Appendix 15.2

Acoustic Design Statement & Site Suitability Assessment

Loddon Garden Village

www.rpsgroup.com

Contents

Tables, Figures and Appendices

Tables

Figures

1 Introduction

1.1 The structure and content of this Appendix is based upon the requirements of the Professional Practice Guidance on Planning and Noise (ProPG) [1] and provides the Acoustic Design Statement (ADS) for the development. The purpose of the ADS is to consider any constraints that the existing noise environment may have on the development and whether any specific mitigation measures are required to provide satisfactory internal and external environments for future residents.

1.2 Also contained in this Appendix is:

- an assessment regarding the suitability of the site for educational purposes in terms of noise and whether any specific mitigation measures are required to provide a satisfactory internal environment for learning; and
- an assessment of existing noise generating land uses, and whether any specific mitigation measures are required to provide satisfactory internal and external environments for future residents.

1.3 The assessment has been undertaken based upon appropriate information on the proposed development provided by the project team. RPS is a member of the Association of Noise Consultants (ANC), the representative body for acoustics consultancies, having demonstrated the necessary professional and technical competence. The assessment has been undertaken with integrity, objectivity and honesty in accordance with the Code of Conduct of the Institute of Acoustics (IOA) and ethically, professionally and lawfully in accordance with the Code of Ethics of the ANC.

1.4 The technical content of this assessment has been provided by RPS personnel, all of whom are corporate (MIOA) members of the IOA (the UK's professional body for those working in acoustics, noise and vibration). This report has been peer reviewed within the RPS team to ensure that it is technically robust and meets the requirements of our Integrated Management System.

2 National & Local Policy, Standards and Guidance

2.1 The assessment within this ADS has been carried out on the basis of the guidance in the ProPG. A Stage 1 risk assessment has been carried out based upon the results of the baseline noise survey. The risk assessment determines the level of detail required for the subsequent Stage 2 assessment, which has been carried out in accordance with the guidance, as required for this application.

2.2 In accordance with Stage 2: Element 4 of the ProPG, the development has been designed to comply with relevant national guidance in the Noise Policy Statement for England (NPSE) [2], National Planning Policy Framework (NPPF) [3], Planning Practice Guidance on Noise (PPGN) [4] and local noise planning policy.

2.3 Full details regarding national and local planning policy are provided in Appendix 15.1.

Professional Practice Guidance on Planning & Noise

2.4 This ProPG provides practitioners with guidance on a recommended approach to the management of noise within the planning system in England for new residential development. The guidance has been produced by the ANC, IOA and Chartered Institute of Environmental Health (CIEH) and is expected to be widely adopted by planning authorities as best practice when considering noise affecting new residential development.

2.5 This ProPG advocates a systematic, proportionate, risk based, two stage, approach, namely:

- Stage 1: an initial noise risk assessment of the proposed development site; and
- Stage 2: a systematic consideration of four key elements.

2.6 The four key elements to be undertaken in parallel during Stage 2 are listed below, with further details in the following sections:

- Element 1: Good Acoustic Design Process;
- Element 2: Internal Noise Level Guidelines;
- Element 3: External Amenity Area Noise Assessment; and
- Element 4: Other Relevant Issues.

2.7 The approach is underpinned by the preparation and delivery of an ADS. An ADS for a site assessed as high risk should be more detailed than for a site assessed as low risk. An ADS should not be necessary for a site assessed as negligible risk.

2.8 Figure 1 of ProPG summarises the ‘Stage 1 Initial Site Noise Risk Assessment’, which is based on indicative noise levels derived from current guidance and experience. This is provided in Table 2.1 below for reference.

Table 2-1 ProPG Stage 1 Initial Site Noise Risk Assessment

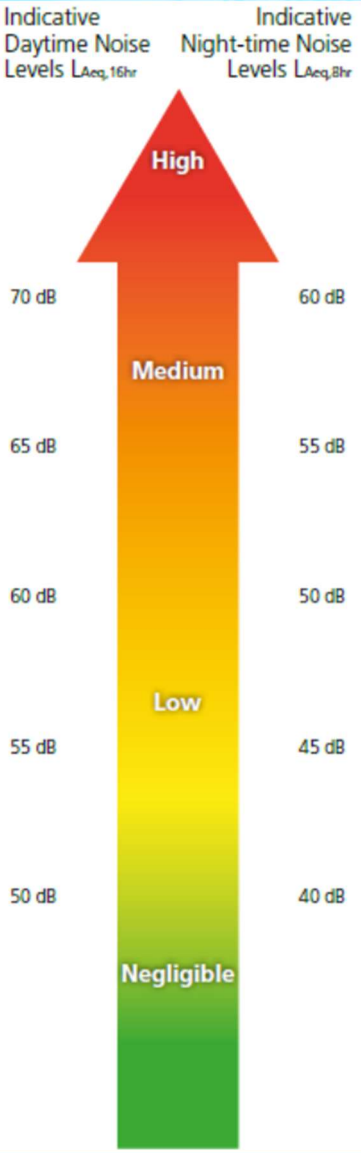
NOISE RISK ASSESSMENT	POTENTIAL EFFECT WITHOUT NOISE MITIGATION	PRE-PLANNING APPLICATION ADVICE
	Increasing risk of adverse effect	High noise levels indicate that there is an increased risk that development may be refused on noise grounds. This risk may be reduced by following a good acoustic design process that is demonstrated in a detailed ADS. Applicants are strongly advised to seek expert advice. As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development. At low noise levels, the site is likely to be acceptable from a noise perspective provided that a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development.
	No adverse effect	These noise levels indicate that the development site is likely to be acceptable from a noise perspective, and the application need not normally be delayed on noise grounds.

