
The Cambridge South East Transport Order

Transport And Works Act 1992

Transport And Works (Applications And Objections Procedure) (England And Wales) Rules 2006

Appendix 2.4 Code of Construction Practice

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Cambridge South East Transport (CSET)

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1 Introduction

1.1 Background

- 1.1.1 The Greater Cambridge Partnership (GCP), through Cambridge County Council (CCC) as lead authority (the Applicant), is making an application to the Secretary of State for an order under the Transport and Works Act 1992 accompanied by a request for a Planning Direction under Section 90 (2A) of the Town and Country Planning Act 1990. If authorised, the resulting Transport Works Act Order ("TWAo") and deemed planning permission will together provide the relevant powers and planning conditions for the construction, maintenance and operation of Phase 2 of the Cambridge South East Transport Scheme ("CSET Scheme").

1.2 Construction Management

- 1.2.1 As part of the Scheme development a suite of construction management plans has been produced in draft to support the TWAo application. This suite of plans includes:

- Code of Construction Practice (CoCP) – this document
- Construction Environmental Management Plan (CEMP)
- Programme and Construction Phasing Plan
- Construction Lighting Strategy
- Spoil Management Plan
- Landscape and Ecology Management Plan

1.3 Scope of this CoCP

- 1.3.1 The Code of Construction Practice is the over-arching document setting out the commitments to ensure effective planning, management and control of the construction works for the CSET Scheme. It will provide high level guidance on the measures and standards of work to be applied by the Applicant on the Principal Contractor delivering the construction work. The CoCP will also set out how local communities will be engaged with during construction. The CoCP sets out the requirement for the draft Construction Environmental Management Plan (CEMP) to be updated for approval by the local authorities prior to construction commencing.
- 1.3.2 This Code of Construction details the outline arrangements for the duration of the works but is considered to be a live document that will continue to be reviewed and updated through the planning and tender process. It will be finalized once the outcome of the TWAo application process has been completed so that proper account of any commitments or planning conditions set by the Secretary of State are properly accounted for.
- This document has the following contents:
 - Introduction
 - Summary overview of the Scheme
 - Standards and guidance
 - Stakeholder liaison
 - Pre-construction works management
 - Working Hours
 - Construction Compounds and Material Storage
 - Traffic management
 - Construction Environmental Management
 - Waste Management
 - Pollution Control

-
- Emergency services and incident control
 - Site security

1.4 The CEMP

- 1.4.1 The CoCP is to be used in conjunction with these other documents, particularly the CEMP. The Principal Contractor shall develop a final CEMP based on the current draft CEMP.
- 1.4.2 The final CEMP shall include a Project Environmental Aspects and Impacts Register, which will be updated following a significant change in risk to the environment from activities related to this Project as determined by the Environment Advisor/Manager and Project Manager. This will also include reviews triggered by changes to compliance obligations associated with work activities.
- An Environmental Aspect is defined as an element of the project that can interact with the environment. A significant environmental aspect is an environmental aspect that has, or can have, a significant environmental impact.
 - An Environmental Impact is defined as any change to the environment, whether adverse or beneficial, resulting from an aspect of the project.
 - An Environmental Risk is defined as a change to the environment which has potential adverse effects.
 - An Environmental Opportunity is defined as a change to the environment which has potential beneficial effects.
- 1.4.3 The CEMP identifies specific actions and measures to protect the existing environment and to manage any potential sources of impact on the environment.

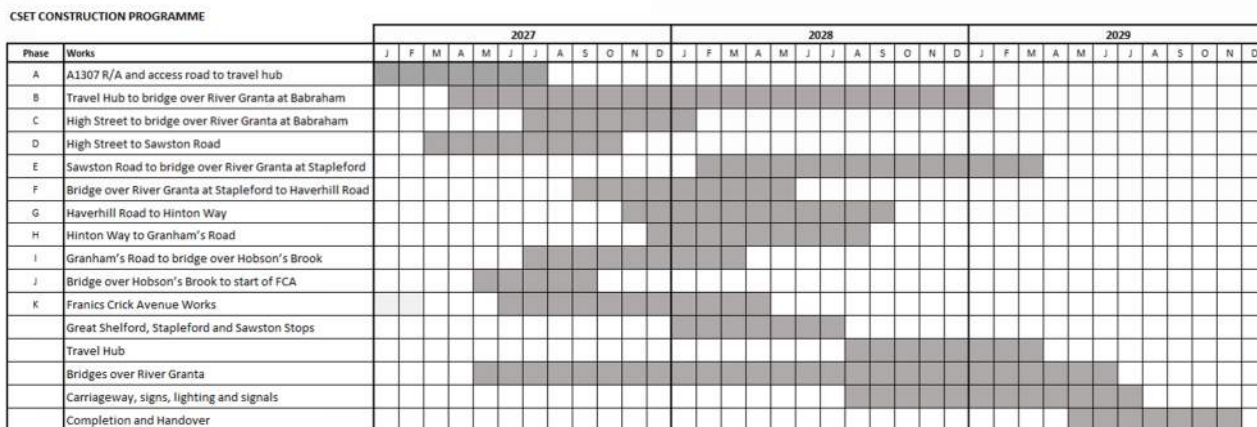
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Summary Overview of the Scheme

2.1 Construction Programme and Phasing

2.1.1 The programme proposed for construction is set out in below, construction should commence in Jan 2027 and be completed before end of March 2029. This is illustrated below.

Figure 2.1 CSET Construction programme



2.1.2 The phasing to deliver the construction programme is illustrated in the maps shown in Appendix A. The phasing of the works is intended to work from south (at the Travel Hub) to north (Francis Crick Avenue). The phasing of each section of the route is set out below, with an indication of which construction compounds will be used for different phases of works.

Table 2.1: Phasing of the construction works

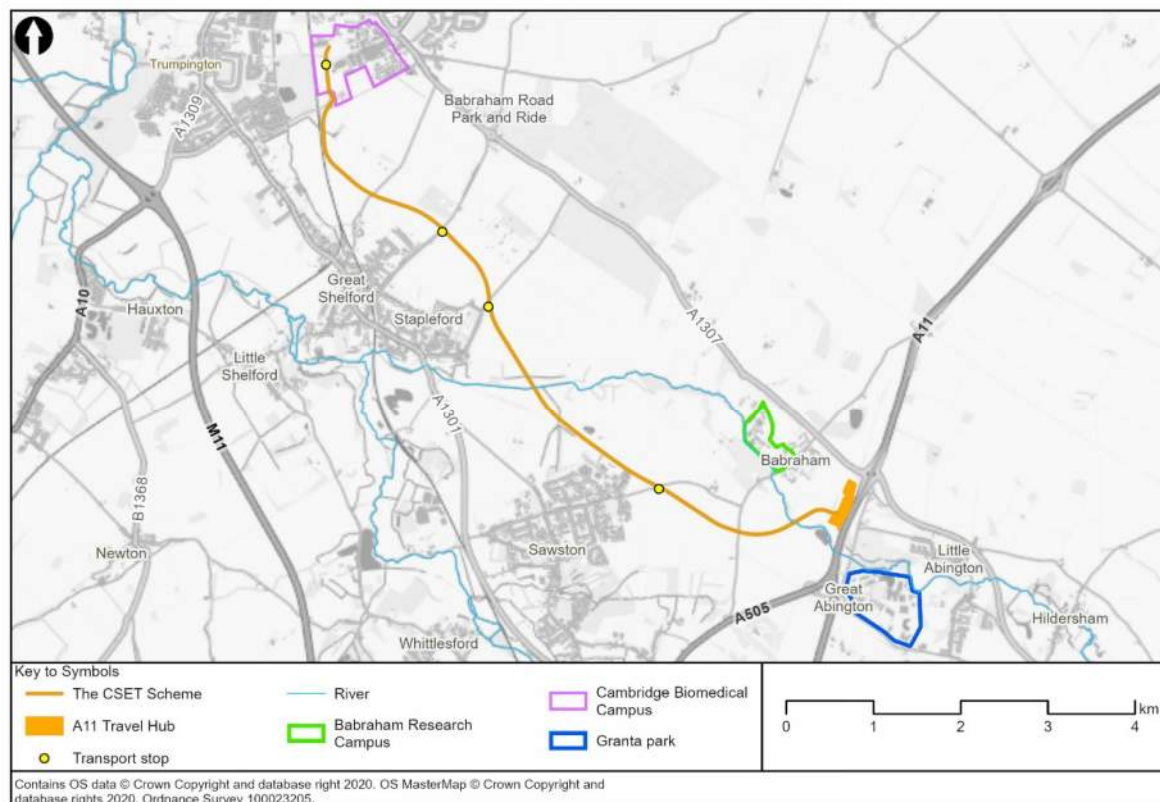
Phase	Area covered	Construction Compound
A	Access road and r/a on A1307	1
B	Route from Travel Hub to River Granta crossing (Bridge Structure 3)	1
C	River Granta to High Street	1 and 2
D	High Street to Sawston Road and Sawston Stop	2
E	Sawston Road to River Granta (Stapleford) – bridge structure 2	2
F	River Granta (Stapleford) to Haverhill Road and Stapleford Stop	4
G	Haverhill Road to Hinton Way and Gt Shelford Stop	4 and 5
H	Hinton Way to Granhan’s Road	5 and 6
I	Granham’s Road to Hobson’s Brook and bridge (Structure 1)	6
J	Hobsons Brook to entrance onto Francis Crick Avenue	7
K	Francis Crick Avenue	7

2.2 The public transport route

2.2.1 The figure below shows the full extent of the route and associated infrastructure along the scheme which extends from the Cambridge Biomedical Campus (CBC) to a new travel hub located on the east side of the A11 near Babraham. Along the route there is a segregated carriageway for public transport vehicles and a parallel track for emergency and maintenance vehicles which also functions as a shared use path for

pedestrians, cyclists and equestrians. This parallel track is called the Active Travel Path. These are shown as a single line in the figure below.

Figure 2.2 CSET Scheme Location Plan



2.3 Travel hub

- 2.3.1 The A11 Travel hub site is located between the A11 and Babraham with access from the A1307 from a new roundabout to be constructed as part of the Scheme. The first phase of operation will provide for 1250 car and 200 cycle parking spaces plus space for ten coaches. The new travel hub building shall provide a waiting area, plus male & female toilets and a baby changing area. The proposed travel hub would be as sustainable as possible and use renewable energy to power routine daily operations of the site building, signs and lighting. The site has capacity to absorb future expansion, if needed.

2.4 Stops along the route

- 2.4.1 There will be four stops along the route as shown in the image above. These will be the:

- CBC Stop opposite the new Cambridge South Station on Francis Crick Avenue
- The Great Shelford Stop on Hinton Way
- The Stapleford Stop on Haverhill Road
- The Sawston Stop on Sawston Road

- 2.4.2 Stops would have:

- Platforms with shelter and real-time passenger information
- Pick up and drop-off facilities
- Disabled parking
- Cycle parking and cycle lockers

3 Standards and Guidance

3.1 General Principles for Management of the Construction Phase

- 3.1.1 In order to construct the Scheme a series of general principles and requirements will be implemented by the Applicant to control and mitigate impacts on the environment and local communities.
- 3.1.2 These principles and requirements will be adopted and adhered to by all parties appointed by the Applicant in the delivery of the scheme.
- All construction works shall follow the principles set out below:
 - Information will be regularly and clearly provided to local communities on the construction works in their area.
 - All works will meet relevant legislation and latest standards (i.e. compliance obligations).
 - The works will be conducted in accordance with construction management plans to minimise adverse impacts on the local community and the environment, as far as reasonably practicable.
 - The works will conform to the Construction Traffic Management Plan to minimise disruption to the transport network as far as is reasonably practicable.
 - The works will be planned and delivered in a cost-effective manner.
 - The works will be co-ordinated with other relevant projects to reduce any cumulative effects, as far as reasonably practicable.
- 3.1.3 The Applicant will have a management system in place to monitor the Contractor's performance and ensure compliance with the management plans. This will include requirements for:
- the Contractor (and any appropriate sub-contractors) to submit regular reports to demonstrate compliance (or any non-compliance issues) to the Applicant,
 - checking/auditing the Contractor's compliance with the management plans,
 - emergency responses to incidents on the site to be clearly documented with clear definition of responsibilities,
 - training and awareness raising for site staff,
 - requirements for keeping local communities informed of the construction programme in a timely and regular fashion, and
 - accountabilities and responsibilities, throughout the Applicant and Contractor organisations, to be clearly allocated and identified.
- 3.1.4 The key management requirements will be set out in a series of construction management plans, some of which have been produced as DRAFT documents to support the TWAO application. These will remain DRAFT and will be developed during detailed design to take into account
- Conditions set out in the Scheme Order and deemed planning consent
 - Changes in legislation
 - Changes in the scheme design
 - Changes in construction good practice guidance
- 3.1.5 Changes following the Order publication will be carried out following consultation with statutory agencies as appropriate including the Environmental Agency (EA), Historic England (HE), and Natural England (NE).

