Land off Lockwood Road
Goldthorpe, Barnsley, S63 9JY

Planning Noise Assessment for a Proposed Residential Development

Report ref.
RK3551/20444/Rev 2

Issued to
Gleeson Homes

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1. INTRODUCTION

Gleeson Homes are seeking planning permission for a residential development consisting of 125 houses at land off Lockwood Road in Goldthorpe, Barnsley. As the site is located in a sensitive area, a noise assessment is required to support the planning application.

Accordingly, Spectrum Acoustic Consultants has been instructed to carry out a noise assessment for the purpose of establishing the impact on the proposed residential properties. This report provides the information required to inform and satisfy the requirements of the Local Planning Authority, for the purpose of determining the application.

2. SITE DESCRIPTION AND PROPOSALS

The proposed development site is located off Lockwood Road in Goldthorpe, Barnsley, S63 9JY. The site currently consists of disused land, along with allotment gardens which have now been vacated. The A635 bounds the site to the north which is a busy A-road linking Barnsley to the A1(M). Beyond the A635 is parkland. Lockwood Road bounds the site to the west and has a number of existing residential properties located along it, along with a church, associated convent and a scout hut. To the south of the site is Dearne Goldthorpe Primary School, along with houses on East Street. To the east of the site are houses on Hamilton Road, Nora Street and St Mary's Road.

Proposals involve constructing 125 houses at the proposed development site. The houses would consist of a mixture of detached and semi-detached properties. Each of the houses would have a small garden to the rear and parking for vehicles at the front. The proposed scheme plans are included in Appendix B.

3. CRITERIA FOR ACCEPTABILITY

3.1 PLANNING GUIDELINES

3.1.1 National Planning Policy Framework (NPPF), February 2019

The National Planning Policy Framework (NPPF) sets out the government's guidance for local planning authorities and planning application decision-takers.

It says that the planning system should contribute to and enhance the environment by (among other things) preventing development from contributing to, being put at risk from, or being adversely affected by unacceptable levels of noise pollution. (Para. 170.e)

Paragraph 180 states that:

- 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;
- Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

Paragraph 182 states that 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.

3.1.2 Noise Policy Statement for England (NPSE), DEFRA, March 2010

The NPPF refers to the Noise Policy Statement for England (NPSE) which sets out the long term vision of Government noise policy as follows: *Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.*

The first aim of the Noise Policy Statement for England

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.

2.23 The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided while also taking into account the guiding principles of sustainable development (paragraph 1.8).

The second aim of the Noise Policy Statement for England

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.

2.24 The second aim of the NPSE refers to the situation where the impact lies somewhere between the Lowest Observed Adverse Effect Level (LOAEL) and the Significant Observed Adverse Effect Level (SOAEL). It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.

The third aim of the Noise Policy Statement for England

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.

2.25 This aim seeks, where possible, positively to improve health and quality of life through the pro-active management of noise while also taking into account the guiding principles of sustainable development (paragraph 1.8), recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.

3.1.3 Planning Practice Guidance – Noise (PPG), July 2019

The PPG sets out government guidance on the role of noise in the planning process. This provides advice on issues such as when noise is relevant to planning, how to determine noise impact, discussion on the context of noise and how the impact of noise can be mitigated.

Of relevance to this scheme, it advises that *"Noise needs to be considered when …new developments would be sensitive to the prevailing acoustic environment."* Whilst it does advise that noise can override other planning concerns, it states that as with the NPSE and the NPPF it does not expect noise to be considered in isolation from other economic, social and environmental dimensions of a proposed development.

It asks an LPA to consider:

- *whether or not a significant impact is occurring or likely to occur;*
- *whether or not an adverse effect is occurring or likely to occur;*
- *whether or not a good standard of amenity can be achieved.*

This includes identifying whether the noise exposure is above or below SOAEL or LOAEL.

The PPG talks about "impact" and "effect". This is an important part of the context discussion, as a noise may have a significant impact for a brief period of time, but because the impact is only brief, the overall "effect" in not significant, as it does not materially affect behaviour.

The PPG summarises examples of the perception of noise, with the outcome and the effect level:

- No observed effect: Noise is not noticeable, and no specific measures are required. This would correlate to NOAEL of the NPSE;
- No observed adverse effect: Noise is noticeable and not intrusive, does not cause any change in behaviour or attitude, can affect the acoustic character of an area but not such that there is a perceived change in the quality of life. No specific measures are required;
- Observed adverse effect: Noise causes small changes in behaviour (eg closing windows for some of the time because of the noise), potential for some sleep disturbance, and there is a perceived change in the quality of life. In this case noise should be mitigated and reduced to a minimum as it represents the onset of the LOAEL as defined in the NPSE;
- Significant observed adverse effect: Noise causes a material change in behaviour and attitude (eg avoiding certain activities during periods of intrusion, or having to keep windows closed most of the time because of the noise where there is no alternative ventilation), potential for difficulty getting back to sleep, quality of life diminished. This correlates to a SOAEL as defined by the NPSE and should be avoided.
- Unacceptable adverse effect: Extensive and regular changes in behaviour and/or an inability to mitigate effects, leading to psychological stress and physiological effects (eg regular sleep deprivation, medically definable harm). This, the PPG advises, should be prevented.

It is of note that the examples given in the PPG relate to changes of behaviour, changes to quality of life and changes in the character of an area. In the case of this development, residents would be moving into an existing situation, so behaviours would not change, as no pattern of behaviour is already established.

This is reflected formally in paragraph 007 of the PPG. This paragraph helps the LPA consider the balance between planning and statutory nuisance (Environmental Protection Act 1990). It states that *"When assessing whether a statutory nuisance exists, local authorities will consider a number of relevant factors including the noise level, its duration, how often it occurs, the time of day or night that it occurs and the 'character of the locality'. The factors influencing the 'character of the locality' may include long-established sources of noise in the vicinity, for example church bells, industrial premises, music premises or public houses'."*

As stated in the NPSE, there is no simple relationship between noise levels and the effect of those noise levels. The NPSE lists a number of factors as relevant, and the following are those that apply to this scheme:

- Source and level of noise;
- Number of noise events, how often they occur, and the pattern;
- The spectral content of the noise and its character;
- Whether noise effects can be mitigated by closing windows, allowing for alternative ventilation to be provided;
- The acoustic environment in external amenity spaces where they are an intrinsic part of the overall design;
- The effect on a nearby existing business.

The PPG says that for development, mitigation can be considered in terms of engineering (reducing noise at source, or containing it). This is unlikely to be practicable in a case like this, as the proposed developer would need to rely on the goodwill (unless formal agreements could be reached) with those responsible for the source of the noise. However, layout (orientating site to minimise impact, and including screening), planning conditions, and mitigation to the dwellings themselves are all likely to be feasible.

Such mitigation techniques are therefore recognised by the PPG as normal practice in the case of noise sensitive schemes.

The noise impact can also be offset where residents have access to a quiet facade, a quiet external amenity space for their sole or shared use, or a public amenity space nearby.

3.2 CRITERIA FOR ASSESSMENT

3.2.1 WHO – Environmental Noise Guidelines for the European Region 2018

New guidance from WHO titled Environmental Noise Guidelines for the European Region (ENG) was published in 2018. The document takes a very different approach to guidance set out in the previous WHO Guidelines for Community Noise 1999 (GCN) document by identifying separate thresholds for specific sources, rather than for community noise as a whole. Consequently, much of the earlier guidance set out in GCN is now absent from ENG. While ENG was intended to supersede GCN, it recognises this absence and states that *'indoor guideline values and any values not covered by the current guidelines (such as industrial noise and shopping areas) should remain valid.'*

3.2.2 WHO – Guidelines for Community Noise, 1999

Guidelines for Community Noise - World Health Organization (GCN) gives guidance on suitable noise levels for sleeping and resting conditions in dwellings. It sets out these values in table 4.1, and lists them as being guideline values for community noise. The document defines community noise (also called environmental noise, residential noise or domestic noise) as noise emitted from all sources, except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic, industries, construction and public work, and the neighbourhood.

WHO recommends internal noise levels of 30dB(A) at night for bedrooms, and 35dB(A) during the day for living-rooms. The guideline levels are based on annual average data.

To avoid sleep disturbance in bedrooms during the night time period, it also recommends that noise levels from single sound events should not regularly exceed L_{Amax} 45dB(A). WHO defines 'regular' as not more than 10-15 events per night.

WHO also gives guidance on suitable noise levels for outdoor living areas such as gardens. The WHO guidelines state that "*to protect the majority of people from being seriously annoyed during the daytime, the sound pressure level on balconies, terraces and outdoor living areas should not exceed 55 dB L_{Aeq} for a steady continuous noise. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound pressure level should not exceed 50 dB L_{Aeq}".*

The preface to WHO states that community noise includes road, rail and air traffic, industries, construction and public work, and the neighbourhood. Therefore, although these noise levels are usually used to determine acceptability from steady continuous noise from anonymous sources, such as road traffic or rail movements, they provide helpful guidance when considering noise from commercial sources.

3.2.3 BS 8233:2014 guidance on sound insulation and noise reduction for buildings

BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings* gives guidance on indoor ambient noise levels to be achieved in dwellings for reasonable resting and sleeping conditions. The guidance in BS 8233:2014 is based on guidelines issued by the WHO, Guidelines for Community Noise (1999).

In Section 7.7.1 of BS 8233:2014, it states that it applies to external noise as it affects the internal acoustic environment from sources without a specific character, previously termed “anonymous noise”. However, it then goes on to state that if the noise has a specific character, if it contains features such as a distinguishable, discrete and continuous tone, is irregular enough to attract attention, or has strong low-frequency content, in which case lower noise limits might be appropriate.

The BS 8233:2014 guideline levels are shown in Table 1.

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	-
Dining	Dining room/area	40 dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

Table 1: BS 8233 guideline noise level limits in dwellings for resting and sleeping

BS 8233 advises that “*If relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation that does not compromise the facade insulation or the resulting noise level. If applicable, any room should have adequate ventilation (e.g. trickle ventilators should be open) during assessment.”*

It also advises that *“Where development is considered necessary or desirable…the internal target levels may be relaxed by up to 5 dB and reasonable conditions still achieved.”*

The standard also advises that *“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_{AFmax} depending on the character and number of events per night. Sporadic noise events could require separate values.”* It does not give guidance on what might constitute a guideline value. However, as the standard does cross reference Guidelines for Community Noise - World Health Organization, 1999 (WHO), it is suggested that the guideline value of L_{AFmax} 45 dB, inside bedrooms, should not be exceeded during the night more than 10-15 times, which reflects the WHO position.

BS 8233:2014 suggests the following guidelines for noise levels in external spaces that are used for amenity space, such as gardens and patios. *“For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.”*

4. SITE MEASUREMENT SURVEY

4.1 MEASUREMENT LOCATIONS

For the purpose of the assessment, unattended noise loggers were utilised for the recording of continuous noise measurements at two measurement locations, each representative of the most sensitive areas of the site. The noise measurement locations are detailed as follows:

Position A – North end of site, facing the A635.
Position B – Centre of site.

Additionally, short-term attended noise measurements were carried out through the daytime at the following locations.

Position 1 – Attended location at the northern end of the site.
Position 2 – Attended location at the centre of the site.
Position 3 – Attended location at the western side of the site.
Position 4 – Attended location at the western side of the site.
Position 5 – Attended location at the eastern side of the site.
Position 6 – Attended location at the eastern side of the site.

All of the noise measurements were carried out at 1.5m above ground. The measurement locations are illustrated on the existing site location plan, included in Appendix A.

4.2 SURVEY DETAILS AND INSTRUMENTATION

Measurements of noise were completed over the period Wednesday 10 to Thursday 11 February 2021. Throughout the survey, weather conditions were generally cold and dry, with low wind speeds.

Noise logger measurements consisted of contiguous five-minute periods for the duration of the survey at each of the identified noise logger locations. The instrumentation recorded short audio samples at timed intervals and selected individual events using a trigger to allow identification of noise sources.

The attended noise measurements were carried out during the daytime on Wednesday 10 February 2021 and consisted of five-minute samples at each of the identified locations.

Noise measurement parameters consisted of equivalent continuous (L_{Aeq}) noise levels and maximum (L_{Amax}) noise levels, as well as statistical noise levels (termed L_n, where n is the percentage of time the level is exceeded during the measurement period). Both overall and octave band measurements were stored for later analysis at all of the measurement positions.

The following instrumentation was used during the noise measurement survey:

- Bruel & Kjaer Type 2250 Light Sound Level Meter s/n 3006954
- Bruel & Kjaer Type 4952 Microphone s/n 2922639

- Bruel & Kjaer Type 2260 Sound Level Meter s/n 1772232
- Bruel & Kjaer type 4189 Microphone s/n 2469838
- Bruel & Kjaer Type 4230 Acoustic Calibrator s/n 1234621
- Bruel & Kjaer Type ZC 0026 Preamplifier s/n

- Bruel & Kjaer Type 2250 Sound Level Meter s/n 3027959
- Bruel & Kjaer Type 4189 Microphone s/n 3196073
- Bruel & Kjaer Type 4231 Acoustic Calibrator s/n 2688672

Before and after the survey, the sound level meters were field-calibrated in accordance with the manufacturer's guidelines, and no significant drift was observed. The meters, microphones and field calibrator are laboratory calibrated biennially in accordance with UKAS procedures or to traceable National Standards.

4.3 RESULTS & OBSERVATIONS

During the daytime noise levels across the site are dominated by road traffic movements on the A635 and other nearby roads. During the daytime noise emanating from Dearne Goldthorpe Primary School during break times is audible at the southern end of the site. However, road traffic noise remains dominant. During the night-time road traffic movements reduce. Charts below show the noise profiles measured at the logger monitoring locations.

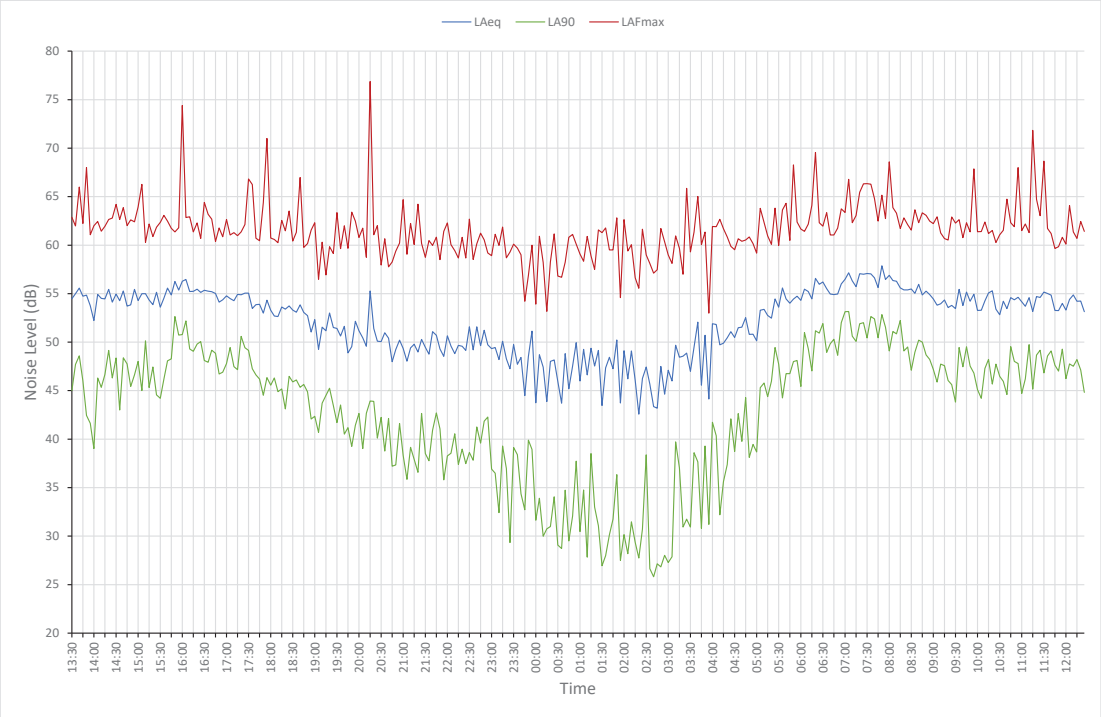


Chart 1: Position A, North end of site, facing the A635, ambient noise profile - Wednesday 10 to Thursday 11 February 2021

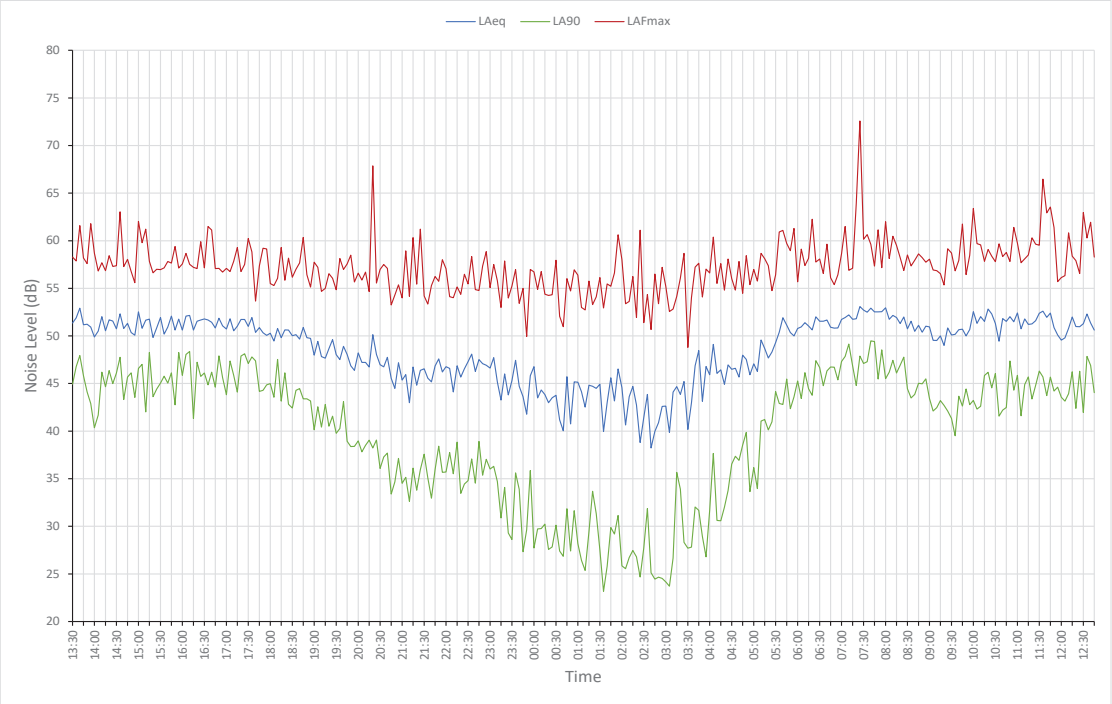


Chart 2: Position B, Centre of site, ambient noise profile - Wednesday 10 to Thursday 11 February 2021

A summary of the measured noise data over the daytime and night-time periods is included in Table 2 below. The $L_{Aeq,16\ hour}$ and $L_{Aeq,8\ hour}$ levels have been calculated using of all of the daytime and night-time noise measurements.

