

9 Noise and Vibration

9.1 Introduction

- 9.1.1 This Chapter, which has been prepared by Waterman, provides a statement of conformity with regard to the potential noise and vibration impacts arising from the Scheme with Phase 1B (North) in place (and having regard also to the detailed design previously approved in relation to Phase 1A (North)). This statement of conformity, with updated baseline information, is provided pursuant to the s73 ES and other EIA Documentation (as defined in **Chapter 4: Approach to the ES Further Information Report**) in light of the further detailed design information now available in respect of Phase 1B (North) and confirms whether the findings of the s73 ES and other EIA Documentation with respect to the likely significant effects, mitigation and residual impacts in relation to noise and vibration remain valid.
- 9.1.2 A review of relevant policy, legislation and guidance published since preparation of the s73 ES and other EIA Documentation has been carried out. A review of the detailed design for Phase 1B (North), as defined in **Chapter 2: Description of Phase 1B (North) RMA**, has then been undertaken, to identify those elements of the Phase 1B (North) RMA of relevance to the noise and vibration assessment.
- 9.1.3 The approach to the statement of conformity is set out, and a summary of relevant consultation is provided. A review of the baseline information presented in the s73 ES and other EIA Documentation has been undertaken and updates are presented where relevant. Commentary is then provided which confirms whether any new or different potential significant noise and vibration impacts arising from the Development (comprising the Scheme with the detailed design for both Phase 1A (North) and Phase 1B (North) in place) from those identified in the s73 ES and other EIA Documentation are likely. Likewise, any new or different mitigation measures from those identified in the s73 ES and other EIA Documentation are presented where considered necessary, and residual impacts following the application of mitigation are described.
- 9.1.4 This Chapter is supported by:
- **Appendix 9.1: Description of Noise and Vibration Units and Noise Monitoring Data** which presents the 2014 noise monitoring data, with Appendix F of the s73 ES also appended for background information purposes;
 - **Appendix 9.2: Acoustic Design Report Plot 113** (Hilson Moran); and
 - **Appendix 9.3: Acoustic Planning Report Plot 102** (Hilson Moran).

9.2 Policy, Legislation and Guidance

- 9.2.1 There have been no significant changes to legislation, policy or guidance since the s73 ES and other EIA Documentation was prepared which have a material effect on the approach to or findings of the assessments previously presented.
- 9.2.2 Both national and local planning policy contain provisions to safeguard the amenity of existing and future sensitive receptors from potential adverse noise effects associated with new development. These policy provisions are complemented by the noise assessment mechanisms and standards contained within the suite of relevant British Standard Guidelines. Together, these documents are intended to ensure that appropriate safeguards are in place to protect sensitive receptors during both the construction and operation of proposed developments. More detail regarding these documents is presented in the s73 ES and Phase 1A (North) FIR.

9.3 Relevant Phase 1B (North) RMA Details

9.3.1 This assessment considers the noise and vibration impacts of the Development as a whole (including the detailed design of Phase 1B (North) and Phase 1A (North)). The key elements of Phase 1B (North) which are of relevance to noise and vibration include:

- Plot 113 residential plot;
- Plot 101 Energy Centre development plot;
- Transport Interchange T2 (replacement Brent Cross bus station);
- BXE hotel development (part plot 109);
- BXE development plots (including M&S plot 102 and cinema plot 106);
- Public realm (Threshold spaces including Layfield Place, Fenwick Place, Brent Cross Main Square and Tempelhof Circus); and
- New / improved green spaces of River Brent Nature Park (NP4); Western Brent Riverside Park; Eastern Brent Riverside Park and Sturgess Park improvements.

9.4 Assessment Methodology

9.4.1 The methodology used in the assessment of the potential noise and vibration impacts presented in this Chapter remains unchanged from that presented within the s73 ES and other EIA Documentation.

