

J D Wetherspoon Public House 'The Paramount' 33-35 Oxford Street, Manchester, M1 4BH

Mechanical Services Plant Planning Noise Impact Assessment

Report ref.

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Issued to

J D Wetherspoon Plc

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1. INTRODUCTION

J D Wetherspoon Plc are seeking planning permission to relocate 4 existing external condenser units and install 2 new condenser units at their existing Public House 'The Paramount' in Manchester. The site is located in a sensitive area. Consequently, a noise impact assessment is required to cover the operation of the proposed new mechanical services plant.

Accordingly, Spectrum Acoustic Consultants has been commissioned by J D Wetherspoon to carry out a noise assessment for the purpose of establishing the potential noise impact associated with the new plant. This report is submitted with the intention of providing the sufficient information required to both inform and satisfy the requirements of the Local Planning Authority.

2. SITE DESCRIPTION AND PROPOSALS

J D Wetherspoon operate a Public House 'The Paramount' located at 33-35 Oxford Street, Manchester, M1 4BH. The Public House occupies part of the ground floor of a wider building which also contains a restaurant (Turtle Bay) and a hotel (Premier Inn). Oxford Street bounds the site to the west and has a number of commercial properties located along it. Portland Street bounds the site to the east, which also has a number of commercial properties located along it. Bounding the site to the north is St James Street, which has offices located along it. To the south of the site are commercial buildings on Oxford Street. An existing site location plan is included in Appendix A.

The Public House consists of a large customer area on the ground floor. Directly above at first floor level are hotel rooms. There is also a small external customer area at the front of the premises.

The existing mechanical services plant is located on the roof of the building. Proposals involve relocating 4 existing external condenser units and the installation of 2 new condenser units on the roof. Proposed scheme layout plans are included in Appendix B.

The premises trades between 08:00 and 00:00, Sunday to Thursday, and between 08:00 and 01:00 on Fridays and Saturdays. The kitchen closes at 23:00 each day.

3. ASSESSMENT METHODOLOGY

To assess the environmental noise impact of new mechanical services plant, it is generally accepted that the predicted noise levels from the plant need to be compared with the existing background noise levels at the nearest noise sensitive receptor locations to the site.

This assessment adopts the assessment methodology set out in BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*, by comparing the predicted noise levels from mechanical plant, with the existing background noise levels, as measured at locations representative of the nearest noise sensitive receptors. Further detail on the BS 4142 assessment procedure is provided in Section 5 of this report.



4. BACKGROUND NOISE MEASUREMENT SURVEY

4.1 MEASUREMENT LOCATIONS

For the purpose of the noise assessment, the following noise measurement locations have been identified as being representative of the nearest noise sensitive receptors (Premier Inn hotel) to the proposed new plant:

- Position A – Roof of the premises, overlooking Portland Street.
- Position B – Roof of the premises, overlooking the rear courtyard.

The measurement location is illustrated on the existing site location plan, included in Appendix A.

4.2 NOISE SURVEY DETAILS AND INSTRUMENTATION

The background noise measurement survey, completed for providing information to use in the noise impact assessment, was carried out on Monday 29 to Tuesday 30 September 2025. The noise survey consisted of unattended measurements carried out at the positions during the most sensitive night-time period. All noise measurements were carried out in accordance with the procedures outlined in BS 4142:2014, with noise samples recorded in terms of 15-minute periods.

The parameters recorded during the measurement survey included L_{Aeq} , L_{A90} and L_{AFmax} . In accordance with BS 4142 guidance, L_{A90} is used for describing background noise and, as such, will be used for the purpose of the noise impact assessment. L_{Aeq} is used to describe the ambient noise level, with L_{Amax} representing the maximum noise level measured during the sample period.

The following instrumentation was used during the noise measurement survey:

- Bruel & Kjaer Type 2250 Sound Level Meter s/n 3010857
- Bruel & Kjaer Type 4189 Microphone s/n 3060807
- Bruel & Kjaer Type 4231 Acoustic Calibrator s/n 2291483

- Bruel & Kjaer Type 2250 Sound Level Meter s/n 3023840
- Bruel & Kjaer Type 4189 Microphone s/n 3130623
- Bruel & Kjaer Type 4231 Acoustic Calibrator s/n 3030524

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

During the noise survey, the weather was mild and dry with low wind speeds. The conditions were good for noise measurement purposes.

4.3 NOISE SURVEY RESULTS

During the survey, background noise levels were controlled by existing plant located on the roof of the building serving the other units, road traffic movements on Oxford Street, Portland and other nearby roads, as well as general street activity. The measured noise profiles are shown in the following charts.

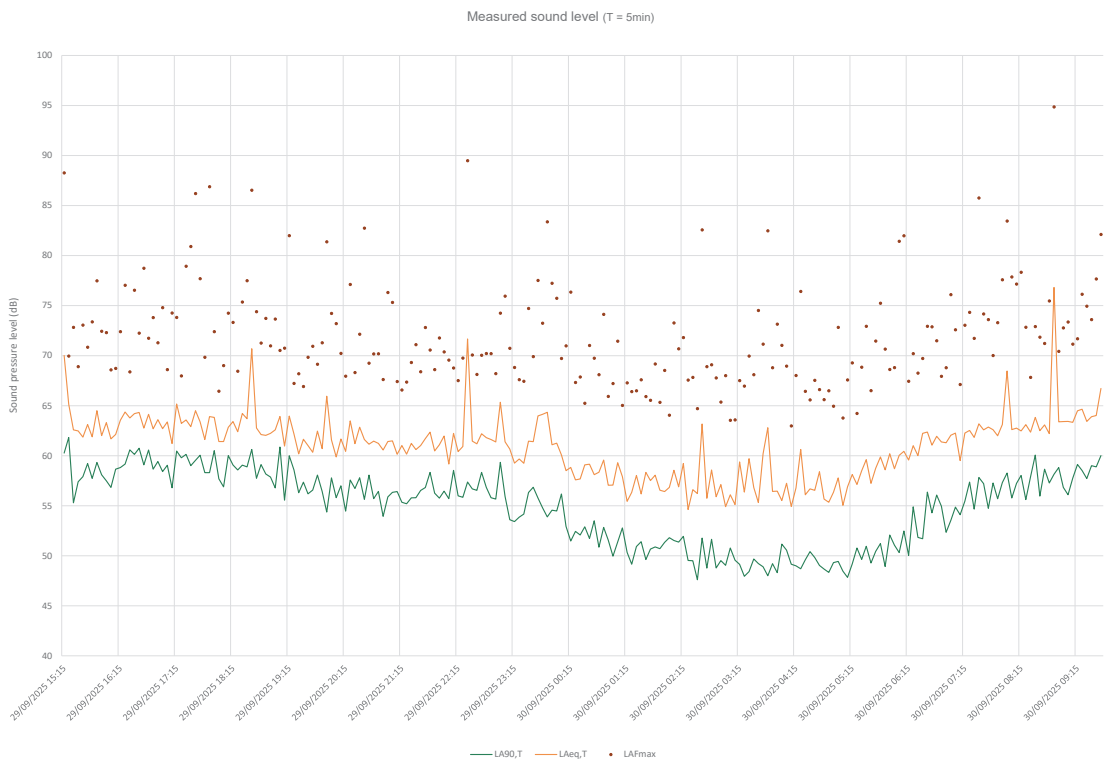


Chart 1: Noise measurement results at Pos A - Roof of the premises, overlooking Portland Street – Monday 29 to Tuesday 30 September 2025.