With reference to LAmax levels, World Health Organisation (WHO) guidelines for community noise, define regular as not more than 10-15 events per night. Therefore, the L_{Amax} levels measured during the night time periods have been sorted from highest to lowest. It is then possible to read off the 10-15th highest L_{Amax} levels during each of the night-time periods which are regarded as being typical. The typical L_{Amax} values for each of the night-time periods obtained in this survey are included in Table 2.

Measurement Position	Daytime L_{Aeq} (dB) 0700-2300	Night-time L_{Aeq} (dB) 2300-0700	Night-time typical L_{Amax}[1] (dB)
Position A – Logger North end of site, facing the A635.	54	51	63
Position B – Logger Centre of site.	51	47	59
Position 1 – Attended Northern end of the site.	54	-	-
Position 2 – Attended Centre of the site.	54	-	-
Position 3 – Attended Western side of the site.	53	-	-
Position 4 – Attended Western side of the site.	53	-	-
Position 5 – Attended Eastern side of the site.	54	-	-
Position 6 – Attended Eastern side of the site.	50	-	-

Table 2: Summary of results of ambient noise survey

Note: 1 The L_{Amax} data is only relevant to the night-time period

During the daytime, noise levels across the site are $L_{Aeq,16hour}$ 50-54dB. During the night-time, noise levels across the site are $L_{Aeq,8hour}$ 47-51dB, with maximum levels typically in the range L_{AFmax} 59-63dB.

The noise survey was carried out during a national lockdown due to the COVID-19 pandemic. It is therefore expected that road traffic movements were lower during the survey than under normal circumstances.

National statistical data indicates that the road traffic movements were around 60% of the typical volume during the survey[1]. The national statistical data is measured on a sample of trunk roads around the country. Therefore, a +2 dB adjustment to the measured noise levels may be considered here.

5. PREDICTION OF ENVIRONMENTAL NOISE LEVELS AT INDIVIDUAL BUILDING FACADES

The proposed development comprises of dwellings and associated habitable rooms at various heights, distances and aspects relative to the A635. As a result, the noise levels affecting different parts of the proposed development will be subject to differing levels of distance attenuation, screening and angle of view to the road. Therefore, analysis has been undertaken to predict the noise levels at the various residential facades of the houses, based on the measurement results and taking these effects into account.

[1] https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

The procedure that has been followed is as summarised below:

- Generate a three dimensional numerical noise model of the site conditions at the time of the survey using Bruel and Kjaer's 7810 'Predictor' software. This acoustic model implements the procedures set out in ISO 9613-2:1996 "Acoustics – Attenuation of sound during propagation outdoors Part 2: General method of calculation to determine noise levels".

- Validate the noise prediction model against noise measurement data taken at the site and reported in Section 4.3. This validation is carried out in respect of daytime and night-time $L_{Aeq,T}$ levels, as well as night-time $L_{Amax,typ}$ for road traffic noise. The octave band frequency levels of the noise predictions are also taken from the measurements carried out at the site.

- Alter the noise model to replace the physical configuration at the time of the measurements with the proposed new scheme.

- Predict noise levels at numerous locations across the façades of the houses, representative of the proposed residential windows. A graphical representation of this model is shown at Appendix C.

- Use these noise level predictions as the starting point for intrusive noise calculations at key locations on the development.

- Compare predicted indoor noise levels against the guideline noise levels in terms of:

  * - $L_{eq,T}$ noise levels in living rooms and bedrooms during the daytime (i.e. $L_{Aeq,T}$ 30 dB)
  * - $L_{eq,T}$ noise levels in bedrooms during the night-time (i.e. $L_{Aeq,T}$ 30 dB), and
  * - L_{Amax} noise levels in bedrooms during the night-time (i.e. $L_{Amax,typ}$ 45 dB)

- Using measured sound insulation data for standard façade components, set the sound insulation specifications for the relevant façade components necessary to meet the target noise levels (more information on this in Section 6).

Detailed results of day-time and night-time $L_{Aeq,T}$ levels at the noisiest locations are shown in Appendix C, corresponding to the calculation positions also included in Appendix C. All octave band levels listed in Appendix C are A-weighted.

The $L_{Amax,typ}$ levels have been calculated in the following way. The $L_{Amax,typ}$ measured at the monitoring locations is from a single, short-term event at one location and not the aggregate of noise from all points on the road network. Therefore, the $L_{Amax,typ}$ model includes a series of point sources, rather than line sources (as for the L_{Aeq} model). Accordingly, the single highest sound pressure level at each receptor location from an individual point source is taken to be the $L_{Amax,typ}$ for design purposes. The measured L_{max} frequency distribution (i.e. spectrum) has been also been used in this way within the predictions.

6. NOISE MITIGATION MEASURES

6.1 INTERNAL NOISE LEVELS

Internal noise levels can be calculated from external noise levels, given the size and construction of the building façade elements including glazing and ventilation, as well as acoustic properties of the receiving room, such as the volume and reverberation time. Usually, it is the glazing and, depending upon the particular strategy, the ventilation apertures that admit most noise into residences. It is then a matter of providing façade elements with adequate acoustic performance to achieve sufficient noise reduction to meet the internal noise target.

The method that has been followed is described in Annex G2.1 of *BS 8233:2014 Guidance on sound insulation and noise reduction for buildings*.

The analysis carried out here assumes typical internal finishes for the type of rooms considered, based on acoustic properties Spectrum have measured in a range of occupied dwellings. The general construction of the building envelope is as follows:-

- External walls of brick cladding, with an insulated cavity to 2 layers of 12.5mm plasterboard.
- Window glazing having a specification as described below.
- Ventilation to meet the requirements of Part F of the Building Regulations.

Sound insulation data for the façade elements have been taken from sources such as standard data provided by BRE and DETR, Spectrum library of measurement data, calculations using Marshall Day's *Insul* software as well as manufacturer's data and the BRE/CIRIA publication 'Sound Control for Homes'.

Based on the internal layout drawings for the proposed dwellings, sample intrusive noise calculations for the most noise-exposed habitable rooms of the development, based on the room and façade dimensions are included in Appendix D. The calculations have been carried out in order to establish the façade glazing and ventilation specification necessary to achieve guideline internal noise levels.

Table 3 below details a sound insulation specification for the proposed dwellings. The numeric sound insulation rating for the glazing and the ventilator openings has been specified in terms of $R_w + C_{tr}$ and $D_{n,e,w} + C_{tr}$ respectively.

Note, the noise data from the measurement survey was carried out during a national lockdown due to the COVID-19 pandemic. Therefore, the proposed mitigation scheme has been designed so that an increase in ambient noise levels of 2dB would still result in acceptable internal noise levels being achieved across the entire development.

Room	Wall type	Window Performance R_w+C_{tr} dB	Vent Performance $D_{n,e,w}+ C_{tr}$ dB
Living Room	Brick/block	25	32
Dining/Kitchen	Brick/block	25	32
Bedrooms	Brick/block	25	32

Table 3: Sound insulation specification for the proposed development site

Acoustic performances in all of the proposed habitable rooms can typically be achieved by the following specification.

- Standard double-glazed units (rated R_w+C_{tr} 25dB), typically comprising of 4mm float glass, 12mm cavity, 6mm float glass.
- Standard hit and miss trickle ventilators (rated at $D_{n,e,w}$ + C_{tr} 32dB).

6.2 NOISE LEVELS IN OUTDOOR LIVING SPACES

BS 8233:2014 suggests the following guidelines for noise levels in external spaces that are used for amenity space, such as gardens and patios. *"For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited."*

The site by definition adjoins the strategic road network. Consequently, the residential scheme has been designed to achieve the lowest practicable noise levels in the outside amenity areas of properties.

National statistical data indicates that the reduced road traffic movements could have resulted in a 2dB reduction in noise levels during the ambient noise survey. However, despite this, noise levels in all of the gardens during the daytime would not exceed the $L_{Aeq,16hour}$ 55dB guideline suggested by BS 8233:2014. Furthermore, in order to provide additional protection from road traffic noise emanating from the A635, mitigation measures in the form of 2m high close boarded timber fences are proposed around the gardens of Plots 69, 81, 82, 86, 89, 90, 91.

7. CONCLUSIONS

Gleeson Homes have commissioned Spectrum Acoustic Consultants to complete a noise assessment in order to support a planning application in connection with a proposed residential development, at land off Lockwood Road in Goldthorpe, Barnsley, S63 9JY.

During the daytime noise levels across the site are dominated by road traffic movements on the A635 and other nearby roads. During the night-time road traffic movements reduce.

A noise mitigation strategy has been developed, by considering the character to the noise impacting on the proposed development, as well as the noise insulation and noise control requirements for the proposed plots. The mitigation scheme that has been proposed and specified satisfies internal noise levels than the guidelines set out for good internal conditions in BS 8233:2014 and WHO Guidelines for Community Noise. In order to provide additional protection in gardens from road traffic noise emanating from the A635, mitigation measures in the form of 2m high close boarded timber fences have been proposed around the gardens of Plots 69, 81, 82, 86, 89, 90, 91.

APPENDIX A

Existing Site Location Plan with Measurement Locations


N
A
X
1
2
3
4
5
6
X
B
Proposed Development Site

APPENDIX B

Proposed Scheme

Schedule of Accommodation
To be read in conjunction with drawing no. 3228-1-001-II

Name	Type	Storeys	Beds	Format	ft²	m²	No.	Mix	Sub-total ft²	Sub-total m²
OMS										
Greystones	250	2	2	Semi	753	69.96	3	2%	2259	209.87
Kenmare	252	2	2	Semi	753	69.96	4	3%	3012	279.82
Tallow	253	2	2	Semi	753	69.96	1	1%	753	69.96
Glin	350	2	3	Semi	904	83.98	29	23%	26216	2435.53
Lucan	352	2	3	Semi	904	83.98	11	9%	9944	923.82
Strade	354	2	3	Detached	904	83.98	14	11%	12656	1175.77
Neale	355	2	3	Semi	904	83.98	9	7%	8136	755.85
Sandyford	358	2	3	Semi	984	91.42	5	4%	4920	457.08
Clifden	359	2	3	Detached	984	91.42	8	6%	7872	731.33
Milford	360	2	3	Detached	919	85.38	11	9%	10109	939.15
Dalkey	450	2	4	Detached	1156	107.40	18	14%	20808	1933.11
Grange	451	2	4	Detached	1071	99.50	4	3%	4284	397.99
Lanesborough	452	2	4	Detached	1211	112.50	8	6%	9688	900.04
						Total	125	100%	120657	11209.31

N

S

LEGEND
- 1.8m (h) TIMBER FENCE
- POST & WIRE FENCE
- 0.45m (h) TIMBER KNEE RAIL
- 6m EXISTING EASEMENT
- EXISTING TREES
- PROPOSED TREES
- BIN COLLECTION POINT
- RAISED TABLE TO ENGINEER'S DESIGN & SPECIFICATION

SCALE BAR 1m 10m

NOTE:
All plots are to be
"Urban 21 Elevations"

revision	date	content	initials
II	27.04.23	L.E.A.P. EQUIPMENT ADDED. BOUNDARY UPDATES TO PLOTS 12, 69, 70, 71, 81 & 82	PG
HH	24.04.23	DRAFT LAYOUT FORMAUSED IN CAD. ALL 357 HOUSE TYPES REPLACED WITH 350 HOUSE TYPES. RAISED TABLES ADDED	PG
GG	03.04.23	DRAFT SKETCH OVERLAY - MIX ADJUSTMENT TO ACCOMMODATE SALES REQUIREMENT / POS DETAIL ADDED	SN
FF	03.04.23	DRAFT SKETCH OVERLAY - SITE REDRAW	SN
EE	20.03.23	PLOT 96 POSITION REVISED	ED
DD	14.03.23	ADDITION OF NOTE, ALL PLOTS TO BE URBAN 21 ELEVATIONS	SM
CC	07.03.23	REVERTED TO SWEPT PATH ANALYSIS REV A TRACKING. AMENDED PLOT 96 GARDEN BOUNDARY AND PARKING ARRANGEMENT	SM
BB	06.03.23	FENCE LINE AND PARKING AMENDED TO PLOT 96.	SM
AA	06.03.23	ROAD DIMENSION AMENDED OUTSIDE PLOT 95.	ED
Z	03.03.23	ROAD WIDTHS REVISED FOLLOWING DISCUSSIONS WITH HIGHWAYS CONSULTANT.	ED
Y	22.02.23	SUBSTATION LOCATION REVISED. GARAGE TO PLOTS 64/65 REPOSITIONED. VISITOR SPACES INCREASED. TREE DETAILS ADDED TO LAYOUT.	ED
X	17.02.23	ROAD WIDENED FOLLOWING DISCUSSIONS WITH HIGHWAYS OFFICER. PLOT 71 REPLACED WITH 357	ED

PLANNING
subject to structural review
subject to accurate measured survey

project: PROPOSED RESIDENTIAL
LOCKWOOD ROAD
GOLDTHORPE

client: GLEESON DEVELOPMENTS

title: PROPOSED SITE LAYOUT

date: 02.03.21 | scale: 1:500@A0 | drawn: SN

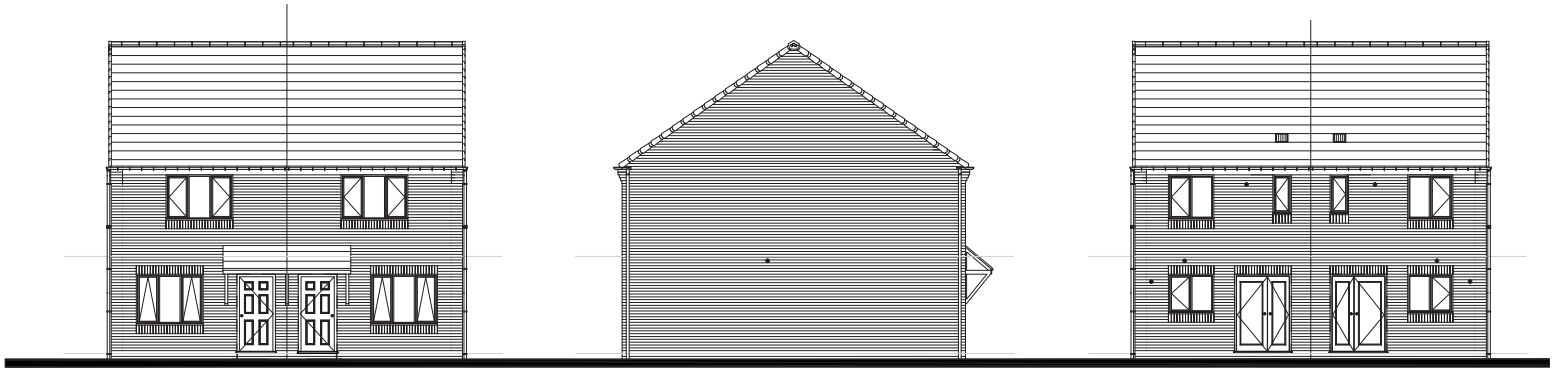
drawing number: 3228-1-001 | II | checked:

Niemen Architects
Deck 2 The Waterscape
42 Leeds & Bradford Road
Kirkstall Leeds LS5 3EG
Tel: 0113 239 5400
Fax: 0113 239 5401
office@niemen.co.uk
www.niemen.co.uk

Lockwood Road, GOLDTHORPE

Notes

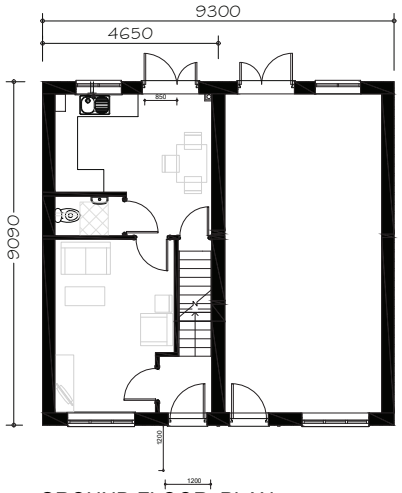
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.



