

11.0 NOISE AND VIBRATION

Introduction

- 11.1 This chapter of the ES assesses the likely significant effects of the Development on the environment in respect of noise and vibration. In particular, it considers the potential impact of construction related noise and any additional traffic noise generated on the local highway network as a result of the operation of the completed Development.
- 11.2 A review of the construction phase of the Development has determined that there will be no effects on sensitive receptors with regards to ground vibration. This is because the construction of the new buildings is unlikely to require piled foundations. It is also considered that the operation of the Development will not give rise to any significant vibration effects. Therefore, vibration is not considered further within this chapter.
- 11.3 A baseline noise survey was undertaken as part of the assessment and is detailed in Appendix 11.1: baseline noise monitoring.
- 11.4 Assessment of the impact of existing noise sources in the area (i.e. road traffic noise) on the Development itself has been considered separately and is included in the Noise Impact Assessment report which is provided in Appendix 11.2.

Policy Context

National Planning Policy Frameworkⁱ

- 11.5 Published in 2021, the National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. Reference to noise is made in in Section 16: Conserving and enhancing the natural environment, paragraph 174 of the NPPF, which states that:

"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 basing management plans."

11.6 Noise is also referred to in paragraph 185 of the NPPF which states that:

'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 life⁶⁰

; 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; and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Footnote 60 See Explanatory Note to the Noise Policy Statement for England (Department for Environment, Food & Rural Affairs, 2010)'

11.7 Paragraph 187 of the NPPF provides additional policy information applicable where new development is proposed close to existing commercial noise sources and is reproduced below.

"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."

Noise Policy Statement for Englandⁱⁱ

11.8 The Noise Policy Statement for England (NPSE) March 2010, which is referred to in the NPPF, includes the three following aims:

11.9 The first aim of the NPSE

"Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development."

11.10 The second aim of the NPSE

"Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development."

11.11 The third aim of the NPSE

"Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development."

11.12 The NPSE introduces the terms "significant adverse" and "adverse" impacts used in these aims are discussed in the NPSE as follows:

NOEL: No Observed Effect Level

"This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise."

LOAEL: Lowest Observed 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."

11.13 It should be understood that there is no single objective noise-based measure that defines these terms (NOEL, LOAEL and SOAEL), as the effects of noise are likely to be different for different noise sources, different receptors and at different times etc. Suitable values are adopted depending on the different circumstances affecting each site.

Planning Practice Guidanceⁱⁱⁱ

11.14 The Planning Practice Guidance - Noise (PPGN) March 2014, which refers to the NPPF and NPSE is a web-based resource with noise guidance most recently updated in July 2019. The section on noise provides a table describing and indicating example outcomes from the levels introduced in the NPSE.

11.15 However, NPPF, NPSE and PPGN do not provide any basis for technical or numerical assessment of potential noise impact. All of these guidance documents accept there is no simple relationship between measured/calculated noise levels and noise impact.

Local Planning Policy

Rochdale Core Strategy^{iv}

- 11.16 The relevant policy which refers to noise in the Rochdale: Core Strategy (adopted October 2016) is Policy G9: Reducing the impact of pollution, contamination and land instability. The policy states:

*"We will reduce all forms of pollution, contamination and land instability in the borough, by:
b. Requiring that development does not have impacts that lead to an unacceptable increase in air, water, noise, light or other pollution;"*

Legislation

- 11.17 Additional statutory powers to control noise exist outside of the planning system, and the granting of planning permission does not remove the need to comply with these controls. The major legislative instruments are:

- Part III of the Environmental Protection Act 1990^v, as amended by the Noise and Statutory Nuisance Act 1993, which requires local authorities to serve notices where noise emitted from premises constitutes a statutory nuisance.
- Part III of the Control of Pollution Act 1974^{vi} which gives local authorities certain powers to control noise from construction sites.