Scope of Assessment

9.4.2 The scope of this assessment is effectively the same as that of the s73 ES and other EIA Documentation. The assessment has included the following:

- Confirmation that the potentially sensitive existing and future noise sensitive receptors on the Site and within the surrounding area, as identified in the s73 ES and other EIA Documentation, remain valid;
- Review of the s73 ES and other EIA Documentation to confirm that the baseline information remains valid;
- Review and assessment of the s73 ES and other EIA Documentation to confirm that the potential noise and vibration levels generated during the demolition and construction works associated with the Development remain valid - a statement of conformity is provided;
- Consideration of the impact due to operation of the Replacement Bus Station; as this component is in accordance with the 2014 Permission design parameters, the effects reported in the s73 ES and other EIA Documentation are considered to remain valid - a statement of conformity is provided;
- Consideration of the impact due to operation of the Energy Centre (Plot 101); provided the energy centre complies with the requirement of Condition 29.5 of the 2014 Permission (which states "... where building services, plant or other external noise sources are to be installed, the total noise level of such items shall be at least 5dB(A) below the prevailing background L_{A90} noise level, measured at the nearest Noise Sensitive Premises., in accordance with BS4142 or successive guidance..."), the effects reported in the s73 ES and other EIA Documentation are considered to remain valid - a statement of conformity is provided.
- Consideration of the potential noise and vibration impacts from forecast road traffic flows and composition (as set out in **Chapter 7: Traffic and Transport**) during operation of the Development; these are considered to remain unchanged from those reported within the s73

ES and other EIA Documentation (refer to **Chapter 7: Traffic and Transport**) - a statement of conformity is provided.

- Assessment of the suitability of the residential element of Phase 1B (North) (namely Plot 113) for residential development in terms of the prevailing noise conditions, having regard to the Acoustic Design Report by Hilson Moran (**Appendix 9.2**);
- Assessment of the suitability of Plot 109 for hotel use in terms of the prevailing noise conditions, having regard to information provided by Hilson Moran;
- Consideration of the suitability of new areas of open space having regard to ambient noise levels which have the potential to affect future users of these amenity spaces. These have been considered in the s73 ES and the detailed design for Phase 1B (North) and are considered to be in accordance with the parameters of the 2014 Permission. The effects reported in the s73 ES and other EIA Documentation are therefore considered to remain valid - a statement of conformity is provided;
- Confirmation that the design aims for plant and services as identified in the s73 ES and other EIA Documentation remain valid for proposed new buildings within Phase 1B (North) - a statement of conformity is provided;
- Provision of proposals for mitigation, where appropriate (i.e. over and above that identified in the s73 ES and other EIA Documentation); and
- Assessment of the potential significance of residual noise and vibration effects.

Baseline Conditions

- 9.4.3 Following a review of the s73 ES and other EIA Documentation, it was deemed that the baseline noise and vibration information (having been updated in July 2014) remains valid for the purposes of the Phase 1B (North) RMA, refer to **Figure 9.1** for noise monitoring locations and noise assessment areas. Assessment of residential amenity is based on future predicted noise levels and is therefore not wholly dependent on prevailing baseline noise levels. The 2031 'with Development' noise levels, on which residential amenity has been assessed, do not change significantly from that reported within the Phase 1A (North) FIR. With regard to fixed external plant associated with the Brent Cross Development Plots which form part of Phase 1B (North) RMA, they will be designed to comply with LBB's noise criteria with compliance demonstrated through the subsequent acoustic design reports. On this basis, no further monitoring is considered necessary to inform the Phase 1B (North) RMA. Regard has, however, been taken of additional noise monitoring conducted in 2016 by Hilson Moran to inform the acoustic design of several development plots within Phase 1B (North), refer to **Appendices 9.2** and **9.3** for more detail in relation to this.

Construction Noise and Vibration

- 9.4.4 In terms of construction noise and vibration effects, the s73 ES was based on typical plant associated with the key construction phases. There is no change to the assessment method of the construction phase from that detailed within the s73 ES, despite the replacement of BS5228-1:2009 with BS5288-1:2009+A1:2014. The assessment methodology of the s73 ES therefore remains valid. This was also the case with the Phase 1A (North) FIR.
- 9.4.5 Construction traffic data has changed slightly from that presented in the Construction Impact Assessment (CIA) Addendum (2013) which accompanied the s73 ES. Further information is provided in the Technical Note to the CIA Addendum contained in **Appendix 2.1**. In addition, the Indicative Construction Programme (ICP) which forms part of the CIA, has been subject to an

interim update to reflect changes to the construction programme for Phase 1 North. Further information is contained in **Chapter 2** and **Chapter 4**, and the revised ICP is contained within **Appendix 2.1**. The changes to the ICP and CIA have been taken into account as part of this assessment.

