BY EMAIL

Chesworth House
Denne Road
Horsham
RH12 1JR

Planning Department
Horsham District Council
Parkside
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RH12 1RL

13 January 2023

Reference: DC/23/2024 - Part change of use of Chesworth Visitor Centre for use by the Horsham Men's Shed

Dear Ms. Turner,

I do hope you are well. I am writing with regard to the above application which has just come to my notice. We live in Chesworth House which directly adjoins Chesworth Visitor Centre – the "Site". We are situated directly behind the Site.

I am sorry that I was not aware of this application previously but I was not notified by email or letter, which I understand would have been typical for the Council to do. The only signage relating to the application that I have been able to find was posted opposite the front of the Site – a c.350 metre walk from my gate in the direction away from the public road. It is therefore not clear to me how I might have been aware earlier. I have marked the location of the House and the Site, together with the walking route from the house to the site notice and the direction of the public road on a map in Appendix 1. I became aware of the application on seeing the Sign when looking for someone who had got lost heading from my house (on 12 Jan 2024).

This application involves the change in use of the Site from an Artists' Workshop to "light industrial" – specifically its use for woodworking and metalworking using assorted power tools and workshop machinery. I have not been able to find any noise reports or similar relating to the Application, and no mention of noise appears to have been made in the planning statement, however I can but conclude that the noise generated will be significant and considerably greater than current background noise. This appears counter to HDC's own guidance.

As noted above the Site abuts my property directly and the source of noise generation under the proposal is a matter of metres (around 7) from the living accommodation and safe outside spaces. It is therefore clear that this Application, if approved, would result in a material increase in noise levels and, given the nature – power tools etc – would be of a volume and nature to result in our having to change the way we use our home. This is counter to statements from both Horsham District Council and the U.K. Government with regard to noise.

From my understanding this is a change of use due to Horsham Men's Shed wishing to have an additional site and the property is currently owned by Horsham District Council. As such it is a new use for the site and there must be alternative locations available for this purpose – indeed the

reason for the application is given as wanting an additional unit rather than the existing unit being unavailable. I understand that both HDC's, and the national, guidance state that alternative sites should be used if the development will result in adverse noise levels.

In summary I am concerned that:

- There has been no assessment of the impact of noise from this development on my home (a "noise sensitive receptor")
- The development will result in increased noise above background – counter to the stated requirement from HDC
- The increase in noise will result in our having to change behaviour and our quality of life would be diminished due to a change in acoustic character of the area

I am also a little worried that the only notification of the Application was placed in such a way as to make it very unlikely that I would see it (and I am the closest neighbour and one of two within 500 metres).

Below I provide a little more detail about my concerns together with some supporting evidence.

- No noise report is visible on the planning website for this application – it is therefore unclear to me how the council would have considered the impact of noise pollution. I note that the "Planning Noise Advisory Document: Sussex 2021" which is provided on the Horsham District Council Website as the "Noise Advice for Developers" states that a Noise Report is required for Industrial type uses – provided in Appendix 2.
- UK Government guidance (Appendix 3) says "Noise needs to be considered when development may create additional noise".
- Further U.K. Government guidance states "In these circumstances the applicant (or 'agent of change') will need to clearly identify the effects of existing businesses that may cause a nuisance (including noise, but also dust, odours, vibration and other sources of pollution) and the likelihood that they could have a significant adverse effect on new residents/users. "
- The application itself appears to make no mention of noise nor is any mitigation mentioned or implied.
- The consultation response from HDC Environmental does note the "proximity of residential dwellings to the above unit" but does not seem to mention any requirement for assessing the noise levels that would result from the application or ensuring they are below background noise levels.
- In Section 2.1.2 of the Planning Noise Advisory Document: Sussex 2021 it states that "Any application likely to result in a noise source being located near and existing… …noise sensitive receptor (i.e. a residential area… …will need to demonstrate there will be no unacceptable noise effects on sensitive receptors…" (Appendix 2).
- It has not been demonstrated that there will be no unacceptable noise effects on sensitive receptors as part of this application.
- Section 2.1.2 of the Planning Noise Advisory Document: Sussex 2021 goes on to state that "If the development is likely to result in adverse noise levels, the developer should first consider whether there are alternative site locations which are more suitable." (Appendix 2).
- The application itself notes that the Horsham Men's Shed currently have facilities that they have used for a number of years and indeed plan to continue to use, based upon their application;

"Provide an expansion capability for the Men's Shed Club Horsham". There is no mention of any alternative site having been considered beyond the Chesworth Visitor Centre. In fact the website for the club states "Sharing this predicament with Horsham District Council, it has been identified that the former 'artists studios' building on Chesworth Farm could present an opportunity for Shed growth, becoming a second site for our local members." It is clear that no attempt was made to consider alternative sites.

- In section 3.2.1. of the "Planning Noise Advisory Document: Sussex 2021" it states "The rating level of the industrial or commercial sound source should, where practicable, achieve a level no greater than the representative background sound, when measured in accordance with BS 4142:2014 + A1: 2019. There may be instances, for specific sites, where a rating level below background is deemed appropriate" (Appendix 2).
- It seems clear that the conversion of a (currently disused) Artists' workshop into a light industrial facility will result in a significant increase in noise levels above the current background. Whilst there is no information provided I have tested it by using a power drill inside our property (with the windows closed) and listening to it from the Site. The disturbance is very meaningful. This is at odds with section 3.2.1. and with section 191 of the National Planning Framework (Appendix 4)
- For context the power tools used in woodwork generate between 90-110dB and a "normal conversation – easily audible and therefore louder than the background noise level is c.60dB. I note that 90 dB is around 16 times louder than 60dB and 110dB is 32 times louder. It seems clear that the use of these items within 7 metres of our living accommodation would massively increase the noise levels.
- The proposed change of use will materially impact the way in which we must use our property – a "Significant Observed Adverse Effect" as per government guidelines – see Appendix 3. The government guidelines indicate this is to be avoided.
    - The U.K. Government guidance states that "Plan-making and decision making need to take account of the acoustic environment" and whether or not a [significant] adverse effect is occurring or likely to occur. I cannot see where this has been done.
    - The site is very close (around 7 metres) to two of the dwellings on our property. The living areas of those dwellings have no ventilation save by windows and those windows face the site and the source of noise generation. I believe that we would need to keep those windows closed due to the levels of noise that would be generated from this application.
    - Our garden area, used for seating and dining, is around 15 metres from the site and would be materially impacted by the noise generated by the proposed use. We would therefore have to avoid the area and associated activities. This is the only safe area for our small children due to the presence of water on our property. As a result our children would not be able to play outside undisturbed.
    - We are retired and so at home most of the time and our children spend much of their time at home – especially in the holidays.
    - Our quality of life would be diminished by a significant rise in ambient noise levels.

I conclude by stating that the change of use contained in this application will have a material negative effect on our ability to peacefully enjoy our home. It seems to me that approval of this

application would be counter to the guidance and rules provided by Horsham District Council and nationally. I am also very concerned that the processes and approaches outlined within Horsham District Council's own documentation has not been followed – with no, or very little, attention being given to the impact of noise pollution from this application.

I therefore must ask that you decline this application.

[redacted]

[redacted]

[redacted]

APPENDIX 1: ANNOTATED MAP



APPENDIX 2: HORSHAM DISTRICT COUNCIL GUIDANCE ON NOISE AND PLANNING

Below is a screenshot from the HDC website indicating where developers and their consultants should find guidance on potential noise pollution resulting from their developments.

Noise reports and noise assessments

The Planning Noise Advice Document aims to provide advice for developers and their consultants when making a planning application in East and West Sussex. The document seeks to complement the Noise Policy Aims set out in the Noise Policy Statement for England (2010), namely to:

- avoid significant adverse impacts on health and quality of life
- mitigate and minimise adverse impacts on health and quality of life
- where possible, contribute to the improvement of health and quality of life

We advise you to read the document below to find out about the principles of noise control, whether your plans require a noise report, and noise guidelines for the most common types of development.

Noise advice for developers

Sussex-Noise-Guidance-for-developers.pdf (PDF File, 1.4 MB)

Source: Noise reports and noise assessments | Horsham District Council

Table from Planning Noise Advisory Document: Sussex 2021 highlighting the need for a noise report for new industrial type uses – including change of use or new equipment.

Table 2: New or Additional Sources - Determining If A Noise Report Is Required

Type of development	Noise Report required	Comments
INDUSTRIAL TYPE USES (e.g. general industrial uses, storage or distribution uses. Waste management sites, Minerals development)	YES	Noise report will normally be required. Please consult with LPA if there are no existing or approved or allocated noise sensitive premises in close proximity. Includes new development and changes of use. Also includes changes in operations or layout, extensions or new equipment at existing sites.

Section 3.2.1 from Planning Noise Advisory Document: Sussex 2021 noting that the rating level of the industrial or commercial sound source should, where applicable, achieve a level no higher than the representative background sound.

3.2 Guidelines and Criteria

3.2.1. The rating level of the industrial or commercial sound source should, where practicable, achieve a level no greater than the representative background sound, when measured in accordance with BS 4142:2014 + A1: 2019. There may be instances, for specific sites, where a rating level below background is deemed appropriate. This can be determined through discussion with the Local Planning Authority (LPA). A rating level below background may be required if there are concerns for potential noise creep, for example in a High Street setting. It is considered that meeting this criterion would avoid adverse noise impacts, in the interests of ensuring a good standard of amenity and protecting human health. Where these criteria are not attainable, the noise report should explain why, and how best practicable means will be implemented to control noise in order to satisfy the LPA that the development is acceptable. At all times the reports shall have regard to the context.

