

Chapter 9: Noise and Vibration

NOISE AND VIBRATION	
AUTHOR	Hann Tucker Associates
SUPPORTING APPENDIX	ES Volume 3: Appendix: Noise and Vibration Annex 1: Acoustic Terminology Annex 2: Relevant Acoustic Standards, Policies & Legislation Annex 3: Environmental Noise Survey Report Annex 4: Noise Modelling Assumptions
KEY CONSIDERATIONS	<p>The following key acoustic aspects have been considered in the assessment:</p> <ul style="list-style-type: none">Noise and vibration from demolition and construction activities at the Proposed Development;Noise from construction traffic from the Proposed Development;Noise from building services plant noise associated with the completed Proposed Development and from completed nearby schemes;Noise from operational road traffic from the completed Proposed Development and from completed nearby schemes;Noise from proposed retail, leisure and commercial units;Site suitability (for residential and commercial occupation); andCumulative effects.
CONSULTATION	<p>An EIA Scoping Report was prepared and submitted to the London Borough of Southwark (LBS) on 11th January 2024 to confirm the general acceptance of the proposed scope of the EIA. The EIA Scoping is appended to this ES in ES Volume 3, Appendix: EIA Methodology – Annex 1 and sets out the proposed scope and methodology for the noise and vibration assessment and this ES chapter.</p> <p>An EIA Scoping Opinion was issued by LBS on 27th March 2024 and is provided in ES Volume 3, Appendix: EIA Methodology – Annex 2. A summary of the key points relating to noise and vibration and how they have been addressed in this ES chapter are summarised below.</p> <ul style="list-style-type: none">Comments were provided in relation to the proposed scoping out of vibration effects. It was agreed that this should be acceptable given no sources of vibration are being introduced as part of the Proposed Development (excluding those from temporary construction works) and no existing vibration sources (e.g. over ground or underground railway lines) pass close to the site;The proposed policies and legislation were agreed with LBS to be acceptable;The baseline survey locations where considered to be representative of the acoustic environment across the site; andComments were made in relation to the duration of the baseline survey, specifying that it “cover a period sufficient to characterise the sound levels in the area, up to 1 week including the weekend”. The baseline survey was undertaken from approximately 13:00 hours on Wednesday 3rd August to 14:30 hours on Monday 8th August 2022. This period is deemed sufficient to characterize weekday and weekend sound levels in the area and therefore in-line with LBS’ comments. Further details on the baseline survey are found in paragraphs 9.1 – 9.3, Table 9.1 and Figure 9.1 as well as in ES Volume 3, Appendix: Noise and Vibration – Annex 3.

ASSESSMENT METHODOLOGY

Defining the Baseline

Current Baseline Conditions

- 9.1

A baseline environmental noise survey was undertaken in August 2022 to establish the existing noise climate around the site. Given the site’s location in an urban city centre that is understood to have seen minimal overall changes (in infrastructure and surrounding uses) since August 2022, the survey data is considered to be representative of the long term baseline at the site. The full environmental noise survey methodology and results are presented in **ES Volume 3, Appendix: Noise and Vibration – Annex 3**.
- 9.2

The baseline noise survey comprised of unattended noise monitoring that was undertaken at the site from approximately 13:00 hours on Wednesday 3rd August 2022 to 14:30 hours on Monday 8th August 2022.

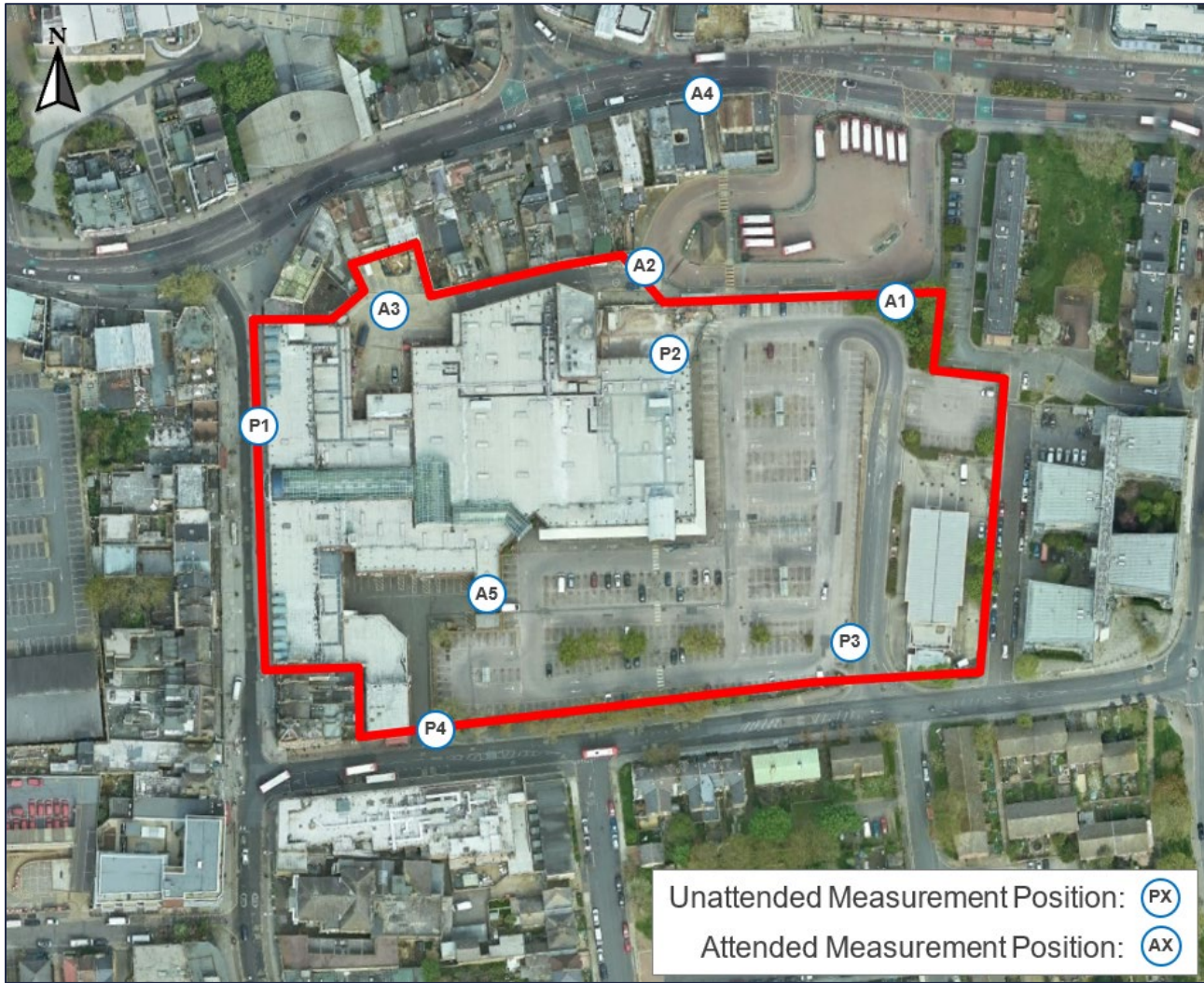
Further attended noise monitoring was undertaken between approximately 15:00 hours and 15:30 hours on 3rd August 2022 and between approximately 12:30 hours and 13:45 hours on 9th August 2022.

9.3 The noise monitoring locations were as described in Table 9.1 and shown in Figure 9.1.

Table 9.1 Attended and Unattended Noise Monitoring Locations

Position No.	Type	Description
P1	Unattended	The sound level meter was positioned on the western boundary of the site, overlooking Rye Lane. The microphone was attached to a pole that protruded 1m from the roof edge, fully exposed to passing traffic and activity. This location was selected to represent the western boundary of the site.
P2	Unattended	The sound level meter was positioned towards the north of the site, overlooking Peckham Bus Station. The microphone was attached to a pole that was placed on the roof edge, approximately 2m from roof level, fully exposed to passing traffic and activity. This location was selected to represent northern boundary of the site.
P3	Unattended	The sound level meter was installed inside a small security box with the microphone protruding approximately 6cm out of the box. The security box was fixed to a lamp post on the junction with the existing Morrisons car park entrance and Hanover Park (on the side facing the road) with the microphone at a height of approximately 3.5m above ground level. In order to minimise the effect of the box, the microphone was orientated vertically downwards such that it was not screened from the road.
P4	Unattended	The sound level meter was installed inside a small security box with the microphone protruding approximately 6cm out of the box. The security box was fixed to the Aylesham Centre entrance sign on the southern boundary on Hanover Park (on the side facing the road) with the microphone at a height of approximately 3.5m above ground level. In order to minimise the effect of the box, the microphone was orientated vertically downwards such that it was not screened from the road.
A1	Attended	The sound level meter was mounted on a tripod which was positioned towards the northeast corner of the site on the boundary with Peckham Bus Station. The microphone was approximately 1.2m from local ground level.
A2	Attended	The sound level meter was mounted on a tripod which was positioned north of the site, within Peckham Bus Station. The microphone was approximately 1.2m from local ground level.
A3	Attended	The sound level meter was mounted on a tripod which was positioned within the centre of the Aylesham Centre northern service yard. The microphone was approximately 1.2m from local ground level.
A4	Attended	The sound level meter was mounted on a tripod which was positioned on Peckham High Street, at the junction with Bull Yard. The microphone was approximately 1.2m from local ground level and 3m from Peckham High Street.
A5	Attended	The sound level meter was mounted on a tripod which was positioned on the roof of the existing Aylesham Centre, overlooking the southern elevation. The microphone was approximately 1.8m from roof level.

Figure 9.1 Noise Monitoring Locations



Evolution of the Baseline

- 9.4 The EIA Regulations¹ require that the likely evolution of baseline is considered in the event that the Proposed Development were not to come forward. In other words, the likely effect on the existing baseline conditions if the cumulative schemes, as detailed in **ES Volume 1, Chapter 2: EIA Methodology**, were to come forward in the absence of the Proposed Development.
- 9.5 With regards to operational road traffic noise, whilst there is the potential for cumulative schemes in the area to affect the flows on the local road network, as discussed within **ES Volume 1, Chapter 7: Traffic and Transport**, the cumulative schemes do not materially affect the study area and flows.
- 9.6 A list of the cumulative schemes that have been identified, with their approximate distance from the site, is presented in Table 9.2.

Table 9.2 List of Cumulative Schemes

Site Name	Application Ref.	Approximate Distance from Proposed Development
Schemes that are Approved and which form part of the Cumulative Assessment		
213 Rye Lane London SE15 4TP	16/AP/0131	600m
Aylesbury Estate Phase 1 Land bounded by Albany Road Portland Street Bagshot Street Alvey Street East Street and Dawes Street London SE17	14/AP/3844	1,800m
	17/AP/3885	1,800m
Aylesbury Estate Site Phase 2B Land Bounded by Thurlow Street and Albany Road and Kinglake Street and Bagshot Street London Southwark SE17 And SE5	22/AP/2226	1,700m
Malt Street Regeneration Site Land bounded by Bianca Road Latona Road Haymerle Road Frensham Street and Malt Street London SE1	17/AP/2773	1,000m
	20/AP/3242	1,000m
Land at Cantium Retail Park 520 Old Kent Road London SE1 5BA	18/AP/3246	1,300m
840 Old Kent Road London SE15 1NQ	19/AP/1322	1,150m
Land at 313-349 Ilderton Road London SE15	20/AP/1329	1,300m
Land bounded by Ruby Street Murdock Street and 685-695 Old Kent Road London SE15 1JS	18/AP/0196	1,150m
651-657 Old Kent Road London SE15 1JU	19/AP/1710	1,200m
Ruby Triangle site land bounded by Old Kent Road Ruby Street and Sandgate Street London SE15 1LG	18/AP/0897	1,250m
6-12 Verney Road London SE16 3DH	17/AP/4508	1,400m
227-255 Ilderton Road London SE15 1NS	19/AP/1773	1,600m
747-759 & 765-775 Old Kent Road London SE15 1NZ & land at Devonshire Grove SE15 1NZ	23/AP/1862	1,100m
Open Land Rear of 1-51 Peckham High Street Bounded by Sumner Avenue and Melon Road Open Land Adjacent to 59 Peckham High Street and Sumner House Located on Sumner Road London	16/AP/4018	1,250m
Vacant Site Opposite Central Venture Park Commercial Way SE15 (On the Site of Former 25 Commercial Way),	16/AP/4702	700m
Ledbury Estate Commercial Way London Southwark	22/AP/0554	1,050m

¹ The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (As amended in 2018 and 2020)

Site Name	Application Ref.	Approximate Distance from Proposed Development
Schemes that are Approved and which form part of the Cumulative Assessment		
Southernwood Retail Park 2 Humphrey Street London SE1 5JJ	18/AP/3551	1,750m
Dulwich Hamlet Football Ground	19/AP/1867	1,600m
40-46 Solomons Passage	20/AP/3285	1,400m
25-33 Parkhouse Street	20/AP/0858	1,600m
Bells Gardens Community Centre	21/AP/1077	460m
Submitted & Pending Determination		
812 Old Kent Road London SE15 1NH	19/AP/0994	1,050m
Ilderton Wharf 1-7 Rollins Street London Southwark SE15 1EP	21/AP/4757	1,600m
Land at Surrey Canal Road, Stockholm Road, Bolina Road And, Rollins Street, London, SE16	DC/20/119706	1,750m

Impact Assessment Methodology

- 9.7** The study area for the assessment is defined by the location of surrounding sensitive receptors and the end use(s) of the Proposed Development. Receptors are outlined within the 'Receptors and Receptor Sensitivity' section of this ES chapter.
- 9.8** This section presents the methodology used to assess each type of noise and vibration impact upon sensitive receptors, in terms of the application of relevant standards and guidance, along with the types of data and analysis carried out.
- 9.9** In summary, the assessment considers the following types of noise and vibration:
- Noise and vibration from demolition and construction activities at the Proposed Development;
 - Noise from construction traffic from the Proposed Development;
 - Noise from proposed commercial uses;
 - Noise from building services plant noise from the completed Proposed Development; and
 - Noise from operational road traffic from the completed Proposed Development and from Completed nearby schemes.