- 11.18 It is usual for the implementation of this legislation to be applied under delegated powers to the Environmental Health Department of the relevant local authority, in this instance RBC.
- British Standards and Other National Guidance

- 11.19 The following documents have been used for the purposes of the assessment:

- BS5228-1:2009+A1:2014 – 'Code of Practice for Noise and Vibration Control on Construction and Open Sites - Part 1'^{vii}. This document (which is referred to hereafter in this chapter as BS5228-1) contains useful guidance on the measurement, prediction, and control of construction noise. In particular it describes practical measures to minimise the impact of construction noise which have been taken fully into account in this chapter;
- Department of Transport Memorandum 'Calculation of Road Traffic Noise' (1988)^{viii}. This document describes a formal procedure for calculating traffic noise for proposed new or altered highways. The procedure takes into account a number of factors including the volume of traffic, the speed of traffic, and the composition of the traffic flow. For environmental assessment purposes it is also used as a basis for undertaking comparative

traffic noise calculations for existing roads i.e. to compare the 'with development' and 'without development' scenarios; The comparative road traffic noise assessment is detailed in the appropriate operational phase section of this chapter;

- Highways England 'Design Manual for Roads and Bridges' (2020)^{ix}. This document sets out the requirements for assessing and reporting the effects of highways noise and vibration from construction, operation and maintenance projects. For environmental assessment purposes it also provides a basis for the determination of the significance of the effect depend upon both the magnitude of change of road traffic noise levels as predicted using the methodology with CRTN;
- Institute of Environmental Management & Assessment (IEMA) 'Guidelines for environmental noise impact assessment' (2014)^x. This document represents the most relevant 'best practice' guidance for undertaking noise studies for EIA purposes. It includes examples of tables of scales of significance of noise change, but these are only examples, and it is stated that it is necessary for the individual assessor to define appropriate scales of significance for the particular type of noise/development being evaluated; and
- BS7445:1991- 'Description and measurement of environmental noise'^{xi}. The standard provides guidelines for undertaking environmental noise measurements and interpreting and applying the results.

Assessment Methodology

Consultation

- 11.20 Hepworth Acoustics provided input to the scope of the noise assessment that was set out in a formal EIA Scoping Request to RBC (Appendix 2.1). A formal response was provided by RBC (Appendix 2.2) on 15th February 2023 which stated "*the Council has no further comments*" in respect of noise and vibration as set out in the Scoping Report. However, RBC did request that the ES should assess the cumulative effects of other developments.
- 11.21 Further to providing input into the formal EIA Scoping Report, Hepworth Acoustics also contacted the Environmental Protection department of RBC setting out the proposed scope of work for the noise assessment, however at this stage no response has been received.

Significance Criteria

- 11.22 The following terms have been used to define the significance of the effects identified.

- Major effect: where the Development would result in a major/substantial noise or vibration impact (either positive or negative) compared to the pre-development baseline;
- Moderate effect: where the Development would result in a noticeable noise or vibration effect which constitutes a material change (either positive or negative) compared to the pre-development baseline;
- Minor effect: where the Development would result in a small, barely noticeable effect (either positive or negative) compared to the pre-development baseline; and
- Negligible effect: where the Development would result in a barely noticeable noise or vibration effect, approximating to a 'no change' situation.
- None: No noise or vibration effect.

11.23 The significance of the effect on existing receptors is generally assessed by determining the relative sensitivity of existing receptors and then determining the magnitude of the noise impact on those receptors.

11.24 In this noise assessment, the majority of the receptors surrounding the Site to the north and south are residential and so are categorised as high sensitivity. There are also other receptors such as the St John Thornham Church and St John CE Primary School to the south of the Site which would be categorised as moderate sensitivity.

11.25 For the purposes of this assessment major and moderate effects are considered to be significant, whilst minor and negligible effects are considered insignificant. The aim is to avoid, reduce or offset any significant effects that have been identified to the point where they would be considered insignificant.

11.26 To establish the significance of effect for each type of potential noise impact, it is necessary to adopt suitable values from guidance or standards with the categories set out in the sections below.

Construction Phase

11.27 The methodology for assessing noise impacts of the temporary construction phase of the Development has by necessity been qualitative rather than quantitative. This is because at this stage (i.e. planning application stage) the Construction Contractor and Sub-Contractors have not been appointed and there is no detailed information available regarding the type of construction plant to be deployed, the construction operations, programme, etc. The assessment has therefore focussed on the need to mitigate likely significant effects of

construction noise as far as is reasonably practicable by implementing appropriate measures in accordance with the 'best practice' guidance that is set out in BS 5228-1.