Section 2.1.2 from Planning Noise Advisory Document: Sussex 2021 noting that "Any application likely to result in a noise source being located near and existing… …noise sensitive receptor (i.e. a residential area… …will need to demonstrate there will be no unacceptable noise effects on sensitive receptors…"

2.1.2. Any development proposal should follow the basic principles of noise control set out below, which are to separate noise sources from sensitive receptors, then to control the noise at source, attenuate through the use of barriers, and finally to protect the receptor:

I. Separation of noise source from receptor: Any application likely to result in a noise source being located near an existing, permitted or allocated noise sensitive receptor (i.e. a residential area, school or hospital), whether as a result of a proposed new noise source, or a proposed new noise sensitive receptor, will need to demonstrate that there will be no unacceptable noise effect on sensitive receptors, and that all steps have been taken to reduce any adverse effects. If the development is likely to result in adverse noise levels, the developer should first consider whether there are alternative site locations which are more suitable.

APPENDIX 3: UK GOVERNMENT GUIDANCE ON NOISE WHICH "ADVISES ON HOW PLANNING CAN MANAGE POTENTIAL NOISE IMPACTS IN NEW DEVELOPMENT."

Below are screenshots from the UK Government highlighting how noise issues might be assessed in planning for new developments.

Noise

When is noise relevant to planning?

Noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). When preparing plans, or taking decisions about new development, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset.

Related policy: paragraph 170e, paragraph 180a, paragraph 180b, paragraph 182

Paragraph: 001 Reference ID: 30-001-20190722

Revision date: 22 07 2019

What are the observed effect levels?

- Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- Lowest observed adverse effect level: this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- No observed effect level: this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

Although the word 'level' is used here, this does not mean that the effects can only be defined in terms of a single value of noise exposure. In some circumstances adverse effects are defined in terms of a combination of more than one factor such as noise exposure, the number of occurrences of the noise in a given time period, the duration of the noise and the time of day the noise occurs.

See the noise policy statement for England for further information.

Paragraph: 004 Reference ID: 30-004-20190722

Revision date: 22 07 2019

Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid

noise_exposure_hierarchy.pdf (publishing.service.gov.uk)

APPENDIX 4: NATIONAL PLANNING POLICY FRAMEWORK, DECEMBER 2023

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

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

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

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FAO Kate Turner, case officer: [redacted] & planning@horsham.gov.uk
Copy Robert Hermitage - Principal Planning Officer, Rehan Beg - Locum Property Lawyer

5 February 2024

Dear Sirs

Reference: DC/23/2024 - Part change of use of Chesworth Visitor Centre for use by the Horsham Men's Shed

We act for [redacted] of Chesworth House, Denne Road, Horsham, RH12 1JR. [redacted] is the immediate neighbour of the proposed development, and his living room is located circa 7m from where the proposed industrial activities are due to take place.

We write further to his objection letter dated 13 January 2023, where he raised a number of concerns with you, including about the consultation process. We don't repeat all those concerns but note they are validly made.

Noise and odour

Because noise appears to be the main issue [redacted] has at his own expense appointed an expert engineer to review the noise impacts, noting that both the applicant and the Council have yet to do so. His report is attached and the conclusion is:"

… it is considered that planning permission may not be granted without additional information from the applicant. Just applying a noise condition, without further information, is also not recommended as the assessments in this report show that even with extensive mitigation measures the standard (Rating level to be no higher than background) noise criteria may not be achieved."

The proposed use appears to be light industrial use, albeit for a community purpose. This is a different use to the previously approved artists studio which does not correspond to a light industrial use. The plans show an entirely enclosed space which whilst helpful from a noise perspective is of course totally impractical from a noise and odours (paint, glue, solvents etc) perspective. If no ventilation is provided on a hot day or when smelly/noisy activities are undertaken someone will open the doors and/or windows. Proper forced ventilation/filtration is needed and no such provision is made for this on the plans. But the further problem is that the ventilation itself can be noisy and could, depending on which direction it vents, project noise and odours towards [redacted] home.

[redacted] also notes that the noisy activities will also impact users of Chesworth Farm (including the picnic areas immediately adjacent to the proposed development), contrary to the Council's

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Management Plan: https://www.horsham.gov.uk/__data/assets/pdf_file/0007/92887/Chesworth-Farm-Management-Plan-2019-26.pdf

Planning Policy

The applicants quote planning policy 43 Community Facilities and Uses in support of their proposals. However, this is in the old local plan which is now out of date. The new local plan has now reached Reg 19 stage and has significant weight and has a much more robust policy 28:

Policy 28: Community Facilities and Uses
1. The provision of new or improved community facilities or services will be supported, where they meet the identified needs of local communities as indicated in the current Open Space, Sport & Recreation Study, the Community Facilities Study, the Playing Pitch and Built Facilities Strategies, the Infrastructure Delivery Plan and other relevant studies or updates and local engagement; and / or contribute to the provision of Green Infrastructure and nature recovery. Proposals for new or improved community facilities and services will be required to meet all of the following criteria:
a) be located within a defined built-up area boundary unless it can be demonstrated an alternative location is the only practicable option for the use proposed, and the site is suitable and well-related to an existing settlement;
b) be of an appropriate scale and intensity of use for the location and not prejudice adjoining and nearby uses or habitats, unless it can be demonstrated any harmful impacts can be suitably mitigated;
c) lighting proposals, including floodlighting, must minimise light pollution, help reduce crime, and must not cause significant nuisance to surrounding occupants or highway users, and not significantly harm habitats and species; and
d) unless convincingly demonstrated to be impracticable:
i. be accessible to the community it serves by walking, wheeling, cycling and public transport;
ii. improve access to existing open space; and
iii. provide accessible public toilets and drinking water refill facilities for the occupants / users and the general public

The proposal fails to meet the requirements of the uptodate policy requirement in respect of the highlighted elements:

It is not in a built up area boundary and the applicant has not demonstrated this location is the only practicable option for the use. A quick look at the various property websites show plenty of light industrial units available to rent in and around Horsham.

The location is not suitable because of its proximity to existing residents because of noise and odour. The proposed use would prejudice [redacted] adjoining residential use, and leisure use of the farm contrary to the Management Plan, and the impacts cannot be fully mitigated.

It is not well related to an existing settlement, nor accessible because it is only accessible by an unlit, narrow unadopted road, that is not suitable for walking and cycling to serve an industrial use, where that is in conflict with motor traffic which will include both traffic accessing the existing Council depot

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and users of the proposed development travelling by car. Walking and cycling for leisure purposes will also be impacted by the additional traffic. There is no public transport.

To be clear [redacted] entirely supports what the Men's Shed is trying to do, but it is clearly the wrong location for their proposals. Their very worthy purposes are not enough of a material consideration to locate development in the wrong place contrary to policy. The rent that the Council are reported to be receiving is not a material consideration that the Council can properly take into account.

We note the restrictive covenants that are revealed on the Council's title [redacted] "*No noisome noxious or offensive trades businesses or manufactures shall be carried on upon the property hereinbefore described*". Whilst breach of property covenants is not a material planning consideration and there is a risk the Men's Shed might sign up to a lease with the Council (and commitment to pay rent), for a building it turns out it cannot actually use as intended.

Consultation responses, keeping informed, and speaking at planning committee

Our client requests that they be kept informed of the progress of the application. We request copies of the consultation responses received by the Council, in particular in relation to planning policy, alternatives and accessibility. If amendments to the scheme are made he would wish to be able to comment on those amendments. If the matter is to be reported to planning committee he would wish his objections to be made clear to members as set out above. Our clients request the opportunity to speak before members to outline their concerns about the proposals.

Refusal

We strongly urge the Council to refuse the application, for the reason that it fails to comply with emerging local plan policy 23, it is not a sustainable location for the proposed development, and should be refused because of the noise and odour impacts on [redacted] and users of Chesworth Farm.

Yours faithfully

[redacted]

For and on behalf of Aardvark Planning Law

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Encs
Acoustic South East – Noise Impact Assessment [redacted] – Noise Impact Assessment – Part change of use of Chesworth Visitor Centre 1 February 2024
Copy letter 13 January 2024

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Chartered Building Consultancy

Acoustic South East

Noise Impact Assessment

Client:	[redacted]
Site Address:	**Visitor Centre Chesworth Farm, Horsham**
Reported By:	**George Orton BEng(Hons) MIOA**
Date Written:	**01/02/2024**
Job Reffernce:	**[redacted] - Noise Impact Assessment - Part change of use of Chesworth Visitor Centre**
Revision:	**P01**
Issue Purpose:	**For Planning**

Constructionline Part of Capita plc

CQMS Safety Scheme

ANC THE ASSOCIATION OF NOISE CONSULTANTS

ATTMA

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Report by: [redacted]

Issue 1	01/02/2024	

Acoustic Associates

1 Introduction

Acoustic South East have been appointed to undertake an acoustic assessment relating to the proposed part change of use of what currently is an artist's studio.

Mens Shed Club Horsham (MSH), have submitted a planning application that proposes to convert part of the Chesworth Visitor Center Horsham building to a light industrial workshop which would fall into use class E. The workshop will be used as a joinery workshop which is understood would include the use of various woodworking power tools.

The assessment has been commissioned by a resident of an adjacent property that shares a boundary with the Visitor Centre. It is understood the applicant has not submitted or completed their own noise impact assessment.