Demolition and Construction

- 9.10** The demolition and construction programme is anticipated to be undertaken over the course of approximately 9 years comprising two main phases. During the demolition and construction works, there is the potential for noise and vibration associated with demolition, earthworks, installation of necessary services and building construction to result in significant adverse effects; these impacts have therefore been assessed within this ES

chapter. The noise and vibration assessment has been undertaken in line with details of the proposed demolition and construction works, as set out in **ES Volume 1, Chapter 5: Demolition and Construction**.

- 9.11** As per **ES Volume 1, Chapter 5: Demolition and Construction**, works are proposed to be undertaken during normal working hours for construction unless otherwise agreed with LBS. Section 71.3 of LBS' 'Technical Guidance for Demolition and Construction'² document states that noisy working hours will usually be restricted to the following hours and includes deliveries and collections, maintenance and cleaning:

- 08:00 to 18:00 hours Monday to Friday;
- 09:00 to 14:00 hours Saturday; and
- No working Sundays, Bank or Public Holidays.

Demolition and Construction Noise

- 9.12** Atmospheric noise emissions from demolition and construction works at the surrounding noise sensitive receptors has been predicted using a 3D noise model based on the methodology outlined in BS 5228-1:2009³ to determine the magnitude of impact. This has then been referenced against the receptor sensitivity to establish the scale of effect.

- 9.13** The key demolition and construction stages that are to be considered for noise include:

- Site set up (enabling works) and demolition;
- Piling;
- Substructure construction;
- Superstructure construction;
- Concrete superstructure construction; and
- Envelope and cladding; installation of unitised cladding panels to the outer face of the superstructure(s).

- 9.14** Annex E of 'BS 5228-1 - Noise and Vibration Control on Construction and Open Sites'³ includes the 'ABC method' for setting potential thresholds of significant effects at residential receptors. The ABC method has been used in the assessment within this ES chapter to assess the potential for likely significant noise effects from the demolition and construction works.

- 9.15** This method defines category 'threshold values' which are determined by the proposed hours of operation and existing ambient noise levels (rounded to the nearest 5 dB). A significant effect is deemed to have occurred when the total noise level (including construction noise) exceeds the appropriate category threshold value. The scale and nature of the effect and whether the effects are significant or not are defined in the 'Methodology for Defining Effects' section of this ES chapter.

- 9.16** Table 9.3 presents the threshold of significant effects of the BS 5228 ABC method.

² London Borough of Southwark, 2016, 'London Borough of Southwark Technical Guidance for Demolition and Construction'

³ British Standards Institute, 2009, 'Noise and Vibration Control on Construction and Open Sites. Part 1, 2 & 4. Code of Practice. BS 5228'

Table 9.3 Threshold of Potential Significant Effects at Residential Receptors

Assessment Category and Threshold Value Period	Threshold value (dB) L _{Aeq,T}		
	Category A ^{A)}	Category B ^{B)}	Category C ^{C)}
Daytime (08:00 – 18:00) and Saturdays (09:00 – 14:00)	65	70	75
NOTE 1: A significant effect has been deemed to occur if the total L _{Aeq} noise level, including construction, exceeds the threshold level for the Category appropriate to the ambient noise level.			
NOTE 2: If the ambient noise level exceeds the threshold values given in the table (i.e., the ambient noise level is higher than the above values), then a significant effect is deemed to occur if the total L _{Aeq} noise level for the period increases by more than 3 dB due to construction activity.			
NOTE 3: Applied to residential receptors only.			
A) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values			
B) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.			
C) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.			

- 9.17 Annex E of BS 5228-1³ does not present threshold criteria for non-residential receptors. Suitable criteria have therefore been adopted from Environmental Advisory Leaflet (ADL) 72, 1976 ‘Noise Control on Building Sites’⁴ which provides some guidance on setting appropriate construction noise limits depending on the site setting and independent of baseline noise conditions. These limits are:
- 70 dB(A) in rural, suburban and urban areas away from main road traffic and industrial noise; and
 - 75 dB(A) in urban areas near main roads and heavy industrial areas.
- 9.18 Given the location of the site and surrounding area is of a dense urban nature, the 75 dB(A) limit is to be considered for non-residential (low sensitivity) receptors surrounding the Proposed Development.

Demolition and Construction Vibration

- 9.19 BS 5228 Part 2³ provides guidance on human response to vibration. The simplified methods and historical vibration data contained within BS 5228 Part 2 have been used to predict potential annoyance associated with ground-borne vibration.
- 9.20 Table 9.4 presents the effects of vibration levels for human perception.

Table 9.4 Human Perception of Vibration Levels

Vibration Level	Effect
≥ 0.14 mm/s < 0.3 mm/s	Vibration might be perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
≥ 0.3 mm/s < 1.00 mm/s	Vibration might be just perceptible in residential environments.
≥ 1.0 mm/s < 10.0 mm/s	It is likely that vibration of this level in residential environments will cause complaints but can be tolerated if prior warning and explanation has been given to residents.
≥ 10 mm/s	Vibration is likely to be intolerable for any more than a very brief exposure to this level.

- 9.21 BS 7385-2⁵ provides guidance on building vibration response limits for cosmetic damage. These criteria are presented in Table 9.5.

Table 9.5 Guidance on Building Vibration Response Limits

Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
	4Hz to 15Hz	15Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings	50mm/s at 4Hz and above	
Unreinforced or light framed structures Residential or light commercial buildings	15mm/s at 4Hz increasing to 20 mm/s at 15Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above
NOTE 1 Values referred to are at the base of the building.		
NOTE 2 For line 2, at frequencies below 4 HZ, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded		

- 9.22 The values in Table 9.5 refer to transient vibration events such as impact piling. BS 7385-2 notes that for continuous sources (such as vibratory compaction) these limits should be reduced by up to 50%.
- Demolition and Construction Traffic Noise
- 9.23 Changes in road traffic noise as a result of the traffic associated with demolition and construction works, have been predicted using the Calculation of Road Traffic Noise (CRTN)⁶ methodology and assessed based on the approach for noise impacts set out in Design Manual for Roads and Bridges LA 111⁷.
- 9.24 Traffic flow data has been provided by the Applicant’s Transport Consultant (Arup) and include the following scenarios for assessment of demolition and construction traffic noise in this ES chapter:
- 2022/2023 Baseline Average Weekly Traffic (AAWT 18hr); and
 - 2031 Peak construction Average Daily Traffic (AAWT 18hr).
- 9.25 The traffic flow data has been used to calculate the dB L₁₀ at 10m from the nearside road edge during demolition and construction works of the Proposed Development on surrounding public local roads. This permitted a direct comparison of existing (baseline) road traffic noise (as established from baseline traffic flow data) with the expected road traffic noise during construction works to establish the likely effect.
- Phasing
- 9.26 The assessment of demolition and construction noise and vibration effects have considered the phased development of the scheme. **ES Volume 1, Chapter 5: Demolition and Construction** sets out the phases of the Proposed Development, including expected occupation as follows:
- Phase 1 (comprising the replacement Supermarket and Buildings L, M, N, Q, P): commencement of work in Q2 2026 with completion in Q2 2030; and
 - Phase 2 (comprising Buildings A, B, C, D, E, F, G, H, J and K): commencement of work in Q2 2030 with completion in Q4 2034.
- 9.27 Demolition and construction noise has been assessed at each receptor using a ‘timeslice’ approach. The ‘timeslice’ approach considers each key noisy demolition or construction phase and accounts for the potential for simultaneous works and activities that are likely to take place during each phase. Table 9.6 sets out the timeslices considered in the noise modelling, including consideration for the phased construction of the Proposed Development. Figure 9.3 shows the blocks relevant to Phase 1 and Phase 2.

⁴ DEPARTMENT OF THE ENVIRONMENT, 1976, Noise control on building sites. Advisory Leaflet 72, 3rd Edition. London: HMSO.
⁵ British Standards Institute BS 7385 Part 1-2, 1990/93, ‘Evaluation and Measurement for Vibration in Buildings’

⁶ Department of Transport/Welsh Office, 1988, ‘The Calculation of Road Traffic Noise’
⁷ Highways Agency, 2020, ‘Design Manual for Roads and Bridges LA 111’

Table 9.6 Assessment Timeslices

Timeslice	Description of Works During Timeslice	Duration
Phase 1 (Start Q2 2026 & End Q2 2030)		
1	Site enabling works, demolition, and piling	24 Months
2	Substructure & superstructure construction and external envelope installation	48 Months
Phase 2 (Start Q2 2030 & End Q4 2034)		
3	Site enabling works, demolition, and piling	36 Months
4	Substructure & superstructure construction and external envelope installation	48 Months

9.28 Receptors will be introduced during the construction programme for each phase and therefore could be impacted by noise and vibration effects during the construction of nearby buildings. A qualitative discussion on these potential affects is included in the *Demolition and Construction Noise* section of this ES chapter.

Completed Development

Building Services Plant Noise

- 9.29** Atmospheric noise emissions from building services plant have the potential to increase the background noise climate and impact nearby noise sensitive receptors (both existing and introduced).
- 9.30** As is standard at the planning stage, precise details of proposed building services plant associated with the Proposed Development are not yet known. Building services plant equipment will therefore be selected, located and attenuated such that the plant noise emission criteria agreed with LBS are satisfied. Such criteria will be agreed through appropriately worded planning conditions.
- 9.31** LBS' 'Technical Guidance for Noise'⁸ stipulates that their typical policy for building services plant noise are as follows:
- The 'Rating Level' does not exceed the typical minimum L_{A90} (15 minute) background sound level at any time; and
 - The unrated 'Specific' sound level does not exceed 10dB below the typical minimum L_{A90} (15 minute) background sound level at any time.
- 9.32** The 'Rating Level' and 'Specific' sound level should be calculated fully in accordance with the methodology of BS 4142:2014+A1:2019⁹.
- 9.33** For emergency and life safety plant (e.g. backup generators and smoke extract fans), it is common to consider a relaxation on plant noise limits whereby noise is controlled to a level no more than 10 dB above the prevailing background sound level (dB L_{A90}), including during periods of testing. Testing of equipment should be limited to up to 1-hour during working hours, Monday to Friday and excluding bank holidays and weekends.
- 9.34** Atmospheric plant noise emission limits have been established from the baseline noise monitoring data and requirements of LBS.

Complete and Operational Road Traffic Noise

- 9.35** Changes in road traffic noise as a result of long term (i.e. general flow) traffic flow changes associated with the complete and operational development have been predicted using the Calculation of Road Traffic Noise (CRTN)⁶ methodology and assessed based on the long term impact classification approach set out in the Institute of Acoustics (IOA) / Institute of Environmental Management and Assessment (IEMA) 'Guidelines for Noise Impact Assessment'¹⁰.

9.36 Traffic flow data has been provided by the Applicant's Transport Consultant (Arup) and include the following scenarios for assessment of operational road traffic noise in this ES chapter:

- 2022/2023 Baseline Average Daily Traffic (AAWT 18hr); and
- 2034 Future Baseline Average Daily Traffic (AAWT 18hr) and Proposed Development.

9.37 The traffic flow data has been used to calculate the dB L_{10} at 10m from the nearside road edge for the scenarios above on surrounding local roads. This permitted a direct comparison of existing/future (baseline) road traffic noise with the expected road traffic noise during operation of the Proposed Development to establish the likely effect.

Retail, Leisure and Commercial Noise

- 9.38** The Proposed Development is to include flexible retail, leisure and commercial units. Of the likely uses, up to 350m² of Sui Generis (drinking establishment) is proposed and would be the most likely to influence the external noise climate and thus impact surrounding sensitive receptors (both existing and introduced). For the purposes of assessment of this ES chapter, an assessment of worst -case retail, leisure and commercial uses has been undertaken.
- 9.39** As is standard at the planning stage, precise details of future uses and occupants associated with the Proposed Development are not yet known. Any retail, leisure and commercial uses (including drinking establishment premises) will therefore be designed and managed such that the noise emission criteria agreed with LBS are satisfied. Such criteria will be agreed through appropriately worded planning conditions and licensing agreements.
- 9.40** LBS' 'Technical Guidance for Noise' stipulates that their typical policy for noise from entertainment and leisure venues (entertainment venues such as public houses, bars, night clubs, sports venues, leisure venues, performance spaces etc.) are as follows:
- The L_{Fmax} sound from amplified and non-amplified music and speech shall not exceed the typical minimum L_{90} (5min), 1m from the facade of any sensitive receptor in all third octave bands between 63 Hz and 8 kHz.
- 9.41** Atmospheric noise emission limits for retail, leisure and commercial uses (including drinking establishment premises) have been established from the baseline noise monitoring data and requirements of LBS.

Site Suitability

- 9.42** The complete and operational development shall include residential and commercial (e.g. retail / office) occupiers. The habitable rooms of the proposed residential dwellings are the most sensitive spaces for environmental noise intrusion. Commercial units are typically considered less sensitive to environmental noise.
- 9.43** The assessment of site suitability has considered the following:
- The baseline noise monitoring results, as presented in **ES Volume 3, Appendix: Noise and Vibration – Annex 2**;
 - 3D noise modelling of the Proposed Development using CadnaA® and baseline noise monitoring results; and
 - External environmental noise intrusion into the most noise sensitive spaces of the Proposed Development (residential habitable rooms).
- 9.44** Given commercial spaces are typically considered less sensitive to environmental noise, the assessment has focused on future residential occupiers. Achievement of suitable conditions for residential areas should also ensure achievement of suitable conditions for future commercial occupiers.