3.2 Environmental Management System

- 3.2.1 GCP will require the Principal Contractor to maintain an environmental management system certified under the ISO 14001 Environmental Management standard. All the works completed by the Principal Contractor will be fully compliant with their Environmental Management System.

3.3 Legislation, Standards and Guidance

- 3.3.1 The Principal Contractor will comply with all relevant legislation in place at the time of construction, and for this reason legislative controls are not set out in this CoCP.
- 3.3.2 The Principal Contractor shall conduct their activities in accordance with the relevant best practice environmental guidance and legal requirements relevant to the specific activities in question. Relevant guidance are set out in the Environmental Statement and the draft Construction Environmental Management Plan which should be read in conjunction with this CoCP. Before construction commences both this CoCP and the CEMP will be updated to take into account any changes in guidance and legislation.
- 3.3.3 Any reference to guidance in this CoCP, the Environmental Statement or draft CEMP are not intended to be exhaustive. There may also be requirements set out in any approved TWAO or associated deemed planning conditions which supercede the requirements set in the ES, this CoCP or the draft CEMP.
- 3.3.4 Best practice guidance that is particularly relevant and which shall be used to inform the further refinement and finalisation of CoCP and CEMP prior to construction commencing includes:
- CIRIA : Environmental Good Practice on Site Guide (Fourth Edition), C741, 2015
 - Design Manual for Roads and Bridges, LA 120 - Environmental management plans¹
 - [www.gov.uk](https://www.gov.uk/guidance/pollution-prevention-for-businesses) guidance on pollution prevention for businesses² and associated guidance referenced on www.gov.uk including:
 - report an environmental incident,
 - get permission to discharge to surface or groundwater,
 - manage business and commercial waste,
 - store oil and any oil storage regulations,
 - discharge sewage with no mains drainage,
 - work on or near water and
 - manage water on land.
- 3.3.5 The draft CEMP provides specific guidance and measures to be implemented during construction of the Scheme covering the following topics:
- training and awareness
 - roles and responsibilities
 - internal and external communication
 - security and housekeeping
 - environmental authorisations and consents
 - monitoring and evaluation
 - protecting air quality and managing noise
 - protecting biodiversity
 - protecting the historic environment
 - protecting water resources and managing flood risk
 - protecting soil and managing contaminated land risks
 - managing construction site waste and materials
 - Preventing pollution and storing hazardous materials

<https://www.standardsforhighways.co.uk/prod/attachments/a3a99422-41d4-4ca1-bd9e-eb89063c71sixc4?inline=true>

² <https://www.gov.uk/guidance/pollution-prevention-for-businesses>

4 Stakeholder Liaison during Construction

- 4.1.1 A key factor in ensuring that the effect of any construction activity on the occupiers of neighbouring premises is minimized is a good communication strategy. This is what promoters and contractors must focus on before construction work begins and during the project itself. Particularly, it is important that there is early contact between the Principal Contractor and residents.
- 4.1.2 Liaison with the occupiers of neighbouring properties must take place before work gets underway and good communication must continue throughout the works. Disruption during a construction project may be unavoidable, but the impact will be reduced if neighbouring occupiers are consulted and informed about problems and potential solutions during each phase of the works. Often minor changes to working patterns, schedules or methods can significantly improve the experience for neighbours; contractors are therefore strongly encouraged to have a dialogue with affected occupiers throughout a project to determine what changes can be accommodated.

4.2 Pre-Start Project Consultation

- 4.2.1 At the start of the scheme there shall be a public consultation meeting, hosted locally to the project in a venue accessible to the community, so the local stakeholders, residents, businesses, and landowners etc. can come and see the plans and talk to the contractor(s) delivering the scheme. Giving them a platform to ask questions and raise any concerns.

4.3 Customer Liaison Officer

- 4.3.1 The Principal Contractor will provide a full time CLO to manage key messages to the public and local stakeholders. The CLO will act as a conduit between the CCC, the GCP, the construction delivery team and affected stakeholders. Where works are to be carried out in the vicinity of an area the CLO will manage advance notification of works and ongoing progress updates to the affected properties. This would be in the form of letters, face to face contact or electronic communication. Local road users will also be communicated to via Variable Message Signs (VMS) along with scheme information signage and noticeboards

4.4 General requirements – before works commence

- 4.4.1 The occupiers of neighbouring premises must be informed of any works, within a reasonable time period before they start, to provide as much notice as possible of any unavoidable noise or vibration they are likely to be exposed to.
- 4.4.2 The Principal Contractor shall give at least two weeks' notice to neighbours of their intention to start works. The following key project information is expected to be provided to the occupiers of neighbouring premises:
- The anticipated start and end date of the work
 - The nature of the project
 - The hours of work
 - The principal stages of the project i.e. demolition, ground works, construction
 - All operations that have potential to cause disturbance from noise and vibration
 - Approximate start and end dates of potentially noisy works. and times of working
 - Outline details of noise and vibration mitigation steps that are to be used
 - Contact names and numbers of appropriate project and site personnel: developer; project manager; site manager/foreman; community liaison manager.
- 4.4.3 When advising the occupiers of neighbouring premises of works that, despite the use of Best Practicable Means (BPM), have the potential to cause significant disturbance, such as concrete breaking, developers and contractors must provide the following information to neighbouring residents:

- A brief explanation of the works, and why they are necessary
- An explanation as to why quieter methods of working are not practicable
- A brief description of the character and pattern of any noise and/or vibration that might occur as a result of the works
- The general working hours of the site (ensuring they are compliant with the Council's requirements)
- The noise/vibration mitigation measures that will be in place, including respite breaks/quiet periods and noise screens/barriers
- The scheduled completion of that phase of works
- Any changes to the work schedule

4.4.4 It recommended that during liaison with the occupiers of neighbouring premises the following information, which may influence schedules and work patterns for noisy work, be obtained:

- Details of any vulnerable persons in neighbouring properties who may have special needs
- Special occasions such as wakes, wedding receptions, etc.
- Home working days and/or hours

4.5 Dealing with complaints

4.5.1 The contractor will provide a 24/7 helpline which members of the public can contact and raise queries or concerns. During normal working hours this will generally be dealt with by the project Customer Liaison Officer (CLO), whilst outside of this period, the calls will be diverted to an out of hours service that will log the issue raised and, in the case of an emergency arrange for this to be addressed immediately, or for more routine enquiries provide this information for the project team to address at the earliest opportunity.

4.5.2 The contractor is responsible for keeping a detailed log of and responding to complaints within three working days and where appropriate providing details of corrective action taken. There should be regular meetings and correspondence between the contractor and the Construction Management Team to monitor the progress of the works, to consider any concerns or complaints and to review any noise monitoring results. All complaints will also be reviewed and reported in the monthly progress update meetings to be arranged between the contractor and the Construction Management Team.

4.6 Bi-Weekly Local Stakeholder Meetings

4.6.1 Bi-Weekly meetings with stakeholders shall be held locally to the project site in a public setting, such as a village hall or other setting easily accessible to the community. Information about the project shall be freely available for stakeholders to review and raise concerns with the project team. These meetings shall also be utilized to inform the public and stakeholders of any planned noisy or out of hours working.

5 Utilities Management

- 5.1.1 The Principal Contractor will ensure excavation works are carried out using safe dig methods including obtaining service plans, scanning and marking the area for utilities (Cat and Genny), looking for visual signs of utilities (boxes, trench reinstatement). Excavation works will be carried out in accordance with HSG47 and will include the use of vacuum excavation techniques where excavation is carried out within 500mm of a known service.

5.2 Francis Crick Avenue

- 5.2.1 Francis Crick Avenue has been identified as a high-risk area due to the high number of existing services within the construction area. Diversions may be necessary, and the detailed design should consider this at an early stage. The Principal Contractor shall engage with all utility providers at least 12 months in advance of the project commencing on site to highlight potential diversions and new services required in the vicinity of Francis Crick Avenue as well as the entirety of the project.

5.3 Compound 1 – Travel Hub

- 5.3.1 Compound 1 is located on the Travel Hub site. Utility connections required by the Travel Hub should be installed into the site. Compound 1 temporary supply shall be taken from the newly installed services for the permanent works.

5.4 Satellite Compounds

- 5.4.1 Construction compounds shall require utility connections. The Principal Contractor shall liaise with utility providers to plan installation of new supplies 12 months in advance of project commencement.
- 5.4.2 Compound utility connections such as electrical feeder posts may be utilized to serve the proposed interchanges reducing cost and additional works.

5.5 Utilities Coordination

- 5.5.1 Utilities will be paid for by the client but will in all respects be managed by the main contractor who will provide a named dedicated utilities coordinator to manage all utilities works to meet the programme and client's budget.

6 Hours of Work

6.1.1 The table below details the standard project working hours.

Table 6.1: Standard project working hours

<u>Day</u>	<u>Times</u>	<u>Comments</u>
Monday – Friday Day Working	08:00 – 18:00	Route wide works
Saturday Working	08:00 – 13:00	Route wide works
Monday – Sunday Night Works	20:00 – 06:00	Restricted to works that cannot be completed within standard traffic management, such as carriageway surfacing which will be completed under full road closures. Requires prior approval from GCP and relevant statutory bodies.
Public Holidays	Any time	No works are anticipated during public holidays, any works will be restricted to works that are required for safety reasons only and with prior approval from GCP and relevant statutory bodies.

6.1.2 These work hours are subject to the agreement of Highways England and CCC Streetworks team depending on the section of road being worked upon.

6.1.3 The Principal Contractor will seek approval from the Local Authority Environmental Health Team or Officer (EHO) and Clients Project Manager to undertake planned works outside of the prescribed working hours.

7 Environmental Authorisations, Consents and Permissions

- 7.1.1 Certain aspects or phases of construction work packages may require the following environmental authorisations, permits or consents to operate including, but not limited to the following:
- Environmental Permit for waste operations. Environmental Permitting (England and Wales) Regulations 2010.
 - Environmental Permit for discharge to surface or groundwater
 - Exemptions for operations such as U1 (import of waste for use in construction). Pollution Prevention and Control Act 1999.
 - CL:AIRE Materials Management Plan for materials being reused, imported, or stockpiled
 - Land Drainage Consent to culvert an Ordinary Watercourse. Section 23 of The Land Drainage Act 1991
 - Water abstraction licence (if need to remove more than 20m³/day). Water Resources Act 1991 (as amended by the Water Act 2003), Environment Act 1995, The Water Resources (Abstraction and Impounding) Regulations 2006.
 - Flood Risk Activity Permit to construct or work near on a main river. The Environmental Permitting (England and Wales) Regulations 2016.
 - Section 61 consent if requested from the Local Authority. Control of Pollution Act 1974.
 - PROWs closures and diversions. Highways Act 1980, Town, and Country Planning Act 1990, (these shall be managed by a Traffic Management Plan)
 - Consent to remove hedgerows. Hedgerow Act (1997)
- 7.1.2 However, some of these applications will be dependent on the finalised construction site set up, methodologies, design option and discussions with stakeholders (e.g. EA and Local Authority).
- 7.1.3 A register of environmental permits and records (the Permits and Consent Register) of all consents, licences etc. relating to construction activities will be maintained and made available for audit as part of the final CEMP.
- 7.1.4 The Permits and Consents Register for this scheme will be a live document that should be regularly reviewed and updated following the application for, and approval of any new authorisations, permits or consents as well as checking for permits that need renewal.

8 Location of Storage Compounds and Welfare Facilities

- 8.1.1 Six compound locations are proposed along the CSETS route and are anticipated to be used for the delivery of the works. For three (3) of these locations – compounds 4,6 & 7 – these are located in close proximity to known areas of archaeology. Prior to the installation of the compounds in these locations, the scope will include carrying out a pre construction strip and mapping exercise. This scope is to be developed further during the Stage 2 ECI depending on the final agreed temporary foundations for the compounds.