The purpose of this assessment is to assess noise levels, created by the proposed joinery workshop, affecting the existing nearby noise sensitive receptors (NSRs)

The noise levels for the day and the night time period have been assessed in terms of and following the guidelines of the documents listed below:

- World Health Organisation (WHO): Guidelines for Community Noise (1999)
- BS8233: Sound insulation and noise reduction for buildings (2014)
- BS4142 (2014+A1-2019) Method for rating industrial noise affecting mixed residential and industrial areas

Existing environmental noise levels have been measured close to an adjacent noise sensitive receptor (NSR). Worksop (operations and associated plant) noise levels have been predicted using a computer noise model, historic data and manufacturers data

The assessment methodology in BS4142 has been used to predict the significance of effects relating to the operation of the new workshop. Even if the doors and windows are kept closed moderate adverse effects are predicted for the most affected NSR. If doors and windows are accidentally left open adverse effects are predicted to be major for all receptors.

If the doors and windows are to be kept shut it is considered that heating/cooling and dust extraction plant could be required. Example assessments have been completed to show that, for outdoor plant, if no mitigation measures are completed there could be major adverse effects.

Based on the above it is considered that planning permission may not be granted without additional information from the applicant. Just applying a noise condition, without further information, is also not recommended as the assessments in this report show that even with extensive mitigation measures the standard (Rating level to be no higher than background) noise criteria may not be achieved.

2 Context, Noise Criteria & Noise Assessment Methodology

2.1 Site Description

The development description has been copied below:

Part change of use of Chesworth Visitor Centre for use by the Horsham Men's Shed

The proposed location plan (downloaded from the planning portal) can be seen below:

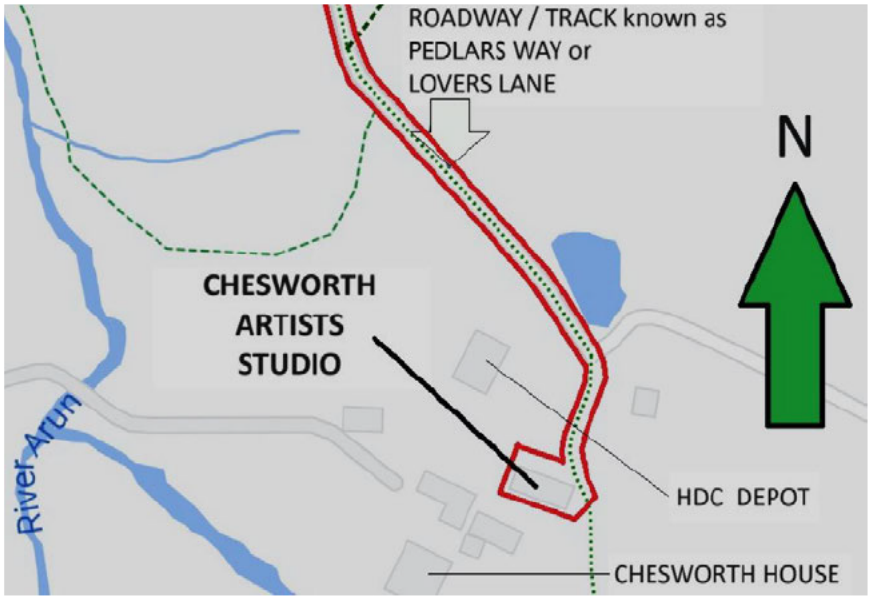


Figure 1: Application Location Plan

It should be noted that the buildings immediately to the south of the studio are also part of Chesworth house and contain habitable rooms on the ground and 1st floors. There is also another residential noise sensitive receptor (NSR) to the north of the studio and a public picnic area to the west of the studio. The NSRs and sound survey position have been added to the location plan:

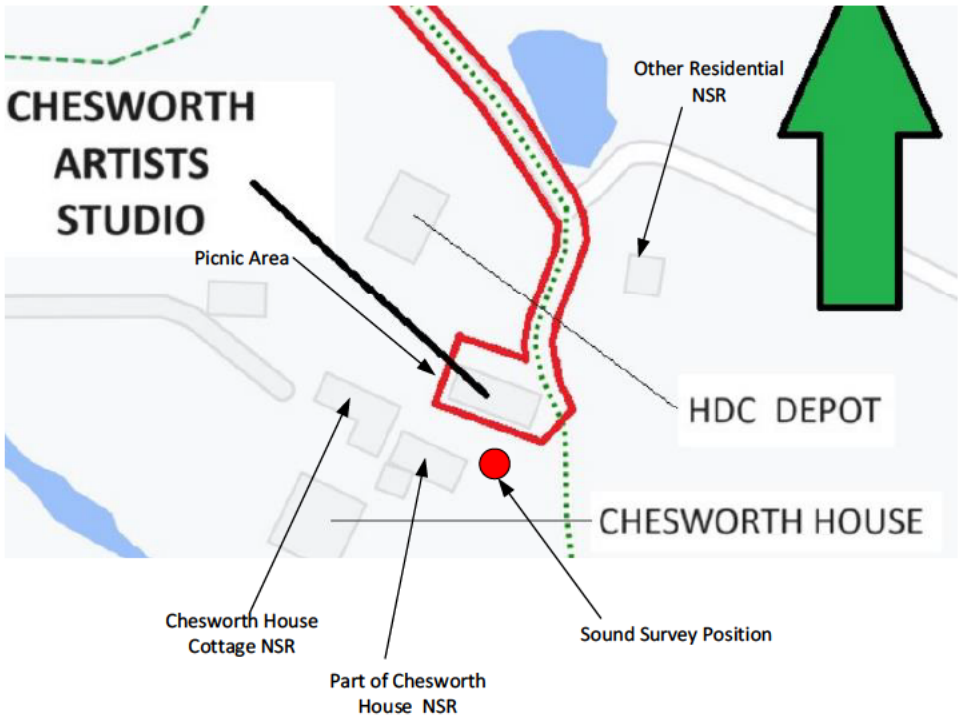


Figure 2: NSR/Survey Plan

The proposed workshop will initially be used by Mens Shed Club Horsham as a joinery workshop which would include the use of various woodworking power tools. However the overall use of the building would be Use Class E which could mean different future uses or similar uses of a more commercial nature.

2.2 Local Authority Correspondence

At the time this report was issued the planning application had only been registered. On the planning portal is a memorandum from the Local Authority's Environmental Health department which has been copied below:

> This department is mindful to the proximity of residential dwellings to the above unit and offer the following recommendations for your consideration:
>
> 1. Restrict hours of use to 8 am – 6 pm Monday to Friday. 9 am – 1 pm Saturdays. No working allowed on Sundays or Bank Holidays (Including deliveries)
> 2. No work operations to be undertaken outside of the unit in the external yard. All doors & windows to remain closed during the operation of power tools, hammering, etc.
> 3. Restrict to light industrial only.
> 4. Before permission is granted, the applicant must submit a plan detailing any proposed external plant (i.e., air conditioning units) and/or external lighting, etc.

Figure 3: EHLO Comments

For many other change of use projects, where Acoustic Southeast have been involved with, the comments from the relevant environmental health department have either requested a noise impact assessment or issued a draft condition relating to the noise created by future operations and associated mechanical and electrical plant (Extract ventilation, heating/cooling etc). As discussed in the report it is considered that extra plant machinery (possibly to be installed outside) may be required if doors and windows are to be kept closed.

2.3 Assessment Methodology

The noise impact assessment will investigate the potential for the proposed development to give rise to impacts on the existing receptors close to the development. The assessment will identify possible significant effects of the proposed development in terms of noise.

In terms of noise, significant effects may have adverse effects on health and quality of life of people living in the proposed development.

Noise Policy Statement for England (NPSE) introduces the term SOAEL (Significant Observed Adverse Effect Level). This is the level above which significant adverse effects on health and quality of life occur.

Significant effects of noise may cause changes in behaviour and/or attitude, e.g. having to keep windows closed and may have the potential to disturb sleep.

The significance of effects has been assessed based on the magnitude of impact (or change MOC) and the sensitivity of the receptor. For this assessment all existing NSRs detailed in the assessments are considered to be highly sensitive in respect of noise impacts.

The "significance of effect" evaluates the noise effect to determine whether or not the impact is significant. Effects can be beneficial, adverse or negligible.

2.3.1 Methodology

The noise impact assessment methodology has been summarised below:

- Survey
  - Measure baseline noise levels close to existing receptors
- Predict
  - Use noise propagation calculation model to predict noise levels at other locations within and outside the development boundary
- Assessments
  - Complete assessments using standard documents to identify where significant effects may occur.

2.4 Adopted Noise Criteria

Several Local Planning Authority ('LPA') departments (including LDC) have collaborated to create the Planning Noise Advice Document Sussex.

The document details relevant standards that should be referred to when completing a noise impact assessment.

Based upon the advice document it is recommended that appropriate criteria are provided by:

- World Health Organisation (WHO): Guidelines for Community Noise (1999)
- BS8233: Sound insulation and noise reduction for buildings (2014)
- BS4142 (2014+A1-2019) Method for rating industrial noise affecting mixed residential and industrial areas

2.5 WHO Internal Noise Criteria

The target internal levels are based on guidelines laid out by the World Health Organisation (WHO) and are as follows:

Room Type	**Target Maximum Internal Level - L_{Aeq} dB (A)**
Living rooms	35 (Daytime only)
Bedrooms	30 (Night)
Room Type	**Maximum Internal Level – L_{Amax} dB(A)**
Bedrooms	45 (not more than 10-15 times per Night)

The target maximum internal noise level for a bedroom during the night time corresponds to the threshold of sleep disturbance. WHO state that the noise level outside a bedroom window would be less than 45dB(A) this assumes that an open window provides 15dB attenuation.