⁸ London Borough of Southwark, 2019, 'London Borough of Southwark Technical Guidance for Noise'

⁹ British Standards Institute, 2014, 'Method for Rating and Assessing Industrial and Commercial Sound BS 4142'

¹⁰ Institute of Environmental Management and Assessment (IEMA) and Institute of Acoustics (IOA) Guidelines for Noise Impact Assessment, 2014

9.45 British Standard 8233: 2014 ‘Guidance on sound insulation and noise reduction for buildings’¹¹ provides guidance for the control of noise in and around buildings and includes desirable guideline internal ambient noise level criteria for residential dwellings. These criteria are congruent with the relevant guidelines set out in LBS’ ‘Technical Guidance for Noise’ and are set out in Table 9.7.

Table 9.7 Indoor Ambient Noise Level Criteria

Activity	Location	Desirable Internal Ambient Criteria	
		07:00 – 23:00	23:00 – 07:00
Resting	Living Rooms	35 dB LAeq,16hour	-
Dining	Dining Room/Area	40 dB LAeq,16hour	-
Sleeping (Daytime Resting)	Bedroom	35 dB LAeq,16hour	30 dB LAeq,8hour / 45 dB LAmax ^[1]
[1] Regular noise events (10th highest)			

9.46 BS 8233 further notes that where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target noise levels may be relaxed (subject to the requirements of any planning conditions) by up to 5 dB and reasonable internal conditions still achieved.

Assumptions and Limitations

9.47 To assess the effects of the Proposed Development, it was necessary to determine the baseline conditions. It is assumed that the baseline noise measurements, which were undertaken at the site from Wednesday 3rd August 2022 to Monday 8th August 2022, are representative of the typical (long term) noise environment at the site.

9.48 It is assumed that contractors will comply with all legislation relevant to the control of noise and vibration from construction work that include:

- The Control of Pollution Act 1974 (COPA) with particular reference to part III¹²;
- The Environmental Protection Act 1990¹³; and
- The Control of Noise at Work Regulations 2005¹⁴.

9.49 The predictions of demolition and construction noise and vibration have been based upon the following assumptions:

- Noise emissions from demolition and construction plant and activities will be compliant with the historical noise data presented in Annex C of BS 5228-1³ and noise data as summarised in **ES Volume 3, Appendix: Noise and Vibration – Annex 4**;
- Levels of vibration from demolition and construction plant and activities will be compliant with the historical vibration data presented in Annex C of BS 5228-2³;
- Minimum 2.3m high solid hoarding (min. density 7kg/m²) will be implemented at the boundary of the site (and relevant phase);
- Mobile plant will manoeuvre around the site equally during deconstruction and construction; and
- Locations and routes of fixed and mobile plant items have been selected based on reasonable assumptions for the site layout and likely access and egress points.

9.50 The exact selected equipment and demolition and construction methodology will be dependent on the appointed contractor. Reasonable worst-case assumptions have therefore been made for predictions with regards to operations, activities, locations, mobile plant routes and the associated plant and equipment that will be used. As such, the predicted demolition and construction noise and vibration levels represent an upper estimate or worst-case scenario in terms of emissions from the site during works.

¹¹ British Standards Institute, 2014, ‘Guidance on Sound Insulation and Noise Reduction in Buildings. BS 8233’
¹²The Law Library, 1974, The Control of Pollution Act 1974

Embedded Mitigation

Demolition and Construction

9.51 Predictions of demolition and construction noise emissions includes consideration for the following standard measures that constitute the principles of ‘Best Practicable Means (BPM)’ as defined in the Control of Pollution Act 1974:

- Minimum 2.3m high hoarding around the perimeter of the site (and relevant phase);
- Local screening of handheld tools; and
- Enclosures for the noisiest fixed plant equipment such as generators and pumps.

Completed Development

9.52 Building services plant equipment will be selected, located and attenuated such that the atmospheric plant noise emission criteria agreed with LBS (through appropriately worded planning conditions) are satisfied.

9.53 The external building fabric elements (glazing / ventilation) of the proposed dwellings will be selected such that the internal ambient noise level criteria agreed with LBS (through appropriately worded planning conditions) are satisfied.

Methodology for Defining Effects

Receptors and Receptor Sensitivity

9.54 Existing and introduced noise and vibration sensitive receptors that have the potential to be affected by the Proposed Development (during the demolition and construction works and once complete and operational) have been identified based on programme information, professional judgement, on-site surveys and observations. The sensitivity of the identified noise and vibration sensitive receptors have been defined based on the use and occupancy type of the identified receptor.

9.55 Table 9.8 summarises the sensitivity of various receptors, including use types relevant to the Proposed Development, and other uses for context, which is based on a mixture of professional experience and industry standards.

Table 9.8 Receptor Sensitivity

Sensitivity	Description	Examples of Receptor Type
High	Receptors where noise will significantly affect the function of the receptor	<ul style="list-style-type: none">• Residential (including Hotels);• Auditoria / Studios;• Sensitive places of worship• Specialist teaching centres; and• Libraries.
Medium	Receptors where people or operations are particularly susceptible to noise	<ul style="list-style-type: none">• Quiet outdoor areas used for recreation;• Conference facilities;• Schools (during the daytime); and• Hospitals / residential care homes
Low	Receptors of low sensitivity to noise, where it may cause some distraction or disturbance	<ul style="list-style-type: none">• Offices;• Restaurants; and• Sports grounds where noise is typically not a normal part of the on-site activities, e.g., those associated with golf, tennis.

¹³ The Environmental Protection Act 1990
¹⁴ Health and Safety Executive, 2005, The Control of Noise at Work Regulations

Sensitivity	Description	Examples of Receptor Type
Very Low	Receptors where distraction or disturbance from noise is minimal	<ul style="list-style-type: none"> Residences and other buildings not occupied during working hours; Industrial / commercial facilities with high noise level environments; and Sports grounds where noise is typically a normal part of the on-site activities.

9.56 For properties that include multiple receptor types (e.g. commercial and residential mixed-use) the more onerous (sensitive) use shall be considered in the assessment.

Magnitude of Impact

Demolition and Construction Noise

9.57 The significance criteria for demolition and construction noise relate to the level of exceedance above the thresholds presented in Table 9.3. These are defined using category A, B and C of the 'ABC' method of BS 56228-1³ respectively and determined by comparison to the following effect levels:

- **NOEL** – No Observed Effect Level
 - This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.
- **LOAEL** – Lowest Observable Adverse Effect Level
 - This is the level above which adverse effects on health and quality of life can be detected.
- **SOAEL** – Significant Observed Adverse Effect Level
 - This is the level above which significant adverse effects on health and quality of life occur.

9.58 The exceedance impact criteria are presented in Table 9.9.

Table 9.9 Construction Noise Impact Criteria for Residential Receptors

Construction Noise Level	Effect Level	Magnitude of Impact
Assessment criterion is exceeded by 0 to 3 dBA;	NOAEL	Negligible
Assessment criterion is exceeded by 3 to 5 dBA;	LOAEL	Low
Assessment criterion is exceeded by 5 to 10 dBA; and	SOAEL	Medium
Assessment criterion is exceeded by over 10 dBA		High

Demolition and Construction Vibration

9.59 The significance criteria for demolition and construction vibration relate to the level of exceedance above the thresholds presented in Table 9.4. The resultant exceedance impact criteria are presented in Table 9.10.

Table 9.10 Vibration Impact Criteria

Vibration Level (PPV)	Effect Level	Magnitude of Impact
< 0.3 mm/s	NOAEL	Negligible
0.3 mm/s – 0.9 mm/s	LOAEL	Low
1.0 mm/s to 9.9 mm/s	SOAEL	Medium
> 10.0 mm/s		High

Demolition and Construction Road Traffic Noise

9.60 The road traffic noise effects associated with demolition and construction of the Proposed Development can be categorised as noise associated with changes in road traffic movements around the site on local roads.

9.61 Impact criteria for assessing the demolition and construction road traffic effects are presented in Table 9.11. The criteria are based on the approach for noise impacts set out in Design Manual for Roads and Bridges LA 111⁷.

Table 9.11 Construction Traffic Noise Change Criteria

Increase in Basic Noise Level of Closest Public Road Used for Construction Traffic (dB)	Magnitude of Impact
<1.0	Negligible
1.0 – 2.9	Low
3.0 – 4.9	Medium
≥5.0	High

Operational Building Services Plant Noise

9.62 Noise emissions from building services plant associated with the completed and operational Proposed Development would need to be controlled to ensure that it would not have an effect on nearby noise sensitive receptors relative to the existing background sound level and also achieve LBS requirements for atmospheric plant noise emissions. Criteria for the assessment have been set in accordance with the Institute of Acoustics (IOA) / Institute of Environmental Management and Assessment (IEMA) 'Guidelines for Noise Impact Assessment'¹⁰ and are presented in Table 9.12.

Table 9.12 Operational Building Services Plant Noise Effect Scale Criteria

Increase in Noise Level (dBA)	Description	Magnitude of Impact
<1.0 dB	Noise increase is unlikely to be discernible	Negligible
0.1 to 0.9 dB	A slight increase in noise levels may be perceived in affected buildings and outdoor recreational areas	Low
1.0 to 2.9 dB	Increase in noise levels is likely to be noticeable in affected buildings and outdoor recreational areas	Medium
>5.0 dB	Increase in noise levels is likely to be clearly perceptible and could have a significant effect on the continued use of a building	High

Entertainment and Leisure Venue Noise

9.63 Noise emissions from entertainment and leisure venues associated with the completed and operational Proposed Development would need to be controlled to ensure that it would not have an effect on nearby noise sensitive receptors relative to the existing background sound level and also achieve LBS requirements for atmospheric noise emissions. Criteria for the assessment have been set in accordance with the Institute of Acoustics (IOA) / Institute of Environmental Management and Assessment (IEMA) 'Guidelines for Noise Impact Assessment'¹⁰ and are presented in Table 9.13.

Table 9.13 Entertainment and Leisure Noise Effect Scale Criteria

Increase in Noise Level (dBA)	Description	Magnitude of Impact
<1.0 dB	Noise increase is unlikely to be discernible	Negligible
0.1 to 0.9 dB	A slight increase in noise levels may be perceived in affected buildings and outdoor recreational areas	Low
1.0 to 2.9 dB	Increase in noise levels is likely to be noticeable in affected buildings and outdoor recreational areas	Medium
>5.0 dB	Increase in noise levels is likely to be clearly perceptible and could have a significant effect on the continued use of a building	High

Completed and Operational Road Traffic Noise

9.64 The significance criteria for long term changes in road traffic noise (i.e., general flow) for the completed and operational development are determined using the methods outlined in CRTN⁶ and the long-term impact classification criteria set out in the IOA / IEMA ‘Guidelines for Noise Impact Assessment’⁷. The impact criteria are presented in Table 9.14.

Table 9.14 Operational Traffic Noise Change Effect Criteria

Change in Noise Level on Surrounding Roads	Subjective Response	Magnitude of Impact
<1.0 dB	Just perceptible change in loudness	Negligible
1.0 to 2.9 dB	Perceptible change in loudness	Low
3 to 4.9 dB	Up to a doubling or halving of loudness	Medium
>5.0 dB	Increase in noise levels is likely to be clearly perceptible	High

Site Suitability

9.65 The assessment of site suitability for residential occupation is established with regard to achievement of appropriate internal ambient noise levels within habitable rooms of the Proposed Development from external noise intrusion. Thresholds for site suitability have been established based on the relative increase to the internal ambient noise level criteria set out in Table 9.7. Table 9.15 presents the thresholds for relative increase.

Table 9.15 Internal Ambient Noise Level (Residential) Thresholds

Increase in Internal Ambient Noise Level Relative to BS 8223 Criteria (dBA)	Threshold Description	Magnitude of Impact
≤0.0	Achieves BS 8233 ‘desirable’ internal ambient noise levels criteria.	Negligible
0.0 – 5.0	Achieves BS 8233 ‘reasonable’ internal ambient noise levels criteria.	Low
5.1 – 10.0	Exceeds BS 8233 ‘reasonable’ internal ambient noise levels criteria by 5 dB.	Medium
>10.0	Exceeds BS 8233 ‘reasonable’ internal ambient noise levels criteria by 10 dB.	High

Defining the Effect

Scale and Nature of Effect

9.66 Table 9.16 determines the scale of effects based on the sensitivity of the receptor and the magnitude of the impact, as per the ‘IOA / IEMA ‘Guidelines for Noise Impact Assessment’¹⁰.

Table 9.16 Scale of Effect

Sensitivity of Receptor	Magnitude of Impact			
	High	Medium	Low	Negligible
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Minor	Negligible	Negligible
Low	Minor	Negligible	Negligible	Negligible
Very Low	Negligible	Negligible	Negligible	Negligible

9.67 Noise and vibration effects are typically classified as either Adverse (for Minor to Major impact) or Negligible. An Adverse effect refers to anything that can alter behaviour, attitudes, or the overall character of a location. A

Negligible effect is used when there is no noticeable impact on the receptors. Beneficial effects associated with noise or vibration are unlikely.

Geographical Nature of Effect

9.68 The effects under assessment in this ES chapter are local effects at a spatial level, such that they affect the immediate neighbouring receptors to the site. The effects on broader, more distant receptors (i.e., further from the site in relation to the receptors considered in this ES chapter) are deemed insignificant due to the reduction of noise and vibration with increasing distance and screening from intervening buildings from the site.

Effect Duration

9.69 Effects resulting from demolition and construction works are considered "temporary" for the purposes of the assessment in this ES chapter. These effects can be categorised as either "short term" (1 – 6 months) or "medium-term" (duration over 6 months) depending on the duration of the specific demolition and construction activities.

9.70 Effects linked to the complete and operational Proposed Development are classified as "permanent" or "long-term" effects.