Figure 1 Notes:

a. Indicative noise levels should be assessed without inclusion of the acoustic effect of any scheme specific noise mitigation measures.

b. Indicative noise levels are the combined free-field noise level from all sources of transport noise and may also include industrial/commercial noise where this is present but is "not dominant".

c. $L_{Aeq,16hr}$ is for daytime 0700 – 2300, $L_{Aeq,8hr}$ is for night-time 2300 – 0700.

d. An indication that there may be more than 10 noise events at night (2300 – 0700) with $L_{Amax,F}$ > 60 dB means the site should not be regarded as negligible risk.

Stage 2 Element 1: Good Acoustic Design Process

2.9 The ProPG states that planning applications for new residential development should include evidence that the following have been properly considered:

- The feasibility of relocating or reducing noise levels from relevant sources.
- Options for planning the site or building layout.
- Orientation of proposed building(s).
- Select construction types and methods for meeting building performance requirements.
- Examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, 'construction, design and management' (CDM) etc.
- The viability of alternative solutions.
- External amenity area noise.

Stage 2 Element 2: Internal Noise Level Guidelines

2.10 The internal noise level guidelines provided under within Figure 2 of ProPG are provided in Table 2.2 below. These are based upon the guidance in British Standard (BS) 8233:2014: 'Guidance on sound insulation and noise reduction for buildings' [5].

Table 2-2 ProPG Internal Noise Level Guidelines

Activity	Location	07:00 – 23:00 hrs	23:00 – 07:00 hrs
Resting	Living room	35 dB $L_{Aeq,16r}$	-
Dining	Dining room / area	40 dB $L_{Aeq,16r}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16r}$	30 dB $L_{Aeq,16r}$ 45 dB $L_{Amax,F}$ (Note 4)
"NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45 dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events (see Appendix A).			

Stage 2 Element 3: External Amenity Area Noise Assessment

2.11 The ProPG refers to the design ranges in BS 8233:2014 with respect to the assessment of external amenity, as well as guidance in the PPGN. Based on these two documents the following guidance is provided with respect to the assessment of noise in external amenity areas:

> *"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."*

2.12 The ProPG goes on to acknowledge that:

"These guideline values may not be achievable in all circumstances where development might be desirable. In such a situation, development should be designed to achieve the lowest practicable noise levels in these external amenity spaces."

2.13 Further guidance is provided regarding design, stating that the need to provide access to a quiet (or relatively quiet), external amenity space forms part of a good acoustic design process. A 'hierarchy' of alternative options is provided for instances when external noise levels within private external amenity areas would be potentially significant. This ranges from providing access to a relatively quiet private façade, through to a publicly accessible external amenity space (e.g. a public park).

Stage 2 Element 4: Other Relevant Issues

2.14 The ProPG states that the following other relevant issues should be considered, where appropriate, including:

- compliance with relevant national and local policy;
- the magnitude and extent of compliance with the ProPG criteria;
- the likely occupants of the development;
- the acoustic design compared to unintended adverse consequences of the acoustic design (such as roadside barriers that remove views or prevent crossing roads etc.); and
- acoustic design against wider planning considerations.

Planning Recommendations

2.15 Having followed this approach, it is envisaged that noise practitioners will then have a choice of one of four possible recommendations to present to the decision maker. In simple terms, the choice of recommendations are as follows:

- grant without conditions;
- grant with conditions;
- "avoid" significant adverse effects (corresponding to SOAEL within national planning policy); or
- "prevent" unacceptable adverse effects (corresponding to the UAEL within national planning policy).

2.16 Full details of where/when the above recommendations apply are provided in Section 3 of the ProPG.

Building Bulletin 93 'Acoustic Design of Schools: A Design Guide', 2015

2.17 The Department of Education has produced Building Bulletin 93, Acoustic Design of Schools: A Design Guide (BB 93) [6] which was revised in 2015. The aim of the Bulletin is to provide guidance on the acoustic design for schools and is supported by the Building Regulations. It provides a comprehensive guide for architects, building control bodies, building services engineers and others

involved in the design of new school buildings. The objective is to provide suitable internal ambient noise levels for clear communication between students and teachers, between students themselves and for quiet study.

