,853	581,778	502,534	423,090	343,346	263,254	182,684
	110%	605,538	526,936	448,143	369,076	289,696	209,873	129,463
	112%	550,033	471,888	393,491	314,812	235,728	156,107	75,770
	114%	494,325	416,588	338,585	260,215	181,388	101,905	21,537
	116%	438,369	361,035	283,370	205,282	126,637	47,201	(33,332)
	118%	382,164	305,195	227,836	149,962	71,411	(8,084)	(88,955)
	120%	325,690	249,043	171,933	94,204	15,662	(64,044)	(145,449)

TABLE 7

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	80%	72,342	43,111	13,752	(15,751)	(45,460)	(75,403)	(105,654)
	82%	155,658	121,191	86,600	51,863	16,947	(18,201)	(53,659)
Market Values	84%	238,087	198,405	158,606	118,667	78,547	38,209	(2,429)
100%	86%	319,841	274,955	229,954	184,810	139,502	93,976	48,171
(105% = 5% increase)	88%	401,019	350,932	300,744	250,423	199,928	149,241	98,273
	90%	481,720	426,459	371,089	315,584	259,918	204,068	147,940
	92%	562,032	501,585	441,039	380,367	319,543	258,531	197,256
	94%	642,035	576,410	510,686	444,849	378,871	312,683	246,269
	96%	721,741	650,941	580,055	509,053	437,908	366,589	295,015
	98%	801,208	725,248	649,203	573,043	496,736	420,253	343,554
	100%	880,474	799,354	718,151	636,824	555,372	473,734	391,885
	102%	959,560	873,278	786,911	700,426	613,820	527,048	440,048
	104%	1,038,489	947,043	855,524	763,881	672,122	580,210	488,065
	106%	1,117,284	1,020,670	923,993	827,207	730,295	633,234	535,951
	108%	1,195,967	1,094,178	992,338	890,409	788,355	686,138	583,720
	110%	1,274,510	1,167,589	1,060,580	953,494	846,292	738,935	631,384
	112%	1,352,965	1,240,897	1,128,740	1,016,491	904,138	791,640	678,958
	114%	1,431,358	1,314,103	1,196,811	1,079,418	961,909	844,269	726,455
	116%	1,509,634	1,387,259	1,264,786	1,142,252	1,019,615	896,830	773,857
	118%	1,587,866	1,460,316	1,332,724	1,205,016	1,077,222	949,295	821,194
	120%	1,666,019	1,533,330	1,400,562	1,267,741	1,134,792	1,001,718	868,484

TABLE 8

		Affordable Housing - % on site 40%						
Balance (RLV - BLV £ per acre)	636,824	25%	30%	35%	40%	45%	50%	55%
	5,000	900,927	823,928	746,860	669,722	592,485	515,118	437,589
	10,000	921,359	848,472	775,564	702,568	629,517	556,382	483,132
Grant (£ per unit)	15,000	941,760	873,015	804,198	735,378	666,479	597,537	528,526
-	20,000	962,162	897,497	832,832	768,105	703,379	638,593	573,782
	25,000	982,561	921,978	861,394	800,809	740,194	679,558	618,909
	30,000	1,002,912	946,440	889,955	833,451	776,947	720,442	663,919
	35,000	1,023,263	970,861	918,460	866,059	813,657	761,245	708,821
	40,000	1,043,614	995,283	946,952	898,620	850,289	801,958	753,627
	45,000	1,063,942	1,019,676	975,410	931,144	886,878	842,612	798,346
	50,000	1,084,245	1,044,039	1,003,834	963,628	923,423	883,216	842,989
	55,000	1,104,548	1,068,403	1,032,257	996,080	959,904	923,728	887,552

NOTES

Cells highlighted in yellow are input cells

Cells highlighted in green are sensitivity input cells

Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref	Cambourne				
No Units	1000	**Location / Value Zone**	Lower	**Development Scenario**	Greenfield
Notes					

Scheme Ref:	**Cambourne**
No Units:	1000
Location / Value Zone:	Lower
Development Scenario:	Greenfield
Notes:	[insert any relevant notes, comments or issues to highlight here]
Total GDV (£)	336,567,500
Policy Assumptions	
AH Target % (& mix):	40%
Affordable Rent:	50%
Social Rent:	10%
First Homes:	25%
Other Intermediate (LCHO/Sub-Market etc.):	15%
CIL (£ psm)	-
CIL (£ per unit)	-
CIL Total (£)	-
Site Specific S106 (£ per unit)	10,637
Site Specific S106 Total (£)	10,637,437
Sub-total CIL+S106 (£ per unit)	10,637
Site Infrastructure (£ per unit)	30,000
Site Infrastructure Total (£)	30,000,000
Sub-total CIL+S106+Infrastructure (£ per unit)	40,637
Profit KPI's	
Developers Profit (% on OMS)	20.0%
Developers Profit (% on AH)	6.0%
Developers Profit (% blended)	16.83%
Developers Profit (% on costs)	24.77%
Developers Profit Total (£)	56,629,050
Land Value KPI's	
RLV (£/acre)	803,491
RLV (£/ha)	1,985,425
RLV (% of GDV)	13.11%
RLV Total (£)	44,120,556
BLV (£/acre)	166,667
BLV (£/ha)	411,834
BLV Total (£)	9,151,870
Surplus/Deficit (£/acre) [RLV-BLV]	636,824
Surplus/Deficit (£/ha)	1,573,591
Surplus/Deficit Total (£)	34,968,686
Surplus/Deficit (per unit)	34,969
Plan Viability comments	**Viable**

Viable	if RLV > BLV
Marginal	if RLV < BLV, but RLV is positive
Not Viable	if RLV < BLV, and RLV is negative

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First Proposals Consultation Stage

Appendix 7

Commercial Property Market Report

Greater Cambridge Shared Planning

August 2021

Quality Assurance

Date of Report	20 August 2021
Version	V2
Filename and path	L:_Client Projects\2004 Cambridge WPV_Greater Cambridge Planning_Reports\2107 Commercial Retail Market Paper\210721 Greater Cambridge Commercial Market Report_v2.docx
Prepared by	Ed Tyler, Senior Consultant
	Brett Devenish, Director
Checked by	Brett Devenish, Director
Date	25 August 2021
Authorised by	Ben Aspinall, Managing Director
Date	

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1 Introduction

1.1 This market report has been used to inform our assessment for the Greater Cambridge Local Plan development commercial viability testing; and the viability assessment of the North East Cambridgeshire AAP (NECAAP). This report draws on data from recognised published data such as CoStar, EGi, Land Registry, published reports and agent consultations.

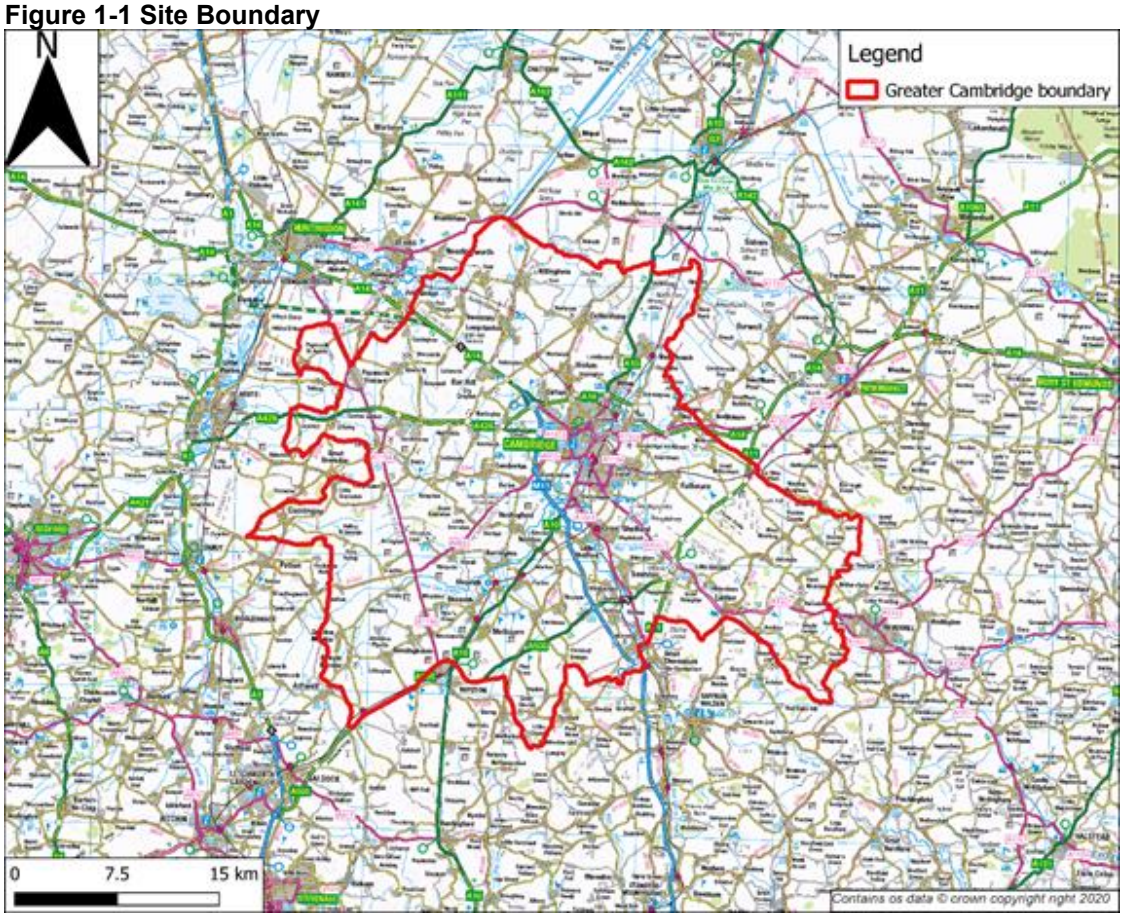
1.2 Our market assessment considers the following markets:

- Hotels
- Serviced apartments
- Retail (comparison and convenience)
- Science parks
- Office
- Industrial and Distribution

Study area

1.3 This market report considers the Greater Cambridge area. As set out in Figure 1-1 the Greater Cambridge area comprises the urban area of Cambridge City and the more rural area of South Cambridgeshire.

Figure 1-1 Site Boundary



Source: AspinallVerdi, 2020

Novel Coronavirus (Covid-19)

1.1 The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on 11 March 2020, has impacted global financial markets. In the second quarter of 2020, the United Kingdom entered the deepest recession in modern history which have consequently impacted property market activity.

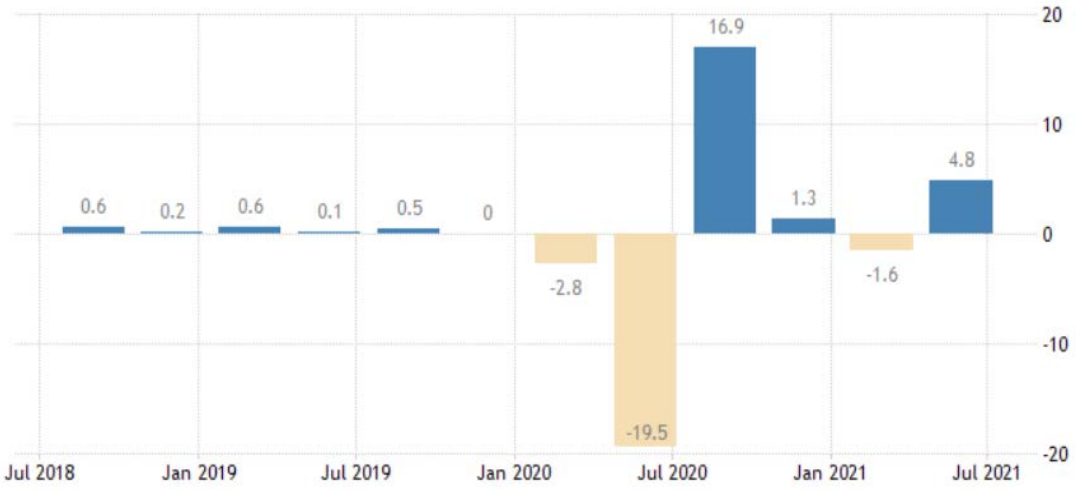
1.2 Many sectors endured forced closures during multiple lockdowns over the last 18 months. Non-essential retail had periods of closure, and the hospitality industry was particularly affected. Government initiatives to support businesses included the furlough scheme and landlords being prevented from initiating eviction proceedings for non-payment of rent. All sectors have now been allowed to re-open at full capacity as the vaccination programme has been rolled out.

1.3 Due to these uncertainties, we recommend that when policy makers are making decisions based on viability evidence in the current climate, they must ensure there is an adequate "viability buffer". In essence, a degree of caution should be taken when imposing planning policies and more surplus should be left as the profitability and viability of development may reduce.

Impact on the local economy

1.4 The pandemic has a significant impact on the UK economy, Figure 1-2 shows that since lockdown the UK economy (gross domestic product (GDP)) has had multiple periods of GDP falls, coinciding with the strictest lockdown periods. The UK was in recession at the end of the 2nd quarter of 2020, before rebounding as sectors re-opened, before a smaller fall in January 2021, which again has rebounded with the success of the vaccine programme and relaxation/removal of restrictions.

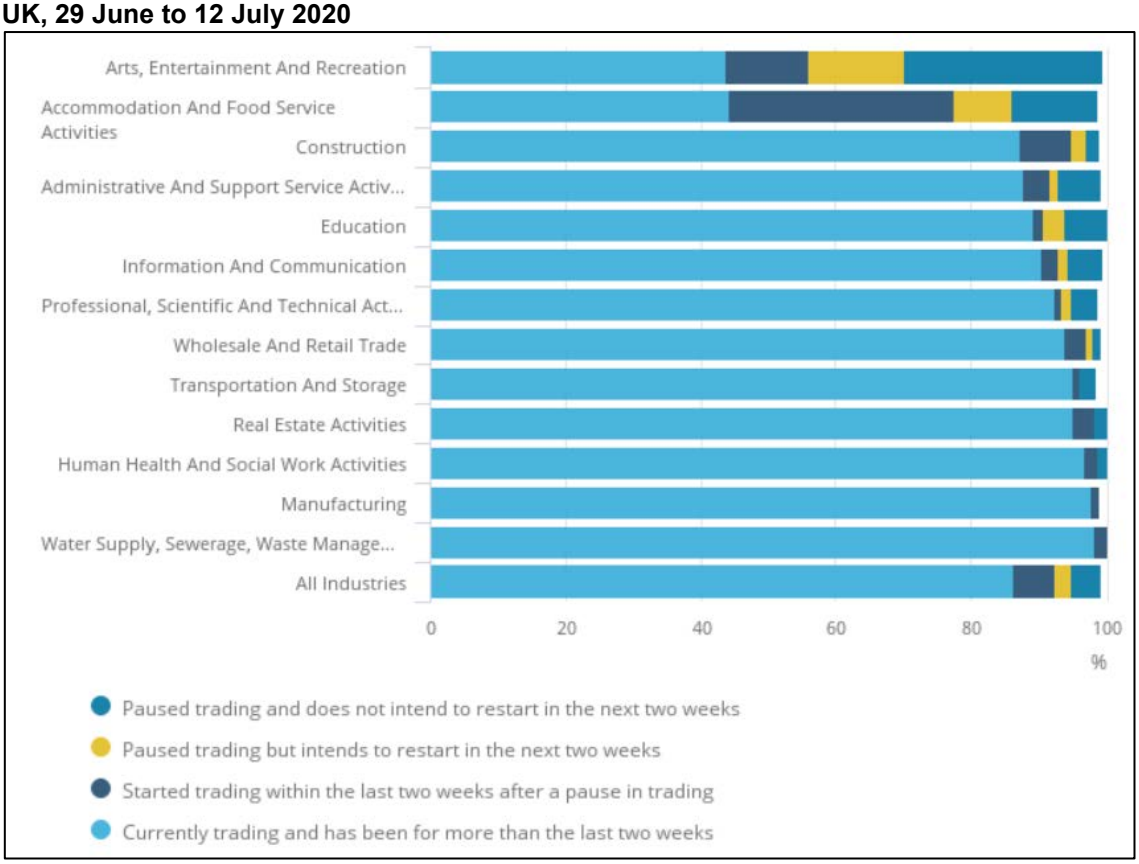
Figure 1-2 UK GDP growth last 3 years



Source: Office for National Statistics

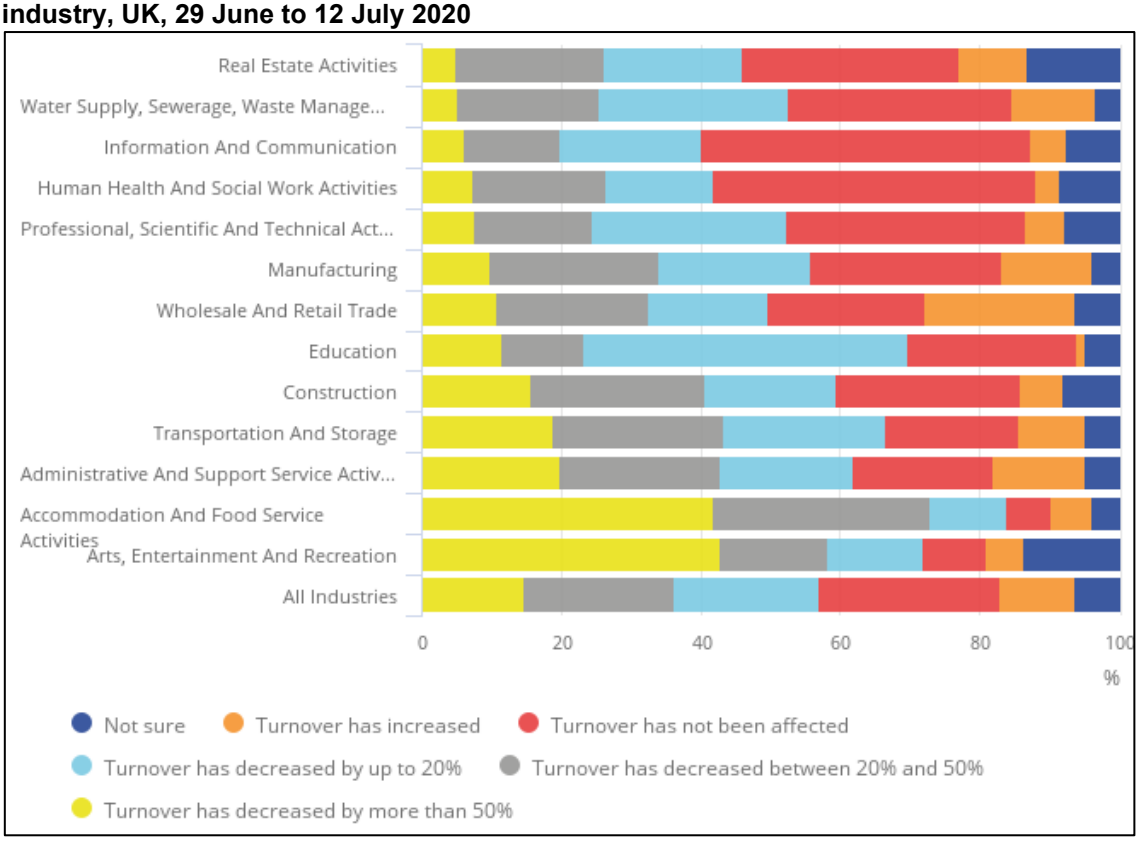
1.5 As shown in Figure 1-3, all sectors were affected by the pandemic through pausing in trading. The arts and the service sectors, then followed by construction, have been particularly hard hit and continually being affected despite easing of restrictions. Due to the pandemic, a large percentage of businesses in all sectors are seeing a reduction in turnover (see Figure 1-4).

Figure 1-3 Percentage of businesses, current trading status, broken down by industry, UK, 29 June to 12 July 2020



Source: Office for National Statistics – Business Impact of Coronavirus (Covid-19) Survey

Figure 1-4 Effect on turnover, businesses who are continuing to trade, broken down by industry, UK, 29 June to 12 July 2020



Source: Office for National Statistics – Business Impact of Coronavirus (Covid-19) Survey

Impact on the property market

1.6 We are now able to better see the affect of the Covid-19 pandemic on the commercial sector.

1.7 Carter Jonas report that many sectors now have increased confidence for the future, for instance in the manufacturing output and new orders was the steepest for 7 years, with increasing job creation, with similar positive perceptions in the construction industry, although this is tempered by supply chain delays and shortages[1].

1.8 The withdrawal of government support measures, coupled with the need to repay pandemic loans and missed rental payments, will be a further significant test for businesses.

Conclusion

1.9 Overall though there is increased uncertainty in the markets we are still able to take an assessment to inform our viability testing. But it is important to note that this market report will

[1] Cater Jonas – Commercial Market Outlook July 2021

need to be periodically updated as more data becomes available and the long-term impact of coronavirus on property markets becomes clearer.

2 Hotel market assessment

Introduction

2.1 The UK hotel market has a wide-ranging offer, from 5-star and luxury hotels, major national brands and small independents. International and domestic tourism, business and leisure activities generate demand across upper, mid and lower tier accommodation. The upper end offer is predominantly found in London to capture high tourist and business traffic. At the budget end Statista report[2] that this sector captures demand from peer-to-peer platforms (e.g. Airbnb) for cheaper rates and home away from home experience. Both Lambert Smith Hampton[3] and Statista report[2] that despite peer-to-peer platforms being considered a disrupter to the market they have not had a discernible impact on chains or industry performance.

Hotel operating models

2.2 There are four types of hotel operating models:

- **Hotel management agreement (HMA**) – these agreements can be complex, but in essence, the operator is responsible for the day-to-day running of the hotel, including hiring and firing employees. As well as providing accommodation, and additional functions such as conference facilities, the operator will take reservations and conduct the marketing and promotion of the business. The operator will be responsible for routine maintenance and will procure other capital projects needed for the hotel, although these will typically be authorised and paid for by the owner. The operator pays a fee for proving the services under the hotel management agreement. The fee is usually calculated through a formula, which will vary depending on the terms of the agreement, typically, the operator's fee will be subdivided as follows:
    - a guaranteed base amount, calculated as a percentage of revenue from the hotel business;
    - an incentive element, to be earned by the operator if gross operating profit (GOP) exceeds an agreed threshold
- **Franchise agreements** – a franchisee has the right to use a brand, the distribution channels and other proprietary knowledge of a franchisor. The owner retains all risks and liability of the business, but, unlike an HMA, they also retain control of the property.
- **Hotel leases** – this is a traditional model involving a landlord and tenant, with the tenant can choose to operate the hotel directly or subcontract operations using management contracts and/or franchises.

[2] https://www.statista.com/topics/3146/hotel-industry-in-the-united-kingdom-uk/
[3] Lambert Smith Hampton, 2018, Hotel Report

- **Owner operation** – the hotel is owned and fully operated by the brand. This model is more capital intensive but provided the operator to have full control of the property thus allowing them to configure the property to respond to the market.

Main hotel indicators of performance

2.3 The main hotel indicators to measure performance are:

- *'occupancy rates (of rooms or bed-places),*
- *average room rates (or ADR – average daily rate),*
- *and room yield, more commonly known as revenue per available room (RevPAR).'*[2]

UK hotel market

2.4 Due to the global pandemic, many UK hotels closed during lockdown with the sector now reopened but still struggling to return to pre-pandemic levels. VisitEngland[4] report that room occupancy in England in May 21 was 43%, compared to 79% for the same period in 2019. On a regional level, the East had the highest level in the country at 53%.

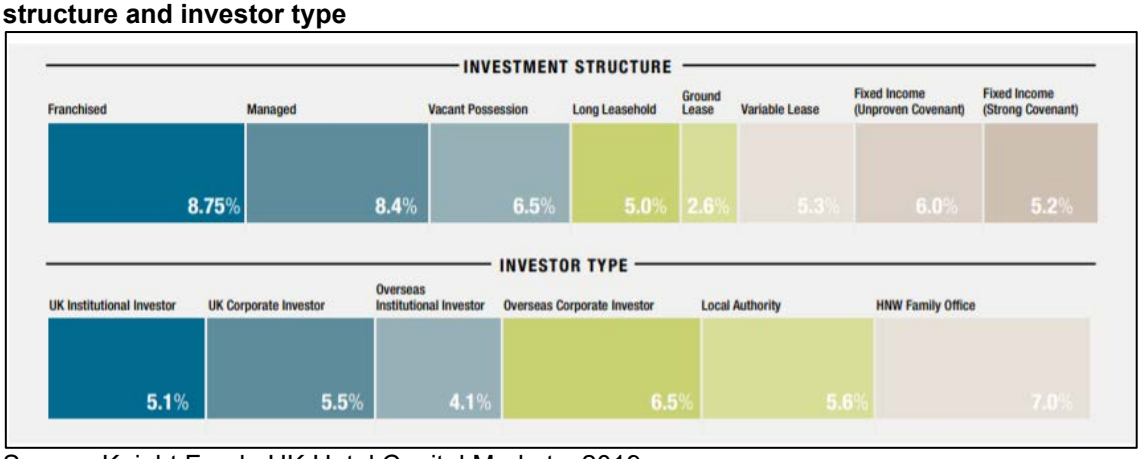
2.5 With regards operators, Travelodge has entered into a company voluntary arrangement (CVA) as it could not agree to a rent reduction with its landlords. As a result of the CVA, 94% of their leases will be paid at 50% of the rent and 6% of leases will receive zero rent until the end of 2021. Furthermore, as part of Travelodge's restructure, two of its landlords are seeking to exit the brand via two initiatives:

- Ago – formed by one group of Travelodge landlords and is seeking to partner with Acord under its Ibis brand,
- Goodnight Hotels – formed by another group of landlords is seeking to create a new budget brand.

2.6 Figure 2-1 summarises research published last year (2019) by Knight Frank. It shows that hotel leases are more attractive to the investment market (i.e. lower yields/generate more value) than the franchised and HMA models. Lease yields are typically between 5% and 6% whereas franchised and HMA yields are in excess of 8%.

[4] VisitEngland – England Occupancy Survey – May 2021 Results

Figure 2-1 UK Hotel Investment 2018 – average net initial yield (%) – by investment structure and investor type



Source: Knight Frank, UK Hotel Capital Markets, 2019

Greater Cambridge hotel market

2.7 The Greater Cambridge area is an attractive hotel market due to strong business base, tourism and university. The attractive nature of the Greater Cambridge market is shown in its high ADR, only London has a higher ADR (see Table 2-1) than Cambridge, with the Cambridge rate being much higher than the likes of Oxford and Bristol.

Table 2-1 - ADR by UK cities

Location	ADR (USD) Jan – Mar 2019
London	223.83
Cambridge	176.04
Birmingham	117.74
Bristol	131.04
Edinburgh	130.47
Milton Keynes	137.59
Reading	156.04
Crawley/Gatwick	144.25
Heathrow	124.11
Oxford	142.09

Source: HOTELS QUARTERLY MARKET REPORT, JANUARY TO MARCH 2019, In association with Advantage Travel Partnership

2.8 Due to the high ADR for Cambridge, the investment values are much higher than other regional cities (see Table 2-2). The Clayton sold last year at circa. £350,000 per bed space whereas values elsewhere are half.

Table 2-2 - Hotel investment sales

Date of sale	Address	Operator	No. of beds	Price per bed	Comments
18 Nov 2019	Station Road, Cambridge	Clayton	155	£351,612	The Ability Group has bought The Tamburlaine Hotel Cambridge for £54.5m as an investment, reflecting a net initial yield of 5%. The hotel, which comprises 155 bedrooms and opened in 2017, was sold by the O'Callaghan Collection in an off market transaction. The new owners have also agreed a 30 year lease with Dalata who will operate the hotel under its Clayton brand.
13 Nov 2018	99 Church St, Rickmansworth	Premier Inn	92	£153,260	H20 Urban, the development joint-venture between bloc Ltd and Canal & River Trust, has completed a development funding agreement with a UK private property company to bring forward the development of a Premier Inn hotel and a branch of builder's merchant Travis Perkins in Batchworth Lock, Rickmansworth, Hertfordshire.
26 Mar 2020	Northside Rd, Bristol	Hampton by Hilton	201	£119,402	Located at Bristol Airport. Includes a fitness centre, breakfast area and conferencing/meeting rooms that can hold up to a maximum of 20 people
12 Aug 2019	Coventry Rd, Birmingham airport	Holiday Inn	239	£138,075	Holiday Inn Birmingham Airport - NEC has been sold by Crest Hotels to 11 Hospitality Limited. The 239-bedroom hotel will continue to operate subject to a franchise agreement with InterContinental Hotel Group (IHG) under the Holiday Inn brand. Alongside its rooms, the hotel has 14 meeting and conference rooms, a Marco Pierre White restaurant and leisure facilities.

Source: CoStar, accessed 14 August 2020

Conclusion hotel market

2.9 Based on the market analysis a suitable capital value bed space to use in the viability testing is £350,000.

3 Serviced apartments market assessment

Introduction

3.1 Within Europe. The UK serviced apartment sector is the market leader with JLL[5] reporting that, in 2018, there were over 22,000 serviced apartments in the UK and Ireland. In recent years, the short term lets sector which includes serviced apartments and aparthotels has been one of the fastest-growing sectors in the accommodation market, with LSH reporting that "*with approximately 6,000 new units scheduled to open by 2021, or about 13% of the total active pipeline, the sector is one of the fastest-growing parts of the overall accommodation market*"[6]. Whilst the serviced sector is different from the traditional hotels sector. Many major hotel operators including IHG and Accor now have extended stay brands with an increasing number of properties across the UK. A major reason for this is that serviced apartments are less labour intensive than traditional hotels, which means that hotel operators with cost pressures can offset these with a serviced apartment or aparthotel brand.

3.2 Nationally, the demand for serviced apartments has been growing steadily in recent years, partly driven by the rise in status of holiday rental operators such as Airbnb. Savills report that "*Post-Covid, greater cleanliness concerns from guests alongside social distancing preferences, and the fact that many Airbnb hosts have removed properties from the listing site, could see the sector capture a greater share of this leisure demand going forward."*[7]

3.3 Due to the global pandemic, the hospitality sector across the UK has been negatively affected as a result of the lockdown which greatly reduced demand across the board. While all markets were negatively affected, the serviced apartments market has performed better than traditional hotels with Savills reporting that "*Serviced apartments have not been immune to the Covid-19 crisis but have shown a degree of relative outperformance. As seen historically, this could become more pronounced once recovery starts to emerge"*[8].

Greater Cambridge serviced apartment market

3.4 The Greater Cambridge area is an attractive market due to a strong tourism sector a world-renowned university and a strong science and technology-based economy. The market is mostly focused around central Cambridge City, with a number of different schemes varying from single apartments to new build schemes. Some of the major operators in Greater Cambridge include Your Space Apartments, Citystay, Urbanstay and Signet Apartments. These operators offer a

[5] JLL, 2018, Serviced Apartments - The fastest growing sector in hospitality
[6] LSH, 2020, Innovation in The Fast-Growing Aparthotel Sector
[7] Savills, 2020, European Serviced Apartment Market
[8] Savills, 2020, European Serviced Apartment Market

range of apartments from studio to three bedrooms with varying levels of quality and amenities, which is reflected in the rents.

Rents

3.5 Table 3-1 summaries the quoting rents for several high-quality serviced apartment schemes in Cambridge. Prices for studio apartments range between £108 - £215 per night while prices of 1 bed apartments range between £109 - £192 per night and 2 beds range between £148 - £215 per night.

Table 3-1 - Summary of serviced apartment rents

Scheme name	Typology	Price per night	Notes
Hinton House, CB1 7BS	Studio	£108 - £160	Built 2019, minimum stay 1 night.
	1 Bed	£121 - £192	
Vesta, CB1 2FX	1 Bed	£134 - £163	Built 2016, minimum stay 4 nights.
	2 Bed	£175 - £215	
Jubilee House, CB1 2NZ	1 Bed	£109 - £145	Built 2017, minimum stay 3 nights.
	2 Bed	£148 - £185	
Ceres, CB1 2FG	Studio	£112 - £132	Built 2015, minimum stay 4 nights.
	1 Bed	£131 - £159	
	2 Bed	£160 - £204	

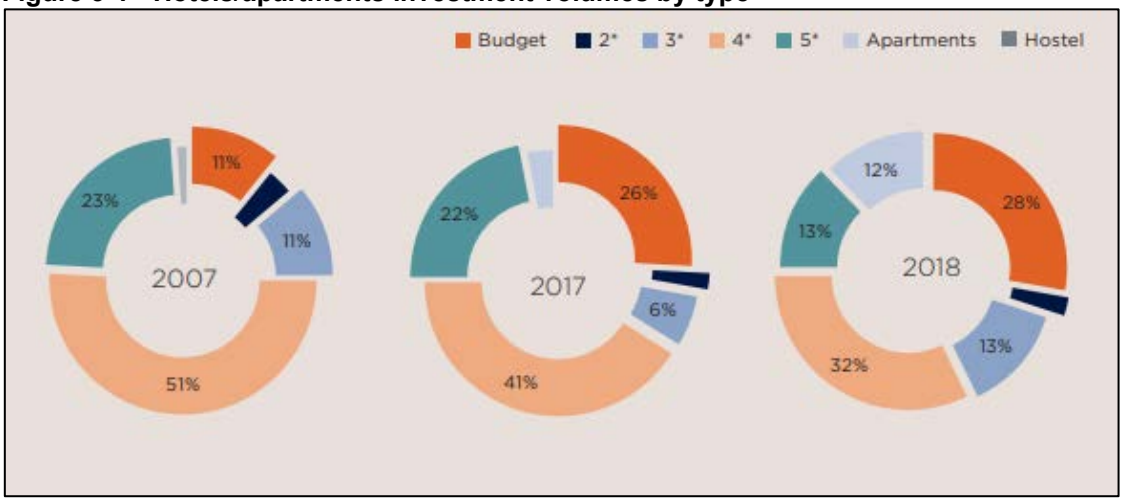
Source: Providers websites

Serviced apartments investment yields

3.6 According to JLL[9], as of 2015, yields for serviced apartments ranged between 6.5% - 9%. This was due to the higher risk involved with the then-emerging sector. With regards to investment yields, Figure 3-1 shows that, between 2017 and 2018, the investment volume for serviced apartments increased from 3% to 12%.

[9] JLL, 2016, Why Serviced Apartments? The Investment Case

Figure 3-1 - Hotels/apartments investment volumes by type



Source: Savills, 2019

Conclusion

3.7 Based on the market analysis a suitable nightly rent is £125 for a studio, £140 for a 1 bed and £195 for a 2 bed. Assuming an adjusted net initial yield of 6.5% is appropriate.

4 Retail market assessment

Introduction

4.1 In our assessment of the retail sector, we consider both convenience and comparison retail because they both have different market drivers.

Retail market overview

4.2 Prior to the Covid-19 pandemic the retail market was going through a structural change. The structural changes in the retail market were being caused by the growth in online sales and falling footfall in town centres. Retailers were also facing cost pressures from business rates and national living wage. During the Covid-19 outbreak many retailers have had to close or limit customer access due to social distancing measures introduced by the government. Many retailers have sought to take advantage of the Coronavirus Act 2020[10] and not paid rent – CoStar reported that only 41% of March quarter date rent was collected and 40% June quarter date.[11]

Convenience sector

4.3 The convenience retail sector has seen a significant change since the financial crisis. In the years following 2008, supermarkets appeared to have weathered the economic storm with most operators aggressively expanding (commonly referred to as the race for space). Operators were able to competitively bid for sites as they were taking advantage of other sectors in the property market is much weaker. During this period of growth, there was a strong appetite from operators to open large-format stores of up to circa 11,150 sqm (123,785 sqft). This format providing a mixture of convenience and comparison retail.

4.4 In more recent years shopping patterns have changed significantly: there is more reliance on online shopping combined along with customers supplementing a ‘big’ shopping trip with regular smaller shops during the week. Also, some customers are splitting their shopping trips between the big four supermarkets (Tesco, Sainsbury’s, Asda and Morrisons) and discounters such as Aldi and Lidl. This resulted in supermarket operators shifting away from large format stores

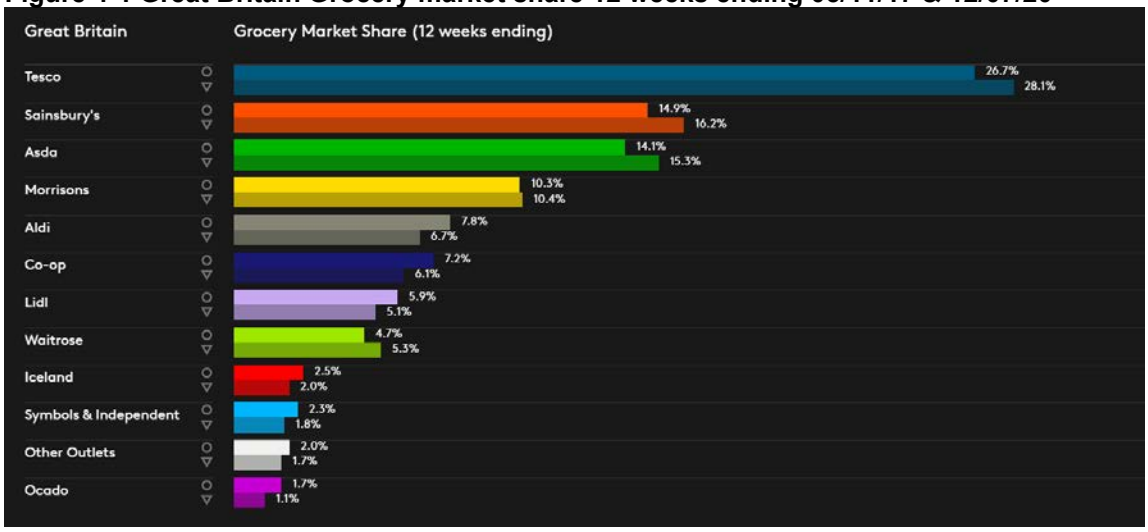
4.5 The convenience retail market appears to have performed relatively well during the outbreak with many reporting a higher volume of sales than they would experience during Christmas. At some points, demand has appeared to outstrip supply, with the likes of Ocado temporarily suspending their ordering application and restricted access to their website. The pressures faced by supermarkets during the Covid-19 lockdown are; maintaining social distancing in their physical

[10] 'Coronavirus Act 2020' which received royal assent on 25 March 2020 introduced new legalisation ‘that no right of re-entry or forfeiture may be enforced due to non-payment of rent until the end of the 'relevant period' (30 June 2020 (unless extended)).’ The Coronavirus Act 2020 has provided the flexibility to allow tenants not to make their quarter day payment in March.
[11] CoStar, 2 July 2020, Forty six per cent of June Quarter Day commercial rent now collected

stores, through restricting customers numbers; maintain supply chains (resulting in less choice of items and restricting the number of purchasers; and increasing capacity for home deliveries to meet demand.

4.6 Figure 4-1 shows how the changes in the market have affected the relevant supermarket operators market share in recent years. The big four have been losing market share whereas the budget operators of Lidl and Aldi have gained market share along with online delivery service Ocado.

Figure 4-1 Great Britain Grocery market share 12 weeks ending 05/11/17 & 12/07/20



Source: Kantar WorldPanel (August 2020)

4.7 Due to the changes in the market, operators are now more selective in the types of and locations of stores the seek to open. Tesco typically only seeks sites for their express format i.e. circa 200 sqm (2,200 sqft) in main urban areas ideally close to transport hubs. The likes of Asda, Morrisons and Sainsbury's focus on the main urban areas where there is a perceived market gap. Aldi and Lidl have been a bit more aggressive which has led them to increase their market share.

4.8 Lidl[12] seeks sites with a minimum of 1.5 acres to accommodate a store totalling between 14,000-26,500 sqft (1,300-2,460 sqm). In terms of location, the sites would ideally have main road frontage with easy access and be situated within town, district or edge of centre or out of town locations. Aldi[13] also has similar requirements in terms of location and size, with a minimum of 1.5 acres to accommodate 18,000 - 20,000 sqft of space and 100+ car parking spaces.

4.9 The big four are decreasing their property portfolios shifting from larger stores to smaller stores to keep up with changes in shopping trends. These smaller stores can be more attractive to the investment market as they have higher sales densities and can increase rent per sqft. Compared

[12] Lidl.co.uk/en/Site-Requirements, accessed February 2019
[13] Aldi.co.uk/about-aldi/property/required-towns, accessed February 2019

to other retail comparison retail is still attractive to investors due to good covenant strength, and long institutional RPI linked leases.

Convenience retail rents

4.10 There is a lack of convenience retail evidence in the area on CoStar; therefore, we have considered the wider region in our analysis of rents. Such an approach is acceptable to analyse comparable evidence as the ability for an operator to pay the rent is driven by footfall and nearby competition rather than geographical boundaries.

4.11 The rents we have considered are not new-build as there is a lack of this type of development coming forward. However, Cambridge is amongst the sites listed as "required locations" by Aldi and Lidl. Table 4-1 shows that rents achievable range between £18.00 psf to £39.40 psf with smaller units achieving s higher price psf than the larger format stores.

Table 4-1 - Convenience retail occupational transactions

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
11/10/2019	393 Newmarket Road, Cambridge, CB5 8JG	Aldi	13,509	£39.40	Let on a 20-year term with rent free periods spread over the term. Rent Review on a 5 yearly basis – effective rent £37.02
19/07/2019	Fred Archer Way, Newmarket CB8 8NY	Waitrose	44,481	£18.60	Let on a 20-year term. Lease renewal option at the end of current lease
17/07/2019	Hartham Lane, Hertford SG14 1RD	Sainsbury's	36,089	£28.54	Let on a 40-year term. Rent Review on a 5 yearly basis
03/2018	Grovebury Road Retail Park, Leighton Buzzard	Aldi	20,000	£18.00	20 year lease and the tenant benefitted from an 11 month rent free period. Unit within a brand new retail park.

Source: CoStar, Knight Frank accessed August 2020

Convenience retail yields

4.12 Table 4-2 shows that the most recent investment sales in Greater Cambridge and the surrounding areas range between 4.5% and 5.36%.

Table 4-2 - Convenience retail investment transactions

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
04/09/2019	Cheddars Lane, Newmarket Road, Cambridge, CB5 8LD	Tesco	72,200	4.5%	Let with 10.5 years term certain and index linked annual rent increases.
01/12/2018	Brooks Road, Cambridge, CB1 3HP	Sainsbury's	81,984	4.65%	Let with 2 years term certain. Possibility to restructure lease for 10-year term and upward only rent reviews. Passing rent £260,000 per annum.
26/11/2018	163-167 Mill Road, Cambridge, CB1 3AN	Tesco	5,720	5.36%	Auction sale, let with 3 years term certain. Passing rent of £75,830
08/2018	Wolverton Works, Milton Keynes	Lidl	28,041	4.84%	FH. Built 2018. 5 yearly rent reviews to OMRV, capped at 2% per annum. Part of a wider regeneration scheme.

Source: CoStar, Knight Frank, accessed June 2020

4.13 Knight Frank report[14] that prime supermarket yields are 4.25% for fixed annual retail price index (RPI) increase on a 25-year term, with yields increasing to 4.75% for open market reviews.

Comparison retail

4.14 Prior to the global pandemic, the shift from bricks to clicks was being significantly felt in the comparison sector. Many well-known names were lost e.g. BHS, Poundworld, Maplin and Toys 'R' Us and entering CVAs or administration e.g. New Look, Debenhams and House of Fraser.

4.15 As the high street starts to re-open we have seen further changes which include:

- Intu – one of the UK's largest shopping centre owners, with the likes of Trafford Centre and Lakeside entered administration.

[14] Knight Frank, May 2020, Investment yield guide

- All Saints – the fashion retailer has agreed to a CVA which has resulted in them changing to turnover rents rather than fixed rents.
- Go Outdoors - entered administration end of June 2020 and was bought by JD Sports and the business will be restructured and reports they will be seeking to significantly cut rents to avoid store closures.

Greater Cambridge comparison retail

4.16 The comparison retail market in Greater Cambridge is mainly concentrated in Cambridge city with significantly less retail activity in the South Cambridgeshire area. the area has a range of retail formats from local high street shops to larger out of town retail parks such as Cambridge Retail Park, Beehive Centre and Cambridge Leisure Park all located in Cambridge City.

4.17 There is no recent new build retail evidence for yields or rents listed on CoStar for the area, a reflection of little new development recently occurring. We have reviewed the second-hand units that have recently sold. Table 4-3 shows some transactions across the Greater Cambridge. The majority of the transactional evidence contains smaller units up to 1,500 sqft. Rents vary across the area and are mainly dependent on the quality of accommodation as well as the local area's retail strength. Rents range between £13.88 and £26.70 psf.

Table 4-3 - Comparison retail occupational transactions

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
01/12/2019	184B Histon Road, Cambridge, CB4 3JP	Express Grocers	995	£25.12	13-year lease with 3-months rent free and 5 year tenant break – effective rent £23.70 psf
30/07/2019	105A Cherry Hinton Road Cambridge CB1 7BS	n/a	620	£26.60	Converted 1900s building. 3-months rent free
08/04/2019	40 Arbury Court, Cambridge, CB4 2JQ	Coral	872	£15.42	Let on a 10-year term with 5-year tenant break
20/01/2020	46B High Street, Sawston, Cambridge CB22 3BG	Break Charity	663	£26.70	Let on a 9-year term with 3 year tenant break
30/05/2019	8 Rose Cres, Cambridge CB2 3LL	JoJo Maman Bebe	1,435	£35.71	10-year lease with 3-months rent free and 5 year rent review with tenant break

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
					on year 3 and 6 – effective rent £34.54 psf
10/04/2019	34 Trumpington Street, Cambridge CB2 1QY	Gabor Cossa Antiques	612	£13.88	Let on a 5-year term – effective rent £15.32
10/01/2019	56 Burleigh Street, Cambridge, CB1 1DJ	Barham & Sons	611	£24.54	Let on a 3-year term

Source: CoStar, accessed June 2020

4.18 There is limited evidence of recent investment deals in Cambridge recorded on CoStar, most of the evidence is based around the city centre. The evidence in Table 4-4 shows that sales achieved yields between 5.44%- 7.35%.

Table 4-4 - Comparison retail investment transactions

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
04/02/2019	30/31 Petty Cury, Cambridge, CB2 3NB	Superdry	7,087	5.92%	Let with 4 years term certain. Passing rent of £325,000
08/07/2019	38/39 Green Street, Cambridge, CB2 3JX	Multilet including: Tabanco & Cellini (Pearls) Limited	2,769	5.44%	Let with 5 and 10 years term certain. Total passing rent of £68,000. No breaks
20/12/2019	The Belvedere, Hills Road Cambridge CB2 8PB	Multilet	19,101	7.35%	AWULT of 3.34 years to expiry, Passing rent of £152,288

Source: CoStar, accessed June 2020

Conclusion

4.19 Based on the above evidence we have proposed to test the following:

- Convenience retail budget format store 4,645 sqm (21,528 sqft)
  - Rent £290 psm (£27 psf)
  - Yield 5%
- Convenience retail express format store 350 sqm (3,767 sqft)

- Rent £215 psm (£23 psf)
- Yield 5.5%

- Comparison small town centre store 93 sqm (1,000 sqft)
  - Rent £215 psm (£25 psf)
  - Yield 7%

- Comparison Large town centre store 557 sqm (6,000 sqft)
  - Rent £236 psm (£22 psf)
  - Yield 6%

5 Science Parks market assessment

Introduction

5.1 Science parks (also known as research parks and technology parks) are facilities that emerged in the UK in the 1980s and have increased in number and size throughout the 1990s and 2000s. Today there are multiple examples of science parks around the country specialising in several different sectors and research fields. The UK has relied on these parks to help it to progress in highly skilled scientific and technology sectors. Successive public and private sector institutions and businesses have promoted the use of science parks as integral areas for innovative and scientific discovery.

5.2 The United Kingdom Science Park Association (UKSPA) provide a broad definition of a science park. In short, a science park is an area that supports business and research institutions to transfer research and technology initiatives The USKPA outline three specific science park criteria, they must:

- Encourage and support the start-up and incubation of innovation-led, high-growth, knowledge-based businesses.
- Provide an environment where larger and international businesses can develop specific and close interactions with a particular centre of knowledge creation for their mutual benefit.
- Has formal and operational links with centres of knowledge creation such as universities, higher education institutes and research organisations.
- Generally, it is assumed that a science park is a centrally managed collection of properties which can include specialist facilities, laboratory space, office space and light manufacturing space. Usually, science parks are master-planned and have a mix of different types of amenities, including cafes, children nurseries and conference facilities.

5.3 The format of UK science parks has changed over the past 15 years with more of a focus now on smaller units for start-ups and SMEs. This has changed the dynamic of the real estate market. The constant demand for small units has decreased supply. Furthermore, there is a constant cycle of companies merging, and being acquired by larger companies, creating demand for medium and larger units as well.

Greater Cambridge Science Parks

5.4 Greater Cambridge is considered to be one of the most established areas for science parks in the country; have multiple science parks in and around Cambridge city and university. Cambridge city specialises in bioscience (life sciences) and technology sectors (including; electronics, IT). Cambridge is one of the three science hubs, along with London and Oxford, that make up the

'Golden Triangle of life science research, with a recent Bidwells Report stating that '*London, Oxford and Cambridge — 'the Golden Triangle' — has demonstrated global leadership in the response to the Covid-19 crisis. The region's strengths in life sciences have been at the forefront in developing testing, treatments and, ultimately, a vaccine.'*[15] It is estimated that the region will play an important role in the post-Covid economic activity and recovery of the UK.

5.5 Table 5-1 provides a list of major science parks in Greater Cambridge, along with their size and example occupiers. Of the example science parks, some have a very specific focus on one sector i.e. Wellcome Genome Campus, which specialize solely in genome and biodata research. However, most science parks have a more diverse range of sectors, and in some cases (e.g. Granta Park) they are a science/business park hybrid. According to Bidwells, *'Cambridge was the second most innovative city behind London, accounting for almost 75% of all life science start-ups in the Eastern region.'*[16].