8.2 Compound 1 – Travel Hub off the A1307 Cambridge Road

- 8.2.1 Main compound to be utilised for the Main offices for Client, Principal Contractor, Sub Contractors, Site welfare, Security, Traffic Management Hub, main parking area and wheel wash.

Figure 8.1: Compound and haul road plan

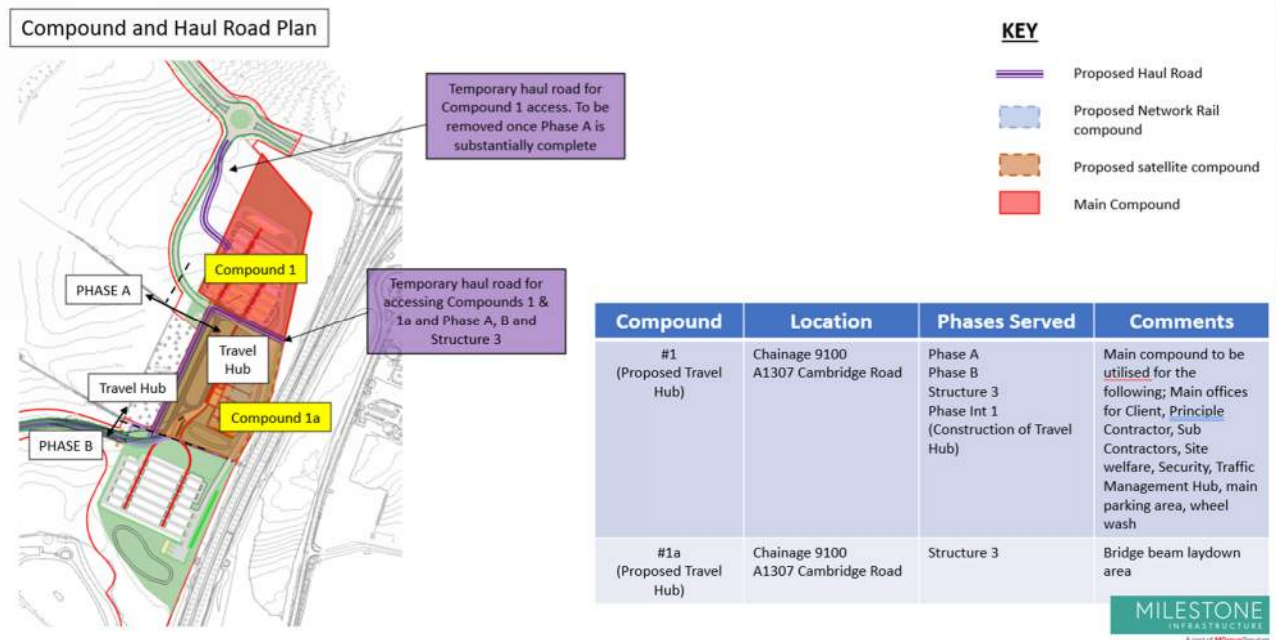


Figure 8.2: Compound 1 setup

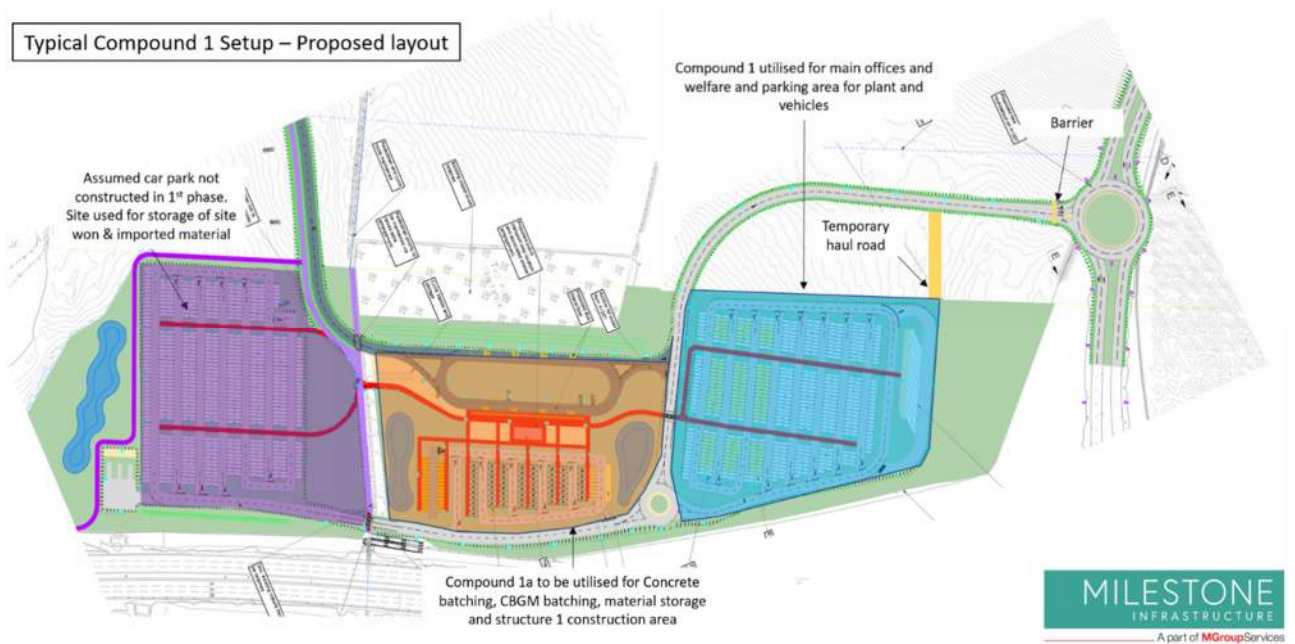
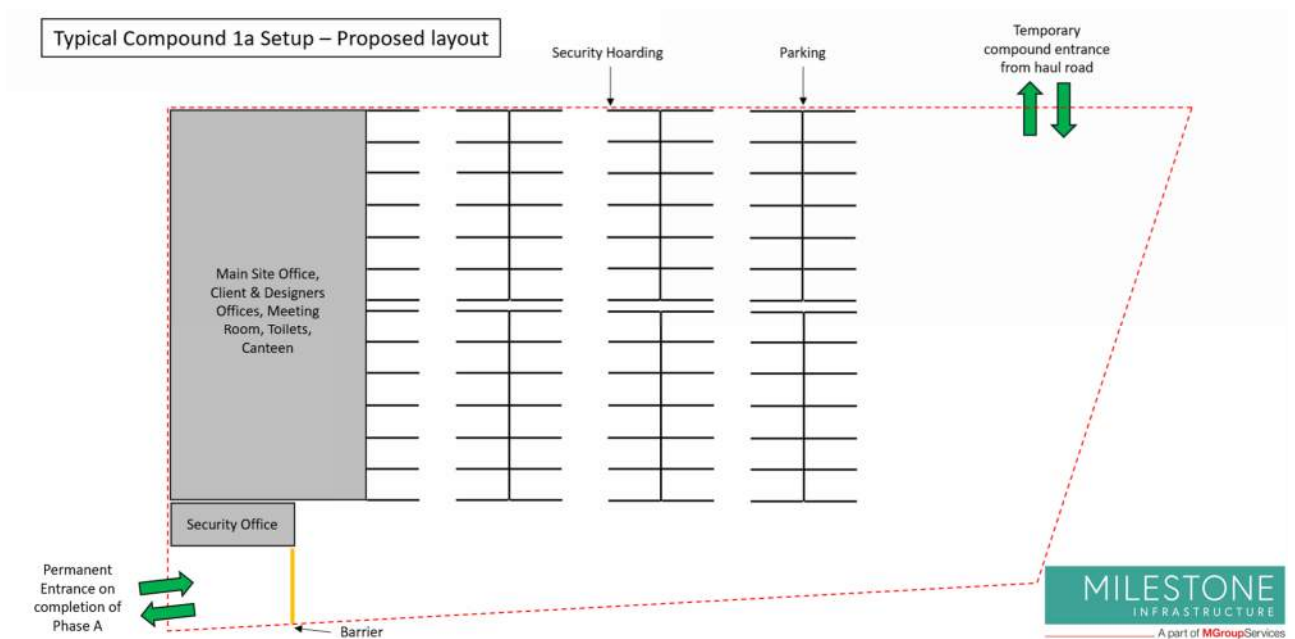


Figure 8.3: Compound 1a setup



8.3 Satellite Compounds

- 8.3.1 Satellite compound shall be strategically placed at highway intersections along the planned route. The images below show a typical site set up and planned access routes that will be utilized throughout the project.

Figure 8.4: Typical compound access routes

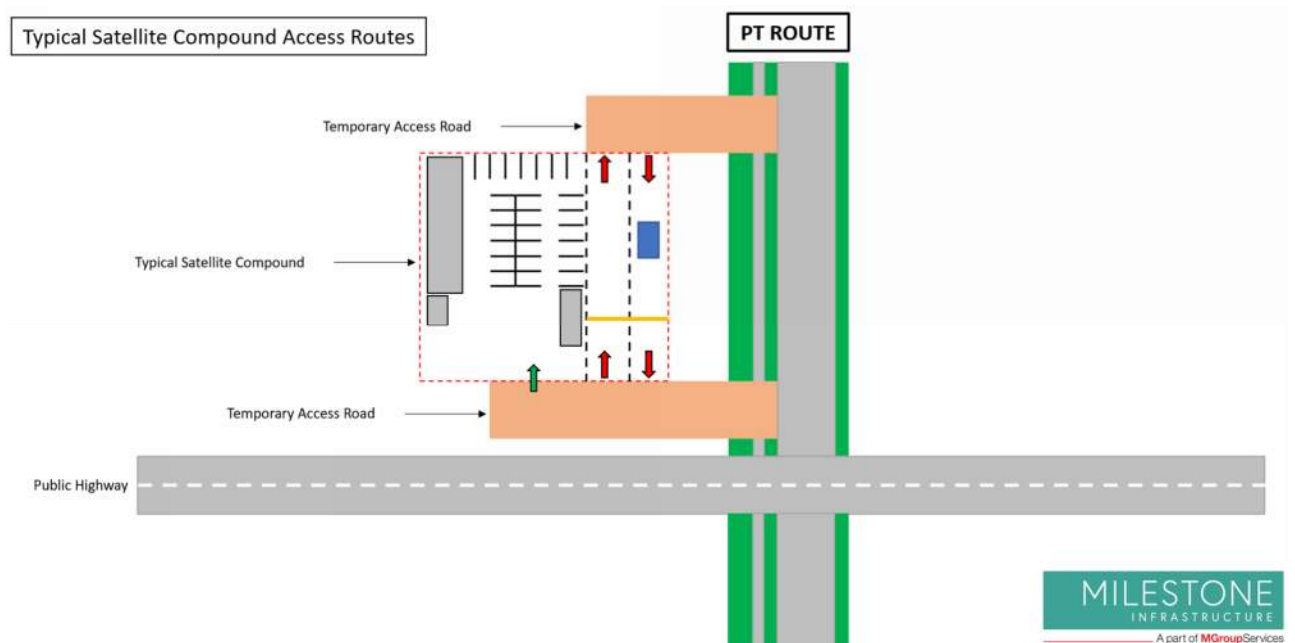
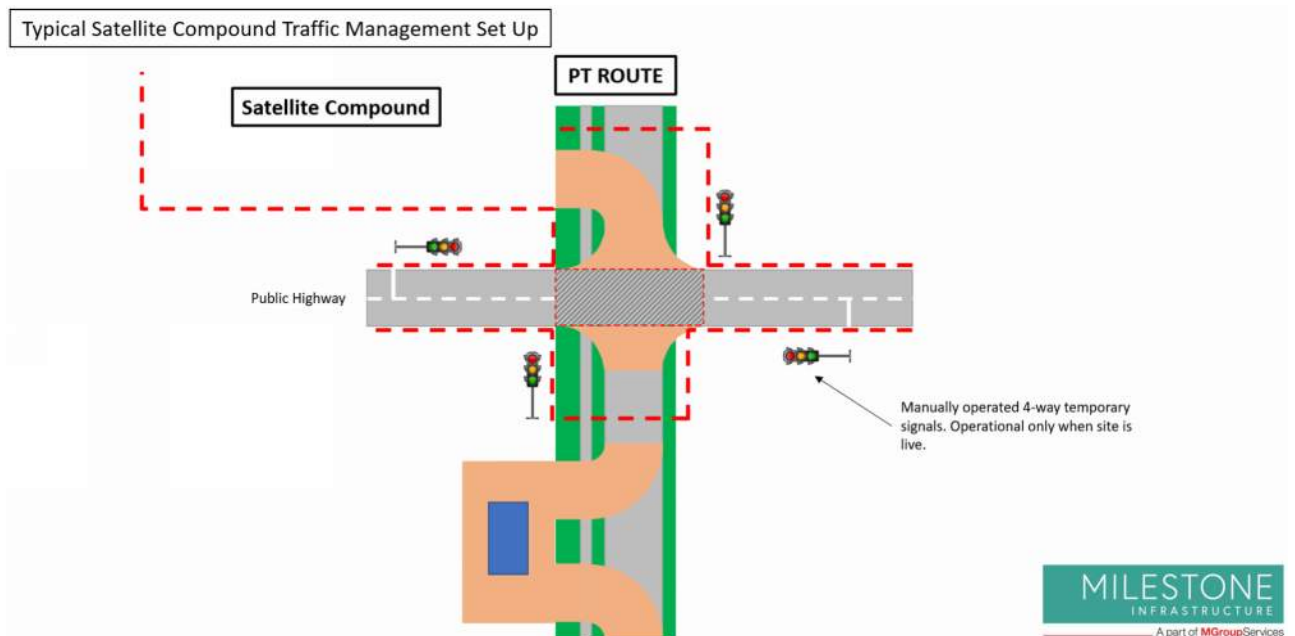