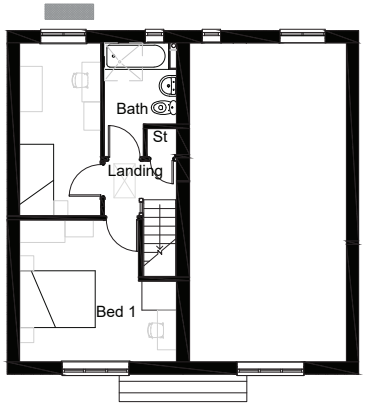
FRONT ELEVATION

SIDE ELEVATION

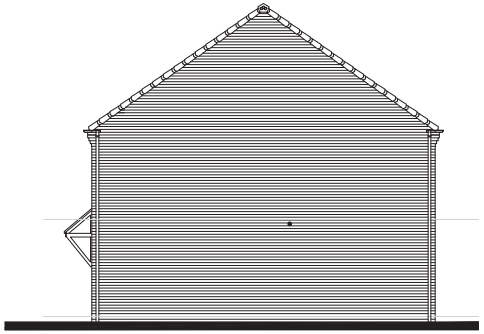
REAR ELEVATION



GROUND FLOOR PLAN

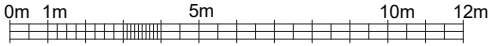


FIRST FLOOR PLAN



SIDE ELEVATION

FLOOR AREA
70.04m², 753ft²



C02	Lounge window changed	13.06.22
C01	Issued for construction	27.05.21
P01	Initial issue	20.04.21
Rev.	Comments	Date

gleeson

Gleeson Homes (Head Office)
Unit 5, Europa Court | Sheffield Business Park | Sheffield |
South Yorkshire | S9 1XE

01142 612900

www.gleesonhomes.co.uk

Project:
250 House Type
Urban

Title:
Planning Drawing

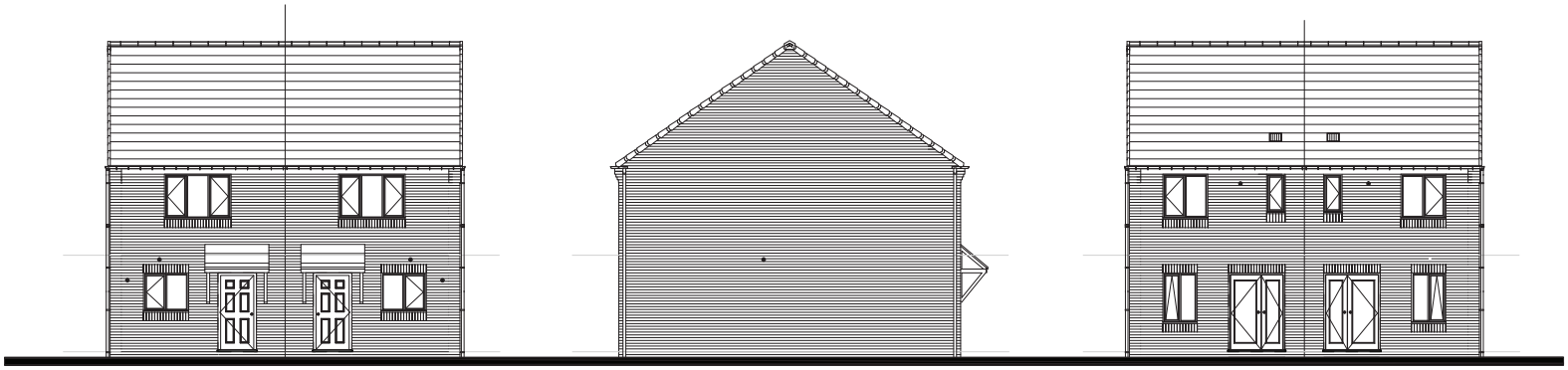
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-250-U-0001

Revision: C02

Notes

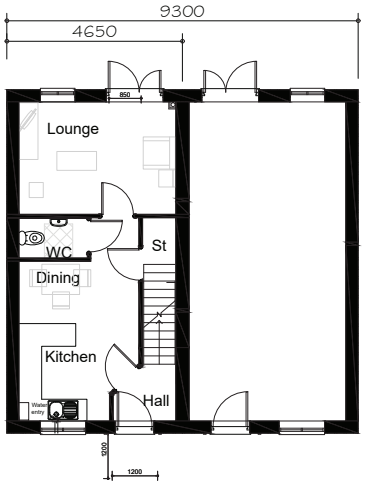
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.



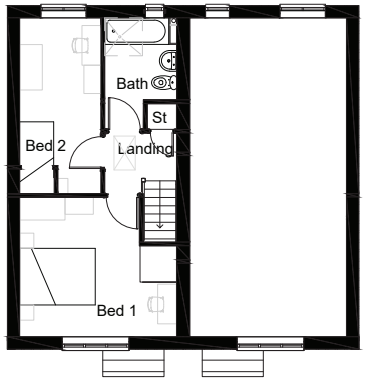
FRONT ELEVATION

SIDE ELEVATION

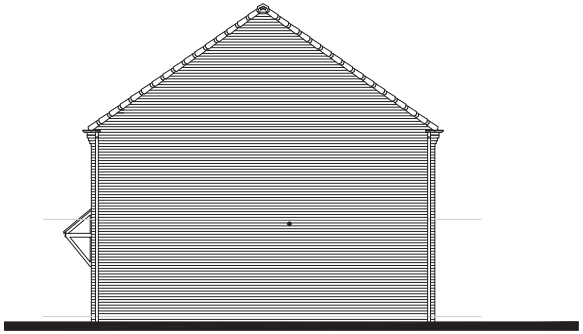
REAR ELEVATION



GROUND FLOOR PLAN

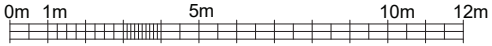


FIRST FLOOR PLAN



SIDE ELEVATION

FLOOR AREA
70.04m², 753ft²



C03	Lounge window changed	13.06.22
C02	FF bathroom window size and position updated	28.04.22
C01	Issued for construction	27.05.21
P01	Initial issue	20.04.21
Rev.	Comments	Date

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Project:
252 House Type
Urban

Title:
Planning Drawing

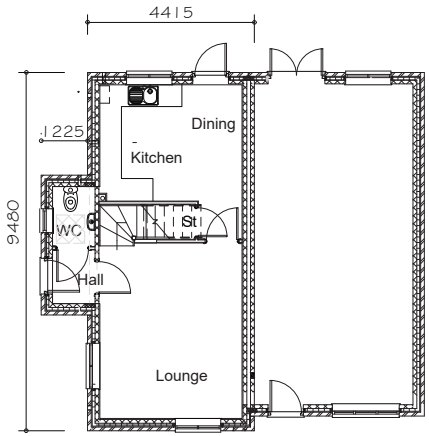
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-252-U-0001

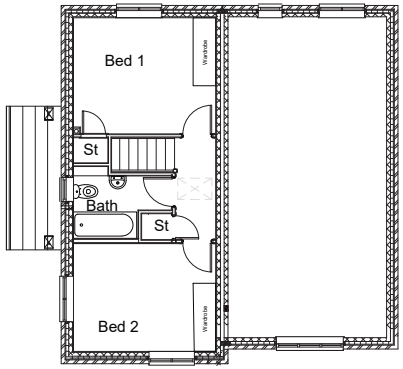
Revision: C03

Notes

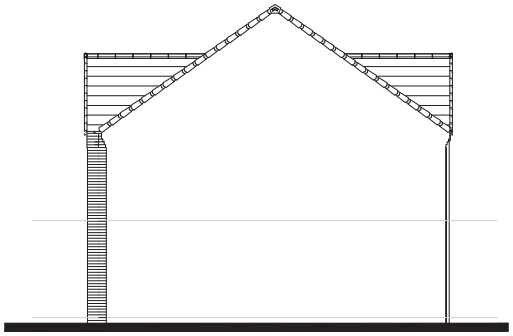
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SIDE ELEVATION

FLOOR AREA
70.01m², 753ft²

0m 1m 5m 10m 12m

C02	Rainwater goods added to front projecting elevations.	30.08.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Project:
253 House Type
Urban

Title:
Planning Drawing

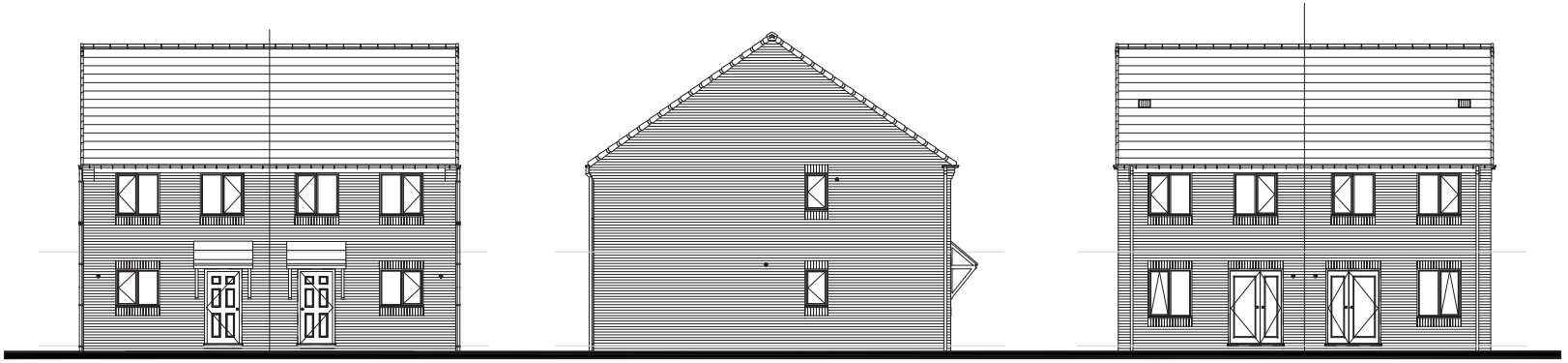
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-253-U-0001

Revision: C02

Notes

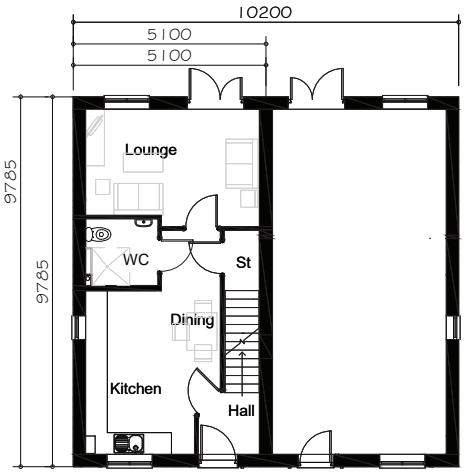
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.



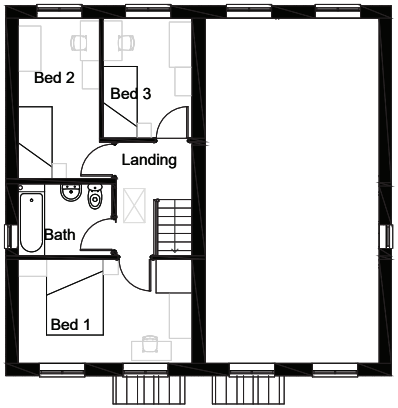
FRONT ELEVATION

SIDE ELEVATION

REAR ELEVATION



GROUND FLOOR PLAN



FIRST FLOOR PLAN

SIDE ELEVATION

FLOOR AREA
84.04m², 904ft²

0m 1m 5m 10m 12m

C03	Lounge window changed	13.06.22
C02	GF layout updated	31.05.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Project:
350 House Type
Urban

Title:
Planning Drawing

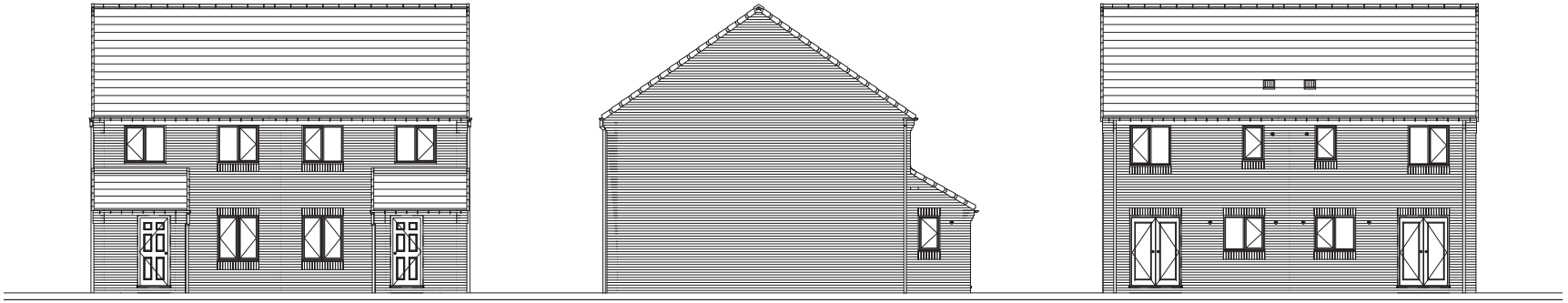
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-350-U-0001

Revision: C03

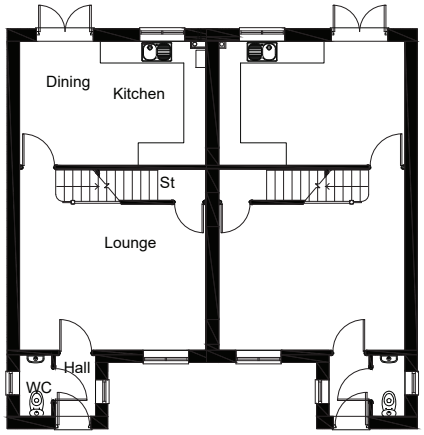
Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

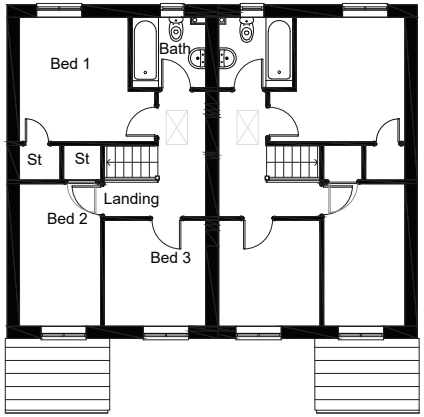


FRONT ELEVATION

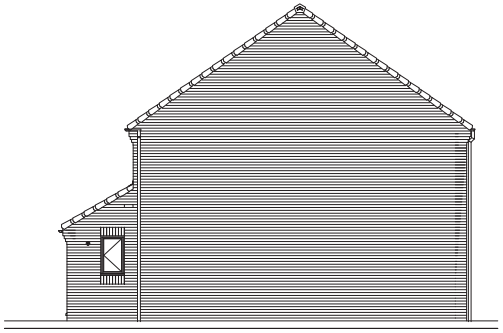
REAR ELEVATION



GROUND FLOOR PLAN

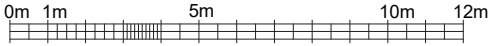


FIRST FLOOR PLAN



SIDE ELEVATION

FLOOR AREA
84.04m², 904ft²



C02	Lounge window altered to double opener type	22.06.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Project:
352 House Type
Urban

Title:
Planning Drawing

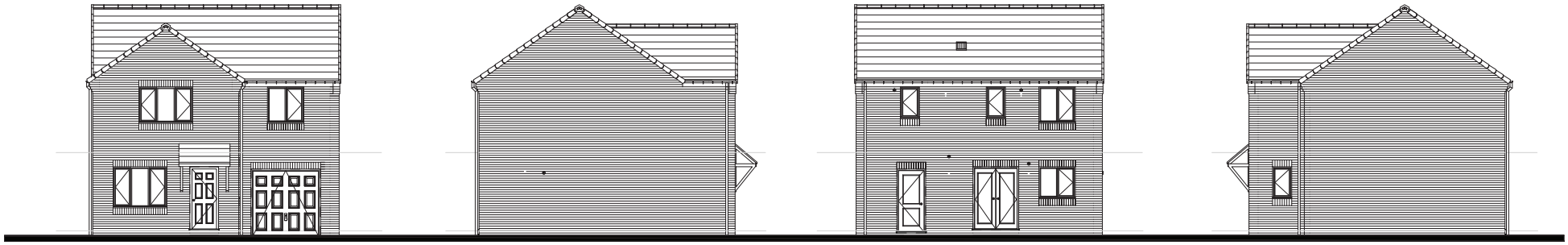
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-352-U-0001

Revision: C02

Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

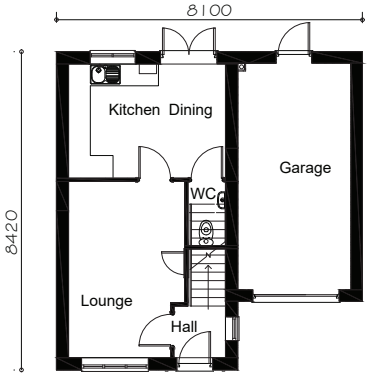


FRONT ELEVATION

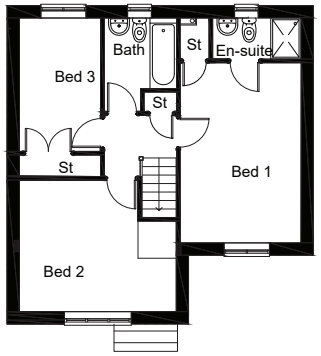
SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION

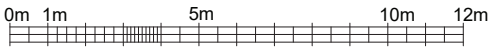


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
84.0m², 904ft²



Rev.	Comments	Date
C03	Personnel door position corrected	17.01.23
C02	Garage door style updated	20.06.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21

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Project:
354 House Type
Urban

Title:
Planning Drawing

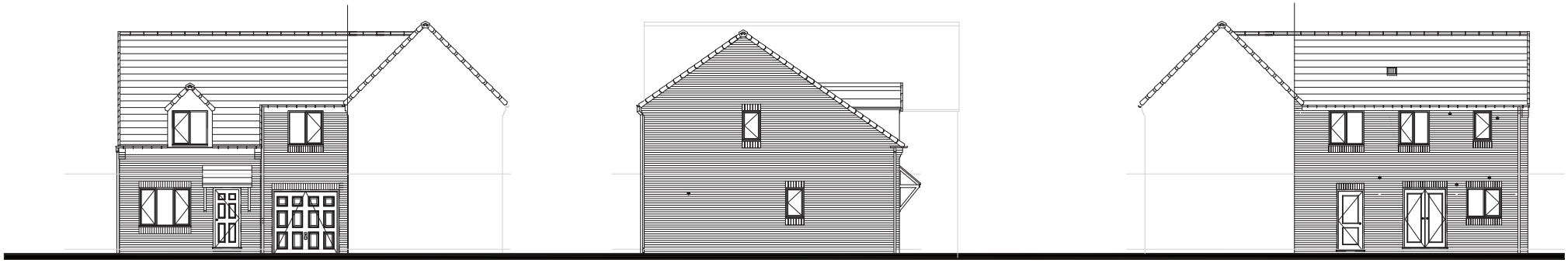
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-354-U-0001

Revision: C04

Notes

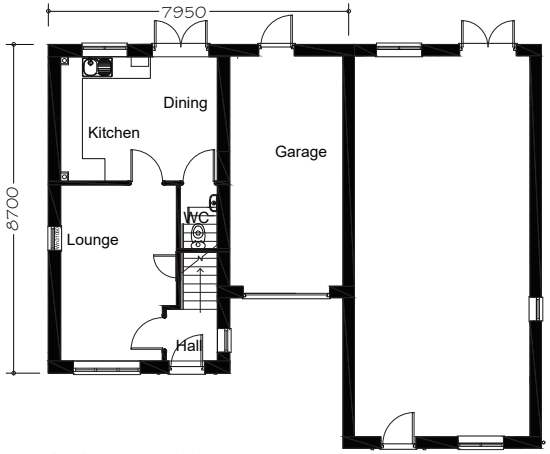
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.



