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MPF/PR0660/L11

21 September 2026

Phillip Dorin
Renaker Build Limited
NQ Building
47 Bengal Street
Ancoats
Manchester
M4 6BB

Dear Phil

PLOT F2, GREAT JACKSON STREET, MANCHESTER – PLANNING CONDITION 24

I write with confirmation of the measured external noise levels due to emergency and non-emergency plant at Plot F2, Great Jackson Street, Manchester.

INTRODUCTION

Fisher Acoustics Ltd has been commissioned by Renaker Limited to measure the external noise levels due to operation of external plant installed at Plot F2 and to compare the noise levels to the requirements of Conditions 24 of the planning permission for the development.

PLANNING CONDITION

In relation to building services plant at Plot F2, the planning permission for Plot F (planning application number 143143/JO/2025) states:

Condition 24:

- *"24) a) Prior to first occupation of Phase 1, the building, together with any externally mounted ancillary equipment, shall be acoustically insulated in accordance with a scheme 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 equipment so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location.*

  b) Prior to occupation of Phase 1 of the development a verification report to validate that the work undertaken throughout Phase 1 of the development conforms to the recommendations and requirements in the approved acoustic consultant's report shall be submitted to and approved in writing by the City Council as local planning authority. The verification report shall include post completion testing to confirm that acceptable criteria has 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 and timescales for the implementation of those measures.

  Reason - To safeguard the amenities of the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy."

PRE-EXISTING NOISE LEVELS & ENVIRONMENTAL NOISE STUDIES

The Noise and Vibration chapter of the Environmental Statement for Plot F, compiled by Fisher Acoustics, identifies the results of environmental noise surveys undertaken by Fisher Acoustics Limited at and around the site. The results of the noise surveys have been used to establish the allowable noise levels due to building services plant.

Table 1 below gives the applicable noise limits at the nearest noise sensitive dwellings for non-emergency building services plant based upon the environmental noise survey data in order to comply with the requirements of the planning condition.

Location	Rating Noise Level (dB LAeq)	
	Daytime (07:00 hrs to 23:00 hrs)	Night time (23:00 hrs to 07:00 hrs)
Residences, 'The Boatmans'	48	47
Deansgate Square, West Tower, Level 1	43	43
Deansgate Square, West Tower, Level 50	58	50
Deansgate Square, East Tower, Level 1	43	42
Residences, Plot F2	49	49
Residences, Plot F2 Level 50	60	51

Table 1: Environmental noise limits for non-emergency building services plant

It will be noted that the noise limits at Level 50 of both Plot F2 and Deansgate Square West Tower are higher than at the lower levels of the building. This is due to the greater visibility of the Mancunian Way to the upper storeys of the tower and hence the higher levels of background noise due to greater exposure to road traffic noise.

With regard to emergency plant, it is expected that such plant would only operate during emergencies and during periodical test runs (understood to be of five minutes duration every fortnight for the roof level fans and bi-annually for the car park smoke extract fans).

On this basis, it is not considered appropriate to require any emergency plant to comply with the noise limits for continuously operating non-emergency plant. It is therefore suggested that the noise level from any emergency plant is no more than 10 dB(A) greater than the background noise level (measured as an LA90) at any residential receptor.

It is therefore recommended that the noise levels at any residential façade during operation of any emergency plant do not exceed the values given in **Error! Reference source not found.**.

Location	Daytime Noise Level (dB LAeq)
Residences, 'The Boatmans'	66
Deansgate Square, West Tower, Level 1	71
Deansgate Square, West Tower, Level 50	73
Deansgate Square, East Tower, Level 1	71
Residences, Plot F2	71
Residences, Plot F2 Level 50	74

Table 2: Environmental noise limits for emergency building services plant

BUILDING SERVICES PLANT (NON-EMERGENCY)

The following non-emergency external plant items are installed at Plot F2.

- 9 no. VRF condensers
- 1 no. Lift Motor Room extract fan
- 1 no. Refuse Chute extract fan
- 1 no. Ground Floor DDA WC Extract (EF G/01)
- 1 no. Ground Floor Refuse Store and Food Waste Extract (EF G/02)
- 1 no. Ground Floor Move in Store Extract (EF G/04)
- 1 no. Ground Floor Staff Area Extract (EF G/06)
- 1 no. Ground Floor Parcel Store Extract (EF G/08)
- 1 no. Ground Floor Refuse Chute Extract - Serving Levels 01-25 (EF 01/02)
- 1 no. Level 01 DDA WC Extract (EF 01/03)
- 2 no. car park extract fans (also serve as emergency smoke extract fans)

One of the car park extract fans is a standby fan (ie only one fan operates at any one time).

Table 3 identifies the reported sound power levels of the installed non-emergency extract fans.