2.18 The document states that all spaces within a school building should meet the performance standards defined within the document for ambient noise, reverberation time and airborne sound insulation for each of the areas defined. Table 1 of the document contains recommended performance standards for the maximum internal ambient noise levels inside rooms, defined in terms of dB $L_{Aeq,30mins}$. For standard teaching areas of new build educational facilities, the upper limit is 35 dB $L_{Aeq,30mins}$.

3 Stage 1: Initial Noise Risk Assessment

Site Description

3.1 The site of the Proposed Development is located south of Reading, on an area of currently undeveloped agricultural land.

3.2 Environmental noise sources in close proximity to the proposed development site include road traffic noise on the M4, Church Lane, A327 and Mole Road. No large industrial/commercial facilities are located in close proximity to the proposed development site, although a number of minor industrial/commercial facilities are located close to the north-western boundary.

Establishing Baseline Conditions

3.3 An unattended environmental sound survey was undertaken at seven locations (LT1 – LT7) around the proposed development. Details of the survey are presented in Annex 1: Baseline Survey of this Chapter.

3.4 Measurements were undertaken in accordance with British Standard 7445-2:1991 – 'Description and measurement of environmental noise – Part 2: Guide to the acquisition of data' at locations as presented in **Error! Reference source not found.** and described below:

- LT1 – Located approximately 11 m north of the nearside carriageway Cutbush Lane East, this measurement location was chosen to calibrate the noise model at this location.
- LT2 – Located 200 m south of the M4 and 240 m north-east of Barrett Lane, this location was chosen as a calibration point for the M4 Road in the noise model. Access closer to the M4 was prevented by localised flooding at the time of the survey.
- LT3 – Located approximately 490 m south of the M4 and 145 m West of Betty Grove Lane.
- LT4 – Located approximately 25 m north-east of Church Lane. This location was chosen to quantify the noise emissions from road traffic on Church Lane.
- LT5 – Located approximately 8 m East of the A327. This location was chosen to quantify the noise emissions from road traffic on the A327.
- LT6 – Located 680 m south of the M4 and 40 m North of Barret's lane. This location was chosen to quantify the noise emissions from road traffic on Barret's Lane.
- LT7 – Located 1.5 m North of Mole Road (B3030). This location was chosen to quantify the noise emissions from road traffic on Mole Road. Due to a failure of the noise monitor originally installed on 25/02/2025, a different monitor was installed on 06/03/2025. Therefore, the data from this location was recorded one week after the other monitoring locations.

3.5 Rain events and instances of unacceptable wind have been excluded from the dataset. The noise climate was dominated by road traffic at each location.

Survey Results

3.6 Ambient sound levels $L_{Aeq,T}$ have been determined from the measured data for the following periods:

- Daytime (0700-2300); and
- Night-time (2300-0700).

3.7 The representative ambient sound levels $L_{Aeq,T}$ have been calculated by logarithmically averaging the survey data over the 16-hour and 8-hour periods for the daytime and night-time respectively.

3.8 The levels derived at each measurement position are presented in Table 3-1. These values have been reviewed against the time-history graphs in Annex 1: Baseline Survey of this ES Chapter and are considered to be representative of those levels captured over the time period.

Table 3-1: Survey Results

Position	Date	Daytime	Night-time	Night-time
		$L_{Aeq,16hr}$	$L_{Aeq,8hr}$	10th Highest $L_{Amax,1min}$
LT1	25/02/2025 – 06/03/2025	50	48	70
LT2	25/02/2025 – 06/03/2025	59	56	68
LT3	25/02/2025 – 06/03/2025	54	51	73
LT4	25/02/2025 – 06/03/2025	51	46	72
LT5	25/02/2025 – 06/03/2025	64	57	77
LT6	25/02/2025 – 06/03/2025	53	51	66
LT7	06/03/2025 – 18/03/2025	77	46	94

3D Sound Model

3.9 On the basis of the survey results, a 3D sound model has been completed to indicate the noise levels across the whole site associated with road traffic movements on the M4, Church Lane, A327 and Mole Road.

3.10 Figures 2, 3 and 4 at the end of the report provide the daytime ambient, night-time ambient, and night-time maximum noise levels respectively.

Traffic flows

3.11 As part of the wider development a traffic flow assessment was undertaken, as detailed in Appendix 15.4 of this ES Chapter. To check how representative the surveyed levels are and to ensure a robust noise impact assessment, the provided traffic flow data has been modelled using

SoundPLAN 9.2. The noise model utilises the methodologies detailed within CRTN. The results of the traffic model are detailed in Table 3-2 below.

