

Technical Note

Title:	Noise Risk Appraisal		
Client:	North Manchester General Hospital		
Reference:	2063498-RSKA-TN-001-(03)		
Date:	25 November 2025		
Prepared:	Daniel Lilley BSc (Hons) AMIOA [redacted]	Approved:	Daniel Vallis BSc (Hons) CEnv MIOA MIEnvSc [redacted]

1 Introduction

1.1 Instruction and Objectives

RSK Acoustics (RSKA) has been instructed by North Manchester General Hospital (NMGH) to provide an initial noise risk appraisal to support the planning application for Works Package 14 (WP14). This appraisal aims to address the preliminary requirements of Manchester City Council's planning portal, ensuring that noise impact considerations are taken into account for the planning application. The findings will inform whether a full noise impact assessment will be required at a later stage, following a review and further discussion with the council's Environmental Health Team as appropriate.

In summary, this document outlines the following:

- A description of the proposed development and the surrounding area,
- Identification of noise-sensitive receptors (NSRs) in the vicinity,
- A review of national and local planning policy, planning guidance and other technical guidance documents.
- An overview on the existing acoustic environment; and
- A high-level appraisal regarding the likelihood of significant adverse impact due to noise.

1.2 Exclusions

It is anticipated that the proposed development will not result in significant vibration. Therefore, operational vibration has been scoped out of the assessment.

The intended use of the carpark is for staff parking only, with there being no planned use for deliveries/HGV access. As a result, any potential HGV impact has not been considered.

No consideration of construction-phase noise has been included in this document, as this is expected to be assessed and mitigated (where necessary) via a Construction Environment Management Plan, utilising Best Practicable Means as defined in the Control of Pollution Act 1974.

2 Site Location and Description

The development site is currently a construction works area off Crescent Road, to the east of NMGH.

2.1 Development Proposals

It is proposed to convert the area into a surface car park for hospital staff, close to North View Mental Health Inpatient Hospital. It is anticipated that the carpark will have 65 car parking spaces and 2 motorcycle bays, and will be operational 24/7, accommodating only passenger vehicles. At present, plans do not include EV-charging facilities.

North View Mental Health Inpatient Hospital is situated immediately to the proposed site's southern and western boundary. An agricultural area is situated to the east of the development site, with a heavy goods vehicle (HGV) rental yard located beyond. To the north-west, the site is largely surrounded by further hospital buildings. Further afield lies a series of residential estates and occasional parkland, serviced by a local road network.

2.2 Noise-Sensitive Receptors

The following NSRs have been identified as being the closest and/or most exposed to the development site:

NSR1 "North View" – a purpose-built, adult mental health inpatient hospital. Opened in November 2024, the building replaces Park House on the wider NMGH site. The southern edge of the proposed car park abuts the building.

It is understood that the building's external façade was designed in such a way that noise from external sources did not result in an adverse internal ambient noise level against the requirements of the Department of Health's *Health Technical Memorandum 08-01: Acoustics* (HTM-08-01). Although this would not consider noise from the proposed car park, it is anticipated that this would cover road traffic noise from Central Drive and Crescent Drive.

NSR2 "Longshaw Close" – a cul-de-sac, located approximately 150 m to the southeast of the proposed car park. The properties are screened from the hospital by a large earth bund, with the hospital's waste compound located on the other side (formerly the site of the staff car park). To the north of Longshaw Close is Salford Van Hire's preparation maintenance centre; to the east lies S.D. Waste Paper Recycling Centre.

3 Regulatory Framework

3.1 National Policy and Guidance

3.1.1 National Planning National Planning Policy Framework (NPPF): 2024

The National Planning Policy Framework (NPPF) describes how noise is considered within the planning regime. The NPPF does not contain assessment design targets, instead providing a series of policies, giving local authorities the flexibility in meeting the needs of local communities. The NPPF states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by […] preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans."

"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 impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

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."

3.1.2 Noise Policy Statement for England (NPSE): 2010

Environment, Food and Rural Affairs (Defra) and sets out the approach to noise within the Government's sustainable development strategy.

The significance of impacts from noise are defined within the NPSE as follows:

"There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

- *NOEL – (No Observed Effect Level) - This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.*
- *LOAEL (Lowest Observed Adverse Effect Level) - This is the level above which adverse effects on health and quality of life can be detected.*

Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level.