Categorising Likely Significant Effects

9.71 Guidance on the magnitude of impact has been drawn from IEMA Guidelines for Environmental Noise Impact Assessment¹⁰ and the Planning Practice Guidance (PPG)¹⁵. Table 9.17 sets out the magnitude of effects experienced by receptors and their likely acceptance to those effects. It also establishes a correlation between the scale of effect and the ratings for LOAEL (Lowest Observed Adverse Effect Level), SOAEL (Significant Observed Adverse Effect Level) and NOAEL (No Observed Adverse Effect Level). The NOAEL (No Observed Adverse Effect Level) is equivalent to a Negligible effect rating.

Table 9.17 Categorisation of Effects

Effect Scale	Description	Exceeds LOAEL	Exceeds SOAEL	Acceptable for Receptors?
Negligible	No discernible effect on the receptor	No	No	Yes
Minor	Non-intrusive, can be heard but does not cause any change in behaviour or attitude. Can slightly affect the character of an area but not such that there is a perceived change in the quality of life.	No	No	Yes
Moderate	Intrusive, noise can be heard and causes small changes in behaviour and/or attitude. Potential for non-awakening sleep disturbance. Affects the character of an area such that there is a perceived change in the quality of life.	Yes	No	Dependant on effect duration
Major	Disruptive, causes a material change in behaviour and/or attitude. Potential for sleep disturbance. Quality of life diminished due to change in character of the area.	Yes	Yes	Dependant on effect duration

9.72 A significant effect is classified as being ‘Moderate’ or ‘Major’. Effects that are ‘Minor’ or ‘Negligible’ are not considered to be significant effects and therefore Negligible.

BASELINE CONDITIONS

9.73 As described in paragraph 9.1, a baseline environmental noise survey was undertaken in August 2022 to establish the existing noise climate around the site. The full environmental noise survey methodology and results are presented in **ES Volume 3, Appendix: Noise and Vibration – Annex 3**.

9.74 During the periods noise measurements were being undertaken on-site, the dominant noise sources toward the west and south of the site were passing road traffic and activity on Rye Lane and Hanover Park. Road

¹⁵ Department of Communities and Local Government (2014) Planning Practice Guidance

traffic on Rye Lane comprises a single lane of slow road traffic but also sees heavy continuous foot traffic from shoppers and nearby residents. Toward the north of the site, manoeuvring buses within Peckham Bus Station and road traffic on Peckham High Street were dominant. Noise from the existing shopping centre and Morrisons supermarket were notable at Positions P2 and P3, as described in Table 9.1, and included manoeuvring vehicles in the car park and fixed plant equipment.

9.75 The typical daytime $L_{Aeq(16\text{-hour})}$, night-time $L_{Aeq(8\text{-hour})}$, typical lowest daytime $L_{A90,15\text{min}}$ and typical lowest night-time $L_{A90,15\text{min}}$ noise levels measured during the unattended survey are presented in Table 9.18.

Table 9.18 Baseline Noise Survey Results (Unattended)

Position	Measured Noise Level (dB re 2 x 10 ⁻⁵ Pa)			
	Daytime (07:00 – 23:00) Hours, $L_{Aeq,16hr}$	Typical Lowest Daytime (07:00 – 23:00) Hours, $L_{A90,T=15min}$	Night-Time (23:00 – 07:00) Hours, $L_{Aeq,8hr}$	Typical Lowest Night-Time (23:00 – 07:00) Hours, $L_{A90,T=15min}$
P1	66	52	61	44
P2	61	58	59	56
P3	68	48	57	42
P4	65	54	60	53

9.76 The A-weighted (dBA) L_{90} , L_{eq} and L_{max} sound levels from the attended survey locations are presented in Table 9.19.

Table 9.19 A-Weighted (dBA) L_{90} , L_{eq} and L_{max} Sound Levels (Attended)

Position	Time	Sound Levels dBA		
		L_{90}	L_{eq}	L_{max}
A1	15:00 to 15:15	58	63	82
A2	15:30 to 15:45	56	62	80
A3	12:00 to 12:15	49	53	72
A4	13:00 to 13:15	63	69	83
A5	13:30 to 13:45	52	55	80

RECEPTORS AND RECEPTOR SENSITIVITY

Existing

9.77 The existing noise and vibration sensitive receptors which could be affected by noise and vibration impacts associated with the Proposed Development are indicated in Figure 9.2. Descriptions of these receptors are provided in Table 9.20.

Figure 9.2 Proposed Development and Sensitive Receptors

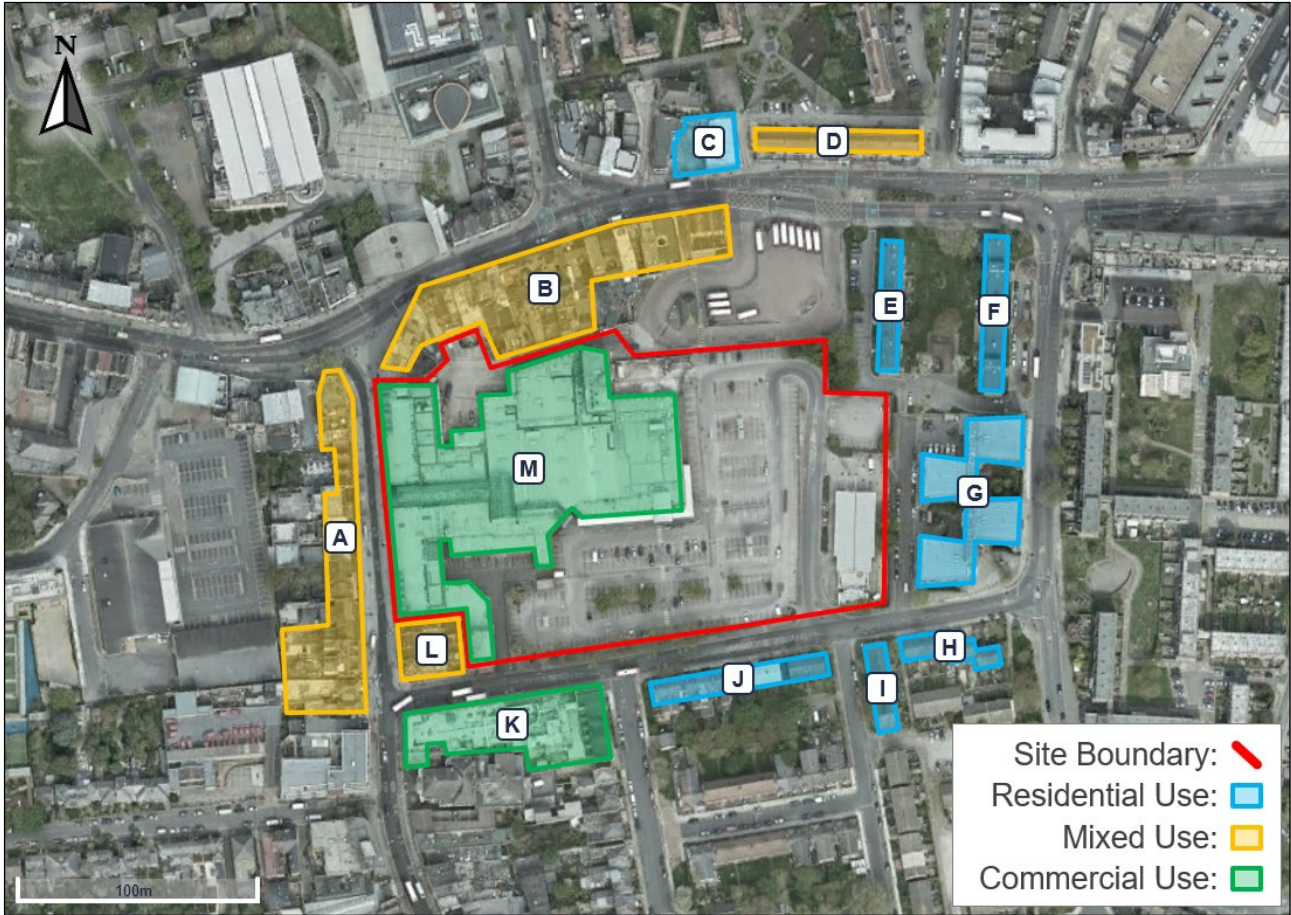


Table 9.20 Existing Receptor Descriptions

Ref	Type	Description	Sensitivity
A	Mixed-use	Commercial units with residential properties above on Rye Lane	High
B	Mixed-use	Commercial units and place of worship with residential properties above on Peckham High Street	High
C	Residential	Travelodge Hotel on Peckham High Street	High
D	Mixed-use	Commercial units with residential properties above on Peckham High Street	High
E	Residential	A block of residential apartments (Purdon House) on Clayton Road	High
F	Residential	A block of residential apartments (Flamborough House) on Clayton Road	High
G	Residential	A block of residential apartments (Hanover Park) on Hanover Park	High
H	Residential	Residential dwellings on Hanover Park	High
I	Residential	Residential dwellings on Hanover Park and Cicely Road	High
J	Residential	Residential dwellings on Hanover Park	High
K	Commercial	A commercial shopping outlet on Hanover Park	Very Low
L	Mixed-use	Commercial units with residential properties above on Rye Lane	High
M	Commercial	Existing Aylesham Shopping Centre (to be demolished at Phase 2)	Very Low

Introduced

9.78 The Proposed Development will introduce residential and commercial uses. Commercial units shall typically occupy much of the ground floor of each block. For the purposes of the assessment in this ES chapter the more onerous (sensitive) use within each block shall be considered. As described in 9.26, the Proposed Development

shall be constructed over two main phases which have been indicated in Table 9.21 that summarises the introduced receptors.

Table 9.21 Introduced Sensitive Receptors

Receptor	Type	Phase	Description	Sensitivity
Building A	Residential	Phase 2	Residential apartment block	High
Building B	Residential		Residential apartment block	High
Building C	Residential		Residential apartment block	High
Building D	Commercial		Commercial office block	Low
Building E	Residential		Residential apartment block	High
Building F	Residential		Residential apartment block	High
Building G	Residential		Residential apartment block	High
Building H	Residential		Residential apartment block	High
Building J1	Residential		Residential apartment block	High
Building J2	Residential		Residential apartment block	High
Building K	Residential		Residential apartment block	High
Building L	Residential	Phase 1	Residential apartment block	High
Building M	Residential		Residential apartment block	High
Building N	Residential		Residential apartment block	High
Building P	Residential		Residential apartment block	High
Building Q	Residential		Residential apartment block	High

9.79 The buildings comprising Phase 1 shall be considered as receptors during the demolition and construction of Phase 2. The complete and operational Proposed Development (Phase 1 and 2) shall be considered for site suitability. Figure 9.3 presents a site plan of the Proposed Development and indicates the blocks and phases referred to in Table 9.21.

Figure 9.3 Proposed Site Plan and Phases



9.80 Table 9.22 indicates the assignment of baseline measurement locations to receptors for the assessment of demolition and construction noise.

Table 9.22 Receptor Baseline Measurement Locations

Ref	Type	Description	Assigned Measurement Location
Existing Receptors			
A	Mixed-use	Commercial units with residential properties above on Rye Lane	P1
B	Mixed-use	Commercial units and place of worship with residential properties above on Peckham High Street	A2
C	Residential	Travelodge Hotel on Peckham High Street	A4
D	Mixed-use	Commercial units with residential properties above on Peckham High Street	A4
E	Residential	A block of residential apartments (Purdon House) on Clayton Road	A1
F	Residential	A block of residential apartments (Flamborough House) on Clayton Road	A1
G	Residential	A block of residential apartments (Hanover Park) on Hanover Park	P3
H	Residential	Residential dwellings on Hanover Park	P3
I	Residential	Residential dwellings on Hanover Park and Cicely Road	P3
J	Residential	Residential dwellings on Hanover Park	P3
K	Commercial	A commercial shopping outlet on Hanover Park	P4
L	Mixed-use	Commercial units with residential properties above on Rye Lane	P4
M	Commercial	Existing Aylesham Shopping Centre (to be demolished at Phase 2)	A5
Introduced Receptors			
Building L	Residential	Residential apartment building	A1
Building M	Residential	Residential apartment building	P3
Building N	Residential	Residential apartment building	P3
Building P	Residential	Residential apartment building	A1
Building Q	Residential	Residential apartment building	P3

POTENTIAL EFFECTS

Demolition and Construction

Demolition and Construction Noise

9.81 Table 9.23 sets out the threshold of potential effect and associated significance criteria for demolition and construction noise. For residential sensitive receptors, the ABC criteria, as set out in Table 9.3, has been considered. For non-residential receptors, the threshold has been established per the criteria described in paragraphs 9.17 and 9.18.

Table 9.23 Receptors and Threshold of Significance

Ref	Type	Description	ABC	Threshold of Potential Significance (dB)
Existing Receptors				
A	Mixed-use	Commercial units with residential properties above on Rye Lane	B	70
B	Mixed-use	Commercial units and place of worship with residential properties above on Peckham High Street	A	65
C	Residential	Travelodge Hotel on Peckham High Street	C	75
D	Mixed-use	Commercial units with residential properties above on Peckham High Street	C	75
E	Residential	A block of residential apartments (Purdon House) on Clayton Road	B	70
F	Residential	A block of residential apartments (Flamborough House) on Clayton Road	B	70
G	Residential	A block of residential apartments (Hanover Park) on Hanover Park	C	75
H	Residential	Residential dwellings on Hanover Park	C	75
I	Residential	Residential dwellings on Hanover Park and Cicely Road	C	75
J	Residential	Residential dwellings on Hanover Park	C	75
K	Commercial	A commercial shopping outlet on Hanover Park	-	75
L	Mixed-use	Commercial units with residential properties above on Rye Lane	B	70
M	Commercial	Existing Aylesham Shopping Centre (to be demolished at Phase 2)	-	75
Introduced Receptors				
Building L	Residential	Residential apartment building	B	70
Building M	Residential	Residential apartment building	C	75
Building N	Residential	Residential apartment building	C	75
Building P	Residential	Residential apartment building	A	65
Building Q	Residential	Residential apartment building	C	75

- 9.82** Plant noise levels (for plant used during demolition and construction) considered in predictions are presented in **ES Volume 3, Appendix: Noise and Vibration – Annex 4**.
- 9.83** The modelled noise levels from demolition and construction works are pre-mitigation and align with the assumptions and limitations described in the *Assumptions and Limitations* section of this ES chapter.
- 9.84** The predicted noise levels at noise sensitive receptors are the dB $L_{Aeq,10hr}$ noise levels at 1m from the worst-affected noise sensitive windows of the identified receptors. Buildings, ground and roads have been modelled as reflective.
- 9.85** Predictions have considered ‘timeslices’ for the demolition and construction works with reference to the proposed demolition and construction programme set out in **ES Volume 1, Chapter 5: Demolition and Construction** which are summarised in Table 9.6.
- 9.86** Table 9.24 and Table 9.25 set out a summary of the predicted noise levels from demolition and construction works during the assessment timeslices.