Building services plant item	Sound Power Level (dB re 1 x 10^{-12} Watts)							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
PVE 1000mm dia, inverter driven axial extract fan, 6 ACH (High CO), 2 no. Car Park Extract								
In-duct outlet (with 1D attenuator)	75	84	81	72	68	66	69	67
Breakout	60	77	70	60	58	52	47	37
Systemair KVK Slim 400 EC extract fan, duty: 1.40 m³/s, 190 Pa 1 no. Lift Motor Room Extract								
Outlet	81	91	90	87	75	72	67	61
Systemair AXC315-6 extract fan, Duty: 350 l/s at 191 Pa, 1 no. Roof Mounted Refuse Chute Extract								
Outlet	89	95	91	95	85	82	76	69
Casing Radiated	83	89	85	89	79	76	70	63
Systemair AXC315-6 extract fan, duty: 70 l/s 140 Pa,1 no. (Ground Floor DDA WC Extract (EF G/01)								
In-duct outlet	87	97	94	91	87	77	69	66
Systemair AXC315-6 extract fan, duty: 380 l/s 100 Pa,1 no. Ground Floor Refuse Store and Food Waste Extract (EF G/02)								
In-duct outlet	89	95	91	95	85	82	76	69
Systemair AXC315-6 extract fan, duty: 90 l/s 120 Pa,1 no. Ground Floor Move in Store Extract (EF G/04)								
In-duct outlet	87	97	94	91	87	77	69	66
Systemair AXC315-6 extract fan, duty: 110 l/s 160 Pa,1 no. Ground Floor Staff Area Extract (EF G/06)								
In-duct outlet	87	97	94	91	87	77	69	66
Systemair AXC315-6 extract fan, duty: 70 l/s 140 Pa,1 no. Ground Floor Parcel Store Extract (EF G/08)								
In-duct outlet	87	97	94	91	87	77	69	66
Systemair AXC315-6 extract fan, duty: 350 l/s 191 Pa,1 no. Ground Floor Refuse Chute Extract - Serving Levels 01-25 (EF 01/02)								
In-duct outlet	89	95	91	95	85	82	76	69
Systemair AXC315-6 extract fan, duty: 60 l/s 170 Pa,1 no. Level 01 DDA WC Extract (EF 01/03)								
In-duct outlet	87	97	94	91	87	77	69	66

Table 3: Sound power levels of non-emergency extract fans at Plot F2

Table 4 identifies the reported static insertion losses of the attenuators installed to the non-emergency extract fans.

Building services plant item	Static Insertion loss, Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Allaway Acoustics 900mm long – Ground Floor DDA WC Extract (ATT G/01), 1 no.	2	3	7	18	25	19	17
Allaway Acoustics 900mm long - Refuse Store and Food Waste Extract (ATT G/02), 1 no.	2	3	7	18	25	19	17
Allaway Acoustics 900mm long – Ground Floor Move-in Store Extract (ATT G/04), 1 no.	2	3	7	18	25	19	17
Allaway Acoustics 900mm long – Ground Floor Staff Area Extract (ATT G/06), 1 no.	1	3	7	19	28	23	20
Allaway Acoustics 900mm long – Ground Floor Parcel Store Extract (ATT G/08), 1 no	1	3	7	19	28	23	20
Allaway Acoustics 900mm long – Levels 01 – 25 Refuse Chute Extract (ATT 01/02), 1 no	3	4	8	22	31	23	20
Allaway Acoustics 900mm long – Level 01 DDA WC Extract (ATT 01/03), 1 no	2	3	7	18	25	19	17
Allaway Acoustics 1200mm long – Roof Mounted Refuse Chute Extract (ATT R/02), 1 no	3	4	8	22	31	23	20

Table 4: Static Insertion loss of non-emergency extract fans

Table 5 identifies the reported sound pressure levels of the external roof-mounted condensers.

Building services plant item	Sound Pressure Level (dB re 2 x 10^{-5} Pa) at 1 m							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
Mitsubishi PUMY-SP112VKM2 VRF Condenser Unit, 9 no., Heating Mode	54	58	56	55	52	49	45	38

Table 5: Sound pressure levels of roof-mounted condensers

Figure 1 identifies the locations of the non-emergency roof plant at Plot F2.