Table 3-2: Traffic Flow Model Results – 2025 Baseline

Position	Daytime	Night-time
	$L_{Aeq,16hr}$	$L_{Aeq,8hr}$
LT1	58	55
LT2	64	61
LT3	59	57
LT4	57	55
LT5	64	61
LT6	59	57
LT7	55	53

3.12 Comparison between Table 3-1 and Table 3-2 shows that the traffic flow data for 2025 predicts consistently higher than the surveyed results. To ensure a robust assessment the annual traffic data will be used for this assessment, with the exception of the night-time L_{Amax} values which cannot be predicted through traffic data.

Risk Assessment of External Levels

3.13 With reference to Figure 2 and Figure 3, sound levels on the application site range between 45 – 70 dB $L_{Aeq,16hour}$ in the daytime, and between 40 – 65 dB $L_{Aeq,8hour}$ in the night-time period.

3.14 On this basis, and with reference to Table 2.1, the majority of the site falls into the medium to high risk category. However, more generally, daytime and night-time sound levels on the application site are below 55 and 50 dB $L_{Aeq,T,}$ respectively, and, as such, the overall site is of low risk.

3.15 With reference to Figure 4, there are more than 10 noise events at night with an L_{AFmax} of more than 60 dB, therefore, the site should not be considered as being of negligible risk.

4 Stage 2: Acoustic Design Statement

4.1 With reference to the ProPG, if a Stage 2 assessment is required, planning applications for new residential development should include evidence that the following have been properly considered:

1. check the feasibility of relocating, or reducing noise levels from relevant sources;
2. consider options for planning the site or building layout;
3. consider the orientation of proposed building(s);
4. select construction types and methods for meeting building performance requirements;
5. examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, CDM (construction, design and management) etc.;
6. assess the viability of alternative solutions; and
7. assess external amenity area noise.

4.2 The above points are considered in the following sections.

Mitigating Existing Noise Levels and Design Considerations (Items 1 to 3 above)

4.3 With regards to the feasibility of relocating existing noise sources affecting the proposed site, as the main noise sources on site are road traffic movements on the M4, Church Lane, A327 and Mole Road, this would not be possible. In regard to mitigating at source, as the majority of dwellings would be located at a distance away from the M4, the main road noise source for this scheme, a barrier at source will have little benefit.

4.4 It should be noted that with dwellings located away from the immediate boundaries with the road; noise levels at the location of proposed dwellings would be appropriately lower.

4.5 With reference to Figure 2, for the vast majority of the Site, daytime noise levels are below 55 dB $L_{Aeq,T}$ and with reference to Figure 3 and Figure 4, night-time noise levels are below 50 dB $L_{Aeq,8h}$ with maximum noise levels normally below 60 dB L_{AFmax}, respectively.

Internal Noise Levels (Item 4 above)

4.6 With reference to Table 2.2, the guidance in BS 8233:2014 proposes that the external building fabric for residential dwellings be designed such that a minimum steady-state internal daytime noise level of 35 dB $L_{Aeq,16hr}$ and a night-time level of 30 dB $L_{Aeq,8hr}$ can be achieved within habitable rooms.

4.7 Furthermore, the ProPG recommends that individual internal noise events do not normally exceed 45 dB L_{AFmax} more than ten times a night.

4.8 The specific acoustic performance requirements of the glazing and ventilation system are dependent on the exact layout of the building, room size, wall and roof design. However, for a

typical residential dwelling, a standard type façade provides a minimum attenuation of 24 dB of external noise[1].

4.9 On the basis of the above, appropriate internal noise levels would be achieved when external noise levels are below 59 and 54 dB $L_{Aeq,T}$ during the daytime and night-time periods, respectively. In addition, internal night-time maximum noise levels would not normally exceed 45 dB L_{AFmax} when external maximum noise levels are normally 69 dB L_{AFmax} or below.

4.10 With reference to Figures 2 to 4, for the vast majority of the site, daytime and night-time noise levels are below those levels stated above and, therefore, appropriate internal noise levels would be achieved through standard house build and no specific acoustic mitigation measures would be required.

4.11 Only for a very limited area of the site, closest to the M4 and Mole Road, are external noise levels above those outlined in paragraph 4.9 above.

4.12 For those proposed dwellings located within those areas, facades should be provided with an improved method of ventilation above standard trickle ventilators, such as acoustically treated trickle ventilators.

Effects of Noise Control and Noise from Mechanical Services (Item 5 above)

4.13 The proposed method of noise control involves the provision of typical trickle ventilation, such that background ventilation can be provided without the need for opening windows. Nevertheless, openable windows should be provided for purge ventilation or to prevent overheating (if noise levels allow for it).

4.14 No mechanical services are proposed at this stage.

External Noise Levels in Amenity Areas (Item 7 above)

4.15 The ProPG refers to the design ranges in BS 8233:2014 with respect to the assessment of external amenity. The ProPG also refers to guidance in the PPGN. Based on these two documents, the following guidance is provided with respect to the assessment of noise in external amenity areas:

> *"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."*

[1] Based on typical habitable room sizes and a façade comprising of a standard cavity wall construction (47 dB R_w based on BS 8233:2014); standard 4 / 6 to 16 mm / 4 thermal double-glazed window unit (25 dB R_w+C_{tr} based on BS EN 12354) and standard non-acoustic trickle ventilators (31 dB D_{new}).