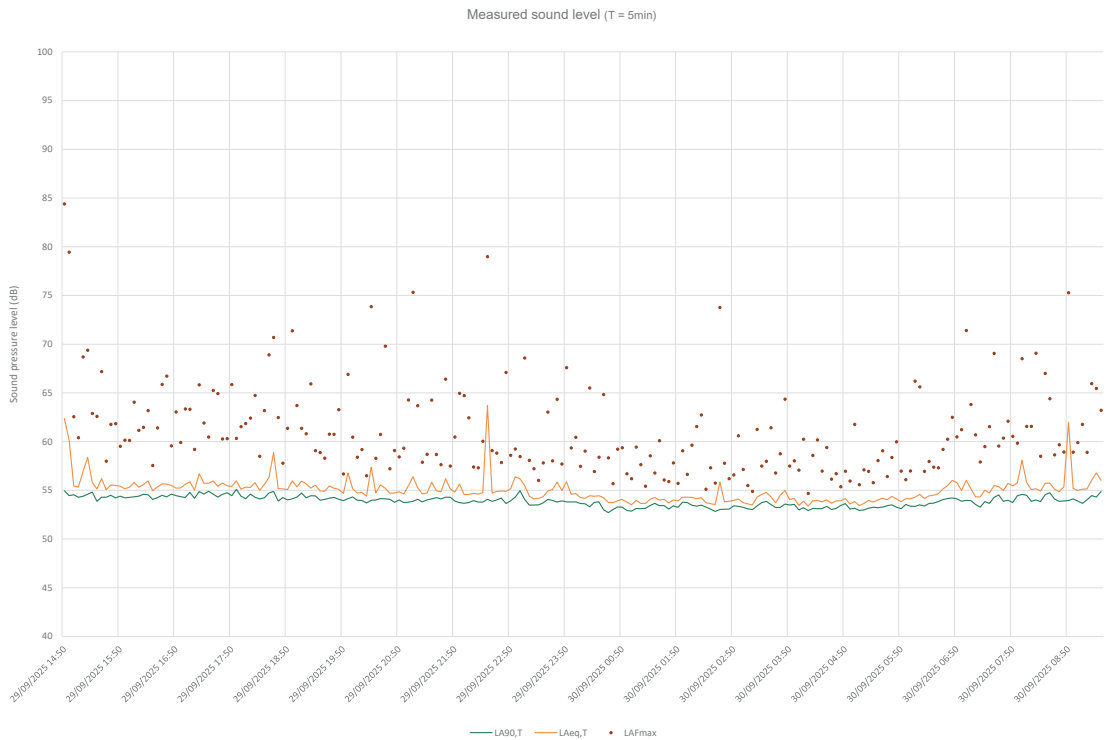


Chart 2: Noise measurement results at Pos B - Roof of the premises, overlooking the rear courtyard – Monday 29 to Tuesday 30 September 2025.



When determining the representative background $L_{A90,T}$ levels for the relevant periods, BS 4142¹ guidance states “a representative level ought to account for the range in background levels and ought not automatically to be assumed to be either the minimum or modal value.” With this in mind, statistical analysis has been used to determine the representative background $L_{A90,T}$ noise levels for each of the sensitive periods. The analysis derives the mode, mean, and median values. Once these values have been established, the lowest of these values is considered representative. In this instance, the modal values were used.

Table 1 shows the representative background noise levels during the sensitive night-time period at the noise measurement locations.

Noise Measurement Location (NML)	Representative Night-time Background Sound Level $L_{A90,15min}$ (dB)
Position A – Roof of the premises, overlooking Portland Street.	49
Position B - Roof of the premises, overlooking the rear courtyard	53

Table 1: Representative background sound levels during the sensitive night-time period

5. ASSESSMENT CRITERIA

The noise impact assessment relating to the proposed new mechanical services plant will be carried out in accordance with the procedures set out in BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*. The principle of BS 4142 is to determine an initial estimate of impact of industrial/commercial sound on nearby residents by comparing the Rating Level (sound level from the industrial/commercial source, with a correction applied for any acoustic features that characterise the sound) with the Background Sound Level (L_{A90} as measured in absence of the industrial/commercial source).

Generally, the greater the difference by which the Rating Level exceeds the Background Sound Level, the greater the magnitude of impact. BS 4142 states that ‘a difference of around +10 dB or more is likely to be an indication of a significant adverse impact [...]. A difference of around +5 dB is likely to be an indication of an 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.’

However, BS 4142 also advises that ‘when making assessments and arriving at decisions [...] it is essential to place the sound in context’ so in each case, the context in which the sound is placed must be considered and the initial estimate of impact should be modified accordingly.

For example, it advises ‘Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.’ It also indicates that impacts estimated during ‘the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night-time period for sleep purposes.’

¹ BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*



Additionally, Guidelines for Community Noise - World Health Organization, 1999 (GCN) was published in 1999 with the aim of informing legislation and guidance produced at the national and regional levels for the purposes of minimising any potential adverse health effects resulting from noise in the community. It presents guideline noise level criteria for the avoidance of adverse effects such as sleep disturbance and annoyance in a range of specific environments. The preface to WHO states that community noise includes road, rail and air traffic, industries, construction and public work, and the neighbourhood.

The GCN document advises that for outdoor living areas during the daytime period (07:00-23:00), table 4.1 of WHO references a guideline façade level of $L_{Aeq(16\text{-hour})}$ 50dB(A). For outside bedrooms (with windows open) during the night-time period (23:00-07:00), table 4.1 of WHO references a guideline façade level of $L_{Aeq(8\text{-hour})}$ 45dB(A).

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

For the assessment of the potential noise impact, consideration will therefore be given to the BS 4142:2014+A1:2019 assessment level, together with the precautionary guideline noise limits defined by the WHO Guidelines.

