Manchester College Wythenshawe Campus

Noise Impact Assessment

32546/NIA1/R3

11 March 2026

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Hann Tucker Associates

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Document Control

Rev	Date	Comment	Prepared by	Reviewed by	Approved by
4	11/03/2026	Update Section 8.1 to Section 8.7. Update latest drawings.	[redacted] Nick Mitchell Senior Consultant BSc(Hons) AMIOA	[redacted] Jake Howarth Senior Associate BEng(Hons), MIOA	
3	27/01/2026	Updated to include detailed plant assessment	Nick Mitchell Senior Consultant BSc(Hons) AMIOA	Jake Howarth Senior Associate BEng(Hons), MIOA	
2	13/08/2025	Updated with new site plan and HRU compound location	Nick Mitchell Senior Consultant BSc(Hons) AMIOA	Naveen Simha Senior Consultant BEng (Hons), MSc, MIOA	Jake Howarth Senior Associate BEng(Hons), MIOA
1	08/08/2025	Updated with new HGV compound layout	Nick Mitchell Senior Consultant BSc(Hons) AMIOA	Naveen Simha Senior Consultant BEng (Hons), MSc, MIOA	Jake Howarth Senior Associate BEng(Hons), MIOA
0	07/08/2025	First Issue	Nick Mitchell Senior Consultant BSc(Hons) AMIOA	Naveen Simha Senior Consultant BEng (Hons), MSc, MIOA	Jake Howarth Senior Associate BEng(Hons), MIOA

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Noise Impact Assessment
Report 32546/NIA1/R3

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1.0 Introduction

Hann Tucker Associates Limited (Hann Tucker) has been commissioned by 10architect to undertake a noise assessment for a site in Wythenshawe, Manchester

The site is located on Renton Road, and the proposals are to demolish the existing Polytunnel and Brick Workshop buildings and erect a new Brick Workshop building with a larger footprint. This in turn will result in the existing HGV Compound being reduced in size and moved approximately 2m south to allow room for the building. The proposals will also see the relocation of the Pan Mixer zone to the northeast corner of the new building. New plant is to be installed both externally and internally. It is understood that the operational hours will remain unchanged (between 07:00 – 19:00).

As such, this Noise Assessment supports the planning application for the proposed new Brick Workshop building including relocated HGV manoeuvre zone, new building services plant and associated mixing plant.

Baseline noise conditions have been established by means of a detailed noise survey, presented herein. The findings have subsequently been used to assess the suitability of the site for intended use. Measures required to mitigate noise impacts for the proposed development (when operational) have been discussed in context with relevant national & local planning policies, design standards and good practice guides.

2.0 Objectives

To undertake a baseline noise survey to establish the existing background noise levels at selected accessible positions representative of nearby receptors.

To undertake additional attended noise level measurements of the Pan Mixer associated with existing Brickworks building and HGV manoeuvring from the existing HGV compound.

To assess the impact of noise associated with the Pan Mixer and HGV movements by comparing predicted noise levels against the baseline noise survey results and the guidance within relevant British Standards such as BS 4142:2014+A1:2019: "*Methods for rating and assessing industrial and commercial sound.*" To set limits to be achieved by fixed plant and equipment at existing noise sensitive receptors in accordance with BS 4142, based on the results of the baseline noise monitoring. Where appropriate, mitigation measures will be considered to reduce noise to within acceptable levels at existing sensitive receptors.

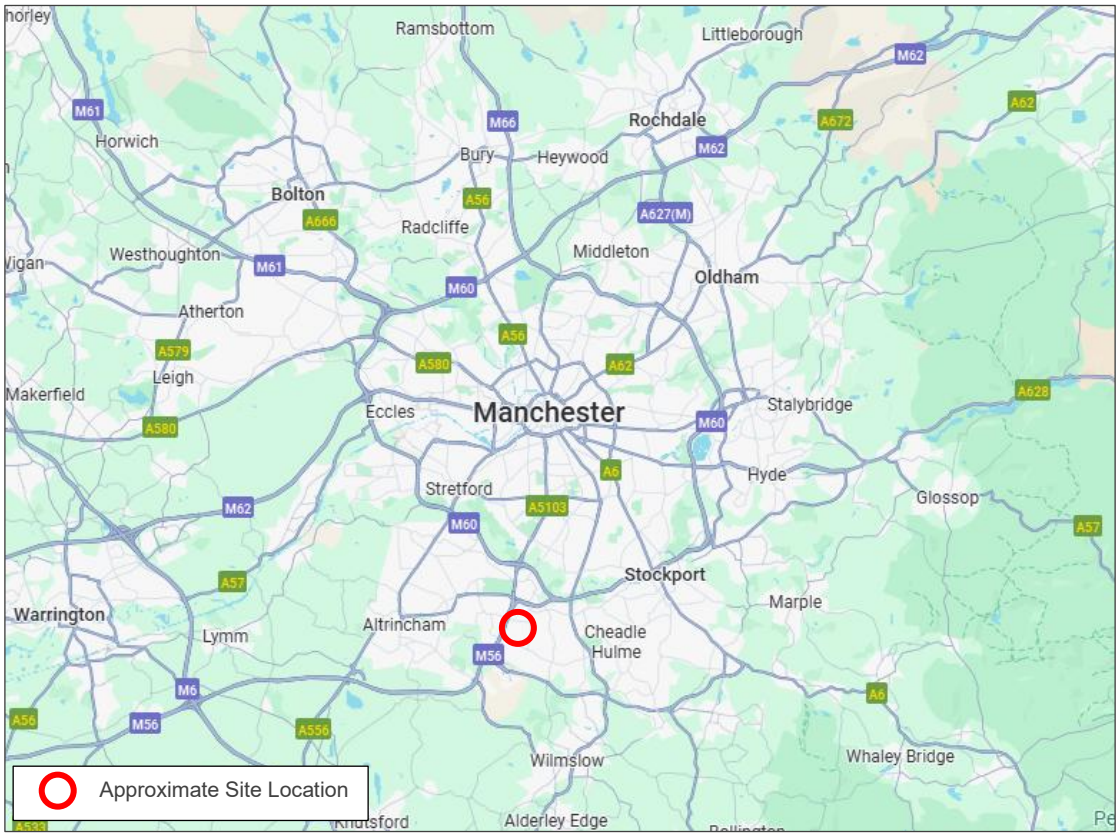
3.0 Acoustic Terminology

For an explanation of the acoustic terminology used in this report please refer to Appendix A enclosed.

4.0 Site Description

4.1 Location

The site is located south of Manchester, in Wythenshawe. The location is shown in the Location Map below.



Location Map: Imagery ©2025 Google, Maxar Technologies

The site falls within the jurisdiction of Manchester City Council.