- 11.28 Potential noise impacts for the temporary construction phase of the Development can be assessed using the 'ABC Threshold' method described in E.3.2 of BS5228-1. The relevant noise threshold for impact is determined by the measured baseline noise level, subject to a minimum threshold value of 65 dB $L_{Aeq,T}$ for daytime construction works. Where it is possible to quantify likely levels of construction noise, the predicted noise levels (including baseline noise) can be compared to the relevant threshold values and the difference used to ascertain the likely magnitude of noise impact. The standard does not include a scale of significance table but based on the ABC threshold approach a scale of significance of temporary construction noise impacts has been devised and is set out in Table 11.1.

Table 11.1 Significance Scale for Potential temporary construction noise impacts

Noise Level compared to threshold value (dBA)	Significance of Effect
< 3	Negligible
3 – 5	Minor Adverse
5 – 10	Moderate Adverse
> 10	Major Adverse

- 11.29 Although in this case there is insufficient information available at this stage to carry out a quantitative assessment, in the section on likely significant effects during construction phase detailed later in this chapter reference is made to the significance criteria described above. For the purposes of this construction noise assessment major and moderate effects are considered to be significant, whilst minor and negligible effects are considered insignificant.

Completed Development – Operational Phase Road Traffic

- 11.30 Changes in traffic noise resulting from changes in traffic flow on existing roads can be predicted on the basis of the calculation procedure set out in the Department of Transport document 'Calculation of Road Traffic Noise', 1988 (CRTN). In this chapter, potential long term traffic noise impacts resulting from operation of the completed Development have been assessed using a comparative approach. This involves investigating the change in calculated traffic noise levels for the 'without development' and 'with development' scenarios, based upon the anticipated future traffic flows.
- 11.31 Traffic flow data has been provided by SCP Transport in the form of 18-hour average annual weekday traffic (AAWT) 2-way flows. The traffic flow data relates to the baseline situation in 2022 and the 2033 fully completed, and fully occupied, Development i.e. worst case traffic

generation conditions. The traffic flow data in 2033 for the fully completed Development also includes any committed development in the area.

- 11.32 Comparative traffic noise calculations have been based upon the relevant procedures in the document 'Calculation of Road Traffic Noise' (CRTN). The calculations relate to any noise-sensitive receptors on or near a sample of roads in the area which include some traffic from the Development.
- 11.33 Potential traffic noise changes have been assessed for existing dwellings on (or near) the roads nearest to the Site, namely the A627(M) and M62 Motorway, and for a sample of other roads in the wider area. The traffic noise calculations have been based upon traffic flow data provided by transportation consultants SCP for the anticipated completion year of the Development at 2033.
- 11.34 There are no legally defined methodologies or criteria to employ when determining the magnitude of the noise impact resulting from the operation of a proposed residential development on the external environment i.e. potential gradual changes in traffic noise on existing roads. Noise from traffic on new road schemes can be assessed using the Design Manual for Roads and Bridges (DMRB) where road traffic noise levels are predicted using the methodology with CRTN.
- 11.35 The principles of this approach can also be applied to the assessment of noise from road traffic in general, to assess the magnitude of impact that would result from increased road traffic noise levels at existing receptors resulting from development generated traffic.
- 11.36 Consideration has been given to how effect magnitude will either be influenced by a noise level change occurring in the short term (e.g. as a result of a sudden opening of a scheme), or in the long term (e.g. gradually over time, such as that associated with natural traffic growth).
- 11.37 The DMRB confirms that the above scales apply to the magnitude of change (not the significance of effect). The significance of effect will depend upon both the magnitude of change and the sensitivity of the receiving environment.
- 11.38 Therefore, based on the scales defined in the DMRB document and the example tables of impacts within the IEMA document. A scale of significance of traffic noise impacts has therefore been developed for the operation of the Development, which is based upon the IEMA guidelines, and is set out in Table 11.2.