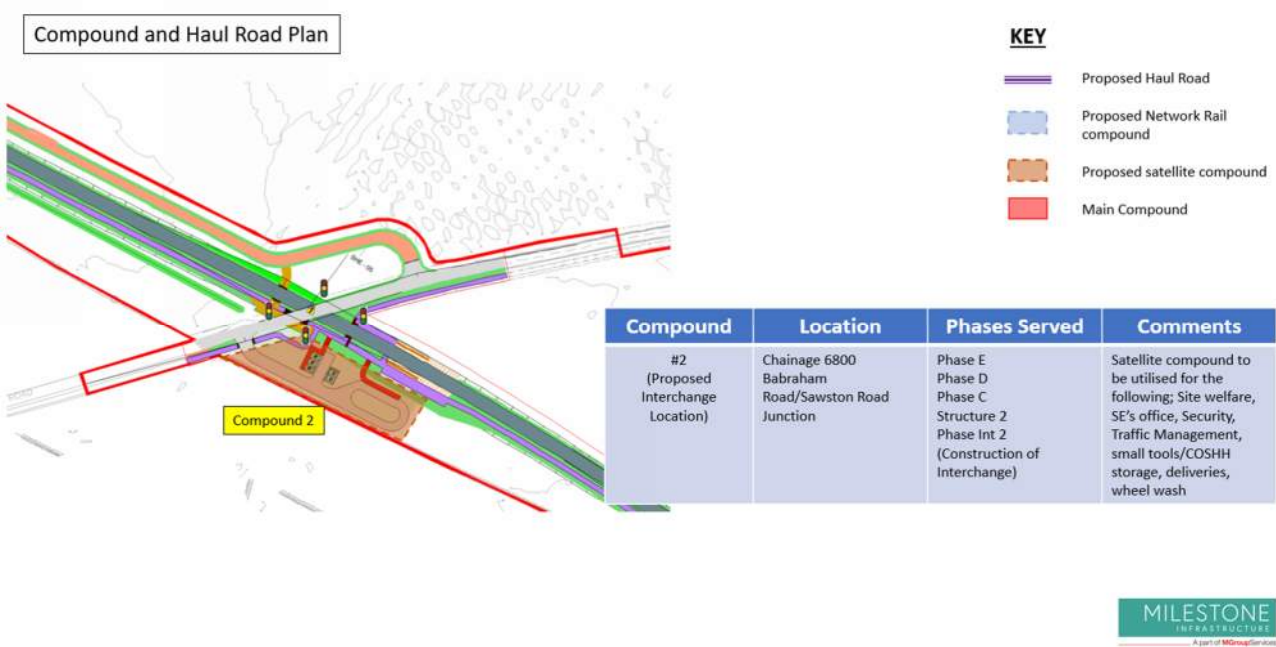
Figure 8.5: Typical satellite compound traffic management set up



8.4 Compound 2 – Babraham Road/Sawston Road Junction & Proposed Interchange Site

8.4.1 Satellite compound to be utilised for Site welfare, SE’s office, Security, Traffic Management, small tools/COSHH storage, deliveries, wheel wash.

Figure 8.6: Compound 2



8.5 Compound 3 – Not Used

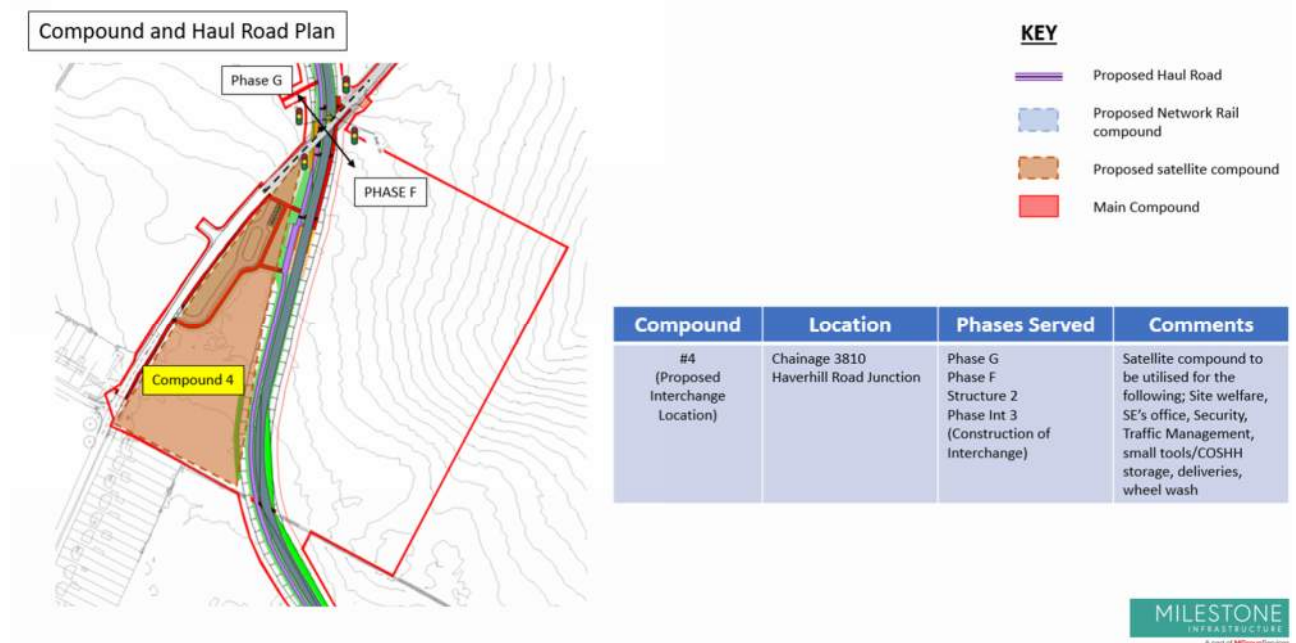
8.5.1 A proposal for the use of Dales Manor Business Park was reviewed but discarded during the development of the planning application.

Figure 8.7: Not used

8.6 Compound 4 – Haverhill Road Junction & Proposed Interchange Site

- 8.6.1 Satellite compound to be utilised for Site welfare, SE's office, Security, Traffic Management, small tools/COSHH storage, deliveries, wheel wash.

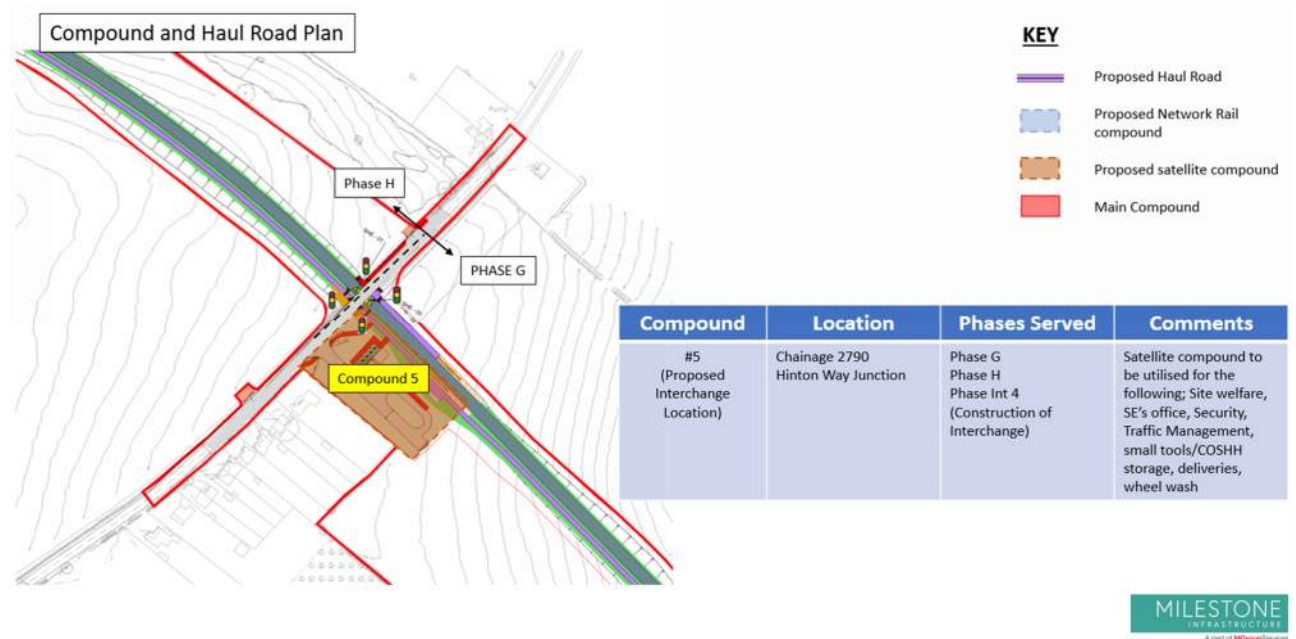
Figure 8.8: Compound 4



8.7 Compound 5 – Hinton Way Junction & Proposed Interchange Site

- 8.7.1 Satellite compound to be utilised for Site welfare, SE's office, Security, Traffic Management, small tools/COSHH storage, deliveries, wheel wash.

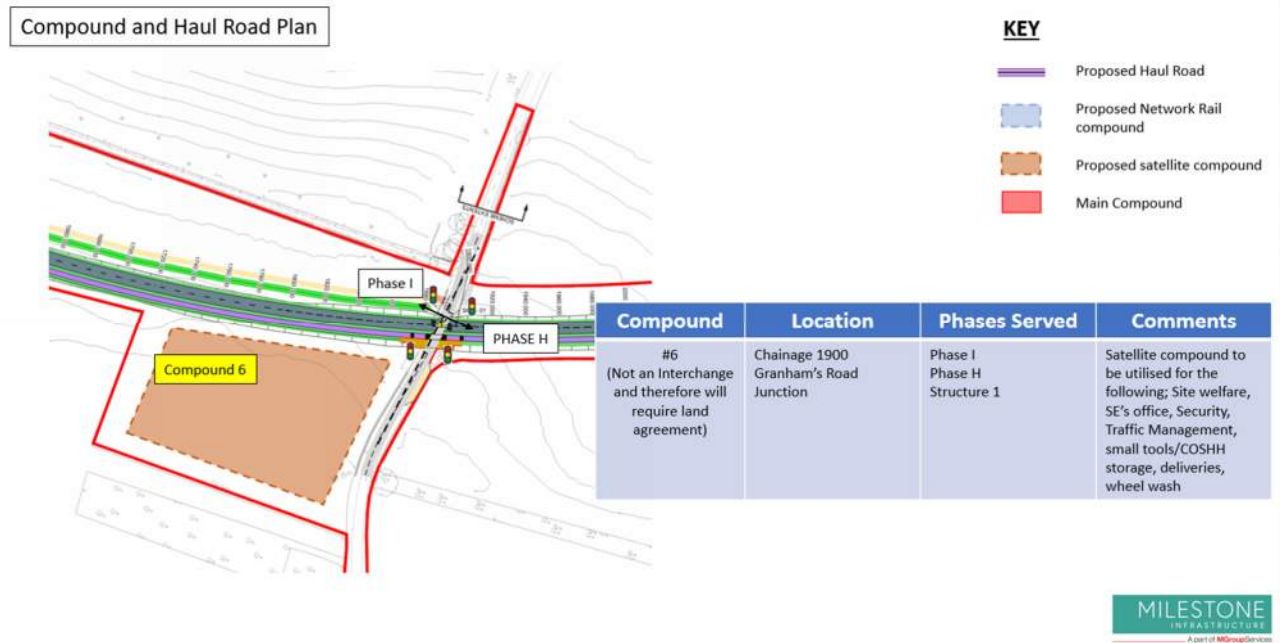
Figure 8.9: Compound 5



8.8 Compound 6 – Granhams Road Junction

- 8.8.1 Satellite compound to be utilised for Site welfare, SE's office, Security, Traffic Management, small tools/COSHH storage, deliveries, wheel wash.