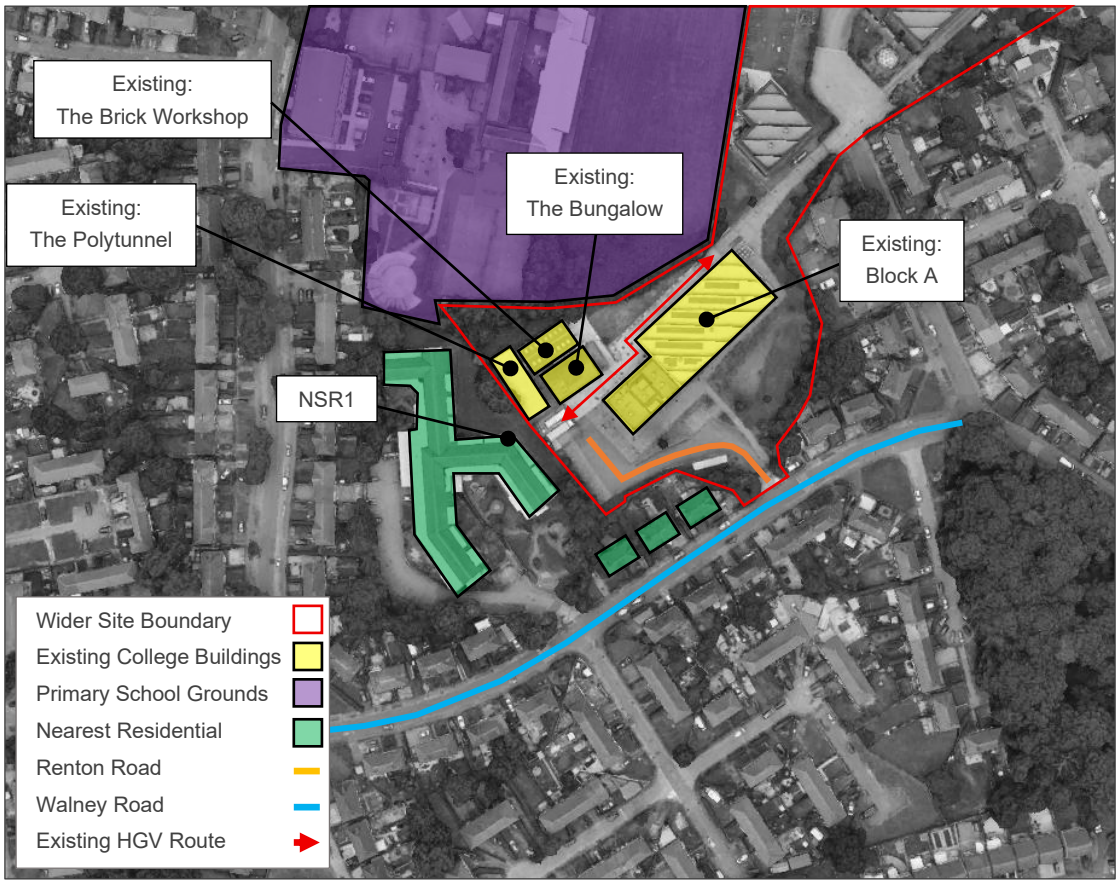
4.2 Description and Noise Sensitive Receptors (NSRs)

The site is located on Renton Road and lies adjacent to Walney Road and is associated with the Manchester College (Wythenshawe Campus). The existing site comprises the southern half of Manchester College which includes existing workshop buildings, and an existing HGV compound used for teaching students to manoeuvre the vehicles.

The nearest noise sensitive receptors (NSRs) are:

- NSR 1: The Peele Care Home
- NSR 2: No. 17 & No. 19 Walney Road
- NSR 3: No. 21 & No. 23 Walney Road
- NSR 4: No. 25 & No. 27 Walney Road

The site is shown in the Site Plan below.



Site Plan: ©2025 Google, Maxar Technologies

4.3 Proposed Development

As mentioned in Section 1.0, the proposed development is to demolish the existing Brick Workshop and Polytunnel buildings to erect a new Brick Workshop Building.

Proposals show that there will be a number of new plant items being installed to serve the new building, including internal extract fans ducted to the façade, heat recovery units externally mounted to the north of the building, a new mechanical ventilation zone to the northeast corner of the building, and a new dust extraction system on the east facing façade. The Pan Mixer is to remain and be relocated to new area. With respect to the HGV compound, the size of the compound is reduced and moved about 2m south of its current location.

The proposed wider site plan is detailed below.



Document reference: MCBW-10A-M3-WB_P3 Proposed Site Plan

5.0 Planning Policies, Standards & Guidance

5.1 Policies & Guides

In order to provide a suitable assessment a number of national planning policies have been considered.

All guidance used to form a noise impact assessment is taken from various standards, guidance, and Local Authority requirements as summarised below:

- National Planning Policy Framework (NPPF): 2024
- British Standard 4142:2014 + A1:2019
- Manchester City Council Planning and Noise Technical Guidance: 2022
- Statutory Noise Nuisance
- The Institute of Environmental Management & Assessment (IEMA): Guidelines For Environmental Noise Impact Assessment

Detailed information for relevant planning policies and guidance can be found within Appendix B.

5.2 Specific Local Authority Criteria

Manchester City Council's (MCC) Planning and Noise Technical Guidance document (October 2022) states the following:

> *"The development should be designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location".*

And

> *"Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location".*

6.0 Baseline Noise Survey

6.1 Procedure

Fully automated environmental noise monitoring was undertaken by Naveen Simha, Senior Consultant B.Eng (Hons), MSc, MIOA from approximately 10:30 hours on Friday 25 July 2025 to 11:00 hours on Monday 28 July 2025, to establish existing baseline noise levels. Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq}, and L_{max} sound pressure levels over discrete 15-minute periods.

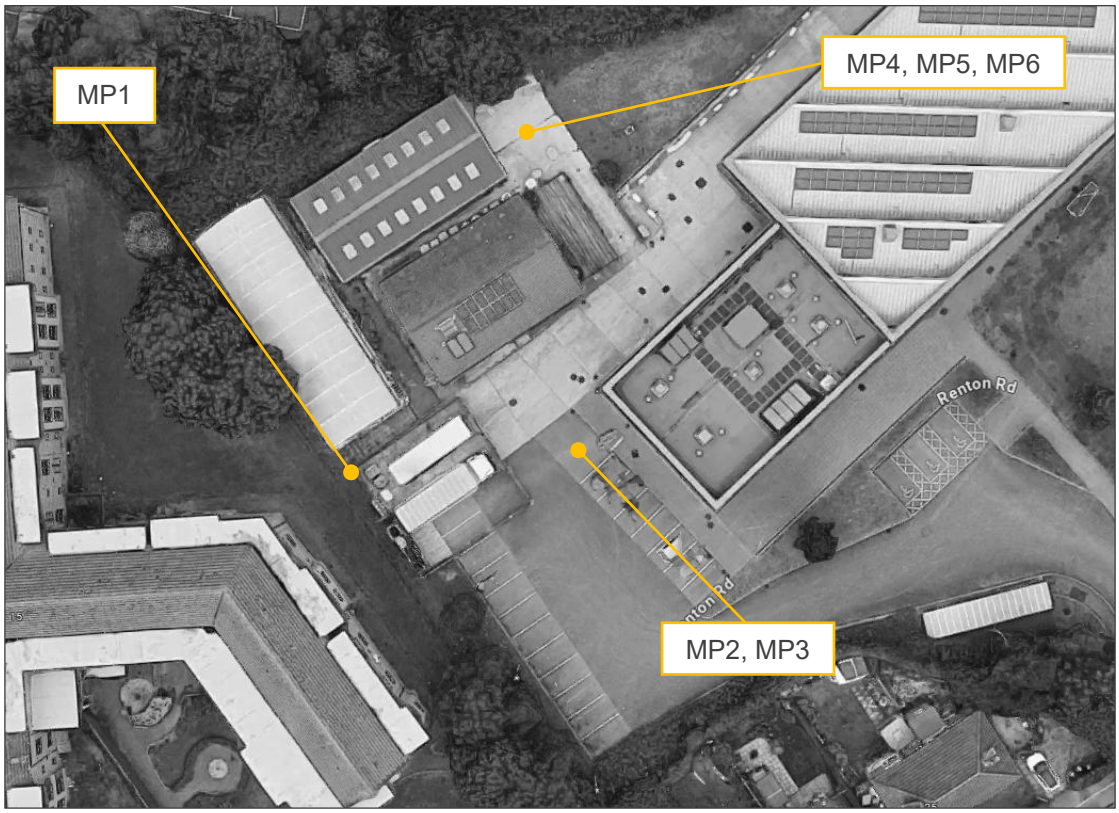
Additional attended measurements were performed between 09:15 hours and 11:00 hours on Friday 25 July 2025 with the purpose of establishing specific noise levels associated with HGV manoeuvring and noise levels from the existing Pan Mixer.