Operational Development Noise and Vibration

- 9.4.6 Operational traffic data used in the s73 ES were based on the outputs of the BXC Transport Model (BXC - TM) and were assessed for the year of completion 2031. As the Scheme progressed into detailed design and technical approvals, a further transport model (the BXC - DDM) was developed in agreement with Transport for London (TfL), Highways England (HE) and London Borough of Barnet (LBB) principally for technical approvals for the highway authorities' functions. The s73 ES noise assessment was updated with the traffic data from the BXC-DDM for the Phase 1A (North) RMA, and the updated assessment presented in the Phase 1A (North) FIR.
- 9.4.7 As outlined in **Chapter 7: Traffic and Transport**, the BXC-DDM operational traffic data predominantly remains unchanged for the purposes of the Phase 1B (North) RMA, except for a slight percentage forecast increase in AM and PM car trips due to a proposed uplift in retail and associated uses floorspace by 4,192m², the impact of which is considered within the assessment of operational road traffic noise presented in this Chapter.
- 9.4.8 There is no change to the methodology and assessment criteria for operational noise and vibration, which is therefore still applicable to the Phase 1B (North) RMA.

Assumption and Limitations

- 9.4.9 No limitations of constraints were identified.

9.5 Consultation

- 9.5.1 The approach to the noise and vibration statement of conformity was set out in the EIA Scoping Report (**Appendix 4.1**).
- 9.5.2 Comments received in relation to noise and vibration from LBB and LBB's Scientific Services as part of the Scoping process are presented in **Table 4.1** within Chapter 4 of this ES, together with responses. Comments received from LBB or consultees are addressed within the Chapter, where relevant.

9.6 Baseline Conditions

Baseline Noise Monitoring

- 9.6.1 As previously discussed, the monitoring undertaken to date is considered to remain valid for the purposes of the Phase 1B (North) FIR, refer to **Figure 9.1**. Regard has however been given to the additional noise monitoring conducted in 2016 by Hilson Moran to inform the acoustic design of several development plots within Phase 1B (North), refer to **Appendices 9.2, 9.3** and **9.4**.

Baseline Vibration Monitoring

- 9.6.2 Additional vibration monitoring had not been requested during consultation, and from professional opinion, is not considered necessary, given there are no vibration operational sources associated with Phase 1B (North).

9.7 Assessment and Mitigation

Demolition and Construction Noise and Vibration

Potential Impacts

- 9.7.1 The ICP and CIA have been updated to reflect changes to the Phase 1 North construction programme, details of this are provided within **Chapter 2** and **Appendix 2.1**. Given the assessment is based on typical plant associated with the key construction activities, the construction activities presented within the s73 ES and other EIA Documentation remain largely unchanged. Further commentary on the validity of the s73 ES and other EIA Documentation in respect of construction noise and vibration is provided below.

Construction Noise Impacts

- 9.7.2 The s73 ES assessed construction noise and vibration impacts based on assumed plant (Annex F) and assumed total power levels for various construction activities as defined in Table 9.5 of the s73 ES. A summary of expected significant construction noise impacts was identified in Table 9.6 of the s73 ES for noise sensitive receptors (NSRs). Commentary was then provided in respect of Road Works, Bridge Works, Buildings Demolition, Foundations and Superstructure, Railway Works and Impacts on NSRs within the Development.
- 9.7.3 The adverse impacts upon NSRs were identified as significant impacts in areas where the works are expected to be within critical distances of receptors (as detailed in Table 9.5 of the s73 ES). The details now provided by the Phase 1B (North) RMA do not significantly alter the distance at which the various construction works occur in relation to the selected NSRs. It is understood that there are no additional NSRs to those assessed within s73 ES and other EIA Documentation. In this respect, therefore, although there have been some adjustments to the timings and sequencing of some construction activities as detailed in the interim updated ICP, as the types and locations of the activities have not changed the significance of effects detailed within s73 ES and other EIA Documentation remain valid.
- 9.7.4 This is also applicable to Construction Vibration which also remains unchanged from the s73 ES.

Construction Traffic Impacts

- 9.7.5 The forecast peak construction traffic is approximately 23% greater than previously assessed within the s73 ES and other EIA Documentation. Condition 1.9 of the 2014 Permission requires the submission of a CCC Feasibility Study for each phase or sub phase of the Development and this Study has been approved by LBB for Phase 1A (North). The construction traffic impacts of the CCC are not considered in detail within this Phase 1B (North) FIR as the final option has not yet been confirmed. In terms of construction traffic however, the CIA Addendum Technical Note (**Appendix 2.1**) presents a worst-case scenario as it does not assume that a CCC is in place.
- 9.7.6 In acoustic terms an increase of 23% equates to an increase in noise level of just under 1dB(A). This increase would not significantly change the results within the s73 ES and other EIA Documentation due to the existing high traffic volumes on the main surrounding road network, such as the A406 and A41. As reported within the s73 ES, on the minor roads with lower traffic volumes construction traffic will cause an increase in the prevailing noise levels. Qualitatively this would not result in a change in the significance of effects as detailed within the s73 ES and other EIA Documentation, which therefore remains valid.