Manchester City Council require that any assessment for plant noise is conducted in accordance with BS 4142: 2014 and is designed to achieve a rating level of 5dB (L_{Aeq}) below the typical background (LA_{90}) level at the nearest noise sensitive location.

Therefore, for the assessment of the potential noise impact, consideration will therefore be given to the BS 4142:2014+A1:2019 assessment level, Manchester Council's requirements, together with the precautionary guideline noise limits defined by the WHO Guidelines.

5.1 POTENTIAL NOISE IMPACT FROM THE PROPOSED MECHANICAL SERVICES PLANT

The mechanical plant layout proposals are outlined on the plans included in Appendix B. The noise output (in terms of sound power levels) generated by the mechanical plant to be included in the proposed scheme, is shown in Table 2. The noise data is based upon information provided in specifications issued by the mechanical services contractor and equipment suppliers.

Plant Item	Number of.	Sound Pressure Level (dB) at 1m	L_p to L_w Correction (dB)	Calculated Sound Power Level L_{wA}^2
Mitsubishi PUZ-M250YKA	4	62	15	77
Mitsubishi PUZ-ZM125YDA	2	52	15	67

Table 2: Sound Power Levels of the proposed new external mechanical plant

² Sound power levels (L_{wA}) are calculated from sound pressure level (L_p) measurements made at a specified distance from equipment.

The proposed plant could be required any time during the daytime and night-time periods. However, the plant operates on thermostatic, speed and timer controls according to heat loads and occupation rates and so would not be operating 100% of the time. Whilst a typical on-time for this type of equipment might only 20-35%, a conservative and therefore more robust assessment assumes a 50% on-time for a typical worst-case scenario (ie 50% of all condensers operating at any one time).

Predictions of how the noise from each of the mechanical plant sources propagates to sensitive community receptors, together with the cumulative effect of all these noise sources, has been determined by noise modelling using proprietary software (iNoise³) which meets the requirement of ISO 9613 Part 2:2024⁴.

The noise model takes account of the following in its calculations procedures:

- Source sound power level (for point, line and area sources)
- Reflection from nearby structures and source directivity
- Distance from noise source (geometric spreading)
- Atmospheric absorption
- Acoustic screening of intervening structures and topography
- Ground absorption
- Ground effects (which includes the height of ground relative to the noise source)

The noise map, showing the noise contours produced by the proposed new mechanical services plant is included in Appendix C of this report. Predicted specific noise levels at the nearest noise sensitive receptors are provided in Table 3 below.

Receptor	L_{Aeq} dB(A)	L_{Aeq} Octave Band Centre Frequency (Hz)							
		63	125	250	500	1k	2k	4k	8k
R1. Hotel Room overlooking Portland Street	36	26	24	29	31	30	27	22	11
R2. Hotel Room overlooking Rear	45	35	33	37	40	38	34	30	19
R3. Hotel Room overlooking Portland Street	35	24	23	28	31	29	26	20	6
R4. Hotel Room overlooking Rear	41	29	28	33	36	36	32	27	16

Table 3: Predicted specific noise contribution from the proposed new mechanical services plant at the nearest noise sensitive receptors

As indicated in Table 3, predicted noise levels at the nearest noise sensitive receptors from the proposed new mechanical services plant are L_{Aeq} 35-45dB(A).

³ DGMR Raadgevende Ingenieurs B.V – iNoise V2024.3

⁴ ISO 9613-2:2024 "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation to determine Noise Levels

6. ASSESSMENT OF NOISE IMPACT

For the purposes of this assessment, the predicted plant rating levels will be compared with the background sound levels measured during the sensitive night-time period, at the nearest noise sensitive receptors.

Table 4 shows a BS 4142 assessment covering the noise impact associated with proposed new mechanical plant scheme. The proposed new plant items do not emit any distinct impulses or tones, nor could they emit other characteristics which may be distinctive against the existing residual acoustic environment.

Residential Position	Rating Level (dB)	Background L_{A90} (dB)	Assessment Level (dB) (Background excess)
R1. Hotel Room overlooking Portland Street	36	49	-13
R2. Hotel Room overlooking Rear	45	53	-8
R3. Hotel Room overlooking Portland Street	35	49	-14
R4. Hotel Room overlooking Rear	41	53	-12

Table 4: Predicted rating levels from proposed new mechanical plant scheme at the nearest noise sensitive receptors, compared with the representative night-time (23:00-07:00) background $L_{A90,15min}$ levels

With the proposed new mechanical services plant in place, the rating levels would be comfortably lower than the representative background noise level at the nearest residential properties.

The difference between the rating levels and background levels indicates that uncertainty would likely have no influence on the outcome of the assessment. However, in an attempt to minimise the uncertainty, continuous noise measurements have been carried out throughout the most sensitive periods at the site and the predictions of noise have been carried out in accordance with ISO 9613 Part 2:1996⁵.

Based on the above, the overall noise impact would be low.

7. CONCLUSIONS

A noise assessment has been completed to consider the potential impact of noise produced by relocating 4 existing external condenser units and the installation of 2 new condenser units at an existing J D Wetherspoon Public House 'The Paramount' in Manchester.