6.2 Measurement Positions

The noise level measurements were undertaken at the positions as described in the table below.

Position	Type	Description
1	Unattended	On the western boundary. Microphone was attached to a pole which was fixed to paladin fencing between Manchester College and the residential apartment block adjacent. The microphone was in free-field conditions approx. 2.5m above ground.
2, 3	Attended	The microphone was attached to a tripod at approx. 3.0 metres from the HGV compound and manoeuvring route. The microphone was in free-field conditions approx. 1.5m above ground.
4,5,6	Attended	The microphone was attached to a tripod at approx. 2.0 metres from the Pan Mixer existing location. The microphone was in free-field conditions approx. 1.5m above ground.

The positions are shown on the plan below.



Measurement Map: Imagery ©2025 Google, Maxar Technologies

6.3 Weather Conditions

For the unattended survey between Friday 25 July 2025 and Monday 28 July 2025, local weather reports indicated no notable periods of rain, with temperatures ranging from 13 °C (night) to 25 °C (day) and wind speeds less than 5 m/s. During our time on site, skies were largely clear with patchy cloud cover, wind conditions were calm, and from an east to west direction. Road surfaces were dry.

During the attended survey on Friday 25 July 2025, the weather was generally clear and dry with no periods of rainfall and calm wind conditions.

6.4 Instrumentation

The instrumentation used during the survey is presented in the table below:

Position	Description	Manufacturer	Type	Serial Number	Calibration
1	Type 1 Data Logging Sound Level Meter	Larson Davis	LxT	4086	Calibrated on 30/05/2024
2, 3, 4, 5, 6	Type 1 Data Logging Sound Level Meter	Larson Davis	LxT	4568	Calibrated on 28/05/2024
All	Type 1 Calibrator	Larson Davis	Cal200	3083	Calibration on 28/02/2025

Each sound level meter, including the extension cable, was calibrated prior to and on completion of the surveys. No significant changes were found to have occurred (no more than 0.3 dB).

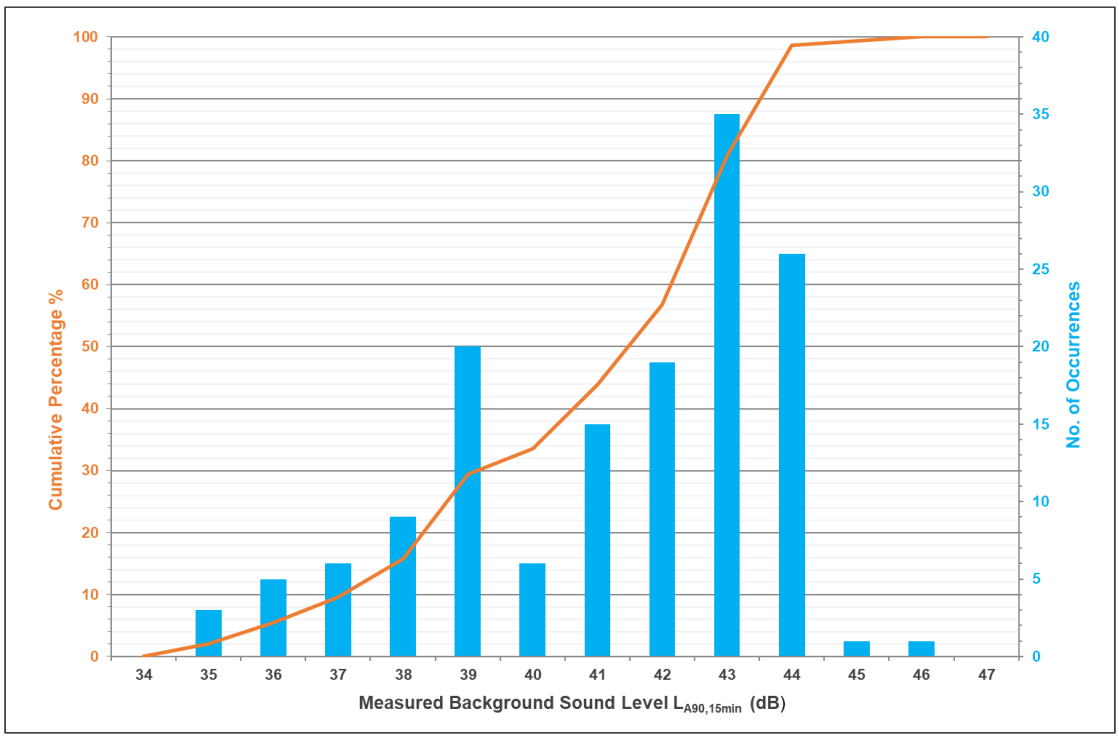
Each sound level meter was located in an environmental case with the microphone connected to the sound level meter via an extension cable.

Each microphone was fitted with a windshield.

6.5 Results

The results have been plotted on Time History Graph 332546/TH1 enclosed presenting the 15-minute A-weighted (dBA) L_{90}, L_{eq} and L_{max} levels at the unattended measurement position throughout the duration of the survey.

BS 4142 states that “the background sound level must be reliable and suitably represent he particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.” Taking this into account, the following histogram has been created which display the occurrence of each sound level (L_{A90}) for the operating period as it is understood (between 07:00 – 19:00).



Plot Showing Statistical Analysis of Measured Daytime (07:00-19:00) Background Noise Levels

Based on the above plot the L_{A90} value presented below is considered to be the ‘representative’ background sound levels determined through statistical analysis of the 15-minute readings in line with BS 4142.

Position	Representative Measured Daytime $L_{A90(15min)}$ Background Sound Level (dB re 2 x 10^{-5} Pa)
1	39

The following table summarises noise levels recorded at each of the attended measurement positions. The Pan Mixer was measured at 2 metres from the source; the HGV idling and reversing manoeuvres were measured at 3 metres from the source. Measurements were undertaken between 30 seconds to approximately 2 minutes.

Position	Date	Period	Sound Pressure Level (dB)
			$L_{Aeq,T}$
2	25/07/2025	10:29:21 – 10:31:25	69 at 3m
3	25/07/2025	10:33:03 – 10:34:40	66 at 3m
4	25/07/2025	10:47:09 – 10:47:42	75 at 2m
5	25/07/2025	10:48:00 – 10:48:31	75 at 2m
6	25/07/2025	10:48:47 – 10:49:19	75 at 2m

6.6 Discussion Of Noise Climate

Due to the nature of the survey, i.e. unattended, it is not possible to accurately describe the dominant noise sources, or specific noise events throughout the entire survey period. However, at the beginning and end of the survey period the noise climate was noted to be dominated by road traffic noise from the surrounding road network. Airplane flyover was also noted.

7.0 Plant Noise Emission Criteria

For any newly proposed building services and external plant items, external noise emission levels will need to comply with local planning authority requirements and statutory noise nuisance legislation.

Based on the results of the noise survey and the requirements of the Local Authority (as outlined in Section 5.2), we propose that the following plant noise emission criteria be achieved incident at the nearest noise sensitive area with all new plant operating simultaneously.

Location	Plant Noise Emission Criteria ($L_{Ar,Tr}$, dB)
	Daytime (07:00 – 19:00 hours)
All NSRs	34

The above criteria are to be achieved with all of the proposed plant operating simultaneously.

Noise shall be assessed in accordance with BS 4142:2014 with corrections applied for any plant emitting noise of a tonal or irregular quality.

The above limit relates to new items of plant; however, the existing HGV Compound and Pan Mixer are to remain and be relocated. Therefore, the application of BS 4142 may not be appropriate to assess noise impact from existing sources. A comparison of the calculation levels of egress between the existing condition and the proposed condition will be used to assess the relocated plant/activities. Based on this, where there is no change in level, the relocation of the plant/activity is considered to have a low impact.

It should be noted that the above is subject to the final approval of the Local Authority.