Table 5-1 - Greater Cambridge Science Park

Name	Size (sq ft)	Example Occupiers	Focus of industry	Owned by Uni. University collages
Babraham Research Campus	260,000	Cambimune, Cancer research, Gen2 Neuroscience, Kymab, New Path, Zfactors	BioScience	
Cambridge Research Park	400,000	Elecheck, Sectrum Management, Valliant, Diomed and Horizon Discovery	BioScience & General Engineering	
Cambridge Science Park	1.65 million	Nobelight, Johnson Matthey Catalysts, Kiss Communications, Pharmorphix, Philips Research, Solize UK,	BioScience & Technology	Yes (Trinity College)
Wellcome Genome Campus	-	Genomics England, Microbiotica, Congenica, Global Gene Corp	Genome and biodata research	
Cambridge Bio-Medical Campus	2.3 million	GlaxoSmithKline, AstraZeneca, Cambridge University Hospitals NHS Foundation Trust,	BioScience & Medical	Yes
Granta Park	1.1 million	Pfizer Research Centre, One Nucleus, Ista, Alzheimers Research UK, UCB	BioScience	

[15] Bidwells, Knowledge networks
[16] Bidwells, Spring 2020, Our View on Offices and Labs

Name	Size (sq ft)	Example Occupiers	Focus of industry	Owned by Uni. University collages
St Johns Innovation Park	250,000	AlphaBio Control Ltd, Bailey Fisher, Cambridge Therapy Centre, Ellexus Ltd	BioScience, Technology, IT & Electronics	Yes (St Johns College)
Melbourn Science Park	200,000	AstraZeneca, Avita Medical Europe, TTP Labtech, TTP Venture Managers	BioScience	
Chesterford Research Park	350,000	Charles River, Illumina, Isomerase Therapeutics, UKSPA, DRW, TLIP, AstraZeneca, CellCentric	BioScience	

Source: Bidwells & Individual science park websites (2020)

5.6 The success of science parks in Greater Cambridge is due to many reasons. A key attribute is the world-class university located in the city. This provides the academic resource required to make advancements in the research carried out in the parks. Cambridge Science Park and Cambridge Bio-Medical Campus are both owned by Cambridge University. Those science parks that do not have direct connections to the university can still benefit their geographic position in acquiring skilled resource. A further benefit in the area is the critical mass of numerous science parks in the area. This creates the potential for competition and the sharing of academic resources. Savills report that access to academic resource has been the key to the success of science parks in the Cambridge region.

5.7 Another competitive advantage of Cambridge is the strong office market where development is viable. Prime rents in Cambridge are as high as £46.50 psf. This provides a good opportunity for science parks to let space to non-science related activity.

5.8 Major recent deals include Abcam's 100,000 sqft office building a Cambridge Biomedical Campus and Tuspark's completion of the Bio Innovation Centre at Cambridge Science Park.

Science Park rents

5.9 Table 5-2 sets out achieved rents for Greater Cambridge recorded on CoStar and EGi. Rents for second-hand units range from £32.09 psf to £34 psf which is in line with Carter Jonas[17] headline rents of £36.00 psf for northern fringe office/science parks and Bidwells[18] headline rents of £35.00 psf for shell labs.

[17] Carter Jonas, 2020, Commercial Edge Spring 2020
[18] Bidwells, 2020, Our View on Cambridgeshire Offices & Labs, Summer 2020

Table 5-2 - Achieved rents Greater Cambridge

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
23/03/2020	216 Cambridge Science Park, Milton Road, Cambridge, CB4 0FZ	Amgen	34,692	£34.00	Built 2019, 10 year lease
10/03/2020	Vitrum Building, St Johns Innovation Park, Cowley Road Cambridge, CB4 0DS	Phillips Medisize	2,000	£32.09	Built 2004, 3 year FRI lease
30/06/2020	181 Cambridge Science Park, Milton Road, Cambridge, CB4 0FZ	Mursla	1,247	£50.00	Recently refurbished, 1 year lease

Source: CoStar/EGi accessed August 2020

Science Park yields

5.10 There is little evidence of recent investment activity in Greater Cambridge recorded on CoStar. Table 5-3 shows these investment transactions, with yields between 5.25% - 5.63%, these properties are located in the fringe areas of the city. In addition to this Carter Jonas[19] report a prime yield of 4.50% for offices/labs in Cambridge City.

Table 5-3 - Science Parks investment transactions Greater Cambridge

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
01/06/2018	Unit 163, Cambridge Science Park, Milton Road, Cambridge, CB4 0GG	Heraeus Noblelight	10,283	5.25%	Purchased by Norwich City Council.
22/11/2018	140 Cambridge Science Park,	Displaylink		5.63%	Fully occupied, Lease lengths mostly 10 years with 5 year breaks.

Source: CoStar, accessed June 2020

[19] Carter Jonas, 2020, Commercial Edge Spring 2020

Conclusion

5.11 Based on our analysis of the Science Park market an appropriate rent is £36 psf and yield of 5.25%.

6 Office market assessment

Introduction

6.1 Similar to the residential market, the full impact of Covid-19 on the office market is unknown. With the government encouraging working from home measures, many offices have been left unoccupied or at greatly reduced occupancy. Companies have been forced to embrace video conferencing and other measures to ensure business continuity.

6.2 What has emerged to date is that:

- Leasing decisions deferred – due to the uncertain world economic outlook companies have deferred the decision making in taking new space, this is more apparent with micro-businesses and SME's whose current focus is dealing with the immediate fallout and business continuity.
- Tenants seeking to defer rent payments – the 'Coronavirus Act 2020' which received royal assent on 25 March 2020 introduced new legalisation *'that no right of re-entry or forfeiture may be enforced due to non-payment of rent until the end of the 'relevant period' (30 June 2020 (unless extended)).'*[20] The Coronavirus Act 2020 has provided the flexibility to allow tenants not to make their quarter day payment in March.
- Increase in office occupier tenant incentives – Knight Frank indicates that *'Lease incentives, however, have drifted: 21-24 months on some 10-year leases, instead of 18-21 months in the West End and nearer 24 months in the City, which were previously at 21-24 months.'*[21]

6.3 Typically, new office development is only financially viable in major towns and cities. Generally, new development requires a pre-let in place to a blue-chip covenant – i.e. on a long lease to a high-quality tenant that is likely always to pay its rent and adhere to its obligations. This structure gives sufficient security to the investment to enable funding to be obtained. For example, office take-up in 2019 to the end of September was 1.8m sq ft, of which 90% of the take-up was Grade A.[22] Only 460,000 sq ft of speculative schemes are expected to complete in 2019, well below the 5-year average of 1.0m sq ft delivered per annum in the South East.[23].

6.4 In recent years the main drivers of demand for new office space have been from finance, professional services, Technology, Media and Telecommunications (TMTs) and flexible workspace providers. Since the referendum to leave the European Union there has been a slight

[20] https://www.rpc.co.uk/perspectives/rpc-big-deal/covid-19-and-commercial-tenants-rights-regarding-rent/
[21] Knight Frank, June 2020, COVID-19 What we know, what we expect, what we question
22 BNP Paribas, 2019 Q3, South East Offices Review,
[23] Ibid

cooling of office demand from the finance and professional services, but demand from TMTs and flexible workspace providers remains robust.

Greater Cambridge office market

6.5 The Greater Cambridge office market is centred around Cambridge City, where economic growth has been strong despite the Brexit and election uncertainty of the past few years. Cambridge has also emerged as the eastern region's main hub of research & development/ TMTs, there are also some more traditional occupiers such as professional services and finance companies around the area.

6.6 The majority of the largest office deals in the city have occurred in the CB1 area, especially around Station Road, with Apple pre let of 80.000 sqft of space, Fora taking 65,000 sqft of space and WeWork taking up 50,000 sqft of space. There is also activity in the north of the city at Cambridge Business Park.

6.7 In South Cambridgeshire, the office market is focused mainly around several established office parks such as Vision Park/Pioneer Court, Cambridge Innovation Park in Waterbeach and Cambourne Business Park. There are also a number of notable 'character offices' such as barn conversions, examples of this include Copley Hill Business Park and Magog Court.

6.8 Occupiers in these areas range from local to national occupiers, Occupiers include Ziess (advanced manufacturing) who occupy a 43,000 sqft building at Cambourne Business Park and DCI[2] (Data Storage), who occupy a 30,000 sqft building at Cambridge Research Park.

Office rents

6.9 According to Carter Jonas, prime rents in the CB1 area are up to £46.50 psf while prime rents in the northern fringe area are around £36.00 psf. Table 6-1 sets out achieved rents for the Cambridge City area recorded on CoStar. Rents for second-hand units range from £23 psf to £32 psf; with higher quality refurbished units in central Cambridge achieving close to £40 psf. There is no evidence of new build achieved rents available on CoStar.

Table 6-1 - Achieved office rents Cambridge City

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
27/05/2020	Radio House, St Andrews Road, Cambridge, CB4 1GS	Sentec	13,989	£32.00	Recently renovated BREEAM Excellent building, 10-year lease
10/03/2020	Norman House Cambridge Place, Off	Salus Wellness	1,446	£23.00	Central Cambridge

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
	Hills Road, Cambridge CB2 1NS				location, 7 year lease
01/01/2020	95 Regent Street, Cambridge, CB2, 1BQ	Invenia Labs	7,944	£40.00	Recently refurbished city centre offices, 10 year lease
12/02/2020	Kett House, Station Road, CB1 2JY	Apple Europe	17,920	£40.00	5 year lease, moving in August 2020
14/03/2019	Terrington House, 13-15 Hills Road, Cambridge CB2 1NL	Ramboll UK	3,925	£35.00	Lease Renewal, 5 year lease
06/09/2019	95-97 Regent Street, Cambridge, CB2 1BQ	IQ Capital	2,380	£35.00	10 year lease with 3 months rent free and rent review at year 5 (Effective Rent - £33.85)

Source: CoStar accessed June 2020

6.10 Table 6-2 sets out achieved rents for the South Cambridgeshire area recorded on CoStar. Rents for second-hand units range from £14 psf to £31.50 psf; with the higher rents being achieved at high quality office parks such as Granta Park and Vision Park.

Table 6-2 - Achieved office rents South Cambridgeshire

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
23/07/2019	Suite 1 Pioneer House, Chivers Way, Histon, Cambridge, CB24 9NL	Granite Coast	1,766	£25.30	10 year lease with 5 year break and 3 months rent free– effective rent £24.47 psf
15/07/2019	Vision House, 7/8 Oakington Business Park, Dry Drayton Road, CB24 3DQ	The Harrison Group	857	£18.99	Constructed circa 2007, 5 year lease
27/03/2020	Unit 6, Stow Court, Stow Road, Stow-Cum-Quy, Cambridge, CB25 9AS	Barker Associates	1,044	£22.50	Renovated 2019, 5 year lease with tenant break at year 3
29/03/2019	Unit 18, Avenue Business Park, Brockley Road, Cambridge CB23 4EY	S2 Partnership	1,588	£14.16	Barn conversion offices, 3 year lease

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
01/08/2018	10 Bennell Court West Street, Comberton, CB23 7EN	Johnstones Homecare	460	£18.47	2 year lease

Source: Source: CoStar accessed June 2020

Office yields Cambridge City

6.11 There is little evidence of recent office investment activity in Cambridge city recorded on CoStar. Table 6-3 shows these investment transactions, with yields between 5.6%-5.89%, these properties are located in the fringe areas of the city. In addition to this, Bidwells report a prime yield of 4.50% for offices in Cambridge City.

Table 6-3 - Office investment transactions Cambridge City

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
31/05/2019	Chartwell House, 620 Newmarket Road, CB5 8LP	Multi-let	5,092	4.8%	Fully occupied, Reversionary yield set to be 6.5%
11/04/2019	23 Signet CourtCambridge CB5 8LA	The Richmond Fellowship	1,267	5.89%	Fully occupied, Lease lengths mostly 10 years with 5 year breaks.

Source: CoStar, accessed June 2020

6.12 There is limited recent evidence of office investment yields available for the district on CoStar, therefore, we have also considered the wider area. Table 6-4 shows that yields range between 6.01% and 6.36%. Knight Frank yield evidence supports the CoStar evidence, with their research indicating that office yields in secondary towns and office parks are approximately 5.25%+.[24]

Table 6-4 - Office investment transactions South Cambridgeshire

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
01/10/2018	1-3 De La Warr Way, Cambourne, Cambridge, CB23 6DX	Multiliet	1,538	6.01%	Auction Sale, Fully occupied

[24] Knight Frank, Yield Guide May 2020

27/03/2019	1 Cates Corner, Hill Street, Saffron Walden, Essex, CB10 1LU	Saffron Security	1,244	6.36%	High street office, new letting from 18th December 2018 until 18th December 2023.
23/11/2018	Western House, 2 Cambridge Road, Stansted Mountfitchet, CM24 8BZ	Multiliet	7,640	6.35%	Fully occupied, Lease lengths mostly 10 years with 5 year breaks.

Source: CoStar, accessed June 2020

Conclusion

6.13 Based on the above evidence we have proposed to test the following:

- CBD offices
  - Rent £495 psm (£46 psf)
  - Yield 5%
- Cambridge fringe office parks
  - Rent £215 psm (£23 psf)
  - Yield 5.5%
- Rural office parks (1,000 sqft)
  - Rent £215 psm (£25 psf)
  - Yield 7%

7 Industrial market assessment

Introduction

7.1 Prior to the Covid-19 lockdown, the UK industrial market was tight, with growing demand pushing against restricted supply.

7.2 In the years before the recession caused by the Global Financial Crisis, the industrial market saw a wave of speculative development, fuelled by easy access to finance. Much of the new space that resulted remained on the market as occupier demand weakened in the recession, so speculative development came to a halt. In more recent years supply has tightened against demand, due to the economic recovery, the increase in online shopping (which needs warehouse space) and some industrial units being lost to higher-value residential uses.

7.3 Due to the tight nature of the funding markets, speculative development is generally only occurring in 'super-prime' areas such as parts of the M1 corridor, Heathrow, etc. Those areas have very strong occupier demand from blue-chip covenants, who are prepared to commit to longer-term leases (typically more than 10 years), therefore the perceived risk is low. Elsewhere, speculative development is generally occurring only for larger units that can be occupied by these large national /international firms.

7.4 The economics for small and mid-sized units is different from large-scale distribution units, both in terms of cost and values. Smaller and mid-sized units do not benefit from economies of scale for build costs as large units do. Covenant strength of occupiers of smaller units is generally weaker and result in less secure income, which is guaranteed for shorter periods due to shorter lease terms, and hence lower capital values. Consequently, small and medium-sized development typically occurs only on existing employment sites - where infrastructure is currently in place; or as part of larger strategic schemes, whereby the large-scale distribution units can pay for the infrastructure to service the smaller and mid-sized units.

7.5 Concerning small and mid-size units, the lack of speculative development has led to an imbalance in the market, with some occupiers having to wait for the build to suit opportunities, or taking second-hand space to satisfy immediate requirements although they would prefer new space. With a lack of suitable medium-sized space, occupiers across the country are struggling to find suitable space for business expansion. This is having a knock-on effect, with smaller units not experiencing 'natural' levels of market churn, therefore not freeing up space for SMEs and start-ups.

7.6 Since the coronavirus lockdown the industrial market appears to be performing well. Demand for online retail has increased significantly and manufactures have sought to re-purpose space to respond to the government's need for protective equipment.

Industrial market Greater Cambridge

7.7 The Greater Cambridge area has a relatively small number of industrial estates due to competition from more valuable land uses with units mostly being small and medium sized buildings that range in age. The main industrial areas are focused around Cambridge City close to the airport and railway station. There are smaller "pockets" of units elsewhere. There has not been much recent new build development, but what has come forward are mid sized units between 20,000 sqft and 35,000 sqft. The majority of the industrial stock in the area is second-hand and of reasonable quality, although there are cases where units are over 60 years old and are coming to the end of their economic lives.

7.8 The area benefits from a mix of sectors, although there is a greater focus of advanced manufacturing around Cambridge City due to the research and development facilities at the university. Other sectors around Greater Cambridge include general manufacturing, local trade counter services, automotive services and some general manufacturing.

7.9 Demand for industrial space in Greater Cambridge is from a mix of local, regional and national companies, with the larger regional/national occupiers wanting access to Cambridge's highly skilled labour force. In recent years, there has been a growing demand from occupiers seeking suitable "mid-tech" space, which industrial space that also includes offices and communal areas.

Industrial rents

7.10 Carter Jones report[25] that prime rents for trade counter units in Cambridge are £16.50 psf, falling to £13.50 psf for general industrial.

7.11 Table 7-1 shows that rents industrial range between £7.89 psf and £12.50 psf with the higher rents being achieved at Enterprise 5000, a new development at Cambridge Research Park which was built for the "mid-tech" market.

Table 7-1 - Industrial occupational transactions

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
01/04/2020	Unit 8 Enterprise 5000 – Cambridge Research Park, CB25 9PD	Grifols (Pharmaceuticals)	13,879	£12.50	Listed as being on the market for 28 months, New build space. 10-year lease with rent-free period spread over term- – effective rent £11.70 psf

[25] Carter Jonas, 2020, Commercial Edge Spring 2020

Lease signed date	Address	Tenant	Size sqft	Rent £ psf	Comment
26/0/2020	Unit 9 Nuffield Road, Cambridge, CB4 1TF	Unknown	11,714 (including 2,550 sqft offices)	£10.67	1980's steel portal framed building. 10-year lease
02/03/2020	Unit E, Trinity Hall Farm Industrial Estate, Cambridge, CB4 1TG	Fenley Foods	1,160	£11.64	New build space. 5-year lease with 3-year break
01/12/2019	Suite 9, Babraham Road, Cambridge, CB22 3JH	Echion Technologies (advanced manufacturing)	2,386	£10.00	10-year lease with 6 months rent free and 5 year tenant break – effective rent £9.35 psf
25/11/2019	Unit 400, Buckingway Business Park, CB24 4AE	Network Rail	50,284	£8.95	New build space. 10-year lease
19/10/2019	Copley Hill Business Park - Babraham Road	PMS Cambridge	1,530	£11.24	Renovated in 2008. 7-year lease.
12/07/2019	Unit 5 The Links, Trafalgar Way, Bar Hill, CB23 8UD	Laborsing	6,135 (including 769 sqft offices)	£8.15	1990s industrial Building. 10-year lease.
08/05/2019	11-11A Nuffield Road, Cambridge, CB4 1TF	Cambridge Office Environments	6,147	£7.89	1960s building. 10-year lease.

Source: CoStar, accessed June 2020

Industrial yields

7.12 Carter Jonas report[25] that prime industrial yields in Cambridge are 5.5%. There is limited evidence of investment transactions recorded on CoStar so we have considered evidence from the neighbouring East Cambridgeshire area. Table 7-2 shows investment transactions are achieving between 4.05% and 7.49% yields. Due to the lack of available data on CoStar, we have also reviewed the Knight Frank Yield Guide[26] which states that Good modern estates are at a yield of 4.75%-5%, lower than the recent transactions.

[26] Knight Frank, 2019, Investment yield guide December 2019

Table 7-2 - Industrial investment transactions

Date of transaction	Address	Tenant	Size sqft	Net Initial Yield	Comment
01/07/2019	Unit K Broad Lane Industrial Estate, Cottenham, Cambridgeshire, CB24 8SW	Retrofit UK	13,967	7.49%	Modern purpose-built industrial building. Let on a 20 year lease
25/09/2019	6-7 Coldhams Road, Cambridge, CB1 3EW	Multi-let – tenants include; Topps Tiles and Howdens	10,445	4.05%	Modern purpose build light industrial building.
08/02/2019	Plot 9, St Leger Drive, Newmarket, CB8 7DT	Unknown	22,582	5%	Built to a Grade A in November 2013, CoStar states that it was one of the first BREEAM Excellent buildings to be delivered in the UK.

Source: CoStar, accessed March 2020

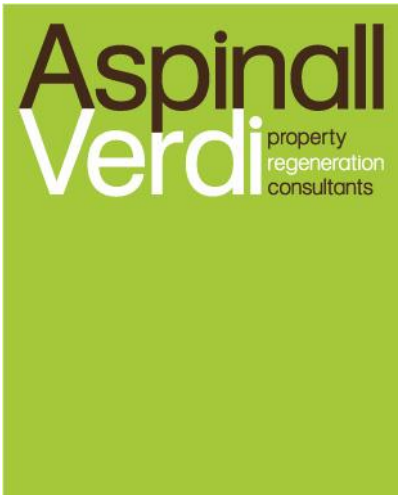
Conclusion

7.13 Based on the above evidence we propose to use a rent of £145 psm (£13.50 psf) and variable yield of between 5.5% and 6%.

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Scheme Ref: BTR (Brookgate)
No Units: 1000 **Location / Value Zone:** High **Development Scenario:** Brownfield
Notes:

ASSUMPTIONS - COMMERCIAL USES

Units -	# Units	% mix	# Units	# Mkt Resi Units	# AH Units
BTR studio	30	5%	30	30	
BTR 1 bed	180	30%	180	180	
BTR 2 bed	300	50%	300	300	
BTR 3 bed	90	15%	90	90	
BTR studio AH	30	7.5%	30		30
BTR 1 bed AH	120	30.0%	120		120
BTR 2 bed AH	150	37.5%	150		150
BTR 3 bed AH	100	25.0%	100		100
	1,000		1000	600	400
Affordable housing %					40%

Unit Floor areas -	Net area per unit NIA (sqm)	NIA (sqft)	Net to Gross %	Gross (GIA) per unit GIA (sqm)	GIA (sqft)
BTR studio	40	431	80.0%	50	538
BTR 1 bed	50	538	80.0%	63	673
BTR 2 bed	70	753	80.0%	88	942
BTR 3 bed	86	926	80.0%	108	1,157
BTR studio AH	40	431	80.0%	50	538
BTR 1 bed AH	50	538	80.0%	63	673
BTR 2 bed AH	70	753	80.0%	88	942
BTR 3 bed AH	86	926	80.0%	108	1,157

Total Floor areas -	NIA (sqm)	NIA (sqft)	GIA (sqm)	GIA (sqft)
BTR studio	1,200	12,917	1,500	16,146
BTR 1 bed	9,000	96,875	11,250	121,094
BTR 2 bed	21,000	226,042	26,250	282,553
BTR 3 bed	7,740	83,313	9,675	104,141
BTR studio AH	1,200	12,917	1,500	16,146
BTR 1 bed AH	6,000	64,583	7,500	80,729
BTR 2 bed AH	10,500	113,021	13,125	141,276
BTR 3 bed AH	8,600	92,570	10,750	115,712
	65,240	702,237	81,550	877,797

Commercial Values -	Rent* (£ pcm)	Unit Rent (£ pa)	Rent* (£psf)	Man. Cost %	T Incentive*	Cap Yield (%)
BTR studio	1200	14,400	0.00	25.8%	0	4.00%
BTR 1 bed	1600	19,200	0.00	25.8%	0	4.00%
BTR 2 bed	2150	25,800	0.00	25.8%	0	4.00%
BTR 3 bed	2750	33,000	0.00	25.8%	0	4.00%
BTR studio AH	960	11,520	0.00	25.8%	0	4.00%
BTR 1 bed AH	1280	15,360	0.00	25.8%	0	4.00%
BTR 2 bed AH	1720	20,640	0.00	25.8%	0	4.00%
BTR 3 bed AH	2200	26,400	0.00	25.8%	0	4.00%
			* as applicable		*Total Incentive including Rent Free & Void allowance (months)	

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Scheme Ref: BTR (Brookgate)
No Units: 1000 **Location / Value Zone:** High **Development Scenario:** Brownfield
Notes:

GROSS DEVELOPMENT VALUE

BTR GDV -	rental basis	Gross Rent £PA	less Man.	Net Rent £PA	@	capitalisation £
BTR studio	unit	432,000	26%	320,544	4.00%	8,013,600.00
BTR 1 bed	unit	3,456,000	26%	2,564,352	4.00%	64,108,800.00
BTR 2 bed	unit	7,740,000	26%	5,743,080	4.00%	############
BTR 3 bed	unit	2,970,000	26%	2,203,740	4.00%	55,093,500.00
BTR studio AH	unit	345,600	26%	256,435	4.00%	6,410,880.00
BTR 1 bed AH	unit	1,843,200	26%	1,367,654	4.00%	34,191,360.00
BTR 2 bed AH	unit	3,096,000	26%	2,297,232	4.00%	57,430,800.00
BTR 3 bed AH	unit	2,640,000	26%	1,958,880	4.00%	48,972,000.00
				16,711,918		417,797,940

BTR GDV less voids and PC	less RF/Void	Purchasers Costs %	PC £	£
BTR studio	-	8,013,600	5.76%	(436,444)	7,577,156
BTR 1 bed	-	64,108,800	5.76%	(3,491,553)	60,617,247
BTR 2 bed	-	143,577,000	5.76%	(7,819,625)	135,757,375
BTR 3 bed	-	55,093,500	5.76%	(3,000,554)	52,092,946
BTR studio AH	-	6,410,880	5.76%	(349,155)	6,061,725
BTR 1 bed AH	-	34,191,360	5.76%	(1,862,162)	32,329,198
BTR 2 bed AH	-	57,430,800	5.76%	(3,127,850)	54,302,950
BTR 3 bed AH	-	48,972,000	5.76%	(2,667,159)	46,304,841
Sub-total GDV Commercial					**395,043,438**

Phasing		
Phase 1 GDV	*131,681,146*	
Phase 2 GDV	*131,681,146*	
Phase 3 GDV	*131,681,146*	
Grant Funding		-
Total GDV		**395,043,438**

DEVELOPMENT COSTS

Initial Payments -								
Planning Application Professional Fees, Surveys and reports						4.0	x	94,000
Statutory Planning Fees (Planning Portal)						23,411	£	23,411
CIL			81,550	sqm (gross)	0.00	£ psm		-
CIL analysis:			0.00%	% of GDV				
Site Specific S106 Contributions		1,000	units @		0			-
	Net zero carbon	1,000	units @		5%	build costs		(6,560,698)
	Green belt mitiga	1,000	units @		1000	per dwelling		(1,000,000)
S106 analysis			0.00%	% of GDV	0.00	£ psm (GIA)		
Construction Costs -								
Site Clearance and Demolition (inc. Mineworking)			8.24	acres @	110,000	£ per acre (if brownfield)		(906,033)
Biodiversity Net Gain			1,000	dwellings	298	£ per dwelling		(298,000)
Infrastructure costs			15,000	1,000				(15,000,000)
BTR studio			1,500	sqm @	1,609	psm		(2,413,500)
BTR 1 bed			11,250	sqm @	1,609	psm		(18,101,250)
BTR 2 bed			26,250	sqm @	1,609	psm		(42,236,250)
BTR 3 bed			9,675	sqm @	1,609	psm		(15,567,075)
BTR studio AH			1,500	sqm @	1,609	psm		(2,413,500)
BTR 1 bed AH			7,500	sqm @	1,609	psm		(12,067,500)
BTR 2 bed AH			13,125	sqm @	1,609	psm		(21,118,125)
BTR 3 bed AH		81,550	10,750	sqm @	1,609	psm		(17,296,750)
Total							(131,213,950)	
External works			131,213,950	@	15.0%			(19,682,093)
M4(2) Category 2 Housing	Aff units	400	units @	100%	@	586	£ per dwelling	(234,400)
M4(3) Category 3 Housing	Aff units	400	units @	5%	@	11,386	£ per dwelling	(227,720)
M4(2) Category 2 Housing	Mrkt units	600	units @	100%	@	586	£ per dwelling	(351,600)
M4(3) Category 3 Housing	Mrkt units	600	units @	5%	@	11,386	£ per dwelling	(341,580)
Electric charge points (flats)	All units	1,000	units @	100%		625	£ per dwelling	(625,000)
Water Efficiency additional cost	All units	1,000	units @	100%		3,106	£ per dwelling	(3,106,000)
Contingency			171,986,376	@	5.0%			(8,599,319)
Professional Fees			171,986,376	@	6.5%			(11,179,114)
Disposal Costs -								
Letting Agents Costs			16,711,918	ERV @	15.00%			(2,506,788)
Letting Legal Costs			16,711,918	ERV @	5.00%			(835,596)
Investment Sale Agents Costs			395,043,438	GDV @	1.00%			(3,950,434)
Investment Sale Legal Costs			395,043,438	GDV @	0.50%			(1,975,217)
Marketing and Promotion			395,043,438	GDV @	0.50%			(1,975,217)
Interest (on Development Costs) -			7.50%	APR	0.604%	pcm		(13,162,747)

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Scheme Ref:	**BTR (Brookgate)**				
No Units:	**1000**	**Location / Value Zone:**	**High**	**Development Scenario:**	**Brownfield**
Notes:					

Developers Profit -			
Profit on Cost	223,614,094	15.00%	(33,542,114)
TOTAL COSTS			**(257,156,209)**

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Scheme Ref: BTR (Brookgate)
No Units: 1000 **Location / Value Zone:** High **Development Scenario:** Brownfield
Notes:

RESIDUAL LAND VALUE					
Residual Land Value (gross)					137,887,229
SDLT	137,887,229	@	5.00%	(slabbed)	(6,883,861)
Acquisition Agent fees	137,887,229	@	1.00%		(1,378,872)
Acquisition Legal fees	137,887,229	@	0.50%		(689,436)
Interest on Land	137,887,229	@	7.50%		(10,341,542)
Residual Land Value					**118,593,517**
RLV analysis:	*35,578,055*	*£ per ha*	*14,398,242*	*£ per acre*	

THRESHOLD LAND VALUE					
Density	300.00	dph			
Site Area	3.33	ha	8.24	acres	
Density analysis: *300.00 dph*	*24,465*	*sqm/ha*	*106,572*	*sqft/ac*	
Threshold Land Value	1,317,866	£ per ha	533,333	£ per acre	**4,392,886**

BALANCE					
Surplus/(Deficit)	**34,260,189**	£ per ha	**13,864,909**	£ per acre	**114,200,631**

SENSITIVITY ANALYSIS

The following sensitivity tables show the balance of the appraisal (RLV-BLV) for changes in appraisal input assumptions above.
Where the surplus is positive (green) the policy is viable. Where the surplus is negative (red) the policy is not viable.

TABLE 1

		Affordable Housing - % on site 40%						
Balance (RLV - BLV)	114,200,631	25%	30%	35%	40%	45%	50%	55%
	20,000.00	97,761,231	94,154,257	90,544,521	86,927,772	83,307,202	79,682,295	76,057,387
	30,000.00	83,693,769	80,068,862	76,443,955	72,819,047	69,194,140	65,569,233	61,944,326
	40,000.00	69,580,707	65,955,800	62,330,893	58,681,262	55,003,347	51,292,821	47,555,516
	50,000.00	55,320,653	51,586,460	47,824,208	44,032,450	40,214,746	36,367,285	32,495,401
	60,000.00	40,415,815	36,546,684	32,652,000	28,729,546	24,783,607	20,811,241	16,814,427
S106 (£ per dwelling)	70,000.00	24,877,996	20,883,589	16,866,607	12,826,003	8,760,367	4,682,823	605,278
0.00	80,000.00	8,761,138	4,683,594	606,049	(3,471,495)	(8,075,042)	(12,816,372)	(17,557,703)
	90,000.00	(8,074,145)	(12,815,476)	(17,556,807)	(22,298,137)	(27,039,468)	(31,780,799)	(36,522,130)
	100,000.00	(27,038,572)	(31,779,902)	(36,521,233)	(41,262,564)	(46,003,895)	(50,745,226)	(55,486,557)
	110,000.00	(46,002,998)	(50,744,329)	(55,485,660)	(60,226,991)	(70,780,851)	(109,145,052)	(147,517,229)
	120,000.00	(64,967,425)	(94,144,653)	(132,508,853)	(170,896,971)	(209,294,071)	(247,691,172)	(286,088,272)

TABLE 2

		Site Specific S106		100%	(where 110% is a 10% increase etc.)			
Balance (RLV - BLV)	114,200,631	90%	100%	110%	120%	130%	140%	150%
	0	114,992,303	114,200,631	113,408,959	112,615,222	111,819,441	111,023,661	110,227,518
	50	109,581,147	108,781,332	107,979,166	107,175,388	106,371,611	105,567,574	104,759,908
	100	104,097,278	103,287,117	102,475,633	101,664,148	100,852,646	100,037,416	99,222,186
	150	98,539,827	97,720,922	96,902,018	96,083,113	95,260,959	94,438,451	93,615,943
	200	92,911,988	92,085,947	91,259,905	90,431,254	89,601,750	88,772,245	87,942,740
CIL £psm	250	87,216,650	86,383,752	85,549,005	84,712,782	83,876,559	83,040,336	82,204,113
0.00	300	81,466,850	80,630,627	79,794,404	78,958,181	78,121,958	77,285,735	76,449,512
	350	75,712,249	74,876,026	74,039,803	73,203,580	72,367,357	71,531,134	70,694,911
	400	69,957,648	69,121,425	68,285,202	67,448,979	66,612,756	65,776,533	64,940,310
	450	64,203,047	63,366,824	62,530,601	61,694,378	60,854,281	60,012,308	59,168,189
	500	58,420,044	57,572,285	56,718,915	55,865,545	55,008,300	54,149,283	53,288,397
	550	52,524,174	51,659,543	50,789,812	49,919,602	49,046,440	48,170,684	47,294,179
	600	46,514,165	45,632,897	44,747,934	43,861,186	42,973,084	42,080,889	41,188,695
	650	40,394,209	39,496,601	38,597,362	37,694,373	36,791,383	35,883,936	34,975,598
	700	34,168,309	33,254,654	32,340,999	31,423,125	30,504,185	29,583,756	28,659,562
	750	27,838,810	26,910,948	25,981,533	25,051,301	24,116,696	23,182,091	22,244,407
	800	21,408,877	20,469,113	19,524,376	18,579,484	17,632,665	16,682,675	15,732,686
	850	14,883,804	13,928,748	12,973,205	12,013,113	11,053,021	10,090,637	9,125,539
	900	8,265,966	7,300,868	6,335,770	5,370,672	4,405,574	3,440,476	2,475,378
	950	1,615,805	650,707	(314,391)	(1,279,489)	(2,244,586)	(3,209,684)	(4,174,782)
	1000	(5,150,990)	(6,273,197)	(7,395,404)	(8,517,611)	(9,639,818)	(10,762,024)	(11,884,231)
	1050	(12,883,735)	(14,005,942)	(15,128,149)	(16,250,356)	(17,372,563)	(18,494,769)	(19,616,976)
	1100	(20,616,480)	(21,738,687)	(22,860,894)	(23,983,101)	(25,105,308)	(26,227,514)	(27,349,721)
	1150	(28,349,225)	(29,471,432)	(30,593,639)	(31,715,846)	(32,838,053)	(33,960,259)	(35,082,466)
	1200	(36,081,970)	(37,204,177)	(38,326,384)	(39,448,591)	(40,570,798)	(41,693,004)	(42,815,211)
	1250	(43,814,715)	(44,936,922)	(46,059,129)	(47,181,336)	(48,303,542)	(49,425,749)	(50,547,956)

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Scheme Ref: BTR (Brookgate)
No Units: 1000 **Location / Value Zone:** High **Development Scenario:** Brownfield
Notes:

TABLE 3

		Build rate 100%	(where 110% is a 10% increase etc.)					
Balance (RLV - TLV)	114,200,631	80%	90%	100%	110%	120%	130%	140%
	0	151,389,705	133,042,749	114,200,631	95,020,306	75,590,786	55,935,359	35,451,304
	20	149,397,093	130,955,224	112,041,466	92,804,294	73,330,591	53,593,767	32,996,958
	40	147,387,618	128,853,522	109,870,384	90,578,096	71,062,284	51,232,939	30,530,705
	60	145,361,853	126,737,947	107,687,534	88,342,061	68,784,598	48,857,840	28,052,708
	80	143,319,979	124,608,662	105,493,063	86,096,325	66,496,190	46,468,648	25,563,128
CIL £psm	100	141,262,173	122,465,827	103,287,117	83,841,019	64,199,987	44,065,542	23,060,834
0	120	139,186,419	120,309,601	101,069,840	81,575,519	61,898,146	41,648,697	20,545,050
	140	137,095,134	118,140,143	98,841,344	79,298,588	59,588,199	39,218,289	18,018,087
	160	134,988,537	115,957,608	96,600,470	77,012,421	57,262,066	36,774,490	15,480,102
	180	132,866,797	113,762,152	94,348,624	74,717,147	54,919,939	34,317,070	12,931,247
	200	130,730,086	111,553,928	92,085,947	72,415,307	52,562,010	31,845,003	10,370,368
	220	128,577,737	109,333,088	89,812,577	70,113,467	50,188,541	29,359,978	7,796,370
	240	126,409,902	107,099,783	87,528,652	67,811,626	47,799,721	26,862,161	5,211,893
	260	124,227,682	104,854,163	85,234,308	65,509,786	45,395,734	24,351,719	2,617,087
	280	122,031,241	102,596,375	82,932,467	63,207,945	42,976,764	21,828,817	12,098
	300	119,820,739	100,326,566	80,630,627	60,904,744	40,542,993	19,293,617	(2,605,970)
	320	117,596,336	98,044,883	78,328,787	58,584,066	38,094,602	16,746,282	(5,384,388)
	340	115,358,191	95,751,468	76,026,946	56,246,112	35,631,770	14,185,403	(8,452,892)
	360	113,106,462	93,449,628	73,725,106	53,891,081	33,154,673	11,611,666	(11,532,632)
	380	110,840,556	91,147,788	71,423,266	51,519,243	30,663,488	9,026,198	(14,625,730)
	400	108,561,114	88,845,947	69,121,425	49,130,793	28,158,388	6,429,157	(17,718,828)
	420	106,268,629	86,544,107	66,819,585	46,725,925	25,639,546	3,820,698	(20,811,926)
	440	103,966,788	84,242,266	64,517,744	44,304,830	23,107,133	1,200,974	(23,905,024)
	460	101,664,948	81,940,426	62,215,904	41,867,697	20,560,768	(1,431,178)	(26,998,122)
	480	99,363,108	79,638,586	59,903,465	39,414,715	18,000,438	(4,076,013)	(30,091,220)
	500	97,061,267	77,336,745	57,572,285	36,946,068	15,426,962	(7,124,675)	(33,184,318)
	520	94,759,427	75,034,905	55,220,151	34,461,943	12,840,503	(10,217,773)	(36,277,416)
	540	92,457,587	72,733,065	52,849,944	31,962,521	10,241,228	(13,310,871)	(39,370,514)
	560	90,155,746	70,431,224	50,461,866	29,447,985	7,629,297	(16,403,969)	(42,463,612)
	580	87,853,906	68,129,384	48,056,117	26,918,513	5,004,873	(19,497,067)	(45,556,710)
	600	85,552,065	65,827,543	45,632,897	24,374,284	2,368,116	(22,590,165)	(48,649,808)

TABLE 4

		GDV						
Balance (RLV - TLV)	114,200,631	80%	90%	100%	110%	120%	130%	140%
	0	44,762,428	79,725,982	114,200,631	148,166,743	181,587,864	214,770,595	247,953,326
	20	42,425,419	77,491,498	112,041,466	146,088,566	179,596,007	212,778,738	245,961,468
	40	40,070,048	75,245,989	109,870,384	143,997,530	177,591,467	210,786,880	243,969,611
	60	37,696,594	72,989,597	107,687,534	141,893,791	175,572,662	208,795,022	241,977,753
	80	35,305,261	70,722,460	105,493,063	139,777,504	173,540,250	206,803,165	239,985,896
CIL £psm	100	32,896,249	68,444,716	103,287,117	137,648,823	171,494,393	204,811,307	237,994,038
0	120	30,468,260	66,154,916	101,069,840	135,507,902	169,435,254	202,819,450	236,002,180
	140	28,022,536	63,854,662	98,841,344	133,354,891	167,362,994	200,827,592	234,010,323
	160	25,559,825	61,552,821	96,600,470	131,189,574	165,277,772	198,829,491	232,018,465
	180	23,080,323	59,250,981	94,348,624	129,011,836	163,179,747	196,817,102	230,026,608
	200	20,584,218	56,949,141	92,085,947	126,822,383	161,069,075	194,791,080	228,034,750
	220	18,071,700	54,647,300	89,812,577	124,621,363	158,945,911	192,751,589	226,042,893
	240	15,542,957	52,333,256	87,528,652	122,408,921	156,810,409	190,698,792	224,051,035
	260	12,998,174	49,998,852	85,234,308	120,185,201	154,662,722	188,632,851	222,059,178
	280	10,436,529	47,645,100	82,932,467	117,950,346	152,502,999	186,553,923	220,067,320
	300	7,859,065	45,273,269	80,630,627	115,704,498	150,331,392	184,462,169	218,061,542
	320	5,266,202	42,883,564	78,328,787	113,447,796	148,148,048	182,357,744	216,041,910
	340	2,658,117	40,476,183	76,026,946	111,180,380	145,953,115	180,240,804	214,008,786
	360	34,988	38,051,326	73,725,106	108,902,387	143,746,737	178,111,502	211,962,102
	380	(2,603,010)	35,607,391	71,423,266	106,612,588	141,529,058	175,969,992	209,902,146
	400	(5,408,372)	33,146,330	69,121,425	104,312,114	139,300,223	173,816,425	207,829,102
	420	(8,501,470)	30,668,481	66,819,585	102,010,273	137,059,318	171,650,949	205,743,129
	440	(11,594,568)	28,174,033	64,517,744	99,708,433	134,807,133	169,472,843	203,644,386
	460	(14,687,666)	25,663,177	62,215,904	97,406,592	132,544,146	167,282,897	201,533,028
	480	(17,780,764)	23,136,100	59,903,465	95,104,752	130,270,497	165,081,414	199,409,211
	500	(20,873,862)	20,592,986	57,572,285	92,802,912	127,986,323	162,868,540	197,273,088
	520	(23,966,960)	18,034,022	55,220,151	90,501,071	125,691,760	160,644,420	195,124,812
	540	(27,060,058)	15,458,912	52,849,944	88,199,231	123,389,919	158,409,195	192,964,533
	560	(30,153,156)	12,867,735	50,461,866	85,897,391	121,088,079	156,163,007	190,792,400
	580	(33,246,254)	10,261,341	48,056,117	83,595,550	118,786,239	153,905,996	188,608,562
	600	(36,339,352)	7,639,906	45,632,897	81,293,710	116,484,398	151,638,301	186,413,166

NOTES

Cells highlighted in yellow are input cells
Cells highlighted in green are sensitivity input cells
Figures in brackets, thus (00,000.00), are negative values / costs

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Scheme Ref: BTR (Brookgate)
No Units: 1000 **Location / Value Zone:** High **Development Scenario:** Brownfield
Notes:

KPI's for Report Summary Table - [note that this table is combined with other similar Scheme Typologies for the Main Report]

[please check that is captures the required KPI's that you would like carried forward and presented in the Main Report (not the Appendices)]

Scheme Ref:	**BTR (Brookgate)**	
No Units:	1000	
Location / Value Zone:	High	
Development Scenario:	Brownfield	
Notes:	[The figures in yellow are dummy figure to test the formula; need Cambs sign-off to the headings and senstivities]	
Total GDV (£)	395,043,438	
Policy Assumptions		
CIL (£ psm)	-	
CIL (£)	-	
Site Specific S106 (£ psm)	-	
Site Specific S106 (£)	-	
Sub-Total Policy Costs (£ psm)	-	
Sub-Total Policy Costs (£)	-	
Profit KPI's		
Total Developers Profit (£)	33,542,114	
Developers Profit (% on costs)	15.0%	
Land Value KPI's		
RLV (£/acre)	14,398,242	
RLV (£/ha)	35,578,055	
RLV (£ net)	118,593,517	
BLV (£/acre)	533,333	
BLV (£/ha)	1,317,866	
BLV (£ net)	4,392,886	
Surplus/Deficit (£/acre)	13,864,909	
Surplus/Deficit (£/ha)	34,260,189	
Surplus/Deficit	114,200,631	
Plan Viability comments	Not Viable	if RLV < BLV, and RLV is negative
	Marginal	if RLV < BLV, but RLV is positive
	Not Viable	if RLV < BLV, and RLV is negative
	Viable	if RLV > BLV

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210816_Cambridge BTR appraisals_v3 - Summary Table

Scheme Ref:	**BTR (Brookgate)**
No Units:	1000
Notes:	
Total GDV (£)	395,043,438
CIL (£ psm)	-
CIL (£)	-
Site Specific S106 (£)	-
Total Developers Profit (£)	33,542,114
Developers Profit (% on costs)	15.0%
RLV (£ net)	**118,593,517**
RLV (£/acre)	14,398,242
RLV (£/ha)	35,578,055
#REF!	
BLV (£ net)	4,392,886
BLV (£/acre)	533,333
BLV (£/ha)	1,317,866
Surplus/Deficit	114,200,631
Surplus/Deficit (£/acre)	13,864,909
Surplus/Deficit (£/ha)	34,260,189
Plan Viability comments	Viable
Commuted Sum (£ psm)	
Commuted Sum (£)	

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R&D (GF)

SCHEME DETAILS - ASSUMPTIONS					
Science Park (R&D space)	**Greenfield**				
Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Science Park (R&D space)	5,000	53,820	85.0%	5,882.4	63,317
area 2	0	0	85.0%	0.0	0
area 3	0	0	85.0%	0.0	0
area 4	0	0	85.0%	0.0	0
area 5	0	0	85.0%	0.0	0
area 6	0	0	85.0%	0.0	0
total floor area	5,000	53,820	85.0%	5,882	63,317

GROSS DEVELOPMENT VALUE						
	sqft			£ psf	£	
Science Park (R&D space)	53,820	@		36.00	1,937,504	
area 2	0	@		0.00	-	
area 3	0	@		0.00	-	
area 4	0	@		0.00	-	
area 5	0	@		0.00	-	
area 6	0	@		0.00	-	
Estimated Gross Rental Value per annum					1,937,504	
Yield		@		5.25%		
capitalised rent					36,904,834	
less						
Rent Free / Void allowance	12	months rent			(1,937,504)	
Purchasers costs		@		5.76%	(1,904,423)	33,062,907
GDV						**33,062,907**

DEVELOPMENT COSTS					
Initial Payments -					
Planning Application Professional Fees and reports					(100,000)
Statutory Planning Fees					(32,059)
Combined CIL	5,882 sqm @		0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	3.63	acres @	0	per acre	-
Science Park (R&D space)	5,882.35	sqm @	2,289.00	psm	(13,464,706)
				per unit	
	5,882.35	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(62,566)
	-	sqm @		psm	-
External works	13,527,272	@	15%		(2,029,091)
Contingency	15,556,363	@	5%		(777,818)
Professional Fees	16,334,181	@	10%		(1,633,418)
Disposal Costs -					
Letting Agents Costs	1,937,504	ERV @	10.00%		(193,750)
Letting Legal Costs	1,937,504	ERV @	5.00%		(96,875)
Investment Sale Agents Costs	33,062,907	GDV @	1.00%		(330,629)
Investment Sale Legal Costs	33,062,907	GDV @	0.50%		(165,315)
Marketing and Promotion	33,062,907	GDV @	1.00%		(330,629)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(1,454,722)
Developers Profit	27,551,320	@	20.00%	on costs	
	33,062,907	@	16.67%	on GDV	(5,511,587)
TOTAL COSTS					**(26,183,165)**

RESIDUAL LAND VALUE				
Residual Land Value (gross)				6,879,742
SDLT (HMRC % rates)	6,879,742	@		(275,190)
Acquisition Agent fees	6,879,742	@	1%	(68,797)
Acquisition Legal fees	6,879,742	@	0.5%	(34,399)
Interest on Land	6,879,742	@	7.5%	(515,981)
Residual Land Value (net)				**5,985,376**

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R&D (GF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	1.471	ha	3.63	acres	
	4,000	sqm/ha	17,424	sqft/ac	
Threshold Land Value	247,110	£ per ha	100,000	£ per acre	
	14,706	34.00%			**363,382**
Gross to net					

BALANCE	
Surplus/(Deficit)	**5,621,993**

SENSITIVITY ANALYSIS

GDV

Balance	5,621,993	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	2,134,414	3,296,940	4,459,467	5,621,993	6,784,520	7,947,046	9,109,573
	100	1,498,650	2,661,177	3,823,703	4,986,230	6,148,756	7,311,283	8,473,809
	200	862,886	2,025,413	3,187,939	4,350,466	5,512,992	6,675,519	7,838,045
	300	227,123	1,389,649	2,552,176	3,714,702	4,877,229	6,039,755	7,202,282
	400	(415,404)	753,885	1,916,412	3,078,939	4,241,465	5,403,992	6,566,518
	500	(1,146,167)	118,122	1,280,648	2,443,175	3,605,701	4,768,228	5,930,754
	600	(1,876,930)	(540,692)	644,885	1,807,411	2,969,938	4,132,464	5,294,991
	700	(2,607,692)	(1,271,455)	13,403	1,171,647	2,334,174	3,496,700	4,659,227
	800	(3,338,455)	(2,002,218)	(665,981)	535,884	1,698,410	2,860,937	4,023,463
	900	(4,069,218)	(2,732,981)	(1,396,743)	(96,851)	1,062,647	2,225,173	3,387,700
	1000	(4,799,981)	(3,463,744)	(2,127,506)	(791,269)	426,883	1,589,409	2,751,936
	1100	(5,530,744)	(4,194,507)	(2,858,269)	(1,522,032)	(203,553)	953,646	2,116,172
	1200	(6,261,507)	(4,925,269)	(3,589,032)	(2,252,795)	(916,557)	317,882	1,480,409

Build costs

Balance	5,621,993	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	8,140,727	7,301,149	6,461,571	5,621,993	4,782,415	3,942,838	3,103,260
	100	7,504,963	6,665,385	5,825,807	4,986,230	4,146,652	3,307,074	2,467,496
	200	6,869,199	6,029,622	5,190,044	4,350,466	3,510,888	2,671,310	1,831,732
	300	6,233,436	5,393,858	4,554,280	3,714,702	2,875,124	2,035,547	1,195,969
	400	5,597,672	4,758,094	3,918,516	3,078,939	2,239,361	1,399,783	560,205
	500	4,961,908	4,122,330	3,282,753	2,443,175	1,603,597	764,019	(72,250)
	600	4,326,145	3,486,567	2,646,989	1,807,411	967,833	128,255	(763,313)
	700	3,690,381	2,850,803	2,011,225	1,171,647	332,070	(529,044)	(1,494,076)
	800	3,054,617	2,215,039	1,375,462	535,884	(301,636)	(1,259,807)	(2,224,839)
	900	2,418,854	1,579,276	739,698	(96,851)	(1,025,538)	(1,990,570)	(2,955,602)
	1000	1,783,090	943,512	103,934	(791,269)	(1,756,301)	(2,721,333)	(3,686,365)
	1100	1,147,326	307,748	(557,000)	(1,522,032)	(2,487,064)	(3,452,096)	(4,417,128)
	1200	511,562	(326,796)	(1,287,763)	(2,252,795)	(3,217,827)	(4,182,859)	(5,147,891)

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2004 Cambridge strategic options Commercial appraisals v2

R&D (BF)

SCHEME DETAILS - ASSUMPTIONS						
Science Park (R&D space)	**Brownfield**					
Floor areas:		NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Science Park (R&D space)		5,000	53,820	85.0%	5,882.4	63,317
area 2		0	0	85.0%	0.0	0
area 3		0	0	85.0%	0.0	0
area 4		0	0	85.0%	0.0	0
area 5		0	0	85.0%	0.0	0
area 6		0	0	85.0%	0.0	0
total floor area		5,000	53,820	85.0%	5,882	63,317

GROSS DEVELOPMENT VALUE					
	sqft		£ psf	£	
Science Park (R&D space)	53,820	@	36.00	1,937,504	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				1,937,504	
Yield		@	5.25%		
capitalised rent				36,904,834	
less					
Rent Free / Void allowance	12	months rent		(1,937,504)	
Purchasers costs		@	5.76%	(1,904,423)	33,062,907
GDV					**33,062,907**