¹⁶ To be demolished as part of the development of Phase 2

Table 9.24 Predicted Demolition and Construction Noise Levels – Phase 1

Ref	Description	Noise Levels During Timeslice 1 (dB $L_{Aeq,10hr}$)	Noise Levels During Timeslice 2 (dB $L_{Aeq,10hr}$)
A	Commercial units with residential properties above on Rye Lane	58	57
B	Commercial units and place of worship with residential properties above on Peckham High Street	70	67
C	Travelodge Hotel on Peckham High Street	66	64
D	Commercial units with residential properties above on Peckham High Street	67	64
E	A block of residential apartments (Purdon House) on Clayton Road	71	69
F	A block of residential apartments (Flamborough House) on Clayton Road	68	66
G	A block of residential apartments (Hanover Park) on Hanover Park	74	71
H	Residential dwellings on Hanover Park	71	68
I	Residential dwellings on Hanover Park and Cicely Road	73	70
J	Residential dwellings on Hanover Park	77	75
K	A commercial shopping outlet on Hanover Park	69	66
L	Commercial units with residential properties above on Rye Lane	62	61
M	Existing Aylesham Shopping Centre ¹⁶	73	72

Table 9.25 Predicted Demolition and Construction Noise Levels – Phase 2

Ref	Description	Noise Levels During Timeslice 3 (dB $L_{Aeq,10hr}$)	Noise Levels During Timeslice 4 (dB $L_{Aeq,10hr}$)
Existing Receptors			
A	Commercial units with residential properties above on Rye Lane	77	73
B	Commercial units and place of worship with residential properties above on Peckham High Street	78	73
C	Travelodge Hotel on Peckham High Street	65	61
D	Commercial units with residential properties above on Peckham High Street	67	63
E	A block of residential apartments (Purdon House) on Clayton Road	62	58
F	A block of residential apartments (Flamborough House) on Clayton Road	51	48
G	A block of residential apartments (Hanover Park) on Hanover Park	62	58
H	Residential dwellings on Hanover Park	62	58
I	Residential dwellings on Hanover Park and Cicely Road	66	62
J	Residential dwellings on Hanover Park	78	73
K	A commercial shopping outlet on Hanover Park	81	77
L	Commercial units with residential properties above on Rye Lane	85	81
Introduced Receptors			
Building L	Residential apartment building	76	71

Ref	Description	Noise Levels During Timeslice 3 (dB LAeq,10hr)	Noise Levels During Timeslice 4 (dB LAeq,10hr)
Building M	Residential apartment building	78	73
Building N	Residential apartment building	77	73
Building P	Residential apartment building	66	62
Building Q	Residential apartment building	71	66

9.87 Table 9.26 and Table 9.27 set out the corresponding impact magnitude with reference to the classifications set out in Table 9.9.

Table 9.26 Predicted Demolition and Construction Noise Magnitude of Impact – Phase 1

Ref	Description	Receptor Sensitivity	Magnitude of Impact	
			Timeslice 1	Timeslice 2
A	Commercial units with residential properties above on Rye Lane	High	Negligible	Negligible
B	Commercial units and place of worship with residential properties above on Peckham High Street	High	Low	Negligible
C	Travelodge Hotel on Peckham High Street	High	Negligible	Negligible
D	Commercial units with residential properties above on Peckham High Street	High	Negligible	Negligible
E	A block of residential apartments (Purdon House) on Clayton Road	High	Negligible	Negligible
F	A block of residential apartments (Flamborough House) on Clayton Road	High	Negligible	Negligible
G	A block of residential apartments (Hanover Park) on Hanover Park	High	Negligible	Negligible
H	Residential dwellings on Hanover Park	High	Negligible	Negligible
I	Residential dwellings on Hanover Park and Cicely Road	High	Negligible	Negligible
J	Residential dwellings on Hanover Park	High	Negligible	Negligible
K	A commercial shopping outlet on Hanover Park	Very Low	Negligible	Negligible
L	Commercial units with residential properties above on Rye Lane	High	Negligible	Negligible
M	Existing Aylesham Shopping Centre	Very Low	Negligible	Negligible

Table 9.27 Predicted Demolition and Construction Noise Magnitude of Impact – Phase 2

Ref	Description	Receptor Sensitivity	Magnitude of Impact	
			Timeslice 3	Timeslice 4
Existing Receptors				
A	Commercial units with residential properties above on Rye Lane	High	Medium	Low
B	Commercial units and place of worship with residential properties above on Peckham High Street	High	High	Medium
C	Travelodge Hotel on Peckham High Street	High	Negligible	Negligible
D	Commercial units with residential properties above on Peckham High Street	High	Negligible	Negligible
E	A block of residential apartments (Purdon House) on Clayton Road	High	Negligible	Negligible
F	A block of residential apartments (Flamborough House) on Clayton Road	High	Negligible	Negligible

Ref	Description	Receptor Sensitivity	Magnitude of Impact	
			Timeslice 3	Timeslice 4
G	A block of residential apartments (Hanover Park) on Hanover Park	High	Negligible	Negligible
H	Residential dwellings on Hanover Park	High	Negligible	Negligible
I	Residential dwellings on Hanover Park and Cicely Road	High	Negligible	Negligible
J	Residential dwellings on Hanover Park	High	Low	Negligible
K	A commercial shopping outlet on Hanover Park	Very Low	Medium	Negligible
L	Commercial units with residential properties above on Rye Lane	High	High	High

Introduced Receptors				
Building L	Residential apartment building	High	Medium	Negligible
Building M	Residential apartment building	High	Low	Negligible
Building N	Residential apartment building	High	Negligible	Negligible
Building P	Residential apartment building	High	Negligible	Negligible
Building Q	Residential apartment building	High	Negligible	Negligible

9.88 The scale of effect at each receptor for demolition and construction noise are presented in Table 9.28 and Table 9.29 and have been established based on the predicted impact magnitudes presented in Table 9.26 and Table 9.27 and the scale of effect matrix presented in Table 9.16.

Table 9.28 Predicted Demolition and Construction Noise Scale of Effects – Phase 1

Ref	Description	Receptor Sensitivity	Scale of Effect	
			Timeslice 1	Timeslice 2
A	Commercial units with residential properties above on Rye Lane	High	Negligible (not significant)	Negligible (not significant)
B	Commercial units and place of worship with residential properties above on Peckham High Street	High	Minor Adverse (not significant)	Negligible (not significant)
C	Travelodge Hotel on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
D	Commercial units with residential properties above on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
E	A block of residential apartments (Purdon House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
F	A block of residential apartments (Flamborough House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
G	A block of residential apartments (Hanover Park) on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
H	Residential dwellings on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
I	Residential dwellings on Hanover Park and Cicely Road	High	Negligible (not significant)	Negligible (not significant)
J	Residential dwellings on Hanover Park	High	Negligible (not significant)	Negligible (not significant)

Ref	Description	Receptor Sensitivity	Scale of Effect	
			Timeslice 1	Timeslice 2
K	A commercial shopping outlet on Hanover Park	Very Low	Negligible (not significant)	Negligible (not significant)
L	Commercial units with residential properties above on Rye Lane	High	Negligible (not significant)	Negligible (not significant)
M	Existing Aylesham Shopping Centre	Very Low	Negligible (not significant)	Negligible (not significant)

Table 9.29 Predicted Demolition and Construction Noise Scale of Effects – Phase 2

Ref	Description	Receptor Sensitivity	Scale of Effect	
			Timeslice 3	Timeslice 4
Existing Receptors				
A	Commercial units with residential properties above on Rye Lane	High	Moderate Adverse (significant)	Minor Adverse (not significant)
B	Commercial units and place of worship with residential properties above on Peckham High Street	High	Major Adverse (significant)	Moderate Adverse (significant)
C	Travelodge Hotel on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
D	Commercial units with residential properties above on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
E	A block of residential apartments (Purdon House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
F	A block of residential apartments (Flamborough House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
G	A block of residential apartments (Hanover Park) on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
H	Residential dwellings on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
I	Residential dwellings on Hanover Park and Cicely Road	High	Negligible (not significant)	Negligible (not significant)
J	Residential dwellings on Hanover Park	High	Minor Adverse (not significant)	Negligible (not significant)
K	A commercial shopping outlet on Hanover Park	Very Low	Negligible (not significant)	Negligible (not significant)
L	Commercial units with residential properties above on Rye Lane	High	Major Adverse (significant)	Major Adverse (significant)
Introduced Receptors				
Building L	Residential apartment building	High	Moderate Adverse (significant)	Negligible (not significant)
Building M	Residential apartment building	High	Minor Adverse (not significant)	Negligible (not significant)
Building N	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building P	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building Q	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)

9.89 Predictions of demolition and construction noise indicate the possibility of significant effects for the following receptors during specific works within the site.

- Phase 2 Timeslice 3: Site enabling works, demolition, and piling;
 - Receptor A: Commercial units with residential properties above on Rye Lane (Moderate Adverse);
 - Receptor B: Commercial units a place of worship with residential properties above on Peckham High Street (Major Adverse);
 - Receptor L: Commercial units with residential properties above on Rye Lane (Major Adverse); and
 - Building L (introduced receptor): Residential apartment building (Moderate Adverse).
- Phase 2 Timeslice 4: Substructure & superstructure construction and external envelope installation;
 - Receptor B: Commercial units and place of worship with residential properties above on Peckham High Street (Moderate Adverse); and
 - Receptor L: Commercial units with residential properties above on Rye Lane (Major Adverse).

9.90 Minor Adverse (not significant) effects are predicted for the following receptors.

- Phase 1 Timeslice 1
 - Receptor B: Commercial units and place of worship with residential properties above on Peckham High Street
- Phase 2
 - Receptor A: Commercial units with residential properties above on Rye Lane (Timeslice 4)
 - Receptor J: Residential dwellings on Hanover Park (Timeslice 3)
 - Building M (introduced receptor): Residential apartment building (Timeslice 3)

9.91 Negligible (not significant) effects are predicted at all other receptors during each Phase.

9.92 It should be noted that the assessment of demolition and construction noise effects is based on a worst-case representation of assumptions for the activities over the course of a working day for each timeslice with noise sources operating simultaneously. In practice, noise sources will likely operate for shorter periods.

9.93 It should be noted that receptors will be introduced during the construction programme of each phase and therefore could be impacted by noise and vibration effects during the construction of nearby individual blocks (within the same phase). Based on the programme information it is likely that during occupation of the first blocks to be completed (and therefore occupied by receptors) in each phase (e.g. Buildings N to L during Phase 1 and Buildings C to D during Phase 2), the surrounding blocks will be in to the later stages of construction (e.g. external envelope installation and internal fit-out). Noise emissions are typically lower during these latter stages of construction when compared to earlier stages and therefore the noise effects are anticipated to be Negligible (not significant). Occurrences of significant effects is unlikely and effects will be short term from these works.

9.94 To mitigate demolition and construction noise emissions, the principles of ‘Best Practicable Means (BPM)’, as defined in the Control of Pollution Act, 1974 should be used to reduce noise emissions throughout the works to a reasonable and practicable level. These measures are described in the ‘*Mitigation Measures, Monitoring and Residual Effects*’ section of this ES chapter.

Demolition and Construction Road Traffic Effects

9.95 As described in paragraph 9.24, baseline and future traffic flow data (AAWT 18hr) on nearby public roads during peak construction has been provided by the Applicant’s Transport Consultant (Arup).

9.96 Table 9.30 presents the predicted change in road traffic noise levels on nearby worst-affected public roads as a result of traffic associated with demolition and construction of the Proposed Development. The magnitude of impact is relevant to high sensitivity receptors which are present on all public roads considered.

Table 9.30 Demolition and Construction Road Traffic Noise Levels on Nearby Public Roads

Road	Traffic Noise Baseline (2022/2023) (dB L _{10,18hr} at 10m)	Traffic Noise During Peak Construction (dB L _{10,18hr} at 10m)	Change in Noise Level (dB)	Magnitude of Impact	Scale of Effect
Rye Lane (one way)	67.5	67.5	0.0	Negligible	Negligible (Not significant)
Peckham Hill Street	68.6	68.5	-0.1	Negligible	Negligible (Not significant)
Marmont Road	60.0	60.0	0.0	Negligible	Negligible (Not significant)
Peckham High Street	73.5	73.5	-0.1	Negligible	Negligible (Not significant)
Staffordshire Street	48.5	48.5	0.0	Negligible	Negligible (Not significant)
Clayton Road	71.3	71.2	-0.1	Negligible	Negligible (Not significant)
Meeting House Lane	61.9	61.8	-0.1	Negligible	Negligible (Not significant)
Queens Road	71.4	71.4	0.0	Negligible	Negligible (Not significant)
Hanover Park	70.1	69.8	-0.3	Negligible	Negligible (Not significant)
Cicely Road	52.8	52.8	0.0	Negligible	Negligible (Not significant)
Cerise Road	55.0	55.0	0.0	Negligible	Negligible (Not significant)
Rye lane	67.9	67.9	-0.1	Negligible	Negligible (Not significant)

- 9.97** Comparison of calculated road traffic noise during peak construction against the baseline indicates that changes in road traffic flows as a result of the Proposed Development will result in a Negligible (not significant) effect on all surrounding public roads.