8.0 Noise Impact Assessment

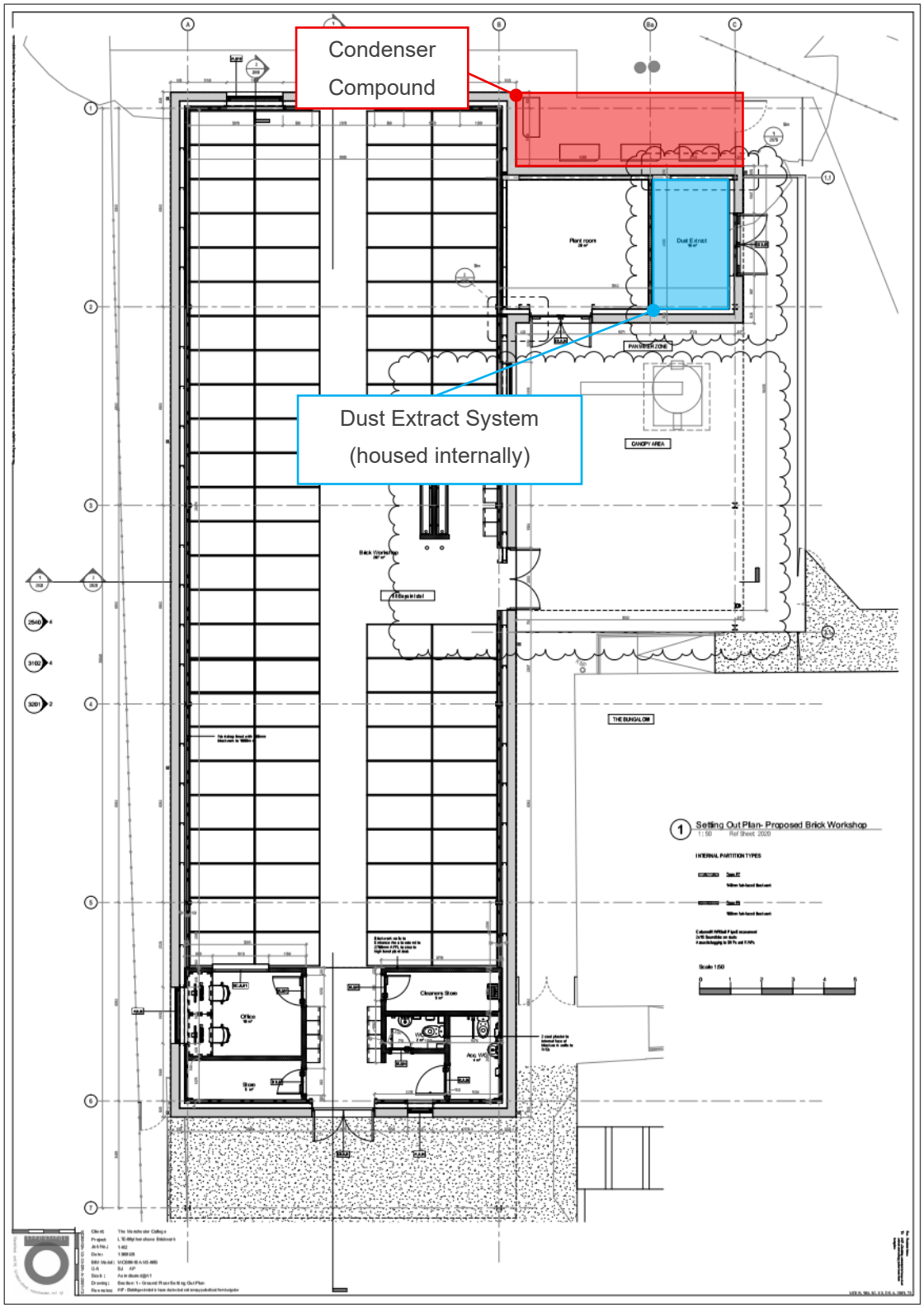
8.1 Proposed New Plant

It is understood that the new plant being proposed that will serve the new building is as follows:

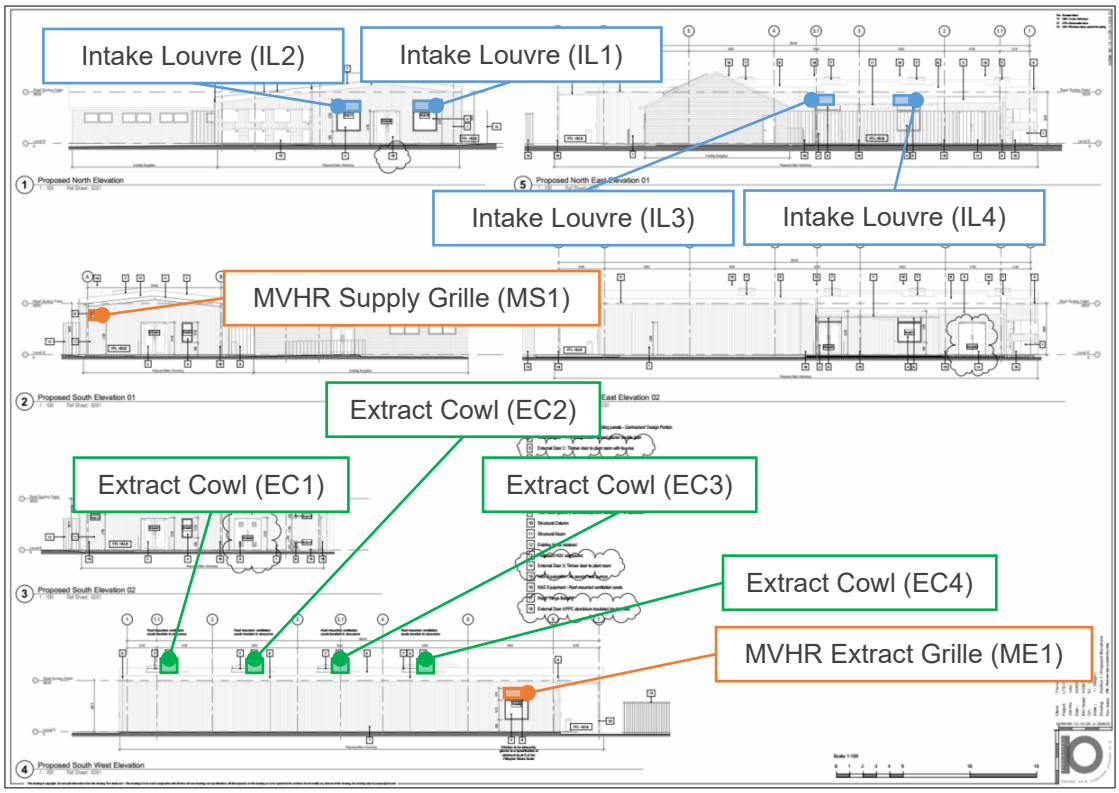
- **Extract Fans (4 no.)**: New units to be installed internally. Exhaust will be hard ducted and discharge above roof level, facing NSR 1. Two air intake louvres will be located on the north facing façade (potential to affect NSR 1), and two air intake louvres will be positioned on the eastern façade, facing away from receptors (screened from receptors).
- **MVHR Fan (1 no.)**: New unit to be installed internally. Supply/Extract will be ducted to the western and southern façade (nearest to NSR 1).
- **Heat Pumps (8 no.)**: New units to be installed on the northern façade (design details to be confirmed and will require further assessment).
- **Dust Extraction Vacuum System**: New system to be installed in a dedicated plantroom and louvred to the east facing façade.
- **Mechanical Ventilation Zone**: New installation to be housed within a dedicated plantroom, comprising:
    - Electrical switch panel
    - Mechanical control panel
    - LTHW expansion vessel
    - LTHW buffer vessel
    - LTHW primary pumpset
    - LTHW secondary pumpset

8.2 Plant Location

The plan below shows the location of the proposed plant.