DEVELOPMENT COSTS					
Initial Payments -					
Planning Application Professional Fees and reports					(100,000)
Statutory Planning Fees					(32,059)
Combined CIL	5,882	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	3.63	acres @	110,000	per acre	(399,721)
Science Park (R&D space)	5,882.35	sqm @	2,289.00	psm	(13,464,706)
				per unit	
	5,882.35	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(62,566)
	-	sqm @		psm	-
External works	13,527,272	@	15%		(2,029,091)
Contingency	15,956,083	@	5%		(797,804)
Professional Fees	16,753,888	@	10%		(1,675,389)
Disposal Costs -					
Letting Agents Costs	1,937,504	ERV @	10.00%		(193,750)
Letting Legal Costs	1,937,504	ERV @	5.00%		(96,875)
Investment Sale Agents Costs	33,062,907	GDV @	1.00%		(330,629)
Investment Sale Legal Costs	33,062,907	GDV @	0.50%		(165,315)
Marketing and Promotion	33,062,907	GDV @	1.00%		(330,629)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(1,540,393)
Developers Profit	27,551,320	@	20.00%	on costs	
	33,062,907	@	16.67%	on GDV	(5,511,587)
TOTAL COSTS					**(26,730,513)**

RESIDUAL LAND VALUE				
Residual Land Value (gross)				6,332,394
SDLT (HMRC % rates)	6,332,394	@		(253,296)
Acquisition Agent fees	6,332,394	@	1%	(63,324)
Acquisition Legal fees	6,332,394	@	0.5%	(31,662)
Interest on Land	6,332,394	@	7.5%	(474,930)
Residual Land Value (net)				**5,509,183**

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R&D (BF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	1.471	ha	3.63	acres	
	4,000	sqm/ha	17,424	sqft/ac	
Threshold Land Value	1,186,128	£ per ha	480,000	£ per acre	
	14,706	34.00%			**1,744,235**
Gross to net					

BALANCE	
Surplus/(Deficit)	**3,764,947**

SENSITIVITY ANALYSIS

GDV

Balance	3,764,947	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	277,368	1,439,894	2,602,421	3,764,947	4,927,474	6,090,001	7,252,527
	100	(358,396)	804,131	1,966,657	3,129,184	4,291,710	5,454,237	6,616,763
	200	(994,160)	168,367	1,330,894	2,493,420	3,655,947	4,818,473	5,981,000
	300	(1,625,981)	(467,397)	695,130	1,857,656	3,020,183	4,182,709	5,345,236
	400	(2,343,605)	(1,103,160)	59,366	1,221,893	2,384,419	3,546,946	4,709,472
	500	(3,074,368)	(1,738,741)	(576,398)	586,129	1,748,656	2,911,182	4,073,709
	600	(3,805,131)	(2,468,893)	(1,212,161)	(49,635)	1,112,892	2,275,418	3,437,945
	700	(4,535,894)	(3,199,656)	(1,863,419)	(685,398)	477,128	1,639,655	2,802,181
	800	(5,266,656)	(3,930,419)	(2,594,182)	(1,316,299)	(158,636)	1,003,891	2,166,417
	900	(5,997,419)	(4,661,182)	(3,324,945)	(1,988,707)	(794,399)	368,127	1,530,654
	1000	(6,728,182)	(5,391,945)	(4,055,707)	(2,719,470)	(1,426,553)	(267,636)	894,890
	1100	(7,458,945)	(6,122,708)	(4,786,470)	(3,450,233)	(2,113,995)	(903,400)	259,126
	1200	(8,189,708)	(6,853,471)	(5,517,233)	(4,180,996)	(2,844,758)	(1,532,092)	(376,637)

Build costs

Balance	3,764,947	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	6,283,681	5,444,103	4,604,525	3,764,947	2,925,370	2,085,792	1,246,214
	100	5,647,917	4,808,339	3,968,762	3,129,184	2,289,606	1,450,028	610,450
	200	5,012,154	4,172,576	3,332,998	2,493,420	1,653,842	814,264	(25,313)
	300	4,376,390	3,536,812	2,697,234	1,857,656	1,018,079	178,501	(661,077)
	400	3,740,626	2,901,048	2,061,471	1,221,893	382,315	(457,263)	(1,296,841)
	500	3,104,862	2,265,285	1,425,707	586,129	(253,449)	(1,093,027)	(1,960,752)
	600	2,469,099	1,629,521	789,943	(49,635)	(889,213)	(1,728,258)	(2,691,514)
	700	1,833,335	993,757	154,179	(685,398)	(1,522,456)	(2,457,245)	(3,422,277)
	800	1,197,571	357,994	(481,584)	(1,316,299)	(2,222,976)	(3,188,008)	(4,153,040)
	900	561,808	(277,770)	(1,117,348)	(1,988,707)	(2,953,739)	(3,918,771)	(4,883,803)
	1000	(73,956)	(913,534)	(1,754,438)	(2,719,470)	(3,684,502)	(4,649,534)	(5,614,566)
	1100	(709,720)	(1,542,576)	(2,485,201)	(3,450,233)	(4,415,265)	(5,380,297)	(6,345,329)
	1200	(1,340,900)	(2,250,932)	(3,215,964)	(4,180,996)	(5,146,028)	(6,111,060)	(7,076,092)

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Office TC (BF)

SCHEME DETAILS - ASSUMPTIONS

Cambridge TC Office **Brownfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Cambridge TC Office	5,000	53,820	85.0%	5,882.4	63,317
area 2	0	0	85.0%	0.0	0
area 3	0	0	85.0%	0.0	0
area 4	0	0	85.0%	0.0	0
area 5	0	0	85.0%	0.0	0
area 6	0	0	85.0%	0.0	0
total floor area	5,000	53,820	85.0%	5,882	63,317

GROSS DEVELOPMENT VALUE

	sqft		£ psf	£	
Cambridge TC Office	53,820	@	46.00	2,475,699	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				2,475,699	
Yield		@	5.00%		
capitalised rent				49,513,986	
less					
Rent Free / Void allowance	12	months rent		(2,475,699)	
Purchasers costs		@	5.76%	(2,561,843)	44,476,444
GDV					**44,476,444**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					(100,000)
Statutory Planning Fees					(32,059)
Combined CIL	5,882 sqm @		0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	2.08	acres @	110,000	per acre	(228,412)
Cambridge TC Office	5,882.35	sqm @	1,912.00	psm	(11,247,059)
				per unit	
	5,882.35	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(35,752)
	-	sqm @		psm	-
External works	11,282,811	@	15%		(1,692,422)
Contingency	13,203,644	@	5%		(660,182)
Professional Fees	13,863,827	@	10%		(1,386,383)
Disposal Costs -					
Letting Agents Costs	2,475,699	ERV @	10.00%		(247,570)
Letting Legal Costs	2,475,699	ERV @	5.00%		(123,785)
Investment Sale Agents Costs	44,476,444	GDV @	1.00%		(444,764)
Investment Sale Legal Costs	44,476,444	GDV @	0.50%		(222,382)
Marketing and Promotion	44,476,444	GDV @	1.00%		(444,764)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(1,267,617)
Developers Profit	37,062,220	@	20.00%	on costs	
	44,476,444	@	16.67%	on GDV	(7,414,223)
TOTAL COSTS					**(25,547,374)**

RESIDUAL LAND VALUE

Residual Land Value (gross)				18,929,070
SDLT (HMRC % rates)	18,929,070	@		(757,163)
Acquisition Agent fees	18,929,070	@	1%	(189,291)
Acquisition Legal fees	18,929,070	@	0.5%	(94,645)
Interest on Land	18,929,070	@	7.5%	(1,419,680)
Residual Land Value (net)				**16,468,291**

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2004 Cambridge strategic options Commercial appraisals v2

Office TC (BF)

THRESHOLD LAND VALUE					
Site density	7,000	sqm per hectare			
Site Area	0.840	ha	2.08	acres	
	7,000	sqm/ha	30,493	sqft/ac	
Threshold Land Value	1,186,128	£ per ha	480,000	£ per acre	
	8,403	59.50%			**996,706**
Gross to net					

BALANCE	
Surplus/(Deficit)	**15,471,585**

SENSITIVITY ANALYSIS

GDV

Balance	15,471,585	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	10,780,069	12,343,908	13,907,746	15,471,585	17,035,423	18,599,262	20,163,100
	250	9,190,660	10,754,499	12,318,337	13,882,175	15,446,014	17,009,852	18,573,691
	500	7,601,251	9,165,089	10,728,928	12,292,766	13,856,605	15,420,443	16,984,282
	750	6,011,842	7,575,680	9,139,519	10,703,357	12,267,195	13,831,034	15,394,872
	1000	4,422,432	5,986,271	7,550,109	9,113,948	10,677,786	12,241,625	13,805,463
	1250	2,833,023	4,396,862	5,960,700	7,524,539	9,088,377	10,652,215	12,216,054
	1500	1,243,614	2,807,452	4,371,291	5,935,129	7,498,968	9,062,806	10,626,645
	1750	(345,795)	1,218,043	2,781,882	4,345,720	5,909,558	7,473,397	9,037,235
	2000	(2,075,440)	(371,366)	1,192,472	2,756,311	4,320,149	5,883,988	7,447,826
	2250	(3,902,347)	(2,104,832)	(396,937)	1,166,902	2,730,740	4,294,578	5,858,417
	2500	(5,729,254)	(3,931,739)	(2,134,223)	(422,508)	1,141,331	2,705,169	4,269,008
	2750	(7,556,162)	(5,758,646)	(3,961,131)	(2,163,615)	(448,078)	1,115,760	2,679,598
	3000	(9,383,069)	(7,585,553)	(5,788,038)	(3,990,522)	(2,193,007)	(473,649)	1,090,189

Build costs

Balance	15,471,585	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	17,575,481	16,874,182	16,172,883	15,471,585	14,770,286	14,068,987	13,367,688
	250	15,986,072	15,284,773	14,583,474	13,882,175	13,180,877	12,479,578	11,778,279
	500	14,396,662	13,695,364	12,994,065	12,292,766	11,591,467	10,890,169	10,188,870
	750	12,807,253	12,105,954	11,404,656	10,703,357	10,002,058	9,300,760	8,599,461
	1000	11,217,844	10,516,545	9,815,246	9,113,948	8,412,649	7,711,350	7,010,052
	1250	9,628,435	8,927,136	8,225,837	7,524,539	6,823,240	6,121,941	5,420,642
	1500	8,039,025	7,337,727	6,636,428	5,935,129	5,233,831	4,532,532	3,831,233
	1750	6,449,616	5,748,318	5,047,019	4,345,720	3,644,421	2,943,123	2,241,824
	2000	4,860,207	4,158,908	3,457,610	2,756,311	2,055,012	1,353,713	652,415
	2250	3,270,798	2,569,499	1,868,200	1,166,902	465,603	(235,696)	(934,936)
	2500	1,681,389	980,090	278,791	(422,508)	(1,142,798)	(1,948,889)	(2,754,979)
	2750	91,979	(604,867)	(1,357,525)	(2,163,615)	(2,969,706)	(3,775,796)	(4,581,887)
	3000	(1,572,251)	(2,378,341)	(3,184,432)	(3,990,522)	(4,796,613)	(5,602,703)	(6,408,794)

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Office Fringe (GF)

SCHEME DETAILS - ASSUMPTIONS

Cambridge fringe office park **Greenfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Cambridge fringe office park	2,000	21,528	85.0%	2,352.9	25,327
area 2	0	0	85.0%	0.0	0
area 3	0	0	85.0%	0.0	0
area 4	0	0	85.0%	0.0	0
area 5	0	0	85.0%	0.0	0
area 6	0	0	85.0%	0.0	0
total floor area	2,000	21,528	85.0%	2,353	25,327

GROSS DEVELOPMENT VALUE

	sqft		£ psf	£	
Cambridge fringe office park	21,528	@	36.00	775,002	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				775,002	
Yield		@	5.50%		
capitalised rent				14,090,937	
less					
Rent Free / Void allowance	12	months rent		(775,002)	
Purchasers costs		@	5.76%	(725,225)	12,590,710
GDV					**12,590,710**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					(40,000)
Statutory Planning Fees					(12,320)
Combined CIL	2,353	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	1.45	acres @	0	per acre	-
Cambridge fringe office park	2,352.94	sqm @	1,912.00	psm	(4,498,824)
				per unit	
	2,352.94	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(25,026)
	-	sqm @		psm	-
External works	4,523,850	@	15%		(678,578)
Contingency	5,202,428	@	5%		(260,121)
Professional Fees	5,462,549	@	10%		(546,255)
Disposal Costs -					
Letting Agents Costs	775,002	ERV @	10.00%		(77,500)
Letting Legal Costs	775,002	ERV @	5.00%		(38,750)
Investment Sale Agents Costs	12,590,710	GDV @	1.00%		(125,907)
Investment Sale Legal Costs	12,590,710	GDV @	0.50%		(62,954)
Marketing and Promotion	12,590,710	GDV @	1.00%		(125,907)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(367,546)
Developers Profit	10,491,839	@	20.00%	on costs	
	12,590,710	@	16.67%	on GDV	(2,098,871)
TOTAL COSTS					**(8,958,559)**

RESIDUAL LAND VALUE

Residual Land Value (gross)				3,632,151
SDLT (HMRC % rates)	3,632,151	@		(145,286)
Acquisition Agent fees	3,632,151	@	1%	(36,322)
Acquisition Legal fees	3,632,151	@	0.5%	(18,161)
Interest on Land	3,632,151	@	7.5%	(272,411)
Residual Land Value (net)				**3,159,972**

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Office Fringe (GF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	0.588	ha	1.45	acres	
	4,000	sqm/ha	17,424	sqft/ac	
Threshold Land Value	247,110	£ per ha	100,000	£ per acre	
	5,882	34.00%			**145,353**
Gross to net					

BALANCE	
Surplus/(Deficit)	**3,014,619**

SENSITIVITY ANALYSIS

GDV

Balance	3,014,619	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	1,686,511	2,129,214	2,571,916	3,014,619	3,457,321	3,900,024	4,342,727
	150	1,318,600	1,761,303	2,204,005	2,646,708	3,089,410	3,532,113	3,974,816
	300	950,689	1,393,392	1,836,094	2,278,797	2,721,499	3,164,202	3,606,905
	450	582,778	1,025,481	1,468,183	1,910,886	2,353,588	2,796,291	3,238,994
	600	219,008	657,570	1,100,272	1,542,975	1,985,677	2,428,380	2,871,083
	750	(154,193)	289,659	732,361	1,175,064	1,617,766	2,060,469	2,503,172
	900	(577,079)	(75,938)	364,450	807,153	1,249,856	1,692,558	2,135,261
	1050	(999,965)	(491,112)	1,432	439,242	881,945	1,324,647	1,767,350
	1200	(1,422,852)	(913,998)	(405,145)	78,803	514,034	956,736	1,399,439
	1350	(1,845,738)	(1,336,884)	(828,031)	(319,177)	149,473	588,825	1,031,528
	1500	(2,268,624)	(1,759,770)	(1,250,917)	(742,063)	(233,210)	225,124	663,617
	1650	(2,691,510)	(2,182,657)	(1,673,803)	(1,164,949)	(656,096)	(147,242)	295,706
	1800	(3,114,396)	(2,605,543)	(2,096,689)	(1,587,836)	(1,078,982)	(570,129)	(69,683)

Build costs

Balance	3,014,619	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	3,840,783	3,565,395	3,290,007	3,014,619	2,739,231	2,463,842	2,188,454
	150	3,472,872	3,197,484	2,922,096	2,646,708	2,371,320	2,095,931	1,820,543
	300	3,104,961	2,829,573	2,554,185	2,278,797	2,003,409	1,728,020	1,452,632
	450	2,737,050	2,461,662	2,186,274	1,910,886	1,635,498	1,360,109	1,084,721
	600	2,369,140	2,093,751	1,818,363	1,542,975	1,267,587	992,198	716,810
	750	2,001,229	1,725,840	1,450,452	1,175,064	899,676	624,287	348,899
	900	1,633,318	1,357,929	1,082,541	807,153	531,765	260,994	(14,655)
	1050	1,265,407	990,018	714,630	439,242	167,408	(110,368)	(423,019)
	1200	897,496	622,107	346,719	78,803	(212,829)	(529,367)	(845,905)
	1350	529,585	258,789	(16,910)	(319,177)	(635,715)	(952,253)	(1,268,792)
	1500	165,203	(112,624)	(425,525)	(742,063)	(1,058,601)	(1,375,140)	(1,691,678)
	1650	(215,335)	(531,873)	(848,411)	(1,164,949)	(1,481,488)	(1,798,026)	(2,114,564)
	1800	(638,221)	(954,759)	(1,271,297)	(1,587,836)	(1,904,374)	(2,220,912)	(2,537,450)

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Office Fringe (BF)

SCHEME DETAILS - ASSUMPTIONS

Cambridge fringe office park **Brownfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Cambridge fringe office park	2,000	21,528	85.0%	2,352.9	25,327
area 2	0	0	85.0%	0.0	0
area 3	0	0	85.0%	0.0	0
area 4	0	0	85.0%	0.0	0
area 5	0	0	85.0%	0.0	0
area 6	0	0	85.0%	0.0	0
total floor area	2,000	21,528	85.0%	2,353	25,327

GROSS DEVELOPMENT VALUE

	sqft		£ psf	£	
Cambridge fringe office park	21,528	@	36.00	775,002	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				775,002	
Yield		@	5.50%		
capitalised rent				14,090,937	
less					
Rent Free / Void allowance	12	months rent		(775,002)	
Purchasers costs		@	5.76%	(725,225)	12,590,710
GDV					**12,590,710**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					(40,000)
Statutory Planning Fees					(12,320)
Combined CIL	2,353	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	1.45	acres @	110,000	per acre	(159,888)
Cambridge fringe office park	2,352.94	sqm @	1,912.00	psm	(4,498,824)
				per unit	
	2,352.94	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(25,026)
	-	sqm @		psm	-
External works	4,523,850	@	15%		(678,578)
Contingency	5,362,316	@	5%		(268,116)
Professional Fees	5,630,432	@	10%		(563,043)
Disposal Costs -					
Letting Agents Costs	775,002	ERV @	10.00%		(77,500)
Letting Legal Costs	775,002	ERV @	5.00%		(38,750)
Investment Sale Agents Costs	12,590,710	GDV @	1.00%		(125,907)
Investment Sale Legal Costs	12,590,710	GDV @	0.50%		(62,954)
Marketing and Promotion	12,590,710	GDV @	1.00%		(125,907)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(394,499)
Developers Profit	10,491,839	@	20.00%	on costs	
	12,590,710	@	16.67%	on GDV	(2,098,871)
TOTAL COSTS					**(9,170,183)**

RESIDUAL LAND VALUE

Residual Land Value (gross)				3,420,527
SDLT (HMRC % rates)	3,420,527	@		(136,821)
Acquisition Agent fees	3,420,527	@	1%	(34,205)
Acquisition Legal fees	3,420,527	@	0.5%	(17,103)
Interest on Land	3,420,527	@	7.5%	(256,540)
Residual Land Value (net)				**2,975,858**

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Office Fringe (BF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	0.588	ha	1.45	acres	
	4,000	sqm/ha	17,424	sqft/ac	
Threshold Land Value	1,186,128	£ per ha	480,000	£ per acre	
	5,882	34.00%			**697,694**
Gross to net					

BALANCE	
Surplus/(Deficit)	**2,278,164**

SENSITIVITY ANALYSIS

GDV

Balance	2,278,164	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	950,057	1,392,759	1,835,462	2,278,164	2,720,867	3,163,570	3,606,272
	100	704,783	1,147,485	1,590,188	2,032,890	2,475,593	2,918,296	3,360,998
	200	459,509	902,211	1,344,914	1,787,616	2,230,319	2,673,022	3,115,724
	300	214,235	656,937	1,099,640	1,542,342	1,985,045	2,427,748	2,870,450
	400	(31,039)	411,663	854,366	1,297,068	1,739,771	2,182,474	2,625,176
	500	(271,470)	166,389	609,092	1,051,794	1,494,497	1,937,200	2,379,902
	600	(515,515)	(78,885)	363,818	806,520	1,249,223	1,691,926	2,134,628
	700	(777,197)	(319,865)	118,544	561,247	1,003,949	1,446,652	1,889,354
	800	(1,059,121)	(565,010)	(126,730)	315,973	758,675	1,201,378	1,644,080
	900	(1,341,045)	(832,191)	(368,260)	70,699	513,401	956,104	1,398,806
	1000	(1,622,969)	(1,114,115)	(614,505)	(174,575)	268,127	710,830	1,153,532
	1100	(1,904,893)	(1,396,040)	(887,186)	(416,656)	22,853	465,556	908,258
	1200	(2,186,817)	(1,677,964)	(1,169,110)	(664,000)	(222,421)	220,282	662,984

Build costs

Balance	2,278,164	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	3,104,329	2,828,941	2,553,553	2,278,164	2,002,776	1,727,388	1,452,000
	100	2,859,055	2,583,667	2,308,279	2,032,890	1,757,502	1,482,114	1,206,726
	200	2,613,781	2,338,393	2,063,005	1,787,616	1,512,228	1,236,840	961,452
	300	2,368,507	2,093,119	1,817,731	1,542,342	1,266,954	991,566	716,178
	400	2,123,233	1,847,845	1,572,457	1,297,068	1,021,680	746,292	470,904
	500	1,877,959	1,602,571	1,327,183	1,051,794	776,406	501,018	225,630
	600	1,632,685	1,357,297	1,081,909	806,520	531,132	255,744	(19,644)
	700	1,387,411	1,112,023	836,635	561,247	285,858	10,470	(259,944)
	800	1,142,137	866,749	591,361	315,973	40,584	(234,804)	(503,727)
	900	896,863	621,475	346,087	70,699	(204,690)	(477,577)	(764,099)
	1000	651,589	376,201	100,813	(174,575)	(447,116)	(729,485)	(1,046,023)
	1100	406,315	130,927	(144,461)	(416,656)	(695,153)	(1,011,409)	(1,327,947)
	1200	161,041	(114,347)	(386,195)	(664,000)	(976,795)	(1,293,333)	(1,609,871)

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Office Rural (GF)

SCHEME DETAILS - ASSUMPTIONS

Rural office park **Greenfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Rural office park	2,000	21,528	85.0%	2,352.9	25,327
area 2	0	0	85.0%	0.0	0
area 3	0	0	85.0%	0.0	0
area 4	0	0	85.0%	0.0	0
area 5	0	0	85.0%	0.0	0
area 6	0	0	85.0%	0.0	0
total floor area	2,000	21,528	85.0%	2,353	25,327

GROSS DEVELOPMENT VALUE

	sqft		£ psf	£	
Rural office park	21,528	@	25.00	538,196	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				538,196	
Yield		@	6.50%		
capitalised rent				8,279,931	
less					
Rent Free / Void allowance	12	months rent		(538,196)	
Purchasers costs		@	5.76%	(421,638)	7,320,098
GDV					**7,320,098**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					(40,000)
Statutory Planning Fees					(12,320)
Combined CIL	2,353	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	1.45	acres @		per acre	-
Rural office park	2,352.94	sqm @	1,856.00	psm	(4,367,059)
				per unit	
	2,352.94	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(25,026)
	-	sqm @		psm	-
External works	4,392,085	@	15%		(658,813)
Contingency	5,050,898	@	5%		(252,545)
Professional Fees	5,303,443	@	10%		(530,344)
Disposal Costs -					
Letting Agents Costs	538,196	ERV @	10.00%		(53,820)
Letting Legal Costs	538,196	ERV @	5.00%		(26,910)
Investment Sale Agents Costs	7,320,098	GDV @	1.00%		(73,201)
Investment Sale Legal Costs	7,320,098	GDV @	0.50%		(36,600)
Marketing and Promotion	7,320,098	GDV @	1.00%		(73,201)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(357,142)
Developers Profit	6,099,837	@	20.00%	on costs	
	7,320,098	@	16.67%	on GDV	(1,220,260)
TOTAL COSTS					**(7,727,242)**

RESIDUAL LAND VALUE

Residual Land Value (gross)					(407,144)
SDLT (HMRC % rates)	-	@			-
Acquisition Agent fees	-	@	1%		-
Acquisition Legal fees	-	@	0.5%		-
Interest on Land	-	@	7.5%		-
Residual Land Value (net)					**(407,144)**

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Office Rural (GF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	0.588	ha		1.45	acres
	4,000	sqm/ha		17,424	sqft/ac
Threshold Land Value	247,110	£ per ha		100,000	£ per acre
	5,882		34.00%		**145,353**
Gross to net					

BALANCE	
Surplus/(Deficit)	**(552,497)**

SENSITIVITY ANALYSIS

GDV

Balance	(552,497)	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	(1,440,022)	(1,144,180)	(848,339)	(552,497)	(256,655)	20,733	277,383
	100	(1,721,946)	(1,426,105)	(1,130,263)	(834,421)	(538,579)	(242,738)	33,258
	200	(2,003,870)	(1,708,029)	(1,412,187)	(1,116,345)	(820,503)	(524,662)	(228,820)
	300	(2,285,795)	(1,989,953)	(1,694,111)	(1,398,269)	(1,102,428)	(806,586)	(510,744)
	400	(2,567,719)	(2,271,877)	(1,976,035)	(1,680,193)	(1,384,352)	(1,088,510)	(792,668)
	500	(2,849,643)	(2,553,801)	(2,257,959)	(1,962,118)	(1,666,276)	(1,370,434)	(1,074,592)
	600	(3,131,567)	(2,835,725)	(2,539,883)	(2,244,042)	(1,948,200)	(1,652,358)	(1,356,516)
	700	(3,413,491)	(3,117,649)	(2,821,808)	(2,525,966)	(2,230,124)	(1,934,282)	(1,638,441)
	800	(3,695,415)	(3,399,573)	(3,103,732)	(2,807,890)	(2,512,048)	(2,216,206)	(1,920,365)
	900	(3,977,339)	(3,681,498)	(3,385,656)	(3,089,814)	(2,793,972)	(2,498,131)	(2,202,289)
	1000	(4,259,263)	(3,963,422)	(3,667,580)	(3,371,738)	(3,075,896)	(2,780,055)	(2,484,213)
	1100	(4,541,188)	(4,245,346)	(3,949,504)	(3,653,662)	(3,357,821)	(3,061,979)	(2,766,137)
	1200	(4,823,112)	(4,527,270)	(4,231,428)	(3,935,586)	(3,639,745)	(3,343,903)	(3,048,061)

Build costs

Balance	(552,497)	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	302,399	41,298	(245,230)	(552,497)	(859,764)	(1,167,031)	(1,474,299)
	100	64,107	(219,887)	(527,154)	(834,421)	(1,141,688)	(1,448,955)	(1,756,223)
	200	(194,544)	(501,811)	(809,078)	(1,116,345)	(1,423,612)	(1,730,880)	(2,038,147)
	300	(476,468)	(783,735)	(1,091,002)	(1,398,269)	(1,705,537)	(2,012,804)	(2,320,071)
	400	(758,392)	(1,065,659)	(1,372,926)	(1,680,193)	(1,987,461)	(2,294,728)	(2,601,995)
	500	(1,040,316)	(1,347,583)	(1,654,850)	(1,962,118)	(2,269,385)	(2,576,652)	(2,883,919)
	600	(1,322,240)	(1,629,507)	(1,936,775)	(2,244,042)	(2,551,309)	(2,858,576)	(3,165,843)
	700	(1,604,164)	(1,911,431)	(2,218,699)	(2,525,966)	(2,833,233)	(3,140,500)	(3,447,767)
	800	(1,886,088)	(2,193,356)	(2,500,623)	(2,807,890)	(3,115,157)	(3,422,424)	(3,729,691)
	900	(2,168,013)	(2,475,280)	(2,782,547)	(3,089,814)	(3,397,081)	(3,704,348)	(4,011,616)
	1000	(2,449,937)	(2,757,204)	(3,064,471)	(3,371,738)	(3,679,005)	(3,986,273)	(4,293,540)
	1100	(2,731,861)	(3,039,128)	(3,346,395)	(3,653,662)	(3,960,929)	(4,268,197)	(4,575,464)
	1200	(3,013,785)	(3,321,052)	(3,628,319)	(3,935,586)	(4,242,854)	(4,550,121)	(4,857,388)

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Light ind-B2 (GF)

SCHEME DETAILS - ASSUMPTIONS

Industrial Class E (light industrial)/B2 **Greenfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Industrial Class E (light industrial)/B2	200	2,153	100.0%	200.0	2,153
area 2	0	0	100.0%	0.0	0
area 3	0	0	100.0%	0.0	0
area 4	0	0	100.0%	0.0	0
area 5	0	0	100.0%	0.0	0
area 6	0	0	100.0%	0.0	0
total floor area	200	2,153	100.0%	200	2,153

GROSS DEVELOPMENT VALUE

			£ psf	£	
	sqft				
Industrial Class E (light industrial)/B2	2,153	@	13.50	29,063	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				29,063	
Yield		@	6.00%		
capitalised rent				484,376	
less					
Rent Free / Void allowance	6	months rent		(14,531)	
Purchasers costs		@	5.76%	(25,589)	444,256
GDV					**444,256**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					-
Statutory Planning Fees					(1,232)
Combined CIL	200	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	0.12	acres @		per acre	-
Industrial Class E (light industrial)/B2	200.00	sqm @	812.00	psm	(162,400)
				per unit	
	200.00	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(2,127)
	-	sqm @		psm	-
External works	164,527	@	15%		(24,679)
Contingency	189,206	@	5%		(9,460)
Professional Fees	198,667	@	10%		(19,867)
Disposal Costs -					
Letting Agents Costs	29,063	ERV @	10.00%		(2,906)
Letting Legal Costs	29,063	ERV @	5.00%		(1,453)
Investment Sale Agents Costs	444,256	GDV @	1.00%		(4,443)
Investment Sale Legal Costs	444,256	GDV @	0.50%		(2,221)
Marketing and Promotion	444,256	GDV @	1.00%		(4,443)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(8,972)
Developers Profit	370,198	@	20.00%	on costs	
	444,256	@	16.67%	on GDV	(74,057)
TOTAL COSTS					**(318,260)**

RESIDUAL LAND VALUE

Residual Land Value (gross)				125,995
SDLT (HMRC % rates)	125,995	@		(1,260)
Acquisition Agent fees	125,995	@	1%	(1,260)
Acquisition Legal fees	125,995	@	0.5%	(630)
Interest on Land	125,995	@	7.5%	(9,450)
Residual Land Value (net)				**113,396**

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Light ind-B2 (GF)

THRESHOLD LAND VALUE						
Site density	4,000	sqm per hectare				
Site Area	0.050	ha		0.12	acres	
	4,000	sqm/ha		17,424	sqft/ac	
Threshold Land Value	247,110	£ per ha		100,000	£ per acre	
	500		40.00%			**12,355**
Gross to net						

BALANCE	
Surplus/(Deficit)	**101,041**

SENSITIVITY ANALYSIS

		GDV						
Balance	101,041	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	52,564	68,723	84,882	101,041	117,200	133,359	149,518
	50	42,163	58,322	74,481	90,640	106,799	122,959	139,118
	100	31,762	47,921	64,081	80,240	96,399	112,558	128,717
	150	21,362	37,521	53,680	69,839	85,998	102,157	118,316
	200	10,961	27,120	43,279	59,438	75,598	91,757	107,916
	250	560	16,720	32,879	49,038	65,197	81,356	97,515
	300	(9,840)	6,319	22,478	38,637	54,796	70,955	87,115
	350	(21,117)	(4,082)	12,077	28,237	44,396	60,555	76,714
	400	(32,673)	(14,719)	1,677	17,836	33,995	50,154	66,313
	450	(44,230)	(26,275)	(8,724)	7,435	23,594	39,754	55,913
	500	(55,786)	(37,831)	(19,877)	(2,965)	13,194	29,353	45,512
	550	(67,342)	(49,387)	(31,433)	(13,478)	2,793	18,952	35,111
	600	(78,898)	(60,944)	(42,989)	(25,035)	(7,607)	8,552	24,711

		Build costs						
Balance	101,041	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	131,331	121,235	111,138	101,041	90,944	80,847	70,750
	50	120,931	110,834	100,737	90,640	80,543	70,447	60,350
	100	110,530	100,433	90,337	80,240	70,143	60,046	49,949
	150	100,130	90,033	79,936	69,839	59,742	49,645	39,549
	200	89,729	79,632	69,535	59,438	49,342	39,245	29,148
	250	79,328	69,231	59,135	49,038	38,941	28,844	18,747
	300	68,928	58,831	48,734	38,637	28,540	18,444	8,347
	350	58,527	48,430	38,333	28,237	18,140	8,043	(2,054)
	400	48,126	38,030	27,933	17,836	7,739	(2,358)	(12,466)
	450	37,726	27,629	17,532	7,435	(2,662)	(12,803)	(24,022)
	500	27,325	17,228	7,132	(2,965)	(13,141)	(24,359)	(35,578)
	550	16,925	6,828	(3,269)	(13,478)	(24,697)	(35,916)	(47,134)
	600	6,524	(3,573)	(13,816)	(25,035)	(36,253)	(47,472)	(58,691)

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Light ind-B2 (BF)

SCHEME DETAILS - ASSUMPTIONS

Industrial Class E (light industrial)/B2 **Brownfield**

Floor areas:	NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Industrial Class E (light industrial)/B2	200	2,153	100.0%	200.0	2,153
area 2	0	0	100.0%	0.0	0
area 3	0	0	100.0%	0.0	0
area 4	0	0	100.0%	0.0	0
area 5	0	0	100.0%	0.0	0
area 6	0	0	100.0%	0.0	0
total floor area	200	2,153	100.0%	200	2,153

GROSS DEVELOPMENT VALUE

			£ psf	£	
	sqft				
Industrial Class E (light industrial)/B2	2,153	@	13.50	29,063	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				29,063	
Yield		@	6.00%		
capitalised rent				484,376	
less					
Rent Free / Void allowance	6	months rent		(14,531)	
Purchasers costs		@	5.76%	(25,589)	444,256
GDV					**444,256**

DEVELOPMENT COSTS

Initial Payments -					
Planning Application Professional Fees and reports					-
Statutory Planning Fees					(1,232)
Combined CIL	200	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	0.12	acres @	110,000	per acre	(13,591)
Industrial Class E (light industrial)/B2	200.00	sqm @	812.00	psm	(162,400)
				per unit	
	200.00	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(2,127)
	-	sqm @		psm	-
External works	164,527	@	15%		(24,679)
Contingency	202,797	@	5%		(10,140)
Professional Fees	212,937	@	10%		(21,294)
Disposal Costs -					
Letting Agents Costs	29,063	ERV @	10.00%		(2,906)
Letting Legal Costs	29,063	ERV @	5.00%		(1,453)
Investment Sale Agents Costs	444,256	GDV @	1.00%		(4,443)
Investment Sale Legal Costs	444,256	GDV @	0.50%		(2,221)
Marketing and Promotion	444,256	GDV @	1.00%		(4,443)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(10,662)
Developers Profit	370,198	@	20.00%	on costs	
	444,256	@	16.67%	on GDV	(74,057)
TOTAL COSTS					**(335,648)**

RESIDUAL LAND VALUE

Residual Land Value (gross)				108,608
SDLT (HMRC % rates)	108,608	@		(1,086)
Acquisition Agent fees	108,608	@	1%	(1,086)
Acquisition Legal fees	108,608	@	0.5%	(543)
Interest on Land	108,608	@	7.5%	(8,146)
Residual Land Value (net)				**97,747**

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Light ind-B2 (BF)

THRESHOLD LAND VALUE						
Site density	4,000	sqm per hectare				
Site Area	0.050	ha		0.12	acres	
	4,000	sqm/ha		17,424	sqft/ac	
Threshold Land Value	1,186,128	£ per ha		480,000	£ per acre	
	500		40.00%			**59,304**
Gross to net						

BALANCE	
Surplus/(Deficit)	**38,443**

SENSITIVITY ANALYSIS

GDV

Balance	38,443	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	(10,035)	6,125	22,284	38,443	54,602	70,761	86,920
	50	(20,435)	(4,276)	11,883	28,042	44,201	60,360	76,520
	100	(30,836)	(14,677)	1,482	17,642	33,801	49,960	66,119
	150	(41,236)	(25,077)	(8,918)	7,241	23,400	39,559	55,718
	200	(51,637)	(35,478)	(19,319)	(3,160)	12,999	29,159	45,318
	250	(62,341)	(45,879)	(29,719)	(13,560)	2,599	18,758	34,917
	300	(73,898)	(56,279)	(40,120)	(23,961)	(7,802)	8,357	24,516
	350	(85,454)	(67,499)	(50,521)	(34,362)	(18,202)	(2,043)	14,116
	400	(97,010)	(79,056)	(61,101)	(44,762)	(28,603)	(12,444)	3,715
	450	(108,566)	(90,612)	(72,657)	(55,163)	(39,004)	(22,845)	(6,685)
	500	(120,123)	(102,168)	(84,214)	(66,259)	(49,404)	(33,245)	(17,086)
	550	(131,679)	(113,724)	(95,770)	(77,815)	(59,861)	(43,646)	(27,487)
	600	(143,235)	(125,281)	(107,326)	(89,371)	(71,417)	(54,046)	(37,887)

Build costs

Balance	38,443	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	68,733	58,636	48,540	38,443	28,346	18,249	8,152
	50	58,333	48,236	38,139	28,042	17,945	7,849	(2,248)
	100	47,932	37,835	27,738	17,642	7,545	(2,552)	(12,649)
	150	37,531	27,435	17,338	7,241	(2,856)	(12,953)	(23,050)
	200	27,131	17,034	6,937	(3,160)	(13,257)	(23,353)	(33,450)
	250	16,730	6,633	(3,463)	(13,560)	(23,657)	(33,754)	(43,851)
	300	6,330	(3,767)	(13,864)	(23,961)	(34,058)	(44,155)	(54,251)
	350	(4,071)	(14,168)	(24,265)	(34,362)	(44,458)	(54,555)	(65,246)
	400	(14,472)	(24,569)	(34,665)	(44,762)	(54,859)	(65,584)	(76,803)
	450	(24,872)	(34,969)	(45,066)	(55,163)	(65,921)	(77,140)	(88,359)
	500	(35,273)	(45,370)	(55,467)	(66,259)	(77,478)	(88,696)	(99,915)
	550	(45,674)	(55,770)	(66,596)	(77,815)	(89,034)	(100,253)	(111,471)
	600	(56,074)	(66,934)	(78,153)	(89,371)	(100,590)	(111,809)	(123,028)

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B2-B8 (GF)

SCHEME DETAILS - ASSUMPTIONS						
Industrial B2/B8	**Brownfield**					
Floor areas:		NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Industrial B2/B8		5,000	53,820	100.0%	5,000.0	53,820
area 2		0	0	100.0%	0.0	0
area 3		0	0	100.0%	0.0	0
area 4		0	0	100.0%	0.0	0
area 5		0	0	100.0%	0.0	0
area 6		0	0	100.0%	0.0	0
total floor area		5,000	53,820	100.0%	5,000	53,820

GROSS DEVELOPMENT VALUE					
	sqft		£ psf	£	
Industrial B2/B8	53,820	@	12.50	672,744	
area 2	0	@	0.00	-	
area 3	0	@	0.00	-	
area 4	0	@	0.00	-	
area 5	0	@	0.00	-	
area 6	0	@	0.00	-	
Estimated Gross Rental Value per annum				672,744	
Yield		@	5.50%		
capitalised rent				12,231,716	
less					
Rent Free / Void allowance	6	months rent		(336,372)	
Purchasers costs		@	5.76%	(647,855)	11,247,488
GDV					**11,247,488**

DEVELOPMENT COSTS					
Initial Payments -					
Planning Application Professional Fees and reports					(100,000)
Statutory Planning Fees					(32,059)
Combined CIL	5,000	sqm @	0.00	£ psm	-
Site Specific S106/278					-
Construction Costs -					
Demolition and Site Clearance (allowance)	3.09	acres @	0	per acre	-
Industrial B2/B8	5,000.00	sqm @	812.00	psm	(4,060,000)
				per unit	
	5,000.00	sqm @		£ psm	-
	-	sqm @		£ per scheme	-
Biodiversity offset	-	sqm @	42,545	£ per gross hectare	(53,181)
	-	sqm @		psm	-
External works	4,113,181	@	15%		(616,977)
Contingency	4,730,158	@	5%		(236,508)
Professional Fees	4,966,666	@	10%		(496,667)
Disposal Costs -					
Letting Agents Costs	672,744	ERV @	10.00%		(67,274)
Letting Legal Costs	672,744	ERV @	5.00%		(33,637)
Investment Sale Agents Costs	11,247,488	GDV @	1.00%		(112,475)
Investment Sale Legal Costs	11,247,488	GDV @	0.50%		(56,237)
Marketing and Promotion	11,247,488	GDV @	1.00%		(112,475)
Finance Costs -					
Interest (cashflow basis incl. land)	7.50%	APR	0.604%	pcm	(350,924)
Developers Profit	9,372,532	@	20.00%	on costs	
	11,247,488	@	16.67%	on GDV	(1,874,956)
TOTAL COSTS					**(8,203,371)**

RESIDUAL LAND VALUE				
Residual Land Value (gross)				3,044,117
SDLT (HMRC % rates)	3,044,117	@		(121,765)
Acquisition Agent fees	3,044,117	@	1%	(30,441)
Acquisition Legal fees	3,044,117	@	0.5%	(15,221)
Interest on Land	3,044,117	@	7.5%	(228,309)
Residual Land Value (net)				**2,648,382**

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B2-B8 (GF)

THRESHOLD LAND VALUE					
Site density	4,000	sqm per hectare			
Site Area	1.250	ha	3.09	acres	
	4,000	sqm/ha	17,424	sqft/ac	
Threshold Land Value	247,110	£ per ha	100,000	£ per acre	
	12,500	40.00%			**308,875**
Gross to net					

BALANCE	
Surplus/(Deficit)	**2,339,507**

SENSITIVITY ANALYSIS

GDV

Balance	2,339,507	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	1,153,086	1,548,560	1,944,033	2,339,507	2,734,980	3,130,454	3,525,927
	50	892,483	1,287,956	1,683,430	2,078,903	2,474,377	2,869,850	3,265,324
	100	631,879	1,027,353	1,422,826	1,818,300	2,213,773	2,609,247	3,004,720
	150	371,275	766,749	1,162,222	1,557,696	1,953,169	2,348,643	2,744,117
	200	115,494	506,145	901,619	1,297,092	1,692,566	2,088,039	2,483,513
	250	(144,451)	245,542	641,015	1,036,489	1,431,962	1,827,436	2,222,909
	300	(425,726)	(11,685)	380,412	775,885	1,171,359	1,566,832	1,962,306
	350	(725,270)	(274,520)	124,735	515,282	910,755	1,306,229	1,701,702
	400	(1,024,815)	(570,247)	(135,000)	254,678	650,151	1,045,625	1,441,098
	450	(1,324,359)	(869,792)	(415,225)	(2,443)	389,548	785,021	1,180,495
	500	(1,623,903)	(1,169,336)	(714,769)	(265,069)	128,944	524,418	919,891
	550	(1,923,448)	(1,468,881)	(1,014,313)	(559,746)	(125,548)	263,814	659,288
	600	(2,222,992)	(1,768,425)	(1,313,858)	(859,290)	(404,723)	6,798	398,684

Build costs

Balance	2,339,507	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	3,085,086	2,836,559	2,588,033	2,339,507	2,090,980	1,842,454	1,593,928
	50	2,824,482	2,575,956	2,327,430	2,078,903	1,830,377	1,581,851	1,333,324
	100	2,563,879	2,315,352	2,066,826	1,818,300	1,569,773	1,321,247	1,072,721
	150	2,303,275	2,054,749	1,806,222	1,557,696	1,309,170	1,060,643	812,117
	200	2,042,671	1,794,145	1,545,619	1,297,092	1,048,566	800,040	551,513
	250	1,782,068	1,533,541	1,285,015	1,036,489	787,962	539,436	290,910
	300	1,521,464	1,272,938	1,024,412	775,885	527,359	278,832	34,205
	350	1,260,861	1,012,334	763,808	515,282	266,755	21,989	(227,588)
	400	1,000,257	751,731	503,204	254,678	9,773	(240,082)	(518,100)
	450	739,653	491,127	242,601	(2,443)	(252,575)	(531,982)	(817,645)
	500	479,050	230,523	(14,660)	(265,069)	(545,864)	(831,527)	(1,117,189)
	550	218,446	(26,876)	(277,563)	(559,746)	(845,409)	(1,131,071)	(1,416,733)
	600	(39,092)	(290,057)	(573,628)	(859,290)	(1,144,953)	(1,430,615)	(1,716,278)

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B2-B8 (BF)

SCHEME DETAILS - ASSUMPTIONS						
Industrial B2/B8	**Brownfield**					
Floor areas:		NIA (sqm)	NIA (sqft)	Net to Gross %	GIA (sqm)	NIA (sqft)
Industrial B2/B8		5,000	53,820	100.0%	5,000.0	53,820
area 2		0	0	100.0%	0.0	0
area 3		0	0	100.0%	0.0	0
area 4		0	0	100.0%	0.0	0
area 5		0	0	100.0%	0.0	0
area 6		0	0	100.0%	0.0	0
total floor area		5,000	53,820	100.0%	5,000	53,820

GROSS DEVELOPMENT VALUE						
		sqft		£ psf	£	
Industrial B2/B8		53,820	@	12.50	672,744	
area 2		0	@	0.00	-	
area 3		0	@	0.00	-	
area 4		0	@	0.00	-	
area 5		0	@	0.00	-	
area 6		0	@	0.00	-	
Estimated Gross Rental Value per annum					672,744	
Yield			@	5.50%		
capitalised rent					12,231,716	
less						
Rent Free / Void allowance		6	months rent		(336,372)	
Purchasers costs			@	5.76%	(647,855)	11,247,488
GDV						**11,247,488**

DEVELOPMENT COSTS						
Initial Payments -						
Planning Application Professional Fees and reports						(100,000)
Statutory Planning Fees						(32,059)
Combined CIL		5,000	sqm @	0.00	£ psm	-
Site Specific S106/278						-
Construction Costs -						
Demolition and Site Clearance (allowance)		3.09	acres @	110,000	per acre	(339,763)
Industrial B2/B8		5,000.00	sqm @	812.00	psm	(4,060,000)
					per unit	
		5,000.00	sqm @		£ psm	-
		-	sqm @		£ per scheme	-
Biodiversity offset		-	sqm @	42,545	£ per gross hectare	(53,181)
		-	sqm @		psm	-
External works		4,113,181	@	15%		(616,977)
Contingency		5,069,921	@	5%		(253,496)
Professional Fees		5,323,417	@	10%		(532,342)
Disposal Costs -						
Letting Agents Costs		672,744	ERV @	10.00%		(67,274)
Letting Legal Costs		672,744	ERV @	5.00%		(33,637)
Investment Sale Agents Costs		11,247,488	GDV @	1.00%		(112,475)
Investment Sale Legal Costs		11,247,488	GDV @	0.50%		(56,237)
Marketing and Promotion		11,247,488	GDV @	1.00%		(112,475)
Finance Costs -						
Interest (cashflow basis incl. land)		7.50%	APR	0.604%	pcm	(408,200)
Developers Profit		9,372,532	@	20.00%	on costs	
		11,247,488	@	16.67%	on GDV	(1,874,956)
TOTAL COSTS						**(8,653,073)**

RESIDUAL LAND VALUE				
Residual Land Value (gross)				2,594,415
SDLT (HMRC % rates)	2,594,415	@		(103,777)
Acquisition Agent fees	2,594,415	@	1%	(25,944)
Acquisition Legal fees	2,594,415	@	0.5%	(12,972)
Interest on Land	2,594,415	@	7.5%	(194,581)
Residual Land Value (net)				**2,257,141**

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B2-B8 (BF)

THRESHOLD LAND VALUE						
Site density	4,000	sqm per hectare				
Site Area	1.250	ha		3.09	acres	
	4,000	sqm/ha		17,424	sqft/ac	
Threshold Land Value	1,186,128	£ per ha		480,000	£ per acre	
	12,500		40.00%			**1,482,600**
Gross to net						

BALANCE	
Surplus/(Deficit)	**774,541**

SENSITIVITY ANALYSIS

GDV

Balance	774,541	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	(411,879)	(16,406)	379,068	774,541	1,170,015	1,565,488	1,960,962
	50	(672,483)	(277,009)	118,464	513,938	909,411	1,304,885	1,700,358
	100	(933,086)	(537,613)	(142,139)	253,334	648,808	1,044,281	1,439,755
	150	(1,190,369)	(798,217)	(402,743)	(7,270)	388,204	783,677	1,179,151
	200	(1,453,318)	(1,053,949)	(663,347)	(267,873)	127,600	523,074	918,547
	250	(1,749,608)	(1,313,797)	(923,950)	(528,477)	(133,003)	262,470	657,944
	300	(2,049,153)	(1,594,586)	(1,181,128)	(789,080)	(393,607)	1,867	397,340
	350	(2,348,697)	(1,894,130)	(1,443,866)	(1,044,708)	(654,211)	(258,737)	136,736
	400	(2,648,242)	(2,193,674)	(1,739,107)	(1,304,346)	(914,814)	(519,341)	(123,867)
	450	(2,947,786)	(2,493,219)	(2,038,651)	(1,584,084)	(1,171,887)	(779,944)	(384,471)
	500	(3,247,330)	(2,792,763)	(2,338,196)	(1,883,629)	(1,434,415)	(1,040,548)	(645,074)
	550	(3,546,875)	(3,092,307)	(2,637,740)	(2,183,173)	(1,728,606)	(1,294,895)	(905,678)
	600	(3,846,419)	(3,391,852)	(2,937,285)	(2,482,717)	(2,028,150)	(1,573,583)	(1,162,646)

Build costs

Balance	774,541	85%	90%	95%	100%	105%	110%	115%
CIL £psm / Section 106	0	1,520,120	1,271,594	1,023,068	774,541	526,015	277,489	28,962
	50	1,259,517	1,010,990	762,464	513,938	265,411	16,885	(231,641)
	100	998,913	750,387	501,860	253,334	4,808	(243,719)	(492,245)
	150	738,309	489,783	241,257	(7,270)	(255,796)	(504,322)	(752,849)
	200	477,706	229,179	(19,347)	(267,873)	(516,400)	(764,926)	(1,013,452)
	250	217,102	(31,424)	(279,950)	(528,477)	(777,003)	(1,025,529)	(1,266,865)
	300	(43,501)	(292,028)	(540,554)	(789,080)	(1,037,607)	(1,279,358)	(1,542,438)
	350	(304,105)	(552,631)	(801,158)	(1,044,708)	(1,291,852)	(1,556,320)	(1,841,983)
	400	(564,709)	(813,235)	(1,056,924)	(1,304,346)	(1,570,202)	(1,855,865)	(2,141,527)
	450	(825,312)	(1,069,140)	(1,316,840)	(1,584,084)	(1,869,747)	(2,155,409)	(2,441,072)
	500	(1,081,356)	(1,329,333)	(1,597,966)	(1,883,629)	(2,169,291)	(2,454,953)	(2,740,616)
	550	(1,341,827)	(1,611,848)	(1,897,510)	(2,183,173)	(2,468,835)	(2,754,498)	(3,040,160)
	600	(1,625,730)	(1,911,392)	(2,197,055)	(2,482,717)	(2,768,380)	(3,054,042)	(3,339,705)

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Annex C

Ministry of Housing, Communities & Local Government (March 2025) The MHCLG Appraisal Guide: Third edition



Ministry of Housing,
Communities &
Local Government

The MHCLG Appraisal Guide

Third edition

March 2025
Ministry of Housing, Communities & Local Government

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March 2025

The MHCLG Appraisal Guide

Third Edition

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Foreword

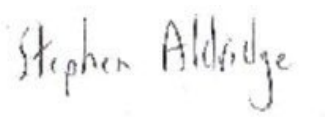
This Guide represents the third edition of the Ministry of Housing, Community and Local Government (MHCLG) Appraisal Guide. The aim is to ensure that Ministers and other decision makers have robust evidence on value for money when making policy and investment decisions.