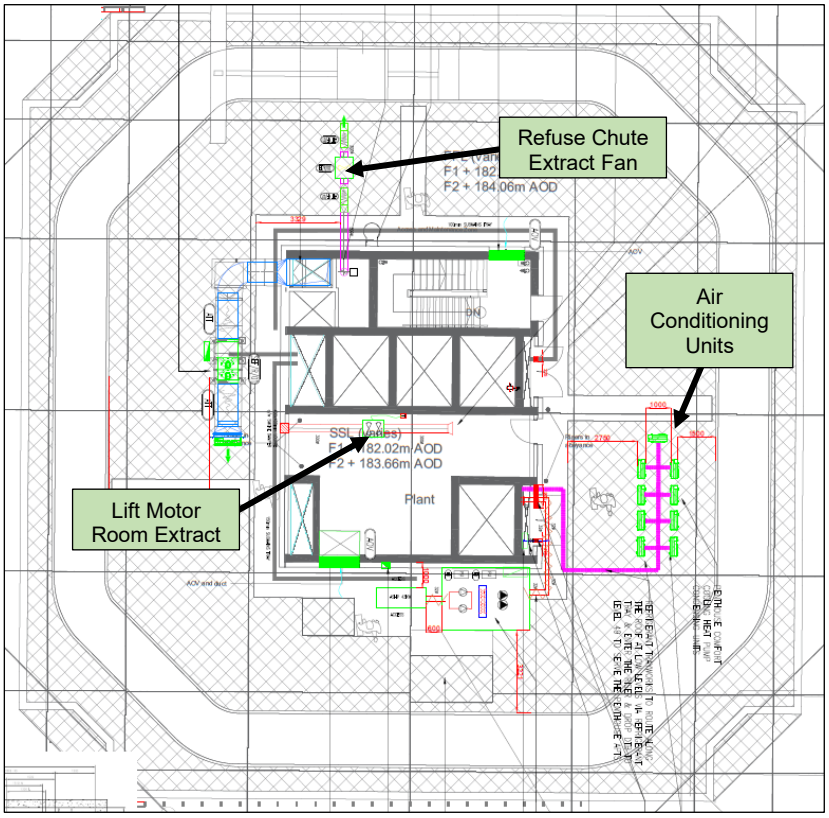


Figure 1: Rooftop non-emergency plant layout, Plot F2

Figure 2 identifies the locations of the extract fans installed at ground floor level of Plot F2.

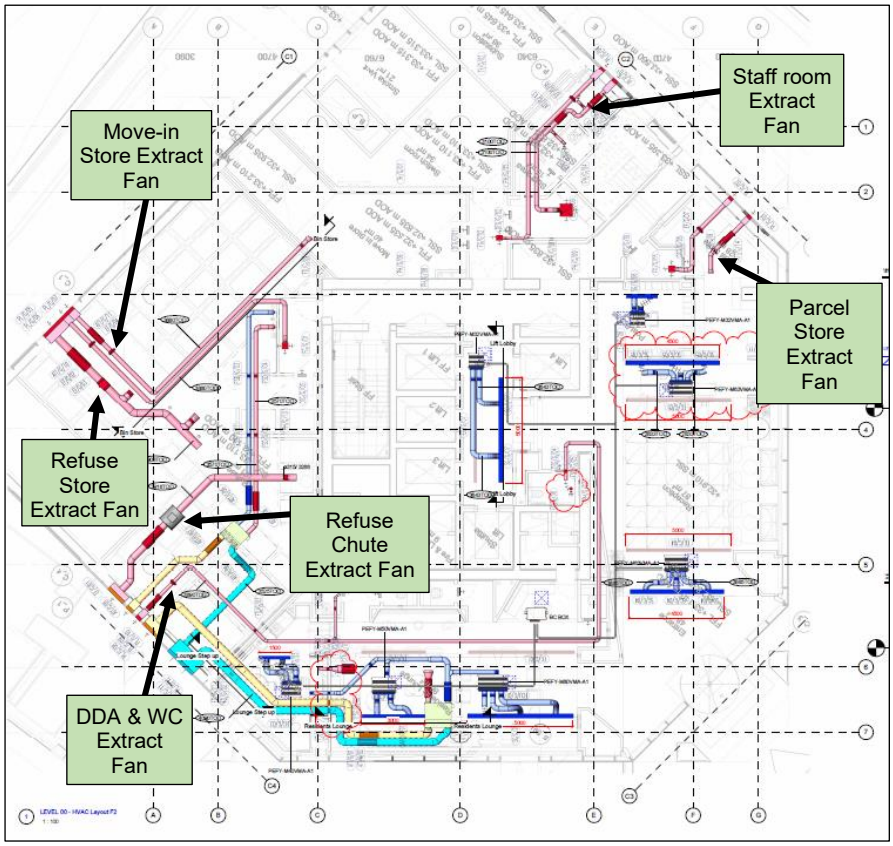


Figure 2: Ground floor internal plant layout, Plot F2

Figure 3 identifies the locations of the extract fans installed at level 1 of Plot F2.

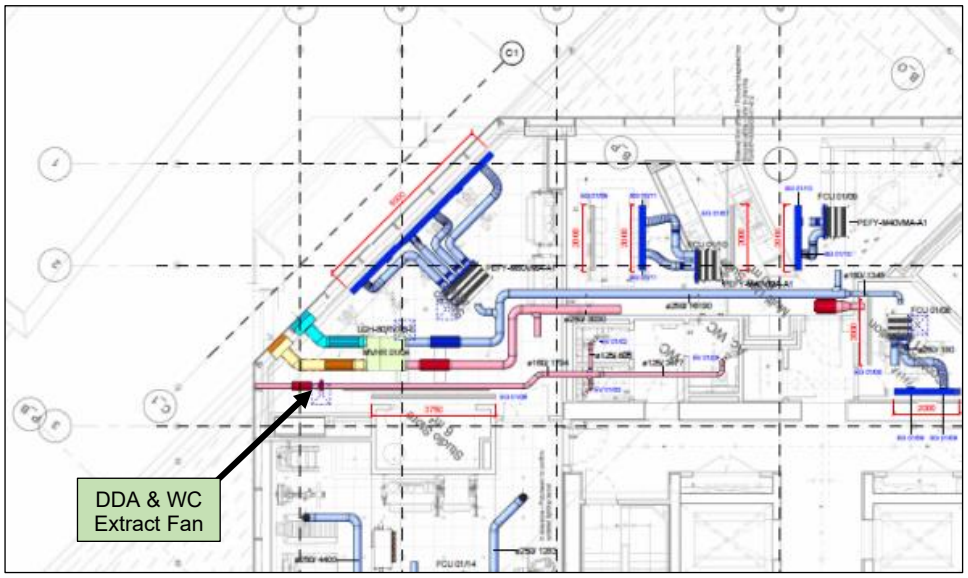


Figure 3: Level 1 internal plant layout, Plot F2

The car park extract fans are located at ground floor level and are ducted via louvres to atmosphere.