Demolition and Construction Vibration Effects

- 9.98** A primary source of ground-borne vibration during demolition and construction of the Proposed Development is anticipated to be on-site piling activities. **ES Volume 1, Chapter 5: Demolition and Construction** describes the intended piling method as Continuous Flight Auger (CFA) piling.
- 9.99** It is not possible to accurately predict the potential impact from vibration effects associated with piling activities as it depends on the specific type of piling, local ground conditions, and distance from the vibratory source to the receiver location.
- 9.100** Annex D of BS 5228³ presents historical example vibration levels for CFA piling for a range of ground conditions and distances. A summary of relevant example data considered in the assessment is presented in Table 9.31.

Table 9.31 Example CFA Piling Vibration Levels

Soil / Ground Condition	Distance (m)	Peak Particle Velocity (mm/s)
Fill Clay (London)	10	0.38
Fill Clay (London)	20	0.30
Fill/sand/clay (London)	10	0.40
Fill/sand/clay (London)	15	0.10
Fill/dense ballast/London clay	20	0.05
Fill including pockets of gravel over London clay	5.5	0.13
6 m of soft ground over rock	5	0.54

- 9.101** The historical example vibration levels in Table 9.31 show that levels of vibration from piling activities typically decrease over distance from the vibratory source. The example data has been used to predict the potential levels of ground-borne vibration during demolition and construction works at receptors. The distances considered in this assessment are the closest assumed piling locations to the nearest receptor façade and the highest example data to represent a potential worst-case during the works. This assessment is presented in Table 9.32.

Table 9.32 Predicted Demolition and Construction Vibration Levels

Receptor Ref	Receptor Sensitivity	Approx. Distance from Closest Piling Location (m)	Predicted Vibration Level (PPV mm/s)	Magnitude of Impact	Scale of Effect
A	High	14	0.4	Low	Minor Adverse (Not significant)
B	High	6	0.5	Low	Minor Adverse (Not significant)
C	High	82	<0.3	Negligible	Negligible (Not significant)
D	High	84	<0.3	Negligible	Negligible (Not significant)
E	High	10	0.4	Low	Minor Adverse (Not significant)
F	High	42	<0.3	Negligible	Negligible (Not significant)
G	High	13	0.4	Low	Minor Adverse (Not significant)
H	High	17	0.3	Low	Minor Adverse (Not significant)
I	High	17	0.3	Low	Minor Adverse (Not significant)
J	High	19	0.3	Low	Minor Adverse (Not significant)
K	Very Low	18	0.3	Low	Negligible (Not significant)
L	High	3	0.6	Low	Minor Adverse (Not significant)
M	Very Low	12	0.4	Low	Negligible (Not significant)
Building L	High	17	0.3	Low	Minor Adverse (Not significant)
Building M	High	14	0.4	Low	Minor Adverse (Not significant)
Building N	High	16	0.4	Low	Minor Adverse (Not significant)
Building P	High	72	<0.3	Negligible	Negligible (Not significant)
Building Q	High	68	<0.3	Negligible	Negligible (Not significant)

- 9.102** Minor Adverse (not significant) effects are predicted at the closest receptors during the piling activities:

- Receptor A: Commercial units with residential properties above on Rye Lane;
- Receptor B: Commercial units and place of worship with residential properties above on Peckham High Street;
- Receptor E: A block of residential apartments (Purdon House) on Clayton Road;
- Receptor G: A block of residential apartments (Hanover Park) on Hanover Park;
- Receptor H: Residential dwellings on Hanover Park;
- Receptor I: Residential dwellings on Hanover Park and Cicely Road;
- Receptor J: Residential dwellings on Hanover Park; and
- Receptor L: Commercial units with residential properties above on Rye Lane.

- 9.103** Minor Adverse (not significant) effects are also predicted for introduced residential receptors within Phase 1 of the Proposed Development during the piling activities associated with Phase 2:

- Building L (introduced receptor): Residential apartment building;
- Building M (introduced receptor): Residential apartment building; and
- Building N (introduced receptor): Residential apartment building.

- 9.104** These effects are expected to be short term in duration, as is common for construction works. Negligible (not significant) effects are predicted at residential receptors >20m from the nearest piling locations.

- 9.105** Whilst not significant effects are predicted at all receptors, exceedance of 0.3mm PPV are predicted at the closest and most affected receptors which might be just perceptible in residential environments. Given this outcome, and the uncertainty in predictions, it is advised that receptors subject to Minor Adverse effects are informed of any piling works to minimise the likelihood of complaints.

9.106 Predicted cosmetic damage to all nearby buildings (receptors) is anticipated to be Negligible (not significant).

Completed Development

Building Services Plant Noise

9.107 Building services plant equipment will be selected, located, and attenuated such that the plant noise emission criteria agreed with LBS are satisfied. Such criteria will be agreed through appropriately worded planning conditions.

9.108 Based on the atmospheric plant noise emission criteria set out in LBS' 'Technical Guidance for Noise'⁸, as described in paragraph 9.31, Table 9.33 sets out the atmospheric plant noise limits at sensitive receptors (existing and introduced) and the corresponding magnitude of impact.

Table 9.33 Atmospheric Building Services Plant Noise Limits

Ref	Building Services BS 4142 Limits (dB)				Increase in Background Noise (dB)	Magnitude of Impact
	Daytime (07:00 – 23:00 hours)		Night-time (23:00 – 07:00 hours)			
	Specific Sound Level Limit	Rating Level Limit	Specific Sound Level Limit	Rating Level Limit		
Existing Receptors						
A	42	52	34	44	< 1.0	Negligible
B	42	52	34	44	< 1.0	Negligible
C	48	58	46	56	< 1.0	Negligible
D	48	58	46	56	< 1.0	Negligible
E	48	58	46	56	< 1.0	Negligible
F	48	58	46	56	< 1.0	Negligible
G	38	48	32	42	< 1.0	Negligible
H	38	48	32	42	< 1.0	Negligible
I	38	48	32	42	< 1.0	Negligible
J	38	48	32	42	< 1.0	Negligible
K	44	54	43	53	< 1.0	Negligible
L	44	54	43	53	< 1.0	Negligible
Introduced Receptors						
Building A	42	52	34	44	< 1.0	Negligible
Building B	42	52	34	44	< 1.0	Negligible
Building C	48	58	46	56	< 1.0	Negligible
Building D	38	48	32	42	< 1.0	Negligible
Building E	44	54	43	53	< 1.0	Negligible
Building F	44	54	43	53	< 1.0	Negligible
Building G	42	52	34	44	< 1.0	Negligible
Building H	44	54	43	53	< 1.0	Negligible
Building J1	44	54	44	54	< 1.0	Negligible
Building J2	44	54	44	54	< 1.0	Negligible
Building K	48	58	46	56	< 1.0	Negligible
Building L	48	58	46	56	< 1.0	Negligible

Ref	Building Services BS 4142 Limits (dB)				Increase in Background Noise (dB)	Magnitude of Impact
	Daytime (07:00 – 23:00 hours)		Night-time (23:00 – 07:00 hours)			
	Specific Sound Level Limit	Rating Level Limit	Specific Sound Level Limit	Rating Level Limit		
Building M	38	48	32	42	< 1.0	Negligible
Building N	38	48	32	42	< 1.0	Negligible
Building P	38	48	32	42	< 1.0	Negligible
Building Q	38	48	32	42	< 1.0	Negligible

9.109 Achievement of the atmospheric plant noise limits ensure that noise generated by fixed plant would have a Negligible (not significant) effect for all noise sensitive receptors.

Operational Road Traffic Noise

9.110 As described in paragraph 9.36, existing baseline and future operational baseline traffic flow data (AAWT 18hr) on nearby public roads has been provided by the Applicant's Transport Consultant (Arup).

9.111 Table 9.34 presents the predicted change in road traffic noise levels on nearby worst-affected public roads as a result of traffic associated with the complete and operational Proposed Development. The magnitude of impact is relevant to high sensitivity receptors which are present on all public roads considered.

Table 9.34 Operational Traffic Noise Levels on Nearby Public Roads

Road	Traffic Noise Baseline (2022/2023) (dB L _{10,18hr} at 10m)	Traffic Noise During Operation (Future Baseline 2034) (dB L _{10,18hr} @ 10m)	Change in Noise Level (dB)	Magnitude of Impact
Rye Lane (one way)	67.5	67.5	0.0	Negligible
Peckham Hill Street	68.6	68.5	-0.1	Negligible
Marmont Road	60.0	60.0	0.0	Negligible
Peckham High Street	73.5	73.4	-0.1	Negligible
Staffordshire Street	48.5	48.5	0.0	Negligible
Clayton Road	71.3	71.1	-0.2	Negligible
Meeting House Lane	61.9	61.8	-0.1	Negligible
Queens Road	71.4	71.4	0.0	Negligible
Hanover Park	70.1	69.7	-0.5	Negligible
Cicely Road	52.8	52.8	0.0	Negligible
Cerise Road	55.0	55.0	0.0	Negligible
Rye lane	67.9	67.9	-0.1	Negligible

9.112 Comparison of calculated baseline road traffic noise with the predicted road traffic noise during the operation of the Proposed Development indicates that changes in road traffic flows will result in a Negligible (not significant) effect on all of surrounding public roads.

Retail, Leisure and Commercial Noise

9.113 The proposed flexible retail, leisure and commercial uses (including drinking establishment premises) will be designed and managed such that the noise emission criteria agreed with LBS are satisfied. Such criteria will be agreed through appropriately worded planning conditions and licensing agreements.

9.114 The entertainment and leisure venue noise emission criteria are set out in LBS' 'Technical Guidance for Noise', as described in paragraph 9.45. This criteria is based on L_{Fmax} noise levels at third octave bands. For the purposes of this ES chapter, Table 9.35 sets out simplified broadband L_{AFmax} atmospheric noise limits at sensitive receptors (existing and introduced) and the corresponding magnitude of impact.

9.115 Detailed analysis at third octave bands would be required should any entertainment or leisure venues be proposed, subject to the specific wording of any future planning conditions or licensing agreements.

Table 9.35 Entertainment and Leisure Noise Limits

Ref	Simplified Entertainment and Leisure Noise Limits (dB L _{AFmax})		Increase in Background Noise (dB)	Magnitude of Impact
	Daytime 07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)		
Existing Receptors				
A	52	44	< 1.0	Negligible
B	52	44	< 1.0	Negligible
C	58	56	< 1.0	Negligible
D	58	56	< 1.0	Negligible
E	58	56	< 1.0	Negligible
F	58	56	< 1.0	Negligible
G	48	42	< 1.0	Negligible
H	48	42	< 1.0	Negligible
I	48	42	< 1.0	Negligible
J	48	42	< 1.0	Negligible
K	54	53	< 1.0	Negligible
L	54	53	< 1.0	Negligible
Introduced Receptors				
Building A	52	44	< 1.0	Negligible
Building B	52	44	< 1.0	Negligible
Building C	58	56	< 1.0	Negligible
Building D	48	42	< 1.0	Negligible
Building E	54	53	< 1.0	Negligible
Building F	54	53	< 1.0	Negligible
Building G	52	44	< 1.0	Negligible
Building H	54	53	< 1.0	Negligible
Building J1	54	54	< 1.0	Negligible
Building J2	54	54	< 1.0	Negligible
Building K	58	56	< 1.0	Negligible
Building L	58	56	< 1.0	Negligible
Building M	48	42	< 1.0	Negligible
Building N	48	42	< 1.0	Negligible
Building P	48	42	< 1.0	Negligible
Building Q	48	42	< 1.0	Negligible

9.116 Achievement of the atmospheric noise limits ensure that noise generated by the proposed flexible retail, leisure and commercial (including drinking establishment premises) would have a Negligible (not significant) effect for all noise sensitive receptors.

MITIGATION, MONITORING AND RESIDUAL EFFECTS

Demolition and Construction Mitigation

Demolition and Construction Noise Mitigation

9.117 To minimise potential Significant effects arising from demolition and construction noise, a detailed Demolition and Construction Environmental Management Plan (DCEMP) detailing measures to mitigate potential noise and vibration effects on nearby noise sensitive premises will be defined and agreed with LBS.

9.118 In accordance with modern working practices, the principles of 'Best Practicable Means (BPM)', as defined in the Control of Pollution Act, 1974 should be used to reduce noise emissions throughout the construction works to a reasonable and practicable level.

9.119 These BPMs, which should be contained in the DCEMP, include:

- Careful selection of construction methods and plant to be used;
- Strategic placement of plant items as far from receptors as practicable possible and use of temporary acoustic barriers where appropriate and other noise containment measures such as screens and sheeting to minimise noise breakout and reduce noise levels at the potentially affected receptors;
- Switching off of plant and vehicle engines when not in use;
- Restriction of drop heights onto lorries;
- Regular maintenance and servicing of vehicles, equipment and plant;
- Vehicles and mechanical plant should be fitted with effective exhaust silencers;
- Pneumatic percussive tools should be fitted with appropriate mufflers or silencers;
- Appropriate handling and storage of materials; and
- Enforcement of restricted working hours for excessively noisy activities.

9.120 The following principles of 'Best Practicable Means (BPM)' should be adopted for minimising noise associated with construction road vehicles manoeuvring in and around the site:

- Time slots should be adopted for deliveries to ensure that convoys of vehicles do not arrive simultaneously and avoid potential engine idling on-site; and
- Implementation of an appropriate traffic management strategy. This strategy should include controls to prevent temporary parking of construction vehicles in the vicinity of Noise Sensitive Receptors.

9.121 If a temporary source of noise from works within the site exceeds the relevant limits and cannot reasonably be prevented and the works being undertaken are crucial to progressing the Proposed Development, then separate liaison with LBS and the appropriate neighbours should take place.