Previous versions of the Guide have been widely used within MHCLG, other government departments and at local level, to inform spending decisions on housing, commercial property and land use and funding decisions by local authorities.

This version of the Guide updates the previous version, which was published in March 2023, to reflect MHCLG's changed remit. It also incorporates new research on the environmental impacts of housing developments and has been slightly restructured to make it easier for the user to follow.

I am very pleased to recommend the use of this Guide as a means of helping to deliver better evidence-based policy making. The Guide is a living document and I look forward to future improvements that should make it even more helpful.

I would like to thank every analyst and economist in the Department (including those from Homes England) who have contributed to it. I would also like to thank Graham Russell at AMION and Ben Pretty at Cushman and Wakefield who have provided invaluable comments to support its improvement.



Stephen Aldridge,
Director for Analysis and Data
Ministry of Housing, Communities and Local Government

List Of Abbreviations

AH	Affordable Housing
AONB	Area of Outstanding Natural Beauty
AST	Appraisal Summary Table
BAU	Business as Usual
BCR	Benefit Cost Ratio
BRE	Building Research Establishment
CORE survey)	Continuous Recording of Lettings and Sales in England (MHCLG
GMCA	Greater Manchester Combined Authority
GHG	Greenhouse Gas
GVA	Gross Value Added
HE	Homes England
LVU	Land Value Uplift
MV	Market value
NAO	National Audit Office
NPSV	Net present social value
OB	Optimism bias
PDL	Previously Developed Land
PRP	Private Registered Providers
PRS	Private Rented Sector
PVB	Present Value of Benefits
PVC	Present Value of Costs
PWF	Preferred Way Forward
RCF	Reference Class Forecasting
SR	Spending Review
SRS	Social Rented Sector
TA	Temporary Accommodation
VfM	Value for Money
VOA	Valuation Office Agency

MHCLG Appraisal Group

The MHCLG appraisal group is responsible for overseeing the development of appraisal guidance in MHCLG and ensuring it is communicated and applied effectively within MHCLG and across partner organisations. The group covers all areas of appraisal relevant to MHCLG and Homes England.

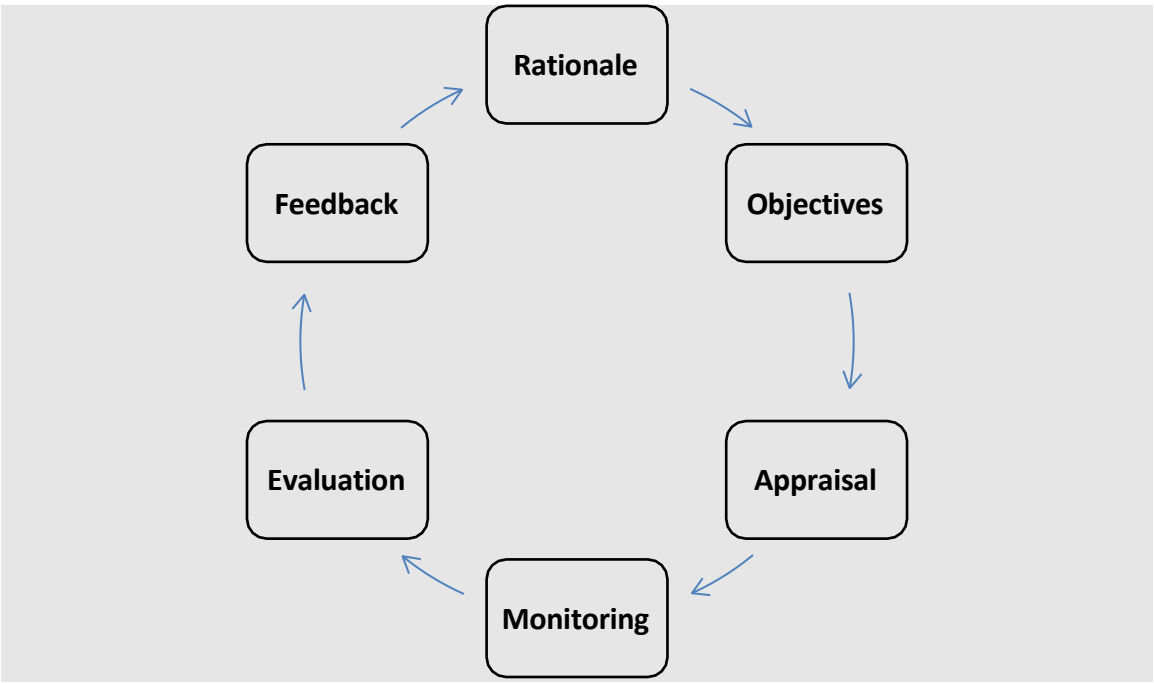
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Chapter 1: Introduction

The role of economic appraisal

1.1 Appraisal is an essential part of the policy making process, represented by HM Treasury's Green Book ROAMEF framework in the figure below. It is about finding the best way to meet policy objectives.

Figure 1: ROAMEF model



1.2 Appraisal is a two step process, conducted through longlisting then shortlisting analysis, following HM Treasury's Five Case Business Case model[1].

1.3 MHCLG uses the Green Book for its appraisal. This guide sets out specific appraisal issues that arise in MHCLG policy areas and is focused on the economic dimension of the business case, providing specific guidance on the quantification of impacts in the economic dimension. The appraisal approaches set out are also applicable to the assessment of options in Impact Assessments.

1.4 Effective economic appraisal involves estimating costs and benefits in a consistent manner so they can be compared, particularly at the shortlist stage.

[1] The five "cases" or dimensions are the strategic, economic, financial, commercial and management dimensions. These are discussed in Chapter 2.

Good appraisal will take account of uncertainties and risks and build them into the assessment. It will also assess which demographic groups and places are likely to be impacted by options and support the development of the Equalities Impact Assessment.

1.5 Once a policy has been chosen and implemented its impact is monitored and its performance evaluated. This provides feedback which can be used to improve the policy further or to make decisions about whether the policy should be expanded or discontinued. Note that Monitoring and Evaluation are not the subject of this guidance; further details on Monitoring and Evaluation can be found in MHCLG's published Evaluation Strategy and in the Magenta Book.

Objectives of this guidance

1.6 This Appraisal Guide is intended to be read in conjunction with the Green Book and aims to:

- Help ensure consistency in MHCLG appraisals; and
- Update and develop the methods and assumptions employed in MHCLG appraisals.

The content and use of this guidance

1.7 The Guide sets out default assumptions, the theoretical framework and the metrics to be adopted by analysts in MHCLG, its agencies, Mayoral Combined Authorities and Local Authorities when carrying out or scrutinising an appraisal.

1.8 The Guide is a technical document designed for analysts at MHCLG, its agencies, Mayoral Combined Authorities and Local Authorities but may in some contexts be of use to analysts in other departments or sectors. The focus is on all policy areas covered by MHCLG. These include policies to promote local growth and regeneration, support housing and commercial development, reduce rough sleeping and homelessness and support the work of Local Authorities.

1.9 It builds on the key principles and application of appraisal methodology set out in HM Treasury's Green Book, providing in depth appraisal tools for the policy areas covered by MHCLG and its partners. As such it can be seen as a bolt on to the Green Book. The guidance is consistent with other departmental guidance, in particular it should be noted that it is consistent with the Department for Transport's (DfT) recommended approach to appraising dependent

development which is set out in unit A2.2 of its Transport Analysis Guidance (TAG).

1.10 The assumptions set out in the Appraisal Guide are provided as defaults when carrying out appraisal for policy development and advice, business cases and impact assessments. Users are free to adopt different assumptions and metrics where they have better evidence to hand. However, the rationale for doing so must be evidence based and clearly documented in the relevant business case (or impact assessment if a regulatory change is being considered).

Development of this guidance

1.11 The Appraisal Guide is overseen by an Appraisal Group (members of which are listed at the beginning of this Guide). The following version of the Guide is the third edition and it updates the second edition published in 2023 to:

- Reflect the department's new responsibilities as the Ministry for Housing, Communities and Local Government; and
- Include improved techniques for the measurement of environmental impacts from housing and commercial developments.

1.12 This Guide is a 'living' document and will be updated from time to time, as new evidence and methodologies develop. We would welcome feedback or suggestions for improvement on any aspect of this guidance so we can enhance the quality of our appraisals. Please send these to AppraisalGuidance@communities.gov.uk

Structure

1.13 The Appraisal Guide is structured as follows:

Chapter 2 outlines the business case model and the role that appraisal plays within it;

Chapter 3 sets out what appraisal information is needed and how it should be presented for all policies;

Chapter 4 sets out the methodology and theoretical basis for appraising and valuing development, both residential and non-residential;

Chapter 5 sets out the approach to valuing external impacts from new developments, both residential and non-residential, which impact on existing residents within an area;

Chapter 6 discusses place based appraisal and includes an illustrative example of how to report place based results;

Chapter 7 sets out useful sources of information;

Annexes A to I contain further information on important topics covered in the main document.

Chapter 2: The Business Case Model

Introduction

2.1 The Five Case Business Case Model is the required framework for considering the use of public resources. This chapter:

- Introduces the Five Case Business Case Model and the role that appraisal plays within it;
- Sets out some key issues that appraisals of MHCLG interventions need to be aware of including: ensuring there is a clear rationale for intervention; that options selection follows the Green Book long-listing and short-listing approach; that options are assessed against a clearly defined counterfactual and that additionality is allowed for when appraising the impact of options.

2.2 If you are producing or reviewing a business case, in addition to reading the Green Book, you must read and familiarise yourself with the relevant programme or project business case guidance. All those involved in appraisal, and in development of business cases, and in their review and approval must be trained and accredited. Details of the appropriate HM Treasury approved training and accreditation scheme are given on the Green Book Training page.

2.3 The five "cases" or dimensions are different ways of viewing the same proposal. In brief the:

a. Strategic Dimension – sets out the case for change, including the rationale for intervention and SMART objectives;

b. Economic Dimension – sets out the net value to society of the intervention compared to continuing with Business As Usual (defined as the continuation of current arrangements, as if the proposal under consideration were not to be implemented);

c. Financial Dimension – looks at the impact of the proposal on the public sector budget;

d. Commercial Dimension – assesses whether a realistic and credible commercial deal can be struck and who will manage which risks; and

e. Management Dimension – sets out the approach to delivery, assesses key risks and presents the benefits realisation plan.

The role of appraisal in the strategic and economic dimensions

2.4 Appraisal plays a particularly important role in the strategic and economic dimensions. This is discussed fully in the HMT Green Book, however in summary:

- The strategic dimension sets out the case for change and the rationale for intervention. It asks the questions: What is the current situation? What is to be done? What outcomes are expected? How do these fit with wider government policies and objectives? These require a strategic assessment supported by sound appraisal based on robust but proportionate analysis. The elements of the strategic assessment which are supported by appraisal activity are set out in Box 6 below taken from the Green Book.[2,3]

Box 6 of HMT Green Book, Page 20: Logical Change Process

The Strategic dimension of the Business Case requires a Strategic Assessment key steps in which are:

- A quantitative understanding of the current situation known as Business As Usual (BAU)
- Identification of SMART objectives that embody the objective of the proposal
- Identification of the changes that need to be made to the organisation's business to bridge the gap from BAU to attainment of the SMART objectives. These are known as the business needs.
- An explanation of the logical change process i.e. the chain of cause and effect whereby meeting the business needs will bring about the SMART objectives.
- This all needs to be supported by reference to appropriate objective evidence in support of the data and assumptions used including the change mechanisms involved. It should include:
  - the source of the evidence;
  - explanation of the robustness of the evidence; and
  - of the relevance of the evidence to the context in which it is being used.
- This provides a clear testable proposal that can be the subject of constructive challenge and review. Single point estimates at this stage would be misleading and inaccurate and objectively based confidence ranges should be used.

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[2] . Chapter 2 of the Magenta Book shows how to construct a logical chain process or theory of change.

[3] See also the MHCLG Evaluation Strategy.

- The economic dimension is the analytical heart of a business case where detailed option development and selection through use of appraisal takes place. It is driven by the SMART objectives and delivery of the business needs that are identified in the strategic dimension. It estimates the social value of different options at both the UK level and, where necessary on different parts of the UK or on groups of people within the UK. Longlist appraisal and selection of the shortlist is a crucial function of the economic dimension. The selection of the preferred option from the shortlist uses social cost benefit analysis or where appropriate social cost effectiveness analysis[4]. **When assessing options, those which do not meet key strategic objectives cannot represent Value for Money.**

2.5 It is important to ensure that there are clear links between the strategic and economic dimensions and other dimensions too.

- The commercial dimension concerns the commercial strategy and arrangements relating to services and assets that are required by the proposal and to the design of the procurement tender where one is required. The procurement specification comes from the strategic and economic dimensions. The commercial dimension feeds information on costs, risk management and timing back into the economic and financial dimensions as a procurement process proceeds.
- The financial dimension is concerned with the net cost to the public sector of the adoption of a proposal, taking into account all financial costs and benefits that result. It covers affordability, whereas the economic dimension assesses whether the proposal delivers the best social value. It is exclusively concerned with the financial impact on the public sector. It is calculated according to National Accounts rules.
- The management dimension is concerned with planning the practical arrangements for implementation. It demonstrates that a preferred option can be delivered successfully. It is important in supporting the development of metrics and targets.

2.6 These links mean that analysts will need to work across dimensions - and with other professions - if appraisal is to be done effectively and decisions made using robust information.

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[4] Social Cost-Effectiveness Analysis (CEA) is a variant of Social CBA which compares the costs of alternative ways of producing the same or similar outputs. Social CEA may sometimes be appropriate where:

- Wider social costs or benefits will remain broadly unchanged or for the delivery of a public good, such as defence;
- Output may not be proportionately quantified

For the majority of MHCLG interventions CBA is the best tool to use and so is covered in depth in this guide. Further guidance on CEA can be found in the HMT Green Book.

The rationale for intervention

2.7 As noted above, the strategic dimension sets out the rationale for intervention. This defines the purpose of the intervention. The Green Book defines a number of potential purposes including:

- Maintaining service continuity, arising from the need to replace some factor in the existing delivery process;
- Improving the efficiency of service provision;
- Increasing the quantity or improving the quality of a service;
- Providing a new service;
- Complying with regulatory changes; or
- A mix of all the above.

2.8 The Green Book highlights that a key rationale for government intervention may be to improve the welfare efficiency of existing private sector markets. For example, intervening to ensure provision of a service or investment which would not occur because wider social benefits are ignored by firms. This represents an example of market failure.

2.9 In economic theory, when economic efficiency is achieved nobody can be made better off without someone else being made worse off. Economic efficiency enhances social welfare by ensuring resources are allocated and used in the most productive manner possible.

2.10 Improving equity may also be another reason for intervention as social welfare might be increased if resources are redistributed from those with a lower marginal utility of income to those with a higher marginal utility. An example of this is given in Annex H of this document.

2.11 If there is no market failure or equity justification, government intervention compared to market provision may be welfare reducing. Although this would not be the case if the intervention is correcting an existing 'government failure' that itself has resulted in an inefficient allocation of resources.[5]

2.12 Based on the rationale, specific intervention objectives will be defined. These will be used to assess options alongside the four other business case lenses –

[5] Examples of corrective action to remove government failure might be removing a subsidy for production of a good which causes high levels of pollution or removing regulations which are overly onerous and lead to shortages of a good or service.

value for money, commercial viability, affordability and deliverability – to arrive at a preferred option.

Appraisal of options

2.13 Appraisal is about finding the best way to meet policy objectives. This is a key theme of the Green Book.

2.14 Policy objectives are set out in the strategic dimension. They must be SMART. The economic dimension then uses the longlist approach in the Green Book to create an initial shortlist for comparison through cost benefit analysis, or social cost effectiveness analysis.

Longlist appraisal

2.15 Longlist appraisal allows a wide range of alternatives for meeting SMART Objectives to be considered so that a short list can be identified for more detailed Cost Benefit Analysis.

2.16 Options are generated using the Options Framework Filter which identifies options across five separate aspects set out in the Green Book (see table below). These are then assessed against critical success factors using SWOT analysis.

Option choices – broad description	
1 Scope	□ coverage of the service to be delivered
2 Solution	□ how this may be done
3 Delivery	□ who is best placed to do this
4 Implementation	□ when and in what form can it be implemented
5 Funding	□ what this will cost and how it shall be paid for

2.17 “Critical Success Factors” are the attributes that any successful proposal must have, if it is to achieve successful delivery of its objectives. These include Strategic Fit, meeting SMART objectives, potential value for money, supplier capacity and capability, potential affordability and achievability. More detail on

the five basic critical success factors that apply to all proposals is given in Box 9 of the HMT Green Book.

2.18 When identifying and considering options, constraints, dependencies, collateral or unintended effects and equality, distributional and placemaking effects should be examined.

2.19 The result of the longlisting will be a short list of five or six options. The short-listed options should include a:

- Quantified BAU for use as a benchmark counterfactual;
- Do minimum option (that just meets the business needs required by the SMART objectives);
- Preferred Way Forward (that may or may not be the Do Minimum);
- A more ambitious preferred way forward (this may be more expensive, deliver more value, but at higher costs with increased risks); and
- A less ambitious preferred way forward, unless the preferred option is a do minimum (this option may take longer, deliver less value but cost less and / or carry less risk).

2.20 The process of identifying and assessing options is a complex task and must be carried out by an expert.

2.21 Chapter 4 of the Green Book and its links provides comprehensive guidance on long listing and choosing the short list together with examples. It should be consulted for further detail on how to go about long listing before starting the process.

Shortlist options appraisal

2.22 At short list stage a much narrower range of options are being considered. This allows more detailed analysis to be carried out and in particular the application of Cost Benefit Analysis. This compares the social benefits that options yield to the costs of the option (both are measured relative to the counterfactual).

2.23 The specific methods used to appraise costs and benefits for MHCLG policies are set out in Chapter 3 and following chapters. More context on shortlist options appraisal is provided in Chapter 5 of the Green Book.

Options and the counterfactual

2.24 Individual options will need to be assessed against an appropriate baseline or counterfactual. This should be the business as usual and be a clear articulation of how things will evolve in the absence of the alternative option being considered. The costs and benefits of that alternative option should always be compared relative to the counterfactual. Clearly defining the counterfactual allows analysts to understand how far individual policy options change impacts and desired objectives rather than being deadweight – that is, what would have happened anyway. It is important because there is no additional economic benefit from government providing support for an outcome which would have happened anyway (though, there may be if the outcome happens quicker, is of a better quality than it otherwise would be or it redistributes outcomes to different places).

2.25 Once a credible counterfactual has been established, this should be compared against each of the other options. For each option this involves understanding what outcomes can be expected with the policy in place over the lifetime of the intervention.

Assessing the Impact of An Option Against the Counterfactual

Example 1

A policy is expected to result in the provision of 1,000 housing units. Only 400 of these units are expected to be delivered in the business as usual. Then:

Net impact of the policy = 1,000 units – 400 units = 600 units

The 600 units are additional, whilst the 400 units are referred to as deadweight.

Example 2

A policy is expected to result in the provision of 1,000 housing units. However 1000 of these units will also be delivered in the business as usual.

If 1,000 units are expected to be delivered in the business as usual, there are no additional benefits, unless the units are delivered faster or are of a higher quality with government intervention.[1]

Net impact of the policy = 1,000 units – 1,000 units = 0 units

In this example there is zero additionality and 100% deadweight.

2.26 The degree to which a market failure is present can provide some insight into the expected additionality of an intervention. A common example is the existence of externalities which impose costs (or benefits) on third parties. For example, the

existence of a brownfield site which cannot be developed due to the presence of contaminated land, but which once developed could provide an amenity benefit to society and improved environmental outcomes. In this case, one might expect the deadweight of an intervention to unlock the site's development to be zero, as the land would not have been developed in the absence of the intervention. Information failures, such as consumers not knowing the standard to which buildings are built, represent another type of market failure.

2.27 Given the importance of market failure in determining the level of additionality, analysts should ensure that the rationale for public sector intervention is clear and is supported by solid evidence. A more detailed discussion of additionality is set out in Annex E whilst the full list of market failures is set out in Annex G.

Chapter 3: Assessing The Value For Money (VfM) Of MHCLG Interventions

Introduction

3.1 This chapter outlines what measures of Value for Money (VfM) should be calculated in an MHCLG appraisal and how this appraisal information should be presented. The chapter:

- Shows the importance of understanding the social value an option adds when considering its VfM;
- Sets out the key elements of social value likely to be relevant for MHCLG appraisals; and
- Shows how social value impacts should be presented when assessing VfM.

What Represents VfM

3.2 Box 18 of the Green Book defines Value for Money as a judgment about the optimal use of public resources to achieve stated objectives embodied in the SMART objectives of a proposal (be it a policy, a portfolio, a programme, or a project), based on consideration of the following factors:

- Performance against SMART objectives. Each shortlisted option must achieve the SMART objectives. Options which do not deliver against SMART objectives cannot be included in a shortlist, or represent VfM for the proposal being considered
- Net present value to society of all social, economic and environmental benefits – these may be qualitative or quantitative
- Net present public resource costs as measured by whole life costs, including capital and operating costs and the opportunity cost of existing assets employed
- Risk costs associated with managing and mitigating risks that are associated with a proposed option

What Makes Up Social Value

3.3 Social value includes all costs and benefits that affect the welfare and wellbeing of the UK population. These may arise through:

- Changes in the level of goods and services produced by firms, the public sector or third sector; or
- From the indirect impacts on workers, families and communities of an intervention not measured through the market (called externalities).

3.4 Three broad categories of impact from an intervention are relevant:

- Economic impacts – on public sector organisations, businesses and workers;
- Social impacts - on individuals, families and communities; and
- Environmental impacts – including on land, air, climate, rivers and sea.

3.5 These impacts are discussed below in more detail.

Types of Impact Relevant to MHCLG Interventions

3.6 MHCLG covers a wide range of policy areas so the range of impacts considered across its appraisals is wide.

3.7 Economic impacts include:

- The whole life costs[6] to the public sector (central and local government) from delivering services, as well as tax revenues[7] or cost avoidance through early intervention;
- Increases in the value of goods and services produced:
    - Many of the interventions in which MHCLG, Homes England and other partners engage involve developing land into more productive residential and commercial uses. These create uplifts in the productive

[6] Whole life costs to the public sector are calculated differently in the economic and financial dimensions of business cases. The appropriate approach should be used for each dimension. See Chapter 5 of the Green Book for how to treat whole life costs in the economic dimension;
[7] Tax revenues represent a disbenefit to individuals and firms paying them as well as a benefit to government. This disbenefit needs to be taken into account too.

value of the land (see Chapter 4). For commercial developments these reflect increases in the profits firms get from occupying the development;

- New developments may result in additional economic growth from creating opportunities for workers to move to more productive jobs either through the creation of new commercial space in high productivity industries or through reducing barriers to accessing jobs better suited to using their skills[8];
- New developments may also lead to agglomeration benefits from creating larger clusters of businesses and greater job density[9];
- Finally policies may facilitate further economic growth by stimulating the supply side e.g. reductions in business rates may encourage business activity to grow.

3.8 Social impacts include changes in:

- Homelessness and temporary accommodation leading to changes in wellbeing and government support for individuals and families;
- Reduced levels of addiction, crime and risky behaviour through targeted social programmes on vulnerable people;
- Health and safety related impacts e.g. from improved housing conditions such as better insulation (these may also affect economic outcomes through changes in labour market activity).

3.9 Box 1 below provides more detail on the assessment of interventions that have social and fiscal outcomes.

[8] These impacts are similar in nature to those outlined in Unit A2 of DfT's Transport Appraisal Guidance. However, the impacts covered in DfT's guidance result from improvements to transport bringing workers closer to higher productivity jobs and increasing effective employment density. MHCLG is carrying out further work to explore the nature and size of productivity impacts from new developments to feed into further guidance.
[9] Ibid.

Box 1: Social & fiscal outcomes

MHCLG leads on a number of the Government's major social programmes. These include the Supporting Families programme; policies to deal with homelessness, rough sleeping and domestic abuse and policies to encourage public service improvement.

These programmes aim to transform the way services are delivered for vulnerable people and communities through joined up and early intervention. By doing so the aim is to deliver a step change in life outcomes and yield savings to the tax payer through reduced need for longer term intervention. Detailed guidance on appraising public service improvement and social policies is set out in *Supporting Public Service Transformation: cost benefit analysis for local partnerships*.

Alongside this guidance, the Greater Manchester Combined Authority (GMCA) Research Team has developed a *Unit Cost Database*, to help with the appraisal of service transformation and social policies. Using the best available research from various government and academic sources, the database provides fiscal, economic, and social cost estimates for over 600 outcome measures covering a range of issues from crime, education, employment, fire, health, housing and social services. The database provides costs which can be used to monetise outcomes relevant to social policies in terms of costs to public services (fiscal costs) and the wider economy and society. The database is widely recognised across government as the best available source for information on the costs of a number of issues and is being extensively used for various appraisal projects across government departments and local authorities.

In addition to the guidance and the Unit Cost Database, the GMCA Research Team has also produced a *model* which acts as a template for carrying out cost benefit analysis.

Finally many social programmes are likely to have impacts on wellbeing. The Green Book supplementary wellbeing guidance provides examples of how wellbeing analysis can be applied to a range of interventions to support a fuller appraisal of the impacts of policies.

3.10 Environmental impacts - many MHCLG interventions will have impacts on the environment. The assessment of environmental impacts is based on the concept of natural capital and the "ecosystem services that flow from it. Box 2 below explains the concept of natural capital.

Box 2: Natural capital

Stocks of natural capital provide flows of environmental or 'ecosystem' services over time. These services, often in combination with other forms of capital (human, produced and social) create a wide range of benefits.

These include use values that involve interaction with the resource and which can have a market value (minerals, timber, freshwater) or non-market value (such as outdoor recreation, landscape amenity).

They also include non-use values, such as the value people place on the existence of particular habitats or species.

To consider the impact of an intervention on natural capital the following questions should be asked. Is the option likely to affect, directly or indirectly:

- The use or management of land, or landscape?
- The atmosphere, including air quality, greenhouse gas emissions, noise levels or tranquillity?
- An inland, coastal or marine water body?
- Wildlife and/or wild vegetation, which are indicators of biodiversity?
- The supply of natural raw materials, renewable and non-renewable, or the natural environment from which they are extracted?
- Opportunities for recreation in the natural environment, including in urban areas?

If the answer to one or more of these questions is "yes" or "maybe", further assessment is recommended using the following four steps:

- Step 1: understand the environmental context to the proposal
- Step 2: consider how natural assets might be affected
- Step 3: consider the welfare implications, that is, how changes to the assets identified in Step 2 affect benefits provided to society by natural capital?
- Step 4: consider uncertainties and optimise outcomes

DEFRA supplies templates for assessing each of these four steps.

3.11 The types of impacts on the environment that can result from MHCLG interventions include:

- Removal of greenfield land, changes in biodiversity and water quality from land take associated with new developments
- In some cases, improvements in amenity from the removal of brownfield land and redevelopments of areas (called placemaking).
- Impacts on the heritage environment for example buildings of historic interest or monuments;[10] Various MHCLG funded schemes take place in areas with heritage assets/environments or might include refurbishing heritage buildings (for example, Ancoats in Manchester). Again, the DCMS cultural and Heritage Framework is helpful here.
- Greenhouse gas impacts through changes in the energy efficiency of homes, land take and construction impacts from new developments (see Box 3 below); and
- Air quality and noise impacts from, for example, changes in traffic flows following development.

3.12 Where investments are likely to impact on natural capital including land, forests, biodiversity, fisheries, rivers or minerals then impacts should be assessed in line with HMT green book supplementary guidance developed by the Dept for Environment, Food and Rural Affairs (DEFRA).

3.13 For new residential developments Homes England has developed environmental guidance that can be used to assess natural capital impacts (see chapter 5). Box 3 provides guidance on the assessment of greenhouse gases and climate change.

Box 3: Greenhouse gases and climate change

Analysts should where possible quantify and appraise the impact of options on carbon emissions. Carbon emissions may arise for a number of reasons including:

- Materials used in the development of sites and refurbishment of structures;
- Transport of materials or changes in trip patterns from new residential or commercial sites;
- Consumption of fossil fuels for heating, lighting or powering electrical appliances.

[10] This is covered specifically by DCMS' Cultural and Heritage Framework.

Some policies – such as better insulation or home generation of renewal energy – may reduce carbon emissions. Newer buildings will generally be built to higher energy efficiency standards than older ones and it is important to factor in renewal of the building stock when assessing impacts.

Policy appraisal on climate change mitigation in MHCLG should use the Supplementary Green Book guidance on "Valuation of energy use and greenhouse gas emissions for appraisal".

The guidance provides details on how to quantify and value energy use and emissions of greenhouse gases. It is intended to aid the assessment of proposals that have a direct impact on energy use and supply and those with an indirect impact through planning, land use change, construction or the introduction of new products that use energy.

It contains sections on:

- Identifying the energy and emissions counterfactual and then policy interactions;
- Quantifying and valuing changes in energy use and in emissions;
- Identifying and quantifying other impacts, such as air quality; and
- How to present findings and report for Carbon Budgets.

The guidance is accompanied by 19 data tables containing detailed estimates out to the year 2100 for carbon values and sensitivities, retail and long run energy prices, variable energy supply costs, and a GDP deflator. While the central estimates should be used in core analysis, care should be taken to reflect uncertainty in these estimates, for instance through sensitivity testing.

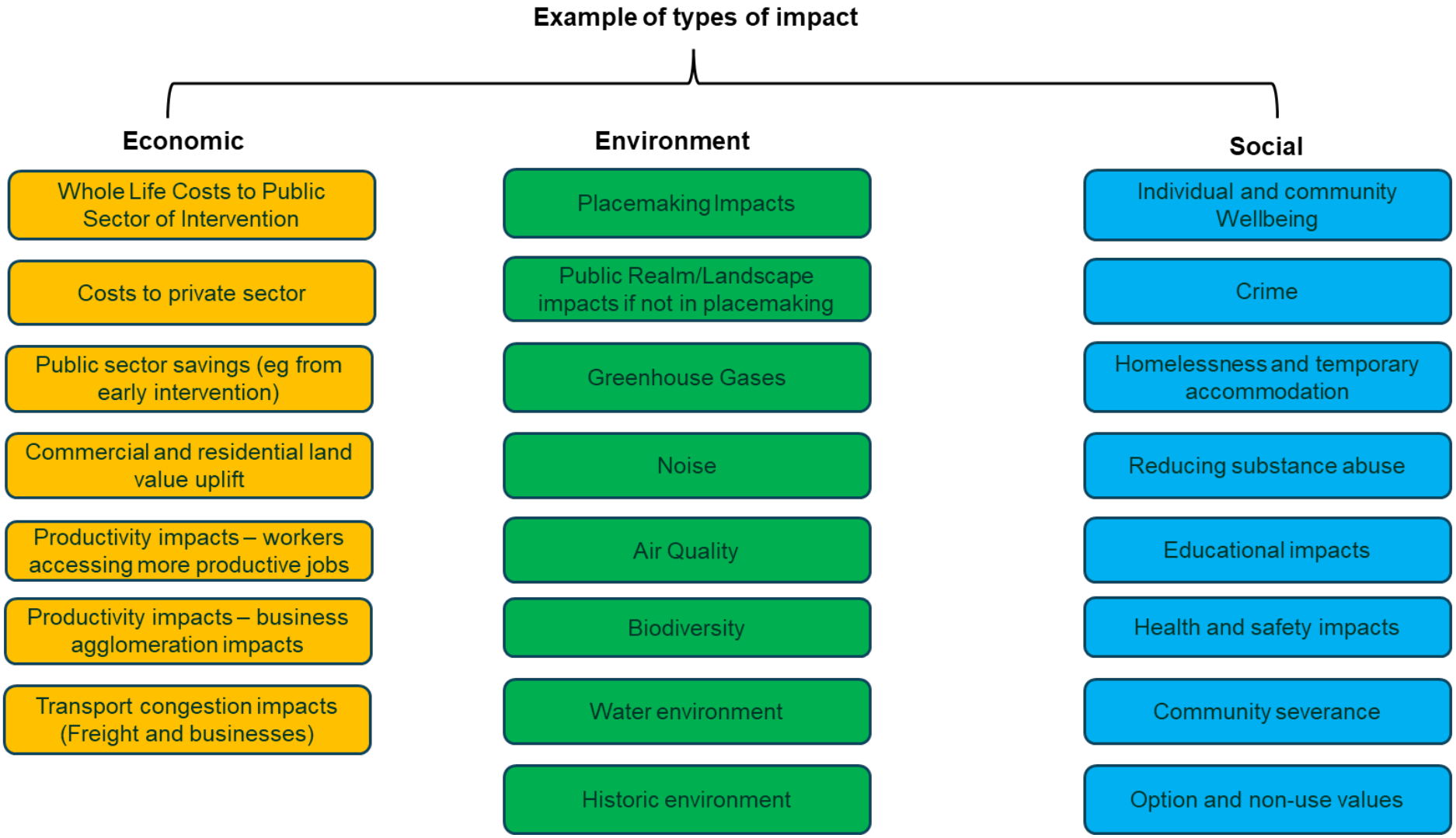
The guidance is updated regularly and so analysts should check that the latest version of the guidance is used in analysis.

For assessing how a policy / programme could be impacted by a changing climate, Supplementary Green Book Guidance on "Accounting for the Effects of Climate Change" should be used. This supports the appraisal of policy options in the face of climate risks and uncertainty, and how adaptation of policies, programmes and projects can build resilience and enable flexibility in decision making.

The uncertainty over the future impacts of climate change and the importance of interconnections mean that climate resilience can prove important in unexpected areas of policy. Defra's supplementary guidance supports analysts in identifying whether and how their appraisal should include climate risks.

3.14 All relevant impacts should be assessed. Figure 2 lists some types of impacts commonly included in MHCLG appraisals, although the figure is not exhaustive.

Figure 2: MHCLG interventions can have a range of impacts on social value



Note that the appraisal of many of these impacts is covered by other departmental guidance eg DfT publishes guidance on the appraisal of transport congestion and productivity impacts and Defra publishes guidance on environmental impacts. This evidence is summarised in the HMT Green Book. This publication concentrates on providing guidance on core MHCLG activities such as development and shows how other departmental guidance might be applied to MHCLG interventions.

Measurement of Impacts

3.15 In order to identify all relevant impacts, a theory of change should be developed linking inputs to outputs and outcomes (see the Magenta Book on how to do this and for examples). Once impacts have been identified these can be valued using appropriate guidance.

3.16 Attempts should be made to monetise all impacts where possible so they can be compared in a common metric. However in practice not all impacts can be valued because either:

- The analysis is at too early a stage to apply the tools fully; or because
- Techniques have not been developed.

3.17 Where full monetary valuation cannot be carried out, the direction and magnitude of impact of these types of impacts should be assessed and these should be incorporated into the VfM assessment (see here).

3.18 The HMT Green Book (paragraphs 5.16 and 5.29) makes clear that where they exist market prices should be used to value impacts. The market price represents the opportunity cost to the supplier of the marginal good or service traded and the willingness to pay for the good or service of the marginal purchaser.

3.19 In some cases a market price that can be used to value the impact of a good or service might not exist or market prices might not fully reflect the impacts that occur.

3.20 A particularly important class of impacts for MHCLG interventions not valued through the market is externalities. When externalities exist a good or service has an impact on the wider community or society which is not reflected in the market price.

3.21 For example, a developer may sell a new house to a family. The price represents the value of the house to the family but there will also be impacts on existing residents in the area which are not accounted for in the price. Those might include:

- Landscape and biodiversity impacts from reclaiming land or building on it;
- Air quality and greenhouse gas emissions from land take, construction and occupation of the new house;

- Transport impacts from new developments which might increase local road congestion;
- Crime impacts because of changes in the environment (such as from better lighting);
- Health impacts from healthier urban design; and
- Positive benefits from the removal of brownfield land and creation of nicer places.

3.22 These impacts need to be taken into account using non-market valuation methods. Box 20 of the HMT Green Book sets out at a high level alternative ways of valuing costs and benefits where prices do not exist. These include the use of revealed preference, stated preference or wellbeing analysis.

3.23 Tools for valuing specific impacts have been developed across a range of government departments and are set out in Annex A1 of the Green Book and in the supplementary Green Book guidance.

3.24 Guidance on how to value residential and commercial developments and their external impacts together with other MHCLG policy impacts not covered elsewhere in guidance are set out here in Chapters 4 and 5.

MHCLG Appraisal Summary Table (AST)

3.25 The 2020 Green Book Review says 'the appraisal process is not a decision making algorithm and its objective is to support decision-making…'. The assessment should move beyond a narrow focus on Benefit Cost Ratios (BCRs) which, though important, do not reflect all the impacts interventions may have on the strategic objectives that decision makers are trying to achieve. There are likely to be a number of impacts which cannot be monetised and so cannot be included in a BCR. The use of VfM categories (discussed below), which allow decisions to incorporate non-monetised impacts alongside the BCR, enables a fuller assessment of interventions to be made.

3.26 All impacts included in the VfM assessment (monetised and non-monetised) should be grounded in solid evidence and based on a robust theory of change, linking inputs and activities to outcomes. It is important that all relevant impacts identified by the theory of change are considered in the VfM assessment and

adequate allowance is made for additionality when making the assessment. Failure to do this will result in incorrect conclusions being drawn.

3.27 An appraisal should provide clear and transparent advice to decision makers on different policy options, taking account of costs, benefits, risks, uncertainties and significant non-monetised impacts. The objective of appraisal should be to provide a consistent comparison of benefits and costs. Presenting such information in summary form is crucial if complex technical information is to be communicated effectively (see below).

3.28 Table 1 on the next page is a recommended Appraisal Summary Table (AST) which should be used for all spending proposals. It should feature in business cases and in all documents where appraisal information is contained. The AST aims to capture all the important appraisal information including on benefits and costs, risks and an overall VfM assessment for each of the options. It presents information on the Benefit Cost Ratio (BCR) and Net Present Social Value (NPSV)[11] alongside other impacts that cannot be monetised although they are part of the overall VfM judgement.

3.29 Table 1 sets out the main elements in an AST and these are discussed below. This is based on the summary AST set out in Chapter 7 of the HMT Green Book. The AST includes five short-list policy options which are the minimum recommended at Short Listing Stage (see paragraph 4.40 of the Green Book). An example of how to complete an AST for a hypothetical scenario is given in Annex B.

Benefits

3.30 The MHCLG AST includes two lines for benefits, each of which are converted into present value measures. The first row reports those benefits which have been assessed using "tried and trusted" methods. The second row reports benefits estimated using "evolving" methods:

- 'Tried and trusted' refers to benefits which are estimated using methods judged by relevant departmental supplementary guidance as being robust. A link to a list of this supplementary guidance is here.[12] Examples include estimates of land value uplift using the method in this guidance, transport

[11] The Net Present Social Value (NPSV) is the present value of the total stream of future benefits to UK society from a proposal less the present value of the total stream of future costs to UK society.
[12] It should be noted that not all measures set out in supplementary guidance enter the Initial BCR, e.g. reliability impacts from schemes which involve transport interventions are viewed as being more experimental than travel time impacts in Transport Appraisal Guidance. Users should carefully consider the advice on how to use impacts in supplementary guidance.

user benefits using the DfT TAG approach, air quality, greenhouse gases, the values of life and reducing crime;

Table 1: Recommended MHCLG appraisal summary table

		Option 1 Business As Usual (baseline)	Option 2 Do Minimum	Option 3 Preferred Way Forward (PWF)	Option 4 More Ambitious PWF	**Option 5** Less Ambitious PWF
A	Present Value Benefits[13] [tried and trusted methods] (£m)][14]					
B	Present Value of Other Monetised Benefits [evolving methods] (£m)					
C	Present Value Public Sector Costs (£m)					
D	Net present social value (£m) [A-C] or [A+B-C]					
E	'Initial' Benefit-Cost Ratio [A / C]					
F	'Adjusted' Benefit Cost Ratio [(A + B) / C]					
G	Significant non-monetised (quantifiable impacts)					
H	Significant non-monetised (non-quantifiable impacts)					
I	Value for Money (VfM) Category					
J	Switching values & rationale for VfM category[15]					
K	MHCLG Financial Cost, £m					
L	Residual risk & optimism bias allowances					
M	Life span of project					
N	Other Issues					

[13] In rows A and B a benefit may be positive or negative (in which case it is called a disbenefit).
[14] Note this includes estimates of land value uplift (see Chapter 4: Land Value Uplift Approach To Appraising Development).
[15] A switching value refers to the changes in costs or benefits required to move an option into a different VfM category. They can be used to assess the stability of rankings where there are different options or the risks of an option being poor Value for Money. An example of the application of a switching value is given in Table 13.

- 'Evolving' methods refer to approaches which are judged by relevant departmental supplementary guidance as being relatively less established and potentially subject to higher levels of uncertainty.
    - Examples include wider area benefits in regeneration areas (see Chapter 5), economic productivity impacts from increased density and output changes under imperfect competition (see DfT TAG Unit A2.1), amenity impacts (also in Chapter 5) and labour supply impacts (see chapter 6).
    - Evolving evidence may include additional estimates of impacts based on users' own evidence (i.e. evidence not currently incorporated in Green Book Supplementary and Departmental guidance). These estimates may be based on more tentative assumptions where the evidence base is not so well established. However, where such estimates are used assumptions will need to be set out and justification provided for their use and acceptance.
    - Distributional impacts relating to income (see Annex H) are also included in this category.

3.31 All monetised benefits based on evolving methods should feature in row B of the AST ('Present Value of other monetised impacts') and not in row A. These impacts - because they are still evolving - should be treated more cautiously than those which go into row A. These impacts will be part of the 'adjusted' BCR calculation but along with non-monetised impacts inform the overall value for money category (see below).

3.32 In some cases, for example increases in carbon emissions or blight, benefits may be negative, in which case they are called *disbenefits* and are netted off other benefits.

3.33 Some interventions will have significant non-monetised benefits or disbenefits. To prevent these impacts being overlooked it is important they are documented and their likely significance assessed using the evidence available. The final VfM assessment should take these impacts into account (see non-monetised impacts section).[16] Impacts are less likely to be monetised early on in business case development where a wider range of options are being assessed at a

[16] Even though evidence has not been monetised it is important that the assessment of magnitude and direction of impact is made using the most robust evidence available. The impacts assessed and evidence collected should be based on a well thought through theory of change. This should assess local context and could involve discussions with relevant subject experts.

higher level. However non-monetised impacts can still be significant at full business case stage.

Costs

3.34 For MHCLG spending proposals, the relevant measure is net costs to the public sector. This means all exchequer costs – for example, changes in Universal Credit (including Housing Benefit) as well as any local authority costs and revenues – should be accounted for when estimating net public sector costs. If costs are related to a transfer – like Universal Credit or a government grant – an identical and offsetting value should feature in the benefits figure unless it is already reflected in a different variable such as land value uplift. For appraisal purposes net public sector costs are converted into present value terms and labelled the present value of costs (PVC).

Net present social value (NPSV) and the benefit cost ratio (BCR)

3.35 Two summary welfare measures are presented in the Appraisal Summary Table:

a) Net Present Social Value
The NPSV of a project is defined as the present value of benefits (PVB) less the present value of costs (PVC).[17, 18] This measures the overall level of public welfare generated by a policy and so is an important measure of impact:

$$NPSV = PVB – PVC$$

b) Benefit Cost Ratio
The BCR of a project is represented as:

$$BCR = PVB / PVC$$

[17] Note that costs are different from a disbenefit. Costs represent a use of public sector resources, disbenefits represent an impact on social welfare for example arising from an increase in carbon emissions. Costs may be upfront capital costs and/or costs from running a service. In some cases, an intervention will also result in savings or receipts to the public sector which should be netted off costs.

[18] For MHCLG spending proposals, the budget constraint should be real discounted net costs to the public sector. This means all exchequer costs should be accounted for when estimating net public sector costs.

3.36 The BCR can be interpreted as the estimated level of benefit per £1 of cost. It is used as the core element in the measure of VfM when interventions involve a net cost to the public sector. The reason for its use is that public sector budgets are fixed through the Spending Review process and so not all interventions with a potentially positive NPSV can be chosen.[19] The BCR allows different proposals to be ranked alongside each other on the basis of benefit per £1 of public sector spend to maximise the social impact of the budget. (Non-monetised impacts also need to be taken into account using switching values – see section on Estimating VfM.)

3.37 Where the PVC is negative then the NPSV represents a better measure of impact.[20] In the case where PVC is negative the VfM of the intervention is often very high, although this might not be the case where reductions in costs come with reductions in benefits. The approach to measuring VfM for the special case of negative spend is set out in Annex I.

3.38 The BCR is used in the vast majority of projects covering MHCLG and local government as in most cases PVC>0.

3.39 When estimating the BCR, it is important that there is transparency in what is included in the benefits and costs. This means being clear about the robustness of the underlying evidence base and the appraisal values being used. It also means being clear when more subjective values are included in the appraisal (this is discussed further below).

3.40 To account for the evolving nature of the methods used for estimating impacts, it is recommended the BCR is separated into two components which are each reported: an 'initial' BCR and an 'adjusted' BCR.

- The 'initial' BCR takes into account all appraisal values where there is a strong underlying evidence base and which are based on Green Book and Green Book Supplementary and Departmental guidance. That is, it is based on ‘tried and trusted’ methods;
- The 'adjusted' BCR includes estimates based on ‘evolving’ techniques or where there is a high degree of uncertainty in the results produced by those techniques.

[19] It should be noted that transfers - like Job Seekers Allowance, a government grant or Housing Benefit for example – are treated differently when calculating a BCR compared to the NPSV. For the BCR they represent a cost to government of the initial payment and so enter the PVC denominator. They also represent an equal and offsetting benefit to the recipient and enter the numerator. If an NPSV was used the transfer would net off to zero.

[20] Negative costs may occur because there are receipts or efficiency savings of sufficient size to offset initial public sector costs. As two examples, receipts might come from leasing of public property, whilst savings might come from new ways of working.

- The types of impacts which are classed as ‘tried and tested’ or ‘evolving’ are set out in the section on Benefits.

3.41 The 'adjusted‘ BCR - along with non-monetised impacts - should inform the overall Value for Money category of the policy.

3.42 In calculating a BCR it is important to account properly for different types of funding streams including income receipts. The table below shows which are counted as benefits and which as costs. A square bracket means the value is subtracted.

	Consumer and business impacts	External impacts and public sector finance impacts
Present Value Benefits (numerator)	Private benefits for example land value uplift [Private sector costs if not captured in land value] [21] Public sector grant or loan if not captured in land value[22] [Public sector loan repayments if not captured in land value] Distributional benefits	External benefits [External costs]
Present Value of Costs (denominator)		Public sector grant or loan [Public sector loan repayments] Other public sector costs [Other public sector revenues]

[21] The land valuation of a particular development will already account for the private costs (and possibly the benefits of potential government support) associated with a development as it is equal to the Gross Development Value of a site less any development costs less a minimum level of profit that is needed. Therefore, care should be taken to avoid double counting of costs (and benefits associated with government support). If the land value data accounts for all costs and the impact of any government support, then there is no need to separately account for further costs or the potential benefits to a firm from government support in the present value benefits. However, if the appraisal is using illustrative Valuation Office Agency land value uplift data, then this data will only account for 'typical' development costs. It will not account for any 'atypical' costs - such as those where there are large 'clean-up' costs associated with brownfield land for example - or the benefits of government support. These impacts will need to be accounted for separately in the appraisal. These 'atypical' private costs should feature as a negative number in the present value benefits as they represent a dis-benefit to the private sector. Any government grant or subsidised loan (less repayments) to the private sector should feature as a positive number in the present value benefits and as a positive number in the present value costs.

[22] As noted above, land value data may already account for the impact of a government grant or loan. If it does not, this should be included separately in the appraisal.

3.43 Once a BCR is calculated, it is important users assess its plausibility. For example, if the estimated BCR is high and consists mainly of private impacts, then it is important to consider why such a project would not have happened in the absence of the intervention. This will mean ensuring there is a sound market failure underpinning the rationale for intervention as set out in the strategic dimension. Where there is no market failure, this may mean there is significant deadweight (see Additionality section) and therefore users should re-visit the underlying additionality assumptions.

3.44 It should be noted that all the impacts in this calculation should be risk adjusted. In the early stages of policy development this will primarily be through Optimism Bias (OB) adjustments to both costs and benefits. Further guidance on OB is given in Annex F.

Financial Transactions

3.45 Additionality is a particularly important consideration for financial transactions. Loans and guarantees often appear to be very high value for money because they involve limited expenditure over the lifetime of the financial transaction. However, care must be taken to understand the degree to which government activity displaces activity by financial institutions. Displacement of private sector investors is particularly likely to occur where the risk associated with an investment is low. To address this issue three questions should be asked:

- Is there a specific reason why the private sector would not be interested in this financial transaction? If the answer is no then additionality is likely very low;
- What are the benefits of the intervention once additionality has been allowed for?
- To what degree does the financial transaction achieve strategic objectives once additionality has been taken into account? Where additionality is low strategic objectives are unlikely to be fully achieved even if the Benefit Cost Ratio is high and therefore the proposed intervention will not be good value for money.

Hypothetical examples of how to calculate the NPSV, initial and adjusted BCR

3.46 The examples below set out the calculations for three hypothetical policies to illustrate how the NPSVs and BCRs of MHCLG policies would be calculated. For simplicity, assume all figures have been discounted to the appropriate year, are all in real prices and OB has already been applied to both costs and benefits.

Example 1: A MHCLG grant to support a development

One policy option being considered is a £5m grant to support a development on a brownfield site. The rationale for intervention is the external benefits that may be generated by intervening e.g. improved amenity benefits for existing residents of the area.* These external benefits are estimated to be around £5m. However, the development is unlikely to take place in the absence of the intervention because of the high upfront costs of 'cleaning up' the land. These high upfront costs are estimated to be £5m and their existence makes the development commercially unviable. As such the Gross Development Value does not cover the development costs and provide a minimum level of profit. Assume that once the land is 'cleaned up' the value of the land in its new use is £5m. Also assume for simplicity that the value of land in its current use is zero and there are no wider external impacts or monetised impacts associated with the intervention other than the improved amenity impacts for existing residents of the area. Also assume for simplicity that there is no displacement of other economic activity.