Document reference: MCBW-10A-V0-XX-DR-A-0201_P9 Proposed Brick Workshop Plan)



Document reference: MCBW-10A-V2-XX-DR-A-2540-C2 Proposed Elevations

Noise breakout through the pumpset plant room structure is expected to be minimal, with any potential noise egress likely occurring via the weakest points, such as access doors.

However, since the plant room is located beneath a canopy, the path between the source and the receptors is fully screened by various forms of intervening land such as buildings, solid structures and the overhead canopy, which would significantly attenuate noise. As a result, any noise contribution from the internal plantroom sources at the receptor locations is not expected to significantly affect the overall noise impact.

The dust extraction system is housed within a dedicated area following coordination with the design team, and 2no. 150mm x 150mm louvred openings on the eastern elevation (away from receptors) are proposed. Therefore, a composite sound reduction performance of the façade, access door and louvre openings has been undertaken to assess the breakout from internally reverberant noise levels.

The Extract Systems (AM42ES units) internal intake and breakout reverberated noise levels have been considered through the north and east facing louvres.

All new plant items have been assessed to NSR 1 only due to all other receptors being further away or afforded by screening effects between intervening land.

8.3 Plantroom Construction Details

The proposed build ups for the dust extraction plantroom are as follows:

- Plantroom Roof: Euroclad Elite 2 roofing system – consists of a 0.7mm internal metal liner sheet, 380mm mineral wool insulation (Rockwool quilt) and external 0.7mm outer metal sheet. The build-up has been modelled using *INSUL,* to derive the acoustic performance for the proposed system, at approximately R_w 38 dB.

- Plantroom Cladding: Euroclad Elite 51: consists of a 0.4mm internal metal liner sheet, 280mm mineral wool insulation (Rockwool quilt) and external 0.7mm outer metal sheet. The build-up has been modelled using *INSUL,* to derive the acoustic performance for the proposed system, at approximately R_w 35 dB.

- Plantroom Door: Timber doors providing an acoustic performance of R_w 35 dB.

8.4 Plant Noise Data

8.4.1 Internal Fans and External Condenser Units

Presented on the tables below is noise data for the proposed plant outlined in Section 8.1 for the extract fans and condenser units. The data presented for the external condensers is described in sound pressure levels at 3 metres as shown below.

Unit	Duct	Sound Power Level (dB) at Octave Band Centre Frequency (Hz)								
		63	125	250	500	1000	2000	4000	8000	dBA
Nuaire AM42ES Internally ducted (EC1, 2, 3, 4)	(Induct Outlet)	69	81	70	67	66	73	69	57	-
Nuaire AM42ES Internally ducted (IG1, 2, 3, 4)	(Induct Inlet)	72	80	75	69	62	68	67	55	-
Nuaire AM42ES	(Breakout)	63	66	61	46	34	41	46	30	-
Nuaire XBC+10-65 (MVHR Unit)	(Induct Extract)	67	56	50	50	56	50	54	36	-
	(Induct Intake)	68	57	50	51	57	50	42	38	-
Samsung AE140BXYD (8No. Units)	No Duct	See Note 1	61	64	57	53	49	45	47	-

[1] Noise level at 63Hz not available. As such, we have not calculated the HRUs in this octave band.

8.4.2 Dust Extraction System

Noise levels for the PAK-M Dust Extraction system have been provided by the manufacturer, however, are presented as a broadband level and tested in accordance with EN ISO 11202:2010 'Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a workstation and at other specified positions applying approximate environmental corrections'.

As the unit has been measured internally, the noise data accounts for local reflections as tests were carried out with the above method. Measurements were carried out at 4no. positions around the unit including the front, cooling intake side, dust separator side and back.

An excerpt from the test sheet that presents the measured noise levels is provided below.

Duty	Front dB(A)	Co.side dB(A)	D.Side dB(A)	Back dB(A)	Clean.pulse dB(C)*
15 kPa 72 hz	69,7	74,3	68,7	70,9	107
20 kPa 72 hz	71,8	74,6	71,8	72,2	108
25 kPa 72 hz	72,6	75,9	72,6	75,3	111
*not at 72 Hz but normal operation around 40-60 Hz.					

The noise data supplied for the proposed Dust Extraction System is not presented in a format suitable for providing detailed in-duct calculations and/or attenuation mitigation guidance. Although the information specifies the overall sound pressure level measured at 1m around the unit, the data does not indicate the relative contribution of in-duct levels to the extract element. This therefore does not allow us to assess noise from each of the constituent parts of the unit (i.e. separating duct-borne from case radiated). To accurately predict noise emissions from ducted units, in-duct and breakout sound power level data is required from the manufacturer.

Therefore, a risk of uncertainty remains in the data provided. We have queried this with the manufacturer on 23rd October 2025, however, have had no response from the technical department in Sweeden in regard to measurements and whether they can provide the detailed octave band noise levels and contributions of each element of the system.

Further observation notes are provided in the test report, however, for robustness we have taken the highest emitting value from the Cooling Intake Side at 25 kPa as a worst-case noise level.

8.4.3 Plant Room

Communications from the sub-contractor and list of information provided shows that no noisy activities/emissions from plant are proposed within the main plantroom.

Therefore, the assessment focuses on the externally mounted plant, new Brick Workshop ducted internal plant to atmosphere and noise breakout from the dust extraction system within the dedicated plantroom.

8.5 Initial Plant Noise Egress Assessment

The cumulative noise level at the receptor has then been calculated by combining the contributions from all plant items. The plant is likely intermittent in nature so a +3dB acoustic feature correction has been applied to the calculations.

The table below sets out the calculated noise level at the noise sensitive receptor.

A detailed breakdown of the plant noise assessment calculations can be provided upon request.

Plant Item	Cumulative Sound Pressure level at Receptor (dB)
Nuaire AM42ES – Extract Cowl (EC1)	45
Nuaire AM42ES – Extract Cowl (EC2)	46
Nuaire AM42ES – Extract Cowl (EC3)	44
Nuaire AM42ES – Extract Cowl (EC4)	43
Nuaire AM42ES – Intake Grille (IG1)	31
Nuaire AM42ES – Intake Grille (IG2)	29
Nuaire AM42ES – Intake Grille (IG3)	17
Nuaire AM42ES – Intake Grille (IG4)	16
Nuaire XBC+10-65 MVHR Unit – Supply (MS1)	26
Nuaire XBC+10-65 MVHR Unit – Extract (ME1)	39
Samsung AE140BXYD (8No. Units)	16
PAK-M Dust Extraction System – Plantroom Breakout	45
PAK-M Dust Extraction System – Extract Flue	33
Cumulative Level	**52**
Daytime Plant Noise Limits (07:00 – 19:00 hours)	34

As shown in the table above, it is likely that cumulative noise levels at the receptor will be well above the daytime background noise limits if mitigation has not been implemented into the design. Therefore, mitigation has been recommended and should be implemented as set out in the following section.

8.6 Mitigation Requirements for New Plant

8.6.1 Nuaire AM42ES & Nuaire XBC+10-65 Fans – Required Dynamic Insertion Loss

The minimum required atmospheric attenuation for the extract fan and MVHR unit is presented below.

Unit	Recommended Dynamic Insertion Loss, DIL (dB) at each Octave Band Centre Frequency							
	63	125	250	500	1000	2000	4000	8000
Nuaire AM42ES Extract (ATT/01, 02)	4	7	13	19	23	23	16	13
Nuaire AM42ES Extract (ATT/03, 04)	6	13	23	37	43	44	35	20
Nuaire XBC+10-65 (ATT/10 Extract)	4	7	13	19	23	23	16	13
Nuaire XBC+10-65 (ATT/09 Intake)	2	5	11	17	20	19	12	10

8.6.2 Intake Louvres (North Facing Façade)

The minimum required attenuation for the louvres is presented below, based on example data for a 300mm deep opening.