- *SOAEL – (Significant Observed Adverse Effect Level) - This is the level above which significant adverse effects on health and quality of life occur."*

The three aims of the NPSE are to:

"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.

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.

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."

3.1.3 Planning Practice Guidance (PPG)

The Department for Communities and Local Government 'Planning Practice Guidance' (PPG) expands upon the NPPF and NPSE. The guidance does not include any specific noise levels but sets out further principles that should underpin a noise assessment. The PPG states:

"Plan-making and decision making need to take account of the acoustic environment and in doing so consider:

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

The below table identifies where the overall effect of the noise exposure falls in relation to SOAEL, LOAEL and NOEL as defined in the NPSE. The implication of the final line of the table is that only the 'noticeable and very disruptive' outcomes are unacceptable and should be prevented. All other outcomes can be acceptable, depending upon the specific circumstances and factors such as the practicalities of mitigation.

Response	Examples of outcomes	Increasing effect level	Action
***NOAEL** (No Observed Effect Level)*			
Not present	No effect	No observed effect	No specific measures required
***NOAEL** (No Observed Adverse Effect Level)*			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No observed adverse effect	No specific measures required
***LOAEL** (Lowest Observable Adverse Effect Level)*			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed adverse effect	Mitigate and reduce to a minimum
***SOAEL** (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
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable adverse effect	Prevent

Table 1 Summary of noise exposure hierarchy



3.2 Local Policy and Guidance

3.2.1 Manchester City Council – Core Strategy Development Plan 2012-2027

The Core Strategy Development Plan Document 2012 -2027 (the Core Strategy) was adopted by the City Council in July 2012 and sets out the long-term strategic planning policies for Manchester's future development.

The following policy is considered to be of most relevance to this document:

"Citywide Development Control Policies 26 Development and Noise

DC26.1 The Council intends to use the development control process to reduce the impact of noise on people living and working in, or visiting, the City. In giving effect to this intention, the Council will consider both:

a) the effect of new development proposals which are likely to be generators of noise; and

b) the implications of new development being exposed to existing noise sources which are effectively outside planning control.

DC26.2 New noise-sensitive developments (including large-scale changes of use of existing land or buildings), such as housing, schools, hospitals or similar activities, will be permitted subject to their not being in locations which would expose them to high noise levels from existing uses or operations, unless the effects of the noise can realistically be reduced. In giving effect to this policy, the Council will take account both of noise exposure at the time of receiving a planning application and of any increase that may reasonably be expected in the foreseeable future."

3.2.2 Manchester City Council – Planning and Noise Technical Guidance: October 2022

Within the aforementioned document, Section 3.1.7.5 *Industrial / Commercial Developments* states the following:

"The Council consider that new developments should contribute and enhance the area in which they are located and where possible i.e. prevent 'noise creep', contribute to the improvement of people's health and quality of life as per the NPSE. With this in mind, the design objective should be:

'The development should be designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location.'

Where this criterion cannot be achieved, the various noise control measures considered as part of the assessment should be fully explained (i.e. relocation of noise sources, use of quieter equipment, enclosures, screening, restriction of the hours of operation) and the achievable noise level should be identified. This information will allow a judgement to be made concerning the application and its likely impact on the surrounding area."

At present, a dialogue has not been opened with Manchester City Council as to the suitability of the above guidance. Subsequent to the issue of this document and if necessary, further discussion with the local authority will be sought to ascertain the suitability of the above to a carpark development.

3.2.3 Greater Manchester Combined Authority – Places for Everyone Joint Development Plan 2022-2029

Policy JP-C5: Streets for All, states within the aforementioned document that, *'Streets will be designed and managed to make a significant positive contribution to the quality of place and support high levels of walking, cycling and public transport'.*

Detailed under point 1.k, with the aim of ensuring *'design and management of streets will follow a Streets for All approach',* the following reference is made to noise pollution from road transport as a principle of the Streets for All initiative:

'Mitigating the impacts of air and noise pollution and carbon emissions from road transport'.

3.2.4 Manchester City Council – Core Strategy Development Plan Document (Adopted 11 July 2012)

Policy DM1 concerns development management and states that, '*all development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document'.*

Concerning noise, policy DM1 states the following consideration should be made:

'Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise'.