In this example the 'initial' BCR of intervening would be calculated as follows: The present value of benefits is the land value in its new use (£5m) minus the value of the land in its previous use (£0m). The estimated cost is the £5m grant to clean up and develop the land. The NPSV would be PVB-PVC = £5m-£5m= £0m and the 'initial' BCR = PVB/PVC = £5m/£5m = 1. However, the other quantified impacts from improved amenity and health are estimated to be around £5m. By including these impacts in the appraisal, the estimated benefits become £10m and the estimated costs are £5m. This means the NPSV becomes £10m-£5m = £5m and the 'adjusted' BCR is £10m/£5m=2.0.

*Note that changes in amenity values for new residents following the development will be reflected in the price they pay for property and so will be reflected in the Land Value Uplift. Chapter 5 discusses the difference between private impacts – which are reflected in the Land Value Uplift – and external impacts.

Example 2: A MHCLG loan to support brownfield land clean-up and development

MHCLG is approached for a loan to support the redevelopment of a brownfield site. The rationale for intervention is that there is evidence of market failure in the lending market which is restricting firms access to finance. The development is expected to provide an external amenity and health benefit.

The site is suitable for 1,000 houses but the high upfront 'clean-up' costs and difficulties in accessing financing make the development commercially unviable. The land value in its new use is £85m based on a financing arrangement which enables the firm to borrow £100m and repay £50m over the appraisal period from sale of the developed site. Once developed, there are potential net external benefits of £10m. Assume for simplicity the value of the site in its current use is £10m.

For the purposes of this example, assume there is no deadweight or displacement from intervening. In this case, by MHCLG providing a loan of £100m and receiving £50m back over the appraisal period from the firm, the present value benefits would be equal to the land value in its new use (£85m) less the value of the land its current use (£10m). The present value costs would be the initial loan of £100m less expected repayments of £50m from the firm (that is £50m net exchequer costs). In this example, the NPSV would therefore be £25m (£75m economic benefits less £50m economic costs to the exchequer). The 'initial' BCR would therefore be 1.5 (£75m economic benefits divided by £50m economic costs to the exchequer).

When including the potential external benefits of £10m, the present value benefits increase to £85m while the economic costs remain at £50m. The NPSV would therefore be £35m and the 'adjusted' BCR would be equal to 1.7.

Example 3: MHCLG will invest £20m to increase the number of polling stations to make voting more accessible to the public.

This will help reduce the barriers to voting by making it more accessible for people to vote, especially for those who do not have access to cars, or those who may find it challenging to access public transport. This is expected to increase the turnout of people coming to vote at UK elections and improve the democracy of UK elections. Some novel analysis has been conducted to look at the potential monetised benefit of an increase in elector turnout, and this is expected to yield an economic benefit of £5m (based on time-to-vote analysis).

In this example, the initial Net Present Social Value will be -£20m as there are no monetisable benefits associated with this policy. However, if we include the estimated impact of the additional increase in elector turnout in the 'adjusted' NPSV, would reduce to -£15m.

The 'initial' BCR will be 0 as the approach taken to estimating benefits is novel, however the 'adjusted' BCR will be 0.25 (£5m in economic benefits divided by £20m of costs). Furthermore, this case will need to consider the non-monetisable benefits when assessing value for money.

Non-monetised impacts

3.47 BCR and NPSV measures only capture monetised impacts. When performing options analysis there are likely to be a number of impacts which are difficult to quantify and monetise. This might reflect the nature of the impact as some environmental impacts are more difficult to monetise. Alternatively it might be because the analysis is at an early stage, before modelling can be developed and applied.

3.48 It is essential that where monetisation is not possible, a qualitative assessment of the potential impacts is carried out and considered alongside BCR or NPSV measures when arriving at an assessment of overall VfM.

3.49 Users will need to form an assessment of the likely magnitude and direction of impact of non-monetisable impacts. The following seven-point scale could be used to make an assessment:

Table 2: Qualitative Assessment Scale for Non-Monetised Impacts

Impact	Commentary
Large Adverse	Large disbenefit likely to materially impact on VfM
Moderate Adverse	Important disbenefit but will not on its own significantly impact on VfM
Slight Adverse	Small disbenefit unlikely to have material impact on VfM
Neutral	No impact
Slight beneficial	Small benefit unlikely to have material impact on VfM
Moderate Beneficial	Important benefit but will not on its own significantly impact on VfM
Large Beneficial	Large benefit likely to materially impact on VfM

3.50 The advantage of using the seven-point scale is that it allows a set of criteria to be applied to assess size and direction of an impact, providing increased transparency when reaching conclusions.

3.51 Large beneficial or large adverse impacts should be given special attention when assessing the VfM of a project. Similarly, if there are several moderate beneficial or moderate adverse impacts these should also be considered in the VfM assessment. This is discussed in more detail in the Estimating VfM section.

3.52 Looking at non-monetised metrics such as output data - for example, number of trees 'lost' as a result of a development or the number of people who visit a particular attraction - could help inform decisions on whether such impacts are large or not and the direction of impact.

3.53 It is essential that where monetisation is not possible, a full qualitative assessment of the potential impacts is carried out and this is considered alongside monetised impacts when arriving at an assessment of VfM. In the context of MHCLG appraisals this could include a discussion on the potential environmental and other amenity impacts of changes in land use. For example, if one option appraisal largely consists of non-monetisable impacts due to the lack of data or the underlying nature of the policy, this will be assessed fairly against other options (which have monetised impacts) by judging into which VfM category it falls and providing a robust justification for it.

3.54 When carrying out an assessment, it is essential that it is done robustly involving stakeholders with local knowledge but also independent experts who are able to assess potential magnitude of impact. Where there is considerable uncertainty as to magnitude of impact this should be noted and accounted for in the VfM assessment.

Value for money categories

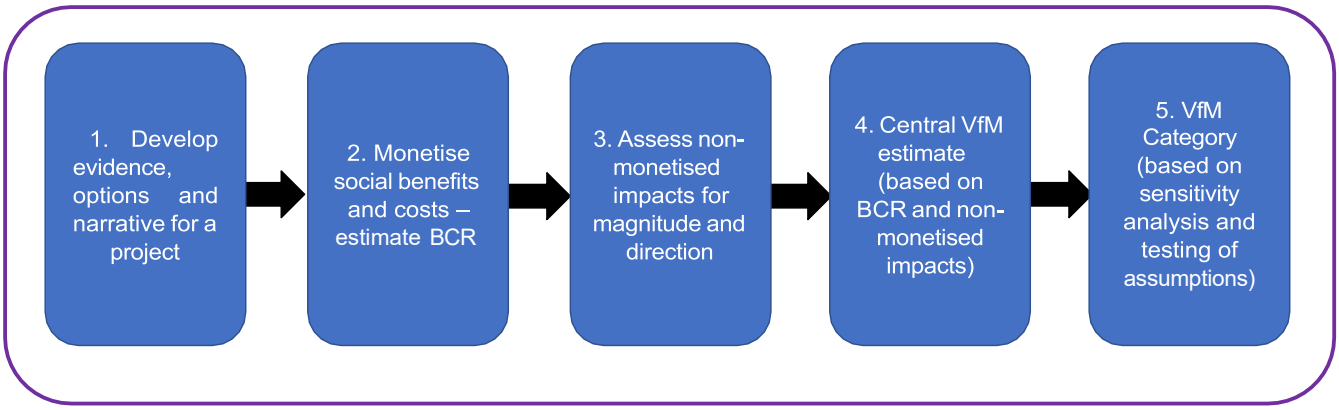
3.55 VfM categories are recommended as the main way of summarising the VfM of an option as they combine all of the monetised and non-monetised impacts into an overarching summary measure. When deciding on VfM categories the impact of risks and uncertainties should also be taken into account before coming to an overall assessment of VfM. [23] They are a core feature of the Appraisal Summary Table.

3.56 To produce a VfM category appraisers should:

- Where possible monetise the expected impacts of the intervention – this allows estimation of the BCR;
- Assess non-monetisable impacts for both direction and scale using the seven-point scale in Table 2 – when taken with the BCR these allow a central estimate of VfM to be created;
- Assess the impact of varying key assumptions and uncertainties in the analysis through sensitivity analysis on the BCR and VfM rating;
- Analysts should use switching values as part of their analysis to understand the scale of change needed for the scheme's BCR to move to another VfM category and whether non-monetised impacts or changes in key assumptions will likely result in such a change. (See the next section on Estimating VfM for a discussion of switching values.)

[23] Note that the assessment should be proportionate, reflecting the importance of the decision. How much resource is used to monetise impacts and assess risks and uncertainty is left to the judgement of the analyst doing the appraisal. The focus of the appraisal should always be on investigating the costs and benefits relevant to the decision being made.

Figure 3: Steps for deciding on a VfM category



3.57 The following VfM categories can be defined where public sector costs are positive[24]:

VfM Category	Implied by….
Very High	BCR greater than or equal to 4
High	BCR greater than or equal to 2 and less than 4
Medium	BCR greater than or equal to 1.5 and less than 2
Acceptable	BCR greater than or equal to 1 and less than 1.5
Poor	BCR greater than or equal to 0 and less than 1
Very Poor[25]	BCR below 0

3.58 In the special case where the present value of costs is negative then the NPSV should be used alongside the categories in Annex I to define VfM.

3.59 As noted in the introduction to this section whilst the above bandings can be used to communicate the analysis, nothing should ever be described as VfM if it does not meet the policy objectives. Appraisal is a two-step process and all options that do not meet policy objectives must be filtered out at the longlist stage using the Options Framework, as per Green Book guidance.

[24] These introduce additional granularity over the categories used in the 2016 DCLG appraisal guidance by breaking down both its Acceptable and High Categories into two separate categories. This allows improved assessment of VfM.
[25] This category would occur where an increase in expenditure results in negative benefits.

Estimating VfM

3.60 To estimate VfM, monetised and non-monetised impacts need to be combined. The simplest approach to obtaining a central VfM estimate is to start with the BCR given by the monetised impacts and then ask the question:

How large do the non-monetised impacts have to be to shift the value for money of the policy to a different category, for example, from High to Medium (where the BCR is less than 2) or in the opposite direction from Medium to High?

3.61 The next stage is to assess all of the non-monetised impacts using the seven-point qualitative scale in Table 2 and ask the question:

Are any of the non-monetised impacts on their own or in combination large enough to shift the VfM category?

3.62 This requires:

- The calculation of a switching value which shows how much benefits or disbenefits would have to change to shift the option to the next VfM category;
- Comparison of the non-monetised impacts with the switching value to see if that size of change was likely.

A description of switching values is given in the Green Book (pages 52-54).

3.63 For example, suppose the BCR for a £10m investment is 0.9. It would require a £1m extra benefit to increase the BCR to 1 and for the investment to be categorised in a higher VfM category. Suppose there was a single non-monetised benefit and that it was assessed – on the basis of user and independent expert opinion - as being likely large so that it was likely greater than £1m. In this case the correct VfM category to use is Acceptable rather than Poor (which is what it would have been had only monetised impacts been considered).[26]

[26] It should be noted that the NPSV calculated in the example above will move from -£1m to positive with the introduction of the large non-monetised benefit.

Examining the impact of uncertainty on VfM

Types of uncertainty

3.64 In reality there is likely to be significant uncertainty associated with costs and benefits which may mean that a range of VfM categories rather than a single VfM category is the best assessment. For this reason, key uncertainties in the analysis should be explored and their impact on VfM assessed.

3.65 For monetised impacts uncertainty may arise from several different factors:

- The degree to which an option has been fully defined, for example, the design of an investment is likely to be more uncertain at earlier business case stages;
- The methods used to monetise impacts, in particular, the:
    - Robustness of the measure used – for example, emerging measures used in the adjusted BCR are likely to have higher levels of uncertainty than those used for the Initial BCR;
    - Models used to estimate impacts for a particular option can often take considerable time to fully develop or may be based on key assumptions which are subject to uncertainty. At early stages of analysis (for example the Strategic Outline Case) results may be subject to more uncertainty because the models are less developed;
    - Some issues are inherently complex – perhaps involving multiple economic actors - so are more difficult to model;
    - The evidence base underlying the theory of change may be less developed resulting in a lack of clear economic model to assess impacts;
- The quality of data on which the modelling of options is based;
- Uncertainty about the future and how it will impact on key variables (including input, output and outcome variables) and economic behaviour.

3.66 For non-monetised impacts there is inherent uncertainty caused by the inability to monetise the impacts.

3.67 There is a range of literature dealing with these issues. In particular, the Aqua Book sets out the importance of understanding uncertainty, developing robust models and ensuring that results are properly quality assured. The National Audit Office (NAO) reviewed how uncertainty is modelled, assessed and communicated across government and ways in which that can be improved (see

here and here). Both these documents should be read by the user to support the assessment of uncertainty.

Assessing uncertainty

3.68 Uncertainty in each of the elements set out in the previous section should be examined when drawing conclusions about the VfM of an option. This includes:

- Identifying key uncertainties and risks in data, assumptions, models and the design of the options being developed;
- Assessing whether they are likely to be significant; and
- For significant areas of uncertainty, testing to understand the impact on VfM.

3.69 At a minimum, the impact of changes in key assumptions and inputs should be tested through sensitivity analysis. In particular:

- Switching analysis should be used to assess how sensitive the VfM rating is to changes in costs and benefits.
- For large schemes, where uncertainty may have a larger impact on the costs and/or benefits of a scheme, other techniques such as scenario or Monte Carlo analysis could be considered.[27]
- For more detailed guidance on how to handle uncertainty in appraisal including Monte Carlo and scenario modelling see the Uncertainty Toolkit for Analysts in Government.

Communicating VfM

3.70 It is essential that any approach and subsequent judgement is transparent and clear to decision makers when non-monetised impacts are considered to imply a different VfM category compared to the BCR alone. To make the judgement transparent, VfM categories and BCRs should be communicated in a Value for Money statement (which should be included with the relevant AST). A Value for Money statement will lay out what the estimated VfM category is and why this has been decided.

[27] Monte Carlo Analysis is a simulation-based risk modelling technique that produces expected values and confidence intervals as a result of many simulations that model the collective impact of a number of uncertainties.

3.71 If the VfM rating is different from the BCR because of the existence of significant non-monetised impacts or a VfM range is adopted because of significant risk and uncertainty, the Value for Money statement will need to explain this.

3.72 As noted above a VfM rating may represent a range of VfM categories rather than a single category. The full range should be reported (for example Acceptable to Medium or Poor to Acceptable).

3.73 Where it is possible to allocate likelihoods to different VfM categories this should done. An example of how that might be presented is shown below.

	VfM Category				
	Poor	Acceptable	Medium	High	Very High
Probability	Very unlikely	Unlikely	Possible	Likely	Possible

3.74 Alongside an assessment of VfM it is important to be clear about the quality of the analysis. This should highlight any issues with the approach taken, whether there was enough time to do the analysis, fitness for purpose of the modelling, gaps in data or other significant risks to the conclusions of the analysis.

3.75 Three examples of how judgement has been used to inform a VfM category are set out in the Value for Money statements below.

Box 4: Examples of a value for money statement

Value for money statement example 1

The estimated value for money of this policy is Acceptable to Medium.

The costs of the policy are £100m. While the estimated 'Adjusted' BCR of this policy is 1.15 (implying Acceptable VFM) there is a potential for wider area impacts from the intervention which would have significant benefits. The switching value to move the VfM rating from Acceptable to Medium is £35m. The non-monetised impacts from wider area impacts are judged to have a reasonable probability of being greater than this.

The modelling that has been carried out quickly using high level modelling. Whilst it has been undertaken by experienced analysts there are concerns about the robustness of the approach. Consequently, the results need to be treated with some caution.

Value for money statement example 2

The estimated value for money of this policy is Medium to High.

The benefits of this policy are reduced CO2 emissions (central estimate equal to £10m) and increased land value (central estimate equal to £190m). The cost of the policy is the grant of £100m. There are no significant non-monetised impacts estimated for this policy.

The 'adjusted' BCR of 2 indicates there is £2 worth of benefits per £1 of net public expenditure.

There are some uncertainties around increased land value which could be less than £190 m if the local housing market slows. This would result in a fall in BCR below 2 and Medium VfM.

The modelling is robust using appropriate techniques and local data. It has been carried out and assured by analysts and reflects key uncertainties.

Value for money statement example 3

The estimated value for money of this option is Poor to Acceptable.

The costs of this option are £100m compared to benefits of £130m giving an adjusted BCR of 1.3 which would equate to a VfM category of Acceptable.

However, there are significant non-monetised biodiversity and landscape disbenefits. In addition, there is some uncertainty over costs which might rise to £120m.

- For costs of £100m, biodiversity and landscape disbenefits of above £30m would change the VfM category to Poor. This is judged to be unlikely.
- However, if costs rise to £120m then disbenefits need only rise by just over £10m for the BCR to fall below 1 and VfM to become Poor. This is judged possible.

The options being developed are at an early stage which is why some impacts have not been monetised. The analysis has been carried out quickly – although by experienced analysts – and there are likely to be large changes in results as options and modelling develop.

Chapter 4: Land Value Uplift Approach To Appraising Development

Introduction

4.1 The primary benefits of new residential and non-residential investments occur through land value uplift, where development increases the value of the land above its previous use, allowing for production costs.

4.2 This chapter introduces the concept of land value uplift, outlines how it might be calculated and used in cost benefit analysis, and how externalities and additionality are taken into account. The approach is also set out in DfT's Transport Analysis Guidance (TAG).

4.3 A step-by-step guide for how to appraise residential development is given in Annex C and for non-residential development in Annex D. Annex E presents more detail on measuring additionality.

Land value uplift explained

4.4 Land value uplift, when used in appraisals, represents the private benefit, or change in economic efficiency, of one form of development on a particular site compared to its previous use. In a housing context, land value uplift is the value of land when used for housing minus the value of land in its current use. Generally, land value uplift will be higher where housing is of higher benefit to society, for example, in locations where housing supply is constrained relative to demand and/or where a site is near to local amenities or well-developed transport infrastructure. In short, the value of land is determined by a number of factors, but most significantly by its use and location.

4.5 The Gross Development Value (GDV) of a site is used in determining land values and therefore land value uplift. GDV is the estimated total revenue a developer could obtain from the land. In the context of housing, it would effectively be:

$$\text{GDV} = \text{House prices} \times \text{number of dwellings}$$

4.6 A developer will also incur costs and would expect a minimum level of profit from developing a site. The residual method of land valuation gives the maximum

price a firm is willing to pay for the land. In a competitive market, the firm will pay a price that gives a normal level of profit. The land price is therefore equal to: [28]

$$\text{Land price} = \text{GDV} - (\text{Development costs} + \text{fees} + \text{profit})$$

4.7 The uplift when land changes use is an estimate of the change, often increase, in economic efficiency arising from that change of use. In turn as discussed above this reflects the relative demand for and supply of land in its previous and new uses.

4.8 In an economic appraisal, analysts should seek to capture all costs and benefits of a policy. Costs should be economic costs and therefore capture the opportunity cost of the investment. For the developer investing money in the site results in foregone profits from investing the money elsewhere[29]. This foregone profit is a cost and should be subtracted off the land price. Similarly wage costs reflect the opportunity cost of using labour in the development and should be subtracted off land price.

4.9 A simple example illustrates how land value uplift is calculated. Assume the economic value of land in its current use is low, for example, 50 owing to being an ex-industrial use brownfield site. Planning permission is then granted on that same site for a number of new homes. In its new use, assume the total obtainable revenue from the site is 300 (the GDV or sales revenue from the homes accruing to the developer), development costs to build the homes are 130 and the fees the developer occurs (such as legal fees, professional fees such as hiring quantity surveyors) are 30. Assume also that the market is competitive and that the level of normal profit is 40 – without this level of developer profit, the developer may instead choose not to develop this site and put their resources elsewhere. The new land value would then be:

$$\text{Land price} = \text{GDV} - (\text{Development costs} + \text{fees} + \text{profit})$$
$$\text{Land price} = 300 - (130 + 30 + 40) = 100$$

4.10 The developer is therefore willing to pay 100 for the land in order to earn a normal level of profit of 40. In an appraisal, the net private benefits from this development is therefore 50 (the land value in its new use, 100, less the land value in its previous use, 50).

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[28] Note that development costs are broken down into a number of elements including build costs, externals, sale and financing costs. Paragraph C8 gives the full equation.
[29] In a competitive economy these are normal profits as there is no market power.

4.11 The key point is that the land value is derived demand and means the land value includes the returns to all factors of production less economic costs, that is, returns to capital, land and labour (300) less construction costs (130) less fees (30) less expected profit (40). Therefore, changes in land values as a result of a change in land-use for a development reflect the economic efficiency benefits of converting land into a more productive use.[30]

4.12 In practice some of the land value uplift is captured for the benefit of wider society through taxation and affordable housing requirements. If such obligations are included in developer costs or reflected in reduced income, they should be added to the land value as although they are a cost to the developer, they are a benefit to the recipient, such as for affordable housing.

4.13 Other planning obligations (Section 106, Section 278, CIL) can relate to both on-site and off-site infrastructure.

- On-site infrastructure is often designed to benefit new residents and in such cases the benefit of this is likely to be captured already in the GDV of the proposals and so the land value uplift.

- The purpose of off-site obligations is typically to mitigate for negative externalities caused by the development. In these circumstances, because the off-site obligation just removes the negative externality caused by the development, there would be no need to adjust the land value calculation.

- However, on-site infrastructure may also benefit existing residents and off-site infrastructure could potentially provide wider societal benefits beyond mitigating for the negative externalities of development. Where this is the case and planning obligations have been included in developer costs, it may be appropriate to treat all or a proportion of these costs as additional transferred land value. The assumptions adopted in calculating this additional benefit must be clearly set out and justified.

4.14 Where local land value data is available, this should be used in the first instance to support land value uplift calculations. This could be informed by a site-specific development appraisal. Where this information is not available the VOA values published in MHCLG "Land value estimates for policy appraisal" can be used. These values do not assume any affordable housing. They also do not include any atypical costs or CIL, S106, S278 payments and need to be adjusted for these when used. In such cases 'atypical' private costs should feature as a

[30] Note this only holds where the value of the land in its new use is greater than its previous use. It is possible for a land use change to produce a negative uplift.

negative number in the present value benefits as they represent a disbenefit to the private sector.

4.15 In summary:

- Land price reflects the value of the land in its new use. In appraisal terms, the difference between this new value - once all costs of changing its use have been allowed for - and its previous value is the land value uplift and this represents the net private benefits of a development.

- Land value data should be the primary means of assessing the private benefits of a development. Land value data is a rich source of information because it is actual market data on individuals' / firms' willingness to pay for a piece of land. Assuming individuals and firms are rational in their decision-making, market prices should reveal the 'true' private benefit of a development. This information can be used to undertake cost benefit analysis to quantify the potential welfare implications of a development.

- Land value uplift is concerned purely with the net private benefits of a development (which accrue to the development's new residents). External impacts – which affect existing residents of an area - should be accounted for separately and summed with the net private impacts to give the net social impact. See Chapter 5 for a fuller discussion of the difference between private and external impacts.

Accounting for external impacts

4.16 Once the private benefits of a development have been calculated, external impacts should be assessed. The value to society of a change in use of the land may be separated into: (a) the private benefit associated with the change in land use, which is capitalised in the uplift in land value, and (b) the net external impact of the resulting development. The net social impact is then the summation of these two impacts.

4.17 The external impacts in (b) are in addition to the land value uplift. Examples of external impacts might include any amenity effects to existing residents of an area from changes in landscape or regeneration of the area. A full list is provided in Chapter 5. As explained in the externalities section, when accounting for externalities, the 'initial' BCR should be based on all impacts that can be robustly appraised using Green Book and Green Book Supplementary and Departmental guidance. The 'adjusted' BCR should then include a further range of externalities where the evidence base may not be as well established but which are important to consider in the overall appraisal. The 'initial' and

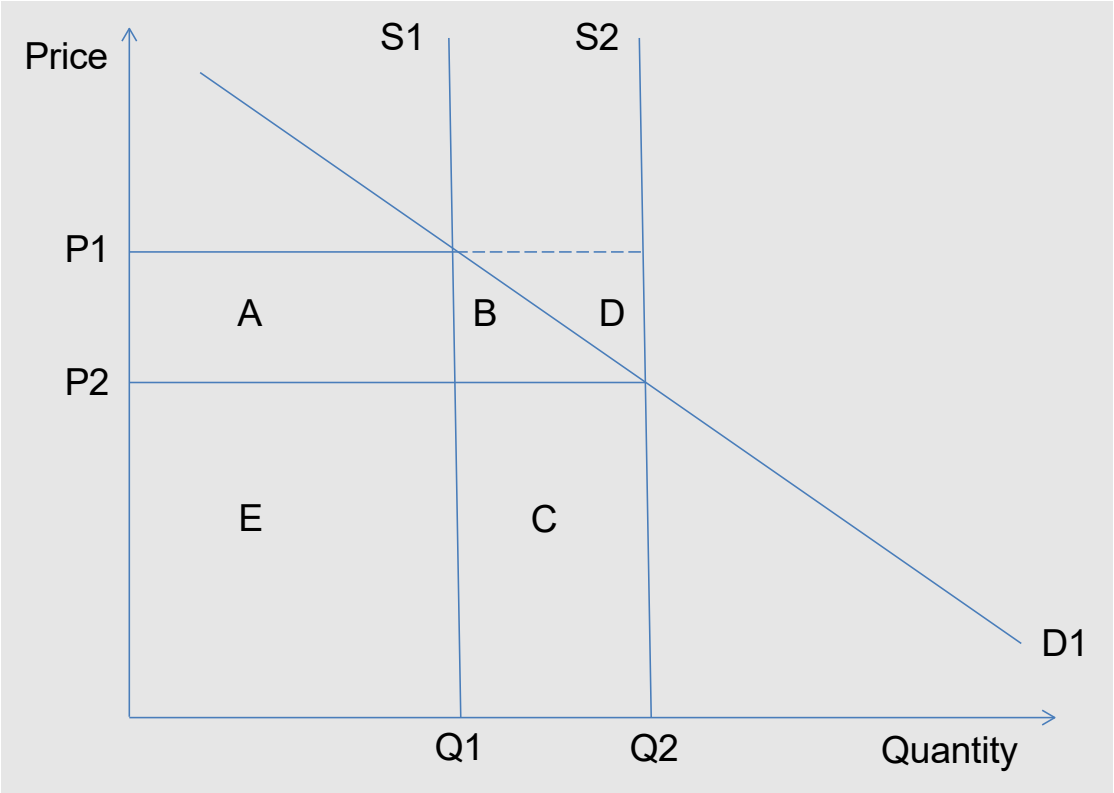
'adjusted' BCRs, non-monetised impacts and sensitivity analysis should inform the appropriate value for money category of the policy.

Using land value uplift in cost benefit analysis

4.18 Consider a hypothetical market for residential floor space (this example is also applicable to commercial floorspace). There is a supply curve S1 and demand curve D1 as per the diagram below.[31]

4.19 The initial market equilibrium is where D1=S1, at which point price= P1 and quantity supplied=Q1. At this initial equilibrium point, the total market value of residential floor space is P1 x Q1 or A + E.

Figure 4: Supply and demand diagram for residential floor space



4.20 Assume government intervention is required to correct for a particular market failure which creates additional residential floor space (perhaps the government

[31] For simplicity an inelastic supply curve is assumed.

has provided financial support to 'clean up' a contaminated brownfield site thus correcting a negative externality). As a result of the intervention the supply curve shifts from S1 to S2. This results in a new market price of P2 and quantity supplied Q2. Consumer surplus[32] increases by A+B while the total market value of the residential floor space is now P2 x Q2 or E + C (in other words the change in the total market value of the residential floor space is C - A). How this is then captured in an economic appraisal is discussed below.

Estimating the gross land value uplift impact from an intervention[33]

4.21 A new development creates economic value which is reflected in the uplift of the value of the land. In this example, area C effectively measures the GDV of the development - the amount of residential floor space multiplied by the market price - so the land value uplift is equal to area C less development costs less profit less the value of the land in its previous use. This effectively goes to the existing land owners because land prices are bid up by developers.

4.22 For large changes in supply there are likely to be changes in the market price – shown as the reduction from P1 to P2 in Figure 4. This leads to two other welfare impacts represented by A and B:

- Area A shows a transfer of benefits from sellers to buyers of existing floorspace as a result of lower prices. The overall impact on welfare nets to zero.
- Area B is additional consumer surplus that goes to 'new' buyers from being able to access the market at lower prices.[34]

4.23 Many developments are local and small scale, so are likely to have a limited impact on the market price even within sub-national areas. In this case, Areas A and B are not counted when assessing welfare impacts. Where interventions are larger – particularly regional and national interventions - there may be some

[32] **Consumer surplus** is defined as the difference between the total amount that **consumers** are willing and able to pay for a good or service (indicated by the demand curve) and the total amount that they actually do pay.
[33] As noted above, land value uplift only covers private benefits to developers and buyers/renters of new property. It does not cover any external impacts which may arise from the development, e.g. wider area impacts, nor public sector costs in supporting schemes. These also need to be taken account of when measuring total welfare impacts from developments (see Annexes C and D).
[34] The change in consumer welfare for new property owners is equal to 0.5*(Q2-Q1)*(P1-P2).

change in price. In this case Areas A and B need to be assessed. Larger scale developments are discussed in more detail in the section on displacement below.

4.24 Land Value Data for calculating Land Value Uplift (LVU) - In many instances, actual land value data may not be available and therefore illustrative values provided by the department can be used (these are explained in Annex C for residential development and Annex D for non-residential development). When using such values, the department would expect to see appropriate sensitivity analysis around these values to ensure a robust estimate of the (net) private benefit is made.

Estimating the net impact of an intervention

4.25 As Chapter 2 and Chapter 3 explain, all costs and benefits of an intervention should be compared against the business as usual counterfactual. The above example is based on a partial equilibrium analysis in the area where a development takes place. It therefore attempts to estimate the gross impact of an intervention. However, in a general equilibrium context, there are potential impacts that need to be considered in other markets / places. For example, as there will be development in the business as usual, it is important to account for the possibility that some of the benefits associated with this development would have happened anyway (deadweight) and that some benefits which would have occurred no longer do (displacement). Each of these is discussed below.

Estimating deadweight

4.26 Estimating the net impact of a policy requires any impacts which would have happened anyway to be subtracted from the gross estimates of a policy. In the example above, a critical issue is whether the expansion of floor space – and crucially the land value created – would have happened without government intervention, either in the location where the intervention takes place or somewhere else in the economy. In other words, 'while an investment may be additional to the area in which it takes place, it may not be to a wider area or to the country as a whole' (see Venables and others, 2014, p 45). Therefore, it is important that when appraising an intervention a correct counterfactual is established (see Chapter 2 and Annex E).

4.27 A key question to ask when trying to establish a counterfactual like the above is: why does the private sector require government support and would the private investment genuinely not happen without it? If there is a genuine market failure that means the development would not otherwise have happened without

government support then there is no deadweight. It may also be the case that the development would have happened without government support but on a smaller scale, in which case there is some deadweight loss. Without a sound rationale for intervention (e.g. market failure), a high BCR consisting of mainly private impacts is potentially a sign of significant deadweight, that is, in the absence of the intervention the market would deliver the same outcomes. In this instance, it would be appropriate to revisit the additionality assumptions underlying the BCR calculation.

4.28 In some instances, it may only be appropriate to include the external impact of a development – such as the positive external (amenity) value of redeveloping a previously derelict site or wider area regeneration impacts – in the additional economic benefits because the development would have gone ahead somewhere in the country but not necessarily on a brownfield site. Strategic considerations will be important in determining this. For example, the clustering of economic activity of a particular sector in a particular area may mean a firm is unlikely to want to locate somewhere else (see Annex E).

Estimating displacement

4.29 As well as potential deadweight, some developments will result in economic activity being displaced from one location to another. An appraisal should seek to capture the gross impact of a development (as measured by the land value uplift) and deduct any reduction in economic activity elsewhere from displaced activity (as well as any deadweight). This will give the net change in land value (or overall additionality).

4.30 There are various ways to take displacement into account. The level of assessment should be proportionate to the scale of the intervention. [35]

4.31 Smaller scale interventions - where the constant price assumption holds – should follow the detailed approach set out in Annex E below.

4.32 Larger scale interventions are likely to require additional analysis:

- For interventions large enough to result in changes in prices at the local level but not regionally the land value uplift should be adjusted down. An assessment of impacts on land value uplift for other planned developments in the local area should also be made.[36] Effectively this means calculating an 'additionality factor' across the local area;

[35] A useful definition of proportionality can be found in TAG:

- For very large interventions which are likely to have significant regional impacts a structural economy model could be used to examine impacts including:
  - The total change in land prices for new developments across all areas; and
  - The spatial and sectoral distribution of economic activity.

4.33 Structural economy models have different strengths and limitations and can take time to set up and run effectively so the choice of which to use should be made carefully.[37] When these models are being used it is very important to state assumptions, be clear about key uncertainties and carry out sensitivity testing around key parameters.

Distributional considerations

4.34 As noted above, large developments are likely to result in changes in the price of residential and non-residential property. These changes in price will have distributional implications:

- In a housing context, the release of new land for development reduces the scarcity of residential land, and so reduces the value of existing residential land. This reduction in value should be regarded as having purely distributional effects – there is a transfer from the asset-rich who lose out from new development, to the asset-poor, including non-homeowners, who gain.

- The economic benefit of expanding non-residential space is captured by existing companies that use that space in the form of rents being lower than they otherwise would have been. Income is thus transferred from existing owners of the floorspace to users of the floorspace (see Venables and others, 2014, p 48).

4.35 If Figure 4 was to be applied separately to both residential and non-residential floorspace, the size of the distributional transfer in both cases would be equal to area A.

[37] The two main structural economy models currently in use are Land Use Transport Interaction models and Spatial Computable General Equilibrium models. The former gives more local granularity in terms of changes in employment, residential and commercial activity including rents and prices. SCGE models are based on a much fuller representation of economic activity but the analysis tends to be at regional or higher level because of the amount of data required to set up the economic relationships in the model. A fuller explanation of the different model types is given here.

4.36 However, any additional (gross) land value generated by new development (Q2-Q1 in Figure 4) is not a transfer as the land has been developed into a more productive use.[38]

Other issues to consider

4.37 Any private costs associated with the development should be included in the appraisal as a disbenefit and therefore feature in the numerator of the BCR calculation (unless such costs have already been accounted for in the residual land value estimate (see the BCR section for further details)). All public sector costs should also be included and feature in the denominator of the BCR.

4.38 When carrying out an appraisal it is essential that there is no double counting of impacts. This could be an issue where local land value data is used. Land value data captures the full net private benefit of a change in land value. For example, any utility derived from being close to open space may be reflected in the value of the land. For non-residential interventions too, in theory, the full private (commercial) benefit of a development will be reflected in the land value, though there may be an external impact on others such as through agglomeration impacts (see chapter 5).[39]

[38] Note this is the net effect once displacement and deadweight has been allowed for - see Annex E – Estimating Additionality for further guidance.
[39] Consideration will also need to be given as to whether changes in land value are due to existence of transfers, e.g. the possibility that the land may benefit from tax-breaks. This could cause the value of the land to change but would represent a transfer from the exchequer to landowners. If the land value increases simply due to the existence of a transfer then this will need to be offset by an equal amount as transfers should have no impact on the NPSV.

Chapter 5: Externalities Associated With Development

Introduction

5.1 An economic appraisal should seek to capture all the benefits and costs of an intervention. This includes private benefits – such as land value uplift – and external impacts which often represent an important element of overall impacts. Where possible these impacts should be monetised.

5.2 There are a number of external impacts that are likely to result from a development including environmental, cultural and amenity impacts of development impacts, placemaking and regeneration impacts, potential agglomeration impacts on third parties, health impacts of additional affordable housing, educational impacts of additional housing and transport externalities (see Figure 5 below).

Determining whether an impact is an externality

5.3 When assessing externalities, it is important to consider whether an impact is already captured in land value uplift. If it is not then it is an additional impact that needs assessing. The framework below in Figure 5 sets out an approach to doing this.

5.4 The key question to ask of a potential impact is, "Who does it affect?"

- If the impact affects the welfare of an individual or firm moving to an area, then this impact may be fully reflected in the price they pay for the thing they are buying, for example a home. Where this is the case, these impacts should not be considered an externality.
- If the impact affects the welfare of individuals or firms already in the area, then this impact will not be accounted for in land value uplift and is therefore an externality.
- If the impact affects society as a whole (so not exclusively existing individuals or firms in an area), then this impact will not be accounted for in land value uplift and is therefore an externality.

5.5 Thus when locating to an area a firm will consider whether there are any potential spill-over benefits to it from co-location with other firms (agglomeration impacts) and the costs to the firm from local road congestion. This will affect the price it is prepared to pay for a development. Individuals moving to an area will also factor the characteristics of the external local environment such as any congestion or amenity benefits when they are deciding how much to offer for a property and this will also be factored into land value uplift.

5.6 However, land value uplift will not account for impacts which affect existing firms or individuals in an area (or society as a whole). These are externalities. For example, any knowledge spill-over impacts enjoyed by existing firms from a new development will not be taken into account by the firm deciding to locate in an area so are in addition to land value uplift. Similarly, the firm or individual deciding to locate in an area will not take into account the congestion cost they impose on others. These impacts are externalities which need to be accounted for in addition to land value uplift.

Examples of valuation of externalities

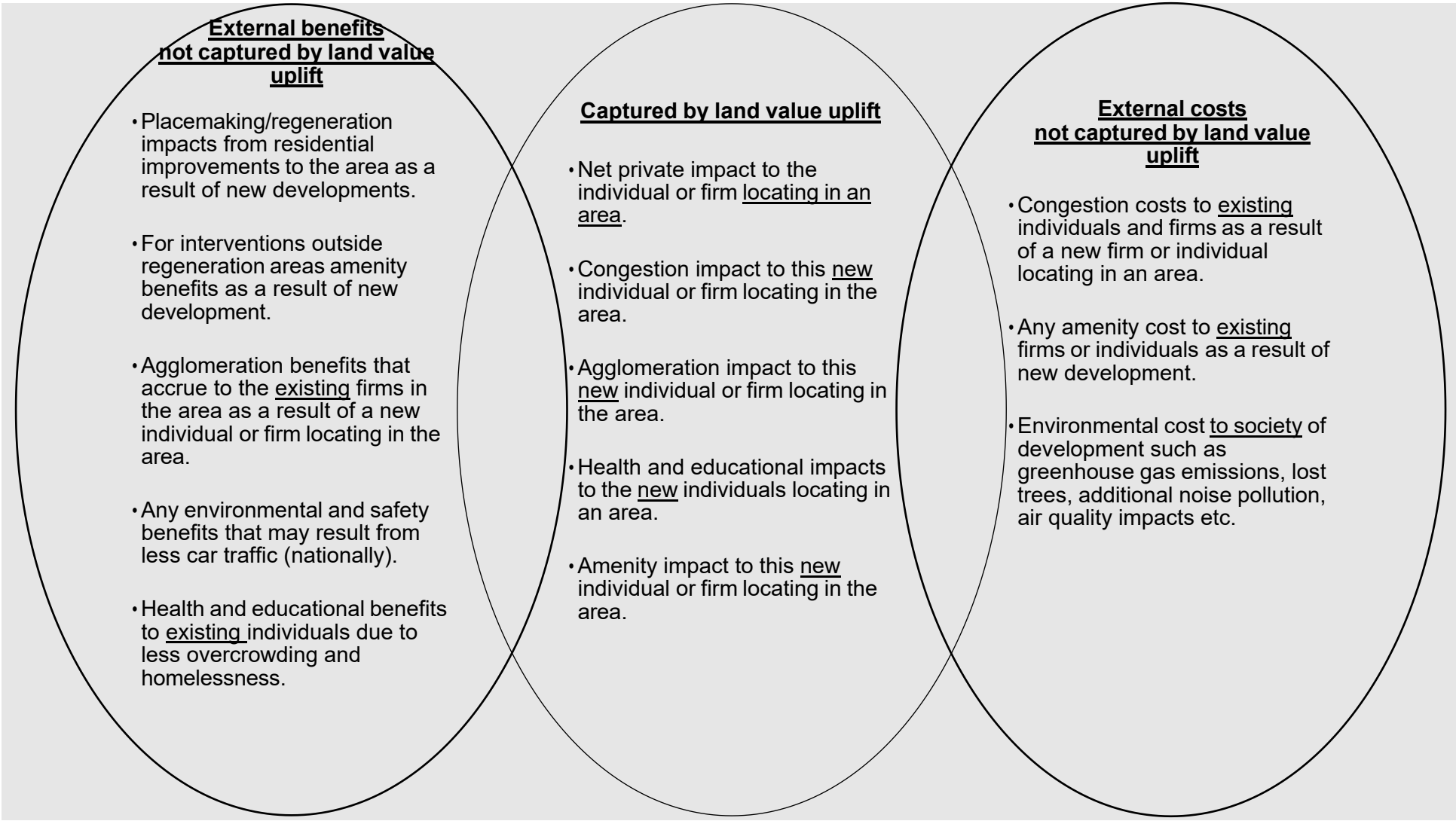
5.7 To help guide users, this chapter provides illustrative examples of the calculation of three types of externality:

i. Environmental and amenity impacts resulting from changes in land use

ii. Assessment of wider placemaking impacts in regeneration areas;

iii The health impacts of affordable housing.

Figure 5: Framework for assessing externalities



i. Environmental and amenity impacts resulting from changes in land use

Introduction

5.8 New developments are likely to have environmental and amenity impacts associated with:

- Land Take – impacts resulting from changes to land use. Most commonly from greenfield and brownfield land uses to residential and/or commercial development.
- Construction – impacts resulting from the construction of buildings and infrastructure, such as the embodied carbon associated with building materials.
- Occupancy – impacts related to the occupation of a development, such as those due to the energy or water consumed.

5.9 Those impacts which are experienced by new occupants of the development will be reflected in the market price. However the existing community and UK as a whole will also be impacted by new developments. These impacts are not included in market prices and separate estimates should be made of them.

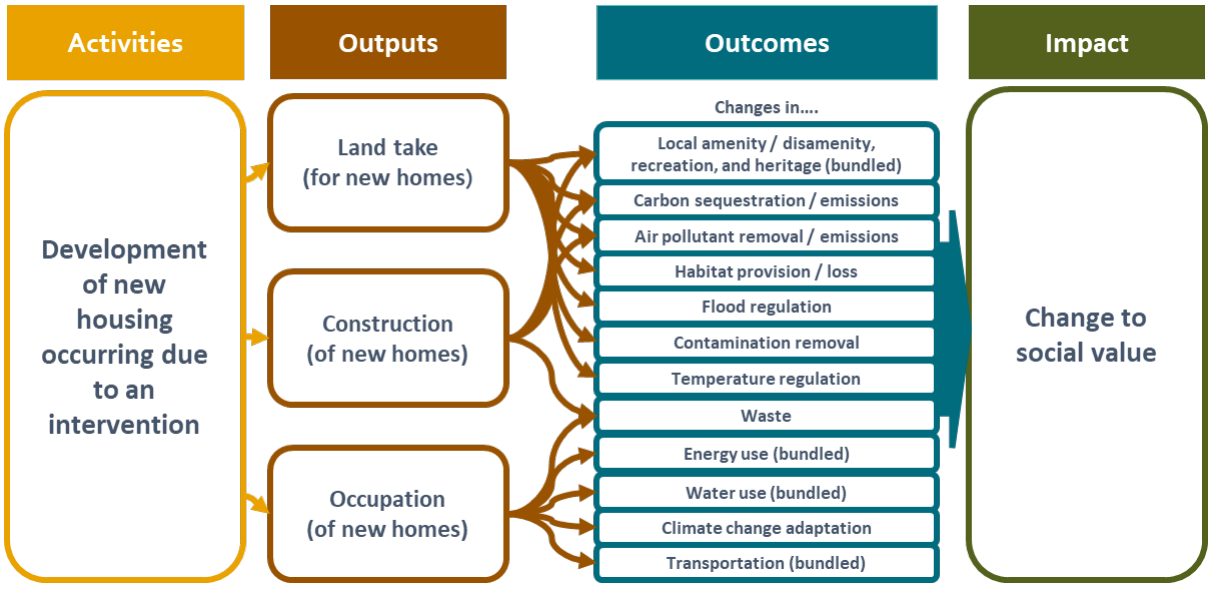
5.10 Homes England has developed guidance[40] on how to appraise the full range of external environmental and amenity impacts resulting from land take, construction and occupancy associated with housing development. A separate **En**vironmental Impact of **H**ousing Development **A**ppraisal **T**ool (ENHAT)[41] has also been developed. The guidance and tool are consistent with the natural capital approach set out in the HMT Green Book and the Dept for Environment, Food and Rural Affairs (DEFRA) Enabling a Natural Capital Approach (ENCA)[42] guidance.[43]

5.11 Figure 6 shows the different impacts considered in the Homes England guidance and ENHAT tool. Changes in land take, construction and occupation result in a number of different outcomes such as changes in land amenity/disamenity which then lead to changes in social value. The task that

[40] https://www.gov.uk/government/publications/environmental-impact-of-new-housing-development
[41] https://www.gov.uk/government/publications/environmental-impact-of-new-housing-development
[42] https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca
[43] The guidance and ENHAT tool include earlier research commissioned by Homes England on the value of removing brownfield land to existing residents impacted by the development see https://www.gov.uk/government/publications/brownfield-development-values.

ENHAT undertakes is to understand the size of these impacts then monetise them.

Figure 6: Logic chain map for appraising environmental impacts of new housing.



Application of the guidance and tool

5.12 The Homes England guidance provides detail on the methods and assumptions that have been used to assess environmental outcomes. It also details specific considerations, such as key sensitivity tests, that should be taken into account when applying the guidance and using the ENHAT tool. Users should refer to the Homes England guidance for those details whenever applying ENHAT.

5.13 In general terms, the Homes England guidance and ENHAT has been provided to aid the appraisal of the environmental impacts of housing development at OBC stage, with a particular focus on the consideration and comparison of options. Consideration should be given to whether more detail analysis is required at FBC stage and at earlier stages for interventions involving more complex environmental outcomes. While not designed to inform the appraisal of other forms of development (e.g. commercial), there are elements of the guidance that can be used. These are discussed further below.

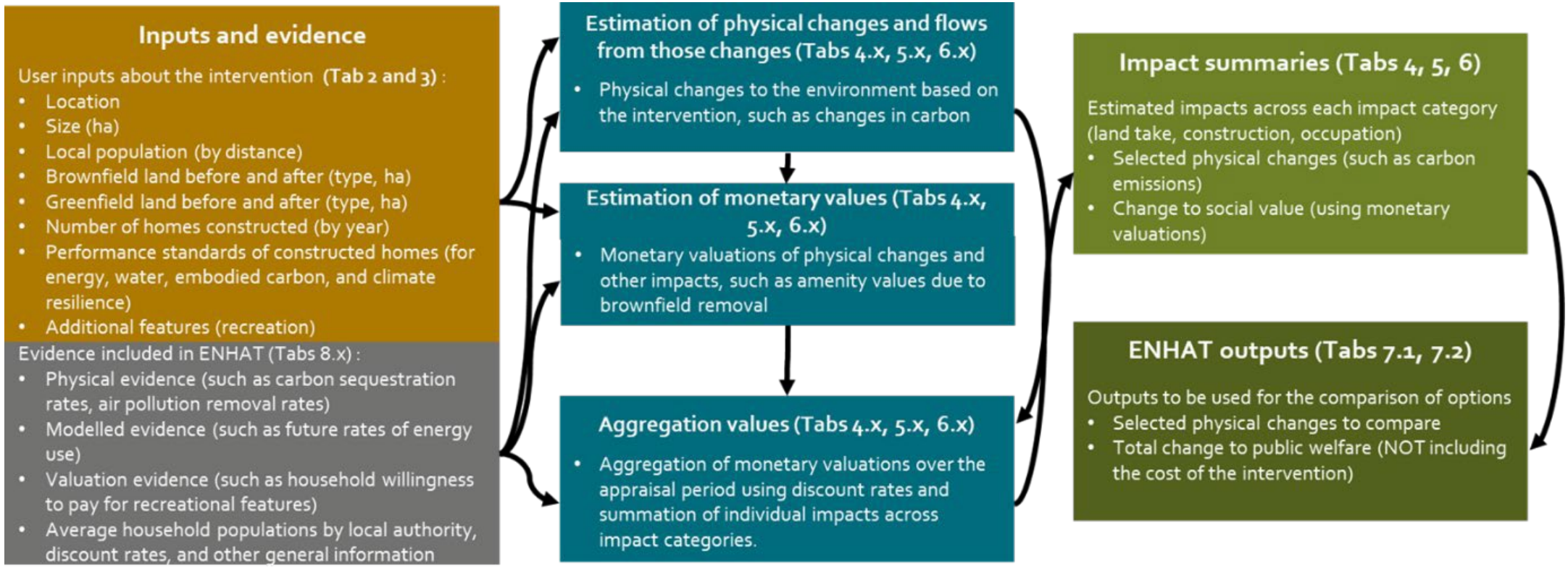
5.14 The table below summarises the range of impacts considered within the guidance and ENHAT tool.

Table 3: Categorisation of environmental outcomes from new housing intervention outputs

Category	Land take outcomes	Construction outcomes	Occupation outcomes
General description	Permanent net changes to ecosystem service provision resulting from land use change	One-off/temporary impacts from the production, use, transport and waste of materials used in the construction of housing	On-going impacts of occupant energy use, water consumption, transport and waste for the duration of the properties' life
Examples	• Amenity/disamenity. • Recreation. • Carbon sequestration/emissions. • Air pollutant removal/emissions. • Habitat provision/loss. • Blue green infrastructure provision (bundled). • Timber production. • Agricultural production. • Flood regulation. • Contamination removal. • Heritage. • Temperature regulation.	• Embodied carbon. • Amenity/disamenity. • Waste (bundled). • Transport (bundled).	• Energy use (bundled). • Water used (bundled). • Climate change adaptation. • Transportation (bundled). • Waste (bundled).
Generalised characteristics of impacts in the category	• Permanent changes to ecosystem service provision or local environmental amenity. • Most benefits or costs accrue to households beyond the intervention "red line" boundary.	• Temporary changes to local amenity/environmental quality. • Permanent and/or temporary costs specifically due to use of construction materials. • Benefits or costs that accrue to households beyond the intervention "red line" boundary.	• Annual costs or benefits due to resident occupation of the new homes. • Benefits or costs that are generated within and beyond the intervention "red line" boundary.

5.15 The ENHAT tool has been produced to simplify the application of the guidance. The figure below summarises the structure of the tool.