Example Acoustic Louvre	Recommended Sound Reduction Index, SRI (dB) at each Octave Band Centre Frequency							
	63	125	250	500	1000	2000	4000	8000
Caice 300mm Deep	6	6	9	13	21	200	16	13

8.6.3 Samsung AE140BXYD Condenser Units

No mitigation targeted at the condenser units is required as noise levels from these units is calculated to be below the required limits at the receptor.

8.6.4 Dust Extraction – Required Insertion Loss for Acoustic Louvres

The minimum required attenuation for the louvres is presented below, based on example data for a 150mm deep opening.

Example Acoustic Louvre	Recommended Sound Reduction Index, SRI (dB) at each Octave Band Centre Frequency							
	63	125	250	500	1000	2000	4000	8000
Caice 150mm Deep	4	4	6	8	11	11	11	10

8.6.5 Dust Extraction – Extract Flue Attenuation

Unfortunately, we cannot provide recommended insertion loss in each octave band due to the limitations of the test data provided by Nederman. However, the minimum requirement is to achieve an overall insertion loss of ≥10 dB.

8.6.6 Recommendations for Canopy, Plantroom Structure and Adjoining Wall

The mechanical plantroom and rear wall are to be faced with a metal composite wall panel that will be imperforate. The modelled acoustic performance for the composite wall is approximately R_w 35 dB, as detailed in Section 8.3.

To ensure that noise emissions are controlled as to not pass through the canopy, it is recommended that the composite structures shall be imperforate (solid) and have a minimum mass per unit area of at least 10kg/m^2 in line with our guidance for acoustic barriers.

Any access doors should have a minimum R_w 35 dB as to control noise breakout.

All junctions between the screen and adjacent structures shall be made good and sealed with a heavy grout and/or dense non-hardening mastic.

It is recommended that all proposed noise mitigation measures be reviewed and confirmed with the architects, structural engineers, building contractors, fire consultants, and material manufacturers prior to procurement and implementation. This ensures that the selected measures are compatible with all design and construction disciplines and do not pose any health and safety concerns during or after installation.

8.7 Mitigated Plant Noise Egress Assessment

The following table presents cumulative plant noise levels at the receptor with the recommended minimum attenuation applied.

Plant Item	Cumulative Sound Pressure level at Receptor (dB)
Nuaire AM42ES – Extract Cowl (EC1)	19
Nuaire AM42ES – Extract Cowl (EC2)	20
Nuaire AM42ES – Extract Cowl (EC3)	18
Nuaire AM42ES – Extract Cowl (EC4)	17
Nuaire AM42ES – Intake Grille (IG1)	21
Nuaire AM42ES – Intake Grille (IG2)	19
Nuaire AM42ES – Intake Grille (IG3)	17
Nuaire AM42ES – Intake Grille (IG4)	16
Nuaire XBC+10-65 MVHR Unit – Supply (MS1)	7
Nuaire XBC+10-65 MVHR Unit – Extract (ME1)	19
Samsung AE140BXYD (8No. Units)	16
PAK-M Dust Extraction System – Plantroom Breakout	32
PAK-M Dust Extraction System – Extract Flue	23
Cumulative Level	**34**
Daytime Plant Noise Limits (07:00 – 19:00 hours)	34

Following implementation of the recommended mitigation measures as set out in Section 8.6, results indicate the MCC criteria can be achieved.

8.8 Pan Mixer Assessment

8.8.1 Assessment Overview

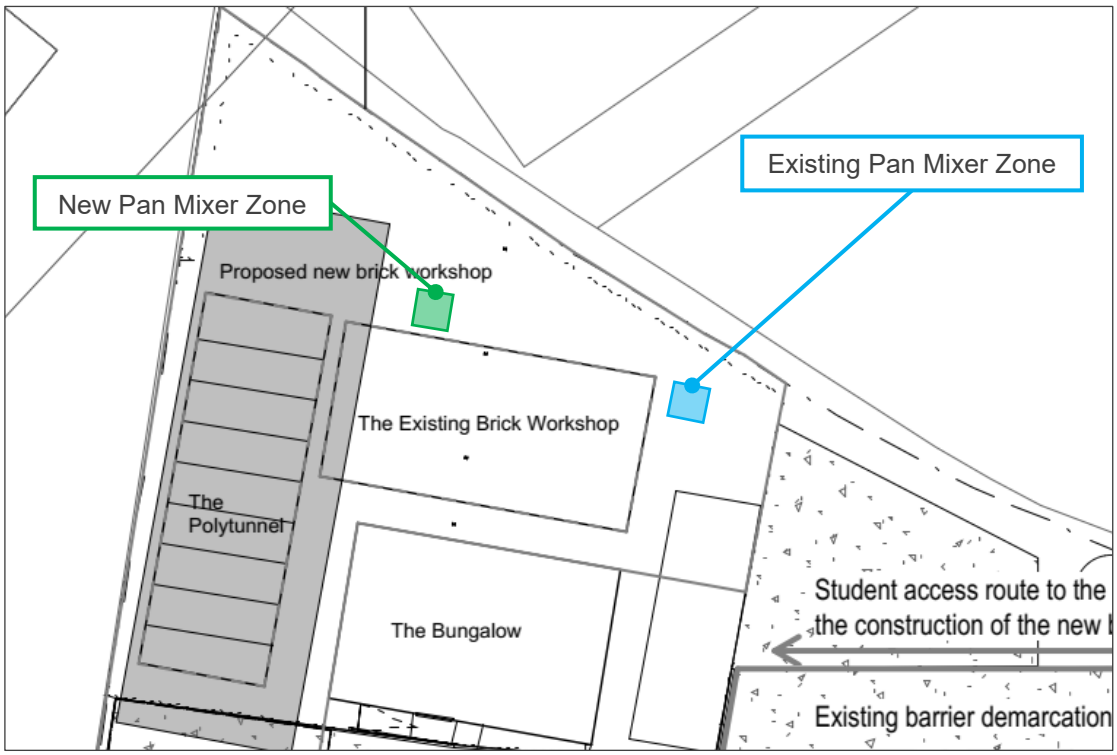
The assessment of the Pan Mixer is based on the following assumptions and considerations;

- A source height of 1.5m
- Screening afforded by existing and new ‘The Brick Workshop’ buildings to NSR 1.
- Screening afforded by existing ‘The Bungalow’ to NSR 2.
- Screening afforded by the existing ‘Block A building’ and NSR 3 & 4.
- Measured distance between source and receiver.
- As the noise sources form part of the current operations, nearby receptors are already exposed to the associated noise characteristics of the Pan Mixer (e.g., tonal, intermittent, or impulsive). Therefore, the application of additional corrections may not be necessary, given that receptors are already subject to this established noise environment.

8.8.2 Plant Location

It is understood that the existing Pan Mixer is to be retained and relocated. The existing and new Pan Mixer Zones are indicated on the pan overleaf.

However, it should be noted that the plan does not show the canopy and side wall to the new Brick Workshop building which would screen the Pan Mixer from NSR1. This is shown in detail below:



1462-MCBW-10A-M3-WB Project Stages Plan

8.8.3 Pan Mixer Operation

It is understood that Pan Mixer has the potential to operate at a worst case of up to 5 hours during any time throughout the period the building is open, between 07:00 – 19:00 (typical learning/teaching/office hours). This is proposed to remain unchanged from the existing use.

Noise levels have been taken as the Pan Mixer running at maximum output across the assessment period of 1-hour.

8.8.4 Pan Mixer Noise Data

Measurements of the ambient noise levels in which the Pan Mixer was operational were undertaken. Details of the sound pressure levels in octave band centre frequencies are detailed below, measured at a distance of 2 metres from the unit.