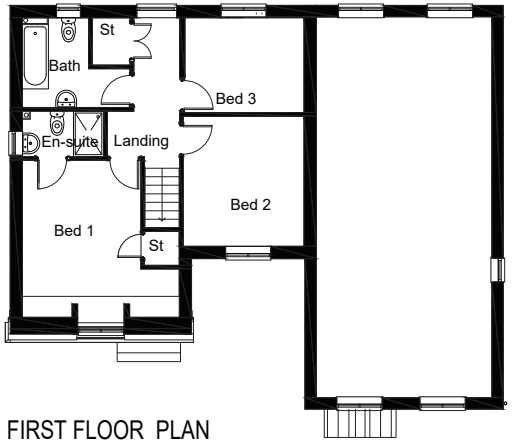
FRONT ELEVATION

SIDE ELEVATION

REAR ELEVATION

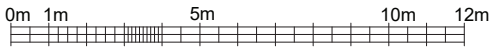


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
84.00m², 904ft²



Rev.	Comments	Date
C04	Personnel door position corrected	17.01.23
C03	Garage door style updated	20.06.22
C02	o/a plot width dim corrected	27.05.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21

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Project:
355 House Type
Urban

Title:
Planning Drawing

Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-355-U-0001

Revision: C04

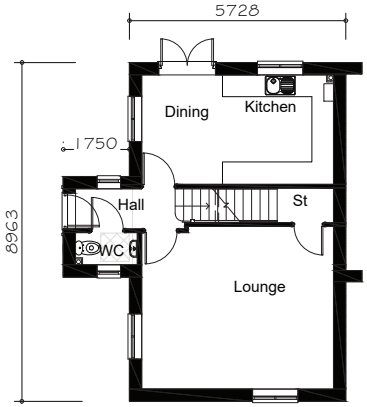
Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

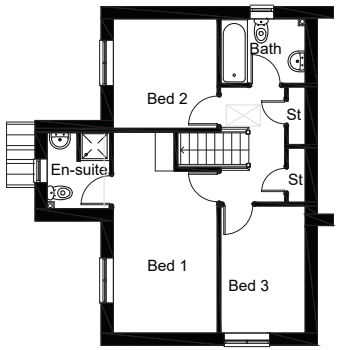
SIDE ELEVATION

FRONT ELEVATION

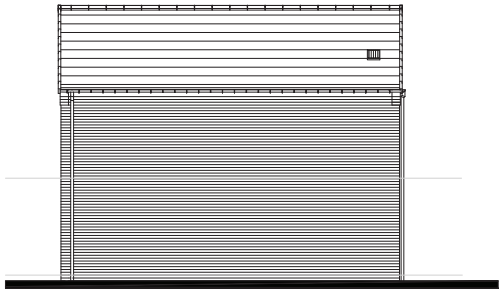
REAR ELEVATION



GROUND FLOOR PLAN



FIRST FLOOR PLAN



Elevation when detached

SIDE ELEVATION

FLOOR AREA
91.44m², 984ft²

0m 1m 5m 10m 12m

C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Project:
358/9 House Type
Urban

Title:
Planning Drawing

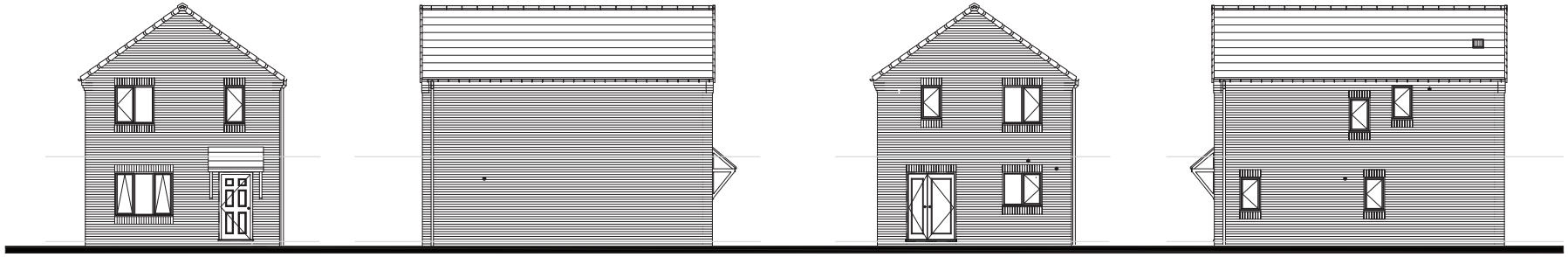
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-358/9-U-0001

Revision: C01

Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

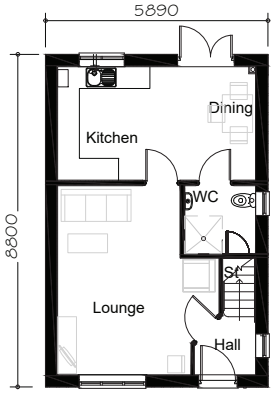


FRONT ELEVATION

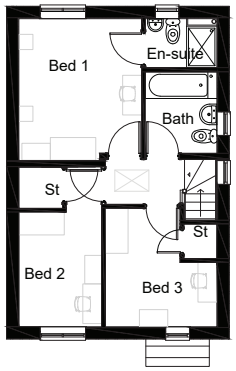
SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION

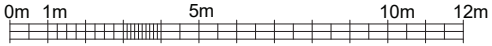


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
85.4m², 919ft²



C03	Half landing replaced with a kitewinder, WC window moved.	07.11.22
C02	Lounge window changed	13.06.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Project:
360 House Type
Urban

Title:
Planning Drawing

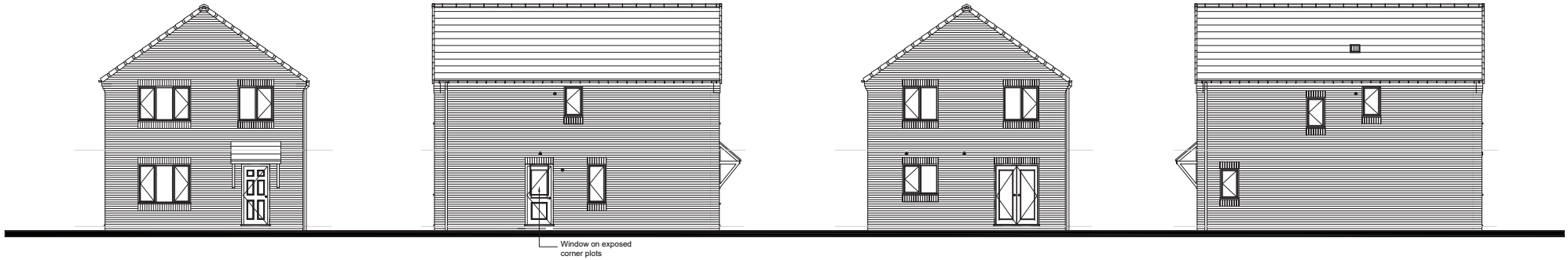
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-360-U-0001

Revision: C03

Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

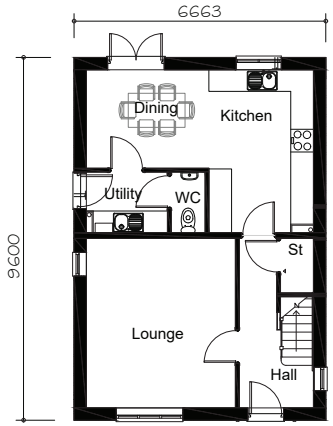


FRONT ELEVATION

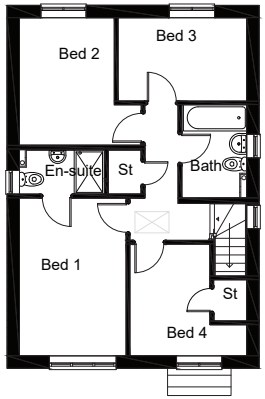
SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION

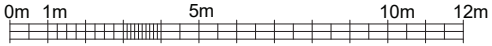


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
107.40m², 1156ft²



C02	Half landing replaced with a kitewinder stair, stair window moved, bathroom wall extended.	07.11.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

gleeson

Gleeson Homes (Head Office)
Unit 5, Europa Court | Sheffield Business Park | Sheffield |
South Yorkshire | S9 1XE

01142 612900

www.gleesonhomes.co.uk

Project:
450 House Type
Urban

Title:
Planning Drawing

Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-450-U-0001

Revision: C02

Notes

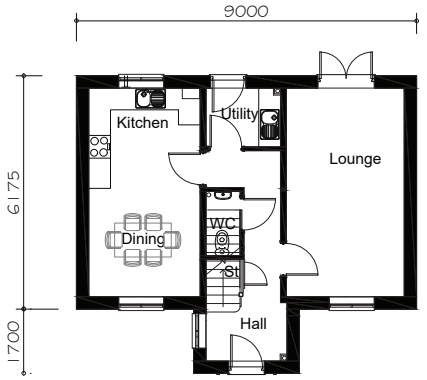
Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

FRONT ELEVATION

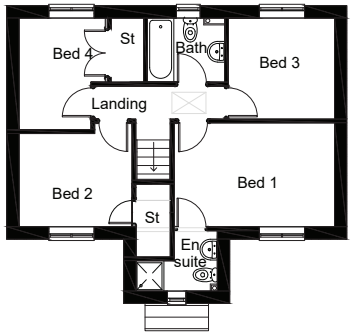
SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION

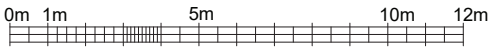


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
99.58m², 1071ft²



C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

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Unit 5, Europa Court | Sheffield Business Park | Sheffield |
South Yorkshire | S9 1XE

01142 612900

www.gleesonhomes.co.uk

Project:
451 House Type
Urban

Title:
Planning Drawing

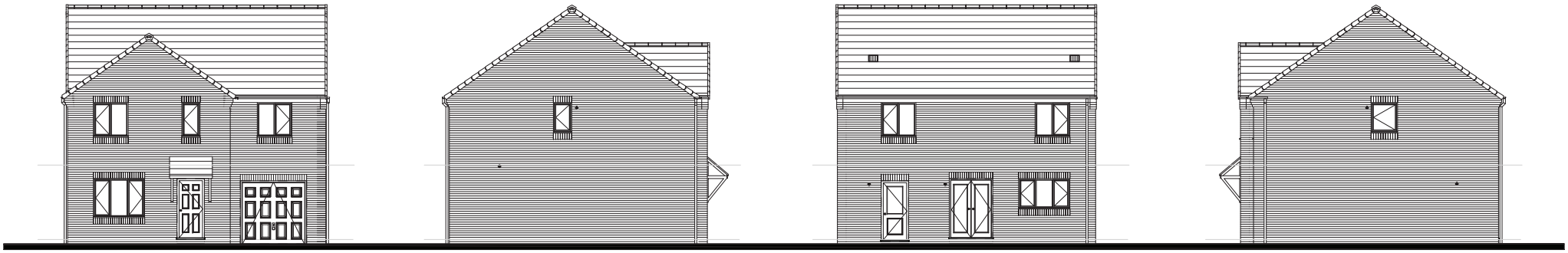
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

Drawing No: 21-451-U-0001

Revision: C01

Notes

Do not scale from this drawing. If in need of further detail, refer back to the Technical Department.

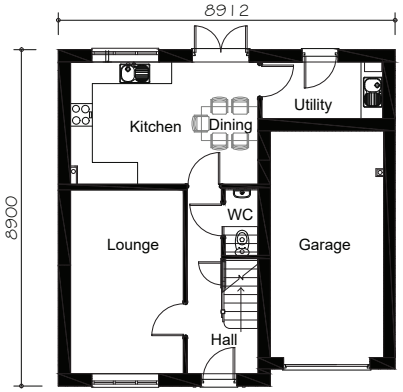


FRONT ELEVATION

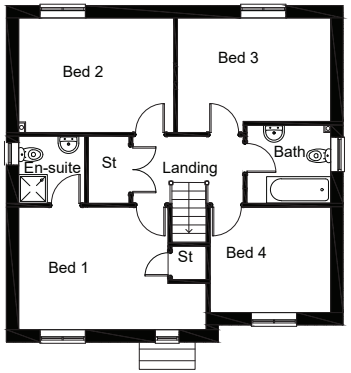
SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION

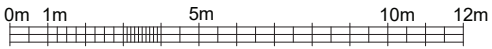


GROUND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR AREA
112.55m², 1211ft



C03	Personnel door position corrected	17.01.23
C02	Garage door style changed	20.06.22
C01	Issued for construction	27.05.21
P01	Initial issue	22.04.21
Rev.	Comments	Date

gleeson

Gleeson Homes (Head Office)
Unit 5, Europa Court | Sheffield Business Park | Sheffield |
South Yorkshire | S9 1XE

01142 612900

www.gleesonhomes.co.uk

Project:
452 House Type
Urban

Title:
Planning Drawing

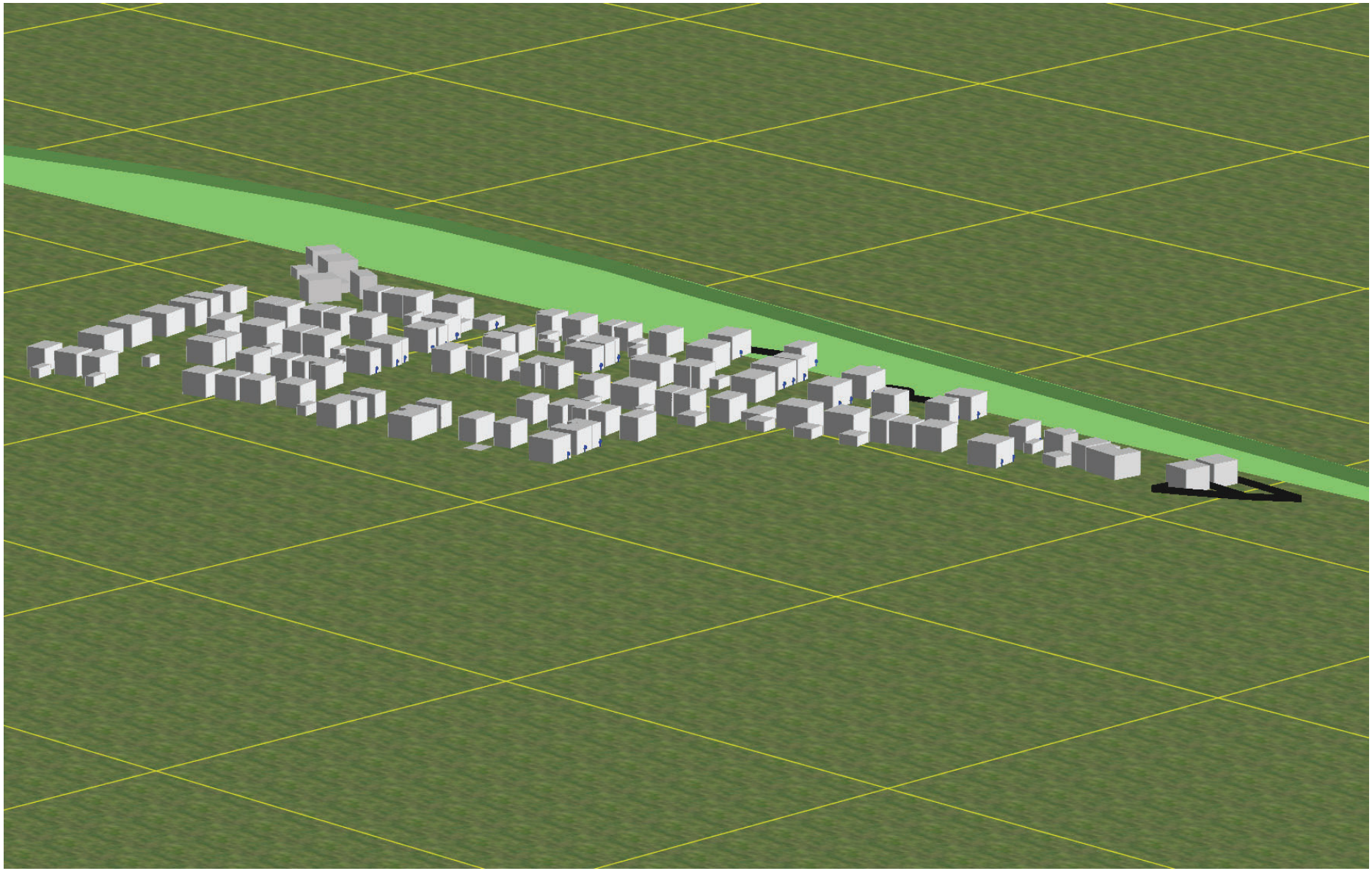
Scale:	Date:	Drawn:	Checked:
1:100 @ A2	22.04.21	OS	GE