2.6 WHO External Noise Criteria

With regard to outdoor amenity areas WHO states the following:

To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed 50dB(A) on balconies, terraces and in outdoor living areas.

2.7 BS8233 Noise Criteria

Table 5 of BS8233 provides the following guideline values:

Activity	Location	Time period of day	
		07:00-23:00	23:00-07:00
Resting	Living Rooms	35dB $L_{Aeq,16hour}$	-
Dining	Dining Room/Area	40dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35dB $L_{Aeq,16hour}$	30dB $L_{Aeq,8hour}$

Table 1: BS8233 Criteria

2.8 BS4142: 2014: Method for rating and assessing industrial and commercial sound

This document provides a means of assessing the impact of industrial or commercial sound upon nearby noise-sensitive receptors, including residential properties.

It does this by comparing the Rating Level of the noise from the industrial or commercial source with the pre-existent L_{90} background noise level affecting the same noise-sensitive premises. The Standard provides guidance that:

a) Typically, the greater the difference, the greater the magnitude of the impact.

b) A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.

c) A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.

d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background noise level, this is an indication of the specific sound source having a low impact, depending on the context.

3 Noise Survey Baseline Conditions & Results

A noise survey was carried out between the 26th and 31st January 2024 to assess the sound levels affecting the existing nearby noise sensitive receptors.

3.1 Noise Survey Details

- Survey carried out by: George Orton BEng (Hons) MIOA
- Equipment used: Svantek 971 - Type 1 Sound Level Meter
- Weather conditions: Dry low wind speed average under 5m/s

3.2 Noise Survey Locations

The noise survey location (close to boundary with the proposed workshop) can be seen on the marked up plan within the previous section.

The survey microphone was considered to be in a freefield position.

All noise levels in this report will be free-field noise levels unless stated otherwise (including noise model predictions)

3.3 Graphical Noise Survey Results

The residual ($L_{Aeq,15min}$) and background ($L_{A90,15min}$) sound levels have been presented graphically below:

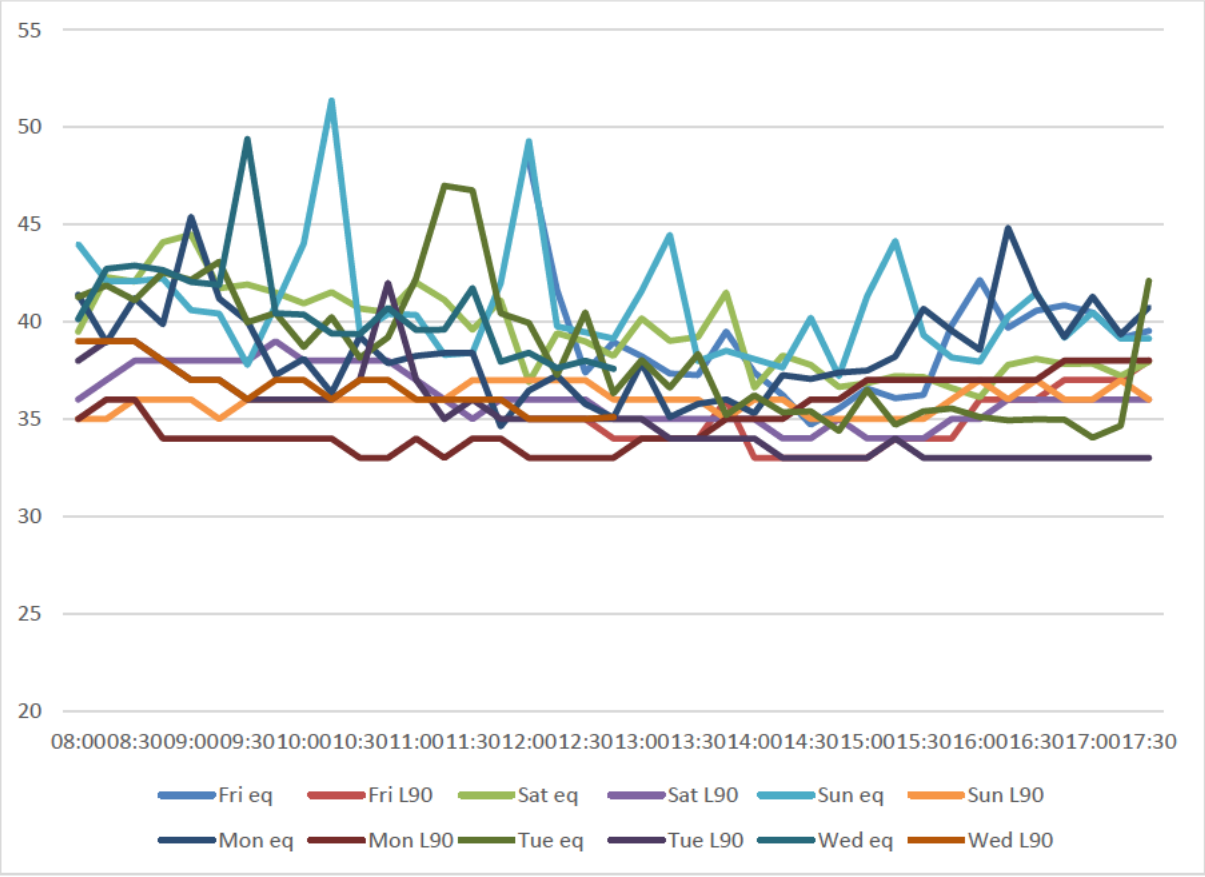


Figure 4: Survey Graphical Data

3.4 Noise Survey Results – Background Noise $L_{A90,15min}$

The most commonly occurring (modal) background sound levels ($L_{A90,15min}$) can be seen below (data for daytime between 08:00-18:00hrs when the workshop is likely to operate):

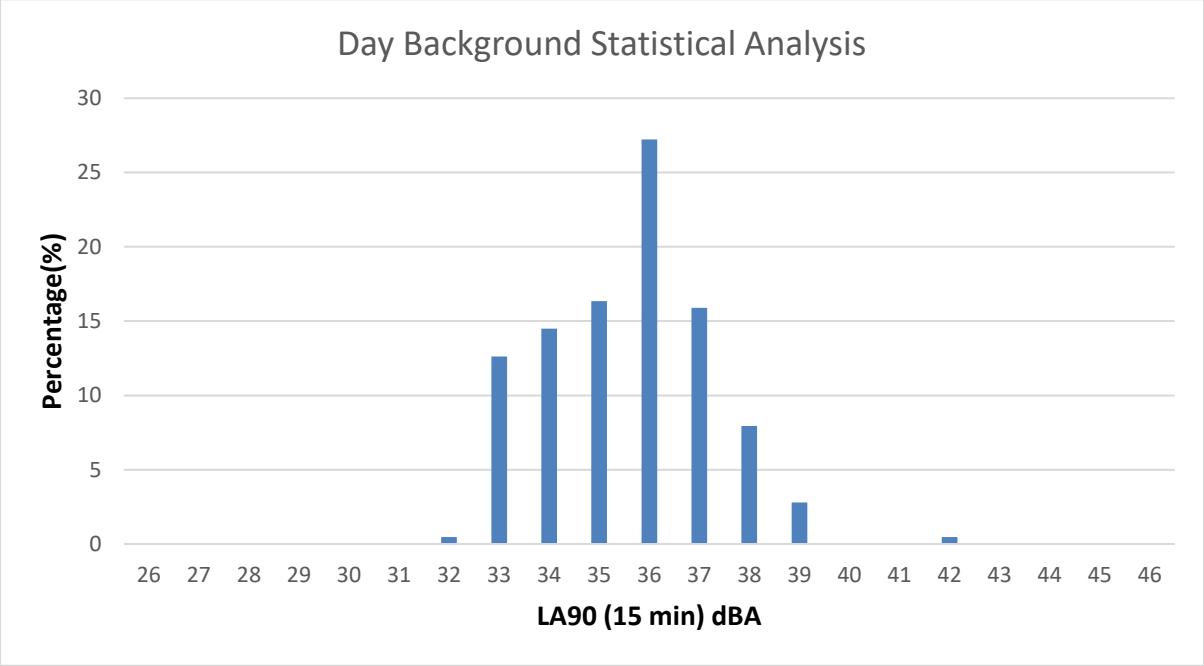


Figure 5: L90 Analysis

3.5 Soundscape Notes

Whilst on site it was noted that the area on and around the visitor centre was very quiet. Occasional sounds could be heard in the distance but at the measurement position the dominant source of noise was the stream/waterfall in the Chesworth House grounds. At the beginning of Monday and the end of Tuesday the background sound level is at a constant low level of 33/34dBA.

However based on the results of other days the representative background sound level will be taken as the modal value of 36dBA.

It should be noted that during summer the representative background sound may be lower still due to less flowing water in the rivers and streams close to the NSR.

4 Noise Model

In order to see how noise varies at different positions around the proposed development it is possible to produce a noise contour map.

A computer noise model has been completed using the computer package IMMI. IMMI faithfully implements the propagation method of ISO-9613:1996; Acoustics – Attenuation of sound during propagation outdoors.

