TECHNICAL NOTE	
Project	R2466 City Works, Openshaw
Subject	Acoustic Mitigation & Plant Review
Author	Johnathan Whittle
Date	10 June 2026
Ref	R2466/T02/JW

red acoustics

Unit 8, Cable Court
Pittman Way, Preston PR2 9YW
T 01772 722 182
F 01772 722 451
info@redacoustics.co.uk
www.redacoustics.co.uk

Red Acoustics has been commissioned by BANSCO to undertake a review and assessment of the proposed plant items and acoustic mitigation measures at City Works, Openshaw to confirm compliance with conditions attached to the planning consent relating to the development site.

At present, the construction of the site is ongoing in relation to Units 1 - 4. All units are now largely complete and BANSCO have instructed Red Acoustics to undertake a site inspection to confirm compliance with the relevant noise conditions in relation to Units 1 - 4. For clarity, site layout is shown below in Figure T1.

Figure T1: Site Layout



The ongoing development benefits from planning consent granted by Manchester City Council under reference 139997/FO/2024 for the erection of four two storey industrial buildings (Use Classes E(g)(ii)(iii), B2 and B8), following the demolition of the existing buildings, together with associated service yards, car parking, electric vehicle charging points, amended site access, refuse storage facilities, substations, boundary treatments, landscaping and other associated works and infrastructure.

Attached to the planning consent are conditions (14 and 15) which specifically relate to noise impact and are considered in this assessment. These are reproduced below:

14) a) The premises shall be acoustically insulated and treated to limit the breakout of noise in accordance with the Noise Impact Assessment (Red Acoustics, 2 May 2024). The scheme shall be implemented in full before any of the uses hereby approved commences.

14) b) All windows and doors to all units must remain closed (excluding access and egress through doors) during night-time hours if work is taking place inside the buildings.

14) c) Prior to occupation of the development a verification report shall be required to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report. The report shall also undertake post completion testing to confirm that acceptable criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

15) a) 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 (LAeq) below the typical background (LA90) level at the nearest noise sensitive location. Prior to commencement of the use hereby approved the scheme shall be submitted to and approved in writing by the City Council as local planning authority in order to secure a reduction in the level of noise emanating from the site. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

15) b) Prior to the operation of the scheme a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

Planning Condition 13 also relates to noise and makes reference to a site specific noise management plan. This is addressed separately in technical note R2466-T01 dated 27 February 2026.

Compliance with the relevant planning conditions is discussed in detail below.

Planning Condition 14 Compliance

Planning Condition 14A makes reference to the planning stage noise impact assessment ref: R2090-REP01F-JW dated 02 May 2024 which provides an assessment of planning stage proposals for the development. While no specific noise mitigation measures were recommended, assumptions were made about the fabric of each building. It was assumed for the purpose of the planning stage noise report that the building would be provided as a portal frame construction with lightweight thermal cladding (24dB R_w) to the facades and basic rolling doors to provide HGV loading bays. Site visits undertaken by Red Acoustics confirm that the actual wall and door construction buildup exceeds these minimum assumptions and that the roof construction meets the initial assumptions. The building fabric will exceed the base assumptions in the noise impact assessment report.

Planning Condition 14B is an operational noise condition and compliance with this will be an ongoing requirement for the final tenants.

Planning Condition 14C requires verification of compliance with condition 14A. Site visits have been undertaken by Red Acoustics on 06 February 2026 and 27 May 2026 to obtain photographic evidence of the construction buildup that will meet or exceed the base assumptions in the noise impact assessment report. Figures T2 to T12 below detail evidence of the inspected constructions for units 1-4. It is anticipated that condition 14A and 14C can now be discharged.

Figure T2: Verification Visit - Roofing Material



Figure T3: Verification Visit - Wall Buildups



Figure T4: Verification Visit - Wall Buildups



Figure T5: Verification Visit - Wall Buildups



Figure T6: Verification Visit - Door Buildups



Figure T7: Verification Visit - Door Buildups



Figure T8: Verification Visit - Window Buildups (Offices)