Table 11.2 Significance Scale for Potential Changes in Traffic Noise

Noise Level compared to threshold value (dBA)	Subjective Response	Significance of Effect
0 – 0.9	No change to barely perceptible increase	Negligible
1.0 – 2.9	Low but perceptible increase	Minor Adverse
3.0 – 4.9	Noticeable increase	Moderate Adverse
5.0 – 9.9		Major Adverse

- 11.39 In the section on likely significant effects during operational phase (i.e. from additional traffic noise) later in this chapter general reference is made to the significance criteria described above. For the purposes of this operational noise assessment major and moderate effects are considered to be significant, whilst minor and negligible effects are considered insignificant.

Study Area

- 11.40 In terms of assessing construction noise impact the study area has been taken to be existing noise sensitive properties in the immediate area of the Site i.e. existing residential properties near to the boundaries of the Site including those on Thornham New Road and Chatburn Avenue. There are also other sensitive uses to the south i.e. St John Thornham Church and St John CE Primary School. The location of the Site and the position of the church and school are indicated in Figure 11.1 which is included as part of Appendix 11.1.
- 11.41 In terms of assessment of additional traffic noise generated on existing roads by the operation of the Development, the study area includes existing noise sensitive receptors on the roads nearest to the proposed Site access points i.e. those along Manchester Road, Thornham New Road and Thornburn Lane. However, for dwellings on roads away from the Site, traffic noise impacts tend to be less than those nearer to the Site because the traffic generated by the Development is more dispersed and thus the potential increase in traffic noise is lower.

Surveys

- 11.42 A baseline noise monitoring survey was carried out at a number of locations on and around the Site from 17th to 18th August 2022. Automated noise measurements were carried out at Location 1 (indicated in Figure 11.1 which is part of Appendix 11.1) in consecutive 5-minute periods between approximately 10:40 hours on Wednesday 17th and 11:00 hours on Thursday 18 August 2022. The automated noise measurements were supplemented with attended noise measurements which were carried out in the daytime on Wednesday 17th.
- 11.43 The noise levels were measured at a height of 1.4 metres above the ground in free-field conditions. Fully calibrated instrumentation was used, and a windshield was fitted to the

microphone during all noise measurements. On-site calibration checks were carried out before and after the noise surveys with no significant variance in levels observed.

11.44 The noise survey locations are indicated in Figure 11.1 which is part of Appendix 11.1 and are described below:

- 5m from Thornham New Road;
- To rear of dwellings on Chatburn Avenue; and
- 5m from Thornham Lane.

11.45 Full details of the noise survey dates, times, instrumentation, weather conditions and results are set out in Appendix 11.1.

Limitations and Assumptions

11.46 As with any process of measurement and assessment there are always uncertainties which can affect the results.

11.47 As set out in the introduction as the construction methods are unlikely to require piled foundations there will be no effects on sensitive receptors with regards to ground vibration. Therefore, vibration has not considered in this chapter.

11.48 The assessment of construction noise has by necessity been qualitative rather than quantitative. This is because at this stage there is no detailed information available regarding the type of construction plant to be deployed, the construction operations, programme, etc. The assessment has therefore focussed on the need to mitigate likely significant effects of construction noise as far as is reasonably practicable by implementing appropriate measures in accordance with the 'best practice' guidance that is set out in BS 5228-1.

11.49 The noise climate in the area is generally steady which reduces the potential uncertainty that extraneous noise can introduce. The noise climate may vary according to time of year and meteorological conditions on different days, however all reasonable steps were taken to ensure that all noise measurements were robust, representative and reliable. All of the instrumentation used in the assessment was fully laboratory calibrated (traceable) and, in addition, field calibration checks of the instrumentation were undertaken before and after the surveys.

Baseline Conditions

- 11.50 The results of the baseline noise monitoring survey are detailed in Appendix 11.1 and are summarised in Table 11.3 below.