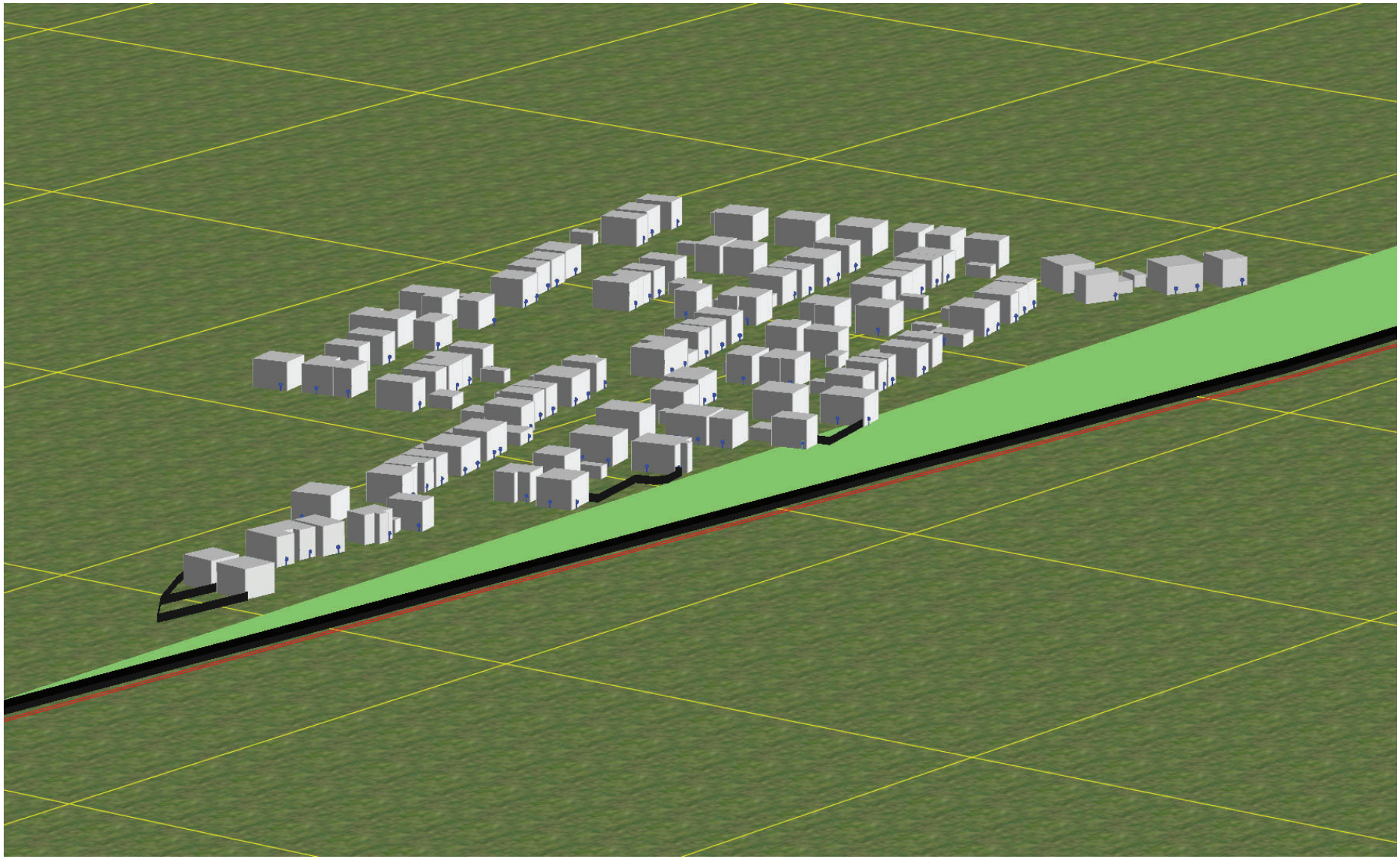
Drawing No: 21-452-U-0001

Revision: C03

APPENDIX C

Computer Noise Prediction Model





Report: Table of Results
Model: Daytime LAeq,16hr - Living Rooms - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 89	1.50	46	34	34	31	41	44	33	15	2
_A	Plot 69	1.50	46	34	34	31	40	43	32	14	1
_A	Plot 95	1.50	46	34	34	31	40	43	32	15	2
_A	Plot 94	1.50	46	33	33	29	40	43	32	13	--
_A	Plot 92	1.50	45	32	32	30	40	43	32	13	--
_A	Plot 92	1.50	45	32	32	30	40	43	32	13	--
_A	Plot 90	1.50	45	33	33	29	39	42	32	13	1
_A	Plot 81	1.50	45	33	33	30	39	42	31	14	2
_A	Plot 55	1.50	45	32	32	29	39	42	31	11	--
_A	Plot 82	1.50	44	32	32	28	38	42	31	13	0
_A	Plot 54	1.50	44	32	32	29	39	41	30	11	--
_A	Plot 87	1.50	44	32	32	29	38	41	30	12	--
_A	Plot 56	1.50	44	32	32	29	38	41	30	11	--
_A	Plot 57	1.50	44	32	32	29	38	41	30	11	--
_A	Plot 58	1.50	44	32	32	29	38	41	29	10	--
_A	Plot 93	1.50	44	32	31	29	38	41	30	12	--
_A	Plot 53	1.50	43	32	32	29	38	41	29	10	--
_A	Plot 88	1.50	43	32	31	28	38	41	30	12	--
_A	Plot 91	1.50	43	31	31	28	38	41	30	11	--
_A	Plot 52	1.50	43	32	32	28	38	40	29	10	--
_A	Plot 96	1.50	43	31	31	28	37	40	29	12	--
_A	Plot 44	1.50	43	31	31	28	37	40	28	9	--
_A	Plot 45	1.50	42	31	31	28	37	40	28	9	--
_A	Plot 51	1.50	42	31	31	28	37	40	28	9	--
_A	Plot 46	1.50	42	31	31	28	37	39	28	9	--
_A	Plot 59	1.50	42	29	29	26	36	39	28	9	--
_A	Plot 86	1.50	42	30	30	27	36	39	28	9	--
_A	Plot 47	1.50	42	31	30	27	36	39	27	8	--
_A	Plot 80	1.50	42	31	30	27	36	39	28	11	--
_A	Plot 48	1.50	42	30	30	27	36	39	27	8	--
_A	Plot 34	1.50	41	27	27	25	35	39	28	6	--
_A	Plot 32	1.50	40	25	26	24	34	38	27	5	--
_A	Plot 49	1.50	40	27	27	24	35	38	27	6	--
_A	Plot 37	1.50	40	27	27	24	34	38	27	5	--
_A	Plot 79	1.50	40	29	29	26	35	37	27	10	--
_A	Plot 38	1.50	40	27	26	24	34	38	27	5	--
_A	Plot 99	1.50	40	30	29	25	35	37	26	8	--
_A	Plot 100	1.50	40	30	29	25	35	37	26	8	--
_A	Plot 78	1.50	40	29	29	25	34	37	26	9	--
_A	Plot 71	1.50	40	28	28	25	34	37	26	8	--

All shown dB values are A-weighted

Report: Table of Results
Model: Daytime LAeq,16hr - Living Rooms - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 101	1.50	40	29	29	25	34	37	25	8	--
_A	Plot 26	1.50	40	24	24	22	33	38	27	4	--
_A	Plot 50	1.50	39	27	26	23	33	37	26	6	--
_A	Plot 43	1.50	39	29	28	25	34	36	26	7	--
_A	Plot 103	1.50	39	28	27	24	33	37	25	7	--
_A	Plot 102	1.50	39	29	28	24	33	36	25	7	--
_A	Plot 83	1.50	39	29	28	24	33	36	26	8	--
_A	Plot 70	1.50	39	30	28	24	33	36	25	8	--
_A	Plot 72	1.50	39	27	27	24	33	36	25	8	--
_A	Plot 28	1.50	39	25	25	22	33	36	25	3	--
_A	Plot 29	1.50	39	25	25	22	33	36	25	3	--
_A	Plot 36	1.50	39	27	27	24	33	36	25	4	--
_A	Plot 27	1.50	39	25	24	22	33	37	25	2	--
_A	Plot 75	1.50	39	28	27	24	33	36	25	7	--
_A	Plot 104	1.50	39	28	27	23	33	36	24	6	--
_A	Plot 106	1.50	38	28	27	23	33	36	24	6	--
_A	Plot 105	1.50	38	28	27	23	33	36	24	6	--
_A	Plot 30	1.50	38	25	24	21	32	36	25	3	--
_A	Plot 60	1.50	38	27	26	23	33	36	25	6	--
_A	Plot 68	1.50	38	28	26	23	33	35	24	7	--
_A	Plot 84	1.50	38	28	27	23	32	35	25	8	--
_A	Plot 35	1.50	38	27	26	23	33	35	23	4	--
_A	Plot 85	1.50	38	27	27	23	33	35	25	8	--
_A	Plot 74	1.50	38	28	26	23	32	35	25	6	--
_A	Plot 73	1.50	38	28	26	23	32	35	24	6	--
_A	Plot 42	1.50	37	26	26	22	31	35	23	5	--
_A	Plot 31	1.50	37	23	23	20	31	35	25	3	--
_A	Plot 77	1.50	37	26	25	22	32	34	24	6	--
_A	Plot 61	1.50	37	26	25	22	31	34	23	5	--
_A	Plot 107	1.50	37	27	26	22	31	34	23	5	--
_A	Plot 76	1.50	37	26	25	21	31	34	23	6	--
_A	Plot 24	1.50	37	24	23	20	30	35	24	0	--
_A	Plot 67	1.50	37	26	25	20	31	34	23	5	--
_A	Plot 97	1.50	37	27	25	21	31	33	23	7	--
_A	Plot 111	1.50	37	27	25	22	31	33	22	3	--
_A	Plot 110	1.50	36	27	25	21	31	33	22	3	--
_A	Plot 112	1.50	36	26	25	22	31	33	22	3	--
_A	Plot 66	1.50	36	27	25	21	30	33	22	3	--
_A	Plot 62	1.50	36	26	25	21	30	33	22	2	--
_A	Plot 39	1.50	36	26	25	22	31	33	22	3	--

All shown dB values are A-weighted

Report: Table of Results
Model: Daytime LAeq,16hr - Living Rooms - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 109	1.50	36	27	25	21	30	33	21	3	--
_A	Plot 41	1.50	36	26	24	21	30	33	22	4	--
_A	Plot 108	1.50	36	27	25	21	30	33	21	3	--
_A	Plot 65	1.50	36	26	25	21	30	33	21	2	--
_A	Plot 98	1.50	36	26	24	20	30	33	22	6	--
_A	Plot 64	1.50	35	26	25	21	30	32	21	2	--
_A	Plot 116	1.50	35	25	24	20	30	32	20	0	--
_A	Plot 25	1.50	35	25	24	21	30	32	20	--	--
_A	Plot 63	1.50	35	26	25	20	29	32	20	1	--
_A	Plot 40	1.50	35	25	24	20	29	32	21	3	--
_A	Plot 117	1.50	35	25	24	20	29	32	20	1	--
_A	Plot 33	1.50	35	24	23	20	30	32	21	1	--
_A	Plot 113	1.50	35	25	24	20	29	32	20	--	--
_A	Plot 115	1.50	35	25	24	20	29	32	20	0	--
_A	Plot 15	1.50	35	25	24	20	29	32	21	2	--
_A	Plot 123	1.50	35	25	24	20	29	32	19	--	--
_A	Plot 20	1.50	35	25	24	20	29	32	21	0	--
_A	Plot 3	1.50	35	25	24	20	29	31	19	--	--
_A	Plot 19	1.50	35	25	24	20	29	31	20	0	--
_A	Plot 114	1.50	34	25	24	20	29	31	19	0	--
_A	Plot 16	1.50	34	25	24	20	29	31	20	0	--
_A	Plot 122	1.50	34	24	23	19	29	31	19	--	--
_A	Plot 12	1.50	34	24	23	19	29	31	19	--	--
_A	Plot 17	1.50	34	25	23	19	28	31	20	0	--
_A	Plot 13	1.50	34	24	23	19	29	31	20	0	--
_A	Plot 18	1.50	34	25	23	19	28	31	20	--	--
_A	Plot 10	1.50	34	24	23	19	28	31	19	--	--
_A	Plot 14	1.50	34	24	23	19	28	31	20	1	--
_A	Plot 11	1.50	34	24	23	19	28	31	19	--	--
_A	Plot 23	1.50	34	24	22	18	28	31	20	--	--
_A	Plot 121	1.50	34	24	22	18	28	31	19	--	--
_A	Plot 9	1.50	34	24	22	19	28	30	18	--	--
_A	Plot 22	1.50	33	22	20	17	27	31	22	--	--
_A	Plot 118	1.50	33	24	22	19	27	30	19	--	--
_A	Plot 119	1.50	33	24	22	18	27	30	19	--	--
_A	Plot 4	1.50	33	24	23	19	27	29	17	--	--
_A	Plot 120	1.50	33	23	22	18	27	30	18	--	--
_A	Plot 7	1.50	33	24	23	18	27	29	17	--	--
_A	Plot 5	1.50	33	24	23	18	27	29	17	--	--
_A	Plot 8	1.50	33	24	22	18	27	29	17	--	--

All shown dB values are A-weighted

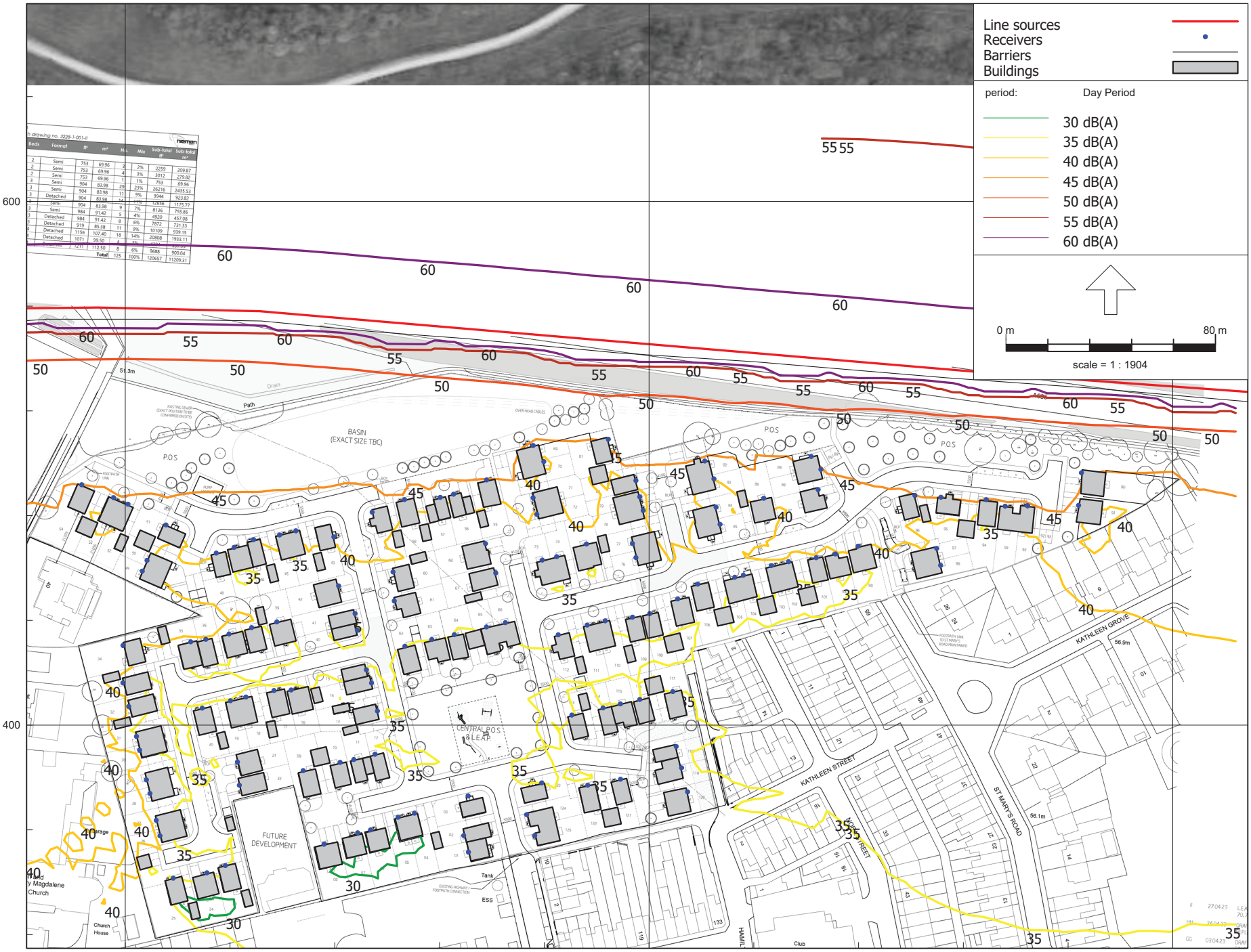
Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Living Rooms