Figure 4 shows the location of the car park extract fans at Plot F2.

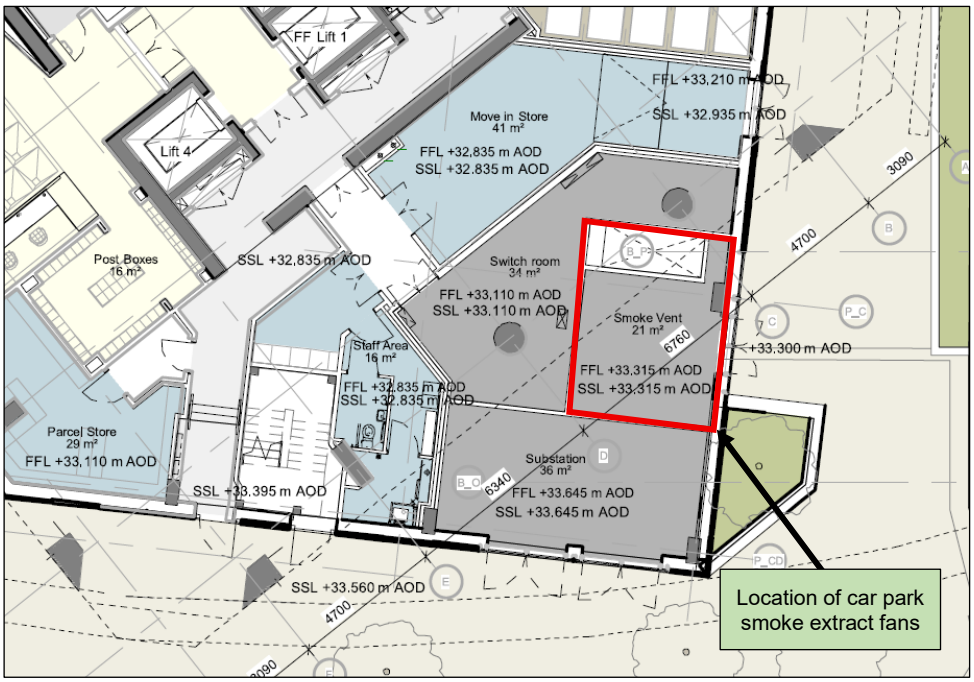


Figure 4: Ground floor location of car park extract fans, Plot F2, (southeast corner)

Figure 5 shows the layout of the car park extract fans installed on the ground floor of Plot F2.