4.16 With reference to Figure 2, baseline daytime noise levels are below 55 dB $L_{Aeq,16h}$ for most of the site, apart from the area closest to the M4 and Mole Road.

4.17 As such, it would be recommended that any private external amenity areas are located on the screened side of dwellings closest to the M4 and Mole Road such as to remove line of sight. Localised close-boarded fencing will also need to be considered in this area.

4.18 Consequently, daytime noise levels would likely be below 55 dB $L_{Aeq,16h}$ for all provided external amenity areas and the vast majority below 50 dB $L_{Aeq,16h}$.

Compliance with National and Local Policy

4.19 Based on the above, internal and external sound levels will meet the guideline values contained within the ProPG. The proposed development accords with national guidance provided in the 'Noise Policy Statement for England' (NPSE) [2] and the 'National Planning Policy Framework' (NPPF) [3] and, with reference to the PPGN, it is considered that internal levels will result in effects below the LOAEL and are therefore acceptable.

4.20 Based on the above, the proposed development will provide a satisfactory environment for future occupants and result in no significant harm to amenity or other sensitive uses or areas; therefore the proposals are compliant with Local Policy DM 14.

5 Educational Use: Site Suitability

5.1 With reference to the 'LGV – Parameter Plans Land Use' drawing the proposed location of one of the Primary Schools is towards the middle of the site, with the 'Education Area' located off Church Lane.

5.2 With reference to the master plan drawing and Figure 2, the daytime ambient noise levels at the location of the proposed educational land use are between 45 and 55 dB $L_{Aeq,T}$.

5.3 As such, and on the basis that windows partially open to provide ventilation would provide around 13 dB of attenuation, internal noise levels may exceed the BB 93 upper limit of 35 dB $L_{Aeq,30mins}$ for standard classrooms. Therefore, windows would be required to be closed, with an alternative means of ventilation provided, to ensure internal noise levels are met.

5.4 Of note, the assessment does not consider the influence of proposed intervening buildings or dwellings, which themselves will provide some screening of noise.

5.5 Consequently, from a noise perspective, the proposed location of the educational land use, when appropriate mitigation is put in place, is considered to be acceptable.

5.6 As the site is not yet developed, it is recommended that a more detailed acoustic assessment be undertaken prior to the design/construction of the school taking into account any future change in noise levels once the site is developed and operational.

6 Consideration of Commercial Noise

6.1 As part of the proposed development, there are areas allocated for employment development, outdoor sports facilities, and schools. The land uses will have associated mechanical plant which will need to be considered.

6.2 At this outline stage, the exact end use of this area is unknown, although it is understood that the intention is that this would comprise a Class E use, which can be carried out in a residential area without detriment to its amenity. Nevertheless, without knowing the exact end use, it is not possible at this stage to undertake a detailed assessment of potential noise impacts and the requirement for any mitigation to avoid significant, or unacceptable, impacts.

6.3 However, Class E uses are typically located close to residential areas and, through appropriate design of the employment land uses, it would be readily achievable for this area to operate without causing significant adverse noise impact at proposed or existing noise sensitive receptors (NSRs) and for an appropriate level of residential amenity to be provided.

6.4 The main noise source of concern with Class E uses is plant noise for heating / ventilation of the building, as well as potentially refrigeration units for food premises.

6.5 Once specific details are known regarding the proposed use, including plant details, it is recommended that a noise impact assessment is undertaken in accordance with BS 4142:2014+A1:2019 ‘Methods for rating and assessing industrial and commercial sound’ [7]. This should form part of the subsequent detailed/reserved matters applications, in order to demonstrate that noise emissions would not result in significant impact and detail any mitigation measures that may be required.

7 Existing Land Uses & 'Agent of Change'

7.1 With regard to existing land uses, Paragraph 200 of the NPPF states:

*"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. "*In this instance new noise sensitive development is proposed, i.e. residential dwellings, in an area close to where existing noise generating businesses and facilities are located.

7.2 In order for the proposed development to be compliant with the NPPF in this regard, these existing businesses should not have unreasonable restrictions placed on them as a result of the proposed development. Potential restrictions may include limiting the nature or timing of activity undertaken or relocating where activity takes place. If restrictions would likely be required, then the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

7.3 In this instance it is considered that the proposed noise sensitive development would not require unreasonable restrictions to be placed on existing businesses, in order to prevent significant adverse effect on the new proposed noise sensitive development.