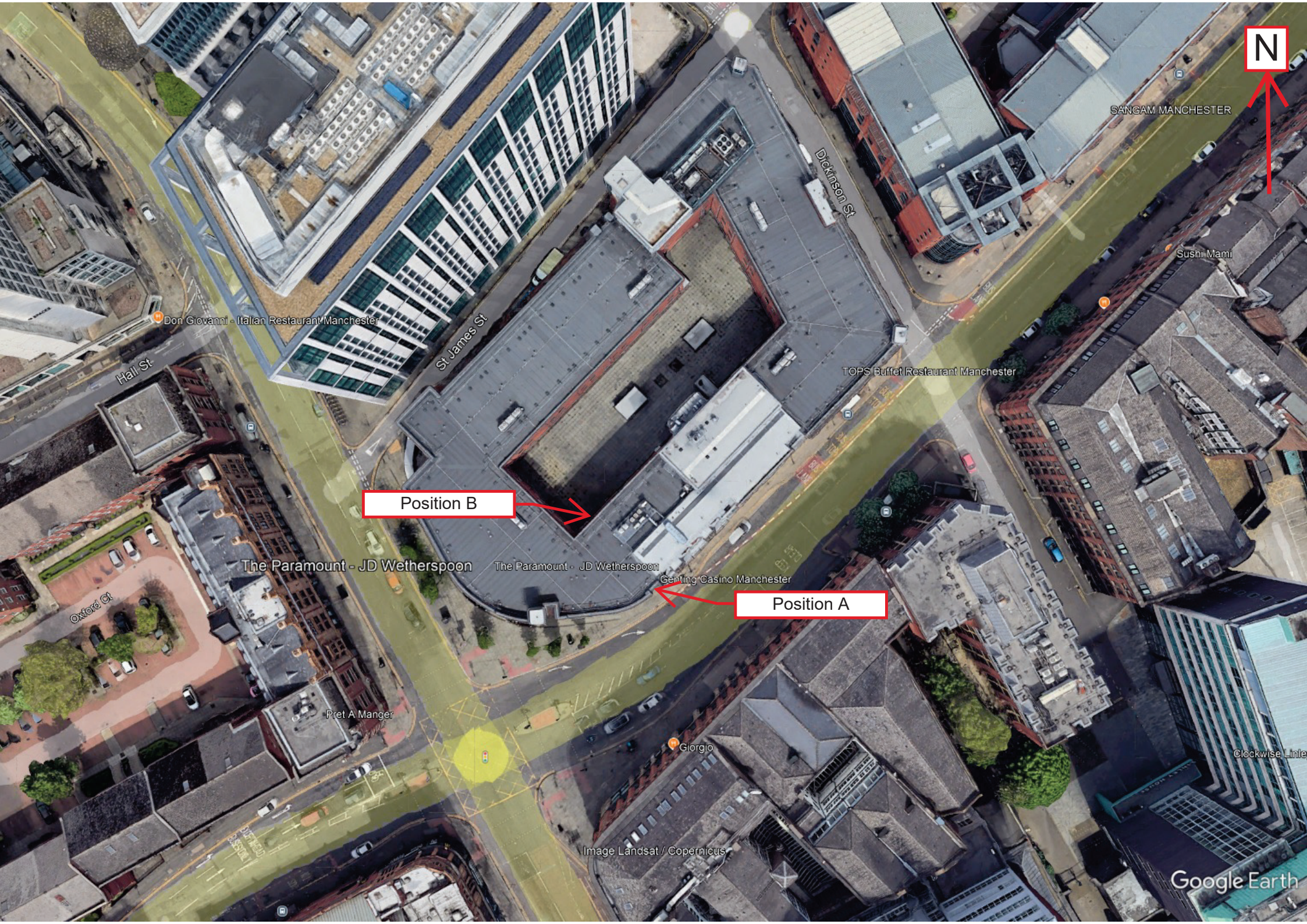
A background noise measurement survey has been conducted at a location representative of the most sensitive residential positions to the site and predictions of noise from the proposed mechanical plant equipment has been completed, utilising a proprietary software package.

Noise limits for mechanical services plant have been established, based on measured background noise levels, as well as taking account of BS 4142, WHO and Manchester City Council's own criteria for plant noise.

⁵ ISO 9613-2:1996 "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation to determine Noise Levels