Mitigation

- 9.7.7 Mitigation measures presented in the s73 ES were secured through conditions attached to the 2014 Permission, through the implementation of measures to be set out in the Code of Construction Practice (CoCP) (Condition 8.1). A draft Code of Construction Practice (CoCP) was provided as an Appendix to the Revised Development Specification Framework (RDSF) for the s73 Application, and is due to be updated and finalised in accordance with the requirements of Condition 8.1 prior to the commencement of the Development. Condition 8.3 also requires the preparation of Construction Environmental Management Plans (CEMPs) prior to the commencement of work, and a CEMP will be prepared specific to Phase 1B (North). A Scheme for Noise and Vibration Monitoring and Assessment will also be prepared and adhered to during the period of construction works, in accordance with the requirements of Condition 29.2.
- 9.7.8 No further mitigation measures beyond those identified in the s73 ES and other EIA Documentation have been identified. These remain valid and appropriate for the purposes of the Phase 1B (North) RMA.

Residual Impacts

- 9.7.9 Given there are no anticipated material changes to the proposed construction methods and operations to those presented within the s73 ES and other EIA Documentation, and that the assessment methodology and predicted impacts remains unchanged, the residual construction impacts of the s73 ES remain valid in respect of noise and vibration.

Operational Development Noise and Vibration

Potential Impacts

Road Traffic Noise

- 9.7.10 The transport engineers (AECOM) do not anticipate any significant changes to the baseline or future traffic data, and the traffic effects of the Development remain as presented in the s73 ES and confirmed in the Phase 1A (North) FIR and other EIA Documentation (refer to **Chapter 7: Traffic and Transport**). Although a percentage increase in AM and PM car trips is predicted due to the proposed uplift in retail space by 4,192m² (refer to **Chapter 2**), the overall increases would not significantly alter the results of the road traffic noise assessment which was carried out for the Phase 1A (North) RMAs, and presented in the Phase 1A (North) FIR.
- 9.7.11 The percentage increase in 2-way car trips based on an increase in retail space of 4,192m², as provided by AECOM, is as follows:
- **Phase 1 – Weekday AM Peak = +1.54% (+40 trips)**
 - **Phase 1 – Weekday PM Peak = +2.99% (+180 trips)**
 - **End-State – Weekday AM Peak = +0.58% (+40 trips)**
 - **End-State – Weekday PM Peak = +1.08% (+90 trips)**
- 9.7.12 An increase of 25% in volume would be required to result in a 1dB increase in road traffic noise, which is insignificant. The forecast increases by AECOM are a magnitude lower, as indicated above, and therefore significant changes on the road transport network are not anticipated as a result of the proposed increase in floorspace above that previously assessed. The above floorspace increase does not therefore affect the outcomes of the previous road traffic noise assessment, as presented within the s73 ES and other EIA Documentation, the conclusions of which remain valid.

Road Traffic Vibration

- 9.7.13 There is no change to peak levels of vibration arising from road traffic vehicles due to the Phase 1B (North) RMA, and therefore the results of the s73 ES and other EIA Documentation remain valid.