Figure 7: ENHAT structure and flow chart. (The tabs within ENHAT are given in parentheses)[44].



[44] Note table references refer to the ENHAT guidance not to this appraisal guide.

Example

5.16 Two examples are used through the Homes England guidance to explain the methodology in relation to each of the impacts being considered. The below provides a summary of Example A from that guidance. Example A is based on a development on a small, 0.82 ha brownfield site in the North East. The future development will include 76 homes with 150 occupants.

5.17 Table 4 summarises the present value of the impacts estimated by ENHAT relative to a counterfactual in which the homes are delivered around 10 years later to a lower environmental standard.

Table 4: The present value of impacts for Example A

Category of environmental impact	Difference in environmental outcomes due to the intervention option over the option without intervention
Impacts from land take	£2.17 million
Impacts from constructions	-£0.03 million
Impacts from occupation	£0.08 million
Net environmental cost/benefit (discounted)	£2.23 million

Note: A positive value denotes a benefit, a negative value a cost or disbenefit.

5.18 The guidance provides further detail against each of the three categories of impact in table 4. Table 5 provides the breakdown for the land take category.

Table 5: Breakdown of Land Take Impacts for Example A

Category of environmental impact	Difference in environmental outcomes due to the intervention option over the option without intervention (2024 present values)
Local environmental amenity due to brownfield	£0.26 million
Local environmental amenity due to greenfield	£0
Local environmental amenity due to specific features	£1.88 million
Air pollutant removal	£0
Carbon sequestration (from habitats)	£0
Habitat provision	£0

Blue Green Infrastructure bundled outcomes	£0.03 million
Net environmental cost/benefit from land take	£2.17 million

Note: A positive value denotes a benefit, a negative value a cost or disbenefit.

5.19 The guidance goes on to provide details against each of the categories considered in Table 5. For the local environmental amenity, due to the removal of brownfield land the benefit associated with the proposed intervention is estimated to be £0.94 million. Under the counterfactual the brownfield land is assumed to be removed 10 years later, with an estimated benefit of £0.68 million resulting in a net effect of £0.26m. Combined with the environmental amenity benefit associated with specific features of £1.88m, this results in a net impact of £2.14 million.

5.20 The examples then highlight the need to consider sensitivity tests on these values - in this case particularly in relation to the number of households affected by the environmental impacts. It highlights that under the high scenario considered within the guidance and ENHAT, the net impact is £2.72 million.

Commercial and Other Development

5.21 The Homes England guidance and tool focuses on new housing development. While elements of the guidance and tool will be of relevance to the appraisal of commercial and other developments, careful consideration is needed to determine where the methods and assumptions being used should be varied. The below provides a high-level summary of how the Homes England guidance may be applied for commercial and other uses. Consideration should also be given to impacts related to the commercial or other use that may be important but fall outside of the Homes England guidance (e.g. if the other use were to generate externalities from noise or pollution).

Land Take

5.22 Generally, we would expect the land take impacts related to the removal or provision of green space to be the same for a commercial development as for a residential development. Where an intervention involves developing brownfield land for a commercial or other use, the analyst should consider whether the

findings from the Homes England study on brownfield amenity values[45] are applicable to the specific case. That study focused on assessing the amenity improvement associated with replacing a brownfield site with a housing or mixed-use development. Where a future use is expected to materially differ from the context of the study, the amenity impacts are also likely to differ and so it may not be appropriate to apply the amenity values from that study.

Construction

5.23 The general approach taken to the appraisal of construction impacts might be expected to be the same for commercial as for residential development. The approach to the monetisation of embodied carbon taken in the guidance and ENHAT could therefore be replicated for a commercial or other development. However, the estimates made by ENHAT are based on an assessment of the embodied carbon involved in the construction of a residential building. Bespoke estimates of the embodied carbon associated with the commercial or other development will therefore be required before the monetisation methodology can be applied.

5.24 The non-quantified impacts associated with construction in the Homes England guidance should also be considered.

Occupation

5.25 As with construction impacts, many of the monetisation methods from the Homes England guidance can be applied in the context of the occupation of a commercial or other development, however bespoke estimates will be required to provide the inputs to the analysis. For example, a bespoke estimate of the expected water or energy use will be needed before applying the method from the Homes England guidance to monetise those impacts.

[45] https://www.gov.uk/government/publications/brownfield-development-values

ii. Assessment of wider area impacts in regeneration areas

5.26 This section describes how the wider area impacts of supply-side housing interventions with explicit placemaking and regeneration objectives can be assessed and monetised as part of the assessment of value for money. For wider area impacts to be relevant, the intervention must be part of a programme of funding that has clear placemaking and regeneration objectives and has explicitly established the importance of housing as a mechanism for supporting regeneration plans. The criteria for inclusion are set out in the next section. All of these must be demonstrated to have been met using robust evidence otherwise wider area impacts cannot be considered in the VfM assessment.

Criteria for inclusion

5.27 The wider area impacts of housing interventions should only be assessed for projects that fulfil the following criteria:

- Are supply-side housing interventions and address housing needs.
- Are located in a place where housing has been identified as a driver for regeneration.
- Are located within an **urban** area, that is a town or city setting, and typically would be brownfield sites.
- Are of a significant scale relative to the local housing market, and not anticipated to be below 50 units.
- Have clear **placemaking and regeneration objectives** that are likely to result in new uses and activities that make the surrounding area become more desirable

5.28 The justification for including wider area impacts must be clearly linked to the programme funding objectives, the underlying rationale for the intervention, the socio-economic context and the objectives of the project as set out in the strategic dimension of the business case. The market failures should also be clearly set out and are likely to relate to providing positive externalities or extensive public good provision.

5.29 Based on the underlying research and previous housing interventions with wider area impacts, it is anticipated that such impacts are only likely to be relevant where schemes exhibit one or more of the following attributes:

- A prominent site that will address significant negative externalities caused on site that impact the surrounding area, such as removing existing blight or remediating brownfield land.
- A housing scheme that as well as addressing housing needs delivers a range of other significant amenity benefits such as open space, active transport (cycleways, pathways), other recreational uses and employment opportunities that will serve and benefit existing residents in the wider area.
- A scheme that is part of a wider placemaking strategy and aims to transform a particular place to help restore and enhance the perception and viability of that location. This could be in the form of providing a critical mass of housing, education, leisure, employment uses and/or delivering a broader range of community infrastructure.

5.30 Importantly, in all cases it must be clearly evidenced how the intervention addresses the needs of the surrounding area. This should be set out in the Theory of Change for the project which clearly demonstrates how the intervention will give rise to positive wider placemaking impacts. This will include setting out the following:

0. **Strategic context, underlying rationale, and project objectives:** to understand how the intervention is addressing key challenges in the local area and beyond the site itself.
1. **Inputs**: to the project, such as the level of investment, complementary activity and private sector investment leveraged.
2. **Activities**: that will be covered by the project. Wider area impacts are only likely to be relevant if the following types of activities are included, which improve wider placemaking:
    i. Removal of blight, which could be for instance through demolition and remediation works or relocation of bad neighbour uses.
    ii. Provision of high-quality development (residential, commercial, or mixed use) of sufficient scale to enhance the overall image and perceptions of the wider area.

iii. Provision of housing supply that addresses barriers to growth, in particular labour market constraints.

iv. Provision of employment floorspace that facilitates the attraction of new, high value economic activity.

v. Infrastructure provision, in sufficient scale to clearly benefit the surrounding local area. This is likely to comprise one or more of the following:

- Provision of green or blue space.
- Public realm improvements.
- Connectivity improvements such as walkways, cycleways, canals, and bridges.
- Significant community infrastructure, that is expected to benefit the wider area.

3. **Outputs**: of the project, which should link to the underlying rationale for intervention, such as redevelopment of brownfield land, and new economic, environmental, and social opportunities.
4. **Outcomes**: of the project, which should clearly include long term economic and regeneration goals that the intervention is seeking to achieve. For larger projects this could relate to transforming the entire area as a place to live, work and visit, supporting wider city growth and creating markets for new, high-quality housing. For smaller projects it is likely to relate to enhanced townscape, enhancement of community assets and improved amenity of the local area.
5. **Impacts**: of the project, as measured by improved wellbeing across the wider area. For wider area impacts this can be measured through higher house prices in the surrounding area, which act as a proxy for this welfare gain.

5.31 In cases where the project is part of a wider set of interventions which collectively address underlying socio-economic challenges, the justification for including wider area impacts must be clearly explained in relation to the role of the project in isolation and combined with other interventions. The dependencies and costs associated with the wider public sector intervention and other funding programmes should be clearly identified, and impacts attributed accordingly.

The approach

5.32 The **gross** wider area impacts should be monetised by estimating the potential uplift to the capital value of the surrounding housing stock. The impact will then need to be adjusted for deadweight and displacement as set out below (and in Annex E).

5.33 This is based on estimating the existing housing stock and its residential capital value within a defined impact area and then applying an uplift factor. The uplift factors detailed in Table 6 below differ according to location (grouped by region), the size of the development and local rates of development.

Table 6: Impacts table - % uplift to residential capital value within the impact area

Region	No. of gross units	Low Development (LD)	Medium Development (MD)	High Development (HD)
North (North East, North West, Yorkshire and the Humber)	<100	0.80%	0.55%	0.12%
	100-250	1.50%	1.24%	0.82%
	250-500	2.76%	2.50%	2.08%
	500+	2.05%	1.67%	1.39%
Midlands (East Midlands, West Midlands)	<100	0.96%	0.71%	0.28%
	100-250	1.66%	1.40%	0.98%
	250-500	2.92%	2.66%	2.24%
	500+	2.21%	1.78%	1.49%
East & South West (East of England, South West)	<100	0.66%	0.53%	0.32%
	100-250	1.01%	0.88%	0.67%
	250-500	1.94%	1.68%	1.30%
	500+	1.49%	1.15%	1.01%
South East	<100	1.31%	1.06%	0.63%
	100-250	2.01%	1.75%	1.33%
	250-500	3.27%	3.01%	2.59%
	500+	2.56%	2.01%	1.87%
London	<100	0.00%	0.00%	0.00%
	100-250	0.00%	0.00%	0.00%
	250-500	0.61%	0.35%	0.00%
	500+	0.41%	0.29%	0.15%

Note:

- Rate of development refers to total % change in the stock of houses in the impact area over the last four years, low (<4%), medium (4%-12%), high (12%+). See further guidance below.

Step by step guide

5.34 Once it has been confirmed that wider area impacts are relevant for the project, the following steps should be undertaken to monetise the impacts as part of the BCR calculation. Table 8 details the accompanying data sources which have been based on publicly available data. In some cases, the user may be able to justify using different data (e.g. local bespoke data, to estimate residential capital stock and value, which is acceptable if fully sourced).

1.) Identify the impact area

5.35 The impact area should be initially identified as a 1.5km or 2.5km radius of the scheme, using the centroid of the site, and based on the constituent Lower Layer Super Output Areas (LSOAs).

5.36 A variety of postcode/LSOA lookup tables are available online or from the Office of National Statistics (ONS) but where possible it is recommended that the impact area should be clearly mapped using Geographical Information Systems (GIS), to understand the area included. [46]

5.37 As a starting point, schemes below 1,000 units should use a 1.5km impact area whilst schemes over 1,000 units can use a 2.5km impact area but must include the 1.5km impact area as a sensitivity test. The 2.5km area should only be used if fully justified by local analysis of the impact area.

5.38 A best fit LSOA approach should be used based on a population centroid approach, so that LSOAs where the majority of the population is located within the impact area are included. This should then be supplemented carefully by further analysis of the geography and local knowledge and consider excluding / including certain LSOAs where relevant, for instance:

- Where the project is clearly unlikely to influence certain areas within the impact area. For example, a city centre scheme which incorporates a

[46] The following link provides access to the ONS data portal with an interactive map to download relevant LSOAs: Lower layer Super Output Areas (December 2021) EW Population Weighted Centroids | Open Geography Portal (statistics.gov.uk)

large element of the city centre that may be already regenerated, and the scheme is unlikely to have a significant impact.

- Where there is a clear demarcation between an area and the site, for example a large park, river, or road, and the two areas are not closely linked.
- Where the opposite may be true and the impact area appears too narrow given the importance of the scheme, for example a scheme that is transformational and will have a significant impact on a town's image.

5.39 The impact area should be clearly explained and justified, with careful analysis of the impact of including / excluding certain areas where necessary. This is particularly important for larger schemes when justifying the selection of the 2.5km impact area.

2.) Calculate the quantity of the existing residential housing stock

5.40 The existing housing stock within the impact area should be calculated by using, Valuation Office Agency (VOA) Council Tax: Stock of Properties data provided by LSOA, to identify the number of properties (by property type) in the footprint. Property types should include flats, terraced, semi-detached/bungalow and detached.

5.41 The latest data should be selected to calculate existing stock as well as a comparison to 4 years ago to understand how stock has changed. For example, in 2024, the latest full year's data on the housing stock will be 2023/24 and the comparison should be to the 2019/20 housing stock (as the data is provided by financial year). This should not include any non-residential property.

3.) Calculate the rate of development

5.42 The absolute growth in total units in the impact area over the last 4 years should then be calculated to identify the rate of development:

- Low development – less than 4% growth.
- Medium development – 4% to 12% growth.

- High development – over 12% growth.

4.) Calculate the current stock value

5.43 The current stock value should then be estimated by LSOA by property type. The Land Registry Price Paid database provides the most granular detail by location and property type and can be used to match sales values by type by postcode to LSOAs.

5.44 In some instances (especially for detached properties) there are missing entries in the Price Paid data and the user will need to proxy the median price by type based on other values, for instance these could be the Middle Layer Super Output Area (MSOA), the surrounding LSOAs or if these do not exist the average LSOA or MSOA property price.

5.45 Once the geographies are matched and sales values identified, the current stock value should then be estimated by multiplying the housing stock by type by median sales value by LSOA and summing the totals.

5.) Select an uplift factor

5.46 Based on the rate of development (Step 3), the size of the scheme and location, select the relevant uplift factor as detailed in *Table 6: Impacts table - % uplift to residential capital value within the impact area.*

6.) Apply the uplift factor and calculate the gross impacts

5.47 Multiply the current stock value by the uplift factor to calculate the *gross* economic gain.

7.) Incorporate impacts into the Cost-Benefit Analysis and adjust for additionality

5.48 The gross wider area impacts should then be incorporated within the wider benefits of the economic appraisal, inputted in the correct price base, adjusted for growth in real terms GDP and discounted over time. Unless there is supporting evidence to suggest otherwise, the gross impacts should be inputted on a pro rata basis against the profile of units delivered.

5.49 The gross wider area impacts should then be adjusted for additionality to derive the net impacts. This should consider both:

- Deadweight in terms of the wider area impacts that would have occurred without the intervention. The default is for this to be based on the same assumptions as for the overall housing delivery, e.g. if 10% of the housing is delivered under the counterfactual, 10% of the wider area impacts should be counted as deadweight. In some cases, there may be strong justification to vary this, but this would need to be clearly set out.
- Displacement in terms of the wider area impacts that would have occurred elsewhere from displaced housing activity. Prudently the default is to assume that displaced activity would have the same level of wider area impacts. Therefore, again, as a rule of thumb, it should be assumed that the displacement rate applied to the number of housing units delivered should also be applied to the wider area impacts.

5.50 As an external impact, the wider area impacts should be included within the adjusted BCR.

8.) Sensitivity analysis

5.51 Sensitivity testing should be undertaken, including to reflect project specific circumstances where local evidence is available.

5.52 Alongside scheme specific sensitivity testing, particularly around the size of the impact area, it is recommended the following impact value ranges based on the rate of development category and unit numbers of the scheme should be applied, as shown in Table 7. These are based on the research findings regarding underlying development and location features. The sensitivity testing should apply the positive and negative percentage adjustment to discounted wider area impacts to understand how the BCR would change

Table 7: Sensitivity analysis – impact value ranges

Number of units	Low Development (LD)	Medium Development (MD)	High Development (HD)
<250	+/- 5%	+/- 10%	+/- 15%
250 – 500	+/- 10%	+/- 15%	+/- 20%
500+	+/- 15%	+/- 20%	+/- 25%

Further adjustments and clarifications

Adjustments to reflect local circumstances

5.53 The modelling upon which the guidance is based reflects the underlying profile of development schemes included in the original research. It is inevitable that circumstances will arise in which proposed developments are atypical and may exhibit significant characteristics that, based on detailed local analysis, could arguably provide wider area impacts above those recorded in the original research. In this situation, the above analysis should be undertaken to provide a baseline for discussion with an opportunity to introduce additional evidence as to local impacts. For example, the existing site may have very substantial negative externalities associated with them such as adverse visual and odour effects. The removal of these may well have a more significant placemaking impact than those identified through the impact factors in *Table 6: Impacts table - % uplift to capital value* above.

5.54 In these atypical cases, a higher or lower impact rate should be applied based on local evidence, but the impact using the standard uplift rates shown in Table 6 should also be included in the appraisal as part of sensitivity testing. Strong evidence must be provided to apply a higher uplift than in Table 6.

5.55 As outlined under Step 1, it may also be relevant to adapt the impact area to reflect the local market and scheme characteristics. This should be clearly set out and justified as well as presenting the values for the default radius impact area.

Option appraisal

5.56 Due to the available sample data, the effects and therefore impact uplifts have been assessed for a broad range of unit outputs and thus it may be difficult to differentiate between options where, for example, all of them deliver over say 1,000 homes. In these cases, it is proposed that the placemaking impact is assessed for the largest option and that the appraiser then uses project specific evidence to adjust the scale of impact accordingly for each alternative option. As a rule of thumb, it is recommended that this is based on a pro-rata basis using the number of housing units.

Applying the impact model to a programme or multiple projects in the same local area

5.57 There may be circumstances where a programme is proposed or there are multiple connected projects. Care will need to be taken not to 'double count' the wider placemaking impact. The appraiser will need to use local evidence to determine the most appropriate way to ensure that this does not happen. For example, it may be appropriate to model the impact area around a number of postcode/LSOA areas to reflect the broad spread of projects/programmes and then allocate the impacts on a pro-rata basis between individual projects.

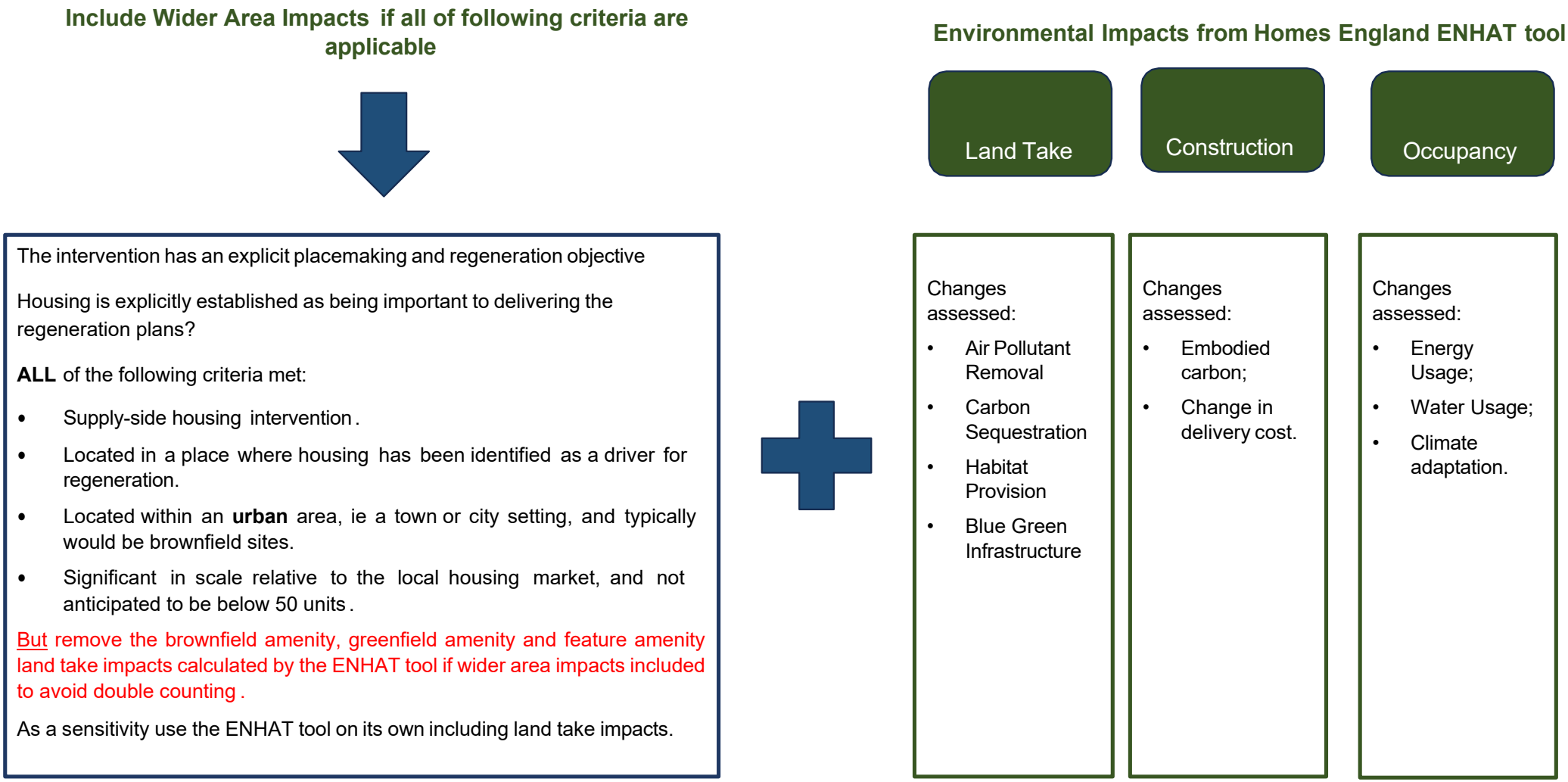
Potential for double counting

5.58 There will be potential for double counting with other external impacts that result in the wider area becoming more desirable.

- Transport benefits – if a scheme includes significant transport provision the appraiser should carefully consider the scope for double counting if including both transport and wider area impacts. This will depend on the nature and scale of the transport provision and who the ultimate beneficiaries are, with the scope for double counting likely to be highest where the transport scheme directly benefits the residents of the surrounding area. The appraiser would need to clearly identify and categorise the type of benefits arising from a scheme with housing and transport impacts and the best approach to monetising these, including any potential duplication[47].
- Amenity Impacts – new developments will have a range of environmental impacts. For new residential developments, analysts should apply the Homes England ENHAT model - discussed in the previous section – to appraise environmental impacts. However, the ENHAT model includes brownfield, greenfield and feature amenity land take impacts. These impacts are double counted in the wider area impacts model and should be removed when applying the ENHAT model in line with the approach set out in Figure 8 below. A sensitivity test could be carried out including the land take impacts but excluding the wider area impacts results. However, where application of the wider area impacts model is relevant it reflects a fuller set of development factors than the land take impacts in the ENHAT model so should be used as the core estimate.

[47] This should be undertaken with reference to the levels of transport analysis as set out in Transport Appraisal Guidance (TAG) on wider economic impacts: TAG Unit A2.1: Wider Economic Impacts Appraisal, DfT, May 2024

Figure 8: Dealing With Double Counting of Wider Area and Amenity Impacts



Worked example

5.59 A residential development will deliver 1,500 units on a brownfield site, on the edge of a city centre. The site has been stalled for decades and is causing significant blight issues, given its prominent gateway position. The remediation of the site will significantly improve the quality of the local environment. The housing to be developed is also critical for the sustainable growth of the city centre and will help transform the wider area in which it is located. The site will clearly have wider impacts on the surrounding area, which have been estimated as follows:

1) Impact area: the default impact area is identified as a 2.5km radius given the size of the scheme and all constituent LSOAs (using the population centroid method) are identified. Based on local knowledge of the area a final list of LSOAs at the 2.5km radius is identified.
2) Existing housing stock is calculated based on the final list of LSOAs by house type.
3) The rate of housing development based on growth over the last four years is identified as medium (between 4% and 12%).
4) The current stock value is calculated based on the median price by property type, and is approximately £7,000m.
5) An uplift value of 1.67% is selected based on location (North), rate of development (medium) and size (500+ units).
6) The gross placemaking benefit is approximately £116.9m.
7) Additionality is assessed as 60%, reducing the net impact to £70.1m.
8) The discounted placemaking benefit for the preferred option, once profiled in line with the housing and adjusted for additionality, is £44.4m. This is included in the adjusted BCR which moves from 1.0 to 2.1.

5.60 Based on Table 7: Sensitivity tests, further analysis is performed with the gross wider area impacts ranging from £93.5m to £140.3m. The analysis above should then also be re-run at the smaller impact area of 1.5km as part of the sensitivity testing.

Data sources

5.61 The Homes England Wider Area Impacts (WAI) tool has been published alongside this guidance which enables users to monetise the gross wider area impacts of housing interventions using the latest data.

5.62 This includes the underlying data estimates of the residential stock and capital stock values by LSOA across England, based on the HM Land Registry Price Paid database and the VOA stock of properties data by property type. Where HM Land Registry Price Paid data by LSOA by type is missing (e.g. where no terrace homes have sold in a certain LSOA over the time period covered), the default is either the median MSOA or LA price by type.

5.63 The data sources are fully detailed below in Table 8.

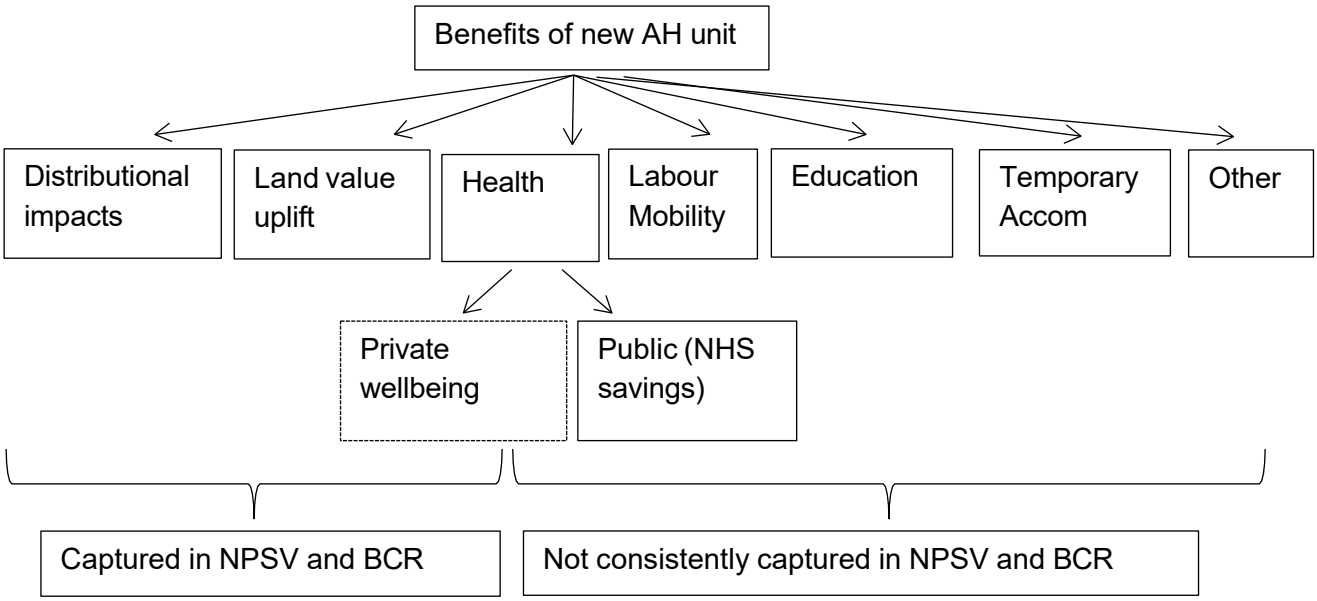
Table 8: Data sources

Category	Data Source
Housing stock	Valuation Office Agency (VOA) Council Tax: Stock of Properties data (currently 1 April 2023 to 31 March 2024) (Table CTSOP 3.1), provided by LSOA. Total are used for Terraced, Flats and Detached Properties, whilst Bungalows and Semi-detached are combined. This is compared to the data covering 1 April 2019 to 31 March 2020 for the four-year comparison. https://www.gov.uk/government/statistics/council-tax-stock-of-properties-2024
House prices	Price Paid Data (PP), HM Land Registry, using the last available financial year (currently 1 April 2023 to 31 March 2024, to bring the stock value data into line with the VOA stock of properties data), provided by postcode. https://www.gov.uk/government/statistical-data-sets/price-paid-data-downloads
Population Centroids	Lower Layer Super Output Areas Population Weighted Centroids, ONS, 2021. This data is used to identify the centroid of the constituent LOSAs within the impact area. Available at: https://www.data.gov.uk/dataset/1b61943c-f5e1-4398-babe-5c487257864e/lower-layer-super-output-areas-december-2021-ew-population-weighted-centroids

iii Health and rough sleeping impacts of additional rented affordable housing

5.64 There are both external impacts and private impacts associated with health improvements. To some extent, the (private) health impact is already captured in land value uplift which will reflect the private consumption benefits of additional rented Affordable Housing (AH). However, there are potential impacts not captured. How far they overlap - and therefore the extent to which they are potentially additional to the private health benefit - is discussed below.

Figure 9 shows the potential benefits of additional rented affordable housing



5.65 As the diagram above illustrates, there are a number of benefits associated with an additional rented AH unit. There is the private benefit – as measured by land value uplift which captures the efficiency benefit of converting land into a more productive use – and a potential distributional impact associated with the progressive nature of AH (see Annex H). Both these impacts are captured separately in an appraisal.

5.66 However, there are also several impacts which are harder to monetise or are only qualitatively assessed in appraisals. These include fiscal savings from the potential savings on health care, improved labour mobility – increased housing supply lowers housing costs and therefore enables people to live in areas they might otherwise not be able to live – and potentially improved educational

outcomes by reducing overcrowding. Finally, it can result in savings to the exchequer from avoiding expensive temporary accommodation (TA) costs.

5.67 This section focuses only on monetising potential health impacts. Assessing the potential significance of these impacts is problematic as these impacts are only likely to materialise if a new rented AH unit (a) enables a household to move away from a housing situation that was imposing an external cost and (b) another household does **not** then move into the same housing situation and instead this property is made either more habitable or could even be demolished (if the latter there may not be any land value uplift associated with the new rented AH unit as it would not be an additional housing unit).

5.68 Therefore to estimate the potential health impact of additional rented affordable housing, the probability of a new tenant that had previously been living in a poor condition or overcrowded property needs to be calculated. In addition, as there are large negative health impacts from rough sleeping, an additional house that is allocated to a rough sleeper can be expected to deliver relatively large health impacts. This should be factored into the probability calculations.[48]

Estimating probabilities

5.69 To estimate the probability that a new tenant had previously been living in either poor or overcrowded conditions, the following working assumptions are made:

- Within the social rented sector (SRS), it is assumed that those living in overcrowded accommodation are prioritised first;
- 10% of vacated properties are filled by a newly formed household (HH); and
- 2.0% of new lets go to rough sleepers[49].

5.70 The formula for estimating the probability that an additional dwelling reduces overcrowding is:

Probability new unit reduces overcrowding=(98%-10% household formation)

[48] We have concentrated on the impact of an additional affordable housing unit so have not accounted for the potential benefits of improving the condition of existing poor quality housing.
[49] CORE data for 2022/23 shows around 2.0% of new lets to General Needs Private Registered Providers (PRP) go to those who say they were previously rough sleeping

Where the 98% figure is derived from 100% less 2.0% of new lets going to rough sleepers.

Estimating the impact of poor housing on health

5.71 The Building Research Establishment (BRE) has a model to estimate the impact of poor housing on the NHS. This is well-established and their work has been widely quoted, including by the World Health Organisation (WHO), National Housing Federation and Age UK. The BRE estimates the number of homes with Category 1 Housing Health and Safety Rating System (HHSRS) hazards and then estimates the cost to the NHS associated with them. There are 29 identified HHSRS hazards, including the risks from cold, damp, falls on stairs and overcrowding.

5.72 The study estimates the direct (medical) costs to the NHS that are likely to result from the presence of these hazards, using NHS data on costs of treating and caring for related health conditions up to a year following a health incident.

5.73 The latest estimates from BRE for 2019 reveal that leaving vulnerable people in the poorest 10% of England's housing costs the NHS £1.25 billion per annum in first year treatment costs (in 2024 prices). The full report contains findings on the impact of all substandard dwellings and includes wider impacts on people's life chances following a housing related incident, as well as the immediate medical costs.

5.74 Table 9 shows BRE estimates of the impacts of different Category 1 hazards on NHS costs in a single year. It can be used to look at the savings to the NHS from removing Category 1 hazards through improving housing quality. For affordable housing it identifies the financial savings to the NHS from removing overcrowding as £165 per year (in 2024 prices).

Table 9: BRE cost estimates for 2019 (2024 prices)

	No. of Cat 1 Hazards	NHS annual saving if hazard fixed (£000s)	Per Unit Annual Saving (DLUHC estimate) (£s)
Excess cold	719,324	639,320	889
Falls on stairs	1,014,373	258,922	255
Falls on the level	400,081	124,221	310
Falls between levels	205,747	70,837	344
Dampness	64,708	40,487	626
Fire	126,918	24,387	192
Lead	68,200	17,762	260
Hot surfaces	46,120	15,554	337
Radon	89,497	12,678	142
Collision and entrapment	14,716	7,667	521
Overcrowding	45,440	7,490	165
Entry by intruders	10,943	6,533	597
Pests (Domestic hygiene)	20,505	5,103	249
Sanitation (Personal hygiene)	19,265	4,906	255
Food safety	18,507	4,710	254
Electrical problems	11,146	2,854	256
Ergonomics	10,718	2,768	258
Structural collapse	13,789	2,610	189
Noise	2,683	1,604	598
Carbon monoxide	5,403	1,236	229
Excess heat	3,131	503	161
Total with any Category 1 hazard	**2,447,678**	**1,252,149**	**512**

Note that:

1. The total sum of all dwellings with Category 1 hazards will be less than the sum of the individual hazards as some dwellings will have more than one Category 1 hazard.

2. The total sum required to remedy all Category 1 hazards is less than the total number of Category 1 hazards multiplied by the average costs; this is because the modelling avoids the double counting of costs where repair work/energy improvements mitigate more than one hazard.

3. For some Category 1 hazards, like explosions, no cases were identified in the survey. These are excluded from the table.

Homelessness evidence

5.75 Estimates for the typical per person cost of homelessness vary, as do estimates of the costs that remain even if they are housed. The best available evidence is available from the rough sleeping questionnaire which collected data from 563 respondents who had slept rough within the period February 2019 to 2020 (before Covid). The survey collected information on details of their homelessness experience, support needs and vulnerabilities, and their use of public services.

5.76 Use of public services were then costed using the Greater Manchester Combined Authority Unit Cost Database. Over half the costs related to health services including physical and mental health, substance treatment, GP and A&E services.

5.77 The estimated average annual fiscal cost of an individual that sleeps rough was £14,690 in 2024 prices. (Note this excludes quality of life/wellbeing impacts which are likely substantial.) This compares to a fiscal cost of £4,060 in 2024 prices for all individuals in a similar age range who were not rough sleepers, and able to access comparable services (based on Bramley et al, 2015).

5.78 The net fiscal cost of an extra rough sleeper per year is £14,690-£4,060 = £10,630.

Final calculation

5.79 The formula for estimating the fiscal impacts from additional rented affordable housing is therefore:

Annual health impact
=Impact of reduced overcrowding
×probability of new unit reducing overcrowding
+Impact of reduced rough sleeping
×probability new unit reduces homelessness
=£165×(98%-10% household formation)
+£10,630×2% reduced homelessness

5.80 Essentially the annual fiscal impact is the annual £10,630 extra cost for a rough sleeper multiplied by the probability that someone is a former rough sleeper (2%) plus the probability of a new rented affordable housing (AH) unit reducing

overcrowding (88%) multiplied by the annual impact of reduced overcrowding from Table 9 (£165).

5.81 **Based on the above assumptions, the external health impact of an additional AH unit is equal to £358 per year or £6,808 in present value terms over 30 years**. This value can be incorporated into the 'adjusted' BCR for each additional affordable or social rented house.

Chapter 6: The Appraisal Of Place Based Initiatives

Introduction

6.1 Appraisal of place based impacts is particularly important for MHCLG policies aimed at increasing local growth and reducing regional inequalities.

6.2 Six key capitals together likely explain much of the disparity in economic performance across geographies[50]:

- **Physical capital** – infrastructure, machines and housing;
- **Human capital** – the skills, health and experience of the workforce;
- **Intangible capital** – innovation, ideas and patents;
- **Financial capital** – resources supporting the financing of companies;
- **Social capital** – the strength of communities, relationships and trust;
- **Institutional capital** – local leadership, capacity and capability.

6.3 Low levels of capital formation in specific geographies – often in multiple sectors – lead to underperformance relative to the UK economy as a whole. These capitals are interrelated, with sustained feedback loops, so that a fall in the stock of one type of capital impacts on others. Poorly performing areas will often face multiple capital shortfalls.

6.4 Natural capital constraints will also play an important role in deciding how to address shortfalls in other capitals at local level and are a key element of options generation and appraisal.

6.5 Within this context effective appraisal must be able to:

a. Provide policy makers with an understanding of how policy options impact on local areas, regions and different groups; and

[50] There are discussed in more detail in the Levelling Up White Paper

b. Deal with multiple and complex interventions covering a range of different issues caused by low levels of capital formation.

Chapter aims

6.6 This chapter aims to show how:

- To appraise place based initiatives so that informed decisions can be made on which policies to pursue to deliver local objectives; and
- Multiple policies can be appraised together to reach a single view on their costs and benefits.

6.7 The chapter builds on Annex A2 of the Green Book which includes a new expectation that appraisals assess the likelihood and extent of differential place based impacts. Place based analysis will be needed when either:

a. The objective of the proposal is aimed at a particular place, area or type of area; or

b. The proposal is likely to have different impacts on different areas.

Structure

6.8 This chapter is structured in the following way:

- The next section discusses the role of place based analysis in appraisal and sets out the key analytical questions to ask when assessing interventions aimed improving local outcomes or which have a significant impact on those places. The section makes clear that to adequately appraise impacts there needs to be a strong focus on place and the people in the place.
- The following section discusses some key issues when appraising place based interventions – including the relationship between strategic objectives and social welfare, the assessment of employment impacts and the importance of understanding wellbeing impacts.
- The penultimate section presents an illustrative example of place based analysis using a hypothetical intervention covering labour market, business support, housing and transport interventions. It provides an example of how to respond to the key questions defined for the strategic and economic dimensions of business cases in the next section.

- The final section identifies some areas where it is intended to develop both place based analysis.

The role of place based analysis in appraisal

6.9 The Green Book says that where a proposal has geographically defined objectives, then place based analysis can be the primary frame of reference for appraisal. This should be supplemented with UK level appraisal or analysis wherever possible:

- Place based analysis may involve consideration of local employment effects, distributional impacts on demographic/protected groups and on intervention target groups.
- It should be based on a robust understanding of local conditions, constraints and plans and consider both the positive and negative impacts of policy options.

6.10 Place based analysis where it is applied to business cases is likely to form a key element of the:

- Strategic Dimension – setting out the place based nature of the problem that needs to be dealt with, and key place based objectives;
- Economic Dimension – looking at the economic impacts across different areas and groups; and
- Management Dimension – showing how place based effects will be monitored and evaluated.

6.11 Place based analysis may also be important for the:

- Financial Dimension – where income is raised locally; and
- Commercial Dimension – where there is a focus on the local market to deliver the services set out in the business case.

6.12 What follows concentrates only on the strategic and economic dimensions as they are the main focus of appraisal. However the importance in the management dimension of having an appropriate evaluation framework that allows identification of place based impacts and place based metrics to monitor performance should be emphasised.

Proportionality

6.13 The degree of analysis should depend on the relative importance of the programme (e.g. the amount of money involved), the degree of importance attached to local outcomes and whether there are any key local delivery risks.

Robustness of analysis

6.14 Local data and models constructed for specific one-off purposes may be less developed than nationally available data sets or long standing models. For this reason, it is important throughout the analysis to report on the robustness of the modelling and data used in any place based analysis.

Key questions

6.15 The following key questions could be used to support the development of place based appraisal. These have been separated into questions that could be posed in the strategic dimension and the economic dimension of a business case, respectively:

a) Strategic dimension

1. What are the key issues that are being addressed by the policy? To what extent do those reflect issues in specific places, areas or types of area?

2. What are the key spatially focused objectives which address the issues above that options must look to satisfy?

3. What do the different options look like spatially? What does the preferred option look like compared to the counterfactual and what is its spatial coverage? To what extent is it focused on specific places, areas or people?

4. What is the spatial impact of the intervention:
   - On specific places, areas or people?
   - On the UK as a whole?

   For this careful consideration needs to be given of any shift in activity between the area of focus and the rest of the UK, such as employment.

5. What are the key local risks that might impact on the delivery of a policy at local level?

b) Economic dimension

6. What are the costs and benefits of the leading intervention:
   - On specific places, areas or people?
   - On the UK economy?

   Where firms shift economic activity from one area to another the impacts on the area from which they move need to be understood too and the degree to which that is beneficial or not, for example if the shift is from an area of greater economic need.

7. How has additionality been assessed in particular:
   - Deadweight - what would have happened in the absence of the intervention;
   - Substitution - where firms substitute one type of labour for another to benefit from an intervention;
   - Displacement – where outputs shift from firms not benefiting from an intervention to those that benefit from it;
   - Leakage – the impacts leaking out of the target area or target group (if the aim is to improve prospects for certain people, e.g. low skills/disabled).

8. How does the intervention impact on different target groups, for example:
   - Local residents versus commuters or people moving in;
   - Different income (e.g. age, need) groups; and
   - Employment impacts if it is thought that there are any.

9. What are the key uncertainties and what is their implication for impacts and VfM?

6.16 Where possible maps should be used to demonstrate problems, set out how interventions would work and to look at the impact on people.

Issues in appraising place based initiatives

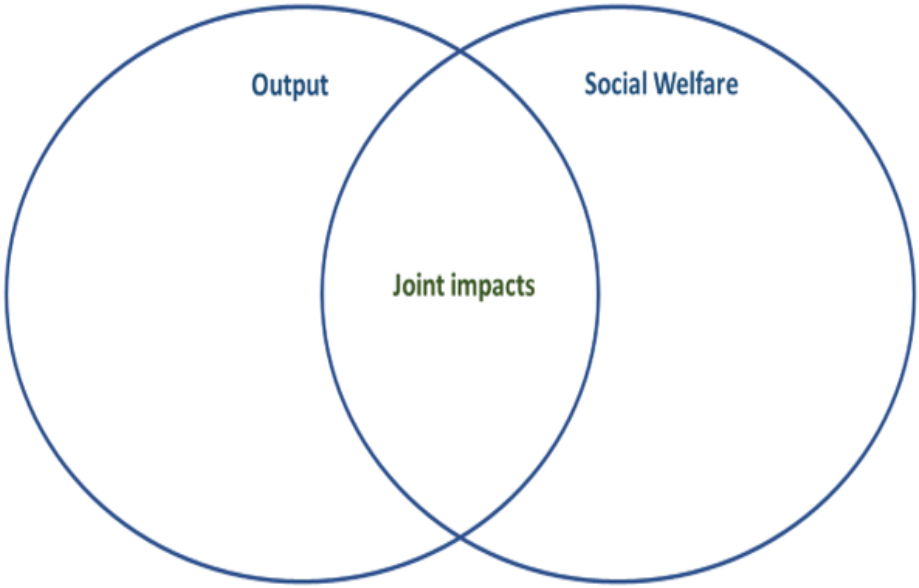
Links between strategic policy objectives and social welfare

6.17 Place based appraisal involves assessing two key separate but related criteria:

- The achievement of strategic policy objectives – these may be local objectives or national objectives which have a local impact. This explicitly comes into the strategic dimension.
- Social Welfare from pursuing a particular option linked to the policy. This explicitly comes into the economic dimension[51].

6.18 The strategic objectives a policy pursues will generally be linked to social welfare but need not necessarily be exactly the same. For example, a key objective may be to raise the level of output in an area or to raise the level of employment. These objectives are related to social welfare but not the same generally.

The relationship between output and social welfare[1]



Economic output

6.19 Economic output ignores a number of factors that enter into social welfare:

- Although the value of what workers produce is included in output as the wages paid to them (reflecting their productivity), the social welfare that workers receive from the job will be different because they have to give up leisure to work (a disbenefit) and receive personal wellbeing from being in

[51] Although, the Green Book makes it clear that for an option to represent value for money it must also satisfy its strategic objectives. Longlist appraisal is mandatory and ensures options that don't meet objectives are filtered out during the appraisal prior to shortlist analysis.

employment (a benefit). Evidence from the 2021 supplementary guidance on valuing wellbeing indicates that the overall impact of moving from involuntary unemployment to being in work (after income, health and other standard factors have been allowed for) is positive, with a central value of £5,980 per annum in 2019 prices. This means the market value of their output is less than their social welfare from employment. If there are net employment impacts then wellbeing impacts need to be taken into account when assessing social welfare in the economic dimension;

- Some things are excluded from economic output which impact on social welfare measures. Important examples of these are:
    - Environmental impacts such as amenity, noise and pollution impacts (including carbon impacts);
    - Social impacts such as on crime levels and health from changes in the physical environment;
    - Community wellbeing impacts which spillover from individual impacts and reflect greater social cohesion and greater levels of optimism; and
    - Any costs to workers of getting to work, such as the value of time and uncertainty caused by congestion and reliability issues.

  Many of these impacts can be monetised and included in BCRs (see Annex A1 of the Green Book).

6.20 However some types of impact are included in both social welfare and economic output measures. These include Land Value Uplift, increases in productivity as a result of skills policies or economic agglomeration and taxes on economic production (e.g. labour taxes).

6.21 Given that some impacts do not impact on social welfare they are better left to the Strategic Dimension than to the Economic Dimension. This does not mean that they are excluded from the decision on which option to select as all options must meet strategic objectives. Rather, it reflects a need to account for impacts in the right place.

Employment

6.22 Increasing local employment is often a key strategic objective of place based initiatives. In line with HM Treasury's Green Book the default assumption is that any jobs created by a policy resulting from government expenditure do not increase aggregate UK employment as these employment effects are already largely determined by macroeconomic decisions on the level of overall public expenditure (though they may have an important local impact). However, if there is a supply side impact which raises overall productivity or increases entry into

the labour force (once additionality has been allowed for) these impacts can be counted at the UK level in the appraisal.

6.23 It is, however, permissible to include local labour demand effects in place based analysis where an intervention has geographically targeted employment objectives. Where local growth initiatives are concerned, then regional and local employment effects may form a key part of the analysis and, if so, should be considered.

6.24 When considering employment effects the analysis needs to allow for:

- Deadweight - what would have happened in the absence of the intervention;
- Substitution - where firms substitute one type of labour for another to benefit from an intervention;
- Displacement – where outputs shift from firms not benefiting from an intervention to those that benefit from it; and
- Leakage – the impacts leaking out of the target area or target group (if the aim is to improve prospects for certain people, e.g. low skills/disabled).

6.25 The analysis may also take account of multiplier effects. The appropriate multipliers to use will depend on the local labour market and the sector in which employment changes. Where the employment rate is at or above the national average and/or projected local employment numbers are large relative to the local unemployment rate, multipliers at the lower end of the range would be expected as the likely level of displacement will be greater.

6.26 The illustrative example in the next section includes a discussion of employment impacts and allows for deadweight, substitution, displacement, leakage and the application of multiplier impacts. It shows how employment impacts are reported in the strategic dimension of a business case and how to report the welfare impacts associated with changes in employment across areas in the economic dimension. In the illustrative example demand impacts net to zero across areas in line with HM Treasury guidance, however supply side impacts are positive. Further detail on how to estimate employment impacts, including a detailed worked through example, is presented in Annex 2, Box 27 of the Green Book.

Range of impacts covered by place focused policies

6.27 The capitals framework outlined in the introduction to this chapter covers a wide range of policy areas and impacts. The appraisal of many of these policy

impacts is covered by other departments' supplementary guidance. A summary of the types of impacts on which other departments offer guidance is set out in Annex A1 of the HM Treasury Green Book and users should consult it for the appraisal of impacts not covered in this guide.

An illustrative example of place based analysis

6.28 This section sets out an example of how place based analysis might be conducted by answering the different questions set out in the previous section. The example is purely illustrative, and the case study area does not relate to any existing administrative boundary.

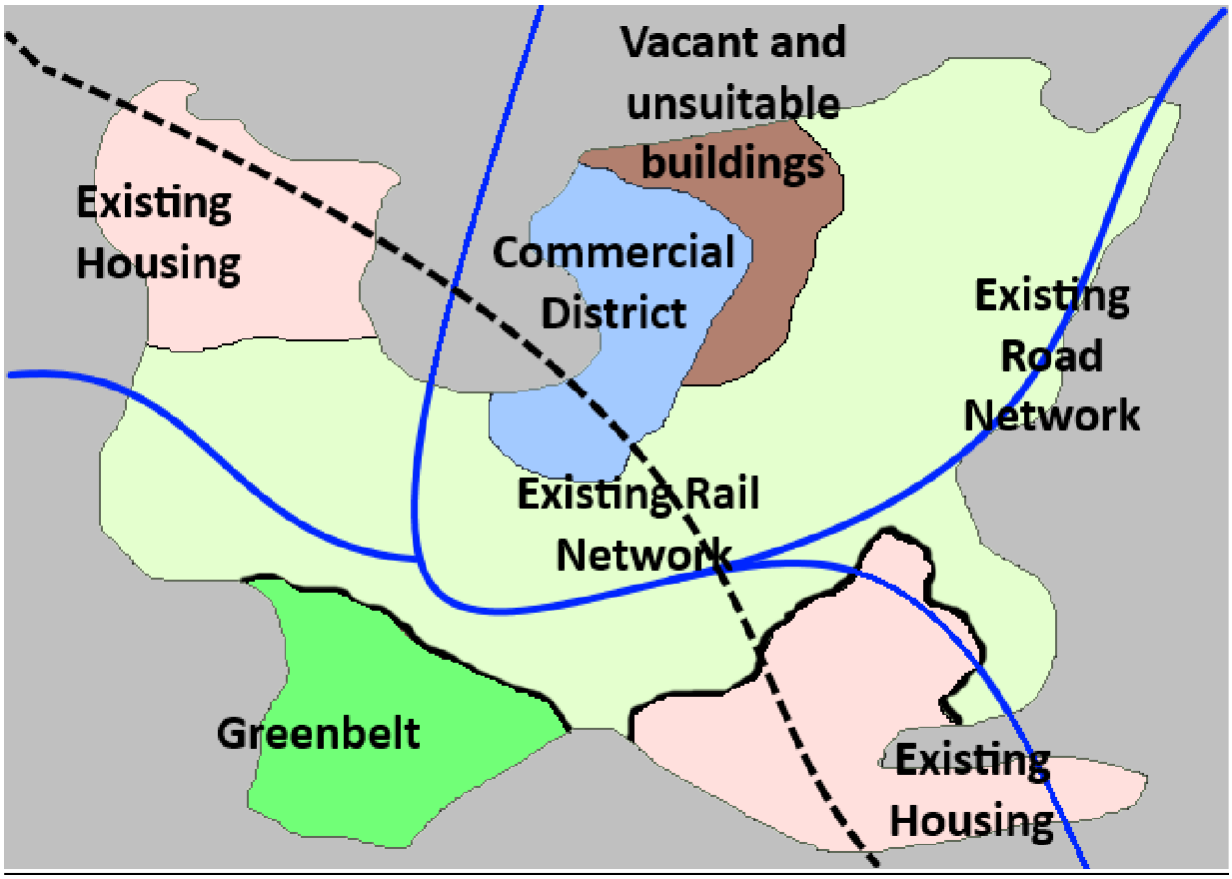
6.29 The example covers a complex programme of interventions on purpose to show how these might be dealt with together. In practice many interventions are likely to have a simpler structure. A proportionate approach to the analysis should be adopted. Smaller, less expensive interventions with lower levels of risk should adopt a proportionate approach to monetisation.

a) Strategic dimension

<u>The key issues that are being addressed by the policy</u>

6.30 The example relates to Place A. Place A experiences significant deprivation caused by high levels of structural unemployment with unemployed workers lacking the skills needed by local industry. Most workers are employed in low skilled jobs. Much of the industrial and commercial business area is derelict or underutilised. There is significant blight from dereliction, some of the industrial land is contaminated and requires remediating before it can be used again. Residents experience poor health outcomes and wellbeing from low levels of social capital. Place A faces high demand for public services but local resources needed to meet those demands are limited because of the low tax base. It is difficult for Place A to attract new business to the area because of the problems the area faces.

