

CHAPTER 12: NOISE AND VIBRATION

12.1 INTRODUCTION

12.1.1 This chapter of the ES Addendum Statement has been produced by Hydrock to review and, where necessary, update the original assessment and findings of the Noise and Vibration assessment and the conclusions presented in the original Noise and Vibration ES chapter, and the associated addendum.

12.2 CONFIRMATION OF AND UPDATES TO BASELINE ENVIRONMENT

Legislation, Policy and Guidance Context

12.2.1 Since the original Noise and Vibration ES chapter was submitted there have been a number of updates to the legislation, policy and guidance context. There have also been updates to local planning policy including the adoption of the new Eastleigh Local Plan, as well as updates to industry guidance specific to Air Quality. These updates are summarised below.

National Planning Policy Framework (NPPF)

12.2.2 The NPPF has been revised most recently in December 2023. Regarding noise and vibration, the changes to the NPPF are considered to be negligible and the same principles apply. The changes essentially comprise an update to the paragraph numbers relevant to noise and vibration. For completeness the new paragraph references and wording is provided.

12.2.3 With regards to conserving and enhancing the natural environment, it states:

“180. Planning policies and decisions should contribute to and enhance the natural and local environment by:

[...]

- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.”*

12.2.4 It also makes the following references to noise in the Section entitled ‘Ground Conditions and Pollution’:

“191. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life ⁶⁹;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

⁶⁹ See Explanatory Note to the Noise Policy Statement for England (Department for Environment, Food & Rural Affairs, 2010).”

12.2.5 And:

“193. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.”

Building Regulations Approved Document O (ADO)

12.2.6 Approved Document O (ADO) was published in 15th December 2021 and came in to effect from 15th June 2022 and requires consideration for the Proposed Development. The requirements of ADO are summarised as follows:

1. *“Reasonable provision must be made in respect of a dwelling, institution or any other building containing one or more rooms for residential purposes, other than a room in a hotel (“residences”) to— (a) limit unwanted solar gains in summer; (b) provide an adequate means to remove heat from the indoor environment.*
2. *In meeting the obligations in paragraph (1)— (a) account must be taken of the safety of any occupant, and their reasonable enjoyment of the residence; and (b) mechanical cooling*

may only be used where insufficient heat is capable of being removed from the indoor environment without it.”

12.2.7 ADO requires rooms for residential purpose to limit unwanted solar gain and provide an adequate means to remove heat from the building, with the safety of the occupant and their reasonable enjoyment of the residence being taken into account, pursuant to requirement O1(2A) (Noise), which specifies internal night-time noise level requirements for bedrooms.

12.2.8 In determining the potential for exceedance of the ADO internal night-time noise level requirements, external noise levels can be compared to recommended external levels provided in ANC and IOA Guide to Demonstrating Compliance with the Noise Requirements of Approved Document O, 2022, which provides an approximate level difference between external and internal noise levels, based on the required open area of a window to purge heat and geographical context, which, for this development is 9dB. This assumes fully open windows.

12.2.9 The internal ADO level limits and the corresponding external levels according to the joint guidance document are summarised in **Table 12.1**.

Table 12.1 Required Internal Noise Levels and Corresponding External Level During Overheating Conditions

Description	Required Internal Level, dB(A)	Corresponding External Level, dB(A)
Average Night-time Noise Level, $L_{Aeq,T}$	40	49
Night-time Maximum Level, L_{AFmax}	55	64

12.2.10 While building regulations are regulated outside of the planning domain, consideration is required when arriving a suitable glazing and ventilation scheme with respect to noise ingress during overheating conditions. Glazing and ventilation strategies are typically confirmed during spatial co-ordination (RIBA Stage 3), for which details will be submitted as part of a detailed planning application.

Eastleigh Local Plan

12.2.11 Within the original Noise and Vibration ES chapter, the previous Eastleigh Local Plan (2001-2011) was referenced, and relevant policies within the (at the time) emerging Local Plan were

also reviewed. The Eastleigh Local Plan 2016-2036¹ was adopted in April 2022 and represents an evolution of the previous Local Plan. The previous assessment was undertaken in light of the emerging plan and therefore its adoption does not result in any fundamental changes. However, for completeness, relevant policies in relation to air quality include Policy DM8, Pollution, which states:

“Development will not be permitted if it is likely to cause loss of amenity or impact on public health or other unacceptable environmental impacts through:

...

c) noise or vibration...”