9.122 In addition to the above, reasonable steps should be taken to keep the local community informed of proposed construction operations. The site management team should co-ordinate the dissemination of information (for example, by means of a regular newsletter) and to schedule those operations at times that would minimise the potential for disturbance. The site management team should provide a contact telephone number on the site boundary so that any concerns with construction activities can be communicated directly to a senior manager who will be able to address any concerns and control activities accordingly. This person should be responsible for logging complaints and actions.

9.123 The primary method for securing the measures which control of noise and vibration is a Section 61 consent under the Control of Pollution Act 1974 (CoPA). This consent will be sought from LBS.

9.124 A Section 61 consent under the CoPA will likely contain appropriate noise and vibration limits for demolition and construction activities at the nearby sensitive properties. These limits are recommended to be monitored

(for both noise and vibration) and reported. The reports and monitoring will highlight when it is likely that the relevant limits are exceeded, and thus permit construction activities to be effectively altered.

9.125 It is not possible to accurately predict the level of noise reduction that could be achieved through introduction of the mitigation measures discussed above. However, it is reasonable to assume based on professional judgement that these measures could reduce noise emissions by approximately 5dB. When considering this assumed reduction in noise levels during each timeslice for Phase 2, the potential effects could be reduced as set out in Table 9.36.

Table 9.36 Predicted Demolition and Construction Noise Scale of Effects with Mitigation – Phase 2

Ref	Description	Receptor Sensitivity	Scale of Effect	
			Timeslice 3	Timeslice 4
Existing Receptors				
A	Commercial units with residential properties above on Rye Lane	High	Negligible (not significant)	Negligible (not significant)
B	Commercial units with residential properties above on Peckham High Street	High	Moderate Adverse (significant)	Minor Adverse (not significant)
C	Travelodge Hotel on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
D	Commercial units with residential properties above on Peckham High Street	High	Negligible (not significant)	Negligible (not significant)
E	A block of residential apartments (Purdon House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
F	A block of residential apartments (Flamborough House) on Clayton Road	High	Negligible (not significant)	Negligible (not significant)
G	A block of residential apartments (Hanover Park) on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
H	Residential dwellings on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
I	Residential dwellings on Hanover Park and Cicely Road	High	Negligible (not significant)	Negligible (not significant)
J	Residential dwellings on Hanover Park	High	Negligible (not significant)	Negligible (not significant)
K	A commercial shopping outlet on Hanover Park	Very Low	Negligible (not significant)	Negligible (not significant)
L	Commercial units with residential properties above on Rye Lane	High	Major Adverse (significant)	Moderate Adverse (significant)
Introduced Receptors				
Building L	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building M	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building N	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building P	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)
Building Q	Residential apartment building	High	Negligible (not significant)	Negligible (not significant)

9.126 Significant effects have the potential to remain following implementation of the demolition and construction mitigation measures for the following receptors and timeslices:

- Phase 2 Timeslice 1: Site enabling works, demolition, and piling;
 - Receptor B: Commercial units and place of worship with residential properties above on Peckham High Street (Moderate Adverse);
 - Receptor L: Commercial units with residential properties above on Rye Lane (Major Adverse); and
- Phase 2 Timeslice 2: Substructure & superstructure construction and external envelope installation;
 - Receptor L: Commercial units with residential properties above on Rye Lane (Moderate Adverse).

9.127 Despite prediction of these potential significant effects, it should be noted that such effects are only likely to occur during the noisiest periods and activities (i.e. not constantly throughout each typical workday or week), as described in paragraph 9.92.

Completed Development Mitigation

9.128 The assessment of effects from the completed operational development do not indicate any significant effects at nearby sensitive receptors for both noise from building services plant and operational road traffic noise. As such, no additional mitigation (beyond the standard typical measures for control of plant noise as described in paragraph 9.30) is required to mitigate potential significant adverse effects associated with the Proposed Development.

Residual Effects

9.129 All of the residual effects resulting from the Proposed Development, are presented in Table 9.37, identifying whether the effect is significant or not.

Table 9.37 Residual Effects

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
Demolition and Construction							
(A) Commercial units with residential properties above on Rye Lane	Demolition and construction noise for Phase 1 – Timeslice 1	Negligible	Not Significant	L	D	T	Mt
(B) Commercial units and place of worship with residential properties above on Peckham High Street		Minor Adverse		L	D	T	Mt
(C) Travelodge Hotel on Peckham High Street		Negligible		L	D	T	Mt
(D) Commercial units with residential properties above on Peckham High Street		Negligible		L	D	T	Mt
(E) A block of residential apartments (Purdon House) on Clayton Road		Negligible		L	D	T	Mt
(F) A block of residential apartments (Flamborough House) on Clayton Road		Negligible		L	D	T	Mt
(G) A block of residential apartments (Hanover Park) on Hanover Park		Negligible		L	D	T	Mt

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
(H) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(I) Residential dwellings on Hanover Park and Cicely Road		Negligible		L	D	T	Mt
(J) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(K) A commercial shopping outlet on Hanover Park		Negligible		L	D	T	Mt
(L) Commercial units with residential properties above on Rye Lane		Negligible		L	D	T	Mt
(M) Existing Aylesham Shopping Centre (to be demolished at Phase 2)		Negligible		L	D	T	Mt
(A) Commercial units with residential properties above on Rye Lane	Demolition and construction noise for Phase 1 – Timeslice 2	Negligible	Not Significant	L	D	T	Mt
(B) Commercial units and place of worship with residential properties above on Peckham High Street		Negligible		L	D	T	Mt
(C) Travelodge Hotel on Peckham High Street		Negligible		L	D	T	Mt
(D) Commercial units with residential properties above on Peckham High Street		Negligible		L	D	T	Mt
(E) A block of residential apartments (Purdon House) on Clayton Road		Negligible		L	D	T	Mt
(F) A block of residential apartments (Flamborough House) on Clayton Road		Negligible		L	D	T	Mt
(G) A block of residential apartments (Hanover Park) on Hanover Park		Negligible		L	D	T	Mt
(H) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(I) Residential dwellings on Hanover Park and Cicely Road		Negligible		L	D	T	Mt
(J) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(K) A commercial shopping outlet on Hanover Park		Negligible		L	D	T	Mt
(L) Commercial units with residential properties above on Rye Lane		Negligible		L	D	T	Mt

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
(B) Commercial units and place of worship with residential properties above on Peckham High Street	Demolition and construction noise for Phase 2 – Timeslice 3	Moderate Adverse	Significant	L	D	T	Mt
(L) Commercial units with residential properties above on Rye Lane		Major Adverse		L	D	T	Mt
(A) Commercial units with residential properties above on Rye Lane		Negligible	Not Significant	L	D	T	Mt
(C) Travelodge Hotel on Peckham High Street		Negligible		L	D	T	Mt
(D) Commercial units with residential properties above on Peckham High Street		Negligible		L	D	T	Mt
(E) A block of residential apartments (Purdon House) on Clayton Road		Negligible		L	D	T	Mt
(F) A block of residential apartments (Flamborough House) on Clayton Road		Negligible		L	D	T	Mt
(G) A block of residential apartments (Hanover Park) on Hanover Park		Negligible		L	D	T	Mt
(H) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(I) Residential dwellings on Hanover Park and Cicely Road		Negligible		L	D	T	Mt
(J) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(K) A commercial shopping outlet on Hanover Park		Negligible		L	D	T	Mt
Building L		Negligible		L	D	T	Mt
Building M		Negligible		L	D	T	Mt
Building N		Negligible		L	D	T	Mt
Building P		Negligible		L	D	T	Mt
Building Q		Negligible		L	D	T	Mt
(L) Commercial units with residential properties above on Rye Lane	Demolition and construction noise for Phase 2 – Timeslice 4	Moderate Adverse	Significant	L	D	T	Mt
(A) Commercial units with residential properties above on Rye Lane		Negligible	Not Significant	L	D	T	Mt
(B) Commercial units and place of worship with residential		Negligible		L	D	T	Mt

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
properties above on Peckham High Street							
(C) Travelodge Hotel on Peckham High Street		Negligible		L	D	T	Mt
(D) Commercial units with residential properties above on Peckham High Street		Negligible		L	D	T	Mt
(E) A block of residential apartments (Purdon House) on Clayton Road		Negligible		L	D	T	Mt
(F) A block of residential apartments (Flamborough House) on Clayton Road		Negligible		L	D	T	Mt
(G) A block of residential apartments (Hanover Park) on Hanover Park		Negligible		L	D	T	Mt
(H) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(I) Residential dwellings on Hanover Park and Cicely Road		Negligible		L	D	T	Mt
(J) Residential dwellings on Hanover Park		Negligible		L	D	T	Mt
(K) A commercial shopping outlet on Hanover Park		Negligible		L	D	T	Mt
Building L		Negligible		L	D	T	Mt
Building M		Negligible		L	D	T	Mt
Building N		Negligible		L	D	T	Mt
Building P		Negligible		L	D	T	Mt
Building Q		Negligible		L	D	T	Mt
All Receptors A – J & Buildings L - Q	Demolition and construction road traffic noise	Negligible	Not Significant	L	D	T	Mt
(A) Commercial units with residential properties above on Rye Lane	Demolition and construction vibration from piling	Minor Adverse	Not Significant	L	D	T	St
(B) Commercial units and place of worship with residential properties above on Peckham High Street		Minor Adverse		L	D	T	St
(C) Travelodge Hotel on Peckham High Street		Negligible		L	D	T	St
(D) Commercial units with residential properties above on Peckham High Street		Negligible		L	D	T	St
(E) A block of residential apartments (Purdon House) on Clayton Road		Minor Adverse		L	D	T	St

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
(F) A block of residential apartments (Flamborough House) on Clayton Road		Negligible		L	D	T	St
(G) A block of residential apartments (Hanover Park) on Hanover Park		Minor Adverse		L	D	T	St
(H) Residential dwellings on Hanover Park		Minor Adverse		L	D	T	St
(I) Residential dwellings on Hanover Park and Cicely Road		Minor Adverse		L	D	T	St
(J) Residential dwellings on Hanover Park		Minor Adverse		L	D	T	St
(K) A commercial shopping outlet on Hanover Park		Negligible		L	D	T	St
(L) Commercial units with residential properties above on Rye Lane		Minor Adverse		L	D	T	St
(M) Existing Aylesham Shopping Centre (to be demolished at Phase 2)		Negligible		L	D	T	St
Building L		Minor Adverse		L	D	T	St
Building M		Minor Adverse		L	D	T	St
Building N		Minor Adverse		L	D	T	St
Building P		Negligible		L	D	T	St
Building Q		Negligible		L	D	T	St
Completed Development							
All Receptors A – J & Buildings A - Q	Building services noise	Negligible	Not Significant	L	D	P	Lt
All Receptors A – J & Buildings A - Q	Retail, leisure and commercial (including drinking establishment premises) noise	Negligible	Not Significant	L	D	P	Lt
All Receptors A – J & Buildings A - Q	Operational Road Traffic Noise Effects	Negligible	Not Significant	L	D	P	Lt
All introduced receptors	Site suitability for residential & commercial occupation	N/A	Not Significant	L	D	P	Lt
Notes: Residual Effect - Scale = Negligible / Minor / Moderate / Major - Nature = Beneficial or Adverse Geo (Geographic Extent) = Local (L), Borough (B), Regional (R), National (N) D = Direct / I = Indirect P = Permanent / T = Temporary St = Short Term / Mt = Medium Term / Lt = Long Term N/A = not applicable / not assessed							

SITE SUITABILITY

- 9.130 As described in paragraph 9.38, the complete and operational Proposed Development shall include residential and commercial (e.g. retail / office) occupiers. The assessment of site suitability has been based on the proposed residential occupations given the more onerous noise criteria and considers the following:
- External environmental noise intrusion into the residential noise sensitive spaces of the Proposed Development (residential habitable rooms).

Internal Noise Levels

9.131 Existing environmental noise levels have been modelled across the Proposed Development using the baseline environmental noise level data. The modelled daytime $L_{Aeq,16hr}$ noise levels are shown in Figure 9.4 and Figure 9.5.