Table 11.3: Summary of Baseline Noise Levels at Locations 1-3 (dB L_{Aeq,T})

Location	Measured Daytime Noise Levels
1. 5m from Thornham New Road	52 – 61
2. To rear of dwellings on Chatburn Avenue	59 – 61
3. 5m from Thornham Lane	51 – 55

- 11.51 The results in Table 11.3 demonstrate that existing dwellings adjacent, or near, to the noise survey locations, are exposed to daytime ambient noise levels that are low to modest and which are below 65 dB L_{Aeq,T}.
- 11.52 Therefore, in terms of control of impact of construction noise using the ABC threshold approach of BS 5228-1, the lowest threshold value of 65 dB L_{Aeq,T} for daytime construction works would apply (i.e. Category A).

Future Baseline

- 11.53 Based on the future traffic flow data provided by SCP, the predicted future baseline noise levels without the Development taking place would increase slightly by approximately 1 to 2 dB as the volume of vehicles on the local road network increase.

Likely Significant Effects

Construction Phase

- 11.54 The potential noise impacts resulting from the construction phase of the Development are described in this section.
- 11.55 The Site is comprised of fields and there are no buildings or other surface structures on the Site. Thus, there will be no requirements for demolition works or major earthworks on the main area of the Development.
- 11.56 There will be some localised excavations and road works associated with construction of the new entrances to the Site. However, the majority of the construction programme will be taken up by construction of the new houses and associated on-site roadways, services, etc, on the Site. The construction of the Development will be phased over a number of years (Refer to

ES Chapter 5: Construction Methodology and Phasing) which means that building works will not occur at the same time over the whole Site. The Site layout plans (refer to Figures 3.1-3.3 shows that the majority of the houses will be constructed well away from existing dwellings in the area, however there will be periods when there will be noise from construction of those new houses that are proposed near to existing individual dwellings.

- 11.57 Construction of houses does not usually generate significant levels of noise. The 'worst case' period is usually the initial ground preparation/foundation works because this is when some heavy plant and machinery is required (e.g. tracked excavator, backhoe, concrete mixer truck, dumpers, etc.) with less machinery deployed, and thus lower noise levels generated, thereafter.
- 11.58 It is understood that foundations are likely to be constructed by traditional strip footings, with some trench-fill or raft foundations, and therefore no piled foundations are envisaged as being necessary at this stage. Thus, none of the likely construction activities will involve unduly noisy construction methods. Also, no requirement for out of hours working (e.g. at night or on Sundays) is anticipated.
- 11.59 Construction activities are temporary, and the level of noise generated at any one location will vary considerably throughout the duration of the works. Depending on the proximity of construction works to noise sensitive residential properties, construction noise has the potential to give rise to short-term noise impacts, unless appropriate, best practice, noise mitigation measures are implemented.
- 11.60 The results of the baseline noise survey have identified that in terms of the ABC threshold approach of BS5228-1, the lowest threshold value of 65 dB $L_{Aeq,T}$ for daytime construction works applies to this Development.
- 11.61 Therefore, based upon previous experience of other similar sized projects, it is anticipated that, without the implementation of appropriate 'best practice' noise mitigation measures, construction noise may give rise to short-term noise effects of minor to moderate adverse significance during periods where the noisiest activity is taking place at the closest points to existing noise-sensitive properties or newly built properties.
- 11.62 Based on information detailed in Chapter 5, construction vehicle movements will be managed via a Construction Traffic Management Plan, which will be secured through a suitably worded planning condition and agreed with RBC. This would include mitigation measures to minimise noise impact, as discussed later in this chapter. The anticipated number of vehicles generated by the construction activities are low, comprising 34 two-way HGV trips per day. Traffic will

access the Site via Rochdale Road, a very busy well trafficked road, and the construction traffic is a fraction (i.e. less than 1% change) of the existing vehicle movements on the road. Therefore, during the construction phase of the Development the effect of noise from vehicle movements is considered to be negligible.

Operational Phase

11.63 The potential impacts on occupiers of dwellings of any additional traffic noise as a result of the Development have been assessed on a comparative basis. Noise impacts have been evaluated for dwellings on a sample of roads nearest to the Site and some roads in the wider area.

11.64 Noise increase calculations have been calculated initially comparing the 2033 traffic figures for the fully built out Development with the 2022 baseline figures. The calculated noise increases in dB $L_{A10,18hrs}$ for the Development are shown in Table 11.4.