7.4 On the basis that existing noise sensitive development is currently located closer to the existing businesses, then restrictions currently placed on existing businesses in order to prevent significant adverse effect at the existing noise sensitive development, would also, necessarily, prevent significant adverse effect at the proposed noise sensitive development. On this basis, the proposed development would not require any new restrictions to be placed on existing businesses.

7.5 Consequently, the proposed development accords with Paragraph 200 of the NPPF.

8 Summary & Conclusions

8.1 The site of the Proposed Development is located south of Reading.

8.2 Environmental noise sources in close proximity to the proposed development site include road traffic noise on the M4, Church Lane, A327 and Mole Road. No large industrial/commercial facilities are located in close proximity to the proposed development site, although a number of minor industrial/commercial/agricultural facilities are located adjacent to the site boundary.

8.3 Environmental sound levels were determined from unattended long-term surveys. The dominant sound sources affecting the site was road traffic noise.

8.4 With respect to the Professional Practice Guidance on Planning and Noise (ProPG), the proposed residential development site ranges from low to high risk. Through the appropriate design outlined in this report, the proposed residential development would be subject to satisfactory internal acoustic environments with respect to the ProPG and British Standard (BS) 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'.

8.5 With respect to Building Bulletin 93, Acoustic Design of Schools: A Design Guide (BB 93), the proposed location of the educational land use is considered suitable for educational development. On the basis that windows partially open to provide ventilation would provide around 15 dB of attenuation, internal noise levels would very likely be below the BB 93 upper limit of 35 dB $L_{Aeq,30mins}$ for standard classrooms.

8.6 The proposed noise sensitive development would not require unreasonable restrictions to be placed on existing businesses and/or facilities. As such, the applicant, or agent of change, would not be required to provide mitigation.

8.7 Based on the above, the proposed development accords with national and local planning policy and guidance (Noise Policy Statement for England, National Planning Policy Framework, Planning Practice Guidance on Noise and the Swale Borough Council Local Plan). Therefore, there are no reasons, with regard to noise, why planning permission should not be granted for the proposed development.

Figures

Notes
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File location:

Date: 06/25	Rev: A
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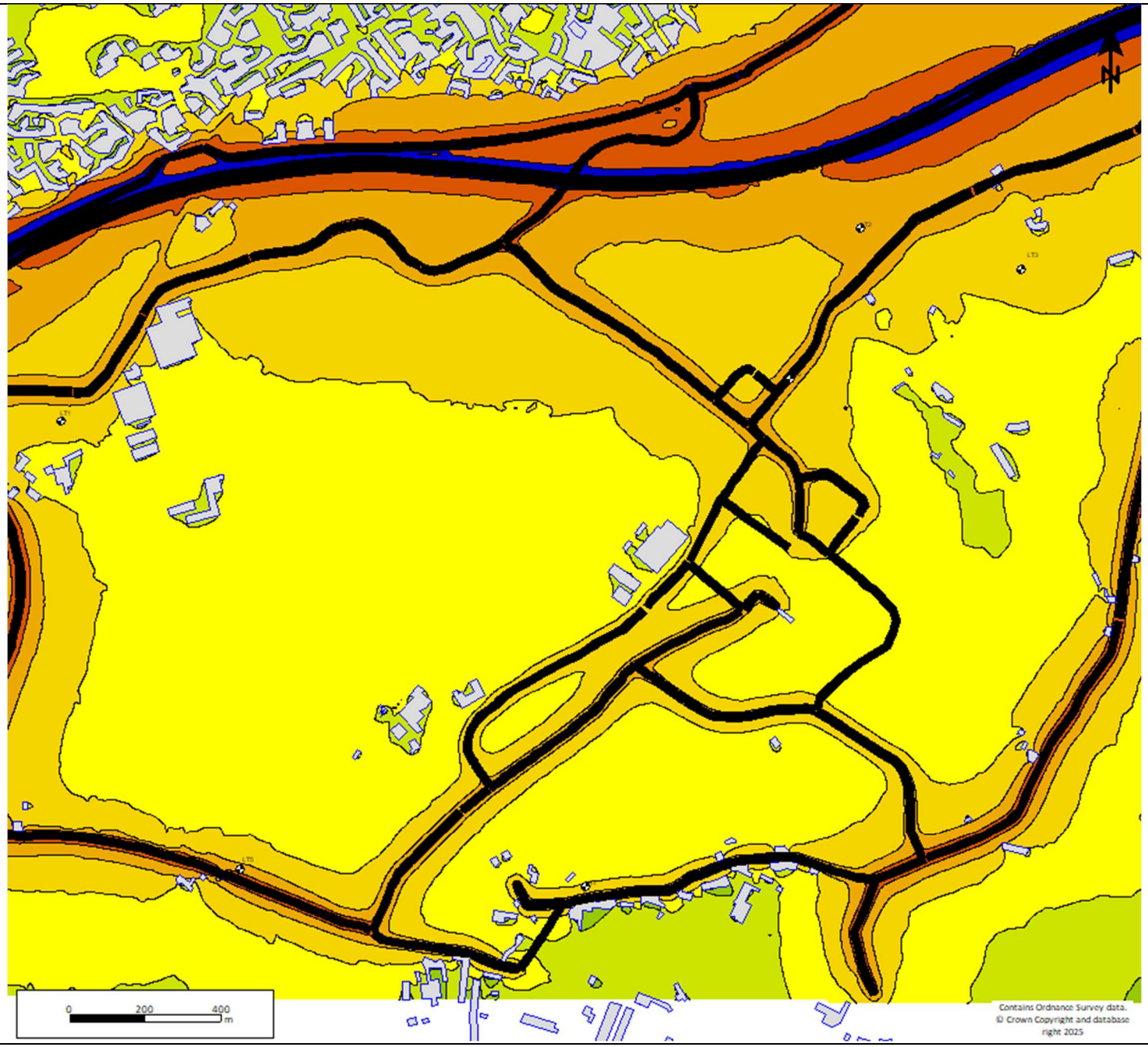
Figure 1: Site Survey Locations