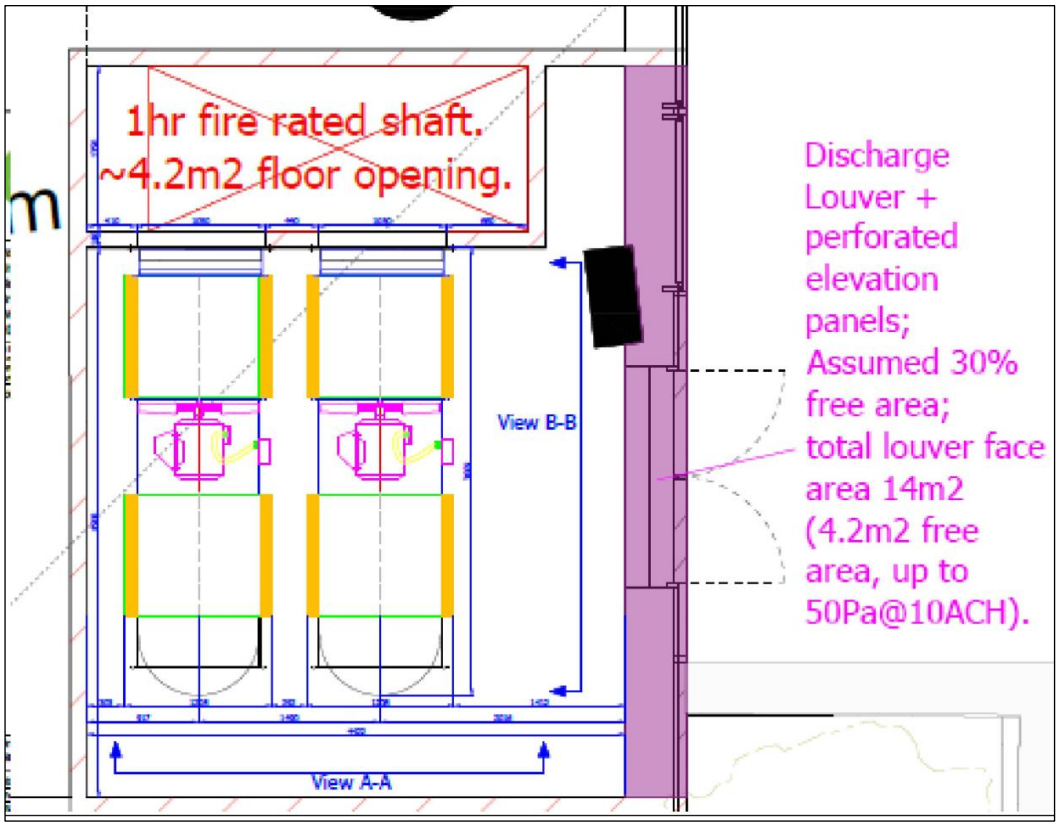


Figure 5: Ground floor layout of car park extract fans, Plot F2

BUILDING SERVICES PLANT (EMERGENCY)

The following emergency plant items are installed externally at Plot F2.

- 2 no. car park extract fans (one of which is standby)
- 1 no diesel driven generator
- 2 no. roof-mounted smoke extract fans (one of which is standby)

Table 6 identifies the reported sound power levels of the emergency plant. The quoted sound power levels for the roof-top smoke extract fans include the performance of the atmosphere-side attenuators installed to each fan.

Building services plant item	Sound Power Level (dB re 1 x 10^{-12} Watts)							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
PVE 1000mm dia, Inverter driven axial extract fan, 10 ACH (Fire condition), 2 no. (Car Park Extract)								
Outlet In-duct outlet (with 1D attenuator)	88	93	95	85	79	79	82	80
Casing Radiated	73	87	84	72	69	65	60	51
Scania DC16 PDE 523 kW 1500 rpm generator, 1 no.								
Exhaust Flue (including primary and secondary attenuators)	64	88	77	70	62	58	56	52
Engine Radiated	112	100 (est.)	100 (est.)	100	102	107	106	104
Elta Fan, roof-mounted smoke extract fans, 2 no., 100% duty								
Outlet	97	96	95	94	89	90	92	87
Casing Radiated	83	89	85	81	82	79	73	59

Table 6: Sound power levels of emergency plant

During testing of the smoke extract system, the smoke extract fans will be operated at 33% of the emergency duty. Table 7 identifies the reported emergency sound power levels of the roof mounted smoke extract plant at 33% (test) duty.

Building services plant item	Sound Power Level (dB re 1 x 10^{-12} Watts)							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
Elta Fan, roof-mounted smoke extract fans, 2 no., 33% duty								
Outlet	66	74	74	67	59	56	60	53
Casing Radiated	53	67	63	54	51	45	41	25

Table 7: In-duct sound power levels of roof mounted emergency smoke extract fans, 33% (test) duty

Table 8 identifies the reported static insertion losses of the attenuators to the inlet and discharge of the generator room.

Building services plant item	Static Insertion loss, Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
Emergency Generator - Fresh Air Inlet, 1 no.	9	14	23	36	45	50	48
Emergency Generator - Discharge 1 no.	12	19	32	51	55	55	55

Table 8: Static insertion loss of attenuators to generator room

Figure 6 identifies the location of the emergency roof-top smoke extract plant.

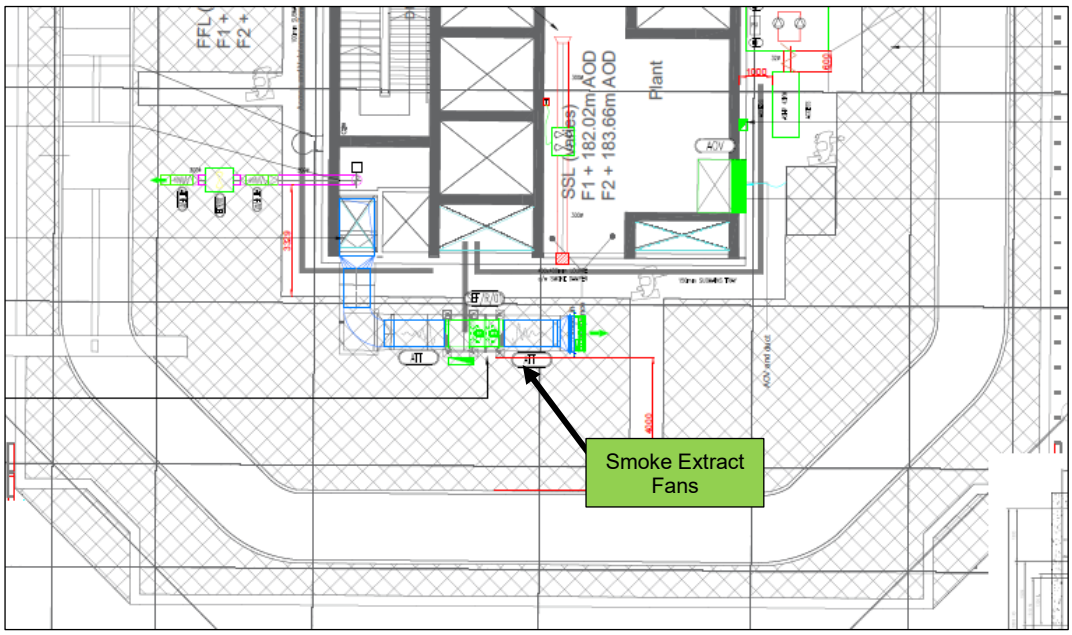


Figure 6: Rooftop emergency plant layout, Plot F2

Figure 7 identifies the location of the ground floor emergency generator.