Figure T9: Verification Visit



Figure T10: Verification Visit



Figure T11: Verification Visit



Figure T12: Verification Visit



Planning Condition 15 Compliance

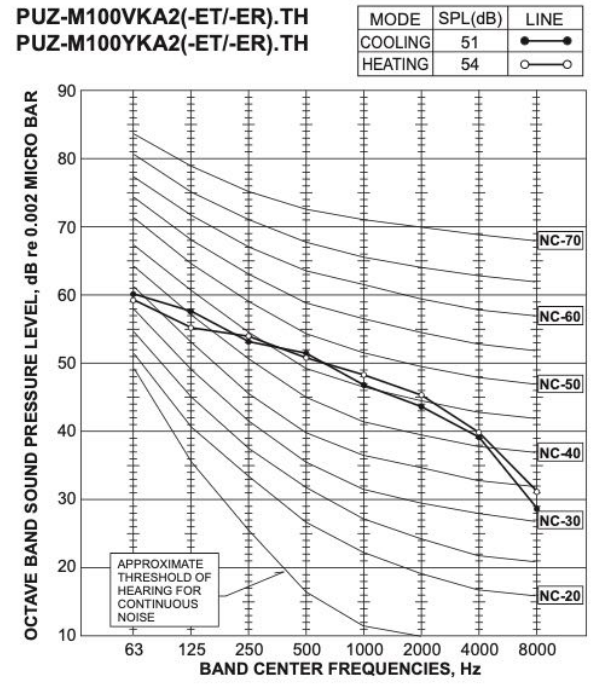
To demonstrate compliance with the requirements of Planning Condition 15, the client and project M&E engineers have provided site specific plant information to allow detailed noise propagation modelling to be undertaken. Table T1 presents the plant schedule provided by the client:

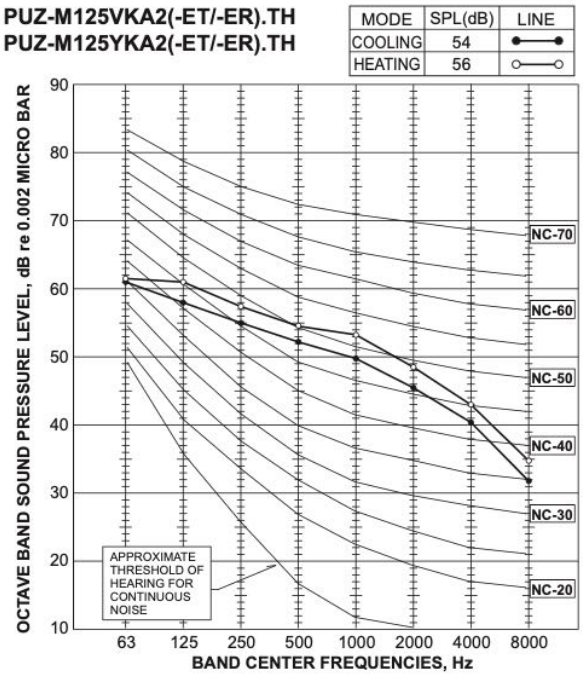
Table T1: Plant Schedule Provided by Client / M&E Engineer

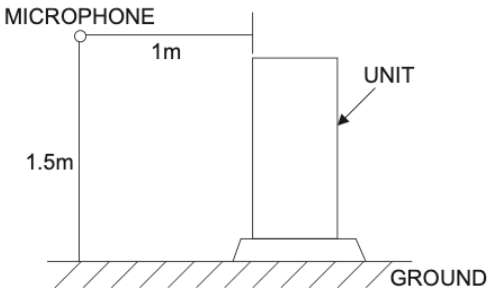
Location	Plant Type	Plant Ref	Manufacturer	Model
Units 1, 3-4	Condensing Unit	External VRF	Mitsubishi	PUZ-M100VKA
Unit 2	Condensing Unit	External VRF	Mitsubishi	PUZ-M125VKA

Figure T13 below presents the provide sound data for each unit type.

Figure T13: Plant Sound Data







At the planning stage, the noise impact assessment was unable to provide a detailed assessment without specific design information, however noise targets were provided for plant impacts to the nearest noise sensitive receptor. Table 8.1 from the above referenced planning stage noise report is repeated below:

Table 8.1: Proposed Commercial Sound (Plant) Target Limits

	Measured Sound Pressure Level, dB (re: 2x10-5 Pa)			
	Daytime Period 07:00hrs to 19:00hrs		Evening/Night-time Period 19:00hrs to 07:00hrs	
Measurement Location	Typical Existing $L_{A90,15min}$	Proposed Target $L_{Aeq,15min}$	Typical Existing $L_{A90,15min}$	Proposed Target $L_{Aeq,15min}$
MP3 (Representing worst case Background Sound Level)	45	40	38	33

Red Acoustics have prepared a noise propagation model based on the site visits undertaken to confirm the locations of the proposed plant items and plant data provided by the project M&E Engineer. To predict noise levels from plant noise levels across the site, CadnaA 3D noise propagation modelling software has been used, which implements the calculation procedure specified within ISO9613-2.

The model has been generated using manufacturer supplied plant noise data for each plant item across the wider development. The model was developed by inputting the proposed buildings and the existing surroundings using Google Earth imagery, terrain height data and drawn details including proposed site levels. Two orders of reflection have been set in the model together with buildings and the ground set to fully reflective.

Each of the noise sensitive receptors identified in the planning stage noise impact assessment has been inputted into the noise model and the cumulative noise impact from the externally mounted plant items proposed has been calculated to each position. This has been completed to confirm that the design proposals will comply with the recommendations in the planning stage noise impact assessment and Condition 15 of the planning consent.

Figure T14 below shows the results of the noise propagation modelling and Table T2 below shows the predicted level at each relevant receptor confirming compliance with the relevant target.