Table 11.4 Noise Impact of Traffic Generated by the Development

Location	2022 Baseline Traffic Flow	2033 Baseline Traffic & Development Traffic	Calculated Increase in Traffic Noise dB $L_{A10,18hrs}$	Significance
A627(M)	53602 (2978 HGV)	58934 (3252 HGV)	1.1	Minor Adverse
Thornham New Road	853 (18 HGV)	1565 (21 HGV)	1.8	Minor Adverse
A664 Manchester Road (North Access)	221 (0 HGV)	241 (0 HGV)	1.1	Minor Adverse
A664 Manchester Road (South Access)	17296 (668 HGV)	23435 (757 HGV)	1.4	Minor Adverse
Thornham Lane	725 (11 HGV)	791 (13 HGV)	1.1	Minor Adverse

11.65 The calculated increases in traffic noise in Table 11.4 is 1.0 to 1.8 dB(A). Therefore, from the assessment criteria in Table 11.2, the significance of effects in terms of traffic generated by Development will be permanent and of minor adverse significance.

Mitigation Measures

11.66 This section describes the measures which are recommended to mitigate any significant environmental impacts.

Construction Phase

- 11.67 Construction noise may be controlled by implementation of appropriate best practice noise mitigating measures. There is general guidance on the control of environmental noise impact of construction works in BS5288-1 and adoption of this guidance is recommended below.
- 11.68 The main method of controlling and reducing noise from construction activities is the adoption of Best Practical Means (BPM) as defined in the Control of Pollution Act 1974 (CoPA). Under Section 60 of CoPA, local authorities have powers to control activities at construction sites e.g. limiting hours of operation and the use of various items of plant.
- 11.69 In addition, Section 61 of the CoPA enables developers to agree construction protocols with a local authority prior to works commencing. These powers present the best method for minimising any noise effects that may arise during the construction phase of the Development.
- 11.70 It is recommended that the following measures, which are in accordance with the guidance in BS 5288-1, are implemented to mitigate construction noise:
- Construction site working hours would be limited to the daytime only e.g., 07:00-19:00 on Mondays to Fridays and 08:00-13:00 on Saturdays, with no working on Sundays and Bank Holidays.
 - Deliveries of building materials would only be made to the Site during the daytime hours specified above.
 - Vehicle routes on-site would be designed (e.g., with one way systems) so as to minimise use of reversing sirens of vehicles.
 - No percussive piling would be undertaken on the Site without the prior consent of RBC.
 - Any spoil that is generated from the Development would be re-used on-site as far as is practicable.
 - All excavators, loaders, dumpers, etc, used on the Site would comply with the latest European Communities (EC) noise certification limits.
 - All machinery would be operated with their engine covers closed and engines will not be left with engines running unnecessarily.
 - The condition of silencers, engine enclosures, acoustic body panels, etc, would be checked and maintained regularly.
 - The construction site compound would be located well away from existing residential areas.
 - All personnel (including sub-contractors) would be instructed on requirements to minimise noise and vibration as part of the Site induction process.

- A Constriction Environmental Management Plan (CEMP) will be drawn up which will include the above measures to mitigate the impact of construction noise on neighbouring residential areas as well as procedures for liaising with local residents, dealing with any complaints, and carrying out noise monitoring if required by the Environmental Health Officer (EHO). It shall also identify any areas where the type/duration of construction works would warrant the provision of temporary noise barriers. This will be secured through an appropriately worded planning condition.

Operational Phase

- 11.71 Consideration of the impact of existing noise sources in the area (i.e. existing road traffic noise) on the Development itself is not a requirement of the EIA Regulations. However, this aspect has been considered separately and is addressed in the noise impact assessment report which is provided in Appendix 11.2.
- 11.72 Effects due to noise from traffic generated by the Development are assessed as minor adverse (not significant), in the absence of mitigation. Therefore, no mitigation is required.

Residual Effects

- 11.73 This section comments on the residual effects of the Development taking into account the implementation of the noise mitigation measures described above.