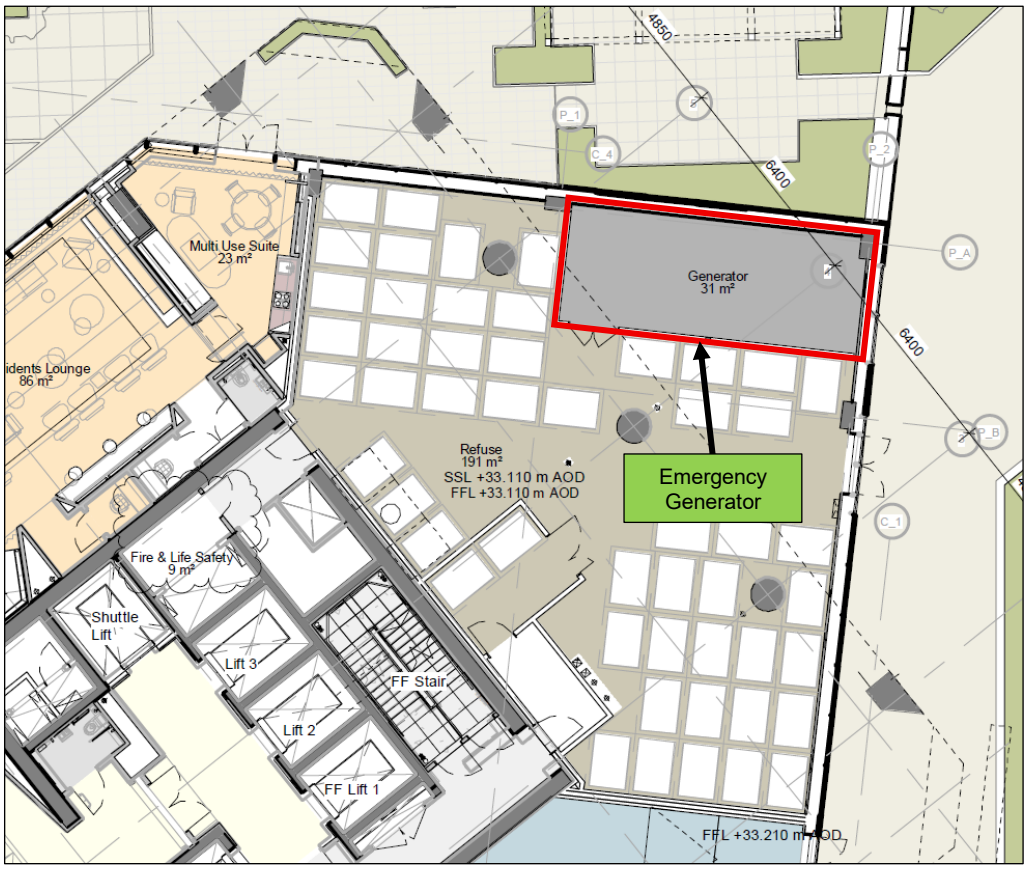


Figure 7: Ground floor emergency generator at Plot F2

Figure 8 illustrates the plan layout of the ground floor emergency generator plantroom