A P P E N D I X A

Existing site location plan showing the noise monitoring location



N

SANGAN MANCHESTER

Sushi Mami

TOPS Buffet Restaurant Manchester

Position B

The Paramount - JD Wetherspoon

The Paramount - JD Wetherspoon

Genting Casino Manchester

Position A

Pret A Manger

Giorgio

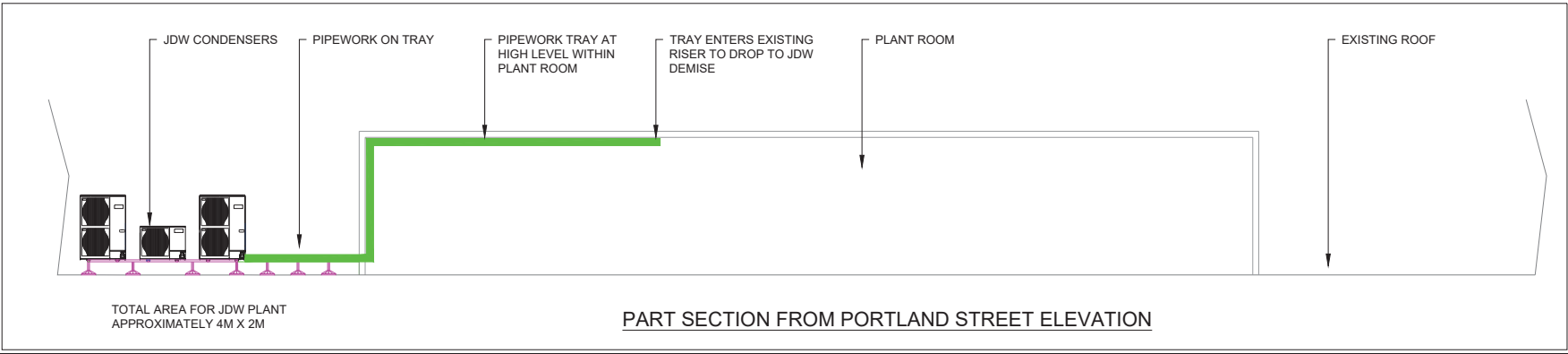
Image Landsat / Copernicus

Clockwise Lane

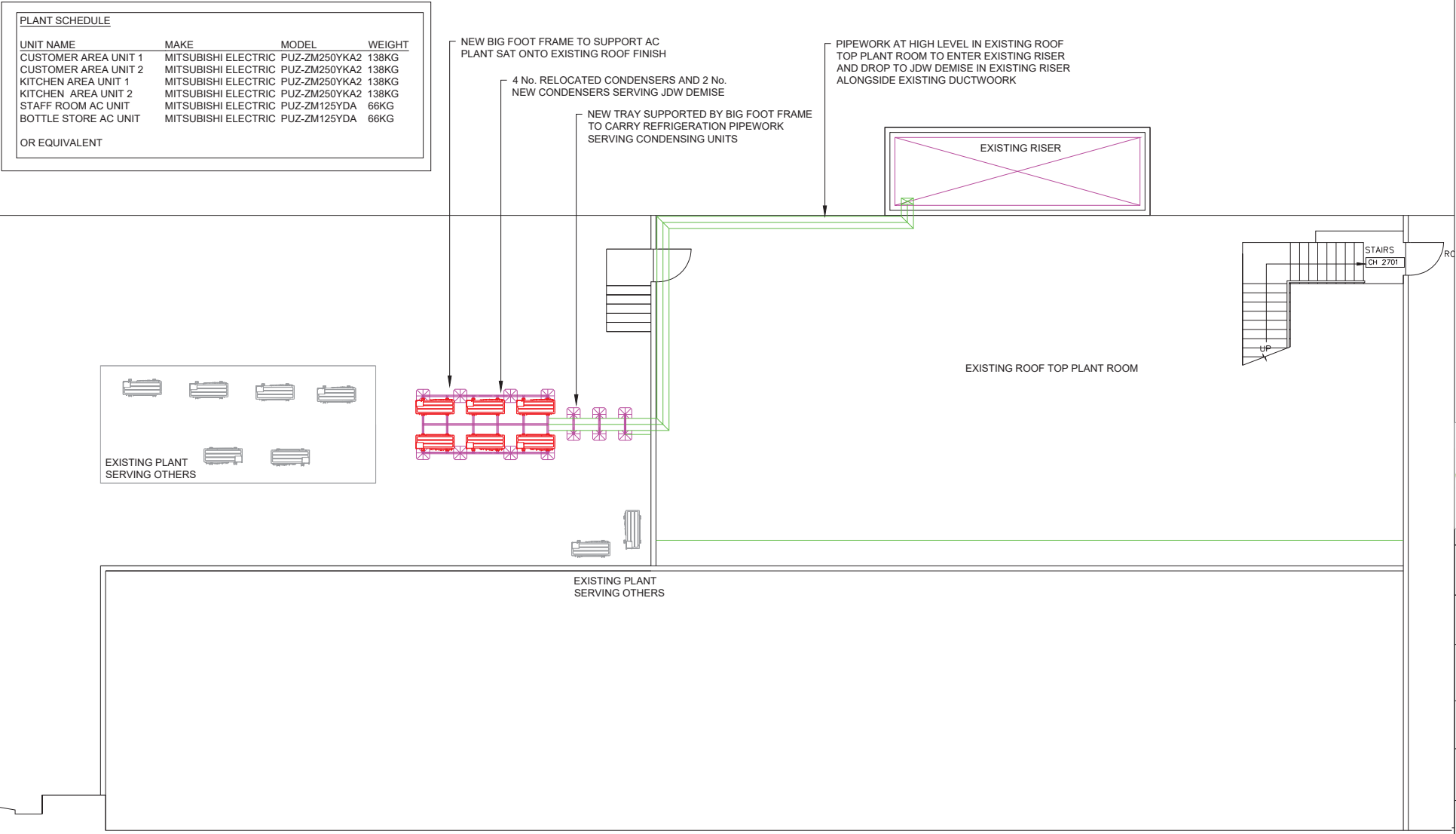
Google Earth

A P P E N D I X B

Proposed New M&E Scheme



PLANT SCHEDULE			
UNIT NAME	MAKE	MODEL	WEIGHT
CUSTOMER AREA UNIT 1	MITSUBISHI ELECTRIC	PUZ-ZM250YKA2	138KG
CUSTOMER AREA UNIT 2	MITSUBISHI ELECTRIC	PUZ-ZM250YKA2	138KG
KITCHEN AREA UNIT 1	MITSUBISHI ELECTRIC	PUZ-ZM250YKA2	138KG
KITCHEN AREA UNIT 2	MITSUBISHI ELECTRIC	PUZ-ZM250YKA2	138KG
STAFF ROOM AC UNIT	MITSUBISHI ELECTRIC	PUZ-ZM125YDA	66KG
BOTTLE STORE AC UNIT	MITSUBISHI ELECTRIC	PUZ-ZM125YDA	66KG
OR EQUIVALENT			



Revisions	
Rev	Comments

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email: drawings@jigsawmees.co.uk		web: www.jigsawmees.co.uk
Client: JD Wethespoon PLC		
Project: The Paramount, Manchester		
Drawing Subject: Heat Rejection Plant		
Drawing Description: Proposed Roof Layout		
Scale: 1:50 @ A1	Drawn By: SW	Date: Feb 2025
Drawing Number: 2459 M102		Rev: 0

PUZ-ZM200/250YKA R32

High Capacity Outdoor Units

Power Inverter Heat Pump (Three Phase)

Mr. SLIM™

Our high capacity Power Inverter outdoor units provide excellent system flexibility by connecting to 2, 3 or 4 Mr Slim indoor units.

Power Inverter technology allows high seasonal efficiency performance as well as extra-long pipe runs. These units provide efficient cooling or heating to large open areas such as retail units, gyms and halls.

R32



Key Features & Benefits:

- Connectable to up to 4 cassette, wall mount, ducted or ceiling suspended units
- Exceptional application coverage with up to 100m pipe runs
- Maximum design flexibility due to 30m height difference between outdoor unit & indoor units
- Utilises lower GWP R32 refrigerant