Figure 8.10: Compound 6



8.9 Compound 7 – Addenbrooke's Road/Dame Mary Archer Way/Francis Crick Avenue roundabout

- 8.9.1 Proposed location with shared haul road for access to Francis Crick Avenue. Proposed location is to allow construction of Phase J and Structure 1.

Figure 8.11: Compound 7

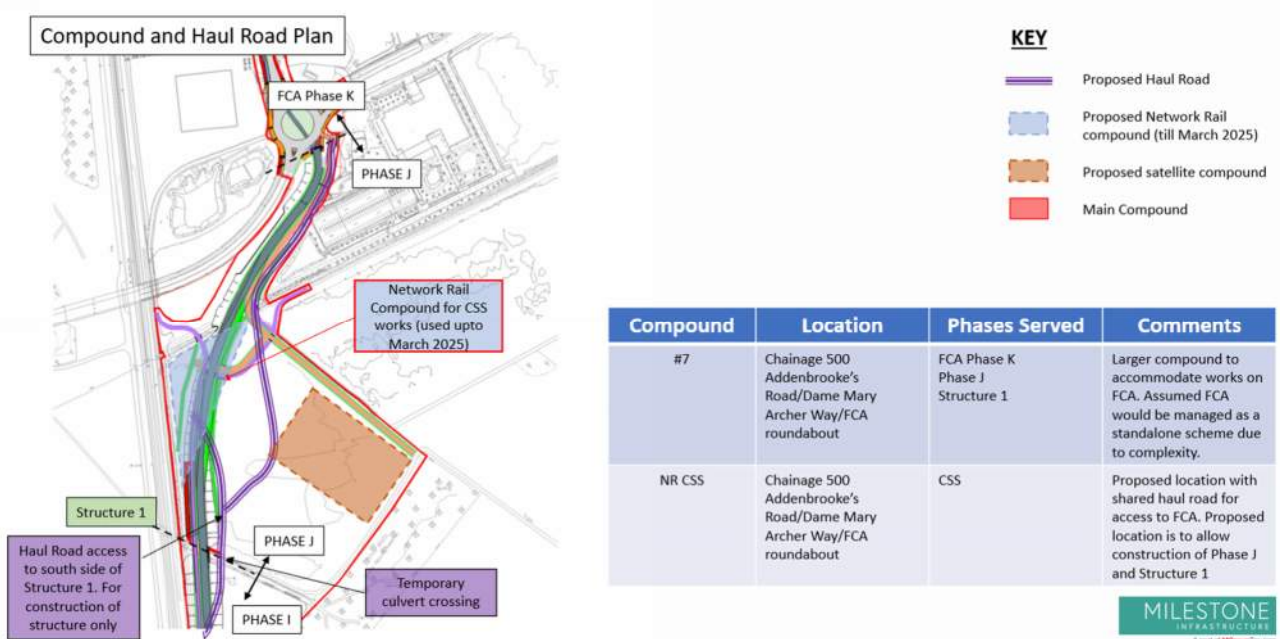
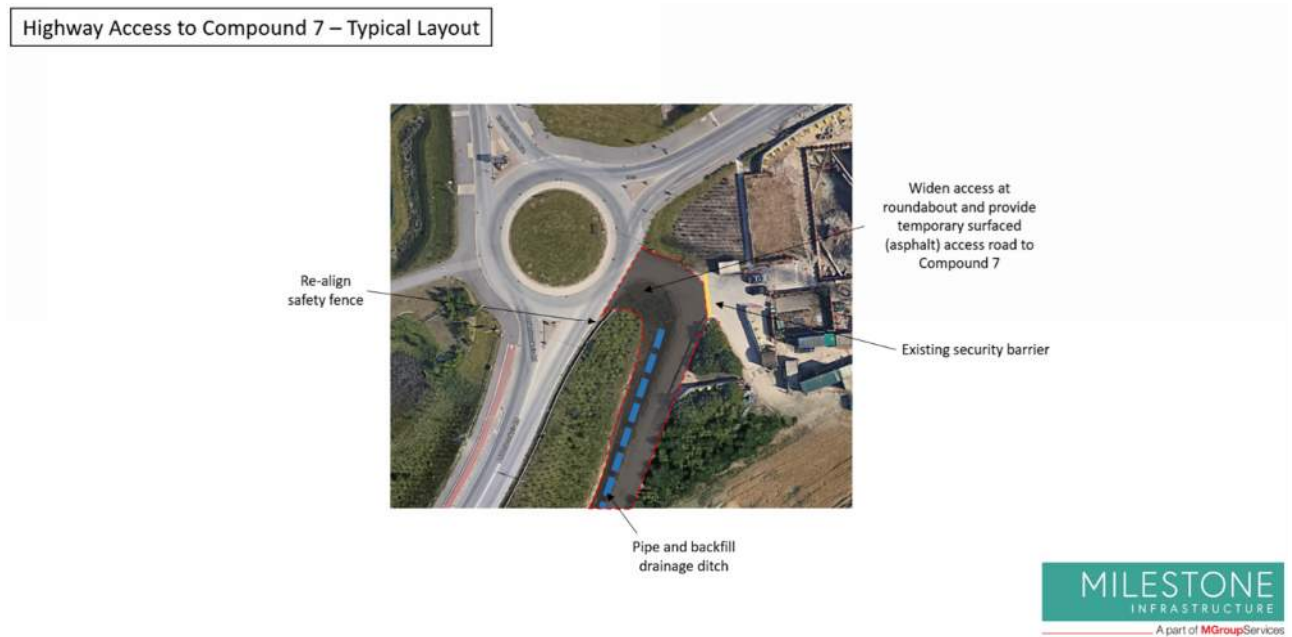


Figure 8.12: Highway access to compound 7



- 8.9.2 This strategy will minimize travel times to acquire materials, thus reducing carbon emissions, excessive noise and congestion to the local highway network. There will be no necessity to close any of the access routes to public vehicles during the project. This strategy will also reduce any bottlenecking of deliveries to one main compound and spread site traffic across the entire project, reducing localized site traffic congestion. Siting and storing materials closer to workfaces will negate the need to haul materials between phases. Hauling materials between phases would put further strain onto the road network.

9 Routes to and from site

9.1 Construction Traffic Management Plan

- 9.1.1 A detailed Construction Traffic Management Plan will be developed to detail the transport of people and materials to site, with the aim of minimizing impact to the local road network and environment. This shall include the potential to use public transport including bus and rail services to access the works area. This is to be developed in detail by the Principal Contractor and communicated to Stakeholders via public engagement forums after it has been approved by the local highway authority.
- 9.1.2 The Construction Traffic Management Plan will include details on all PRoW diversions required during construction including details of the diversion route, how long it will be in operation, management procedures to be implemented if the public have to cross a working area.
- 9.1.3 Major site access routes have been identified on the diagram below. Adequate access is possible via substantial A roads. There is no intention of any site vehicles accessing the site through the center of Cambridge (excluding deliveries from local Cambridge based suppliers).

Figure 9.1: Preferred major access routes



The maximum number of heavy-duty vehicles (HDV i.e.>3.5t) outward movements each day is expected to be within 10-50 in number.

9.2 Proposed Site Traffic Restrictions

- 9.2.1 A survey of the local access routes has been performed. Locations of high-risk areas such as Schools have been identified and shall be avoided if possible. Site traffic shall also be minimized through the villages of Barbraham, Sawston, Stapleford, Little Shelford and Great Shelford. Site traffic prohibited on the routes shown in red on the diagrams below. Access to all compounds (Excluding Compound 7) shall predominantly be from the A1307 Barbraham. Compound 7 shall be accessed from Addenbrookes Road via M11 Junction 11.

Figure 9.2: Preferred local access routes

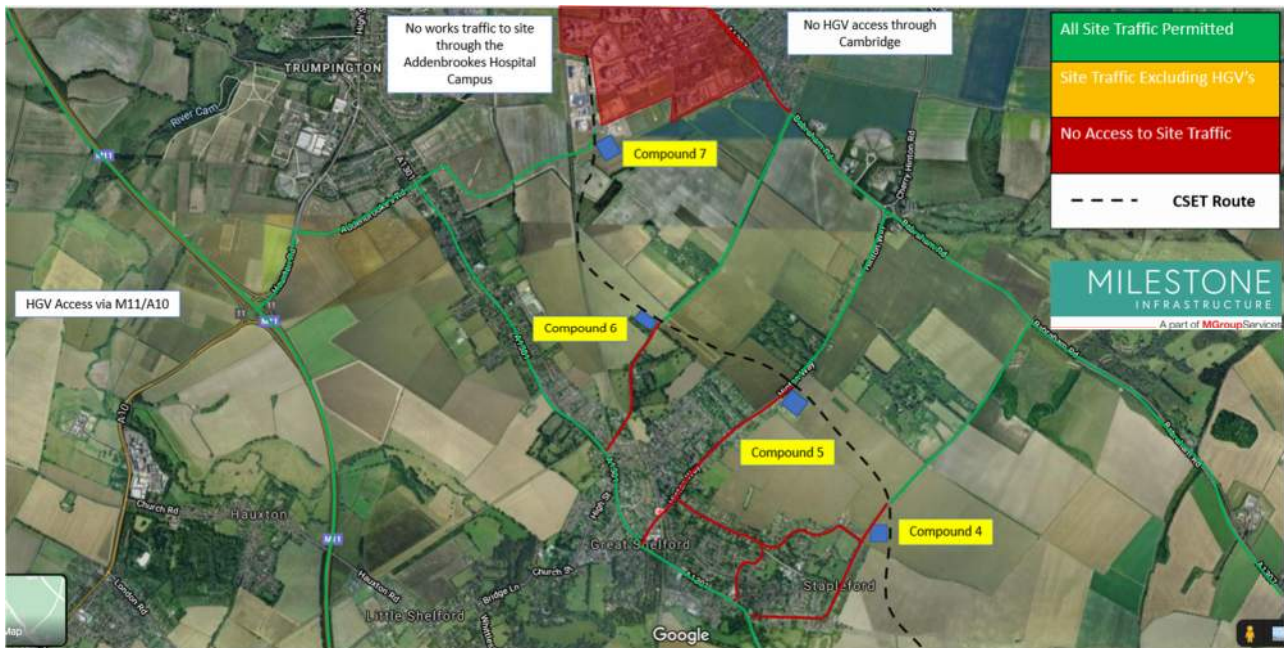


Figure 9.3: Preferred local access routes

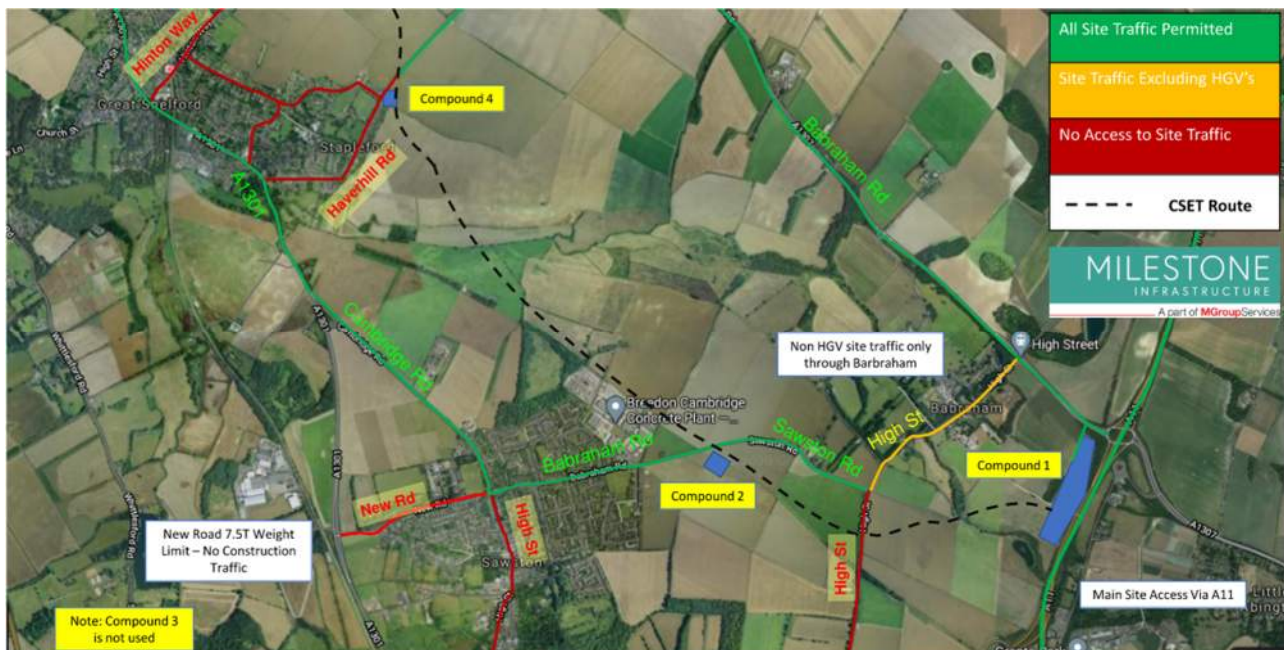


Table 9.1: CSET Travel Distances Between Proposed Compounds via Proposed Approved Highway Route (km)