Residential Amenity Plot 113

- 9.7.14 The assessment of residential amenity now includes the detailed design of Plot 113. The s73 ES identified that Brent Cross East (BXE) facing the A406 and internal roads, of which Plot 113 is part, will have an estimated Noise Exposure Category (NEC) of C increasing to D for some plots. Mitigation was therefore identified as being necessary.
- 9.7.15 A baseline noise survey undertaken in 2014 during the day and night-time periods, and 2031 end state noise modelling, indicate that Plot 113 falls into NEC B/C (LBB's SPD on Sustainable Design and Construction adopts the NEC of the former PPG24). This rating concurs with the baseline survey and assessment results undertaken by Hilson Moran in 2016 as part of the Acoustic Design Report (refer to **Appendix 9.2**).
- 9.7.16 When taking account of predicted façade noise levels based on the 2031 end state scenario, the predicted façade noise levels on the eastern and southern facades of the residential block are comparable to those presented within the Hilson Moran Acoustic Design Report. The proposed minimum glazing sound reduction performances presented within Table 7.2 of the Hilson Moran Acoustic Design Report would allow suitable internal ambient noise levels to be achieved. On the northern façade, 2031 end state façade noise levels are approximately +4dB higher than those reported within the Hilson Moran Acoustic Design Report, however the proposed minimum glazing sound reduction performances within Table 7.2 of the Hilson Moran Acoustic Design Report would still allow suitable internal ambient noise levels to be achieved. On the western façade, end state 2031 predicted noise levels are approximately +9dB higher. The reason for this difference is that the end state 2031 model takes account of the noise contribution from the whole of the road transport network considered as part of the Development. The proposed minimum glazing sound reduction performance for the western façade such as provided by a 4/12/4 (4mm glazing/12mm space/4mm glazing) glazing configuration (27dB Rw+Ctr) should still however allow suitable internal ambient noise levels to be achieved.
- 9.7.17 On this basis, provided that the mitigation measures detailed within Hilson Moran's Acoustic Design report (**Appendix 9.2**) are implemented, the acoustic design of the building will achieve appropriate standards so as to ensure an acceptable living environment is achieved within all residential apartments at Plot 113.

Hotel Amenity (Plot 109)

- 9.7.18 The detailed acoustic design of the hotel façade has not yet been finalised. The required internal ambient noise level criteria of the hotelier may however be more onerous than that required by BS8233. The predicted future noise levels at Plot 109 indicates that mitigation in the form of a suitable glazing and ventilation strategy is likely to be required. The Acoustic Design report for this element of Phase 1B (North) RMA, when available, will detail the exact requirements to provide suitable hotel amenity.

Open Spaces

- 9.7.19 The potential noise impact on the open space proposed as part of Phase 1B (North), namely the Western and Eastern Riverside Parks and Nature Park 4, remain unchanged from those reported within the s73 ES and other EIA Documentation. This is because they are based on the end state 2031 scenario which itself is unchanged by the Phase 1B (North) RMA.

Fixed Plant & Building Services Noise

- 9.7.20 The potential impact from fixed plant and building services remains unchanged to that reported in the s73 ES and other EIA Documentation on the assumption they will be designed to achieve the requirements of Condition 29.5 of the 2014 Permission. Compliance with the required LBB noise criteria for the Phase 1B (North) RMA will be demonstrated through subsequent Planning Noise Assessment reports and / or Acoustic Design reports. Although the Phase 1B (North) RMA includes detailed design, the specifics for all plant items are not known at this stage, however they are intended to be brought forward to the specification outlined above.

Combined Heat & Power (CHP)

- 9.7.21 The CHP Energy Centre located within Plot 101 of Phase 1B (North), based on the technical data sheet for a E770 250NOx L33 Natural Gas CHP Unit, would give rise to a noise level of 65dB(A) at 1 metre from the plant based on the 'low noise version'. It should be possible therefore to comply with Condition 29.5 attached to the 2014 Permission given the nearest existing sensitive receptors on Brent Park Road are located approximately 140 metres to the north-west, with Holiday Inn approximately 115 metres to the south-south-east. This is also considered to be the case for future sensitive receptors located at Plot 113 approximately 200 metres to the north east and the hotel at Plot 109 approximately 50 metres to the north of the energy centre.
- 9.7.22 Provided all CHPs which form part of the Development satisfy Condition 29.5 of the 2014 Permission, the potential noise impact of the s73 and other EIA Documentation remains valid.

Noise from Proposed Future Uses

- 9.7.23 The potential impact from proposed future uses such as bars, cafes and restaurants, remains unchanged from that reported in the s73 ES and other EIA Documentation. The assumption is that standard controls, which could be secured through planning conditions relating to opening hours and use of outside space, would minimise the potential noise effects on sensitive receptors.

Mitigation

Road Traffic Noise

- 9.7.24 Phase 1B (North) would not give rise to a significant change in the forecast end state 2031 traffic volume, composition and speed, being broadly in line with the consented quantum of Development, aside from the slight increase in retail floorspace indicated above and assessed as being insignificant. The results of the s73 ES and other EIA Documentation therefore remain valid. For clarity, given the predicted impacts from changes in road traffic noise levels range predominantly from negligible to minor adverse, no mitigation is proposed. There are therefore no further mitigation measures identified as being necessary from those set out in the s73 ES or other EIA Documentation.