Report:	Table of Results
Model:	Daytime LAeq,16hr - Living Rooms - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 6	1.50	32	24	22	18	27	29	17	--	--
_A	Plot 21	1.50	32	22	20	17	26	29	18	--	--
_A	Plot 2	1.50	32	22	20	17	26	28	17	--	--
_A	Plot 124	1.50	32	22	21	16	26	28	17	--	--
_A	Plot 1	1.50	31	21	20	16	25	28	16	--	--
_A	Plot 125	1.50	31	21	20	15	25	28	16	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Living Rooms



Industrial noise - LimA - ISO 9613.1/2, [version of 20444 - Lockwood Road, Goldthorpe, Barnsley (May 2023) - Daytime LAeq,16hr - Living Rooms - Rev 3 (May 2023)] , Predictor V2021.1 Licensed to Spectrum Acoustics, UK

Spectrum Acoustics, UK

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Bedrooms

Report:	Table of Results
Model:	Daytime LAeq,16hr - Bedrooms - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 89	4.50	46	34	34	31	41	44	33	14	1
_A	Plot 69	4.50	46	33	34	31	40	43	32	14	0
_A	Plot 82	4.50	46	33	33	30	40	43	32	14	1
_A	Plot 94	4.50	46	32	32	29	40	43	32	13	--
_A	Plot 95	4.50	46	32	32	30	40	43	32	14	1
_A	Plot 81	4.50	45	33	33	30	40	43	32	14	1
_A	Plot 92	4.50	45	32	32	30	40	43	32	12	--
_A	Plot 92	4.50	45	32	32	30	40	43	32	12	--
_A	Plot 90	4.50	45	33	32	29	39	42	32	13	1
_A	Plot 55	4.50	44	31	32	29	39	42	30	11	--
_A	Plot 86	4.50	44	31	31	29	38	41	30	11	--
_A	Plot 54	4.50	44	31	31	28	38	41	30	10	--
_A	Plot 56	4.50	44	31	31	28	38	41	30	10	--
_A	Plot 93	4.50	44	31	31	29	38	41	30	11	--
_A	Plot 87	4.50	43	30	29	28	38	41	30	12	--
_A	Plot 57	4.50	43	31	31	28	38	41	29	10	--
_A	Plot 88	4.50	43	32	31	28	38	41	30	12	--
_A	Plot 91	4.50	43	31	31	28	37	40	29	11	--
_A	Plot 58	4.50	43	31	31	28	37	40	29	10	--
_A	Plot 53	4.50	43	31	31	28	37	40	29	9	--
_A	Plot 96	4.50	43	31	31	28	37	40	29	11	--
_A	Plot 52	4.50	43	30	31	28	37	40	28	9	--
_A	Plot 43	4.50	42	30	30	27	37	39	28	8	--
_A	Plot 70	4.50	42	31	31	27	37	39	28	11	--
_A	Plot 83	4.50	42	31	30	27	36	39	28	10	--
_A	Plot 44	4.50	42	30	30	27	36	39	28	8	--
_A	Plot 45	4.50	42	30	30	27	36	39	27	8	--
_A	Plot 51	4.50	42	30	30	27	36	39	27	8	--
_A	Plot 80	4.50	42	30	30	27	36	39	28	10	--
_A	Plot 46	4.50	41	30	30	27	36	39	27	8	--
_A	Plot 50	4.50	41	28	28	25	36	39	28	7	--
_A	Plot 59	4.50	41	29	28	26	35	39	28	8	--
_A	Plot 48	4.50	41	29	29	26	35	38	27	7	--
_A	Plot 47	4.50	41	29	29	26	35	38	27	7	--
_A	Plot 49	4.50	41	28	27	25	35	38	27	6	--
_A	Plot 99	4.50	41	29	29	26	35	38	26	7	--
_A	Plot 78	4.50	40	29	29	26	35	37	26	8	--
_A	Plot 79	4.50	40	29	29	26	35	37	27	9	--
_A	Plot 84	4.50	40	29	29	25	35	37	26	8	--
_A	Plot 100	4.50	40	29	29	25	35	37	26	7	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Bedrooms

Report:	Table of Results
Model:	Daytime LAeq,16hr - Bedrooms - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 35	4.50	40	27	27	24	35	38	26	4	--
_A	Plot 101	4.50	40	29	28	25	34	37	25	6	--
_A	Plot 36	4.50	40	27	27	24	34	37	26	4	--
_A	Plot 85	4.50	40	28	28	24	34	37	26	8	--
_A	Plot 71	4.50	40	28	28	25	34	37	26	7	--
_A	Plot 34	4.50	40	27	27	24	34	37	26	5	--
_A	Plot 103	4.50	39	28	27	24	34	37	25	6	--
_A	Plot 37	4.50	39	27	27	24	34	37	26	4	--
_A	Plot 75	4.50	39	29	28	25	34	36	25	6	--
_A	Plot 102	4.50	39	29	28	24	33	36	25	6	--
_A	Plot 38	4.50	39	27	27	23	33	37	25	3	--
_A	Plot 33	4.50	39	26	26	23	33	37	26	4	--
_A	Plot 68	4.50	39	27	26	24	34	36	25	6	--
_A	Plot 106	4.50	39	28	27	24	33	36	24	5	--
_A	Plot 39	4.50	39	27	26	24	33	36	25	3	--
_A	Plot 104	4.50	39	28	27	24	33	36	25	6	--
_A	Plot 32	4.50	39	26	26	23	33	36	26	4	--
_A	Plot 74	4.50	39	28	27	24	33	36	25	5	--
_A	Plot 72	4.50	39	28	27	24	33	36	25	7	--
_A	Plot 105	4.50	39	28	27	23	33	36	24	5	--
_A	Plot 73	4.50	39	28	27	23	33	36	24	5	--
_A	Plot 60	4.50	39	27	26	23	33	36	25	5	--
_A	Plot 31	4.50	39	26	26	23	33	36	25	3	--
_A	Plot 30	4.50	39	25	26	23	33	36	25	3	--
_A	Plot 29	4.50	38	25	25	22	32	36	25	2	--
_A	Plot 28	4.50	38	25	25	22	32	36	25	2	--
_A	Plot 26	4.50	38	25	25	22	32	36	25	2	--
_A	Plot 25	4.50	38	25	25	22	32	36	24	1	--
_A	Plot 27	4.50	38	25	25	22	32	36	25	2	--
_A	Plot 107	4.50	38	27	27	23	32	35	24	4	--
_A	Plot 97	4.50	38	27	26	22	32	35	24	6	--
_A	Plot 77	4.50	38	26	26	22	32	35	23	5	--
_A	Plot 42	4.50	37	26	26	23	32	34	23	4	--
_A	Plot 76	4.50	37	26	25	22	32	35	23	5	--
_A	Plot 61	4.50	37	26	25	22	32	34	23	3	--
_A	Plot 109	4.50	37	27	26	22	31	34	23	2	--
_A	Plot 66	4.50	37	27	26	22	31	34	22	2	--
_A	Plot 24	4.50	37	24	24	21	31	35	24	--	--
_A	Plot 111	4.50	37	27	25	22	32	34	22	2	--
_A	Plot 62	4.50	37	26	26	22	31	34	22	1	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Bedrooms

Report:	Table of Results
Model:	Daytime LAeq,16hr - Bedrooms - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 67	4.50	37	26	25	21	31	34	23	4	--
_A	Plot 112	4.50	37	26	25	22	32	34	22	1	--
_A	Plot 108	4.50	37	27	26	22	31	34	22	3	--
_A	Plot 110	4.50	37	27	26	22	31	34	22	2	--
_A	Plot 65	4.50	37	27	26	22	31	34	22	2	--
_A	Plot 41	4.50	37	26	24	22	31	34	22	3	--
_A	Plot 64	4.50	36	26	25	22	31	33	22	1	--
_A	Plot 63	4.50	36	26	25	21	30	34	22	1	--
_A	Plot 98	4.50	36	26	25	21	30	33	23	5	--
_A	Plot 40	4.50	36	25	24	20	30	33	22	2	--
_A	Plot 117	4.50	36	26	25	21	30	33	21	--	--
_A	Plot 19	4.50	36	25	24	21	30	33	21	--	--
_A	Plot 20	4.50	36	25	24	21	30	33	21	--	--
_A	Plot 16	4.50	36	25	24	21	30	33	21	--	--
_A	Plot 116	4.50	36	25	24	21	30	33	21	--	--
_A	Plot 17	4.50	36	25	24	20	30	33	21	--	--
_A	Plot 113	4.50	36	25	24	21	30	33	20	--	--
_A	Plot 3	4.50	36	24	24	21	30	33	20	--	--
_A	Plot 22	4.50	36	23	22	20	30	33	22	--	--
_A	Plot 18	4.50	35	25	24	20	30	32	21	--	--
_A	Plot 115	4.50	35	25	24	20	29	32	20	--	--
_A	Plot 114	4.50	35	25	24	20	29	32	20	--	--
_A	Plot 123	4.50	35	25	24	20	30	32	20	--	--
_A	Plot 10	4.50	35	25	24	20	29	32	20	--	--
_A	Plot 23	4.50	35	24	23	20	29	32	20	--	--
_A	Plot 12	4.50	35	25	24	20	29	32	20	--	--
_A	Plot 11	4.50	35	25	24	20	29	32	20	--	--
_A	Plot 122	4.50	35	24	23	20	29	32	19	--	--
_A	Plot 15	4.50	35	24	23	20	28	32	21	1	--
_A	Plot 121	4.50	34	24	23	19	28	32	19	--	--
_A	Plot 9	4.50	34	24	23	20	29	31	19	--	--
_A	Plot 14	4.50	34	24	23	20	29	31	20	0	--
_A	Plot 13	4.50	34	24	23	19	29	31	19	--	--
_A	Plot 4	4.50	34	24	23	19	28	31	18	--	--
_A	Plot 7	4.50	34	24	23	19	28	31	19	--	--
_A	Plot 8	4.50	34	24	23	19	28	31	19	--	--
_A	Plot 5	4.50	34	24	23	19	28	30	18	--	--
_A	Plot 6	4.50	34	24	23	19	28	30	18	--	--
_A	Plot 21	4.50	34	23	22	19	28	31	19	--	--
_A	Plot 118	4.50	33	24	22	19	27	30	18	--	--

All shown dB values are A-weighted

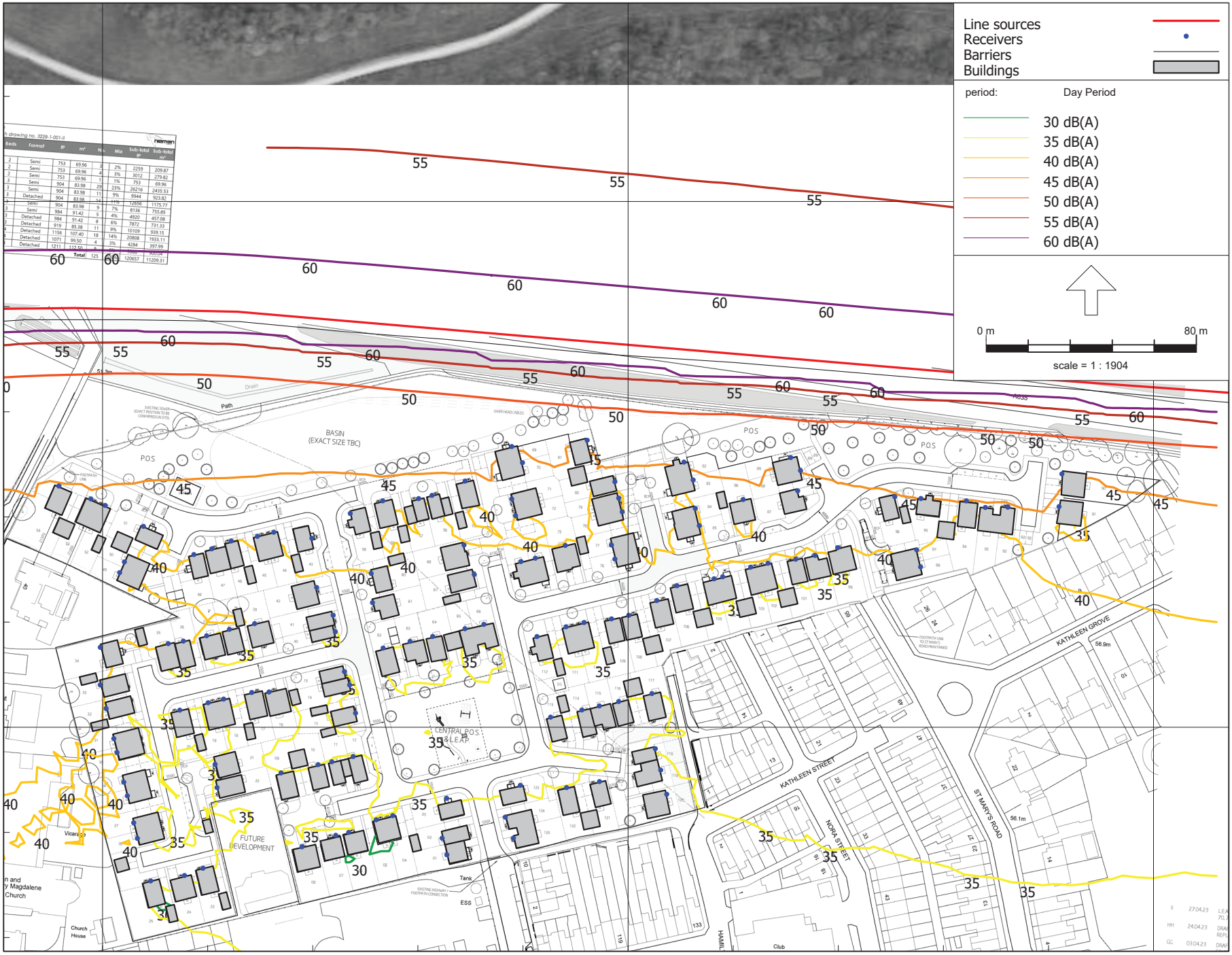
Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Bedrooms

Report: Table of Results
Model: Daytime LAeq,16hr - Bedrooms - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 119	4.50	33	23	22	18	27	30	18	--	--
_A	Plot 120	4.50	33	23	22	18	27	29	18	--	--
_A	Plot 124	4.50	32	23	22	18	27	29	17	--	--
_A	Plot 2	4.50	32	22	21	18	27	29	17	--	--
_A	Plot 1	4.50	32	22	21	17	27	29	17	--	--
_A	Plot 125	4.50	32	22	21	17	26	28	17	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Bedrooms



Industrial noise - LimA - ISO 9613.1/2, [version of 20444 - Lockwood Road, Goldthorpe, Barnsley (May 2023) - Daytime LAeq,16hr - Bedrooms - Rev 3 (May 2023)] , Predictor V2021.1 Licensed to Spectrum Acoustics, UK

Spectrum Acoustics, UK

Lockwood Road, Goldthorpe
Predicted LAeq,8hr - Night-time - Bedrooms

Report:	Table of Results
Model:	Night-time LAeq,8hr - Bedrooms - Rev 2 (May 22)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 89	4.50	44	32	32	26	39	41	30	8	--
_A	Plot 69	4.50	43	31	32	26	38	40	29	8	--
_A	Plot 82	4.50	43	31	31	25	38	40	29	8	--
_A	Plot 94	4.50	43	30	30	24	38	40	29	7	--
_A	Plot 95	4.50	43	30	30	25	38	40	29	8	--
_A	Plot 81	4.50	43	31	31	25	38	40	29	8	--
_A	Plot 92	4.50	42	30	30	25	38	40	28	6	--
_A	Plot 92	4.50	42	30	30	25	38	40	28	6	--
_A	Plot 90	4.50	42	31	30	24	37	39	29	7	--
_A	Plot 55	4.50	42	29	30	24	37	39	27	5	--
_A	Plot 86	4.50	41	29	29	24	36	38	27	5	--
_A	Plot 54	4.50	41	29	29	23	36	38	27	4	--
_A	Plot 56	4.50	41	29	29	23	36	38	26	4	--
_A	Plot 93	4.50	41	29	29	24	36	38	27	5	--
_A	Plot 87	4.50	41	28	27	23	36	38	27	6	--
_A	Plot 57	4.50	41	29	29	23	36	38	26	4	--
_A	Plot 88	4.50	41	30	29	23	36	38	27	6	--
_A	Plot 91	4.50	40	29	29	23	35	37	26	5	--
_A	Plot 58	4.50	40	29	29	23	35	37	26	4	--
_A	Plot 53	4.50	40	29	29	23	35	37	26	3	--
_A	Plot 96	4.50	40	29	29	23	35	37	26	5	--
_A	Plot 52	4.50	40	28	29	23	35	37	25	3	--
_A	Plot 43	4.50	40	28	28	22	35	36	25	2	--
_A	Plot 70	4.50	39	29	29	22	34	36	25	5	--
_A	Plot 83	4.50	39	29	28	22	34	36	25	4	--
_A	Plot 44	4.50	39	28	28	22	34	36	25	2	--
_A	Plot 45	4.50	39	28	28	22	34	36	24	2	--
_A	Plot 51	4.50	39	28	28	22	34	36	24	2	--
_A	Plot 80	4.50	39	28	28	22	34	36	25	4	--
_A	Plot 46	4.50	39	28	28	22	34	36	24	2	--
_A	Plot 50	4.50	39	26	26	20	34	36	25	1	--
_A	Plot 59	4.50	39	27	26	21	33	36	25	2	--
_A	Plot 48	4.50	38	27	27	21	33	35	24	1	--
_A	Plot 47	4.50	38	27	27	21	33	35	23	1	--
_A	Plot 49	4.50	38	26	25	20	33	35	24	0	--
_A	Plot 99	4.50	38	27	27	21	33	35	23	1	--
_A	Plot 78	4.50	38	27	27	21	33	34	23	2	--
_A	Plot 79	4.50	38	27	27	21	33	34	24	3	--
_A	Plot 100	4.50	38	27	27	20	33	34	23	1	--
_A	Plot 84	4.50	38	27	27	20	33	34	23	2	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,8hr - Night-time - Bedrooms