Figure 9.4 Daytime $L_{Aeq(16hr)}$ Noise Levels on the North and East Elevations

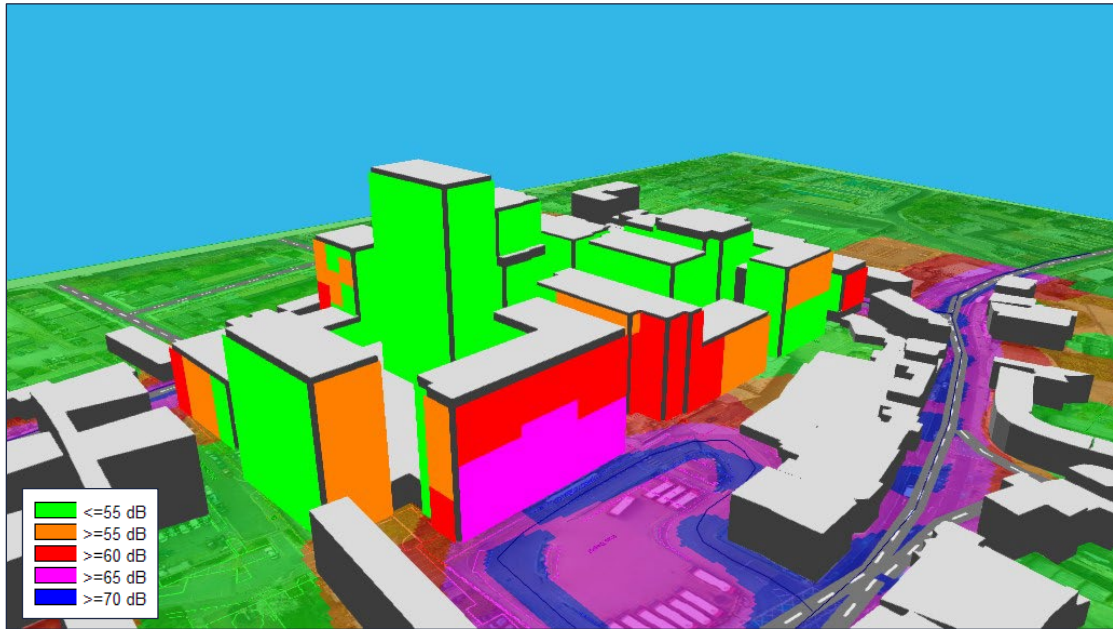
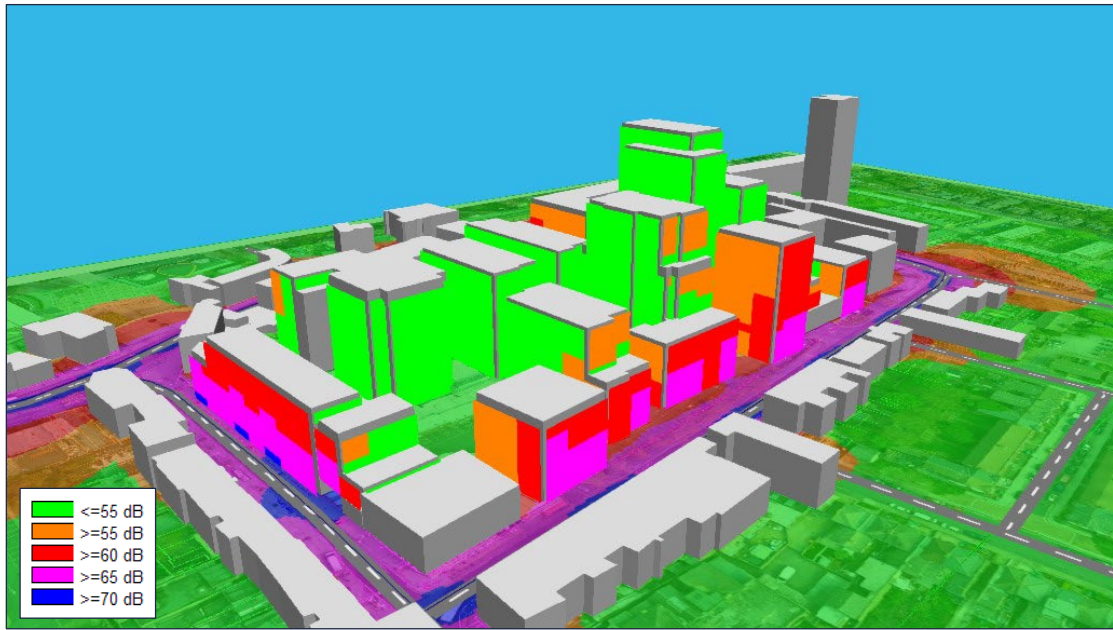


Figure 9.5 Daytime $L_{Aeq(16hr)}$ Noise Levels on the South and West Elevations



9.132 Using the 3D noise model, Table 9.38 and Figure 9.6 set out the worst-case free-field incident noise levels across the Proposed Development. For the purposes of the assessment in this ES chapter, these zones are considered to be the “Façade Zones”.

Table 9.38 Worst-Case Incident Noise Levels

Zone (as shown on Figure 9.6)	Calculated Worst-Case Incident Noise Levels (Free-field)		
	Daytime $L_{Aeq,16hr}$ (dB)	Night $L_{Aeq,8hr}$ (dB)	10th Highest Night L_{AFmax} (dB)
Zone A (Purple)	69	62	82
Zone B (Red)	66	62	82
Zone C (Orange)	58	53	72
Zone D (Green)	55	50	65

Figure 9.6 Site Plan Showing Façade Zones



Note 1: For where indicated on Building J1, Zone C applies from Level 7 and to Roof level. Other than where indicated in Note 1 above, the indicated Façade Zones above apply to all floors of the respective elevation.

9.133 Based on the 3D noise modelling and baseline environmental noise survey, Table 9.39 presents a simplified indicative summary of glazing and ventilation acoustic performance requirements for each identified Façade Zone indicated in Figure 9.6 with a view of achieving the internal ambient noise level criteria presented in Table 9.7 and thus achieving BS 8233 ‘desirable’ internal ambient noise level criteria as set out in Table 9.15. Note that these acoustic performances have been derived based on a simplified assessment. A detailed external building fabric specification will need to be developed for each dwelling during detailed design and subject to planning conditions.

Table 9.39 Indicative Glazing & Ventilation Acoustic Performances

Façade Zone	Room	Façade Element	Preliminary Minimum Sound Reduction Specification
Zone A (Purple)	Kitchen / Living	Window	35 dB $R_w + C_{tr}$
		Ventilator	42 dB $D_{new} + C_{tr}$
	Bedroom	Window	38 dB $R_w + C_{tr}$
		Ventilator	52 dB $D_{new} + C_{tr}$
Zone B (Red)	Kitchen / Living	Window	35 dB $R_w + C_{tr}$
		Ventilator	37 dB $D_{new} + C_{tr}$
	Bedroom	Window	38 dB $R_w + C_{tr}$
		Ventilator	44 dB $D_{new} + C_{tr}$
Zone C (Orange)	Kitchen / Living	Window	27 dB $R_w + C_{tr}$
		Ventilator	33 dB $D_{new} + C_{tr}$
	Bedroom	Window	30 dB $R_w + C_{tr}$
		Ventilator	33 dB $D_{new} + C_{tr}$
Zone D (Green)	Kitchen / Living	Window	27 dB $R_w + C_{tr}$
		Ventilator	33 dB $D_{new} + C_{tr}$
	Bedroom	Window	27 dB $R_w + C_{tr}$
		Ventilator	33 dB $D_{new} + C_{tr}$

9.135 Example glazing configurations commensurate with achieving the sound insulation performances given in Table 9.39 are given in Table 9.40.

Table 9.40 Example Glazing Configurations

Glazing Specification, $R_w + C_{tr}$ (dB)	Preliminary Minimum Sound Reduction Specification
38	Acoustic double glazed system e.g. 10/16/8.8 mm
35	Uprated double glazed system e.g. 6/16/8.8 mm
30	double glazed system e.g 10/16/4 mm
27	double glazed system e.g 6/16/6 mm

9.136 Example ventilation solutions commensurate with achieving the elemental sound insulation performances noted in Table 9.39 are given in Table 9.41.

Table 9.41 Example Ventilation Solutions

Ventilator Specification $D_{new} + C_{tr}$ (dB)	Example Configuration
≥43	High performance in-wall acoustic ventilator with absorption, or a mechanically assisted supply & extract solution (e.g. local MVHR).
34 - 42	Acoustic trickle vent per habitable room, or a mechanically assisted supply & extract solution (e.g. local MVHR).
33	1 x 2,500mm ² standard hit-miss trickle vent per habitable room, or a mechanically assisted supply & extract solution (e.g. local MVHR).

¹⁷ Department for Levelling Up, Housing and Communities, 2021, Overheating: Approved Document O

9.137 The preliminary performance specifications included in Table 9.41 above are based on the provision of either full MVHR for rooms or one ventilator only per habitable room as required. If additional numbers of ventilators are required to achieve the ventilation rates, the performance requirement for the individual ventilators will need to increase per ‘10LOG(N)’ where ‘N’ is the number of ventilators per habitable room.

9.138 3D noise modelling and indicative external noise intrusion predictions indicate that suitable internal ambient noise levels can be achieved throughout the Proposed Development through the implementation of suitable standard glazing and ventilation elements. As such, the Proposed Development is considered suitable for the intended uses.

Ventilation & Overheating (ADO)

9.139 Approved Document O ‘Overheating’ (ADO)¹⁷ was released in December 2021 and came into effect in England on 15th June 2022. It sets out the suitable methodologies to limit unwanted solar gains in summer and provide adequate means to remove heat from the indoor environment. Requirement O1(2)(a) contains criteria relating to noise with Sections 3.2 to 3.4 of ADO stating the following:

“In locations where external noise may be an issue (for example, where the local planning authority considered external noise to be an issue at the planning stage), the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (11pm to 7am).

Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits.

- a) 40 dB L_{Aeq,T_s} averaged over 8 hours (between 11pm and 7am).
- b) 55 dB L_{AFmax} , more than 10 times a night (between 11pm and 7am).”

9.140 The acoustic requirements of ADO relate to bedrooms and night and does not consider daytime hours or other living spaces.

9.141 To assess overheating ADO sets out two methods: These are by either using the simplified method or through dynamic thermal modelling (i.e. a TM59 assessment). For an acoustic assessment suitable to accompany a planning application, the simplified method is often used as it splits England into “Moderate” and “High” risk zones depending on the location of the site and provides “minimum free areas” for window openings in bedrooms. These are as follows:

- 13% of the floor area for “High Risk” locations
- 4% of the floor area for “Moderate Risk” locations

9.142 The corresponding incident noise levels are shown in Table 9.42, based on the site’s location in Southwark, London, which therefore falls into the “High” risk category.

Table 9.42 ADO Incident Noise Levels

ADO Zone	Risk Category	Incident Noise Level (dB)		Notes
		$L_{Aeq,8h}$	$L_{AFmax,2min}$	
Red	High	>44	>59	Open windows based on simplified model not suitable. Detailed modelling via TM59 assessment advised. Limited area opening windows or closed windows may be required to comply with AD-O.
Green	-	<44	<59	Open windows based on simplified model potentially suitable.

9.143 Based on Table 9.42, Figure 9.7 shows the locations in which the external noise is above the point at which the simplified ADO model can be used (Shown in Red) and detailed modelling thermal modelling and a subsequent acoustic assessment is advisable to show compliance with Requirement O1(2)(a). Where a façade

is marked in **Green**, opening windows as a means of overheating control should be suitable from an acoustic perspective without a more detailed assessment.

Figure 9.7 ADO Façade Zones



Note 1: Where indicated on Building J1, the **Red** zone applies from Level 7 and to Roof level
Note 2: The **Red** dotted red line marked on Building M above indicates that the Zone applies from Level 6 to Roof Level only.

9.144 At this stage, bedrooms should be designed to avoid or severely restrict the reliance on opening windows to satisfy overheating targets in the **Red** zones highlighted in Figure 9.7. This can be achieved by use of solar rated glazing, external shutters or fenestration design. In addition, mitigation measures in the form of attenuated or plenum windows, attenuated louvres or vents for overheating and sound attenuating balconies may be suitable. These methods for reducing solar gains can be assisted with mechanical ventilation, such as MVHR with a manual summer boost function. Air conditioning can also be considered. However, the introduction of mechanical solutions should be considered carefully; not only with regard to cost and maintenance, but sustainability and the environment.

ASSESSMENT OF THE FUTURE ENVIRONMENT

Evolution of the Baseline Scenario

9.145 Without the Proposed Development it is likely that environmental noise levels (baseline) will remain broadly the same in the medium to long term. Road traffic noise is the dominant environmental noise source influencing the ambient noise climate around the site. An increase in road traffic flow on public roads surrounding the site through natural growth (from the addition of new residences and businesses in the surrounding area) may occur in the considerable long term but the resultant change in traffic noise levels is likely to still be minimal overall.

Cumulative Effects Assessment

- 9.146** Schemes with a potential to result in cumulative effects have been identified in **ES Volume 1, Chapter 2: EIA Methodology** and listed with approximate distances from the site location in Table 9.2.
- 9.147** All nearby major developments are required by the LBS to have accompanying noise impact reports and Construction Management Plans that incorporate and detail the general mitigation measures which will reduce these effects as far as possible to ensure compliance with the Control of Pollution Act and that compliance will be monitored by LBS.

Demolition and Construction

- 9.148** For schemes outside the scoping distance in this assessment (located beyond the noise sensitive receptors considered in this ES chapter that surround the site), the potential for cumulative impacts from demolition and construction noise is minimal, as the noise and vibration from the demolition, construction and operation of these schemes would contribute very little to the noise climate in the area of the receptors due to the intervening distance and screening from existing surrounding buildings. As shown in Table 9.2, the closest cumulative scheme is approximately 460m from the site with numerous building screening the site over the intervening distance. The effect of cumulative schemes on noise and vibration from demolition and construction is likely to be Negligible (not significant).
- 9.149** Due to the nature of the Proposed Development (in particular, its location within an urban context and surrounded by a comprehensive road network) construction traffic noise effects with surrounding schemes are determined to be Negligible (not significant).

Completed Development

- 9.150** The effect of cumulative schemes has been considered in the assessment. The cumulative schemes listed in Table 9.2 have been considered. The assessment of cumulative effects for operational road traffic noise is determined to be Negligible (not significant).
- 9.151** No new or additional effects are predicted as a result of building services noise from the Proposed Development. LBS require that Specific Sound Levels from building services plant are 10 dB below the existing background noise level when assessed in accordance with BS 4142. This should ensure that any potential increase in ambient noise levels when considering cumulative schemes is minimal and Negligible (not significant).

LIKELY SIGNIFICANT EFFECTS

- 9.152** Potential significant effects, although temporary, have been predicted for demolition and construction noise at the following receptors during the indicated activities:
- Phase 2 Timeslice 1: Site enabling works, demolition, and piling;
 - Receptor B: Commercial units and place of worship with residential properties above on Peckham High Street (Moderate Adverse);
 - Receptor L: Commercial units with residential properties above on Rye Lane (Major Adverse); and
 - Phase 2 Timeslice 2: Substructure & superstructure construction and external envelope installation;
 - Receptor L: Commercial units with residential properties above on Rye Lane (Moderate Adverse).
- 9.153** No significant effects are likely as a result of construction road traffic movements on surrounding public roads (including cumulative schemes).
- 9.154** No significant effects are likely as a result of the completed development from either buildings services noise or road traffic (including cumulative schemes).