The development and surrounding buildings were added to the model along with various reception points (RPs). The RPs predict the noise level (incident noise level) at a discrete position within the noise model

4.1 Workshop Operation Noise Model

Area sources were added in the location of potential workshop windows and doors. The sound insulation of the closed windows/doors was entered into the model in 1/1 octave bands (Single glazing from Pilkington datasheet and 25mm pine as calculated by the computer program INSUL). The roof was added with the sound insulation of concrete tiles.

The indoor noise level was set to 83dBA based on an indoor survey at a joinery workshop. For this historic project the highest 1hr noise level, away from the working machines, was 80dBA. It is estimated the level in the middle of the workshop, close to the operating tools will be at least 3dB higher. The historic levels were measured over 1hr periods as required by BS4142. The model subtracts 6dB as the noise escapes the building. (The 1/1 octave indoor noise level added to the model can be seen in the appendix).

Two main models were completed one with all doors and windows closed and one with doors and windows (1 front and 1 rear) open. With doors and some windows open the predicted level at the NSRs was significantly higher than the existing sound levels.

The L_{Amax} historic data shows that the short term levels are likely to be at least 20dB higher than the 1hr levels. An additional plot was completed with the internal noise level increased by 20dBA to represent how the possible short term noise levels will propagate from the workshop (This mode assumed the windows/doors were closed and will not be used for the BS4142 assessment due to the shorter reference time)

4.2 Additional Plant Models

If windows and doors are to be kept closed it is highly likely that extraction and/or heating/cooling plant will be required. The additional models were completed assuming that either (or both) of the following would be required:

- External AC unit (Mitsubishi unit used with the cooling sound power added to the model (in 1/1 octave band sound levels. It should be noted that the heating mode would create higher levels)
- External extract/duct extraction fan. (sound data taken from a previous project where a sound proof extract unit was installed (sound power 88dBA) to replace a higher noise unit (without sound mitigation measures commercial woodwork extract systems can create very high levels of noise.)

The noise model Plots Can be seen in the Appendix of the report. A summary (only worst case shown) of the predicted 1hr sound levels ($L_{Aeq,1hr}$ dBA)can be seen below:

NSR:	Doors/windows closed	AC	AC+Ext	Doors/windows open
Chesworth	32	35	44	55
Other NSR	27	43	52	51
Picnic	28	30	40	52

Table 2: Noise Model Summary

5 BS4142 Assessments

5.1 Background Sound Level

The survey data (modal values) was used to express the representative background sound level (BG):

- Workshop Daytime Period $L_{A90,15min}$ = 36dBA

5.2 Rating Level

Sounds created by bandsaws/planers etc. are often deemed to have tonal characteristics. As the tools also create noise level that go from low to very high, in a short period of time, the resulting sounds can be classed as impulsive. The term impulsive has been clarified by the Association of Noise consultants (ANC) in their 2020 technical note (relating to newest BS4142 release):

An impulse is defined at Annex E.3 of BS 4142 as:

'The sudden onset of a sound'

The use of the word **'impulse'** is potentially confusing as sounds that may not be typically considered to be impulsive may be judged as impulsive in BS 4142. This is in contrast to the 1997 version of BS 4142 where impulses were described as **'bangs, clicks, clatters or thumps',** all of which are typically short duration events.

For the purposes of the subjective method considering impulsive **'character corrections'**, the practitioner should attempt to identify the audibility and prominence of 'sudden sounds', rather than what may or may not be defined as an 'impulse' sound by other definitions, including that in the 1997 version of BS 4142. This is based on the NOTE to Clause E.3 which states **'the definition includes only the onset of a sound, not the sound as a whole'**. In these terms, the sound can therefore be considered to justify an **'impulsive' 'character correction'** even if it is not a short duration sound.

Figure 6: ANC Note

Regarding the subjective assessment of tonality and impulsivity BS4142 states the following:

For sound ranging from not tonal to prominently tonal the Joint Nordic Method gives a correction of between 0 dB and +6 dB for tonality. Subjectively, this can be converted to a penalty of 2 dB for a tone which is just perceptible at the noise receptor, 4 dB where it is clearly perceptible, and 6 dB where it is highly perceptible.

A correction of up to +9 dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3 dB for impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible, and 9 dB where it is highly perceptible.

Based on previous assessments it is likely that short term sound levels will be tonal, impulsive and highly perceptible at the NSRs close to the workshop. As a minimum 4dB (tonal) and 6dB (impulsive) character corrections are likely to be required. The corrections result in the rating being 10dB higher than the specific noise level predicted by the model.

For the extract assessment the plant noise was more dominant. The corrections for the plant would probably be less severe. The total correction, for the extract assessment has been set to 3dB.

5.3 Assessments

For the assessments the two residential receptors have been included (for Chesworth House, with multiple reception points in the model, the worst case predictions have been used to simplify the assessment).

5.3.1 Workshop Assessments

- Chesworth House – Workshop Windows/Doors Closed
  - Noise Rating Level = 42dBA
  - 6dB above Background
- Chesworth House – Workshop 2Windows/Doors Open
  - Noise Rating Level = 65dBA
  - 29dB above Background
- Other NSR – Workshop Windows/Doors Closed
  - Noise Rating Level = 37dBA
  - 1dB above Background
- Other NSR – Workshop 2Windows/Doors Open
  - Noise Rating Level = 61dBA
  - 25dB above Background

5.3.2 Workshop (doors windows closed) + Plant Assessments

- Chesworth House
  - With AC+Extract Noise Rating Level = 47dBA
  - 11dB above Background
  - With AC Noise Rating Level =45dBA
  - 9dB above Background
- Other NSR – Workshop 2Windows/Doors Open
  - With AC+Extract Noise Rating Level = 55dBA
  - 19dB above Background
  - With AC Noise Rating Level = 53dBA
  - 17dB above Background

Significant impacts are discussed in a later section. However based on the above, even with doors and windows closed the predicted rating level at the most affected NSR is well above the 36dBA background sound level.

5.4 Context

The following contextual information is considered relevant in completing the noise assessment:

New Sources of noise (with very high short term noise levels) are to be installed on a site with a very low existing sound level and rural soundscape (despite distance to Horsham town).

This is likely to increase the likelihood of adverse impact.

5.5 Significance of Effects

Significance criteria, detailed in the table below, have been used based on the 'Assessment' section of BS4142 which compares the noise rating level of a commercial noise source to the baseline noise levels before the commercial noise started. The rating level can include corrections for noise sources that may be annoying in nature or easily perceived in a more natural soundscape. The assessment section of the standard states clearly that context may affect any specific assessment.

Rating Level minus Background (dB)	BS4142 Note	Significance	MoC
≤0	Low impact	Negligible	Very Low
0-5	Not defined	Minor	Low
5-10	Adverse Impact	Moderate	Medium
≥10	Significant Adverse Impact	Major	High

Table 3: BS4142 Significance Criteria

5.6 Significant Effects Worst Case NSR

5.6.1 Workshop Assessments

- Windows Doors Closed
  - 6dB above background = Moderate Adverse Significance
- Windows Doors Open
  - 29dB above background = Major Adverse Significance

5.6.2 Plant Assessments

- AC
  - 17dB above background = Major Adverse Significance
- AC and Extract
  - 19dB above background = Major Adverse Significance

5.7 WHO/BS8233 Noise Assessments

To further assess the likely noise impact, upon nearby NSRs, guidelines and standards, other than BS4142, can also be used

Based on BS8233/WHO the maximum internal/externa noise level for each area is as follows:

- Bedrooms/Lounges ≤35dBA Day (Inside)
- Outdoor Areas ≤50dBA

To err on the side of caution it is assumed that the noise level inside a property, with window open, will be 10dB lower than the model predicted external noise prediction.

With doors and windows closed the internal noise levels should be below the WHO/BS8233 day time criteria (predicted level would be 32dBA inside).

If a large extract system and/or a large AC heatpump are installed and/or if doors/windows are left open the indoor/external noise levels will not be achieved.

The noise level, with mitigation measures in place, affecting the public picnic area will be fairly modest in comparison the WHO 50dBA limit. However the short term sounds could be fairy disturbing compared to the existing rural soundscape.

6 Conclusion

Acoustic South East have been appointed to undertake an acoustic assessment relating to the proposed part change of use of what currently is an artist's studio.

Mens Shed Club Horsham (MSH), have submitted a planning application that proposes to convert part of the Chesworth Visitor Center Horsham building to a light industrial that will be used as a joinery workshop which is understood would include the use of various woodworking power tools.

The assessment has been commissioned by a resident of an adjacent property that shares a boundary with the Visitor Centre. It is understood the applicant has not submitted or completed their own noise impact assessment. The local authority have not yet requested a noise assessment but have stated that doors and windows are to be kept closed and the application should be refused if details of external plant (if required) are not submitted along with the planning application.

The assessment methodology in BS4142 has been used to predict the significance of effects relating to the operation of the new workshop. Various assessments were completed and in all cases the predicted rating level was above the background sound level).

Even if the doors and windows are kept closed moderate adverse effects are predicted for the most affected NSR. Also with doors and windows closed the short term high sound levels (screeching planer, band saw etc.) are likely to be audible a long distance away from the workshop (as shown in the short term noise model). This is due to the likely sound level inside being as high as 100dBA and the quiet rural soundscape (background noise level was measured to be 36dBA in winter which could be lower in summer when the NSR garden waterfall/stream are not flowing)

If doors and windows are accidentally left open adverse effects are predicted to be major for all receptors.