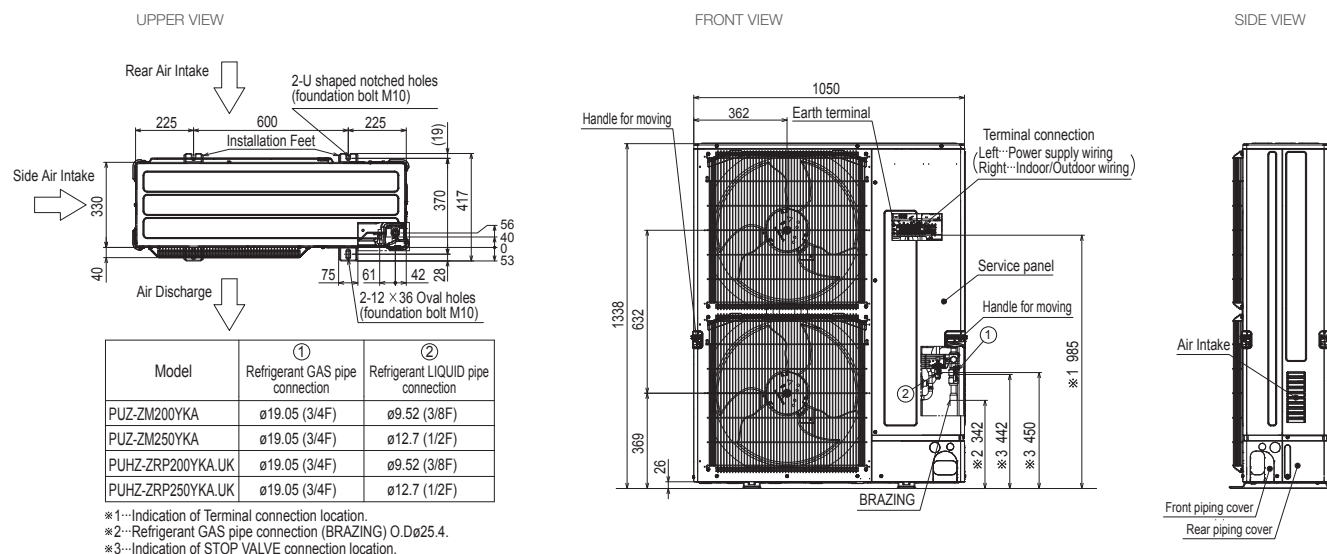




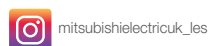
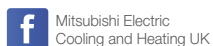
PUZ-ZM200/250YKA OUTDOOR UNITS		PUZ-ZM200YKA	PUZ-ZM250YKA
Capacity (kW)	Heating (nominal)	22.4	27.0
	Cooling (nominal)	19.0	22.0
SCOP (nsh) / SEER (nsc) (BS EN14825)*1		4.50 (177.1%) / 7.49 (296.4%)	4.47 (175.7%) / 7.43 (294.3%)
SOUND PRESSURE LEVEL (dBA)	Heating/Cooling	62 / 59	62 / 59
WEIGHT (kg)		137	138
DIMENSIONS (mm)	Width x Depth x Height	1050 x 330+40 x 1338	1050 x 330+40 x 1338
PIPE SIZE mm (in)	Gas	28.58 (1 1/8")	28.58 (1 1/8")
	Liquid	9.52 (3/8")	12.7 (1/2")
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz
PHASE		Three	Three
SYSTEM POWER INPUT (kW)	Heating/Cooling (nominal)	5.63 / 4.95	7.81 / 6.86
	Heating/Cooling (UK)	5.07 / 4.11	7.03 / 5.69
STARTING CURRENT (A)		5	5
SYSTEM RUNNING CURRENT (A)	Heating/Cooling [MAX]	9.57 / 8.58 [22.5]	13.3 / 11.6 [22.5]
FUSE RATING (BS88) - HRC (A)		25	25
MAINS CABLE No. CORES		5	5
MAX PIPE LENGTH (m)		100	100
MAX HEIGHT DIFFERENCE (m)		30	30
CHARGE REFRIGERANT (kg) / CO ₂ EQUIVALENT (t)	R32 (GWP 675) - 30m	6.3 / 4.25	6.8 / 4.59
MAX ADDITIONAL REFRIGERANT (kg) / CO ₂ EQUIVALENT (t)	R32 (GWP 675)	2.9 / 1.96	2.4 / 1.62

*1 PUZ-ZM200YKA connected to 2 x PLA-ZM100EA, PUZ-ZM250YKA connected to 2 x PLA-ZM125EA

PUZ-ZM200/250YKA DIMENSIONS



Telephone: 01707 282880
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 IRELAND Mitsubishi Electric Europe, Westgate Business Park, Ballymount, Dublin 24, Ireland. Telephone: (01) 419 8800 Fax: (01) 419 8890 International code: (003531)

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of May 2020



PLA-ZM R32

4-Way Blow Ceiling Cassette System

Power Inverter Heat Pump (Three Phase)

Mr.SLIM™

The **PLA-ZM Power Inverter range** is a ceiling cassette system that blends a host of outstanding features with a sophisticated, streamlined design.

Offering high seasonal efficiency, advanced control options and extended pipe runs, this range is an extremely flexible choice for a broad number of commercial applications.

R32



Key Features & Benefits:

- Increased comfort levels through advanced airflow and smart defrost features
- Compact, single fan outdoor unit chassis across the whole range, for unobtrusive and discreet installation
- 100m pipe run (size 100-140), increasing application capability
- 14°C set point option; ideal for applications where a specialist ambient condition is required (requires PAR-41MAA or PAR-SL101A-E controller)
- Energy usage display available as standard with the PAR-41MAA controller
- Optional 3D Total Airflow casement to allow 360° directional delivery of air (requires PAR-41MAA or PAR-SL101A-E controller)
- Optional 3D i-see sensor grille (PLP-6EAE) provides customised comfort by automatically monitoring room occupancy, position and body temperatures
- Optional filter lowering operation down to 4m (PLP-6EAJ), allowing for easier maintenance
- Optional black grille (PLP-6EAB), ideal for applications with exposed ceilings or stylish aesthetics
- Optional V Blocking filter (PAC-SK53KF-E) provides in-room air purification, neutralises viruses, bacteria, allergens, dust and mould
- Compatible with Plasma Quad Connect - an innovative, bolt-on air purifying device which neutralises viruses, bacteria, allergens, PM2.5, mould and dust (PAC-SK51FT-E)



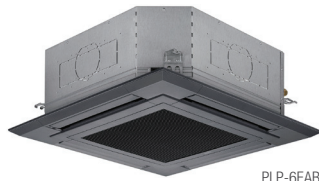
Air Conditioning Product Information

PLA-ZM R32 4-Way Blow Ceiling Cassette System Power Inverter Heat Pump (Three Phase)