Figure T14: Noise Propagation Grid Prediction (dBA) - Plant Items Running Simultaneously and Continuously

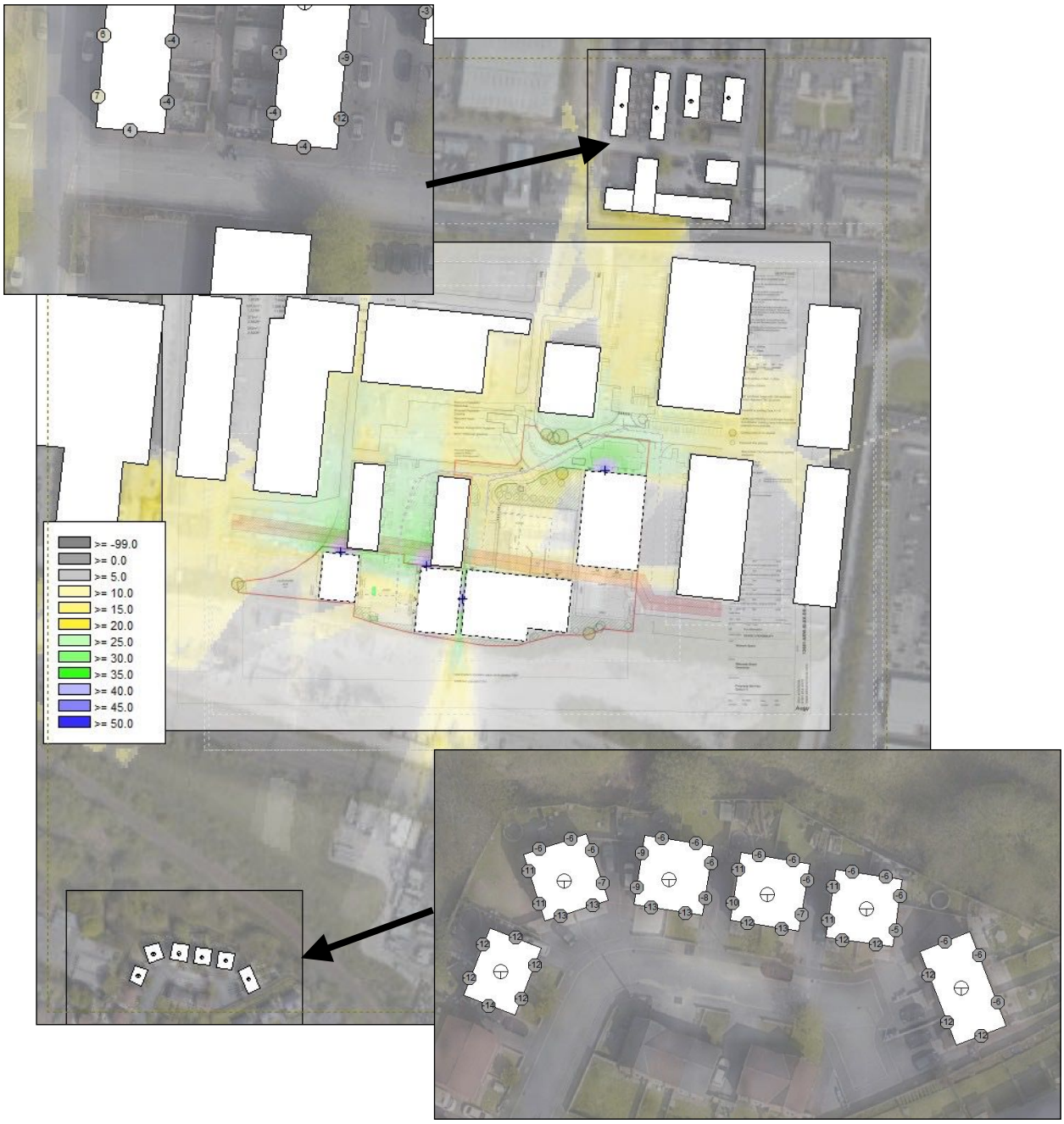


Table T2: Noise Propagation Prediction Results Vs Planning Stage Noise Targets

Receptor Location	Plant Noise Impact (Rating Level) (dBA)	Rating Level Target (dBA LA90)	Difference
South Street	7	33	-24
Assisi Gardens	0	33	-33

Plant noise impact is predicted to be at least 5dBA below the background sound level as defined in the planning stage noise impact assessment with receptors significantly further below this level. As plant noise impact is not expected to be readily distinguishable at any receptor based on worst case operation, the predicted specific sound level can be considered as the rating level and no feature corrections are necessary.

The results of the noise propagation modelling of proposed plant items demonstrate that the combined impact of all plant operating simultaneously will comply with Planning Condition 15 for the whole development. No additional mitigation is proposed and it is recommended that condition 15A can be discharged at this stage.

It is anticipated that a verification measurement will be required for discharge of planning condition 15B, though due to the very low impact predicted, this should be completed by measurement to verify sound source levels for prediction rather than measurement at the nearest receptors as plant sound will not be measurable at those locations.