If the doors and windows are to be kept shut it is considered that heating/cooling and dust extraction plant could be required. Example assessments have been completed to show that, for outdoor plant, if no mitigation measures are completed there could be major adverse effects. Due to the short distance between the NSRs and the workshop and due to the low existing sound levels mitigation measures may need to yield high levels of sound reduction that could be costly to achieve (I.E. timber barrier around plant would not be sufficient).

Furthermore if the use class is changed there could be potential future tenant of a more commercial nature that create higher sound levels and require numerous daily deliveries (for this assessment vehicle movements were not included based on the nature of the proposed workshop operator).

Based on the above it is considered that planning permission may not be granted without additional information from the applicant. Just applying a noise condition, without further information, is also not recommended as the assessments in this report show that even with extensive mitigation measures the standard (Rating level to be no higher than background) noise criteria may not be achieved.

7 Appendix

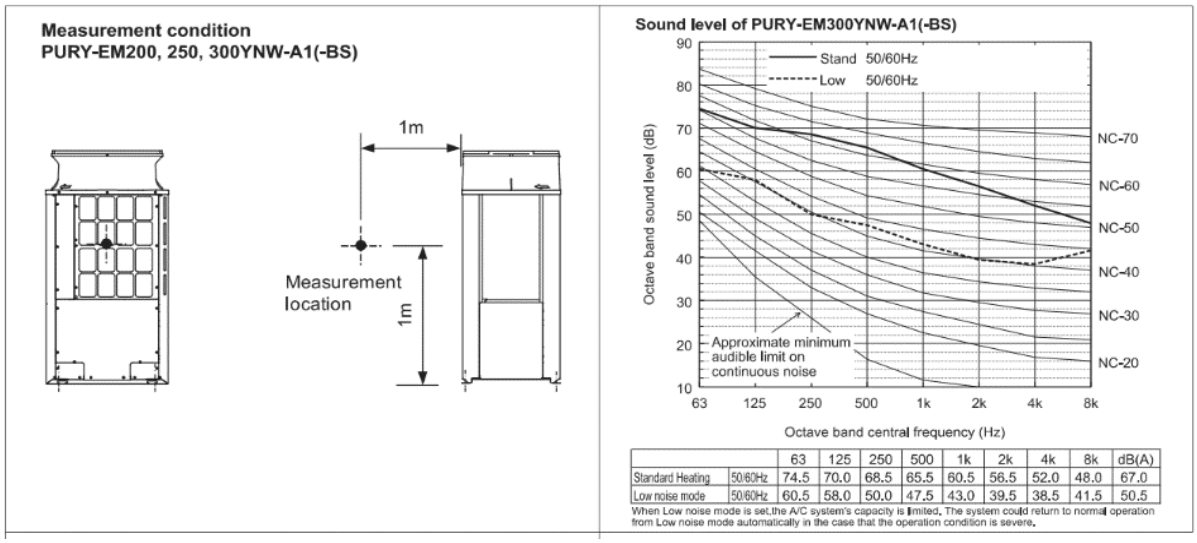
	Fri eq	Fri L90	Sat eq	Sat L90	Sun eq	Sun L90	Mon eq	Mon L90	Tue eq	Tue L90	Wed eq	Wed L90
08:00			40	36	44	35	41	35	41	38	40.1	39
08:15			42	37	42	35	39	36	42	39	42.7	39
08:30			42	38	42	36	41	36	41	39	42.9	39
08:45			44	38	42	36	40	34	43	38	42.7	38
09:00			44	38	41	36	45	34	42	37	42.1	37
09:15			42	38	40	35	41	34	43	37	41.9	37
09:30			42	38	38	36	40	34	40	36	49.4	36
09:45			42	39	41	36	37	34	40	36	40.4	37
10:00			41	38	44	36	38	34	39	36	40.4	37
10:15			42	38	51	36	36	34	40	36	39.4	36
10:30			41	38	39	36	39	33	38	37	39.4	37
10:45			40	38	40	36	38	33	39	42	40.7	37
11:00			42	37	40	36	38	34	42	37	39.6	36
11:15			41	36	38	36	38	33	47	35	39.6	36
11:30			40	35	38	37	38	34	47	36	41.7	36
11:45			41	36	42	37	35	34	40	35	37.9	36
12:00	48	35	37	36	49	37	36	33	40	35	38.4	35
12:15	42	35	39	36	40	37	37	33	37	35	37.6	35
12:30	37	35	39	36	39	37	36	33	40	35	38.0	35
12:45	39	34	38	35	39	36	35	33	36	35	37.6	35.1
13:00	38	34	40	35	42	36	38	34	38	35		
13:15	37	34	39	35	44	36	35	34	37	34		
13:30	37	34	39	35	38	36	36	34	38	34		
13:45	39	36	42	35	39	35	36	35	35	34		
14:00	37	33	37	35	38	36	35	35	36	34		
14:15	36	33	38	34	38	36	37	35	35	33		
14:30	35	33	38	34	40	35	37	36	35	33		
14:45	36	33	37	35	37	35	37	36	34	33		
15:00	37	33	37	34	41	35	37	37	37	33		
15:15	36	34	37	34	44	35	38	37	35	34		
15:30	36	34	37	34	39	35	41	37	35	33		
15:45	40	34	37	35	38	36	40	37	36	33		
16:00	42	36	36	35	38	37	39	37	35	33		
16:15	40	36	38	36	40	36	45	37	35	33		
16:30	41	36	38	36	41	37	41	37	35	33		
16:45	41	37	38	36	39	36	39	38	35	33		
17:00	40	37	38	36	40	36	41	38	34	33		
17:15	39	37	37	36	39	37	39	38	35	33		
17:30	40	38	38	36	39	36	41	38	42	33		
17:45	38	37	38	36	40	36	39	37	34	33		

Figure 7: Survey Raw Data

		63 Hz	125 Hz	250 Hz	500 Hz	1.0 kHz	2.0 kHz	4.0 kHz	8.0 kHz
Fan 88 LWA Based on curve:		66.9	75.7	71.9	62.2	57.3	38.5	26.4	65.5
AC 61 @1m		75	70	68	66	60	56	52	48
AC 86.5 LWA		94.5	89.5	87.5	85.5	79.5	75.5	71.5	67.5
Joinery Workshop 83dBA 1 hour indoor		81	86	80	78	76	77	76	71
		Sound Reduction:							
Single Glazing		18	20	22	28	33	34	28	28
Door 25mm pine		14	17	22	24	23	32	41	42
Concrete Tiles		22	26	31	35	39	35	40	40

Figure 8: Noise Model Data

Sound pressure level (measured in anechoic room) *4		dB <A>	61.0/67.0
Sound power level (measured in anechoic room) *4		dB <A>	80.0/86.5
Refrigerant	High pressure	mm (in.)	19.05 (3/4) Brazed



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard Heating	50/60Hz	74.5	70.0	68.5	65.5	60.5	56.5	52.0	48.0	67.0
Low noise mode	50/60Hz	60.5	58.0	50.0	47.5	43.0	39.5	38.5	41.5	50.5

When Low noise mode is set,the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Figure 9: AC Data

DST56-560-55/D
Sound data

Plant / Order: 09-04-2014/heo
Type: 090414heo4-1

Operating point	1				
Housing	1.0038	4 mm	Air Volume	13896	ft³/min
Inlet diameter	560	mm	Total pressure	14,1	in W.C.
Outlet opening	630x400	mm	Medium temperature	15	°C
Operating speed	1470	1/min	Medium density	1,201	kg/m³
Number of blades	8		Operating point V/Vopt	0,81	
Blade frequency	196	Hz	Measuring surface index	16,9	db

Basic capacity (Fan type 3731)		db	113,3							
Sound correction (operating point V/Vopt)		db	0,2							
Octave band		**Hz**	**Total**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Turning sound adjustment		db		0	0	5	0	0	0	0	0
Strouhal number		db		0,8	1,6	3,2	6,5	13	26	52	104
Relative spectrum		db		-5,4	-6,7	-9	-12,1	-16,2	-21,2	-27,1	-33,9
Total linear soundlevel		db	113,5	108,1	106,8	109,5	101,4	97,3	92,3	86,4	79,6
A-weighting		db		-26,2	-16,1	-8,6	-3,2	0	1,2	1	-1,1
Insulation platethickness housing		db		-4	-6	-8	-13	-13	-13	-13	-13
Total soundlevel	LwA 1	dB(A)	104,5	81,9	90,7	100,9	98,2	97,3	93,5	87,4	78,5
Soundlevel housing	LwA 2	dB(A)	94,8/95,7*	77,9	84,7	92,9	85,2	84,3	80,5	74,4	65,5
	LpA 2(1m)	dB(A)	77,9/78,7*	61	67,8	76	68,2	67,4	63,6	57,5	48,6
Soundlevel duct suctionside	LwA 3	dB(A)	103,7	80,9	89,7	98,9	98,2	97,3	93,5	87,4	78,5
	LpA 3(1m)	dB(A)	93,1**	63,7	76,5	87,8	87,8	87,1	83,4	77,3	68,4
Soundlevel duct pressureside	LwA 4	dB(A)	106,2	81,9	91,7	102,9	101,2	97,3	92,5	86,4	78,5
	LpA 4(1m)	dB(A)	95,5**	64,7	78,5	91,8	90,8	87,1	82,4	76,3	68,4

Noise reduction

Octave band		**Hz**	**Total**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Housing insulation / booth		db		-8	-9	-21	-23	-27	-42	-48	0
Soundlevel housing	LwA 2	dB(A)	78,3/88,4*	69,9	75,7	71,9	62,2	57,3	38,5	26,4	65,5
Soundlevel housing	LpA 2(1m)	dB(A)	61,4/71,5*	53	58,8	55	45,2	40,4	21,6	9,5	48,6