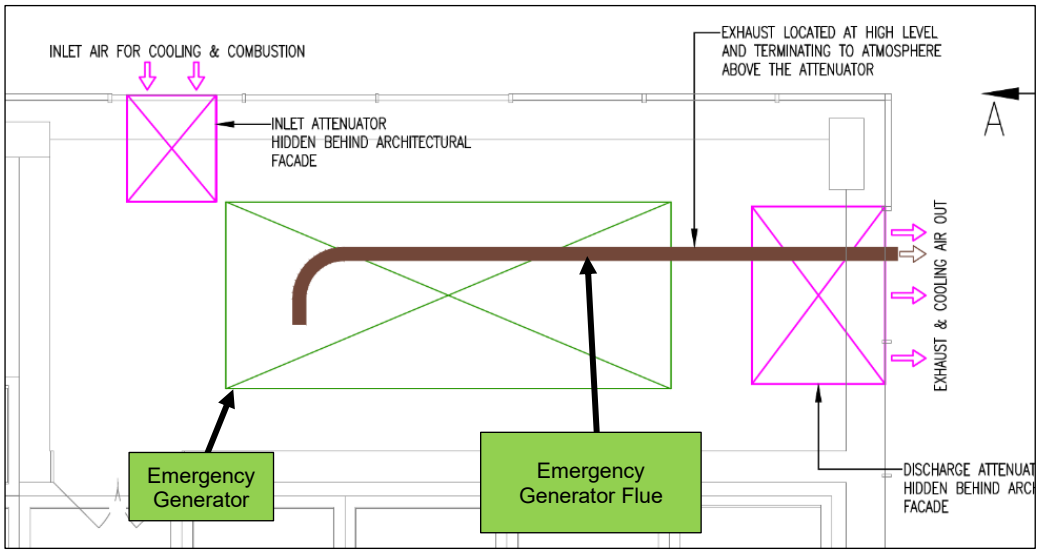


Figure 8: Ground floor generator room layout, Plot F2

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EXTERNAL NOISE MEASUREMENTS

Measurements of the external noise levels generated by each plant item have been made with the plant in normal operation and emergency mode (where applicable). The measurements were carried out on 17 September 2026.

Figure 9 identifies the rooftop measurement locations for emergency and non-emergency plant at Plot F2.

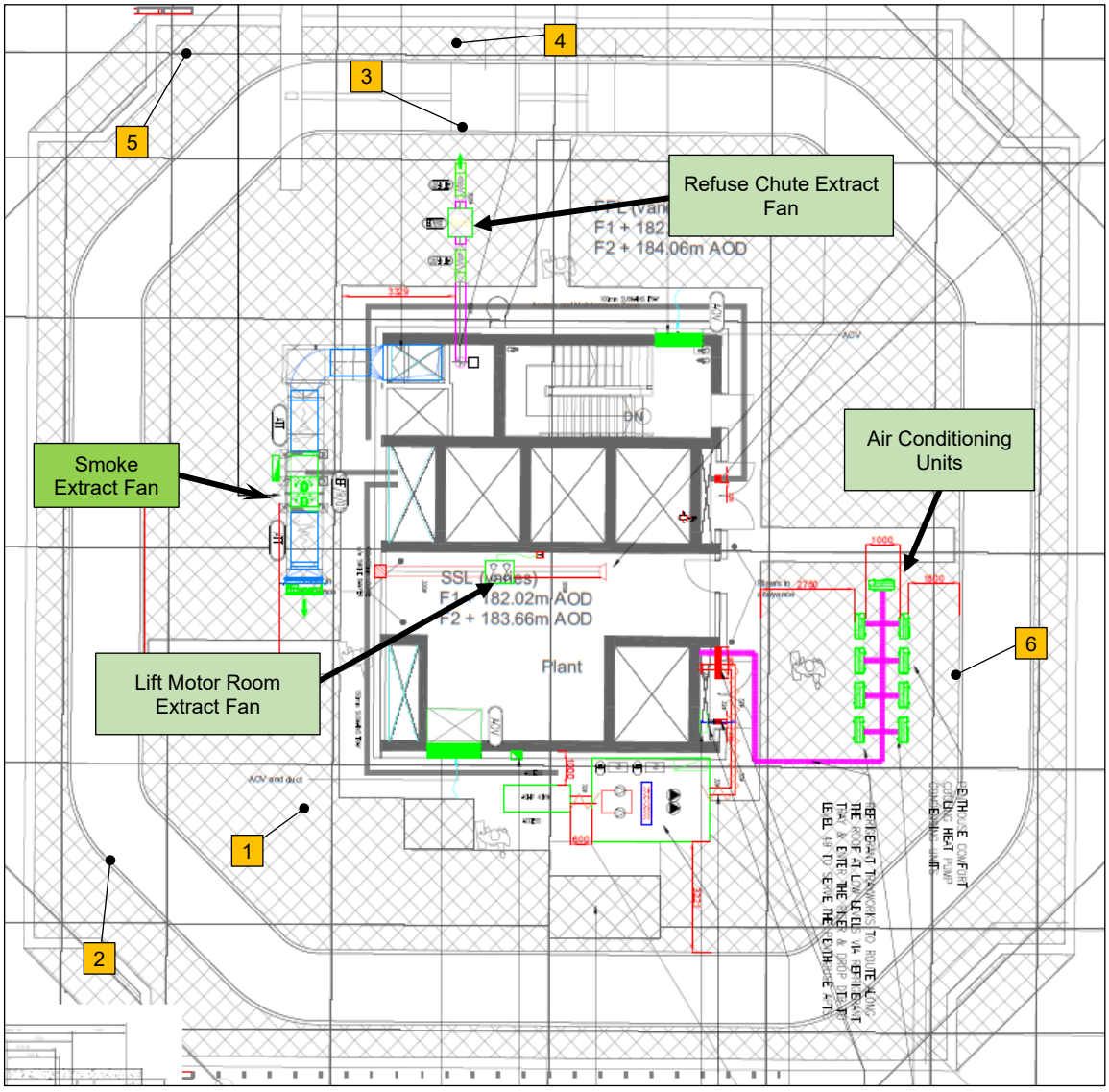


Figure 9: Roof level measurement locations, Plot F2

The roof-top plant noise measurement locations were as follows:

- Location 1: At 5m on-axis from the smoke extract fan exhaust
- Location 2: At 10m from the lift motor room extract louvre
- Location 3: At 1m from the refuse chute extract fan exhaust
- Location 4: At 5m from the refuse chute extract fan exhaust
- Location 5: At 9m from the refuse chute extract fan exhaust
- Location 6: At 1m from condensers

Figure 10 identifies the locations of the ground floor measurement positions.