Report:	Table of Results
Model:	Night-time LAeq,8hr - Bedrooms - Rev 2 (May 22)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 35	4.50	38	25	25	19	33	35	23	--	--
_A	Plot 101	4.50	37	27	26	20	32	34	22	0	--
_A	Plot 85	4.50	37	26	26	19	32	34	23	2	--
_A	Plot 36	4.50	37	25	25	19	32	34	23	--	--
_A	Plot 71	4.50	37	26	26	20	32	34	23	1	--
_A	Plot 34	4.50	37	25	25	19	32	34	23	--	--
_A	Plot 103	4.50	37	26	25	19	32	34	22	0	--
_A	Plot 37	4.50	37	25	25	19	32	34	23	--	--
_A	Plot 75	4.50	37	26	26	20	32	33	22	0	--
_A	Plot 102	4.50	37	27	26	19	31	33	22	0	--
_A	Plot 38	4.50	37	25	25	18	31	34	22	--	--
_A	Plot 68	4.50	37	25	24	19	32	33	22	0	--
_A	Plot 33	4.50	36	24	24	18	31	34	23	--	--
_A	Plot 106	4.50	36	26	25	19	31	33	21	--	--
_A	Plot 104	4.50	36	26	25	19	31	33	22	--	--
_A	Plot 39	4.50	36	25	24	19	31	33	22	--	--
_A	Plot 32	4.50	36	24	24	18	31	33	23	--	--
_A	Plot 74	4.50	36	26	25	19	31	33	22	--	--
_A	Plot 72	4.50	36	26	25	19	31	33	22	1	--
_A	Plot 105	4.50	36	26	25	18	31	33	21	--	--
_A	Plot 73	4.50	36	26	25	18	31	33	21	--	--
_A	Plot 60	4.50	36	25	24	18	31	33	22	--	--
_A	Plot 31	4.50	36	24	24	18	31	33	22	--	--
_A	Plot 30	4.50	36	23	24	18	31	33	22	--	--
_A	Plot 29	4.50	36	23	23	17	30	33	22	--	--
_A	Plot 28	4.50	36	23	23	17	30	33	22	--	--
_A	Plot 26	4.50	35	23	23	17	30	33	22	--	--
_A	Plot 25	4.50	35	23	23	17	30	33	21	--	--
_A	Plot 27	4.50	35	23	23	17	30	33	22	--	--
_A	Plot 107	4.50	35	25	25	18	30	32	21	--	--
_A	Plot 97	4.50	35	25	24	17	30	32	21	0	--
_A	Plot 77	4.50	35	24	24	17	30	32	20	--	--
_A	Plot 42	4.50	35	24	24	18	30	31	20	--	--
_A	Plot 76	4.50	35	24	23	17	30	32	20	--	--
_A	Plot 61	4.50	35	24	23	17	30	31	20	--	--
_A	Plot 109	4.50	35	25	24	17	29	31	20	--	--
_A	Plot 66	4.50	35	25	24	17	29	31	19	--	--
_A	Plot 111	4.50	35	24	23	17	30	31	19	--	--
_A	Plot 24	4.50	34	22	22	16	29	32	21	--	--
_A	Plot 67	4.50	34	24	23	16	29	31	20	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,8hr - Night-time - Bedrooms

Report:	Table of Results
Model:	Night-time LAeq,8hr - Bedrooms - Rev 2 (May 22)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 62	4.50	34	24	24	17	29	31	19	--	--
_A	Plot 112	4.50	34	24	23	17	30	31	19	--	--
_A	Plot 108	4.50	34	25	24	17	29	31	19	--	--
_A	Plot 110	4.50	34	25	23	17	29	31	19	--	--
_A	Plot 65	4.50	34	24	24	17	29	31	19	--	--
_A	Plot 41	4.50	34	23	22	17	29	31	19	--	--
_A	Plot 64	4.50	34	24	23	17	29	30	19	--	--
_A	Plot 63	4.50	34	24	23	16	28	31	19	--	--
_A	Plot 98	4.50	34	24	23	16	28	30	20	--	--
_A	Plot 40	4.50	33	23	22	15	28	30	19	--	--
_A	Plot 117	4.50	33	24	23	16	28	30	18	--	--
_A	Plot 19	4.50	33	23	22	16	28	30	18	--	--
_A	Plot 20	4.50	33	23	22	16	28	30	18	--	--
_A	Plot 16	4.50	33	23	22	16	28	30	18	--	--
_A	Plot 116	4.50	33	23	22	16	28	30	18	--	--
_A	Plot 17	4.50	33	23	22	15	28	30	18	--	--
_A	Plot 113	4.50	33	23	22	16	28	30	17	--	--
_A	Plot 3	4.50	33	22	22	16	28	29	17	--	--
_A	Plot 18	4.50	33	23	22	15	28	29	18	--	--
_A	Plot 22	4.50	33	21	20	15	28	30	19	--	--
_A	Plot 115	4.50	33	23	22	15	27	29	17	--	--
_A	Plot 114	4.50	33	23	22	15	27	29	17	--	--
_A	Plot 123	4.50	33	23	22	15	28	29	17	--	--
_A	Plot 10	4.50	32	23	22	15	27	29	17	--	--
_A	Plot 12	4.50	32	23	22	15	27	29	17	--	--
_A	Plot 11	4.50	32	23	22	15	27	29	17	--	--
_A	Plot 23	4.50	32	22	21	14	27	29	17	--	--
_A	Plot 122	4.50	32	22	21	14	27	29	16	--	--
_A	Plot 15	4.50	32	22	21	15	26	29	18	--	--
_A	Plot 121	4.50	32	22	21	14	26	29	16	--	--
_A	Plot 9	4.50	32	22	21	15	27	28	16	--	--
_A	Plot 14	4.50	32	22	21	15	27	28	17	--	--
_A	Plot 13	4.50	32	22	21	14	27	28	16	--	--
_A	Plot 4	4.50	31	22	21	14	26	28	15	--	--
_A	Plot 7	4.50	31	22	21	14	26	28	16	--	--
_A	Plot 8	4.50	31	22	21	14	26	28	16	--	--
_A	Plot 5	4.50	31	22	21	14	26	27	15	--	--
_A	Plot 6	4.50	31	22	21	14	26	27	15	--	--
_A	Plot 21	4.50	31	21	20	14	26	28	16	--	--
_A	Plot 118	4.50	30	22	20	14	25	27	15	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,8hr - Night-time - Bedrooms

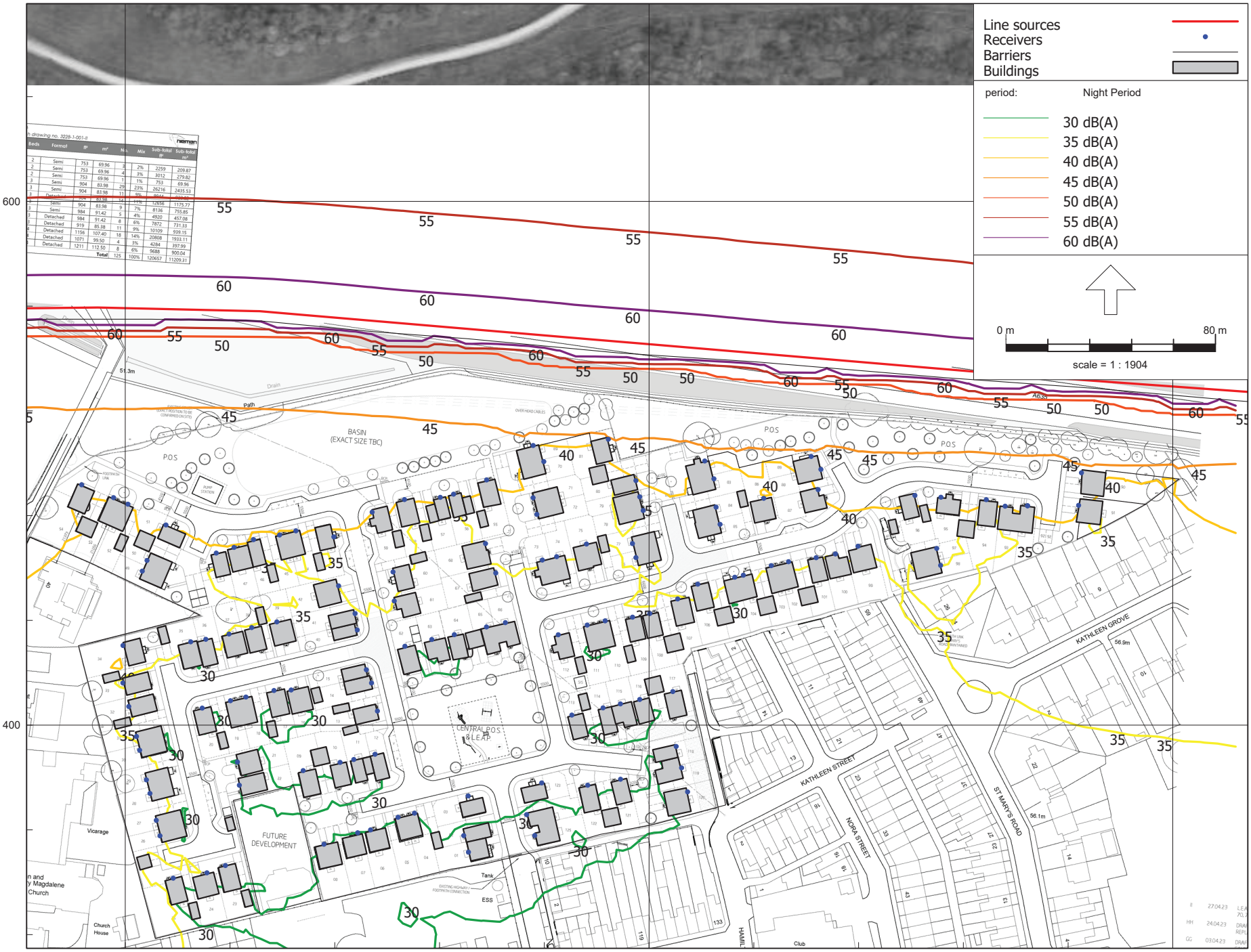
Report: Table of Results
Model: Night-time LAeq,8hr - Bedrooms - Rev 2 (May 22)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Night								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 119	4.50	30	21	20	13	25	27	15	--	--
_A	Plot 120	4.50	30	21	20	13	25	26	15	--	--
_A	Plot 124	4.50	30	21	20	13	25	26	14	--	--
_A	Plot 2	4.50	30	20	19	13	25	26	14	--	--
_A	Plot 1	4.50	30	20	19	12	25	26	14	--	--
_A	Plot 125	4.50	29	20	19	12	24	25	14	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe

Predicted LAeq,8hr - Night-time - Bedrooms



Industrial noise - LimA - ISO 9613.1/2, [version of 20444 - Lockwood Road, Goldthorpe, Barnsley (May 2023) - Night-time LAeq,8hr - Bedrooms - Rev 2 (May 22)] , Predictor V2021.1 Licensed to Spectrum Acoustics, UK

Spectrum Acoustics, UK

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 69

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 69
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 69	4.50	77	60	61	57	71	75	67	48	33
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	40	42	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	40	42	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	58	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	50	55	46	29	14
	A635 - LAFmax	0.50	57	40	41	36	50	55	46	29	14
	A635 - LAFmax	0.50	57	39	40	36	50	54	46	29	13

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 81

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 81
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 81	4.50	77	60	61	57	71	75	67	49	34
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	19
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	18
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	18
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	33	18
	A635 - LAFmax	0.50	60	42	44	40	54	58	50	32	18
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	18
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	18
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	18
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	18
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	41	43	38	52	57	48	31	17
	A635 - LAFmax	0.50	59	41	43	38	52	57	48	31	17
	A635 - LAFmax	0.50	59	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	41	42	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 82

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 82
Group: (main group)
Group Reduction: No

Name			Night								
Source/Group	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 82	4.50	77	60	61	56	71	75	67	49	34
	A635 - LAFmax	0.50	59	40	42	37	51	58	50	32	18
	A635 - LAFmax	0.50	59	40	41	37	51	58	50	32	17
	A635 - LAFmax	0.50	59	40	41	37	51	58	49	32	17
	A635 - LAFmax	0.50	59	40	41	37	51	57	49	32	17
	A635 - LAFmax	0.50	59	40	41	37	51	57	49	32	17
	A635 - LAFmax	0.50	59	40	41	36	51	57	49	31	16
	A635 - LAFmax	0.50	59	40	41	36	51	57	49	31	16
	A635 - LAFmax	0.50	58	39	41	36	50	57	49	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	39	40	36	50	57	49	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	39	40	35	52	56	48	30	15
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	16
	A635 - LAFmax	0.50	58	39	40	36	50	57	48	31	15
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	39	40	35	52	56	48	30	14
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	39	40	36	50	56	48	30	15
	A635 - LAFmax	0.50	58	39	40	35	52	56	48	30	14
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	38	39	35	52	56	48	30	14
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	38	39	35	52	56	47	29	14

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 89

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 89
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 89	4.50	78	61	62	57	72	76	67	49	34
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	42	43	38	52	57	49	31	17
	A635 - LAFmax	0.50	59	41	43	38	52	56	48	31	17
	A635 - LAFmax	0.50	59	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	51	56	47	30	16
	A635 - LAFmax	0.50	58	40	41	37	51	56	47	30	15
	A635 - LAFmax	0.50	58	40	42	37	51	55	47	30	15
	A635 - LAFmax	0.50	58	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 90

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 90
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 90	4.50	76	60	60	56	70	74	66	48	33
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	33	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	19
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	19
	A635 - LAFmax	0.50	60	42	44	39	53	58	49	32	19
	A635 - LAFmax	0.50	60	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	32	18
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	17
	A635 - LAFmax	0.50	59	41	43	38	52	57	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	17
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	31	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	52	56	48	30	16
	A635 - LAFmax	0.50	58	41	42	37	51	56	47	30	16
	A635 - LAFmax	0.50	58	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	30	15
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	50	55	46	29	14
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	29	13
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	35	50	54	46	28	12
	A635 - LAFmax	0.50	56	39	40	35	49	54	45	28	12
	A635 - LAFmax	0.50	55	38	39	35	49	53	45	27	12
	A635 - LAFmax	0.50	55	38	39	35	49	53	45	27	11
	A635 - LAFmax	0.50	55	39	40	35	49	53	45	27	14
	A635 - LAFmax	0.50	55	38	39	35	49	53	45	27	11
	A635 - LAFmax	0.50	55	38	39	34	49	53	45	27	10
	A635 - LAFmax	0.50	55	39	40	35	49	53	44	26	12

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 94

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 94
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 94	4.50	77	59	60	56	71	75	66	48	31
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	40	41	37	51	55	47	29	15
	A635 - LAFmax	0.50	57	39	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	39	40	36	51	55	47	29	13
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	39	40	36	51	55	47	29	13
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	40	41	36	51	55	47	29	14
	A635 - LAFmax	0.50	57	39	40	36	51	55	46	29	13
	A635 - LAFmax	0.50	57	40	41	36	50	55	46	29	14
	A635 - LAFmax	0.50	57	39	40	36	51	55	46	28	13
	A635 - LAFmax	0.50	57	39	41	36	50	54	46	29	14
	A635 - LAFmax	0.50	57	39	40	35	50	55	46	28	13
	A635 - LAFmax	0.50	57	39	40	36	50	54	46	29	13
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	36	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	35	50	54	46	28	13
	A635 - LAFmax	0.50	56	39	40	35	50	54	46	28	12
	A635 - LAFmax	0.50	56	39	40	35	50	54	46	28	12
	A635 - LAFmax	0.50	56	39	40	35	50	54	45	28	12

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAFmax - Night-time - Plot 95

Report: Table of Results
Model: Night-time LAFmax - Bedrooms - Rev 3 (May 22)
LAeq per octave: by Source/Group for receiver _A - Plot 95
Group: (main group)
Group Reduction: No

Name Source/Group	Description	Height	Night Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 95	4.50	78	61	62	58	72	76	68	50	34
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	43	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	43	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	44	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	43	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	43	39	54	58	50	32	17
	A635 - LAFmax	0.50	60	42	43	39	54	58	49	32	17
	A635 - LAFmax	0.50	60	42	43	39	54	58	49	32	17
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	32	17
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	17
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	39	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	49	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	48	31	16
	A635 - LAFmax	0.50	59	42	43	38	53	57	48	31	16
	A635 - LAFmax	0.50	59	42	43	38	52	57	48	31	15
	A635 - LAFmax	0.50	59	42	43	38	52	57	48	31	15
	A635 - LAFmax	0.50	59	41	43	38	52	56	48	31	15
	A635 - LAFmax	0.50	59	41	42	38	52	56	48	30	15
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	15
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	15
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	15
	A635 - LAFmax	0.50	58	41	42	38	52	56	48	30	15