Soundlevel motor	LwA	dB(A)	88
Noise reduction motor	Lw	db	0
Additional sound sources	LwA	dB(A)	0

*** Data incl. motor at nom. RPM and add. sources (± 5dB!!!)**
**** Theoretical noiselevel for estimating of the soundpressure level at the systemborder**

Fan Set 1

Figure 10: Silenced Extract Data

- Historic Survey Data Workshop Extraction:

- Fineline Measured Calculated Sound Power = 96dBA
- WSOF Measured Calculated Sound Power = 89dBA
- Duncan Reed datasheet Sound Power = 88dBA

- Historic Survey Data Inside Workshop:

Date	Time	$L_{Aeq,1hr}$ dB(A)	L_{Amax} dB(A)
12/03/2015	09:00	79.3	96.9
12/03/2015	10:00	78	111.8
12/03/2015	11:00	79.4	99.6
12/03/2015	12:00	78.8	99.9
12/03/2015	13:00	72.7	98.6
12/03/2015	14:00	80.2	99.2
12/03/2015	15:00	78.3	100.5
12/03/2015	16:00	78.7	104
12/03/2015	17:00	73	83.3
06/03/2015	07:00	77.9	99
06/03/2015	08:00	79.4	102.4

Table 4: Indoor Specific Noise Measurements

See below for a summary of the specific noise levels measured inside the workshop:

- Lowest $L_{Aeq,1hr}$ = 73dBA Highest $L_{Aeq,1hr}$ = 80dBA Average $L_{Aeq,1hr}$ = 78dBA

Figure 11: Historic Data

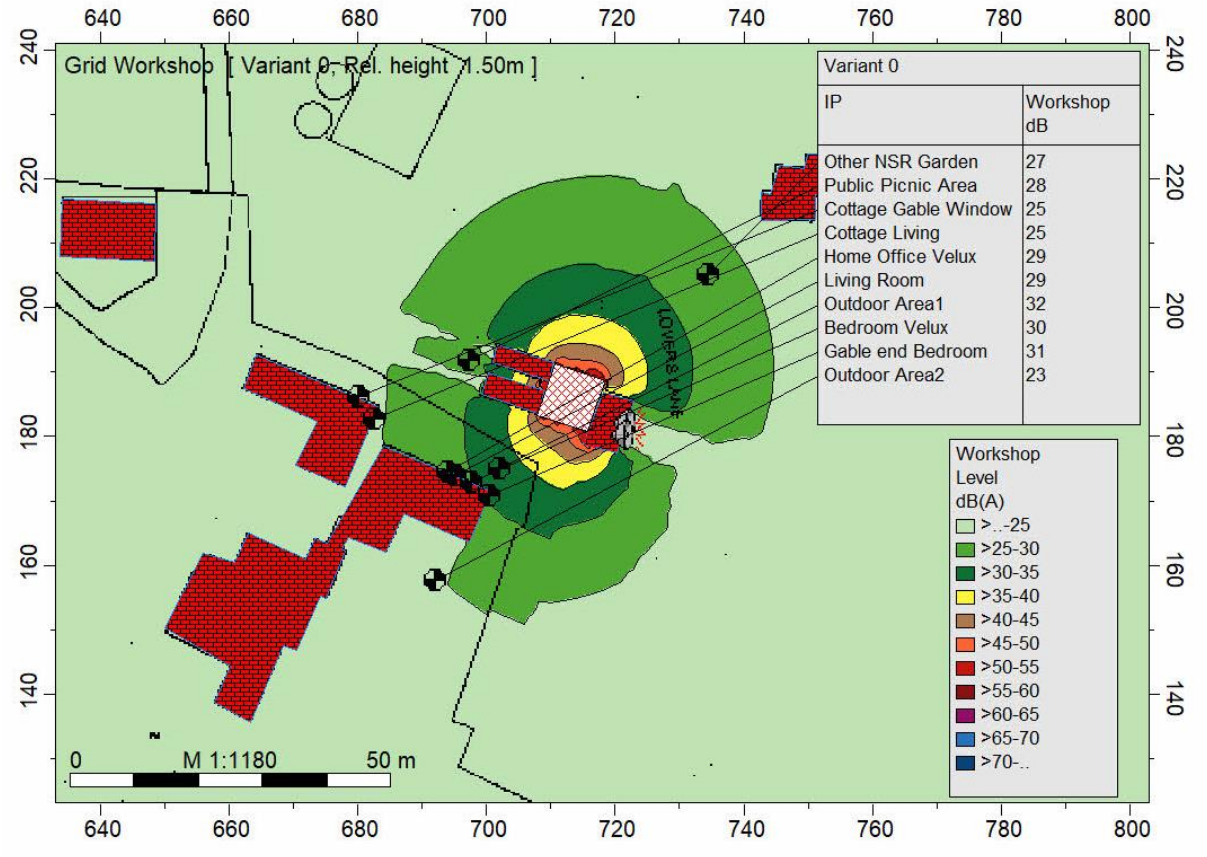


Figure 12: Noise Model Doors/Windows Closed

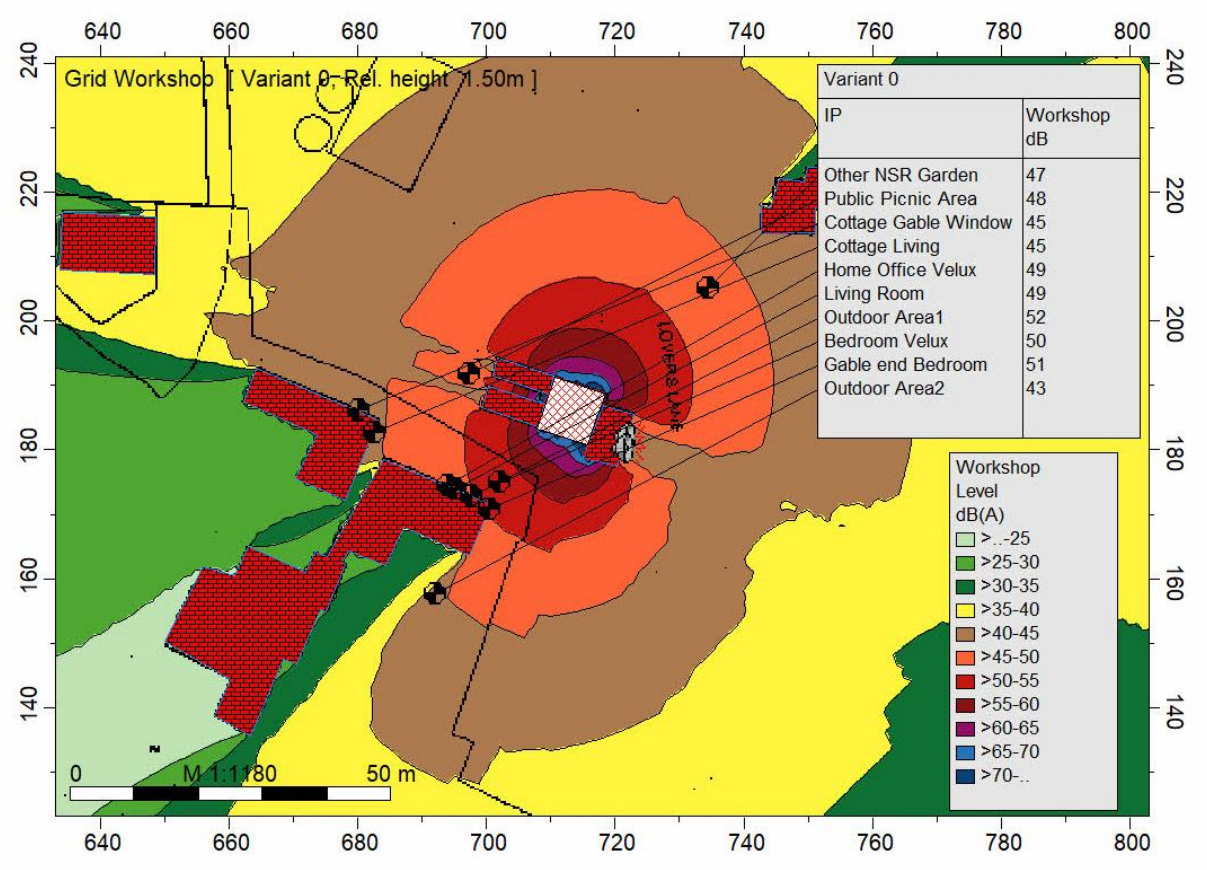


Figure 13: Noise Model Doors/Windows Closed (short term levels)