3.3 British Standards and Other Guidance Documents

3.3.1 BS 4142:2014+A1:2019

BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* (BS 4142) describes the methods for rating and assessing noise of an industrial or commercial nature. The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. BS 4142 states that:

"An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context".

Where the initial estimate of the impact needs to be modified due to the context, all pertinent factors should be taken into account, including:

- The absolute level;
- The character and level of the residual sound; and
- The sensitivity of the receptor and whether dwellings will already (or likely) to incorporate design measures that secure good internal and/or
- outdoor acoustic conditions, such as:
    - façade insulation treatments
    - ventilation and/or cooling, and
    - acoustic screening.

3.3.2 World Health Organization Guidelines for Community Noise, 1999

This document provides general guidance and guidelines, which have been set for different health effects, using the lowest noise level that produces an adverse health effect in specific human environments; the levels which are relevant to this assessment are set out in Table 2:

Environment	Critical health effect(s)	dB L_{Aeq}	Time base (h)	dB L_{AFMax}
Dwelling indoors	Speech intelligibility and moderate annoyance, daytime and evening	35	16	-
Inside bedrooms	Sleep disturbance, night-time	30	8	45 [1]
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60
Notes [1] Should not exceed 45 dB LAFmax more than 10-15 times per night.				

Table 2 WHO Guidelines for Community Noise

3.3.3 IEMA Guidelines for Environmental Noise Impact Assessment

The Institute of Environmental Management and Assessment (IEMA) has compiled guidance for conducting noise impact assessments, particularly for the use in environment impact assessments (EIAs) but with the wider aim of providing guidance for assessing the impact from any new noise sources. The guidelines state that, for any assessment, the noise level threshold and significance statements should be determined by the assessor, based on the specific evidence and likely subjective response to the noise. The methodology for the assessment in accordance with the IEMA Guidelines facilitates the determination of impacts from a comparison of future noise against existing noise.

Table 7-12 of the IEMA Guidelines is shown below. Whilst these are based on an example of road traffic noise (using guidance from the Design Manual for Roads and Bridges), it is reasonable to apply the same magnitude of change thresholds to other sources where the change in noise level is due to the introduction of a noise with the same frequency and/or temporal characteristics as the sounds making up the existing noise climate.

IEMA Degree of Effect	Description / Metric
Very Substantial	Greater than 10 dB L_{Aeq} change in sound level perceived at a receptor of great sensitivity to noise
Substantial	Greater than 5 dB L_{Aeq} change in sound level at a noise-sensitive receptor, or a 5 to 9.9 dB L_{Aeq} change in sound level at a receptor of great sensitivity to noise
Moderate	A 3 to 4.9 dB L_{Aeq} change in sound level at a sensitive or highly sensitive noise receptor, or a greater than 5 dB L_{Aeq} change in sound level at a receptor of some sensitivity
Slight	A 3 to 4.9 dB L_{Aeq} change in sound level at a receptor of some sensitivity
None/Not Significant	Less than 2.9 dB L_{Aeq} change in sound level and/or all receptors are of negligible sensitivity to noise or marginal to the zone of influence of the proposals

Table 3 Effect Descriptors (IEMA Guidelines)

4 Analysis of Existing Noise Environment

RSKA has previous involvement in the delivery of multiple work packages around the North Manchester General Hospital site and, as such, baseline noise monitoring has previously been undertaken at positions close to the proposed development and the NSRs identified.

An overview of the surveys undertaken is detailed below, including the results of background noise level assessment. Further details regarding survey methodology and results can be provided upon request.

4.1 WP01 – Waste Compound Relocation

Undertaken between 11 April 2024 to 14 April 2024 to obtain data for both midweek and weekend periods, unattended noise monitoring was completed as part of a noise impact assessment considering the impact of the Waste Compound Relocation Works Package (RSKA project reference: 2062435). Identified as an NSR



for this project was 12 Longshaw Close, which has also been identified as the closest residential NSR to the WP14 proposed development.

It is worthy of note that the waste compound replaces the previous use of this land parcel as a car park.

4.2 Electrical Infrastructure Upgrades across Blocks D-G

Undertaken between 17 December 2024 to 23 December 2024 to obtain data for both midweek and weekend periods, unattended noise monitoring was completed as part of a noise impact assessment considering the impact of the proposed Substation 8B (RSKA project reference: 2063001). Identified as an NSR for the project was North View Mental Health Inpatient Hospital, which has also been identified as the closest hospital NSR to this development.