All shown dB values are A-weighted

Report: Table of Results
Model: Daytime LAeq,16hr - Gardens - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 54	1.50	44	31	31	29	38	41	30	10	--
_A	Plot 51	1.50	43	31	32	29	38	40	29	10	--
_A	Plot 109	1.50	43	32	31	28	37	40	29	12	--
_A	Plot 90	1.50	43	32	32	28	37	40	29	12	0
_A	Plot 49	1.50	43	29	29	26	37	40	29	8	--
_A	Plot 82	1.50	43	32	32	28	37	39	28	10	--
_A	Plot 53	1.50	42	29	29	26	36	40	29	8	--
_A	Plot 81	1.50	42	31	31	28	37	39	28	10	--
_A	Plot 88	1.50	42	30	30	27	37	39	28	10	--
_A	Plot 34	1.50	42	28	29	26	37	40	29	7	--
_A	Plot 89	1.50	42	31	31	27	36	39	28	10	--
_A	Plot 50	1.50	42	28	28	25	36	40	29	8	--
_A	Plot 86	1.50	42	31	32	28	36	39	28	10	--
_A	Plot 69	1.50	42	32	31	27	36	39	27	9	--
_A	Plot 52	1.50	42	28	29	26	36	39	28	7	--
_A	Plot 32	1.50	42	26	28	25	36	39	28	6	--
_A	Plot 71	1.50	41	30	29	27	36	39	27	10	--
_A	Plot 70	1.50	41	31	30	27	36	38	27	9	--
_A	Plot 72	1.50	41	29	30	26	35	39	28	10	--
_A	Plot 36	1.50	41	28	28	25	36	39	27	7	--
_A	Plot 83	1.50	41	31	30	26	35	38	27	9	--
_A	Plot 26	1.50	41	25	26	24	35	39	28	5	--
_A	Plot 28	1.50	41	26	27	24	35	39	28	5	--
_A	Plot 30	1.50	41	26	27	24	35	39	28	5	--
_A	Plot 38	1.50	41	26	26	24	34	39	28	6	--
_A	Plot 35	1.50	41	28	28	25	35	38	27	6	--
_A	Plot 59	1.50	40	28	28	25	35	37	26	7	--
_A	Plot 37	1.50	40	27	28	24	34	37	27	5	--
_A	Plot 75	1.50	40	29	29	25	34	37	26	9	--
_A	Plot 84	1.50	40	29	29	25	34	37	26	9	--
_A	Plot 87	1.50	40	29	29	25	34	37	26	9	--
_A	Plot 74	1.50	40	29	28	25	34	37	26	8	--
_A	Plot 79	1.50	40	28	28	25	34	37	26	8	--
_A	Plot 91	1.50	40	30	29	25	34	36	26	9	--
_A	Plot 73	1.50	40	29	28	25	34	37	25	8	--
_A	Plot 80	1.50	40	29	28	25	34	37	26	8	--
_A	Plot 85	1.50	40	28	29	25	34	36	26	9	--
_A	Plot 78	1.50	40	28	27	24	34	37	26	8	--
_A	Plot 29	1.50	39	26	26	24	34	37	26	3	--
_A	Plot 95	1.50	39	27	27	24	34	37	26	9	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Gardens

Report:	Table of Results
Model:	Daytime LAeq,16hr - Gardens - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 27	1.50	39	25	25	23	34	37	26	3	--
_A	Plot 33	1.50	39	25	25	23	33	37	26	4	--
_A	Plot 31	1.50	39	26	25	23	33	37	26	4	--
_A	Plot 55	1.50	39	27	26	24	34	36	25	7	--
_A	Plot 43	1.50	39	28	28	25	34	36	24	7	--
_A	Plot 92	1.50	39	28	26	22	33	36	25	8	--
_A	Plot 92	1.50	39	28	26	22	33	36	25	8	--
_A	Plot 77	1.50	38	27	27	23	33	36	24	6	--
_A	Plot 96	1.50	38	28	27	23	33	35	24	8	--
_A	Plot 58	1.50	38	26	25	22	33	35	24	6	--
_A	Plot 44	1.50	38	26	25	23	33	35	24	5	--
_A	Plot 97	1.50	38	28	27	23	32	35	24	7	--
_A	Plot 45	1.50	38	26	26	23	32	35	24	5	--
_A	Plot 76	1.50	38	27	26	23	32	35	24	6	--
_A	Plot 66	1.50	37	27	27	23	32	34	23	5	--
_A	Plot 56	1.50	37	27	25	23	32	34	24	7	--
_A	Plot 60	1.50	37	26	26	23	32	34	23	5	--
_A	Plot 62	1.50	37	26	26	22	32	34	23	4	--
_A	Plot 93	1.50	37	27	25	21	32	34	24	7	--
_A	Plot 68	1.50	37	27	26	22	32	34	23	5	--
_A	Plot 25	1.50	37	23	23	20	31	35	24	0	--
_A	Plot 57	1.50	37	26	25	23	32	34	23	6	--
_A	Plot 98	1.50	37	28	26	22	31	34	23	7	--
_A	Plot 39	1.50	37	26	26	22	32	34	23	4	--
_A	Plot 65	1.50	37	27	26	22	31	34	23	4	--
_A	Plot 67	1.50	37	26	25	22	32	34	23	5	--
_A	Plot 94	1.50	37	27	25	21	31	34	23	7	--
_A	Plot 64	1.50	37	26	26	22	31	34	22	4	--
_A	Plot 42	1.50	37	26	25	22	31	34	22	4	--
_A	Plot 41	1.50	37	25	25	21	31	34	23	3	--
_A	Plot 61	1.50	36	25	25	21	31	33	22	4	--
_A	Plot 63	1.50	36	26	26	21	31	33	22	3	--
_A	Plot 117	1.50	36	25	26	22	31	33	21	2	--
_A	Plot 115	1.50	36	25	25	21	30	33	21	2	--
_A	Plot 48	1.50	36	25	24	21	30	33	22	4	--
_A	Plot 116	1.50	36	25	25	21	30	33	21	2	--
_A	Plot 113	1.50	36	25	25	21	30	33	21	1	--
_A	Plot 123	1.50	36	25	24	21	30	32	20	--	--
_A	Plot 114	1.50	35	25	25	21	30	32	21	2	--
_A	Plot 40	1.50	35	24	23	21	30	32	22	3	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Gardens

Report: Table of Results
Model: Daytime LAeq,16hr - Gardens - Rev 3 (May 2023)
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 105	1.50	35	25	24	21	30	32	21	3	--
_A	Plot 106	1.50	35	25	24	21	30	32	21	3	--
_A	Plot 119	1.50	35	25	24	21	30	32	20	--	--
_A	Plot 14	1.50	35	24	24	21	30	32	21	2	--
_A	Plot 47	1.50	35	24	23	20	29	32	23	4	--
_A	Plot 46	1.50	35	24	23	19	29	32	22	4	--
_A	Plot 118	1.50	35	25	23	21	29	32	20	--	--
_A	Plot 104	1.50	35	25	23	20	29	32	21	3	--
_A	Plot 120	1.50	35	25	24	20	29	31	20	--	--
_A	Plot 100	1.50	35	25	23	19	29	32	22	5	--
_A	Plot 10	1.50	35	24	24	20	29	32	20	0	--
_A	Plot 99	1.50	35	25	23	19	29	32	22	5	--
_A	Plot 101	1.50	35	25	24	20	29	32	22	4	--
_A	Plot 11	1.50	35	24	23	20	29	32	20	--	--
_A	Plot 15	1.50	35	24	23	20	29	32	20	1	--
_A	Plot 109	1.50	35	24	23	19	29	31	21	2	--
_A	Plot 103	1.50	35	25	23	20	29	31	21	4	--
_A	Plot 107	1.50	35	24	23	20	29	31	21	3	--
_A	Plot 12	1.50	34	24	23	19	29	31	20	--	--
_A	Plot 108	1.50	34	24	22	20	29	31	21	2	--
_A	Plot 9	1.50	34	24	24	20	29	31	21	0	--
_A	Plot 110	1.50	34	24	22	19	28	31	21	2	--
_A	Plot 102	1.50	34	24	22	19	28	31	21	4	--
_A	Plot 111	1.50	34	23	22	19	28	31	20	2	--
_A	Plot 112	1.50	34	24	22	18	28	31	20	2	--
_A	Plot 3	1.50	34	24	23	19	28	30	18	--	--
_A	Plot 22	1.50	33	22	20	17	27	31	22	--	--
_A	Plot 19	1.50	33	22	22	19	27	31	20	0	--
_A	Plot 13	1.50	33	23	21	18	28	30	19	1	--
_A	Plot 18	1.50	33	21	21	18	27	31	21	0	--
_A	Plot 16	1.50	33	22	20	17	27	30	19	0	--
_A	Plot 20	1.50	33	22	21	18	27	30	19	--	--
_A	Plot 2	1.50	32	23	22	18	27	29	17	--	--
_A	Plot 125	1.50	32	23	22	18	27	29	18	--	--
_A	Plot 124	1.50	32	23	22	18	27	29	17	--	--
_A	Plot 17	1.50	32	22	21	17	27	29	19	--	--
_A	Plot 1	1.50	32	22	21	17	27	29	17	--	--
_A	Plot 21	1.50	32	22	20	17	26	29	18	--	--
_A	Plot 8	1.50	32	22	21	17	26	28	17	--	--
_A	Plot 122	1.50	32	22	21	17	26	28	17	--	--

All shown dB values are A-weighted

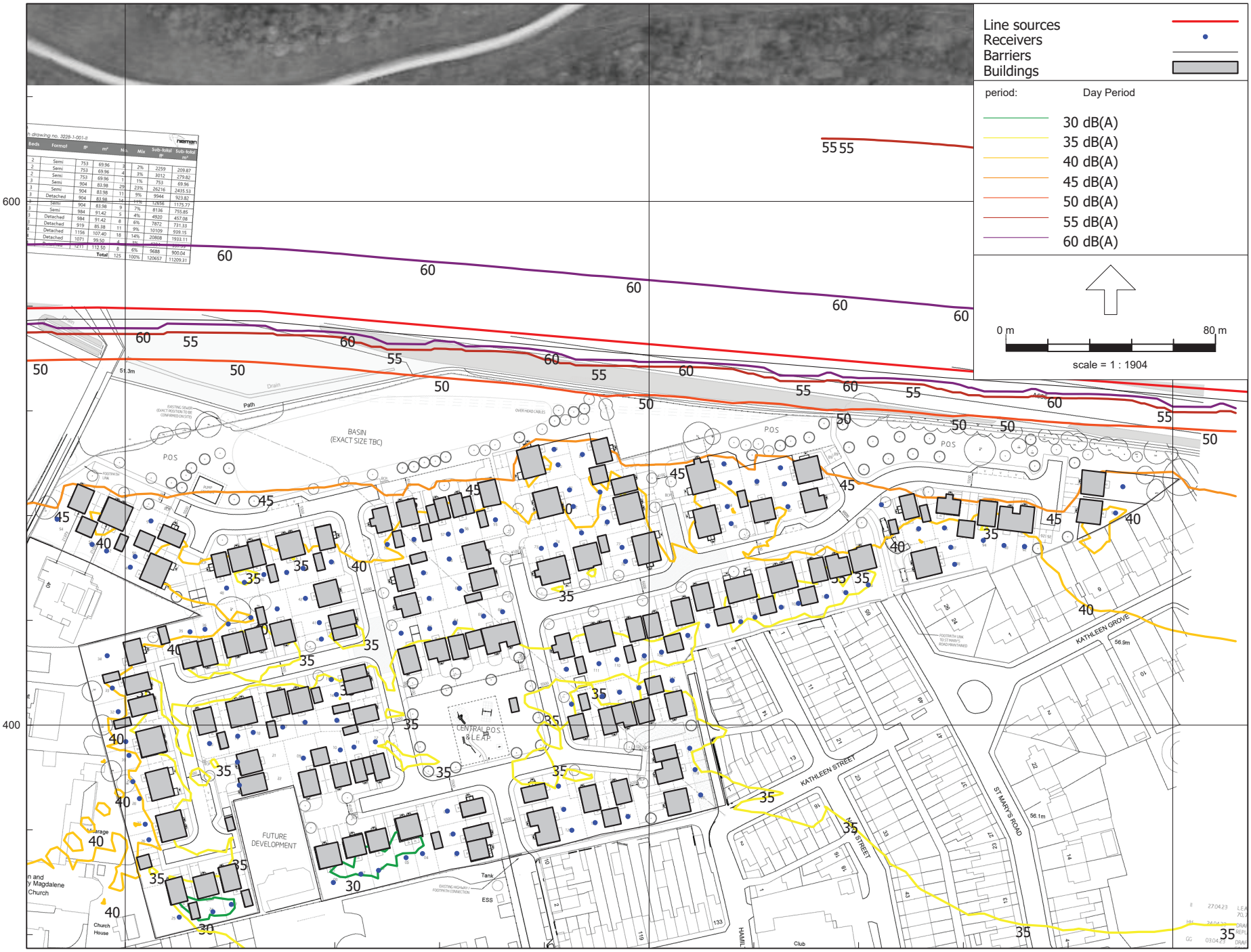
Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Gardens

Report:	Table of Results
Model:	Daytime LAeq,16hr - Gardens - Rev 3 (May 2023)
LAeq per octave:	total results for receivers
Group:	(main group)
Group Reduction:	No

Name			Day								
Receiver	Description	Height	Total	63	125	250	500	1000	2000	4000	8000
_A	Plot 121	1.50	31	21	20	16	25	28	17	--	--
_A	Plot 4	1.50	31	22	20	16	25	27	16	--	--
_A	Plot 5	1.50	30	21	20	16	24	27	16	--	--
_A	Plot 7	1.50	30	21	19	15	24	26	16	--	--
_A	Plot 24	1.50	30	21	20	16	24	26	15	--	--
_A	Plot 6	1.50	30	21	19	15	24	26	15	--	--
_A	Plot 23	1.50	29	21	19	15	23	26	15	--	--

All shown dB values are A-weighted

Lockwood Road, Goldthorpe
Predicted LAeq,16hr - Daytime - Gardens



Industrial noise - LimA - ISO 9613.1/2, [version of 20444 - Lockwood Road, Goldthorpe, Barnsley (May 2023) - Daytime LAeq,16hr - Gardens - Rev 3 (May 2023)] , Predictor V2021.1 Licensed to Spectrum Acoustics, UK

Spectrum Acoustics, UK

APPENDIX D

Intrusive Noise Calculations

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 69 (Type 358)
Room:	Living Room

Daytime ($L_{Aeq,16hr}$)	Unit	Value	Description	Term	Octave band centre frequency 63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	60	50	40	43	43	31	13	2	$L_{Aeq,1}$	46 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	60	50	40	43	43	31	13	2	$L_{Aeq,ff}$	46 dB
ROOM DATA														
Room description and reverberation time	Volume	51	Living Room	RT_{60}	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	2.8	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	32	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	3	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	38	26	18	17	18	2	-	-	$L_{Aeq,2}$	21 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 69 (Type 358)
Room:	Bedroom 2

Daytime ($L_{Aeq,16hr}$)	Unit	Value	Description	Term	Octave band centre frequency 63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	59	50	40	43	43	31	13	1	$L_{Aeq,1}$	46 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	59	50	40	43	43	31	13	1	$L_{Aeq,ff}$	46 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	36	27	18	18	19	3	-	-	$L_{Aeq,2}$	22 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 69 (Type 358)
Room:	Bedroom 2

Night time ($L_{Aeq,8hr}$)					Octave band centre frequency									
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	57	48	35	41	40	28	7	1	$L_{Aeq,1}$	43 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	57	48	35	41	40	28	7	1	$L_{Aeq,ff}$	43 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	34	25	13	16	16	-	-	-	$L_{Aeq,2}$	19 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 69 (Type 358)
Room:	Bedroom 2

Night time (L_{AMax})	Unit	Value	Description	Term	Octave band centre frequency 63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{Max,1}$	72	63	50	56	55	43	22	16	$L_{AMax,1}$	58 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{Max,ff}$	72	63	50	56	55	43	22	16	$L_{AMax,ff}$	58 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				**$L_{Max,2}$**	**49**	**40**	**28**	**31**	**31**	**15**	**-**	**-**	**$L_{AMax,2}$**	**34 dB**

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 82 (Type 358)
Room:	Living Room

Daytime ($L_{Aeq,16hr}$)	Unit	Value	Description	Term	Octave band centre frequency 63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	58	48	37	41	42	30	12	1	$L_{Aeq,1}$	44 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	58	48	37	41	42	30	12	1	$L_{Aeq,ff}$	44 dB
ROOM DATA														
Room description and reverberation time	Volume	51	Living Room	RT_{60}	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	2.8	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	32	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	3	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	36	24	15	15	17	1	-	-	$L_{Aeq,2}$	19 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 82 (Type 358)
Room:	Bedroom 2

Daytime ($L_{Aeq,16hr}$)	Unit	Value	Description	Term	Octave band centre frequency 63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	59	49	39	43	43	31	13	2	$L_{Aeq,1}$	46 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	59	49	39	43	43	31	13	2	$L_{Aeq,ff}$	46 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	36	26	17	18	19	3	-	-	$L_{Aeq,2}$	21 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 82 (Type 358)
Room:	Bedroom 2

Night time ($L_{Aeq,8hr}$)					Octave band centre frequency									
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{eq,1}$	57	47	34	41	40	28	7	1	$L_{Aeq,1}$	43 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{eq,ff}$	57	47	34	41	40	28	7	1	$L_{Aeq,ff}$	43 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				$L_{eq,2}$	34	24	12	16	16	-	-	-	$L_{Aeq,2}$	19 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)

Project:	Lockwood Road, Goldthorpe
Project number:	20444
Date:	03/05/2023
Plot:	Plot 82 (Type 358)
Room:	Bedroom 2

Night time (L_{AMax})					Octave band centre frequency									
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term	
EXTERNAL NOISE LEVEL														
External noise level			Façade 1	$L_{Max,1}$	73	63	50	57	56	44	23	17	$L_{AMax,1}$	59 dB
Façade correction factor				C	0	0	0	0	0	0	0	0		
INCIDENT FAÇADE NOISE LEVEL														
Incident noise level			Façade 1	$L_{Max,ff}$	73	63	50	57	56	44	23	17	$L_{AMax,ff}$	59 dB
ROOM DATA														
Room description and reverberation time	Volume	19	Bedroom	RT_{60}	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2		s
FAÇADE ELEMENTS (Façade 1)														
Glazing	Area	1.2	Pilkington 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	38	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None			--											
RESULTS														
Total calculated indoor noise level				**$L_{Max,2}$**	**50**	**40**	**28**	**32**	**32**	**16**	**-**	**-**	**$L_{AMax,2}$**	**35 dB**

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