The map below shows the existing area before the intervention



Rationale for investment

6.31 Without government intervention Place A is likely to remain an underperforming area. This is because:

- Local unemployed and low skilled workers do not have the resources to retrain - there is a credit constraint;
- Blight makes the area unattractive to developers and to new business; and
- The complexity of the problem to be dealt with creates a co-ordination problem which will not be solved if left to itself.

Key objectives for the intervention

6.32 The key local objectives are to improve economic outcomes for local residents by:

- Increasing the number of jobs for residents in Place A over the next five years and thereby reducing levels of unemployment - particularly long-term unemployment - towards UK national averages;

- Increasing the level of skills of the local workforce so that wages will increase to UK national average levels over the next five years;
- Regenerating the local area by redevelopment and removal of blight over the next two years;
- Attracting high skilled firms to the local area so that overall productivity and output increases over the next five years to the UK average; and
- Improving the level of wellbeing in the area through creating more positive outcomes for local people over the next five years.

6.33 The chosen option must also meet wider Critical Success Factors (see Box 9 of the HM Treasury Green Book) in particular, it must:

- Provide Value for Money – so that social benefits exceed costs nationally;
- Be affordable – money must be available to fund the option;
- Be commercially viable – so that suppliers are able and willing to deliver relevant elements of the chosen option; and
- Be achievable – both in terms of implementing the programme and delivering key objectives.

<u>Description of the options considered and spatial coverage of the preferred option.</u>

6.34 A number of options have been considered including the following:

- Business As Usual – continue as is with no intervention;
- Preferred Way Forward (PWF) - This involves several intervention strands, for example:

  Strand 1 – Redevelopment of 25,000 sq. metres of commercial space and 2,000 homes, including removal of blight from the local area. Costs £35m over two years;

  Strand 2 – A new road to support access to the redeveloped site. Costs £30m over two years;

  Strand 3 – £22m over five years for the provision of skills training to:

  - Help local long-term unemployed workers get into work; and
  - Offer an apprenticeship scheme for low skilled workers to raise their productivity and make the area more attractive to new firms.

  Strand 4 – Business tax rate reductions in Place A over a period of 5 years to attract new business. The estimated public sector cost is £10m;

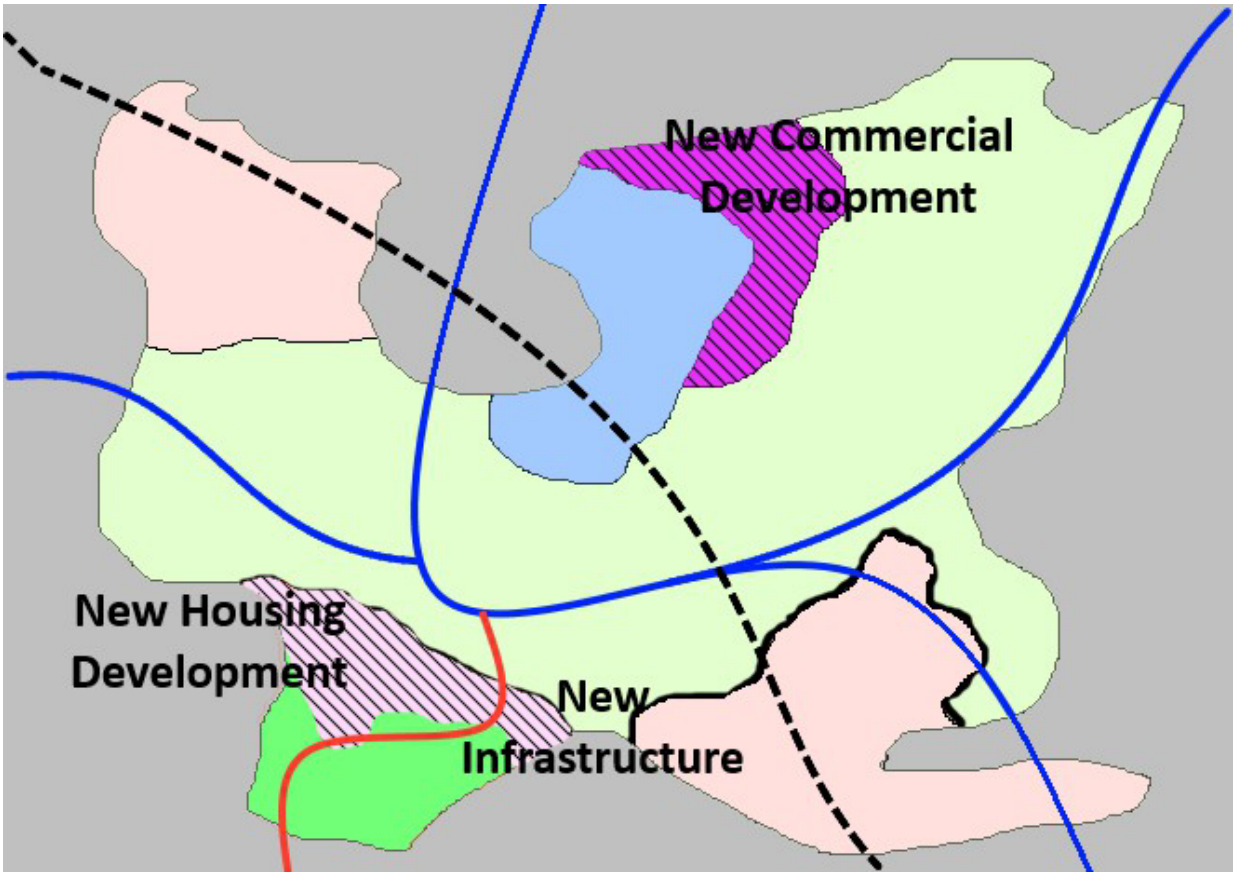
  Strand 5 – Business support to local firms to make them more competitive by supporting innovation. Costs £4m over five years;

Strand 6 – Community involvement in the design of the programme to make sure it meets local needs. Costs £2m over five years.

- Do Minimum – A less ambitious version of the preferred option. This might involve redevelopment of a smaller area and skills training for a smaller number of people.
- Ambitious PWF – A more ambitious version of the preferred option. This might involve widening the scope of the intervention to include additional incentives for businesses to locate to the area.

6.35 In the example that follows only the preferred option is compared relative to the BAU to save space.

The map below shows the new infrastructure interventions in the area



<u>The spatial impact of the preferred option on key objectives:</u>

6.36 *Jobs* – By Year 5, the initiative will result in 740 new jobs for local residents (see chart 1). New jobs come from three sources:

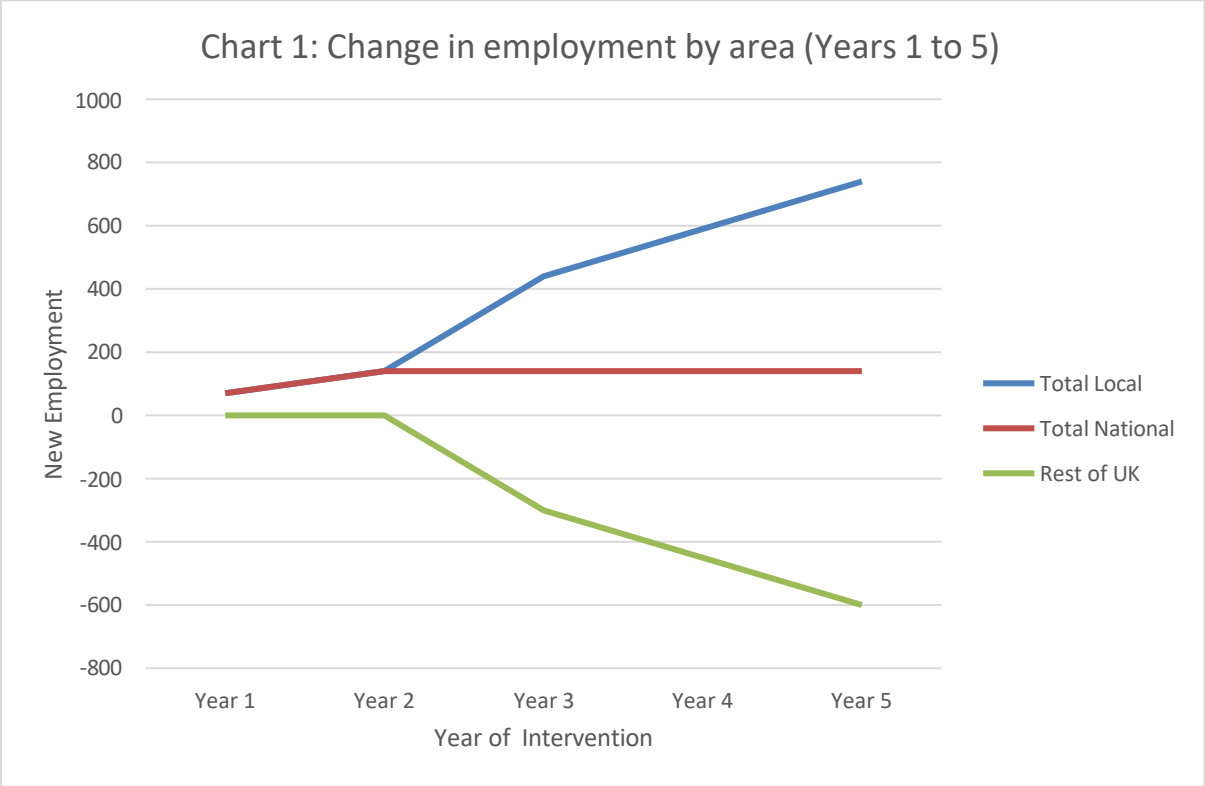
- Improving the skills of the long-term unemployed and unskilled workers;

- Attracting new firms to Place A who employ local residents; and
- Indirect multiplier employment effects in traded and non-traded sections.

6.37 Increased competitiveness through better business support may also raise the level of employment amongst residents.

6.38 Although local employment effects are significant, national effects are somewhat smaller. In particular, it is assumed that jobs that go to local workers as a result of firms relocating are all displaced from other areas in the rest of the UK. Similarly, there will be negative multiplier effects in other areas from displacement. For this reason the rest of the UK experiences a fall in the level of employment. (It should be noted that allowance has been made for the fact that some employment will go to commuters who live outside Place A but work in it.)

6.39 The rest of UK and national impacts on employment over the 5 years covered by the strategic objective are shown in chart 1 below. The rest of the UK impact partially offsets Place A's impact.



Productivity and skills

6.40 Approximately 500 people will complete level 2 apprenticeship training and move into higher skilled jobs. In this illustrative example, the wage increase is assumed to be £10,000 per worker per annum.

6.41 There are also likely to be a general increase in productivity from the business support programme which is focused on innovative training. Finally there will be a general increase in productivity for the area from agglomeration impacts, although these will be offset to some extent from disagglomeration impacts in the rest of the UK. [52]

Regeneration of the local area

6.42 The redevelopment will result in the removal of 15,000 m2 of substandard buildings and its replacement with 25,000 m2 of commercial space and 2,000 houses. In addition, the surrounding area which is subject to blight will be landscaped and turned into a park. There are likely to be significant positive impacts to existing residents from the improved local environment.

Improved wellbeing

6.43 Increased access to employment is likely to significantly improve wellbeing. As noted above the 2021 Wellbeing Guidance for Appraisal indicates that a worker who has a job receives a wellbeing effect of nearly £6,000 a year (in 2019 prices). This is assessed in the economic dimension appraisal;

- Similarly access to better quality jobs for workers who have gone through apprenticeships is likely to raise wellbeing, as will the improved environment and greater social cohesion;
- Increased income for low income workers may also improve health outcomes which raises wellbeing;
- There will be an increase in positive outcomes in the area generally which will improve the level of wellbeing for local residents; and
- Finally it should be noted that some of these impacts are likely to be offset nationally (e.g. displacement of jobs will reduce wellbeing in other areas).

Social and institutional capital

6.44 Under the preferred option:

- The local community will be involved in the design of the redevelopment and in the labour market programme aimed at tackling unemployment and low skills;

[52] The impact of firms moving to an area on the area they leave needs to be very carefully considered. It might be that there are significant adverse impacts from displacement, including on the local supply chain, employment and the physical and social fabric.

- Similarly local businesses will also be involved in the design of the overall programme;
- The programme will be led by the LA in Place A and will involve input from other key public sector partners; and
- Post implementation there will be a local governance forum with the responsibility of overseeing the implementation the programme.

6.45 As a result of all the actions above the programme will support the development of a stronger community identity and pride in place.

Key risks that might impact on the delivery of a policy

6.46 Five major risks are identified in this illustrative example:

i. Commercial and residential values and consequently land value uplift might be lower than estimated because of adverse local economic conditions – this is assessed through sensitivity tests;

ii. Costs of the project might be higher than anticipated – this is dealt with in the economic dimension through the application of optimism bias and cost sensitivity tests;

iii. Failure to adequately target the employment based initiatives on those who need the initiative most – this is dealt with by involving local community in design of programme and active programme monitoring;

iv. Failure to engage properly with the local community resulting in poor design of the programme and lower levels of effectiveness and community wellbeing – this is dealt with through active stakeholder engagement in design and implementation of the option; and

v. The valuation of wellbeing benefits may be too optimistic – this is mitigated by carrying out a sensitivity test with a lower well-being value.

b) Economic dimension

Assumptions used to calculate costs and benefits of the leading intervention

6.47 Costs and benefits are calculated over the relative lifetime of the different interventions. All costs and benefits in this illustrative example are valued in current year present value terms.

6.48 Table 10 provides a breakdown of monetised and non-monetised impacts for relevant costs and benefits. All impacts are measured relative to the business as usual counterfactual (that is they take account of deadweight). Some grouping of impacts has been done to simplify presentation. Only large and medium scale non-monetised impacts are reported as only these are likely to influence the VfM assessment.

6.49 In this illustrative example costs and benefits are reported for Place A (the local area of interest), for the rest of the UK and at UK level. (This approach could easily be extended to further spatial tiering, for example, multiple LAs, region and UK level.)

- Where possible, relevant impacts should be estimated in line with appropriate departmental guidance. For example, transport benefits would require a transport model and use DfT guidance, carbon impacts would use Department for Energy Security and Net Zero guidance, and Wellbeing estimation would use the relevant supplementary guidance.
- The illustrative figures represent central assumption estimates.
- For employment and wage impacts of people with low incomes, distributional weights have been applied in line with Annex H of this guidance.

Additionality

6.50 In addition to allowing for deadweight, full allowance is made for:

- Substitution of existing workers with unemployed workers who are going through the apprenticeship training scheme – it is assumed that 20% of apprenticeship jobs displace existing workers;
- Displacement – some economic activity which occurs in Place A is likely to displace activity outside of the area. In particular the following sectors are likely to be impacted:
    - Commercial and housing – 25% displacement after applying the additionality guidance in Annex E;
    - Benefits from employment – all jobs that move to Place A from outside result in a net zero effect across the UK, that is, they are displaced. Multiplier impacts for these jobs also represent displacement between rest of UK and Place A.

- Leakage – is allowed for with 10% of new employment jobs being filled by commuters into Place A (based on existing travel to work statistics). Note that skills and unemployed worker programmes are targeted on Place A residents and impacts take place within the area.

Estimated costs and benefits of the leading intervention

6.51 Overall the total present value of monetised benefits for Place A in this illustrative example are £334m. The major impacts are from:

- Land Value Uplift as a result of commercial and residential redevelopment and associated regeneration of the area from removing blight and improving landscape;
- Employment benefits from enabling unemployed workers to get jobs through improving their skills. This results in increased income to them and welfare gains from having a job, as well as employment tax benefits to the UK government (not shown separately);
- Wage gains to workers whose skills increase and to the exchequer from increased taxes;
- Employment benefits to local workers as a result of firms shifting location to Place A from the rest of the UK. This results in income and employment tax benefits. There are also employment multiplier impacts; and
- There are also some transport benefits from the creation of a new link road to the commercial site and improved journey time reliability.

6.52 For the rest of the UK the picture is much less positive. In particular:

- There will be some employment losses because of displacement;
- Similarly some of the commercial development in Place A will crowd out other development;
- Welfare impacts will be negative because of reduced employment; and
- This emphasises the importance of understanding displacement effects and the impact on the rest of the economy.

Table 10: Present Value of Benefits and Costs of Example (£ms)

	Place A Impact	Rest of UK Impact	UK Impact
Initial Benefits	95	-11	84
Land Value Uplift (Commercial & Residential)	71	-18	53
Transport User Benefits	37	9	46
Carbon	-19	-1	-20
Other	6	-1	5
Adjusted benefits	239	-124	115
Employment			
Long term unemployed Programme	17	0	17
Skills training	15	0	15
Employment opportunities (Firms relocating & multiplier impacts)	84	-84	0
Productivity gains from innovation	20	-5	15
Agglomeration	10	-2	8
Wellbeing impacts (Community & individual)	66	-35	31
Wider regeneration impacts (landscape)	22	0	22
Other Transport Impacts (Reliability)	5	1	6
Total Benefits	**334**	**-135**	**198**
Total Costs	**96**	**0**	**96**
Net present social value	238	-170	103
Initial Benefit Cost Ratio	1.0	NA	0.9
Adjusted Benefit Cost Ratio	3.5	NA	2.1
Distributional Weighted Sensitivity			
Adjusted Benefits	391	-171	220
Adjusted BCR with Distributional Weights	4.1	NA	2.3
Significant Non-monetised Impacts			
Biodiversity	Moderate Adverse	Neutral	Moderate Adverse
Wellbeing	Large Beneficial	Neutral	Large Beneficial
Crime	Moderate Beneficial	Neutral	Moderate Beneficial
Health	Moderate Beneficial	Neutral	Moderate Beneficial
Value for Money (VfM) Category	Very High	NA	High
Switching Value Category (unweighted)	Very High	NA	Medium
Benefits Change Required	49	NA	-7
Costs Change Required	-12	NA	3
Switching Value Category (weighted)	High	NA	Medium
Benefits Change Required	-8	NA	-29
Costs Change Required	2	NA	14

Overall value for money of the preferred option

6.53 Two measures of VfM are assessed:

- VfM to Place A – reflecting the fact that the programme of interventions is focused on Place A;
- VfM to the UK economy – reflecting the fact that the programme should yield more for the UK taxpayer than it costs (that is BCR>1 allowing for non-monetised impacts).

6.54 In this illustrative example:

- The overall BCR for the UK is 2.1, so that the programme yields over £2 of benefit per £1 spent.
- The impact on Place A is £3.5 of benefit per £1 spent which is higher, reflecting the transfer of employment from residents in the rest of the UK to residents in Place A.
- Non-monetised impacts are on balance positive, with large beneficial wellbeing impacts and moderate crime and health impacts outweighing moderate adverse biodiversity impacts.
- For Place A the overall conclusion is that the VfM of the project is Very High. However, the VfM rating falls to High for the UK as a whole.

Distributional impacts

6.55 The blue lines in Table 10 allow for distributional impacts from applying the welfare weights in Annex H to unemployed and low skilled workers who benefit from the investment package. Doing this results in an increase in benefits within Place A to £391m and increases the Adjusted BCR to 4.1. The UK BCR increases to 2.3. The overall effect of applying distributional weights in this particular illustrative example is to confirm the assessment of the investment package as representing Very High VfM for Place A and High VfM for the UK.

The impact of the preferred option on different target groups

6.56 The target groups picked in Table 11 include those covered by the policy objectives and protected groups and are shown below. Overall, the impacts tend to be positive on target and protected groups supporting further the choice of the preferred option in this illustrative example.

Table 11: Impact of option on different groups

	Impact	Commentary
Local Community	Positive	Option aimed at supporting better outcomes for local residents through lowering unemployment, increasing wages and improving local wellbeing.
Long-term Unemployed	Positive	Tailored programme increases job opportunities for long-term unemployed.
Age	Positive	Positive for 16-24 through increased apprenticeships and for older workers as many unemployed are over 50.
Gender reassignment	Neutral	No distinction in application of option made on basis of gender reassignment.
Sex	Positive	Option applied equally to different sexes.
Being married or in a civil partnership	Neutral	Marital status not a feature of the option.
Being pregnant or on maternity leave	Positive	Support given to access programmes.
Disability.	Positive	Support given to access programmes.
Race including colour, nationality, ethnic or national origin	Positive	Support given to access programmes.
Religion or belief	Neutral	Religious belief not a feature of the option.

Key risks and the impact of their crystallisation on VfM

6.57 The impact of the crystallisation of the five key risks identified above is analysed in Table 12 below. The probability of these risks occurring is shown on the right assuming that all possible mitigation procedures have been put in place. This is assumed to be based on a thorough analysis of the evidence on risks by the programme team.

Table 12: Impact of five different risks on the VfM of the Preferred Option

	Place A		UK		Probability of risk occurring
	BCR	VfM	BCR	VfM	
Commercial and Residential Land Values 15% lower	3.37	High	1.99	High	Medium
Costs of Redevelopment increase by 50%	2.64	High	1.57	Medium	Medium
Costs of Redevelopment reduce by 50%	5.13	Very High	3.05	High	Low
Employment/skills training 20% less effective than planned	3.34	High	1.93	High	Medium
Failure to engage with local community	3.19	High	1.78	High	Low
Wellbeing Value Low range	3.36	High	2.01	High	Medium

6.58 In this example, the preferred option provides at least Medium VfM under all options and consequently is relatively robust to risk challenges.

Further analytical research

Understanding future needs

6.59 Analysis of placed based impacts is still at an early stage. Further work is being done to:

- Develop the measurement of the different capitals important for local areas success;
- Look at how shortfalls in different capital levels interact and impact local economic performance, and what mixtures of programmes best address those shortfalls.

6.60 Research in these areas will be incorporated in future appraisal guidance.

Transformational impacts

6.61 In some cases, transformational change programmes may be required to level up the area where there are shortfalls across multiple capitals.

6.62 Annex A7 of the HM Treasury Green Book defines transformational change as:

"A radical permanent qualitative change in the subject being transformed, so that the subject when transformed has very different properties and behaves or operates in a different way."

6.63 It refers to a "practically irreversible change in a system" that causes self-sustaining internal feedback effects that result in continuing change, or a new stable state, but not reversion to the original state. This transformation persists after the initial stimulus is withdrawn.

6.64 Such change is only likely to occur in areas where there are multiple capital deficiencies and they are of significant magnitude. The achievement of transformational change will require all of those deficiencies to be addressed. Consequently, strategic investment portfolios will likely be required, rather than single interventions, even if those interventions are of significant scale. The area of intervention needs to reflect adequately the level of need.

6.65 The issue of how to assess transformational change is one where there is currently limited consensus or evidence, although DfT has done some work exploring the transformational impacts of transport interventions. This is an area that MHCLG is actively seeking to develop going forward with DfT, HMT and other government departments. This work will look at:

- Further developing logic mapping approaches to better think through how large and complex interventions might lead to transformational change. These will need to assess key conditions required for change to occur and key uncertainties, set out what happens when change does not occur and show who benefits – both people and place;
- Developing appraisal approaches to assess the benefits and costs of large scale, multi-dimensional programmes and portfolios of investment;
- Developing the tools to assess transformational impacts. This includes not only the ability to model significant changes in behaviour at scale and over time but also the ability to understand why changes in behaviour occur and how behaviour varies between different economic actors;
- Building up case study evidence on transformational impacts, the drivers of that change and what sorts, combinations and level of programme intervention are likely to lead to change.

Chapter 7: Useful Sources Of Information And Values

Better Regulation Executive Interim guidance:

Better Regulation Framework - GOV.UK (www.gov.uk)

Toolkit for valuing carbon emissions:

https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

DEFRA Enabling a Natural Capital Approach

https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca

Department for Transport TAG databook:

https://www.gov.uk/government/publications/tag-data-book

Homes England Environmental Impact of New Housing Research and Tool

https://www.gov.uk/government/publications/environmental-impact-of-new-housing-development

MHCLG Evaluation Strategy

https://www.gov.uk/government/publications/MHCLG-evaluation-strategy/MHCLG-evaluation-strategy

English Housing Survey (EHS):

https://www.gov.uk/government/collections/english-housing-survey

HM Treasury Aqua Book on Producing Quality Analysis for Government

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/416478/aqua_book_final_web.pdf

HM Treasury Business Case Guidance for Projects

Guide to developing the Project Business Case (publishing.service.gov.uk)HM Treasury Business Case Guidance for Programmes

Guide to developing the Programme Business Case (publishing.service.gov.uk)HM Treasury GDP deflator:

https://www.gov.uk/government/collections/gdp-deflators-at-market-prices-and-money-gdp

HM Treasury Green Book and Supplementary and Departmental guidance:

https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

Levelling Up White Paper, Ministry of Housing, Communities and Local Government:

https://www.gov.uk/government/publications/levelling-up-the-united-kingdom

Magenta Book Central Government Guidance on Evaluation
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879438/HMT_Magenta_Book.pdf

Office of Budget Responsibility macroeconomic forecasts:

https://obr.uk/publications/

http://obr.uk/forecasts-in-depth/the-economy-forecast/ Rural proofing:

https://www.gov.uk/rural-proofing-guidance

RICS Red Book

https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/red-book

Uncertainty Toolkit for Analysts in Government

https://analystsuncertaintytoolkit.github.io/UncertaintyWeb/index.html

Wellbeing Guidance for Appraisal:

https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing

Annexes

Annex A: Assumptions List

A1 This annex sets out recommended assumptions to use in a MHCLG appraisal. Separate annexes are supplied for some assumptions which require more detailed discussion. In some instances – such as with additionality and optimism bias – the relevant assumptions should be formed on a case-by-case basis, taking into account the guidance provided.

Appraisal period

A2 This should be at the discretion of the user, with a key objective being to strike the right balance between capturing all material impacts in the cost-benefit analysis and maintaining a reasonable level of confidence in the results (given the exponential rise in uncertainty with respect to time). However, costs and benefits should normally be extended to cover the period of the useful lifetime of the assets under consideration. Recommended defaults should be 10, 30 or 60 years, depending on the intervention being considered and - if there is an asset - its expected lifetime.

A3 It is important when deciding the dates over which the appraisal is conducted to allow for the delivery trajectory. For example, if an asset with an expected lifetime of 30 years was to be completed 5 years after the current period t, then the impacts would be measured up to year t+35. If the asset took 4 years to build then these costs would be appraised from t to t+4.

A4 Longer appraisal periods are likely to be required for residential and non-residential development and environmental interventions, while shorter appraisal periods may be appropriate for policy and regulatory changes (a ten-year period can be considered the default). It may be appropriate to include an allowance for the ongoing value of an asset where the appraisal period is truncated.

Distributional weights

A5 The Green Book provides guidance on the use of distributional weights in cost benefit analysis. The use of distributional weights will be most relevant to policies that have a significant progressive element to them (that is policies that benefit low income individuals relatively more than high income individuals). If so, then distributional weights can be used in the calculation of the 'adjusted' BCR but the judgement made on the size of any distributional weights should be made clear for decision makers. Any distributional weighting of impacts should

be presented alongside unweighted impacts. See Annex H for an example of how distributional weights have been applied in housing.

Existing economic use value

A6 Land value uplift is the difference between the economic value of land in its new use and that in its existing use (see Chapter 4 above). To estimate the land value uplift that would be caused by an intervention, it is necessary to estimate the existing economic use value of the land. Where local land value data is not available VOA estimates can be used.

A7 In cases where there is no active economic use of the site and there will not be for the foreseeable future without public sector intervention, it may be appropriate to apply an existing use value of zero.

External impacts of development

A8 Land value uplift aims to capture the net private benefit associated with a development. However, there are external impacts not accounted for in the land value uplift which should be considered in an appraisal. Some external impacts have well established methodologies - for example, valuing carbon emissions - but others, particularly those specific to development, require further work so they can be operationalised into an economic appraisal. A selection of these external impacts is given in Chapter 5. However, all external impacts should be considered in an appraisal and form part of the value for money assessment.

GDP

A9 If the appraisal involves using future GDP levels or requires the uprating of a variable in line with GDP, the default data to use should be the Office for Budget Responsibility's (OBR) latest GDP forecast. This can be found on the OBR's website.

Holding costs

A10 If land is owned by the public sector then the public sector will incur holding costs. These include for example maintenance of land and buildings on the site, maintaining its security and environmental standards. In the absence of site specific evidence then industry standards indicate these can be assumed to be

2% of the existing value of the land per year. Should the land be developed then these holding costs will be avoided.

House prices

A11 The OBR produces a forecast of the mix-adjusted house price index (based on the existing Office for National Statistics indices) at a national level. These are published as part of OBR's Economic and Fiscal Outlook and can be found in their supplementary economy tables. If necessary, future nominal prices beyond the forecast period should be assumed to be in line with long term nominal per capita income growth, consistent with OBR's forecasting methodology. These can be converted into real values using the GDP deflator (see inflation section below). House price assumptions need to be internally consistent with assumptions made on house building rates. In some instances, it may be appropriate to deviate and co-vary both sets of assumptions in sensitivity analysis.

A12 Depending on the spatial distribution of the policy, it may not be appropriate to use national assumptions for house prices. Users may wish to consider housing cycles at a sub-national level to convey divergences in house price growth at different spatial scales, within the bounds of the national forecast. However, price growth should be assumed to converge towards the long-term growth rate of income, as before.

Inflation

A13 The following should be used to adjust prices from nominal to real terms:

- For short time horizons, whole economy inflation (the "GDP deflator") from the most recent forecasts by the OBR;
- For long time horizons, forecasts of the GDP deflator published in the OBR Fiscal Sustainability Report (FSR); and
- For longer time horizons, beyond the end of the OBR's FSR, the GDP deflator should be extrapolated using the growth rate in the final year of the OBR's projection.

A14 Where particular goods or services play an important role in an appraisal, e.g. if building materials or particular types of labour make up a large element of costs, then bespoke inflation assumptions could be used. However these need to be developed in a rigorous way with input from experienced analysts. For business cases which go to MHCLG and HMT, assumptions will need to be agreed with

the Department's Appraisal Group and by HMT spending teams. ONS also publish industry level deflators here.

Land value growth

A15 Land represents a factor of production. Its real value increases over time according to increases in its productivity. Unless there is more specific evidence to the contrary, it should be assumed for appraisal purposes that the future value of land increases in line with real GDP per capita growth rates (see GDP section).

Learning rates

A16 Where particular prices are expected to increase at significantly higher or lower rates than general inflation, the relative price change should be calculated and factored into the economic appraisals.

A17 Cost and performance of different technologies can change over time as manufacturers and installers develop processes and technologies that improve performance and reduce costs through experience. For instance, if the size of the market for a particular good or service increases, then there is a greater potential for economies of scale, and relative prices may then also be expected to reduce.

A18 An evidenced estimate for appropriate learning rates for such technologies should be applied. An example of where learning rates have been applied is in new energy technologies including solar and wind power. For business cases which go to MHCLG and HMT, assumptions will need to be agreed with the Department's Appraisal Group and by HMT Green Book team.

Opportunity cost of public sector assets

A19 Where the public sector owns an asset (e.g. land) in an intervention option, the market value of that asset (or opportunity cost of that asset) should be accounted as a cost in Year 1 of the appraisal, for all options.

A20 Under an option where the public sector holds the asset until the end of the appraisal period, its market value in the final year of the appraisal should be entered as a receipt.

A21 Any income streams or costs to the public sector as a result of holding the asset should also be quantified and included in the appraisal. Here, the receipt from disposal should be accounted for in the denominator of the BCR by netting off public sector costs.

Optimism bias

A22 Optimism bias (OB) is the systematic tendency for forecasts to underestimate costs and overestimate benefits. Costs and benefits need to be adjusted for OB to gauge the robustness of the value for money of a project.

A23 OB should be used to inform decision makers about the risks of costs being higher and benefits being lower than forecast. It is therefore a useful concept in assessing the robustness of a project's overall value for money. All value for money metrics should be calculated with OB included. [53]

A24 In the absence of more specific information, the level of OB to apply to costs should be based on the Green Book supplementary guidance on OB. However, where there is more recent and local evidence on the appropriate OB to apply than the supplementary guidance this should be used.

A25 Homes England provides additional advice to the Green Book on how optimism bias might be applied to residential projects. This is set out in Annex F.

A26 There are a number of difficulties with applying OB to estimated benefits - users are free to decide the most appropriate way of accounting for the risk that the estimated benefits will not materialise. In the context of land value uplift, this includes recognising that some of the land value may not be realised due to atypical costs and inefficient firms. However, it should be recognised that when local land value data is used, these risks may, to a large extent, already be accounted for in the private valuation of the land.

[53] In the Financial Case of a spending proposal, the OB adjustment should be excluded and instead a reasonable level of contingency should be made. This should be based on an assessment by the project team of risks allowing for identified activities to avoid occurrence and mitigate impact. When assessing risks, attempts should be made quantify the impact and probability of its occurrence. Techniques such as quantitative risk assessment could be used to assess contingency needed. For novel projects expert opinion may need to be brought in to support identification and measurement of risks.

Present value year

A27 All future impacts should be discounted back to a common year to calculate their present value. The discount rate should be Green Book consistent. The recommended default should be to discount impacts back to the earliest of the following: the year in which the first public investment is made, the year in which the project opens or the year in which the policy takes effect.

Sunk costs

A28 Sunk costs refer to expenditure or payments already incurred and should be excluded from the appraisal of social value. What matters are costs and benefits affected by decisions still to be made and this should form the central case.

Unit of account

A29 As per Green Book guidance, costs and benefits should normally be presented in market prices rather than in factor prices. This ensures that all goods and services are compared on the basis of a common measure.

A30 Factor costs for businesses and government, which do not pay VAT, must be converted into market prices using the indirect taxation correction factor. The latest estimate is published in the TAG Data Book by DfT and can be found here.

Annex B – Appraisal Summary Table Example

B1 A leading aerospace manufacturer is considering investing in an area but requires a government loan to address a market failure in the lending market. The development is on brownfield land and involves significant 'clean-up' costs. The manufacturer claims that without this government support they will invest abroad. This example considers only two spending options (in practice a wider range of options would be considered). As this Annex is about how to complete an AST, we have assumed 100% additionality for simplicity.

Option 1 (preferred option)

B2 The preferred option is a large capital investment from the manufacturer which is forecast to create 1,000 high skilled jobs, 1,000 construction jobs in the Travel to Work Area (TTWA) and improve the amenity value of the brownfield land in the surrounding area. This amenity value is estimated to be around £10m over 30 years. The clean-up costs allowing for optimism bias are estimated to be £30m. Illustrative Valuation Office Agency (VOA) data on land value uplift suggests such a development would result in a land value uplift of around £30m.[54] The manufacturer requires MHCLG to fund the full £30m clean-up cost in 2022 but is willing to repay £20m of this over 30 years.

B3 However, as a consequence of this development, it is estimated that around 1,000 trees in the local area will be lost.

Option 2

B4 An alternative option is a smaller capital investment from the firm in a nearby area. There would be 500 high skilled jobs created and 500 construction jobs. These would be local jobs in the TTWA. The amenity value of the brownfield land would improve by £5m over 30 years. The clean-up costs are estimated to be £15m. Illustrative VOA data on land value uplift suggests such a development would result in a land value uplift of around £15m. For this option, the manufacturer requires MHCLG to fund the full £15m clean-up cost in 2022 but is willing to repay £5m of this over 30 years.

[54] VOA data provides illustrative land value uplift estimates based on typical development costs. In this example, the estimated 'clean up' costs are considered atypical and so should be accounted for separately.

B5 An AST for these options is given in the table below with the VfM rating in row I:

Table 13: Example of an AST

		Option 1	**Option 2**
A	Present Value Benefits[55] [based on tried and trusted methods][56] (£m)][57]	£10m	£10m
B	Present Value Other Benefits [evolving methods] (£m)[58]	£10m	£5m
C	Present Value Public Sector Costs (£m)	£10m	£10m
D	Net present social value (£m) [A-C] or [A+B-C]	£0-10m	£0-5m
E	'Initial' Benefit-Cost Ratio [A / C]	1	1
F	'Adjusted' Benefit Cost Ratio [(A + B) / C]	2	1.5
G	Significant Non-Monetised Impacts (quantified impacts)	Loss of 1,000 trees in local area	None.
H	Significant Non-Monetised Impacts (unquantified impacts)	None	None
I	Value for Money (VfM) Category	Medium (because of non-monetised costs impacting on adjusted BCR)	Medium as adjusted BCR = 1.5 and no significant non-monetised impacts.
J	Switching Values & Rationale for VfM category	If non-monetised costs > £5m then VfM becomes Acceptable (that is Adjusted BCR<1.5). If non-monetised costs are > £10m then VfM becomes Poor (that is Adjusted BCR<1). Unlikely non-monetised costs big enough to slip VfM to Poor but might fall to Acceptable.	No significant non-monetised impacts so option is Medium VfM

[55] In rows A and B a benefit may be positive or negative (in which case it is called a disbenefit).
[56] These are based on methods using established Green Book Principles, Green Book Supplementary and Departmental guidance. Where that guidance identifies a method as having a lower level of certainty because it is evolving it should go into Row B. An example of this would be agglomeration impacts in transport analysis.
[57] Note this includes estimates of land value uplift (see Chapter 4)
[58] These relate to impacts based on emerging techniques or where there is a high degree of uncertainty in the results produced by those techniques, e.g. amenity impacts. In some cases these will be discussed in supplementary guidance but be identified as being less reliable than other impacts.

K	MHCLG Financial Cost (£m)	£30m in 2022/3	£15m in 2022/3
L	Optimism bias allowance	20% of costs	20% of costs
M	Life Span of Project	30 years	30 years
N	Other issues	Analysis only based on illustrative land value data 1,000 high skilled jobs & 1,000 gross construction jobs from policy in the local area will increase local output.	Analysis only based on illustrative land value data. 500 high skilled jobs & 500 gross construction jobs from policy in the local area will increase local output.

B6 The table below illustrates how these numbers have been derived.

Table 14: Calculations underlying AST

	Option 1 relative to counterfactual (preferred option)	**Option 2 relative to counterfactual (low cost option)**
Land value uplift[59] (a)	30	15
Clean-up cost initially funded by MHCLG (b)	30	15
Manufacturer payment to MHCLG (c)	20	5
Initial MHCLG financial cost (d)	30	15
Present Value Benefits [tried and trusted methods][60] (e) = (a) – (c)	10	10
Present Value Other Quantified Benefits (g) - represented by improved amenity value	10	5
Present Value Costs (f) = (b) – (c)	10	10
Net present social value: Using Initial Benefits = (e) – (f); Using Adjusted Benefits = (e) + (g) - (f)	0-10	0-5
Initial Benefit Cost Ratio (e) / (f)	1	1
Adjusted Benefit Cost Ratio [(e) + (g)] / (f)	2	1.5
Out of BCR calculations		
<u>Employment Impacts</u> Local employment impacts can be valued using the Annual Survey of Hours and Earnings (ASHE). National employment effects from this intervention are assumed to be zero as the increase in local construction and high skilled jobs comes at the expense of jobs in other areas.		

[59] 100% additionality has been assumed for the purposes of illustrating an AST.
[60] For simplicity, we have not included clean-up costs because of the corresponding MHCLG financial support which would cancel it out.

Annex C – Land Value Uplift For Residential Development

C1 The methodology for appraising development is explained in Chapter 4. This annex provides further detail on how the methodology can be applied to the appraisal of residential development. This methodology is also set out in TAG.

C2 Where local land value data is available, this should be used in the first instance. This could be informed by a site-specific development appraisal. This would provide evidence on the GDV likely to be realised from that specific site, as well as the build costs and fees a developer would incur, which would be needed in addition to the land's current use value.

C3 Where local land value data is not available, Valuation Office Agency (VOA) estimates can be used.

C4 The value to society of a decision to grant permission for residential development may be separated into:

- The private benefit associated with the change in land use, as represented by the change in value arising from the land moving from its current use to a more productive use. This change is defined as the value of the land in its new use (in this case residential) minus the value of the land in its existing use (e.g. agriculture);

- The net external impact of the resulting development (see Chapter 5 for a full list of external impacts to be considered).

C5 The equation becomes:

$$\text{Net private value of housing} =$$
$$\text{New use land value [1]} - \text{Existing land use value [2]}$$

$$\text{Net social value of housing}$$
$$= \text{Net private value of housing}$$
$$+ \text{Net external impact of housing development [3]}LLd$$

C6 A range of infrastructure is required to facilitate new development, including water, sewerage and electricity connections. The impacts of granting

planning permission may be attributed jointly to the land use development and any accompanying infrastructure improvements, including those relating to transport. It would not be appropriate to ascribe the impacts to the development in isolation.

C7 Note that costs of infrastructure, whether borne by developers or by the exchequer, do not affect the overall valuation of the change in land use outlined above. However, the incidence of infrastructure costs does have distributional effects – to the extent that developers contribute towards these costs, we would expect the costs to be 'passed back' to landowners in the negotiated price of undeveloped land, so reducing the surplus that otherwise accrues to landowners on the grant of permission.

Residential land value [1]

C8 The residual method of land valuation gives the maximum price a firm is willing to pay for land for development. As noted in Chapter 4, the developer will also incur costs and would expect a minimum level of profit from developing a site. In a competitive market, the firm will pay a price that gives a normal level of profit.

$$\text{Residential land value (or price of developed land)} = \text{hectarage of housing} \times \text{residential land value per hectare}$$

C9 Users must firstly calculate the hectarage of housing. The total value of the land in planned residential use is then estimated by multiplying that hectarage by a per hectare residential land value. Alternatively, the residential land value may be estimated by other means, for example:

$$\textit{Residential land value} = \textit{GDV-build costs} - \textit{externals} - \textit{professional fees} - \textit{sales costs} - \textit{finance costs} - \textit{contingencies} - \textit{normal level of developer profit}$$

C10 Any abnormal costs not covered in the above values should then be netted off as a disbenefit to the private sector.

C11 For appraisal, the Green Book advises that 'Transfers of resources between people (e.g. gifts, taxes, grants, subsidies or social security payments) should be excluded from the overall estimate of Net Present Social Value (NPSV).' *Market* land values are reduced by affordable housing requirements, which allocates a proportion of the total value to society of new housing towards building additional affordable housing.

C12 The values published in MHCLG 'Land value estimates for policy appraisal' are already adjusted in this way, so as to provide values for appraisal which reflect the full value to society of new housing. Where local land value estimates are used these should also be prepared so as to exclude, for example, the impact of affordable housing requirements on prices.

Existing land use value [2]

Existing land use value
= {hectarage of dependent housing on PDL
× (per hectare value of land in industrial use}
+ {hectarage of dependent housing on non
-PDL × (per hectare) value of land in agricultural use}

Note: PDL = previously developed land

C13 Users must then calculate the hectarage split between previously developed land (PDL, also known as 'brownfield') and undeveloped land (non-PDL, also known as 'greenfield'), of the land for residential development. The overall value of the land in existing use is then estimated by multiplying the PDL and non-PDL hectarages by corresponding per hectare values.

C14 For PDL, a regional-level per hectare value for industrial and warehouse land can be used; for non-PDL, a regional-level per hectare value for agricultural land in mixed use can be used. The MHCLG 'Land value estimates for policy appraisal' publication' contains average value estimates for industrial and agricultural land in England, though users may draw upon alternative sources of evidence to inform estimation of land values in areas of dependent development.

Net external impact of housing development [3]

Net external impact of housing development
= {hectarage of dependent housing on non
-PDL × (per hectare) external impact of development on non
-PDL} + transport related external impact of development

C15 The existing hectarage split between PDL and non-PDL for development is also used to estimate the overall value of the external impact of the development. For non-PDL, estimates of the external benefits of undeveloped land are set out in Chapter 5. The mean average of the reported estimates of external benefits of 4 types of land: urban fringe

(forested land), urban fringe (greenbelt), intensive agricultural land and extensive agricultural land can be used.

C16 For PDL, the external impact of development has not been monetised, though in certain circumstances redevelopment might bring external benefits through, for example, improving the aesthetic value of the area surrounding the development (see Chapter 5).

C17 Users may draw upon alternative sources of evidence to inform estimation of the external impacts of development.

C18 As noted earlier, there is a further external impact of development to be considered in the overall valuation - the transport costs imposed on existing users of the network by residents of the new development. These transport-related external impacts of development should be added to the non-transport-related external impacts discussed above (see Chapter 5 for further details).

Qualification to [3] when applying the wider area impacts approach

C19 In regeneration areas, to avoid double counting, the wider area impacts approach set out in Chapter 5 should be used rather than the external impacts identified in **equation [3]**. Chapter 5 provides a calculator to assess impacts in regeneration areas.

Development in future years

C20 For any additional housing that is expected to be delivered in future years, land value uplift should be uprated in line with real per capita GDP growth each year. This assumption is in line with the discussion set out in the house price and land value growth sections. To simplify and in the absence of further data, we assume that this applies to all elements of net social land value uplift including agricultural land values, industrial land values, and externality values.

C21 Given the uncertainty surrounding future house prices it is recommended that sensitivity analysis is carried out to test the robustness of the results. The sensitivities to be applied will depend on forecast GDP per capita growth, but a reasonable range would be:

- A low sensitivity given by nominal growth in line with price inflation (that is a 0% real increase in house prices and LVU per annum); and

- A high sensitivity of a 5% increase in house prices and land value uplift above inflation, which is consistent with previous appraisal guidance assumptions.

Annex D – Land Value Uplift For Non-Residential Development

D1 This Annex describes MHCLG's approach to valuing the impacts of non-residential development.

- The preferred approach involves the use of local land value data to assess the private costs and benefits of a policy.
- In the absence of reliable local land value data, an approach using illustrative VOA land value data is outlined.

D2 Even where local data is available it may be useful to cross-check estimates using VOA data. Large discrepancies should be investigated further to find out what is driving them.

The approach

D3 The value to society of a planning decision to grant permission for new non-residential development may be separated into:

- The private benefit associated with the change in land use, as represented by the uplift in value arising from the land moving from its current use to a more productive use. This uplift is defined as the value of the land in its new use (in this case commercial) minus the value of the land in its existing use (e.g. agriculture); and

- The net external impact of the resulting development, including any loss or gain in amenity.

D4 The equation below summarises this:

Net private value of non-residential development
=Non-residential land value [1]-Existing land use value [2]

Net social value of non-residential development
=Net private value of non-residential development
+Net external impact of non-residential development [3]

The calculation

D5 Below is a discussion of the key elements of the appraisal, including the data inputs and underlying assumptions. Note that a number of data inputs must be specified by the user on a case-by-case basis as they relate to the nature of the development in question.

Non-residential land value [1]

D6 The total value of the land in planned non-residential use is estimated by multiplying the hectarage of land by a per hectare non-residential land value .

$$\text{Non-residential land value} = \text{Hectarage} \times \text{Land value per hectare}$$

a) Locally available land value data is available

D7 Where possible locally derived land value data should be used to estimate the land value from post-development. It should be noted that in practice land values vary substantially on a site-by-site basis, given differences in, for example, proximity to amenities or density of development. As land value estimates are one component of subjective residual valuations made by developers, it is important that an explanation for how these estimates are derived is clearly set out in the economic dimension of a business case:

- The valuation of a site should be based on the most valuable possible use, rather than the highest value that could be obtained for its current use;
- An assessment of the value of a site in the most valuable alternative use should be based on the advice of a suitably qualified and experienced valuation surveyor. Either in-house valuers or external experts can be commissioned to carry out the valuation;
- Valuations should be based on the definitions of 'market value' (MV) used in the 'RICS Valuation of Professional Standards' (the Red Book). Valuations should take into consideration the prospects for development and the presence of any purchaser with a special interest, insofar as the market would do so; and
- Site values used should follow the Green Book guidance on prices where market prices may need to be adjusted to show the full value to society.

D8 Users are encouraged to draw upon alternative sources of evidence to inform estimation of land values in areas of dependent development. Any site values based on recent sales should be consistent with the intended development on:

- Business use of site: for example commercial property can be used as an industrial plant, a logistics warehouse, a hi-tech lab or as office space and the value generated by each of these developments is very different.

- State of development of site: represent typical levels of value for sites that are ripe for development, in that they have the following conditions:

    - no abnormal site constraints;

    - a planning permission of a type generally found in the area; and

    - services to the edge of the site.

- Measurements: the size of the site should be consistent.

b) Locally available land value data is not available

D9 The preference is to use locally derived land value data to estimate both the **existing land value and future non-residential land value**. Where these are not available, typical values estimated by the VOA can be used.

D10 The VOA provides non-residential land value estimates at Local Enterprise Partnership (LEP) area level. Values are available for agricultural use, industrial use and commercial use. For industrial and commercial values, estimates for multiple areas within LEP area are available and users should use their judgement as to which is most appropriate for the area they are appraising. For commercial values, values are available for both city centre and out of town offices (or for London, inner or outer London) and again users should use their judgement as to which is appropriate. VOA's non- residential land values should be regarded as illustrative and represent typical levels of value for sites for development. They should be regarded as being at market prices (that is gross of indirect tax).

D11 As noted above land values vary substantially on a site-by-site basis, given differences in, for example, proximity to amenities or density of development. Users are therefore encouraged to draw upon alternative sources of evidence to inform estimates of land values.

D12 The economic dimension of the business case should clearly set out the justification for choices made in use of land value data.

Existing land use value [2]

$$\text{Non-residential land value} = \text{Hectarage} \times \text{Land value per hectare}$$

D13 Where locally available data is available users may draw upon those sources of evidence to inform estimation of land values.