Road Traffic Vibration

- 9.7.25 Vibration resultant from road traffic vehicles is predicted to be negligible due to stand-off distances between source and receptors. Mitigation is therefore not proposed. This remains unchanged by the Phase 1B (North) RMA.

Residential Amenity Plot 113

- 9.7.26 With regard to Plot 113, required mitigation and design standards is as detailed within Hilson Moran Acoustic Design Report (**Appendix 9.2**) and summarised in the section above. This will ensure an appropriate level of amenity is provided at this location.

Hotel Amenity Plot 109

- 9.7.27 At this stage in the design, specific detail on required mitigation has yet be determined. This will be developed by the Acoustic Design Consultants Hilson Moran to ensure an appropriate level of hotel amenity is achieved.

Open Spaces

- 9.7.28 Given the potential noise impact on the open space remains unchanged the mitigation is as reported within s73 ES and other EIA Documentation.

Fixed Plant & Building Services Noise

- 9.7.29 Provided noise from fixed external plant and building services associated with Phase 1B (North) satisfy Condition 29.5 of the 2014 Permission, existing and future residential amenity would be adequately safeguarded.
- 9.7.30 Plant associated with the commercial development at Plot 102 of Phase 1B (North) is the subject of an Acoustic Planning Report by Hilson Moran (refer to **Appendix 9.3**). The nearest sensitive receptor is the Holiday Inn and housing located south of the A406. The above report demonstrates compliance with Condition 29.5 of the 2014 Permission without the need for additional noise mitigation.
- 9.7.31 Generic mitigation for building services and fixed plant associated with Phase 1B (North) remains unchanged to that reported in the s73 ES and other EIA Documentation.

Combined Heat & Power (CHP)

- 9.7.32 The mitigation is unchanged from that reported in the s73 ES and other EIA Documentation, in that CHP design will ensure that noise emissions from plant and buildings is no higher than 5dB below existing background (L_{A90}) noise levels at the nearest noise-sensitive buildings (in line with existing Planning Condition 29.5).

Noise from Proposed Future Uses

- 9.7.33 The mitigation is unchanged from that reported in the s73 ES and other EIA Documentation.

Residual Impacts

Road Traffic Noise

- 9.7.34 The residual impacts of the Development associated with road traffic noise remain consistent with those reported in the existing EIA Documentation (specifically the Phase 1A (North) FIR) i.e. from

negligible to minor adverse / beneficial with some **substantial beneficial** (due to screening afforded by Development buildings). This remains unchanged as a result of the detailed design for Phase 1B (North).

Road Traffic Vibration

- 9.7.35 Given vibration impacts from road traffic vehicles are predicted to be negligible, residual impacts are also **negligible**. This remains unchanged as a result of the detailed design for Phase 1B (North) and therefore accords with those reported in the s73 ES and other EIA Documentation (specifically the Phase 1A (North) FIR).

Residential Amenity Plot 113

- 9.7.36 Provided a suitable ventilation and glazing strategy is adopted together with strategic design layout, then appropriate residential amenity could be provided with **negligible** impacts on residents. This accords with those reported in the existing s73 ES and other EIA Documentation, albeit now in detail.

Hotel Amenity Plot 109

- 9.7.37 Provided a suitable ventilation and glazing strategy is adopted together with strategic design layout, then appropriate residential amenity could be provided with **negligible** impacts on residents. This accords with those reported in the s73 ES and other EIA Documentation, albeit now in detail.

Open Spaces

- 9.7.38 The residual impact in the open spaces remain unchanged from s73 ES and other EIA Documentation.

Fixed Plant & Building Services Noise

- 9.7.39 Provided noise emissions from plant and building services satisfy the noise criteria of LBB (as detailed in Planning Condition 29.5) **negligible** residual impacts are predicted. This remains unchanged from the s73 ES and other EIA Documentation.

Combined Heat & Power (CHP)

- 9.7.40 The residual impacts remain unchanged from the s73 ES and other EIA Documentation, i.e. **negligible**. This is on the assumption that intrinsic design measures of the CHP allow the noise criteria required by LBB (as detailed in Planning Condition 29.5 attached to the 2014 Permission) would be satisfied.

Noise from Proposed Future Uses

- 9.7.41 Through the use of appropriate façade design and noise control measures, residual impacts will be **negligible**. This remains unchanged from those reported in the s73 ES and other EIA Documentation.

Summary

- 9.7.42 A summary of the residual impacts associated with noise and vibration is included within **Chapter 22: Summary of Residuals Impacts and Mitigation**.

References

There are no references associated with this Chapter.