Key

- Existing Buildings
- Road
- Receiver
- Line

Daytime $L_{Aeq\ 16hour}$ dB

<=	40.0
40.0 -	45.0
45.0 -	50.0
50.0 -	55.0
55.0 -	60.0
60.0 -	65.0
65.0 -	70.0
>	70.0

Notes
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Figure 2: Daytime Noise Levels at 1.5m height

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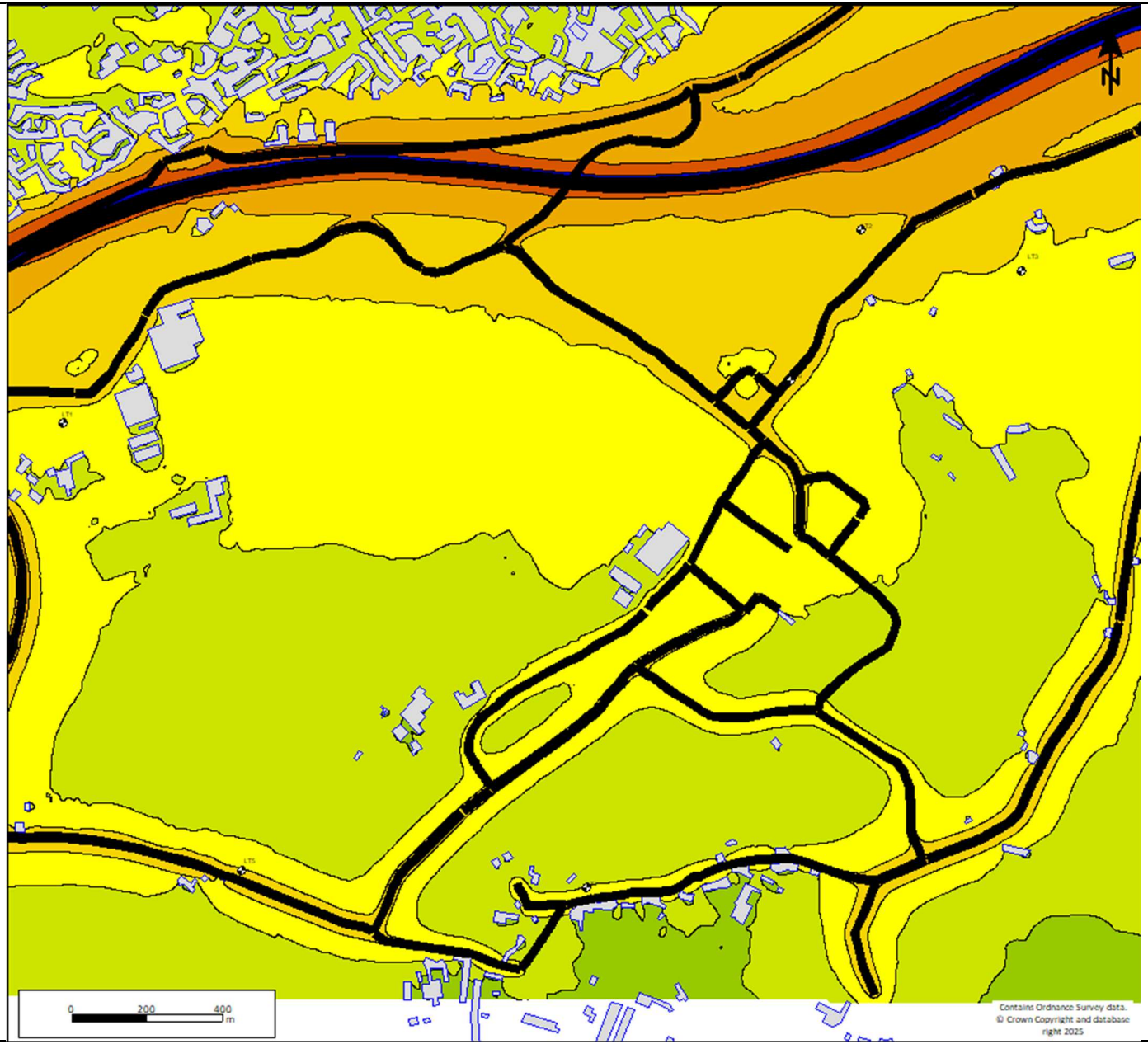