R32



PLP-6EA



PLP-6EAB

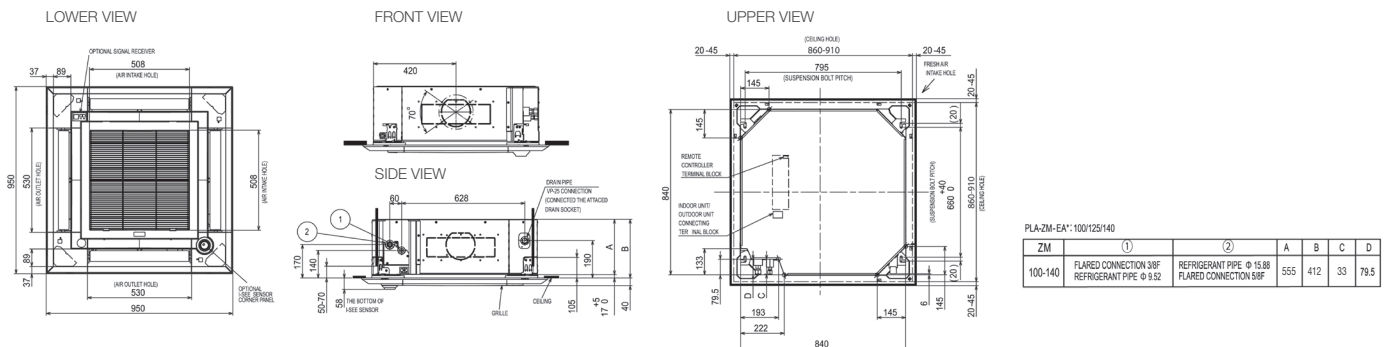


PLA-ZM INDOOR UNITS		PLA-ZM100EA2	PLA-ZM125EA2	PLA-ZM140EA2
CAPACITY (kW)	Heating (nominal)	11.2 (2.7-14.0)	14 (3.2-16.0)	16 (3.7-18.0)
	Cooling (nominal)	9.5 (4.9-11.4)	12.5 (5.1-14.0)	13.4 (5.4-15.0)
	Heating (UK)	8.06 (1.94-10.08)	10.08 (2.30-11.52)	11.52 (2.66-12.96)
	Cooling (UK)	8.74 (4.51-10.49)	11.50 (4.69-12.88)	12.33 (4.97-13.80)
SHF (nominal)		0.77	0.70	0.70
COP / EER (nominal)		4.20 / 4.40	3.60 / 3.60	3.50 / 3.70
SCOP (ηsh) / SEER (ηsc) (BS EN14825)		4.80 / 7.60	4.73 (186.2%) / 7.43 (294.1%)	4.63 (182.3%) / 7.35 (290.9%)
ErP ENERGY EFFICIENCY CLASS	Heating/Cooling	A++ / A++	-	-
AIRFLOW (l/s)	Lo-Mi-Mi2-Hi	317-367-417-467	350-400-433-483	400-433-483-533
PIPE SIZE mm (in)	Gas/ Liquid	15.88 (5/8") / 9.52 (3/8")	15.88 (5/8") / 9.52 (3/8")	15.88 (5/8") / 9.52 (3/8")
SOUND PRESSURE LEVEL (dBA)	Lo-Mi-Mi2-Hi	31-34-37-40	33-36-39-41	36-39-42-44
SOUND POWER LEVEL (dBA)		61	62	65
DIMENSIONS (mm)	Width x Depth x Height (Grille)	840 (950) x 840 (950) x 298 (40)	840 (950) x 840 (950) x 298 (40)	840 (950) x 840 (950) x 298 (40)
WEIGHT (kg)	Unit / Grille	26 / 5	26 / 5	26 / 5
ELECTRICAL SUPPLY		Fed by Outdoor Unit	Fed by Outdoor Unit	Fed by Outdoor Unit
FUSE RATING (BS88) - HRC (A)		6	6	6
INTERCONNECTING CABLE No. CORES		4	4	4
GRILLE REFERENCE	White	PLP-6EA	PLP-6EA	PLP-6EA
	Matt Black	PLP-6EAB	PLP-6EAB	PLP-6EAB
V BLOCKING FILTER		PAC-SK53KF-E	PAC-SK53KF-E	PAC-SK53KF-E
WIRED REMOTE CONTROLLER REFERENCE		PAR-41MAA	PAR-41MAA	PAR-41MAA
WIRELESS REMOTE CONTROLLER REFERENCE		PAR-SL101A-E	PAR-SL101A-E	PAR-SL101A-E

PUZ-ZM OUTDOOR UNITS		PUZ-ZM100YDA ③	PUZ-ZM125YDA ③	PUZ-ZM140YDA ③
SOUND PRESSURE LEVEL (dBA)	Heating/Cooling	48 / 44	50 / 47	51 / 49
SOUND POWER LEVEL (dBA)	Cooling	63	66	68
WEIGHT (kg)		114	116	121
DIMENSIONS (mm)	Width x Depth x Height	1100 x 460 + 45 x 870	1100 x 460 + 45 x 870	1100 x 460 + 45 x 870
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		Three	Three	Three
SYSTEM POWER INPUT (kW)	Heating/Cooling (nominal)	2.667 / 2.160	3.889 / 3.473	4.572 / 3.622
	Heating/Cooling (UK)	2.19 / 1.84	3.19 / 2.95	3.75 / 3.08
STARTING CURRENT (A)		3.5	3.5	3.5
SYSTEM RUNNING CURRENT (A)	Heating/Cooling [MAX]	4.09 / 3.32 [8.5]	5.97 / 5.32 [9.5]	7.02 / 5.56 [9.7]
FUSE RATING (BS88) - HRC (A)		16	16	16
MAINS CABLE No. CORES		5	5	5
MAX PIPE LENGTH (m)		100	100	100
MAX HEIGHT DIFFERENCE (m)		30	30	30
CHARGE REFRIGERANT (kg) / CO ₂ EQUIVALENT (t) - R32 (GWP 675) - 30m		3.60 / 2.43 (40m)	3.60 / 2.43 (40m)	3.60 / 2.43 (40m)
MAX ADDITIONAL REFRIGERANT (kg) / CO ₂ EQUIVALENT (t) - R32 (GWP 675)		2.40 / 1.62	2.40 / 1.62	2.40 / 1.62

③ Three Phase

PLA-ZM100/125/140EA2 DIMENSIONS



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Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). *These GWP values are based on IPCC 6th edition.