Description	Sound Pressure Level (dB re $2x10^{-5}$ Pa) at 2 metres at Octave Band Centre Frequency (Hz)								dBA
	63	125	250	500	1000	2000	4000	8000	
Pan Mixer	73	79	79	75	67	61	55	49	75

8.8.5 Existing Levels of Noise Egress

Noise calculations have been carried out for the Pan Mixer at its existing location, with results assessed at the relevant receptor positions as detailed below.

NSR Location	Assessment Period	Noise Source	Noise Egress Level (dBA)
1	Daytime (07:00 – 19:00)	Pan Mixer	36
2	Daytime (07:00 – 19:00)	Pan Mixer	30
3	Daytime (07:00 – 19:00)	Pan Mixer	34
4	Daytime (07:00 – 19:00)	Pan Mixer	30

8.8.6 Proposed Levels of Noise Egress

Calculations have been undertaken of the noise due to Pan Mixer from its proposed location to the respective receptor positions. The results are detailed below.

NSR Location	Assessment Period	Noise Source	Noise Egress Level (dBA)
1	Daytime (07:00 – 19:00)	Pan Mixer	36
2	Daytime (07:00 – 19:00)	Pan Mixer	30
3	Daytime (07:00 – 19:00)	Pan Mixer	30
4	Daytime (07:00 – 19:00)	Pan Mixer	30

When comparing, it is prudent to show the existing vs proposed in order to assess the change in noise levels.

8.8.7 Existing vs Proposed Assessment

To demonstrate the existing vs proposed change in noise levels, the assessment considers the noise sources in isolation at the respective receptor.

NSR Location	Difference between Existing vs Proposed noise levels, dBA		
	Existing Pan Mixer Results	Proposed Pan Mixer Results	Difference between Existing vs Proposed
1	36	36	0
2	30	30	0
3	34	30	- 4
4	30	30	0

As demonstrated above, the proposed location results in the levels of noise egress being equal to or better at receptor locations. This is mainly due to the fact that the Pan Mixer will be fully screened, on all sides, from the NSRs.

Based on the above, no further mitigation of the Pan Mixer is likely required.

8.9 HGV Movements

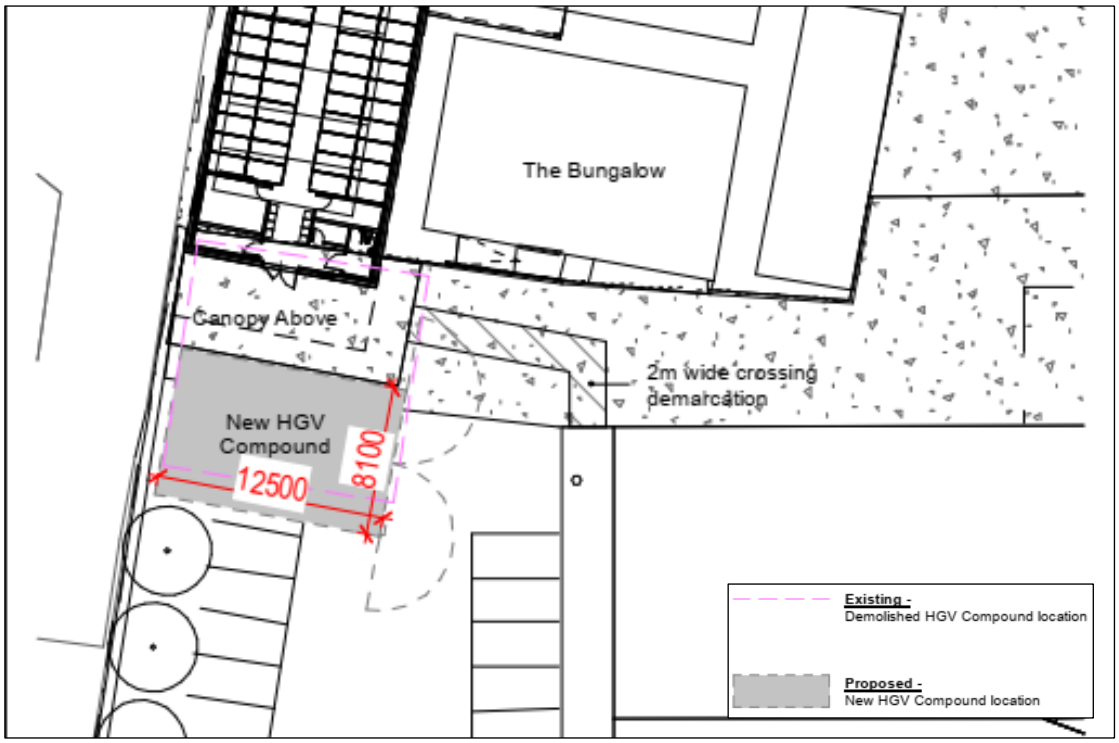
8.9.1 Assessment Overview

The assessment of the HGV activity on site is based on the following assumptions and considerations;

- A source height of 1.5m.
- Idling noise source in a central zone of the compound.
- Noise based on a singular event within a 1-hour assessment period.
- No screening between source and receiver locations in the existing condition (i.e. existing metal fence provides no acoustic attenuation).
- Measured distance between source and receiver.
- As the noise sources form part of the current operations, nearby receptors are already exposed to the associated noise characteristics of HGVs (e.g., tonal, intermittent, or impulsive). Therefore, the application of additional corrections may not be necessary, given that receptors are already subject to this established noise environment.

8.9.2 Existing and Proposed HGV Compound Locations

It is proposed to reduce the size of the existing HGV Compound and move it approximately 2 metres south as a result of the proposed new footprint to The Brick Workshop building. These locations are illustrated in the figure below.



Plan showing Existing and Proposed HGV Compound

Based on the new location of the HGV compound there would be no change in HGV manoeuvring route. It is also understood the there will be no change in usage frequency of the HGV's.

Based on the above, calculations show no change in noise levels due to the relocation of the HGV compound.

9.0 Conclusions

An environmental noise survey has been undertaken in order to establish the currently prevailing noise levels.

Plant noise emission criteria have been recommended based on the results of the noise survey and with reference to the Local Authority's requirements.

An assessment has been carried out to determine noise emissions from proposed new plant requires mitigation to ensure MCC criteria can be readily achieved.

The assessment indicates that the proposals, in conjunction with the recommended mitigation measures, should be capable of achieving MCC criteria at the nearest noise sensitive receptors.

An assessment of existing noise emissions at proposed new locations from the Pan Mixer and HGV compound has been undertaken and demonstrates no increase to the existing noise climate and therefore no mitigation is required for these items.

Following implementation of the recommended mitigation measures, a site verification assessment shall be conducted by a suitably qualified acoustic consultant to ensure that the limits have been met.

Appendix A

The acoustic terms used in this report are defined as follows:

dB — Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form. The relationships between Decibel levels do not work in the same way that non-logarithmic (linear) numbers work (e.g. 30dB + 30dB = 33dB, not 60dB).

dBA — The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The $_A$ subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted

It should be noted that levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is just perceptible.

$L_{90,T}$ — L_{90} is the noise level exceeded for 90% of the period *T* (i.e. the quietest 10% of the measurement) and is often used to describe the background noise level.

$L_{eq,T}$ — $L_{eq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time period, *T*.

L_{max} — L_{max} is the maximum sound pressure level recorded over the period stated. L_{max} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the L_{eq} noise level.

Sound Pressure Level (L_p) is the sound pressure relative to a standard reference pressure of 2×10^{-5} Pa. This level varies for a given source according to a number of factors (including but not limited to: distance from the source; positioning; screening and meteorological effects).

Sound Power Level (SWL or L_w) is the total amount of sound energy inherent in a particular sound source, independent of its environment. It is a logarithmic measure of the sound power in comparison to a specified reference level (usually 10^{-12} W).