12.2.12 Finally, the Wider OPA Site is referenced within the adopted Local Plan as site HH1.

Baseline Noise Environment

12.2.13 The baseline noise environment at and in the vicinity of the Wider OPA Site comprises the following sources:

- Road traffic noise from Allington Lane, Burnetts Lane, B3354 and B3342 and the remainder of the local road network;
- Rail noise from movements on the London to Portsmouth via Basingstoke rail line to the south west of the Site;
- Industrial Noise from Chalcroft Business Park to the south west of the Site, together with Owtons Butchers within the Site boundary;
- Other: Bird song, wildlife and distant aircraft.

Transportation Sources

12.2.14 As described within ESA Chapter 8 Traffic and Transport, the overall baseline position as set out in the ES Chapter remains fundamentally unchanged and so no further updates are required with regards to transportation noise sources.

¹ <https://www.eastleigh.gov.uk/media/11806/to-be-published-final-local-plan-april-2022-v4.pdf>

Industrial Sources

12.2.15 Industrial noise from Chalcroft Business Park, to the south west of the Wider OPA Site, forms part of the baseline noise environment at, and in the vicinity of, the Wider OPA Site. A review of existing businesses at Chalcroft Business Park was undertaken as part of the original ES in to corresponding Appendix 12.1.

12.2.16 An up-to-date review of existing businesses has been undertaken and provided by Eastleigh Borough Council, as provided in Appendix 12.1 of this ESA. It's understood the permitted uses at Chalcroft Business Park have not changed within the planning or licensing domain, and the occupiers identified indicate no significant changes since the writing of the ES.

12.2.17 Deliveries to businesses at Chalcroft Business Park are predominantly made during the daytime, with only occasional night-time movements that are not unloaded until the following day, as considered in the ES Chapter.

12.2.18 Therefore, with regards to industrial noise sources, the baseline position as set out in the ES Chapter remains fundamentally unchanged and so no updates are required.

Other Sources

12.2.19 The baseline position as set out in the ES Chapter remains fundamentally unchanged and so no updates are required.

Existing Sensitive Receptors

12.2.20 Existing sensitive receptors in the vicinity of the site include:

- Residential Receptors; and,
- Ecological Receptors

Residential Receptors

12.2.21 Existing Residential Receptors considered in the ES Chapter remains fundamentally unchanged, therefore no updates are required.

Ecological Receptors

12.2.22 The only notable change with regards to Ecological Receptors is the demolition of all buildings at Chalcroft Farm which previously supported bats, barn owl and swallow, with the exception of Pond Cottage.

12.2.23 Pond Cottage has been refurbished as a bat hotel deluxe as part of an EPS licence, including a no build buffer zone around the building. Previously it was a maternity roost.

12.2.24 Construction works have been taking place for some time now with no reported concerns from the EA or others in relation to disturbance of fish. It's also understood that fish rescue has been carried out at the Quobleigh crossing by the construction contractor.

12.2.25 No evidence of otter/water vole has been recorded.

12.2.26 No notable change with respect to birds, noting that tree protection / barrier protection is in place where needed helping to maintain a minimum buffer zone.

12.2.27 In summary, Existing Ecological Receptors considered in the ES Chapter remains fundamentally unchanged, therefore no updates are required.

12.3 REVIEW OF PREVIOUS ASSESSMENTS AND CONCLUSIONS

12.3.1 The following assessments have been undertaken previously:

- Original Noise and Vibration ES Chapter, December 2020;
- Sports Pitch Noise Impact Assessment, April 2021
- Response to Pollution Control Comments, May 2021;
- ES Addendum, May 2021
- ES Addendum, October 2021
- Response to Pollution Control Comments, October 2021;
- Phase 3 Link Road, Noise Impact Appraisal, September 2022;

Construction Phase Assessment

Noise at Existing Residential Receptors

12.3.2 With the implementation of best working practices, mitigation measures and observation of noise limits outlined in the ES Chapter, noise associated with the construction phase is likely result in **neutral** effects, however there is potential for short-term **moderate** effects when construction takes place in the immediate vicinity of sensitive receptors.

Vibration at Existing Residential Receptors

12.3.3 With implementation of best working practices and mitigation measures and observation of vibration limits outlined in the ES Chapter, vibration associated with the construction Phase is likely result in **neutral** effects, however there is potential for short-term **moderate** effects when construction takes place in the immediate vicinity of sensitive receptors.

12.3.4 Should the requirement for piling be removed altogether, vibration associated with the construction phase is likely result in **neutral** effects.

Noise and Vibration at Ecological Receptors

12.3.5 With the implementation of best working practices, mitigation measures and observation of noise and vibration limits outlined in the ES Chapter, noise and vibration associated with the construction phase is likely result in **neutral** effects, however there is potential for short-term **moderate** effects when construction takes place in the immediate vicinity of SEAs.