Compound	1	2	3	4	5	6	7
1		9.656	N/A	6.759	7.886	8.851	14.323
2	9.656		N/A	15.772	16.576	17.703	9.656
3	N/A	N/A		N/A	N/A	N/A	N/A
4	6.759	15.772	N/A		4.184	5.150	20.439
5	7.886	16.576	N/A	4.184		3.701	21.243
6	8.851	17.703	N/A	5.150	3.701		22.370
7	14.323	9.656	N/A	20.439	21.243	22.370	

Note: Compound 3 is not used

10 Typical Plant to be used for Project

10.1.1 The following plant types are proposed to be used for the project delivery, including detail of expected noise levels for each.

Table 10.1: Plant types

Description	Expected Noise Levels	Activity
30t – 3t Excavator with breaker attachment	80-86dB	Civils
20t Dumper	80-86dB	Civils
8 Wheel Lorries inc with grab facility	80-86dB	Civils
Mobile Crane	80-86dB	Civils – bridge lift
Hiab vehicle	80-86dB	Deliveries/ Street Lighting/ Traffic signal works
MEWP (Mobile elevated works platform)	80-90dB	Street Lighting
Surfacing Paver	80-90dB	Surfacing Works
Concrete Paving Machine for CRC	85dB	Surfacing Works
Piling Rig (CFA)	85-90dB	Civils – bridge abutments/piers
Planer	86-95dB	Surfacing Works
Breakers – Hydraulic/ with compressor	86-95dB	Civils
Roller – on vibration	86-95dB	Civils
Vacuum Excavator	86-97dB	Civils
Dozer	85 – 103dB	Civils
Road Saws/ Stihl Saws	95-105dB	Civils
JCB	96dB	Civils
Concrete Batching Plant	104 – 108dB	Civils & Surfacing Works
Concrete Wagon	104 – 108dB	Civils

10.1.2 The number of heavy earth moving vehicles active on site at any one time will vary dependent on the number of works front. It is anticipated to be between 5 and 10 No.

10.1.3 Further to the above, the table below splits out the key work operations and details the typical plant to be used for each. NOTE – the list is typical main plant items and is not exhaustive and will be updated in depth by the Principal Contractor during the preconstruction phase of works.

Table 10.2: Typical plant to be used for key work operation

Work Operation	Typical Plant to be used
Earthworks	Tracked Excavators up to 30t
	20t Dump Trucks
	9t/10t Forward Tipping Dumpers
	HAMM 3400 series roller or similar
	CAT D5 Dozer or similar
Drainage	20t 8-wheeler road wagons
	Tracked Excavator up to 30t
	Excavator mounted compactor plate
	9t/10t Forward Tipping Dumpers
	Small tools - Stihl Saw, Whacker Plate etc
Structures	Mobile Crane (size TBC)
	Piling Rig (Type & size TBC)
	M40 Concrete Pump
	Tracked Excavator up to 30t
	Bomag 120 Roller or similar
Car Park/Road Construction (up to subbase inc kerbs)	Small tools - Stihl Saw, Whacker Plate, poker vibrator etc
	Tracked Excavators up to 30t
	9t/10t Forward Tipping Dumpers
	Bomag 120 Roller or similar
	8m Concrete Truck
Surfacing	20t 8-Wheeler Road Wagons
	Small tools - Stihl Saw, Whacker Plate etc
	Paver - full and midi likely
	Bomag 140 Roller or similar
	JCB 2CX
Others Misc.	20t Asphalt Delivery Vehicles
	Road Sweeper
	Hamm Smooth Wheeled Roller or similar
	2.2m Wirtgen Surface Planer
	JCB 140 Telehandler
	Low loaders for plant deliveries
	Material delivery lorries and hiabs
	Site vehicles - vans etc

11 Waste Management Plan

11.1 Waste Management

- 11.1.1 The Principal Contractor shall produce a site-specific Site Waste Management Plan for the Project with the aim to encourage effective waste management practices, ensure regulatory compliance, improve environmental performance and reduce the cost of waste disposal. The plan will detail a breakdown of waste streams likely to be produced by the project, a waste forecast, and details of waste carriers and disposal sites. Waste will be segregated on site to enable either on site reuse or off-site recycling of material. The Principal Contractor will track and record all waste movements to ensure legal compliance.
- 11.1.2 The Site Waste Management Plan shall be included in the final CEMP produced by the Principal Contractor.
- 11.1.3 Waste produced by the works are to be managed in accordance with the relevant waste regulations and industry standards.
- 11.1.4 All waste materials sent off site, either for reuse, recovery, recycling or disposal will be transferred, treated and disposed of in accordance with the Legal Duty of Care required by the Environmental Protection Act 1990 and the Waste (England and Wales) Regulations 2011. Waste on site will be kept segregated
- 11.1.5 In line with best practice the Contractor will ensure fully Duty of Care compliance through the associated supply chain, including conduction pre-engagement audits and random spot checks on waste carriers and disposal facilities, throughout the duration of the contract.
- 11.1.6 The Contractor will operate in accordance with industry best practice and the requirements of relevant legislation and planning conditions pertinent to the scheme. Training in waste management and minimisation will be delivered to all operatives on the site as appropriate.
- 11.1.7 All reasonable steps will be taken to ensure:
- No unauthorised keeping, deposit or disposal of waste materials on site, with audits of waste contractors to ensure that this does not occur offsite,
 - No unauthorised treatment of waste on site, with audits of waste contractors to ensure that this does not occur offsite.
 - No escape/release of waste material either onsite while the waste is awaiting removal or offsite, as far as can reasonably be controlled.
 - Waste is only transferred to an authorised person/company which holds the correct Waste Carriers/Brokers License; and a transfer note or consignment note is used with a written description of the waste, a description of any hazardous properties and the appropriate European Waste Catalogue (EWC) code, along with all the other information required by law on this documentation.
 - Pre-appointment checks are to be made that both the carrier and receiving facility are licensed to deal with a particular waste stream.
 - Waste materials should be segregated by type while temporarily stored prior to disposal; the range of waste material segregation will be determined in conjunction with the waste management supply chain.
 - Hazardous wastes arising from the works could include oil/fuel contaminated materials and empty aerosols. They will be identified and stored prior to removal off site according to the following:
 - No mixing/blending with non-hazardous or inert materials,
 - Fuel contaminated soils which may arise if a spillage or accident occurs should be considered as hazardous until proven otherwise.
- 11.1.8 Note: All hazardous wastes will be dealt with in accordance with the relevant regulations including the Hazardous Waste (England and Wales) Regulations 2005.

11.2 Material Recycling

- 11.2.1 Where possible, excavated material shall be re-used on site. Topsoil to is to be banded and stored and used for landscaping or spread on neighbouring fields if landowners accept the soil to be spread in this manner.
- 11.2.2 An Agricultural Soils survey has been completed for the route and travel hub. This information shall be used to be ensure soils of poorer quality are not mixed with soils of higher quality.
- 11.2.3 Class 1 (granular) material shall be removed and deposited on site where required by the “cut & fill” calculations performed in advance of project commencement. Foundations constructed for site compounds shall be designed and built in order to be retained for use within the permanent design.

12 Control of Pollution

12.1 Pollution Prevention

- 12.1.1 All work will be carried out in accordance with guidelines set out in the Environment Agency Pollution Prevention Guidelines (PPGs), or where the document has been revised to the Guidance for Pollution Prevention (GPPs).

Table 12.1: PPGs

Reference	Title	Date
PPG1	Understanding your environmental responsibilities – good environmental practices	June 2013
GPP2	Above ground oil storage tanks	Jan 2018
PPG3	Use and design of oil separators in surface water drainage systems	Apr 2006
GPP4	Treatment and disposal of sewage where no foul sewer is available	Nov 2017
GPP5	Works maintenance in or near water	Jan 2017
PPG6	Working at construction and demolition sites	2012
PPG7	The safe operation of refueling facilities	July 2011
GPP13	Vehicle washing and cleaning	April 2017
GPP21*	Incident response planning	July 2017
GPP22*	Dealing with spills	Oct 2018
GPP26	Drums and intermediate bulk containers	Feb 2019
PPG27	Installation, decommissioning and removal of underground storage tanks	-
PPG28	Controlled burn	July 2007
_*	Is your site right checklist	Aug 2012

* The Environment Agency no longer provides 'good practice' guidance.

12.2 Storage of Fuel and Oil

- 12.2.1 Fuel and oil (including mould oil) will be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001 and fuels and oil will be handled in such a way that risk of pollution is minimised, specifically:
- 12.2.2 Fuel and / or oil storage tanks will comply with the Control of Pollution (Oil Storage) (England) Regulations 2001 and will be locked when not in use i.e. outside working hours. Storage areas will not be located within 10m of site drainage. No refueling will be permitted within 50m of a watercourse or within 10m of a highway drainage gully.
- 12.2.3 Mobile bowsers will be bunded and will comply with the Control of Pollution (Oil Storage) (England) Regulations 2001 and will be locked when not in use i.e. outside working hours. Trained operatives will carry out refueling of plant and equipment.
- 12.2.4 Drums will be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is the greater. Where possible these bunds will be fitted with roofs to prevent the collection of rainwater. Individual drums in use will be stored on a drip tray

sufficient to contain 25% of the full capacity of the drum. Drums will be maintained in a good condition, fitted with lids and labelled to indicate the contents.

- 12.2.5 Static combustion engine plant (e.g. compressors, lighting sets) will be integrally banded or placed on drip trays. Plant will be regularly checked for leaks and will be regularly maintained. Spill kits will be provided within proximity to fuel and oil storage areas and operatives will be trained in their use.
- 12.2.6 Any lighting used out of hours would need agreeing with the LA and EHO. Use of battery powered lighting would have to be considered to minimise noise impacts.

12.3 Concrete Washout

- 12.3.1 Measures for wash out of concrete lorries will be provided and agreed locally with the Environment Agency. Facilities will be based on the amount of concrete being used on site, in general this will consist of a lined skip to separate concrete solids and water. Water will either be treated to neutralize pH before discharge to the drainage network (environmental permit may be required from the Environment Agency) or removed from site using a vacuum tanker.

12.4 Drainage and Surface Water Management

- 12.4.1 Drainage plans for existing drainage will be provided on site. Existing drains will be marked to indicate surface water (blue) or foul (red).
- 12.4.2 Provision for temporary management of stormwater during the construction phase will be developed as the works progress. This will be based on guidelines in PPG6 to provide adequate settlement of suspended solids and treatment prior to discharge into the drainage system.
- 12.4.3 The surface water management proposals for runoff from the highway construction areas and proposed works will be based on the guidelines within the Environment Agency's PPG6. Where necessary silt fences will be employed to intercept any overland exceedance flow from excavation works areas.