4.3 Results and Observations

The acoustic environment was observed by the consultant to comprise the following during the attended portion of each survey:

Location near North View:

- Consistent road traffic noise audible from the wider road network and consistent instances of passing traffic along Central Drive;
- Intermittent birdsong;
- Conversations of individuals waiting at a nearby bus stop; and
- Passing pedestrians and associated conversations.

Location near Longshaw Close:

- Road traffic noise audible in instances of passing traffic on Crescent Drive.
- Consistent birdsong largely dominant in absence of other noise sources.
- Wider road network audible and consistent.
- Intermittent low-level construction noise audible from adjacent hospital site.

A summary of the measurement data for each survey is shown in Table 4 overleaf. Representative background sound levels are provided for daytime and night-time periods, in accordance with the methodology prescribed in BS 4142; they have been derived from a combination of mean, median and modal averages, analysis of the time history and professional judgement. A graphical representation of the monitoring positions is displayed in Figure 2.

NSR Represented	Period	Measured Level, dB(A) [1]			
		$L_{Aeq,T}$	$L_{AFmax,T}$	$L_{A10,T}$	$L_{A90,T}$ [2]
North View	Daytime	47-66	58-87	50-60	37-52 (44)
	Night-time	40-67	44-89	40-58	31-48 (40)
12 Longshaw Close	Daytime	43-55	57-82	44-58	40-49 (45)
	Night-time	37-53	47-76	38-56	35-48 (37)

Notes

[1] Reference interval is set at 1 hour during daytime periods (07:00-23:00) and 15 minutes during night-time periods (23:00-07:00)
[2] Representative $L_{A90,T}$ shown in brackets

Table 4 Noise monitoring data

5 Noise Risk Appraisal

5.1 NSR1 – North View

Vehicle movement within the car park is expected to be slow and the exclusion of commercial vehicles from the area indicates that the presence of reversing alarms is unlikely. As such, noise from vehicle movement is expected to be relatively low, with the primary noise sources likely to be from idling engines and the closing of vehicle doors.

Due to the proximity of NSR1, further consideration may be warranted. However, it is worthy of note that the characteristics of the wider acoustic environment are unlikely to change, nor is the range of noise levels expected to increase (average and maxima) when compared against those shown in Table 4. On the basis that the external façade of North View has been designed to mitigate against these existing noise levels from external sources, it is considered that noise from the proposed car park would also be suitably mitigated to ensure the wellbeing of the residents with regard to sleep disturbance and annoyance.

With consideration to the aforementioned points, it is considered that the risk of an adverse noise impact is low.

5.2 NSR2 – Longshaw Close

The development site is situated approximately 150 m, and with no clear line of sight, from this NSR. Furthermore, the development positions the car park further than its previous location (which has since been replaced by the waste compound).

With consideration to the above alongside the background sound levels monitored at the receptor, a noise impact is not anticipated at NSR2.

6 Conclusions

RSKA has been instructed by NMGH to provide an initial noise risk appraisal regarding the proposed construction of a staff car park close to the eastern boundary of the hospital site. This document considers the regulatory framework and other technical guidance, alongside the specifics of the development and surround area, to provide a high-level overview regarding the likelihood of a significant adverse impact being generated as a result of the proposals.

With consideration to the above points, it is deemed that the risk of a significant adverse impact due to noise is low.

Following the submission of this document, it is anticipated that a dialogue may be opened with the appropriate Environmental Health team at Manchester City Council. Following the outcomes of this consultation, an updated assessment may need to be undertaken, working alongside the design team to limit noise impact where required.



Legend:

- Development Boundary
- Measurement Position
- Noise Sensitive Receptor



Rev	Date	Description	Drn	Chk	App
01	21/09/25	First Issue	DV	DL	DV

NMGH - Works Package 14

RSK acoustics

Appendix A
Map of Noise Sensitive Receptors and Measurement Locations

0 10 20 30
Metres

N
W E
S

Rev 01

RSK acoustics

Institute of Acoustics 50 1974-2024 Sponsoring Organisation

DNV ISO 9001 · ISO 14001 · ISO 45001

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