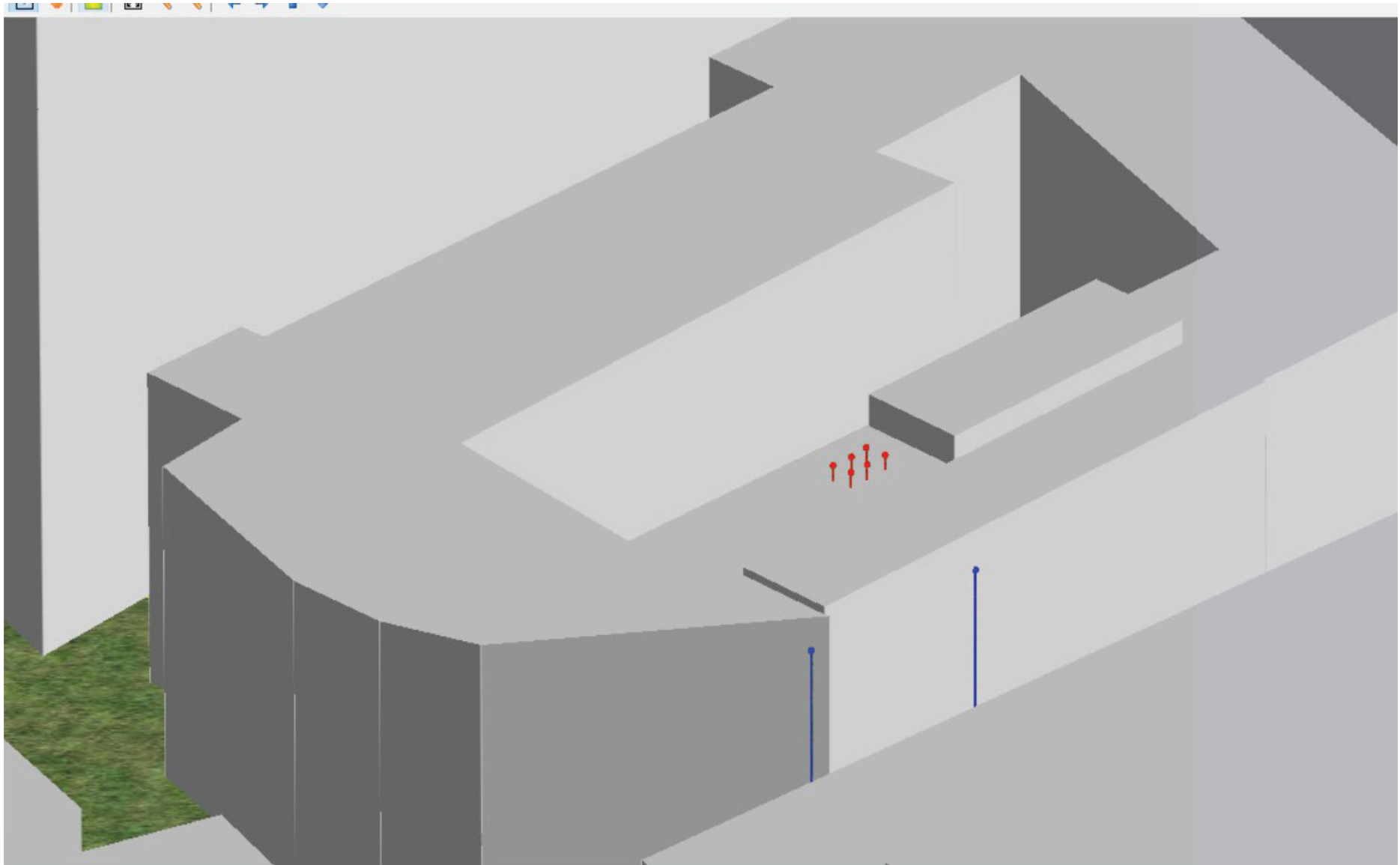
Effective as of April 2025



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APPENDIX C

Results of the noise prediction model relating to the proposed new mechanical plant

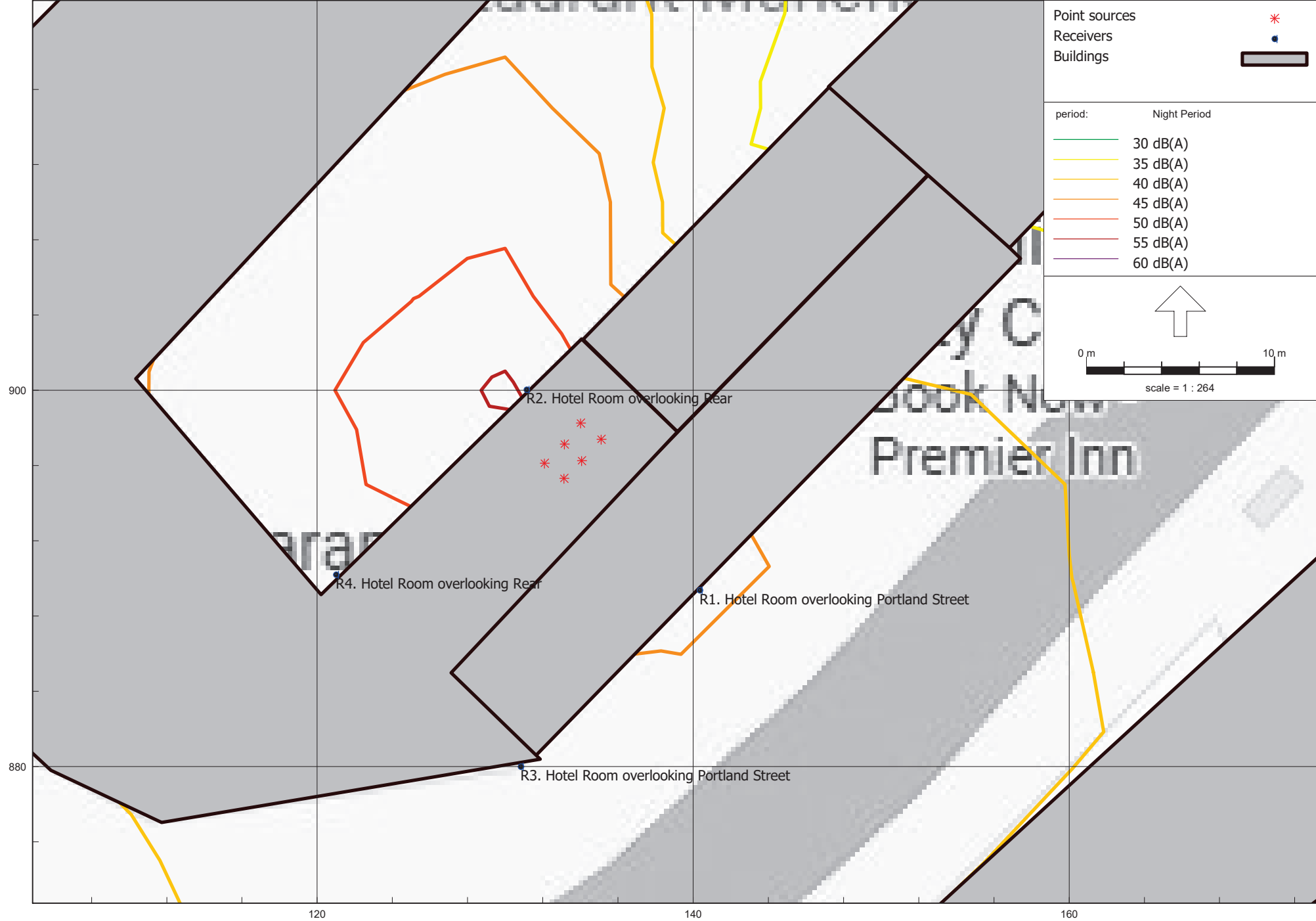


JDW The PAramount, Manchester
Predicted Plant Noise Levels

Report: Table of Results
Model: Proposed Plant - Rev 0
LAeq per octave: total results for receivers
Group: (main group)
Group Reduction: Yes

Name		Height	Night									
Receiver	Description		Total	31	63	125	250	500	1000	2000	4000	8000
1_A	R1. Hotel Room overlooking Portland Street	18.00	36	--	26	24	29	31	30	27	22	11
2_A	R2. Hotel Room overlooking Rear	18.00	45	--	35	33	37	40	38	34	30	19
_A	R3. Hotel Room overlooking Portland Street	18.00	35	--	24	23	28	31	29	26	20	6
4_A	R4. Hotel Room overlooking Rear	18.00	41	--	29	28	33	36	36	32	27	16

All shown dB values are A-weighted



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