12.5 General Notes:

- 12.5.1 Refueling of plant and equipment shall only be carried out at site compounds and only when spillage kits are immediately available for use. Any oil spill onto the ground is to be contained and removed immediately.
- 12.5.2 All silt prevention and pollution measures will be inspected not less than once a day (including non-working days) and at least twice a day during rainfall. Any defects or necessary corrective actions to be carried out immediately. Any cleaning of the drainage system shall ensure no material or pollutants are washed downstream of the works. No cement washings shall be allowed to enter any drainage system. Existing gullies in the highway shall be regularly cleaned and silt removed to a licensed tip.

12.6 Maintenance of plant and equipment

- 12.6.1 Maintenance of plant, vehicles and equipment will be carried out at the site compounds and least 50m from a watercourse and 10m away from a drain. Spill kits will be available during all plant maintenance operations and a drip tray will be used to contain any leakage of oil. Where emergency repair is necessary within 10m of a drain, a drain seal will be used to ensure that no contamination enters the drainage system.
- 12.6.2 Any plant, equipment or other vehicle considered a pollution risk will be either repaired or removed from site.

12.7 Control of Water Pollution

- 12.7.1 The following guidance will be adhered to during construction to manage risks to water resources from the construction works:
 - Control of water pollution from linear construction projects. Technical guidance (C648)

12.8 Pumping Works

- 12.8.1 Pumping works will be controlled using a 'Permit to Pump' system to prevent pollution of drainage systems. In general, small volumes of localised pumping to dewater excavations will be discharged to an area of vegetated ground close to the excavation. Measures for prevention of pollution during larger dewatering activities will be agreed with the Environment Agency.

13 Emergency Plans and Incident Control

- 13.1.1 The works, including the traffic management, will be discussed and agreed with the emergency services. In the case of an emergency with either the site works or within the vicinity of the works the Principle Contractor will communicate with the Emergency services. Access points to remote areas of the site will be maintained to ensure emergency vehicle access is sufficient.
- 13.1.2 An Environment Incident Control Plan (EICP) shall be produced for this Project as part of the CEMP, by the Principal Contractor. This plan details information on all stores, bulk storage vessels, drums or containers intended for storing oils, chemicals or other potentially polluting materials. Site staff involved with emergency response will be familiar with and have access to the site plan, information on materials on site and their health, safety and pollution risks, appropriate spill response equipment and training in incident response procedures.
- 13.1.3 An Emergency Flood Plan (EFP) shall be produced for this Project. The plan details areas of the site that are prone to flooding and the necessary arrangements for working in a flood zone and measures to deal with a flood. Site staff involved with emergency response will be familiar with and have access to the site plan and training in incident response procedures.

14 Appendices:

A - PHASING DIAGRAM

B - HIGH LEVEL DRAFT PROGRAMME

C - VOLUME TAKE OFF

D – AVERAGE RESOURCE NUMBERS (DAILY)

E – TYPICAL MATERIALS LIST

Appendix A

A. Phasing diagrams

The following figures show the proposed phasing shown in the programme in Appendix A. These figures only show indicative alignments of the route and proposed compounds for illustrative purposes only, these are not intended to be used as accurate representation of the route itself.

Travel Hub and route up to River Granta at Babraham



River Granta Crossing through the High Street towards Sawston Stop



Sawston Stop to River Granta Cross at Stapleford



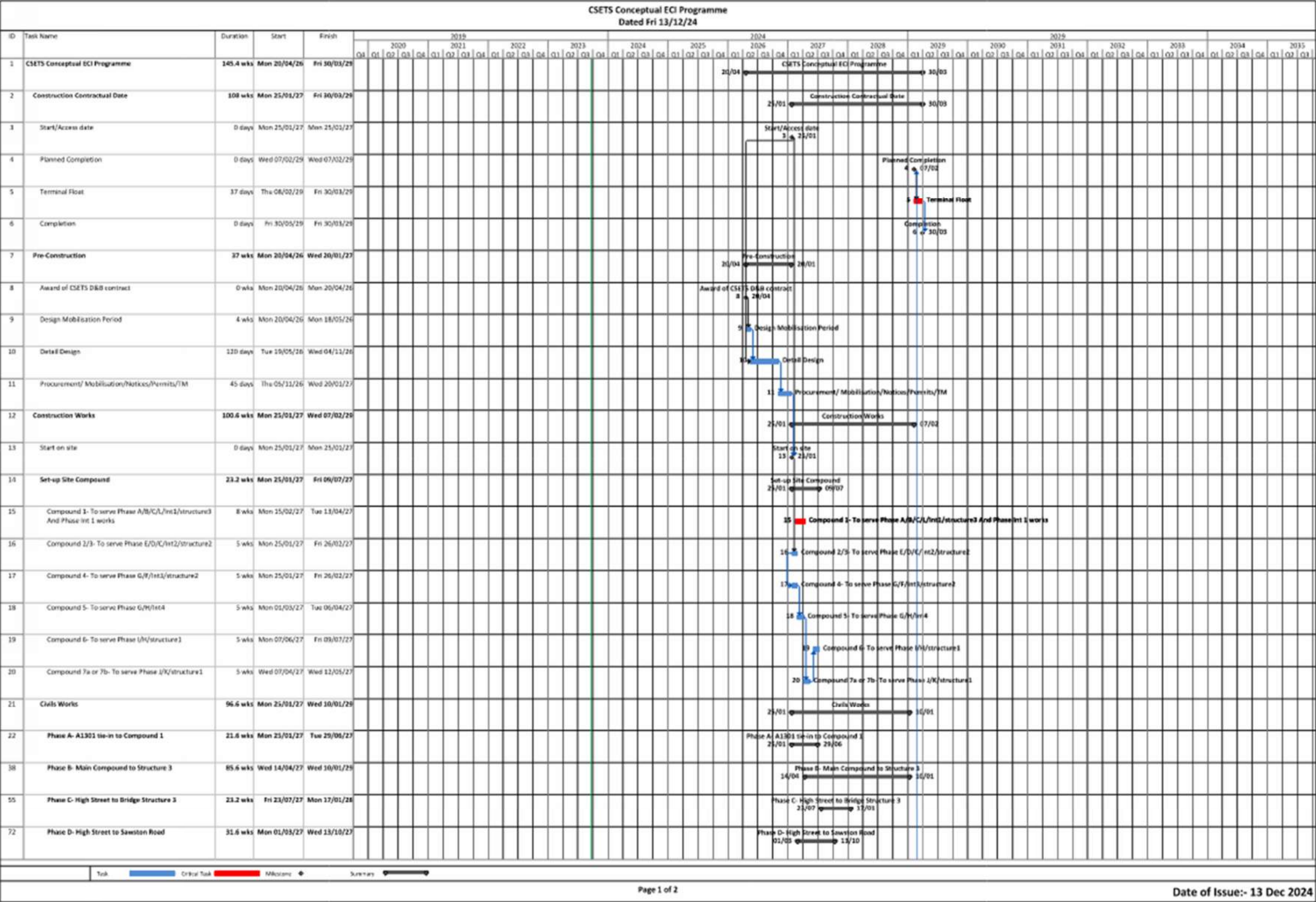
River Granta Crossing at Sawston to Hinton Way