12.3.6 Should the requirement for piling be removed altogether, or alternatively construction take place outside of sensitive migratory periods for local bird and fish species, noise vibration associated with construction of the Wider OPA Site is likely result in **neutral** effects.

Operational Phase Assessment

Development Generated Road Traffic at Existing Sensitive Receptors

12.3.7 With regards to trip generation associated with the Proposed Development, the Traffic and Transport ESA Chapter 8 states:

"The Proposed Development has not materially changed since the production of the ES Chapter in 2020 therefore the overall trip generation as set out in the ES Chapter and accompanying Transport Assessment will also not have changed."

12.3.8 Furthermore, Table 8.2 of the ESA Chapter 8 indicates that the previously agreed trip rates associated with the ES Chapter are higher than the most recent assessment undertaken, which demonstrates that the predicted vehicle movements associated with the ES Chapter provide a robust representation of potential impacts, with regards to noise.

12.3.9 The assessment of development generated road traffic indicates that associated noise effects will be between **moderate** and **neutral**.

Noise Levels at Proposed Residential Dwellings

12.3.10 With the inclusion of recommended mitigation measures outlined in the ES Chapter, residual effects at proposed residential dwellings will be **neutral** to **moderate**.

Noise Associated with Chalcroft Business Park

12.3.11 With the inclusion of the recommended 2m high noise barrier outlined in the ES Chapter, residual effects associated with noise from Chalcroft Business Park will be **moderate**, at the closest sensitive areas of the Wider OPA Site, during the daytime.

12.3.12 Night-time noise effects associated with Chalcroft Business Park are **neutral**.

Noise from Proposed Ancillary Equipment

12.3.13 Providing noise is controlled to the recommended noise limits included in the ES Chapter noise from proposed ancillary equipment will have a **neutral** effect the Site and any existing receptors.

Noise from Proposed Sports Pitch

12.3.14 As demonstrated in the Technical Note, noise impacts associated with the proposed sports pitch will be low and have a **neutral** effect at any existing and proposed receptors with the inclusion of relatively standard mitigation measures for dwellings located within close proximity.

12.4 ASSESSMENT SUMMARY

12.4.1 The likely significant environmental effects associated with the construction and operational phases of the Proposed Development remain the same as those considered within the ES Chapter. Therefore, no additional assessment is required.

Assessment of Cumulative Effects

12.4.2 The likely significant cumulative environmental noise and vibration effects remain the same as those for the considered in the ES Chapter.

Mitigation of Effects

12.4.3 The mitigation identified in the ES Chapter remains valid for the Proposed Development.

Residual Effects

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12.4.4 The residual effects identified in the ES Chapter remain valid.

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Table 12.2: Noise and Vibration Assessment Summary

Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects – OPA Phase 1							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Construction Effects – The Wider OPA							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise at nearby bird habitats	Medium	Bird response to construction noise	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise and vibration at fish habitats	Medium	Fish response to construction noise and vibration	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Operation Effects – OPA Phase 1							

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Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Negligible	Neutral	n/a	Negligible	Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Negligible	Neutral	2m high garden wall/fencing	Negligible	Neutral
Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Negligible	Neutral	n/a	Negligible	Neutral
Operation Effects – Wider OPA							
Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Low - Negligible	Moderate - Neutral	n/a	Low - Negligible	Moderate - Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Medium - Negligible	Major - Neutral	2m high garden wall/fencing in combination with 15m standoff. Alternative location of gardens on screened side of dwellings	Negligible	Neutral
Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral

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Noise at proposed school	Medium	Noise present in teaching areas	Negligible	Neutral	n/a	Negligible	Neutral
Noise at proposed school	Low	Noise present in offices and meeting rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Medium - Negligible	Major - Neutral	2m high close boarded fencing	Low	Moderate
Cumulative Effects							
Effect	Description				Mitigation		Significance
Change in road traffic noise 2020 to 2023	Change in road traffic noise levels as a result of the OPA Phase 1 development, in combination with committed developments and general increase in baseline environment over time.				n/a		Negligible
Change in road traffic noise 2020 to 2030	Change in road traffic noise levels as a result of the Wider OPA development, in combination with committed developments and general increase in baseline environment over time.				n/a		Low
Impact of Climate Change							
Effect	Description				Mitigation		Significance
n/a							

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Table 12.3: Mitigation Implementation

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Construction Environmental Managements Plan	Contractor	Planning condition	CEMP submitted and approved by LPA	Construction Phase
Acoustic screening	Contractor	Planning condition	Mitigation scheme submitted and approved by LPA	Prior to start of works
Glazing and ventilation scheme	Contractor	Planning condition	Strategy be submitted and approved by LPA	Prior to start of works