Appendix B

Planning Policies, Standards & Guidance

B.1 National Planning Policy Framework (NPPF)

The following paragraphs are from the NPPF (published December 2024):

198. 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; and

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

200. 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."

Paragraph 198 also references the Noise Policy Statement for England (NPSE). This document does not refer to specific noise levels but instead sets out three aims:

- "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."

B.2 BS 4142:2014 + A1:2019

When setting plant noise emission criteria reference is commonly made to BS 4142:2014 "*Methods for rating and assessing industrial and commercial sound.*"

The procedure contained in BS 4142:2014 provides an assessment of the likely effects of sound on people when comparing the specific noise levels from the source with representative background noise levels. Where the noise contains "a tone, impulse or other characteristic" then various corrections can be added to the specific (source) noise level to obtain the "rating level."

BS 4142 states that: *"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". An estimation of the impact of the specific noise can be obtained by the difference of the rating noise level and the background noise level and considering the following:*

• *"Typically, the greater this difference, the greater the magnitude of the impact."*

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

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

• *"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 sound level, this is an indication of the specific sound source having a low impact, depending on the context."*

The determination of the "rating level" and the "background level" are both open to interpretation, depending on the context.

B.3 Statutory Noise Nuisance

S79(1)(g) of the Environmental Protection Act 1990 defines a statutory nuisance as *"noise emitted from a premises so as to be prejudicial to health or a nuisance".* A duty is placed on the Local Authority to serve an abatement notice under S80 if it becomes satisfied that a statutory nuisance exists.

There is however no quantitative definition/objective method in determining statutory noise nuisance, and as such we are not able to definitively advise or determine on such matters. Noise nuisance is subjective and requires multiple factors to be considered, including but not limited to:

- Straining to hear something is *generally* considered not a nuisance, however,
- Noise level (of source and relative to background), timing, duration, type of noise, frequency, location, continuous or repetitive, all factor into judging nuisance.

To mitigate against, though not remove entirely, the risk of a statutory noise nuisance, a noise assessment should be undertaken by a Suitably Qualified Acoustician. Adoption of appropriate and relevant industry standards/guides can provide a structured framework for such assessments, improving the credibility of mitigation efforts. It is also important to also recognise that ongoing management (both active and passive) may also be necessary depending on the context of the situation.

B.4 IEMA Guidelines on Noise Impact Assessments

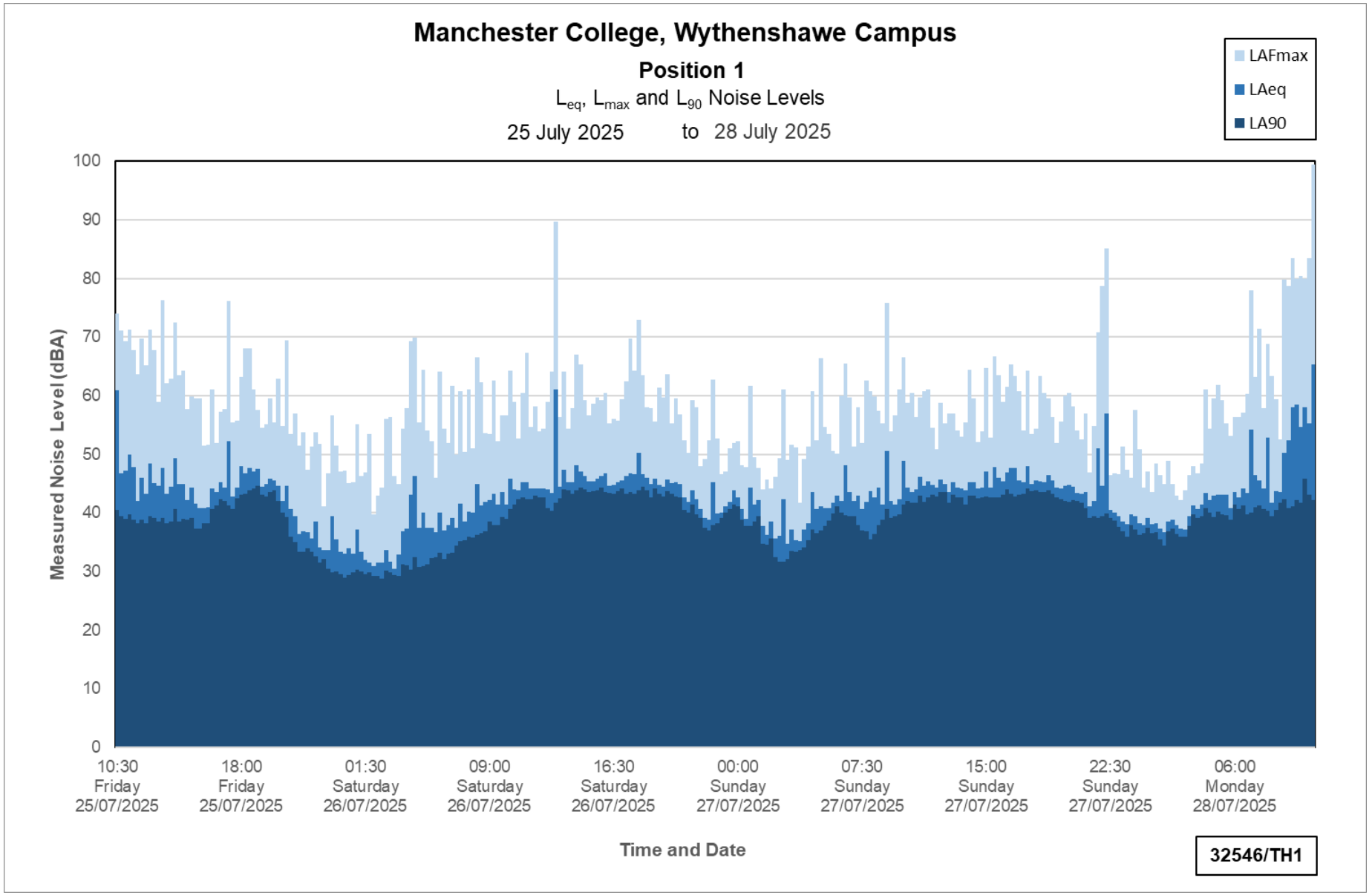
The IEMA Guidelines for Environmental Noise Assessment provide framework to assess the potential noise impact of a proposed development at nearby receptors. The document states that each site should be assessed on a case-by-case basis and should consider the change in noise level (either L_{Aeq}, L_{AFmax} or L_{A90}) caused as a result of the proposed development. This change in noise level should then be used to determine the magnitude of impact at the nearby noise sensitive receptor.

The Guidelines contain effect descriptors for changes in ambient noise level. These effect levels are summarised below:

Impact	Description
Very Substantial Impact	Greater than 10 dB L_{Aeq} change in sound level perceived at a receptor of great sensitivity to noise
Substantial Impact	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 Impact	A 3.0 to 4.9 dB L_{Aeq} change in sound level at a sensitive or overly sensitive noise receptor, or a greater than 5 dB L_{Aeq} change in sound level at a receptor of some sensitivity
Slight Impact	A 3.0 to 4.9 dB L_{Aeq} change in sound level at a receptor of some sensitivity
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

Appendix C

Time History Graphs


Manchester College, Wythenshawe Campus
Position 1
L_{eq}, L_{max} and L_{90} Noise Levels
25 July 2025 to 28 July 2025
LAFmax
LAeq
LA90
Measured Noise Level (dBA)
100
90
80
70
60
50
40
30
20
10
0
10:30 Friday 25/07/2025
18:00 Friday 25/07/2025
01:30 Saturday 26/07/2025
09:00 Saturday 26/07/2025
16:30 Saturday 26/07/2025
00:00 Sunday 27/07/2025
07:30 Sunday 27/07/2025
15:00 Sunday 27/07/2025
22:30 Sunday 27/07/2025
06:00 Monday 28/07/2025
Time and Date
32546/TH1