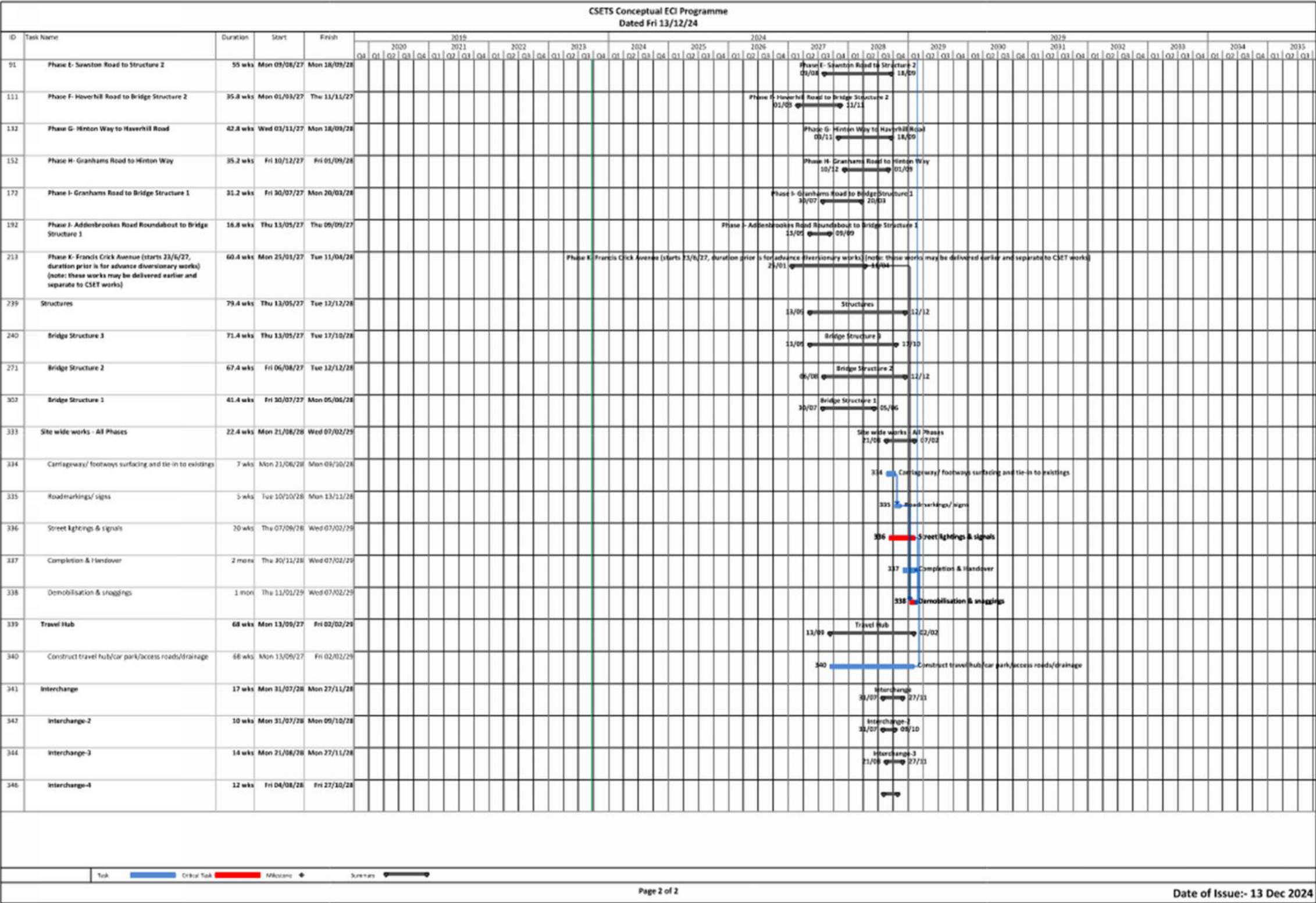


Hinton Way to Francis Crick Avenue



Appendix B – Top Level Programme





Appendix C – Volume Take-Off



	EARTHWORKS MEASURE											
	VOLUME											
	TOP OF BATTER TO TOP OF BATTER										EMBANKMENTS	DRAINAGE
	Topsoil	Topsoil (Import)	Class 1 Fill	Class 1 Cut	CBGM	CRCR	Asphalt	Asphalt	Type 1	Capping	Class 1	Swales
Phase A	497.70	343.77	0.00	-1426.74	557.76	362.25	45.99	51.45	73.50	663.60	0.00	345.00
Phase B	592.50	405.12	0.00	-1916.22	664.00	431.25	54.75	61.25	87.50	790.00	8.73	0.00
Structure 3 - East Ramp	853.20	866.30	12905.15	-316.95	956.16	621.00	78.84	88.20	126.00	1137.60	11007.25	0.00
Structure 3 - West Ramp	568.80	632.25	11318.10	-64.15	637.44	414.00	52.56	58.80	84.00	758.40	10585.43	0.00
Phase C	1019.10	726.12	416.23	-1880.04	1142.08	741.75	94.17	105.35	150.50	1358.80	140.96	816.50
Phase D	2370.00	1694.63	1418.59	-4501.42	2656.00	1725.00	219.00	245.00	350.00	3160.00	447.16	0.00
Phase E	3318.00	2334.33	1234.06	-7755.75	3718.40	2415.00	306.60	343.00	490.00	4424.00	451.75	212.75
Structure 2 - South Ramp	948.00	925.46	12551.77	-554.58	1062.40	690.00	87.60	98.00	140.00	1264.00	10010.82	0.00
Structure 2 - North Ramp	687.30	724.02	11651.43	-111.39	770.24	500.25	63.51	71.05	101.50	916.40	9169.21	0.00
Phase F	1777.50	1252.98	415.32	-3901.02	1992.00	1293.75	164.25	183.75	262.50	2370.00	154.32	730.25
Phase G	2559.60	1875.00	6654.89	-7224.23	2868.48	1863.00	236.52	264.60	378.00	3412.80	3691.61	92.00
Phase H	2109.30	1641.84	6962.10	-2098.24	2363.84	1535.25	194.91	218.05	311.50	2812.40	2573.82	184.00
Phase I	1967.10	1436.79	2066.04	-2804.97	2204.48	1431.75	181.77	203.35	290.50	2622.80	537.04	425.50
Structure 1 - South Ramp	402.90	373.47	4158.99	0.00	451.52	293.25	37.23	41.65	59.50	537.20	1874.15	0.00
Structure 1 - North Ramp	450.30	396.98	3592.82	-14.54	504.64	327.75	41.61	46.55	66.50	600.40	1580.67	0.00
Phase J	592.50	443.87	1001.14	-594.24	664.00	431.25	54.75	61.25	87.50	790.00	283.41	0.00
TOTAL (M3)	20713.80	16072.93	76346.58	35164.48	23213.44	15076.50	1914.06	2141.30	3059.00	27618.40	52516.33	2806.00
TOTAL (M3) +10% Allowance for Wastage	22786	17681	83982	38681	25535	16585	2106	2356	3365	30381	57768	3087
TOTAL (T) +10% Allowance for Wastage	50130	38899	184761	85099	56177	36487	4634	5184	7403	66839	127090	6792
TOTAL (T) +10% In Wagon Loads	2507	1945	9239	4255	2809	3041	232	260	371	3342	6355	340
DAYS IMPORT DURATION BASED ON 40 LOADS/DAY	63	49	231	107	141	153	6	7	10	84	159	9

	Phase J	Structure 1 - North	Structure 1 - South	Phase I	Phase H	Phase G	Phase F	Structure 2 - North	Structure 2 - South	Phase E	Phase D	Phase C	Structure 3 West	Structure 3 East	Phase B	Phase A	Total
Total volume of excavation (T)	1307.32	31.98	0.00	6170.94	4616.13	15893.31	8582.24	245.06	1220.08	17062.64	9903.12	4136.09	141.13	697.29	4215.69	3138.83	77361.86
Total volume of topsoil (T)	1303.50	990.66	886.38	4327.62	4640.46	5631.12	3910.50	1512.06	2085.60	7299.60	5214.00	2242.02	1251.36	1877.04	1303.50	1094.94	45570.36
Total	2610.82	1022.64	886.38	10498.56	9256.59	21524.43	12492.74	1757.12	3305.68	24362.24	15117.12	6378.11	1392.49	2574.33	5519.19	4233.77	
EXCAVATION - TOTAL (T) In Wagon Loads	146.00	57.00	50.00	584.00	515.00	1196.00	695.00	98.00	184.00	1354.00	840.00	355.00	78.00	144.00	307.00	236.00	
EXCAVATION - EXPORT DURATION BASED ON 40 LOADS/DAY	4	2	2	15	13	30	18	3	5	34	21	9	2	4	8	6	
TOPSOIL - TOTAL (T) In Wagon Loads	73	56	50	241	258	313	218	85	116	406	290	125	70	105	73	61	
TOPSOIL -DAYS EXPORT DURATION BASED ON 40 LOADS/DAY	2	2	2	7	7	8	6	3	3	11	8	4	2	3	2	2	
Topsoil import (T)	976.52	873.35	821.63	3160.94	3612.05	4124.99	2756.56	1592.85	2036.01	5135.52	3728.18	1597.47	1390.96	1905.86	891.26	756.29	35360.44
Class 1 import (T)	2202.50	7904.19	9149.78	4545.29	15316.61	14640.75	913.69	25633.14	27613.88	2714.93	3120.89	915.70	24899.81	28391.32	0.00	0.00	167962.47
Total	3179.02	8777.54	9971.41	7706.23	18928.66	18765.74	3670.25	27225.99	29649.90	7850.45	6849.07	2513.16	26290.77	30297.18	891.26	756.29	
TOPSOIL IMPORT - TOTAL (T) In Wagon Loads	52.00	46.00	44.00	167.00	191.00	218.00	146.00	84.00	108.00	271.00	197.00	85.00	74.00	101.00	47.00	40.00	
TOPSOIL -DAYS IMPORT DURATION BASED ON 40 LOADS/DAY	2	2	2	5	5	6	4	3	3	7	5	3	2	3	2	1	
CLASS 1 IMPORT - TOTAL (T) In Wagon Loads	123	440	509	253	851	814	51	1,425	1,535	151	174	51	1,384	1,578	0	0	
CLASS 1 -DAYS IMPORT/EXPORT DURATION BASED ON 40 LOADS/DAY	4	11	13	7	22	21	2	36	39	4	5	2	35	40	0	0	
Topsoil Balance	326.98	117.31	64.75	1166.68	1028.41	1506.13	1153.94	-80.79	49.59	2164.09	1485.82	644.55	-139.60	-28.82	412.24	338.65	10209.93
Class 1 Balance	-895.17	-7872.21	-9149.78	1625.65	-10700.48	1252.57	7668.55	-25388.08	-26393.81	14347.71	6782.24	3220.40	-24758.68	-27694.03	4215.69	3138.83	-90600.61
CLASS 1 IMPORT - TOTAL (T) In Wagon Loads	50.00	438.00	509.00		595.00			1411.00	1467.00				1376.00	1539.00			
CLASS 1 -DAYS IMPORT DURATION BASED ON 40 LOADS/DAY	2	11	13		15			36	37				35	39			

Appendix D

CSETS - Average Resource Numbers (Daily)

Task Name	Start	Finish	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	
Contractual Date	28/01/27	29/01/29																														
Construction Works	28/01/27	29/01/29																														
Set-up Site Compound	28/01/27	11/07/27																														
Compound 1- To serve Phase A/B/C/L/Int1/structure3 And Phase Int 1 works	18/02/27	14/04/27			30	30																										
Compound 2/3- To serve Phase E/D/C/Int2/structure2	28/01/27	03/03/27		30	30																											
Compound 4- To serve Phase G/F/Int3/structure2	28/01/27	03/03/27		30	30																											
Compound 5- To serve Phase G/H/Int4	04/03/27	07/04/27				30																										
Compound 6- To serve Phase I/H/structure1	09/06/27	11/07/27							30																							
Compound 7a or 7b- To serve Phase J/K/structure1	01/04/27	08/05/27				30	30																									
Civils Works	28/01/27	01/01/29																														
Phase A- A1301 tie-in to Compound 1	28/01/27	02/07/27		40	40	40	40	40	40																							
Phase B- Main Compound to Structure 3	15/04/27	01/01/29					40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40					
Phase C- High Street to Bridge Structure 3	23/07/27	16/01/28						40	40	40	40	40	40	40	40																	
Phase D- High Street to Sawston Road	04/03/27	16/10/27				40	40	40	40	40	40	40																				
Phase E- Sawston Road to Structure 2	07/08/27	18/09/28									40	40	40	40	40	40	40	40	40	40	40	40	40	40								
Phase F- Haverhill Road to Bridge Structure 2	04/03/27	07/11/27				40	40	40	40	40	40	40	40																			
Phase G- Hinton Way to Haverhill Road	03/11/27	11/09/28												40	40	40	40	40	40	40	40	40	40									
Phase H- Granhams Road to Hinton Way	08/12/27	28/08/28													40	40	40	40	40	40	40	40										
Phase I- Granhams Road to Bridge Structure 1	28/07/27	18/03/28								40	40	40	40	40	40	40	40															
Phase J- Addenbrookes Road Roundabout to Bridge Structure 1	09/05/27	05/09/27						40	40	40	40																					
Phase K- Francis Crick Avenue (starts 12/8/24, duration prior is for advance diversionary works)	28/01/27	16/04/28		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40														
Structures	16/05/27	08/12/28																														
Bridge Structure 3	16/05/27	15/10/28						40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40								
Bridge Structure 2	07/08/27	08/12/28									40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40					
Bridge Structure 1	28/07/27	28/05/28								40	40	40	40	40	40	40	40	40	40													
Site wide works - All Phases	01/01/28	29/01/29									40	40	40	40																		
Carriageway/ footways surfacing and tie-in to existings	17/08/28	02/10/28																					40	40								
Roadmarkings/ signs	05/10/28	06/11/28																								40						
Street lightings & signals	14/09/28	29/01/29																							40	40	40	40				
Completion & Handover	07/12/28	29/01/29																										10				
Demobilisation & snaggings	01/01/28	29/01/29													25	25	25	25	25	25	25	25	25	25	25	25	25					
Travel Hub	16/09/27	19/01/29																														
Construct travel hub/car park/access roads/drainage	16/09/27	19/01/29									50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50					
Interchange	27/07/28	20/11/28																														
Interchange-2	27/07/28	02/10/28																				20	20	20								
Interchange-3	17/08/28	20/11/28																					20	20	20	20						
Interchange-4	03/08/28	23/10/28																					20	20								
Terminal Float / Completion	29/01/29	31/03/27																														
	Daily Total		0	140	170	250	230	280	310	360	440	450	410	410	475	435	435	395	355	315	315	335	375	335	255	195	165	0	0	0	0	0
Average Daily Total for scheme	270		Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	

Appendix E: CSETS Materials List



Material Type	Datasheet Link
CBGM	https://www.britpave.org.uk/uploads/documents/originals/BP13%20-%20Cement%20and%20other%20hydraulically%20bound%20mixtures.pdf
CRCP	http://www.gillcivil.com/downloads/Gill-Civil-Brochure.pdf
HB2 Kerbs	https://media.marshalls.co.uk/image/upload/v1523957868/125 x 150 Half Battered Kerb Datasheet.pdf
Inspection Chamber Rings	https://fpmccann.co.uk/product/wide-wall-manhole-chambers/
MH Lids	https://www.saint-gobain-pam.co.uk/sites/pamline_uk/files/opt_emax_1.pdf
Reinforcing Mesh	http://simplyprecast.co.uk/wp-content/uploads/2017/03/A-393.pdf
Gully Grates	https://www.wrekinproducts.com/download/d400-gully-grates/?wpdmdl=2434&refresh=5fc639d7c260c1606826455
Precast Gully Pots	https://www.cpm-group.com/products/drainage/gully-pots-covers-gullies/
Path Edgings	https://media.marshalls.co.uk/Flat_Top_Edging_50_x_150_x_914_Datasheet.pdf
Bus Stop Kerb	https://media.marshalls.co.uk/image/upload/v1523958049/Bus_Stop_Kerb_Datasheet.pdf
NAL Sockets	https://www.nal.ltd.uk/wp-content/uploads/data-sheets/NAL%20Duckfoot%20Bend%20Retention%20Socket%20Data%20Sheet.pdf
Tactile Pavers	https://media.marshalls.co.uk/image/upload/v1523955795/Tactile_Blister_450_x_450_x_50_Datasheet.pdf
Concrete Drainage Pipes	http://www.traceyconcrete.com/site/wp-content/uploads/2011/06/Website-brochure-Nov-2019-Tracey-Concrete.pdf
Pre-Cast Headwall	https://content.althon.co.uk/uploads/datasheets/H3C_Datasheet_and_Installation_Guide.pdf
MOT Type 1	https://tarmac.com/products/aggregates/construction-aggregates/mot-type-1/#downloads
AC20 DBM Binder	https://www.breedongroup.com/images/uploads/products/Breedon_Superior_DS_08.17_new.pdf
10mm AGG SMA	https://www.breedongroup.com/images/uploads/products/Breedon_Industrial_SMA_DS_08.17_new.pdf
AC6 DBM 100/150	https://www.breedongroup.com/images/uploads/products/Breedon_Superior_DS_08.17_new.pdf
Ducting	https://www.naylor.co.uk/public/2017/03/Metro-Duct-Brochure.pdf
Stakkabox Duct Chambers	https://www.nal.ltd.uk/wp-content/uploads/2016/10/NAL-STAKKABOX-MODULA-BROCHURE.pdf
Cycleway Demarcation Pavers	https://media.marshalls.co.uk/image/upload/v1523955777/Tactile_Cycleway_400_x_400_x_50_Datasheet.pdf