D14 Where locally available data is not available then typical values estimated by the VOA can be used.

Net external impact of housing development [3]

$$\begin{aligned}\text{Net external impact of non-residential development} \\ &= [\text{Hectarage} \times (\text{per hectare})\ \text{External impact of a development}] \\ &+ \text{Transport related external impact of a development}\end{aligned}$$

D15 Users may draw upon alternative sources of evidence to inform estimation of external impacts of development. A conservative assumption may be to assume that the net external impact of non-residential development is zero even though redevelopment may bring external benefits through, for example, improved aesthetic value of the area surrounding the development.

D16 The overall benefits related to the development are therefore:

$$\begin{aligned}\text{The net social value of the development is} \\ &= \text{Net private value of non-residential development [1]-[2]} \\ &+ \text{Net external impact of non-residential development [3]}\end{aligned}$$

In which the land value uplift estimate captures the net private benefits and the net external impact captures externalities such as changes in amenity.

Costs

D17 All public sector costs should be included. If the land is owned by the public sector then it will be incurring holding costs. These costs include, for example, maintenance of land and buildings on the site, maintaining its security and environmental standards. In the absence of site specific evidence these can be assumed to be 2% of the existing value of the land per year (see holding

costs). Should the land be developed then these holding costs will be avoided. This needs to be reflected in the appraisal as a negative cost. Any private costs associated with the development should be included in the appraisal as a disbenefit and therefore feature in the numerator of the BCR calculation.

Appraisal period

D18 Expected to be 10, 30 or 60 years, depending on the intervention being appraised.

Timing

D19 The land value uplift is assumed to happen at the same time as a change in land use. There is no assumption that benefits are built slowly over a specified time period. All other costs and benefits will need to be discounted at 3.5 per cent per annum in line with the HMT Green Book.

Multiple sites

D20 Where there are multiple sites an overall BCR may be calculated provided there is a positive uplift on all sites.

Additionality

D21 Not all economic activity associated with the land value uplift of an intervention will be additional – some will be displaced from other locations and some might have occurred in the absence of the intervention (deadweight). As a result, in an economic appraisal the land value uplift associated with an intervention should be adjusted for additionality.

D22 For example, it would be expected that the additionality of the land value created would be relatively high for an intervention where there is strong market failure (e.g. access to finance), a strong strategic rationale (e.g. clustering of similar industries meaning investment in an alternative location is unlikely), where the development is in a low displacement sector and where there is limited alternative uses for the land. Where these considerations do not hold additionality is likely to be significantly lower. Annex E provides some illustrative values to use when assessing additionality.

A worked example

D23 Assume a policy option being appraised is a grant of £3.7m for the second phase of works at a 39 acre site owned by the public sector. The land is highly contaminated and the grant is to be used to remediate the land. The remediation of the land would enable businesses to move to an area where there is an existing cluster of businesses in a highly productive sector. Also

assume that an additional £4.2m of infrastructure works including road and electricity works simultaneously goes ahead to increase the site's commercial viability. These costs were incurred by the public sector. The land is publicly owned with holding costs of approximately £65,000 per year.

D24 There is data available on the current value of the land and the value of the land post remediation. The future land value estimate is based on the sale of a piece of land in a similar state of development and to be used for the same business use.

Table 15: Worked example for non-residential development

Factor	Detail
Site area	39 acre (≈ 15 hectares)
Primary cost	£3.7m grant for remediation
Other costs	£4.2m infrastructure works in the first year. A negative holding cost to the public sector without intervention (assumed £65k per year)
Existing use land value estimate	£30,659 per acre
Future use land value estimate	£200,000 per acre

D25 **Costs:** the costs are valued as the net present value costs to the public sector. The costs include the £4.2m infrastructure works and the £3.7m grant less the negative (avoided) annual public holding cost of £65k. Using the 3.5% discount rate this gives a net present public sector cost of £7.1m (appraised over 10 years for simplicity).

D26 **Net private value:** the net private value is calculated using the land value estimates set out above. The new use land value of £200k per acre gives a total value of £7.8 million over 39 acres.[61] Subtracting the £1.2 million[62] existing land value (before remediation) gives a net present private value of £6.4m rounded to the nearest hundred thousand and after discounting by 3.5 per cent to reflect the fact it takes a year to remediate the land.[63]

D27 **Net external impact:** the net external impact is estimated to be zero. This is a conservative estimate since there may be an amenity value from the redevelopment. Therefore, the present value benefit of the development is £6.4m.

[61] 39 x £200,000 = £7.8m
[62] 39 x £30,659 = £1,195,701
[63] £7.8m - £1.2m = £6.6m = £6.4m discounted at 3.5% as recommended by the Green Book.

D28 **'Initial' and 'adjusted' BCR:** the 'initial' and 'adjusted' BCR before an additionality factor is applied is:

$$BCR = \frac{Present\ value\ benefits\ \ (£6.4m)}{Net\ present\ public\ sector\ cost\ (£7.1m)} = 0.9$$

D29 **Additionality:** the above calculation assumes 100% additionality, that is that the firm which 'takes over' the site only does so as a result of the intervention and there is no displacement of economic activity elsewhere. However, although it is reasonable to argue that there would be no deadweight (given the BCR is less than one indicating such an investment by the private sector would not happen as it would not be commercially viable), there may still be some displacement of economic activity from elsewhere.

D30 **Sensitivity analysis:** sensitivity analysis can be used to see how the BCR might change if assumptions were altered with respect to additionality. Sensitivity analysis should look at both costs and benefits. For example:

a. Benefits – it might be that the land price after intervention is overly optimistic or only a proportion of the site is wanted by firms so that benefits are lower. If this occurred and benefits were reduced by for example 10%, the BCR would fall to £5.8m/£7.1m = 0.8.

b. Costs – Alternatively the costs of remediation or of additional public sector infrastructure might be different from central estimates. Three illustrative examples are shown in the table of a 40%, 100% and 150% increase in total costs (initial land value, remediation + other infrastructure-less holding costs).

D31 For example, a 100% increase in costs leads to BCR=£6.4m/£14.2m = 0.45. The BCRs for the other two cost increases are shown in the table below.

Table 16: BCRs with varying levels of optimism bias

	10% lower benefits	**40% higher costs**	**100% higher costs**	**150% higher costs**
BCR	0.80	0.65	0.45	0.35

D32 **Switching values:** sensitivity analysis can also be used to identify a 'switching value' where the VfM moves to a different band. This can be used to examine non-monetised impacts as well as uncertainty in monetised impacts. In the example the potential for amenity benefit from the development is examined. The question is, "How big does this amenity benefit need to be for the BCR to be 1, 1.5 or 2, for example?"

Table 17: Increase in land values required from external amenity impact to shift to new BCR

	BCR = 1	BCR = 1.5	BCR = 2
Required additional benefits for given present value costs of £7.1m	£700,000	£4,250,000	£7,800,000
Additional amenity value required per acre (to nearest £1000)	£18,000	£109,000	£200,000

D33 As the sensitivity analysis shows, the BCR of the development could fall to as low as 0.65 if Optimism Bias of 40% was applied to the costs of the remediation. The BCR could be 1 if the post-remediation value of the land was approximately £18,000 per acre higher than the £200,000 it has been estimated at, or if the value of the net external impact of development was valued positively at 11% of the value of the private benefit instead of being valued at zero. With no other impacts to consider - and given that the size of the amenity benefits needs to be relatively large even if 100% additionality is assumed - then this policy option could be considered Poor value for money.

Annex E – Estimating Additionality

E1 This chapter provides guidance on quantifying the size of the additionality for residential and non-residential developments.

E2 Additionality is the real increase in social value that would not have occurred in the absence of the intervention being appraised. For developments the key factors involved in assessing additionality are:

a) Deadweight – defined as the level of target outputs/outcomes that would have been produced if the intervention did not go ahead. This involves estimation of what scale and type of development, if any, would have taken place on the site in the absence of intervention, and over what time frame.

b) Displacement – defined as the level of outputs/outcomes (occurring under the counterfactual and the intervention options) accounted for by reduced outputs/outcomes elsewhere in the target area.[64]

E3 Where interventions are targeted on particular areas (e.g. through levelling up) or target groups (e.g. low income groups or particular industries/commercial groups) then leakage also becomes relevant. This represents the proportion of outputs that do not go to the target group/area. High rates of leakage indicate that that the intervention is failing to achieve its key objectives. Analysis of leakage is a key part of distributional analysis.[65]

E4 To estimate the correct level of additionality it is essential to properly determine the counterfactual and work through the logic model of the intervention. This involves clarifying the chain of causation through which inputs translate into outputs and outcomes, both desirable and otherwise.

E5 The approaches to measuring additionality in residential and non-residential developments are set out below.

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[64] Substitution – which is the replacement of one type of input by another type in response to an intervention is unlikely to be relevant for residential and non-residential interventions so is not discussed further.

[65] At the local level there are also likely be multiplier impacts relating to increased economic activity – these are covered in the Place Based Analysis Chapter.

Box 5: The link between additionality and VfM

There is a direct link between the size of the additionality associated with a policy option and the estimated VfM. This is particularly important to note when private benefits represent a significant proportion of overall benefits. When this is the case, in the absence of a sound rationale for intervention such as a market failure, it would be reasonable to assume that in the absence of government intervention these private benefits would materialise anyway. This would suggest such a policy option would have significant deadweight and minimal additionality, and therefore be poor VfM. However, where there is evidence of a market failure preventing a development from taking place in the absence of government intervention, it would be reasonable to assume there is less risk of deadweight and greater levels of additionality associated with the policy (meaning higher VfM).

Additionality for residential developments

E6 Three key factors determine the extent of additionality.

- The degree to which there is a clear market failure which means that market outcomes are suboptimal (e.g. development is too low because of failure to take account of positive externalities, or there are credit constraints on small builders due to asymmetric information);
- Whether the focus of the intervention is on the demand or supply side of the residential market. Demand side policies tend to have higher elements of displacement than supply side policies as they do not initially increase the volume of housing stock (that occurs in response to subsequent price increases)[66]; and
- The point in the housing cycle. In economic upswings housing interventions are likely to be in greater competition for resources with existing planned activity, leading to greater displacement.

E7 Ex-ante assessment of additionality is often extremely difficult to quantify, and therefore any figures used should be subject to rigorous sensitivity analysis as part of the appraisal. Users may wish to calculate a switching value of additionality that gives an overall BCR of 1 (or NPSV of zero) for the policy, that is, what number or percentage of dwellings would need to be genuinely additional in order for benefits to exactly equal costs.

[66] There are important distributional impacts from demand side interventions which need to be taken into account. For example, interventions might be targeted on extending home ownership to first time buyers or for less affluent families.

E8 The following bullets set out potential additionality assumptions that could be used in the absence of alternative evidence to help inform the value for money of a housing intervention:

- **0-25% additionality**: policies which fall into this category will be demand focussed. The market failure underpinning the intervention may also be less prevalent than in the past (such as access to finance, though we may still expect this to be significant for Small and Medium Enterprises). These policies are therefore likely to have a very large amount of deadweight and displacement associated with them.

- **25-50% additionality**: policies which fall into this category may be demand or supply focussed but the level of additionality is higher because of the point in the housing cycle when the intervention takes places, and / or because the market failure (ideally supported by local evaluation evidence) is stronger. For example, the policy may be targeted at a particular group like Small and Medium Enterprises (SMEs) or first time buyers. Deadweight or displacement is likely to be large.

- **50-75% additionality**: policies which fall into this category will usually be supply focussed with good supporting evidence justifying the additionality assumption. Deadweight and displacement are likely to be relatively small. An example would be Affordable Housing where there is strong evidence to suggest housing of this type is unlikely to be built by private developers in the absence of policy and very little crowding out of private development occurs in practice.

- **75%+ additionality**: policies which fall into this category will usually have a strong supply focus with good supporting evidence. Deadweight and displacement are likely to be small. For example, it could cover a situation where there are relatively high ‘clean-up’ costs which mean the site is unviable (and so would not go ahead in the counterfactual) and there are no other sites available in the local area. There could also be a condition of funding that housing would need to be delivered on top of local plans. The site may also be located in an area of high housing need. General economic conditions might also be relatively muted, maximising any additional impacts on the demand side (if applicable).

Specific evidence for supply side housing interventions

E9 Specific evidence on the additionality of supply side housing interventions has been developed by AMION. AMION has calculated deadweight and displacement ready reckoners to provide approximate estimates of each impact. Figures 10a and 10b below show the ready reckoner flowchart for both deadweight and displacement. These should be followed to calculate deadweight and displacement for supply side housing interventions.

Deadweight ready reckoner

E10 In most cases the preferred approach to assessing deadweight is to construct a bespoke counterfactual built on evidence-based judgments. However as a general guide to analysts, a deadweight ready reckoner is provided to indicate how the deadweight associated with supply-side housing projects could be assessed.[67] It provides a plausible range of deadweight values associated with different types of project. The degree of deadweight that should be applied will vary according to judgement of the significance of individual factors and the strength of the evidence.

Displacement ready reckoner

E11 The displacement ready reckoner is based on regression analysis carried out by AMION to estimate displacement associated with government supported projects. It is designed to be used to support the estimate of displacement for supply-side housing projects. Key factors affecting displacement have been identified as local housing market affordability; development activity in the local area; the scale of the development; and the proportion of homes that are non-market homes.

E12 To estimate total additionality the following formula should then be used once the deadweight and displacement calculations have been made:

Additionality = (1 - deadweight) * (1 - displacement).

E13 There are two important caveats to these ready reckoners:

- They should only be applied to supply side housing interventions.
- They do not assess leakage, place based or distributional impacts. Where these are judged to be important by the user, further analysis would need to be done to understand their impacts in line with the Green Book Annex A2 and A3.

[67] Note that the ready reckoner does not apply to schemes which involve the provision of developer finance.

Figure 10a: Flowchart for calculating deadweight

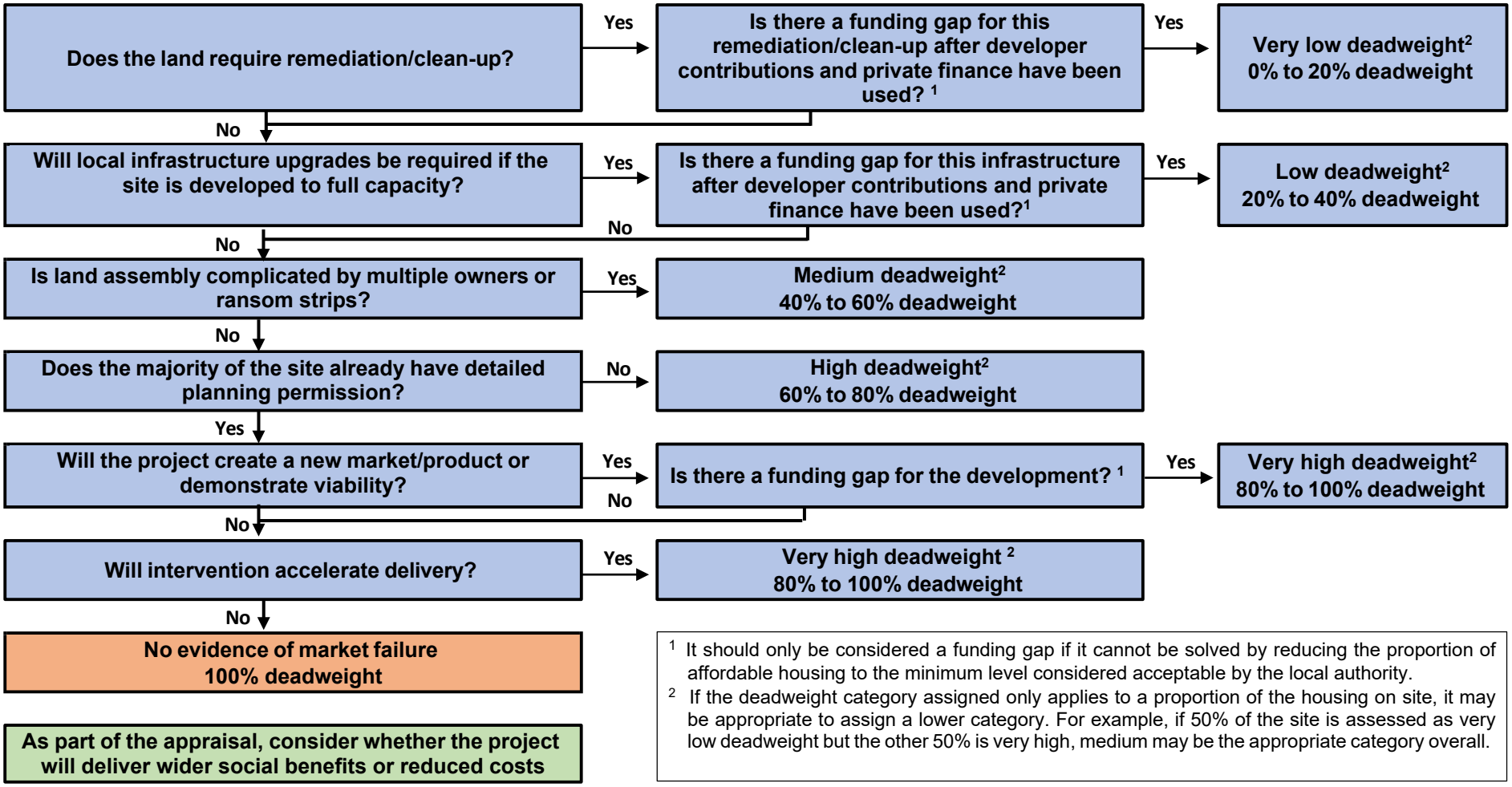
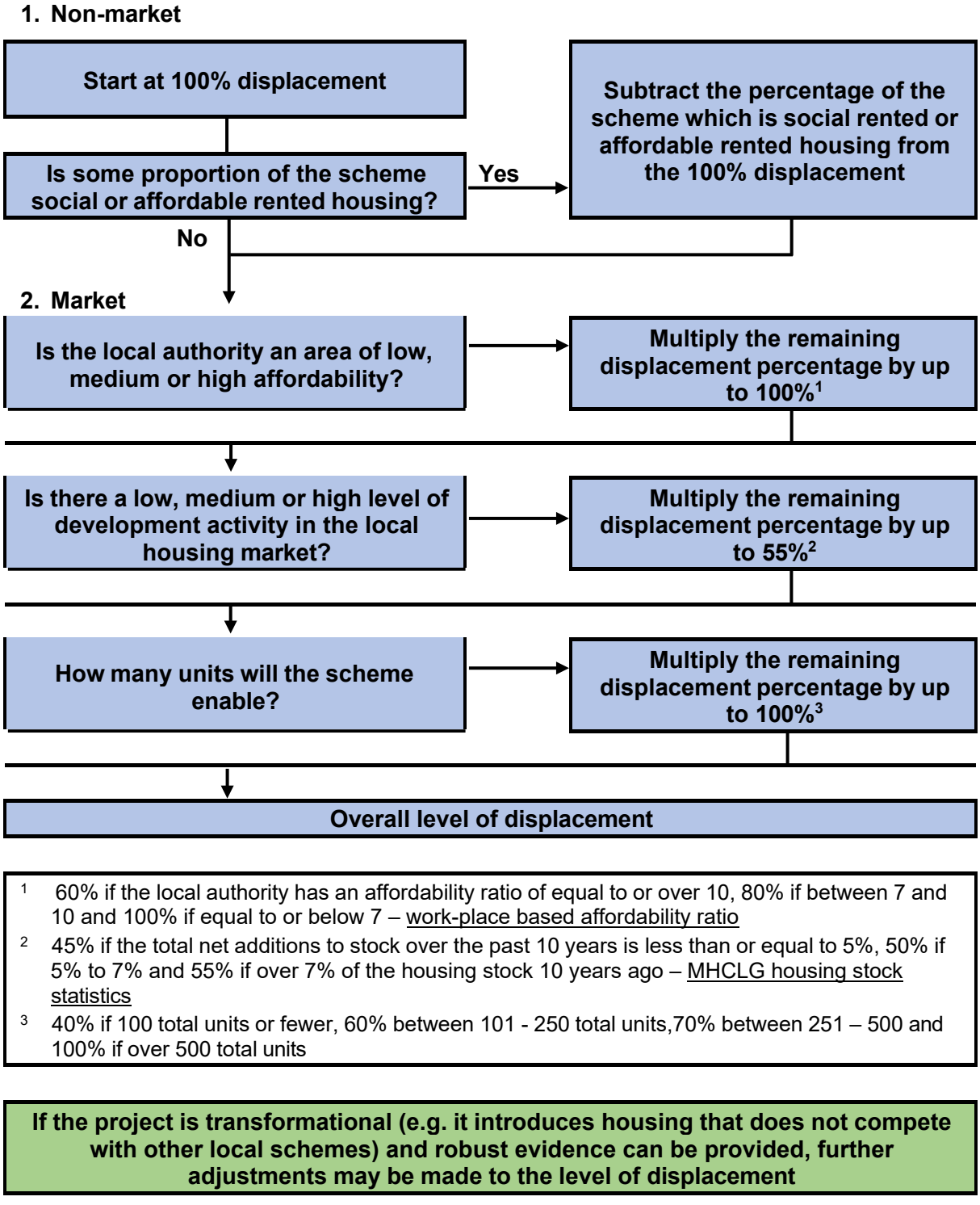


Figure 10b: Flowchart for calculating displacement



1 60% if the local authority has an affordability ratio of equal to or over 10, 80% if between 7 and 10 and 100% if equal to or below 7 – work-place based affordability ratio

2 45% if the total net additions to stock over the past 10 years is less than or equal to 5%, 50% if 5% to 7% and 55% if over 7% of the housing stock 10 years ago – MHCLG housing stock statistics

3 40% if 100 total units or fewer, 60% between 101 - 250 total units,70% between 251 – 500 and 100% if over 500 total units

If the project is transformational (e.g. it introduces housing that does not compete with other local schemes) and robust evidence can be provided, further adjustments may be made to the level of displacement

Box 6: Example of the application of deadweight and displacement calculators

A local authority is bidding for £1m to unlock a site which will release 1.5 ha of brownfield land for the residential development. The final site will have 60 units, of which 20 units will be affordable or social rent. It is currently a riverside industrial site with significant decontamination costs, demolition, and flood defence requirements, for which the local authority is seeking a grant to part meet costs. The bid includes an industry standard valuation of the site and an estimate of the cost of works based on similar schemes. The affordability ratio in the local authority is 8.5, and the total net additions to stock over the past 10 years is 6.5%.

Deadweight - The deadweight of the scheme is assessed as between 0% and 20%, with a central estimate of 20% to reflect that a proportion of the site is likely to be developed in the future without addressing the abnormal costs in the remainder of the site. Most of the land within the site requires significant remediation and clean up before it can be used for development. There is clear evidence from the site-specific valuation that it is the additional costs related to this that creates a funding gap / viability issue which will prevent most of the site being developed. There are no reasonable changes to the scheme, such as reducing the proportion of affordable housing, that would be acceptable within local planning guidelines.

Displacement – the level of displacement depends on the proportion of social/affordable rented housing, the level of affordability, the level of development and the number of units built. Based on the example:

Displacement = (100% – % of social/affordable rent) x medium affordability (80%) x medium development activity (50%) x number of units (40%)

= (1 - 0.33) x 0.8 x 0.5 x 0.4 = 11%.

The final additionality of the scheme is (1 – deadweight) x (1 – displacement)

= (1 – 0.2) x (1 – 0.11) = 71%.

Additionality for non-residential developments

E14 As Chapter 4 explains, one way of accounting for potential displacement and deadweight is to adjust the gross land value uplift estimates of an intervention. To guide users on how this adjustment could be done, the

framework set out in Figure 11 could be used in conjunction with sensitivity analysis in a non-residential appraisal. Please note, the sizes of the adjustment factors are purely a guide. **If there is evidence on the appropriate size of these adjustment factors then this should be used in the first instance.** In the absence of this information, the illustrative figures can be used.

E15 The framework in Figure 11 sets out various criteria that would need to apply for there to be minimal displacement and deadweight from a particular intervention. For example, the existence of a market failure and strong strategic rationale for a development coupled with the industry under consideration being in a relatively low displacement sector would lead to high additionality being assumed. This might be a firm wishing to expand in a geographic area where there is a clustering of industry it would benefit from being near to but being unable to do so because of a failure in the lending market. In this case a relatively small downward adjustment would be made to the gross land value, for example 75% of the gross land value might be used in the appraisal.

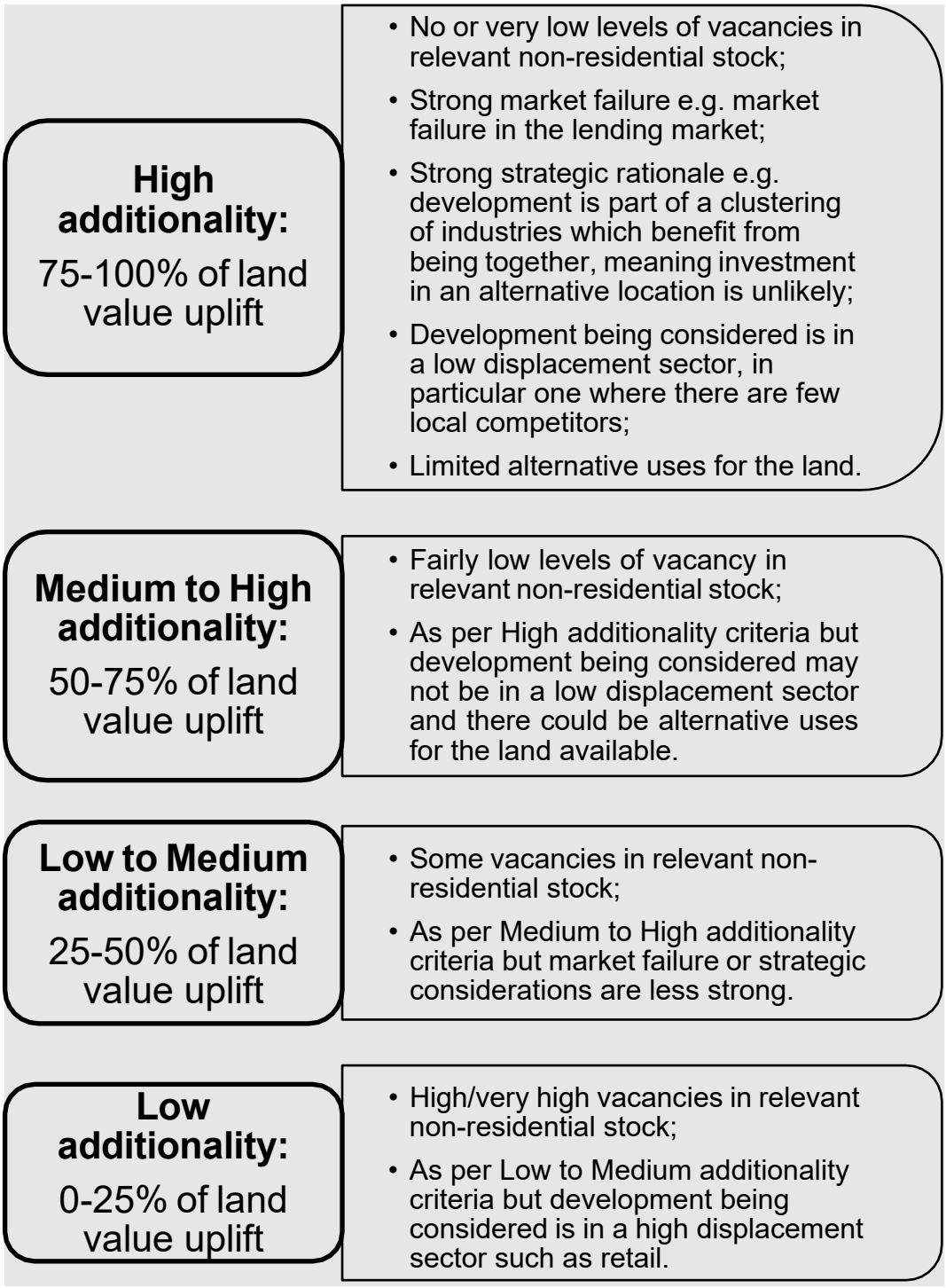
E16 On the other extreme, where there is a weak market failure and strategic rationale for intervening, and where the industry under consideration suffers from significant displacement (such as retail), the gross land value would be significantly adjusted downwards, with the net impact being 25% or less of the gross land value created.

E17 The levels of existing vacancy rates in the non-residential sector will also be important. Where vacancy rates are high for the relevant sector then levels of additionality are likely to be low and additionality assumptions should be adjusted to reflect this.

E18 Analysts will need to exercise judgement on the appropriate size of the adjustment to use taking into account the criteria below. As part of any sensitivity analysis, it may be useful to calculate a 'switching value' that is the size of the additionality factor required to make the development NPSV positive.

E19 The sensitivity analysis on the land value estimate, as well as the potential for non-monetised impacts and the externalities in Chapter 5 should inform the value for money category and 'adjusted' BCR. In particular, this sensitivity analysis will be useful in arriving at an overall judgement on the value for money category and the range it takes.

Figure 11: Additionality framework for non-residential development



Annex F - Homes England Optimism Bias Guidance

Optimism bias on capital costs

F1 This annex provides advice to support analysts in determining the appropriate level of optimism bias (OB) to apply to costs in the appraisal of Homes England's interventions.

F2 There are two parts to this annex:

- The first summarises new research that sets out a Reference Class Forecasting (RCF) approach for projects and programmes supported by Homes England to better inform judgements by building on HMT's optimism bias supplementary guidance. This should be used as the core approach to estimating OB.
- The second provides guidance on the practical application of the HMT OB supplementary guidance in the context of residential development projects. This should be used as a sensitivity test for the RCF approach.

PART 1: Optimism Bias and Contingency at Homes England

F3 Homes England has published new research[68] that sets out a RCF approach for Homes England's interventions. The RCF approach uses evidence on the performance of a broad pool of past projects to inform an assessment of the risk of cost overruns of individual components of project spend of new projects at different points in the project lifecycle. This research can be used to construct project specific estimates for OB based on the pool of past projects and to inform the assessment of contingency requirements in the financial case. Section 5 of the Homes England guidance provides further detail on how RCF can be used, alongside other methods such as Quantitative Risk Assessment and expert judgement, to determine contingency requirements in the financial case.

F4 Importantly the RCF approach recognises the need to consider a range of outcomes that may be expected, rather than focusing on a single point estimate. From the perspective of OB this allows for the range of uncertainty

68 https://assets.publishing.service.gov.uk/media/65b93630ee7d49000d9849f7/Optimism_Bias_and_Contingency_at_Homes_England.pdf

to be considered and interpreted by analysts when drawing conclusions on VfM.

F5 Section 5 of the Homes England guidance provides detail on how to apply the research in the context of **economic appraisal**. The guidance highlights that the following scenarios should be considered when forming a judgement on a central OB estimate and conducting appropriate sensitivity tests.

- **Central estimate** – The P-mean RCF should be used[69]. This is a trimmed mean based on the P5 to P95 values and so excludes the impact of any outliers in the dataset.
- **Standard sensitivities** – The P50 and P80 estimates should be presented as standard sensitivity tests unless alternatives are more appropriate. Where alternatives are used, the rationale for these should be explained within the business case document.
- **Contingency level** – Where the proposed level of contingency in the financial case falls outside the range of the standard sensitivities, the economic case should be tested at the proposed contingency level so that the value for money implications of that level of cost can be interpreted.
- **Optimism Bias** – A sensitivity test should be included in the economic appraisal at the level suggested by the standard Green Book adjustments (see Part 2 below).
- **Further sensitivity testing** – Where proportionate, further sensitivity testing may be undertaken to, for example, test the switching value for the value for money category. This may be most relevant where the value for money category changes across the P50-P80 range and further understanding of the risk to value for money is required to inform the analysis.

PART 2: Application of HMT OB supplementary guidance in the context of residential development projects

Spend categories

F6 The HM Treasury supplementary guidance on OB should also be used when considering OB within economic appraisal. Where RCF is being used, as per Part 1 above, the section below can be used to inform the suggested

[69] The P-level refers to the percentile values taken from a distribution. For instance, the P50 refers to the median and the P80 is the 80th percentile. In the case of cost and the use of RCF, the P80 value therefore refers to the value where 80% of projects in the reference class had a cost overrun of less than this value.

sensitivity test at the level suggested by the standard Green book adjustment (the fourth bullet from the list in Part 1).

F7 The table below provides the upper and lower bounds presented in the Green Book supplementary guidance on OB. The upper bound reflects the average OB found for traditionally procured projects pre-procurement and the lower bound reflects the level of OB to be applied at the point of contract award for projects with effective risk management. The starting point for projects will be the upper bound.

F8 For larger projects it may be necessary to undertake an assessment of OB separately for each phase in recognition of the different stage of development of those phases. For example, if there was an early phase that was already contractually committed the lower bound OB may be appropriate, whereas for a future phase yet to be developed the upper bound might be applied.

	Capital Expenditure Optimism Bias %	
	Upper	Lower
Standard Buildings	24	2
Non-Standard Buildings	51	4
Standard Civil Engineering	44	3
Non-Standard Civil Engineering	66	6
Equipment/Development	200	10
Outsourcing	41	0

F9 Within the Green Book supplementary guidance and other associated documents, several definitions are provided to help to explain the categories of spend included in the table above. The table on the following page aligns these categories with definitions applicable to residential and commercial development projects.

F10 When considering these definitions, it may be necessary to divide a project into several component parts so that the relevant level of OB can be applied to each component. For example, where a project involves constructing a new school building and a new road there may be elements of *buildings* and elements of *civil engineering*.

F11 The breakdown by these components can then be used to generate a blended OB rate that can be used as an input to the appraisal model.

Category	Definition
Standard Buildings	The construction of buildings where a standard approach to design can be used. For example, where there is a greenfield site with few constraints impacting on design. Buildings could include the construction of offices, living accommodation or schools.
Non-Standard Buildings	The construction of buildings where a non-standard approach to design is required. Characteristics of a site where a non-standard approach is required may include; • Space constraints • Brownfield sites • Refurbishment projects • Innovative buildings • Other complicated site characteristics Buildings could include the construction of offices, living accommodation or schools.
Standard Civil Engineering	Those facilities, in addition to buildings, where no special design considerations are required. For example, where there is a greenfield site with few constraints impacting on the design. Facilities could include the construction of roads and utilities.
Non-Standard Civil Engineering	Characteristics of a site where a non-standard approach is required may include; • Space constraints • Brownfield sites • Other complicated site characteristics • Unusual output specifications • Innovative transport infrastructure or upgrade/extension projects • Innovative utility projects Facilities could include the construction of roads and utilities.
Equipment/Development	The provision of equipment and/or the development of software and systems.
Outsourcing	The provision of hard and soft facilities management services.

Contributory factors and mitigations

F12 Within the Green Book supplementary guidance percentage contributions to the upper bound rates are given for a series of contributory factors, allowing for the upper bound OB rate to be reduced based on an assessment of the extent to which each has been mitigated within the scheme.

F13 To standardise the process for the assessment of development schemes, we pose a series of questions linked to these contributory factors. The responses to these questions will then be used to apply a standardised set of mitigation factors to the upper bound OB rate.

F14 Consideration should be given to whether the responses to the questions would be the same for all options under consideration or whether the responses and so level of OB may need to vary by option.

F15 The table below lists these questions, the responses and proposed level of mitigation of the associated contributory factor by response. These are based on the detail within the appendix to the Green Book supplementary guidance and Appendix E from the 2002 Mott MacDonald study.

F16 Those listed as N/A relate to categories not linked to capital cost mitigations for buildings or civils within the Greenbook supplementary guidance. We also assume no mitigation against the '*other'* categories listed.

		Questions	Response 1	Response 2	Response 3
Procurement	Complexity of contract structure	Is a standardised contract structure being used?	Yes (100% mitigated)	No (0% mitigated)	
	Late contractor involvement in design	Was the contractor involved in the scheme design?	Contractor fully responsible for design (100% mitigated)	Contractor consulted on design (50% mitigated)	No or contractor not yet appointed (0% mitigated)
	Poor contractor capabilities	Has the contractor successfully completed projects of a similar scale and nature previously?	Yes and with Homes England (100% mitigated)	Yes but not with Homes England (50% mitigated)	No or contractor not yet appointed (0% mitigated)
	Government guidelines	N/A			
	Dispute and claims occurred	Has a disputes resolution and claims process been agreed with the contractor?	Yes, a standardised process is being used that has been tested with this contractor previously (100% mitigated)	Yes, a process has been agreed but not yet tested (50% mitigated)	No or contractor not yet appointed (0% mitigated)
	Information management	N/A			
	Other	No mitigation assumed			
Project Specific	Design Complexity	Are there any design complexities? E.g. resulting from site conditions or interaction with other infrastructure.	No, work is taking place on greenfield site with no interaction with other infrastructure (100% mitigated)	Yes (0% mitigated)	
	Degree of Innovation	Are innovative methods being used?	Yes (0% mitigated)	No, all methods are tried and tested (100% mitigated)	
	Environmental Impact	Is there the potential for a planning objection to the scheme based on environmental impacts (e.g. wildlife, biodiversity, noise, pollution, or contamination)?	Yes, highly likely (0% mitigated)	Yes, but unlikely (50% mitigated)	No, there is no environmental impact or all planning permissions in place (100% mitigated)
	Other	No mitigation assumed			
Client Specific	Inadequacy of the business case	Has a business case been prepared that; - establishes clear project objectives - defines requirements - fixes project scope - has been agreed with all stakeholders	A business case has been prepared, agreed with all stakeholders and all necessary approvals have been granted (66% mitigated)	A business case has been prepared and agreed with some stakeholders (33% mitigated)	The business case is still being developed (0% mitigated)

	Large number of stakeholders	N/A			
	Funding availability	Has sufficient funding been committed to cover the full cost of the project?	Yes, funding sources identified and approvals sought but may be subject to future business planning and/or spending reviews (66% mitigated)	No (0% mitigated)	
	Project Management team	Has project management team successfully delivered projects of a similar scale and nature previously?	Yes (100% mitigated)	No (0% mitigated)	
	Poor project intelligence	Have detailed ground investigations and/or surveys have been completed?	Yes and no risks have been identified (100% mitigated)	Yes and some risks have been identified (25% mitigated)	No, further investigations/surveys are planned (0% mitigated)
	Other	No mitigation assumed			
Environment	Public relations	Is there expected to be any opposition to the project? E.g. due to environmental impacts, noise, traffic.	Yes, highly likely (0% mitigated)	Yes, but unlikely (50% mitigated)	No, there are no external impacts (100% mitigated)
	Site characteristics	Does the site have any sensitive environmental characteristics? e.g. protected species, archaeology or contamination.	Yes (0% mitigated)	None have been identified to date, but further investigation/surveys required (0% mitigated)	No, detailed investigations/surveys have confirmed there are no sensitive site characteristics (100% mitigated)
	Permits/ Consents / Approvals	N/A			
	Other	No mitigation assumed			
External Influences	Political	N/A			
	Economic	Is the delivery of project outcomes linked to the economic climate?	Yes (0% mitigated)	No (100% mitigated)	
	Legislation/Regulations	Is the delivery of project outcomes linked to required changes to legislation and/or regulations?	Yes (0% mitigated)	No (100% mitigated)	
	Technology	Is the delivery of project outcomes linked to required changes to technological advancement?	Yes (0% mitigated)	No (100% mitigated)	
	Other	No mitigation assumed			

Annex G – Market Failures

G1 Public sector intervention can be based on strategic objectives, improvements to existing policy, market failure or distributional objectives that the government wishes to meet. Market failure is one rationale for intervention and exists when the market mechanism alone cannot achieve economic efficiency in the allocation of a good or service.

G2 In welfare economics, an inefficient outcome means social welfare can be increased without making other parties worse off – that is, by correcting market failure, social value will increase. This definition does not mean that it is appropriate for the public sector to deliver whatever the market will not. There needs to be sufficient social value in doing so and not unduly displacing market activity.

G3 The table below outlines instances of market failure which are particularly relevant in a MHCLG context but is not exhaustive.

Table 18: Sources of market failure

Type of Failure	Definition
Public good	A public good can be defined by two characteristics: firstly, it is difficult to exclude anyone from enjoying it (non-excludable in supply); and secondly, once provided, a person's consumption of the good does not stop anyone else from consuming it (non-rival in demand). A public good will be both non-rival and non-excludable.
Externalities	Externalities arise when an activity results in benefits or costs to people other than those directly producing or consuming the good. A failure to properly consider these external impacts will result in socially sub-optimal outcomes. A common example of a negative externality is pollution, where those causing the pollution do not bear the full costs. In contrast, an intervention to redevelop a derelict site to provide new housing is an example of a positive externality through the impact it can have on improving the amenity of the surrounding area.
Coordination failure	Coordination failure refers to when a socially desirable activity does not take place due to a failure to coordinate effectively between the different parties involved. For example, a development scheme may require agreement between multiple land owners but this is not possible in the absence of

	public sector intervention due to competing or incompatible objectives.
Market power	Market power results from insufficient competition to ensure a market operates efficiently. Sectors such as housebuilding have high barriers to entry and existing businesses may act strategically, through predatory pricing, taking options on land or land banking, to deter competition.
Imperfect information	Imperfect information happens when buyers and sellers do not have all the information they need to make a fully informed decision. Buyers need to know the quality of a good or service to judge the value it can provide. Sellers, lenders and investors need to know the reliability of a buyer, borrower or investor. If information is asymmetrical, this can lead to adverse selection and the market may not operate efficiently.

Approach to assessing market failure

G4 When building a case for market failure it is helpful to consider the following points:

- Proportionality should always underpin market failure assessment. Large, novel or contentious projects will inevitably require more detailed work.

- When considering market failure arguments and reviewing evidence, thought should be given to how potential causes of market failure may evolve over time.

- It is important to understand *all the reasons* the market alone will not deliver efficient outcomes for society (for example, there might be more than one factor which needs to be addressed through public sector intervention). Taking this holistic view will be crucial in helping decide if and how a scheme should come forward using public sector intervention.

Annex H – Distributional Impacts

H1 Annex A3 of the HMT Green Book makes clear that where a policy affects separate income groups differently distributional weights can be applied to provide a refined estimate of the policy's impact on social welfare. (This analysis should be done in addition to unweighted appraisal of costs and benefits which is the minimum requirement of Social CBA.)

H2 The basis for distributional weights is the economic principle of the diminishing marginal utility of income. It states that the value of an additional pound of income is higher for a low income recipient than for a high-income recipient. The Green Book gives the example of a marginal utility of income of 1 which means that an individual with an income of £25,000 values an additional pound income twice as much as someone with an income of £50,000. A review of international evidence provides an estimate of the marginal utility of income at 1.3 which results in a faster decline in the value of an additional pound.[70]

H3 The remainder of this annex:

- Shows how distributional weights are derived from a utility function;
- Provides a practical application of weights to a social housing tenure problem; and
- Provides a practical application of weights to a local government funding problem.

H4 Further background on distributional weights is provided in the Green Book. This annex sets out an example on how distributional weights have been used in MHCLG appraisals and how the results of such analysis should be presented in an appraisal.

Theoretical derivation

H5 To calculate the distributional impact of a policy we first need to calculate the weights for individual income deciles. As noted above, the rationale for welfare weighting is based on the difference in marginal utility of consumption. The classic utility function is the logarithm function:

[70] Layard et al. (2008) "The marginal utility of income" Journal of Public Economics, Vol. 92, pp. 1846-1857, quoted in Annex 3 of the Green Book.

$$U(C) = \log(C)$$

H6 In marginal terms:

$$U'(C) = {}^{1}/_{C}$$

H7 The marginal utility can be derived by dividing 1 by income, *I*, (which we use interchangeably with consumption) for each of the deciles:

$$U'(I) = {}^{1}/_{I}$$

H8 Distributional weights, (WW), can then be derived using the marginal utility of each decile ($1/I_d$) as a percentage of average marginal utility ($1/M$):

$$WW = \left[\left({}^{1}/_{\mathrm{I}_d}\right) \Big/ \left({}^{1}/_{M}\right) \right]$$

$$WW = \left({}^{M}/_{I_d}\right)$$

H9 However, the form of the utility function outlined above assumes the elasticity of marginal utility of consumption is equal to 1. More recent studies have shown different estimates of elasticity of marginal utility. The Green Book cites a review of international evidence which concludes that a reasonable elasticity value η is 1.3. [71] This changes the form of the utility function (where U(C) = log(C) due to an assumption of η = 1) to:

$$U(C) = \frac{C^{1-\eta} - 1}{1 - \eta}$$

H10 The marginal utility is therefore:

$$U'(C) = \frac{1}{C^{\eta}}$$

H11 This gives the following formula to calculate gross weights by income decile:

$$WW = \left({}^{M}/_{\mathrm{I}_d}\right)^{1.3}$$

[71] HM Treasury (2022), Green Book, p 97, referencing: Layard eta al. (2008) “The marginal utility of income” Journal of Public Economics, Vol 92, pp. 1846-1857)

H12 This is the function adopted for the analysis of the social housing tenure problem below and the one that should be adopted more generally for distributional analysis of MHCLG interventions.

Practical applications to social housing tenure

H13 The following calculation of distributional weights is illustrative. The use and calculation of distributional weightings should be viewed in the context of the rationale for the policy proposals being considered and whether they are suitable or not in that light. The HMT Green Book provides further guidance on this.

H14 Consider an intervention that benefits residents in the social housing tenure group. Using DWP data on median household income before housing costs, per decile, for all households[72] in the UK gives the following gross weights per decile:

Table 19: Gross welfare weights by income decile (equivalised, disposable, before housing cost income)

Deciles	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Median (M)**
Income per week (I_d)	204	307	376	444	512	582	665	771	928	1,363	547
Weight $(M/I_d)^{1.3}$	3.60	2.12	1.63	1.31	1.09	0.92	0.78	0.64	0.50	0.31	1

H15 The gross weights vary from 3.6 to 0.31.[73] For a person in the lowest income decile, a £1 benefit increases utility by 3.6 relative to the average marginal utility for all households, whereas for the highest decile, there is a marginal increase in utility of 0.31 relative to the average marginal utility for all households.

[72] DWP publish the data as part of the Household below average income series. The data is taken from HBAI 2019/20.
[73] For example, for a household in the lowest decile weekly income = £204. Therefore the weight = $(547/204)^{1.3}$=3.6. For the top decile weekly income =1363. Therefore the weight = $(514/1363)^{1.3}$=0.31.

H16 The next step is to calculate an average weight for the policy based on the gross weights above. In this example, the intervention benefits residents in the social housing tenure group in England. To calculate the average welfare weight for tenants in the social housing tenure, the gross weights by decile are multiplied by the percentage of social tenants that are in that income decile. The distribution of social tenants (before housing costs) between income deciles of all households is as follows[74]:

Table 20: Distribution of social tenants in England across UK income deciles

Income Decile	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**
% of social tenants	16%	19%	18%	14%	12%	9%	6%	4%	2%	1%	100%

H17 This shows, for example, 16% of social tenants are in the bottom income decile for all households.

H18 Multiplying the gross welfare weights for each income decile in Table 19 by the percentage of social tenants in that income decile from Table 20 gives the following weights:

Table 21: Gross welfare weight adjusted for housing costs

Deciles	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Sum**
Weight	0.58	0.40	0.28	0.19	0.13	0.08	0.04	0.03	0.01	0.00	**1.75**

H19 Summing across the income deciles in Table 21 gives an average weight for all social tenure households of 1.75.

H20 We then calculate welfare weights **net** of the cost to taxpayers (to reflect the negative marginal utility for households arising from paying taxes and other revenue raising activities). Thus, we subtract the £1 of transfer from the £1.75 benefit, leaving only £0.75 of pure welfare gain. In other words, spending £1 on a social housing tenant has an additional welfare equity effect of 75 pence on top of the direct £1 benefit which they receive from the spending.

[74] Based on DWP's Households Below Average Income data, 2017/18 – 2019/20.

H21 The Green Book recommends multiplying benefits by a welfare weight where appropriate, presenting the results alongside the unweighted benefits to demonstrate the impact of the weighting process. For business cases relating to affordable housing (and thus, social tenants), the rent subsidy that tenants would receive has been calculated as the difference between the affordable rent post-intervention and the market rent that would otherwise be charged on the home. In effect, this calculates the amount of additional money these tenants would have in their pocket compared to if they had to pay a market rent.

H22 In 2020/21, the average affordable rent on first-time let, general needs lettings was £142 per week[75]. Given affordable rents are set at up to 80% of market rent for the home, we can infer the average market rent on affordable rent lettings to have been around £177, the difference therefore being £35 per week. The difference is funded by direct government subsidy.

H23 Assuming that the subsidy is distributed in accordance with the existing distribution of income of social tenants, welfare weights could be used to calculate the distributional benefit of the changes. This means multiplying £35 by 0.75, which gives a £26.25 benefit per week per tenant. If some of the rental subsidy resulted in lower housing benefit (and Universal Credit) expenditure as opposed to lower rents for tenants, further adjustments would be required to account for this.

[75] Based on MHCLG's 'Social housing lettings in England, April 2018 to March 2019'.

Annex I – VfM Categories For Initiatives Which Save Money

I1 Some interventions result in financial savings to the public sector rather than increased spending. Examples include:

- Invest to save spending, for example, on maintenance which reduces higher spend later on;
- Reduction in service provision, for example, cutting back the coverage of a service or from reducing funding per person; and
- Interventions which result in significant earned income from provision of services or involve the sale of assets.

I2 In such situations the present value of costs of the activity is negative. BCRs can no longer be used as summary measures of performance from monetised impacts as its size is no longer related to economic performance. In this case alternative measures for assessing VfM are needed.

I3 The general approach for initiatives which save public sector money is to use the Net Present Social Value, with a positive NPSV representing good VfM. Two positive NPSV scenarios are highlighted in Table 22 (represented by the green squares).

I4 Where the NPSV <0 , that is, the reduction in benefits are greater than the reduction in spend, the investment is likely to be poor VfM.

I5 Adjustments for non-monetised impacts - it should be noted that PVB and PVC represent only monetised impacts. Any non-monetised impacts should also be accounted for. If on balance non-monetised impacts are large in one direction it is possible that they will shift the NPSV from positive to negative or vice versa. If the shift is from negative to positive this implies that the intervention is VfM. Conversely if the NPSV shifts from positive to negative it implies the intervention is not VfM.

I6 Sensitivity testing – as before where there are uncertainties in the analysis and these are likely to be significant these should be tested.

Table 22: Value for money categories for money saving initiatives

Examples		Impacts	Comments
1. Very High and Financially Positive VfM	NPSV >0.	PVB >0	Maintenance is often quoted as an example. Results in longer term savings and improved quality of service.
2. Economically Efficient Cost Savings	NPSV>0	PVB<0 but PVC fall faster than benefits	Decommissioning of a loss-making operation.
3. Poor but financially positive VfM	NPSV<0	PVB is more negative than PVC	Project fails to be VfM.