Key

- Existing Buildings
- Road
- Receiver
- Line

Night-time $L_{Aeq\ 8hour}$ dB

<=	40.0
40.0 -	45.0
45.0 -	50.0
50.0 -	55.0
55.0 -	60.0
60.0 -	65.0
65.0 -	70.0
>	70.0

Notes
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Figure 3: Night-time Noise Levels at 4m height

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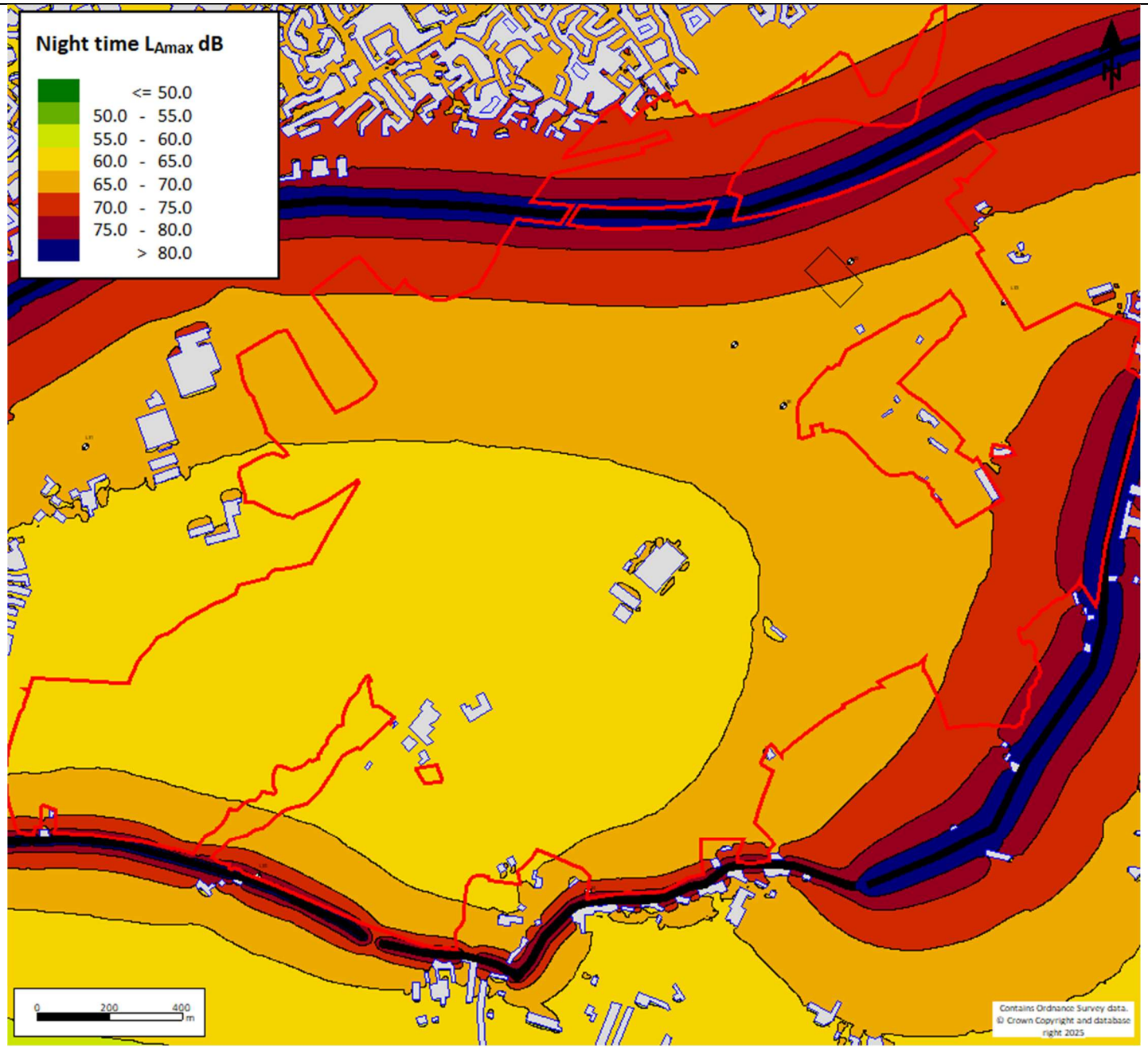

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Figure 4: Night-time Maximum Noise Levels at 4m height

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