Construction Phase

- 11.74 With the implementation of appropriate mitigation measures, it is anticipated that residual effect at any one noise-sensitive location will be no more than minor adverse, and for a temporary period only, which is not considered to be significant.

Operational Phase

- 11.75 The residual effect of traffic generated by the Development will remain as described in Table 11.4, minor adverse, which is not considered to be significant.

Cumulative Effects

- 11.76 This section comments on the from the Development in combination with other committed developments.

Construction Phase

- 11.77 There is a commercial development proposed approximately 750 metres and a number of medium to large residential developments (Land south of Cowm Top Lane, Castleton; Castleton Sidings; Land at Royle Road, Castleton & Land off Don Street, Middleton) approved approximately 200m to 2km from the Site. Based on distance attenuation alone, construction noise will be insignificant at the receptor locations and therefore there will be no cumulative noise impact. On that basis the cumulative effects from the construction phase are considered to be negligible.

Operational Phase

- 11.78 The assessment of noise level increases resulting from additional traffic noise generated on the local highway network, attributable to the Development, also takes account of noise level increases resulting from additional traffic noise attributable to other committed developments in the area. On that basis the cumulative effects from the operational phase are considered to be negligible.

Summary

- 11.79 This chapter has assessed the noise impact of the Development on existing noise-sensitive receptors (dwellings) in the area. In particular, it has considered the potential impact of construction noise and the impact of any additional traffic noise generated on the local highway network as a result of the completed Development. Appropriate mitigation measures have also been set out.
- 11.80 The assessment of the impact from road traffic noise on the Development is a separate issue that has been addressed fully in a separate technical report prepared by Hepworth Acoustics Ltd, and which is presented as a technical appendix to this chapter.
- 11.81 The approach to the noise assessment was set out in the formal EIA Scoping Report submitted to RBC.
- 11.82 Reference has been made to relevant national planning guidelines, British Standards and local planning policies.
- 11.83 A baseline noise monitoring survey has been undertaken to establish the prevailing noise climate of the area at relevant locations.

- 11.84 It has been concluded that, with the implementation of appropriate mitigation measures, the residual noise effect at any one location during the construction phase of the Development will be no more than minor adverse (not significant) and for a temporary period only.
- 11.85 For the fully completed Development, increases in traffic noise for a sample of roads in the area, will result in a residual minor adverse noise effect.
- 11.86 The potential cumulative effects from other committed developments for both the construction and operational phases has been assessed and the effects are considered to be negligible.
- 11.87 Table 11.5 contains a summary of the likely significant effects of the Development.

Table 11.5: Table of Significance – Noise

Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
Construction											
Noise from Works	Temporary	Minor Adverse to Moderate Adverse	Best Practical Means (BPM) as defined in the Control of Pollution Act 1974 (CoPA) to be implemented in a CEMP to be secured through a suitably worded planning condition.							*	Minor Adverse
Completed Development											
Change in Road Traffic Noise	Permanent	Minor Adverse	N/A							*	Minor Adverse
Cumulative Effects											

Construction											
Noise from Works	Temporary	Minor Adverse to Moderate Adverse	Implementation of separate CEMPs for each scheme.							*	Negligible
Completed Development											
Change in Road Traffic Noise	Permanent	Minor Adverse	N/A							*	Negligible

*** Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local

REFERENCES

- ⁱ National Planning Policy Framework
- ⁱⁱ Noise Policy Statement for England (2021)
- ⁱⁱⁱ Planning Practice Guidance (2014)
- ^{iv} Rochdale Core Strategy
- ^v Environmental Protection Act 1990
- ^{vi} Control of Pollution Act 1974
- ^{vii} BS5228-1:2009+A1:2014 – 'Code of Practice for Noise and Vibration Control on Construction and Open Sites - Part 1'
- ^{viii} Department of Transport Memorandum (1988) 'Calculation of Road Traffic Noise'
- ^{ix} Highways England 'Design Manual for Roads and Bridges' (2020)
- ^x Institute of Environmental Management & Assessment (IEMA) (2014) 'Guidelines for environmental noise impact assessment'
- ^{xi} BS7445:1991- 'Description and measurement of environmental noise'