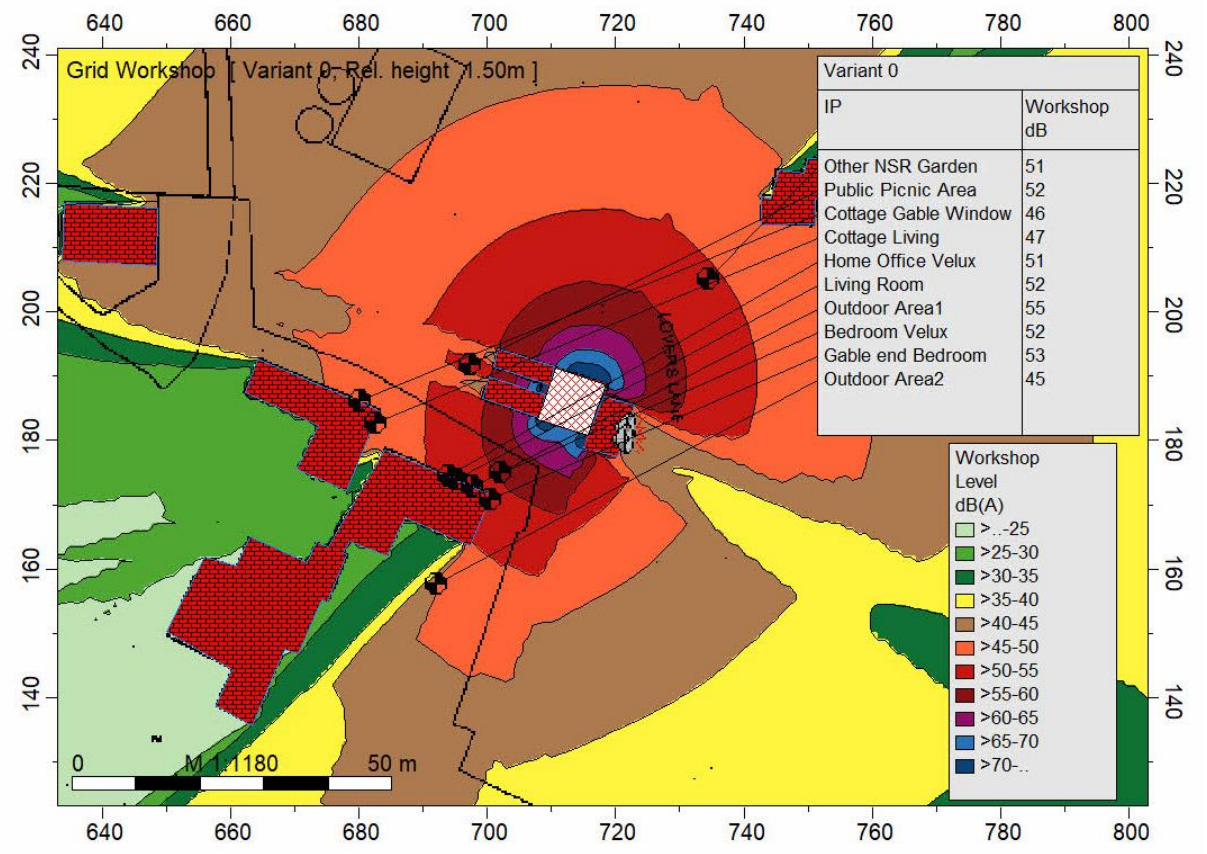


Figure 14: Noise Model Doors/2 Windows Open

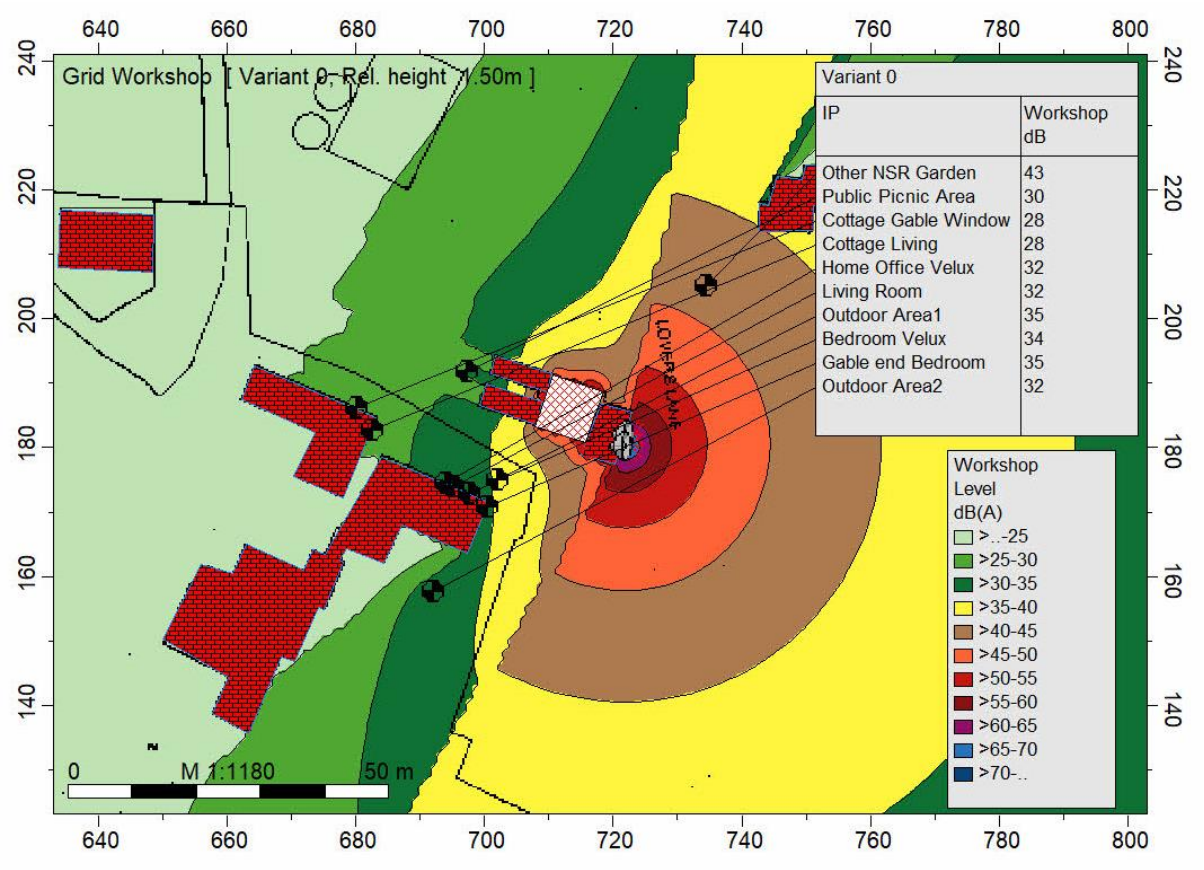


Figure 15: Noise Model Doors/Windows Closed + AC Unit

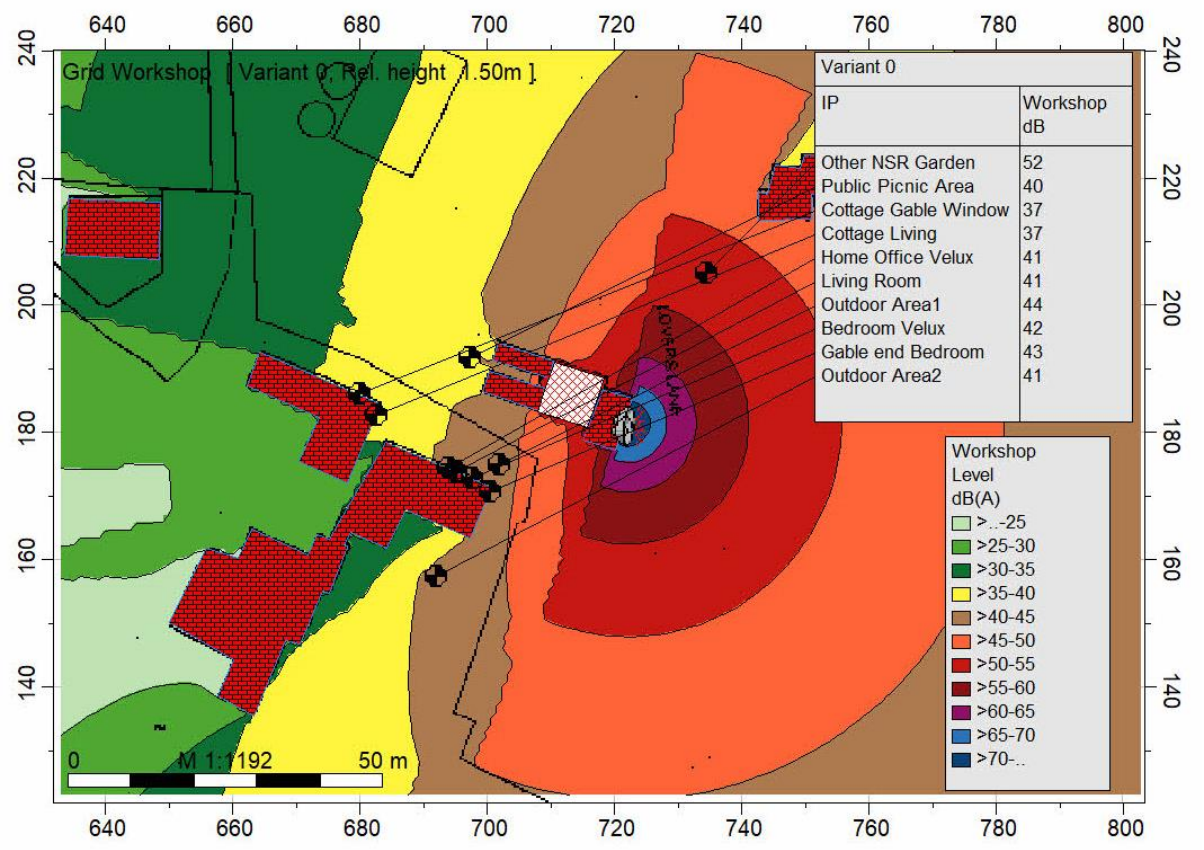


Figure 16: Noise Model Doors/Windows Closed + AC Unit + Extract System