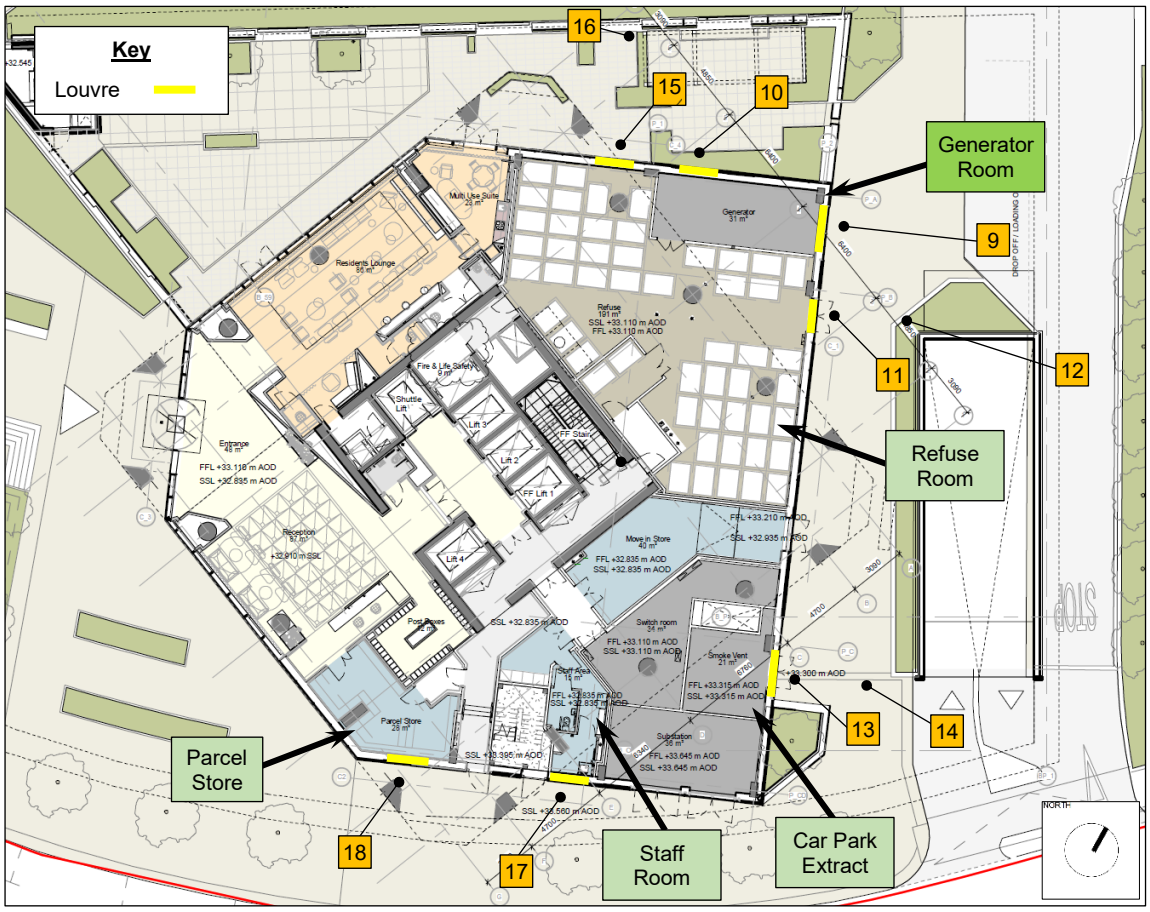


Figure 10: Ground floor measurement locations, Plot F2

The ground floor non-emergency plant noise measurement locations were as follows:

- Location 9: At 1m from the generator exhaust louvres
- Location 10: At 1m from the generator intake louvres
- Location 11: At 1m from the refuse and move-in store extract louvres
- Location 12: At 5m from the refuse and move-in store extract louvres
- Location 13: At 1m from the car park extract louvres
- Location 14: At 5m from the car park extract louvres
- Location 15: At 1m from the refuse chute (level 1-25) extract louvre
- Location 16: At 5m from the refuse chute (level 1-25) extract louvre
- Location 17: At 1m from the staffroom extract louvre
- Location 18: At 1m from the parcel store extract louvre

During the site visit, both the total noise level during operation of the plant and the ambient noise level in the absence of noise from the plant was measured. The specific noise level due to operation of the plant has then been derived.

From the measurement results, the noise level at the closest residential receptors due to the operation of non-emergency and emergency plant has been determined. From an acoustic perspective, the closest dwellings to the rooftop plant are the apartments of Plot F2 at Level 50. The closest dwellings to the ground level plant are the apartments of Plot F2 at Level 2.

Table 9 identifies the derived noise levels at the closest residential receptors due to the emergency and non-emergency plant serving Plot F2.

Location	Free-field Sound Pressure Level (dBA)					
	Non-Emergency				Emergency	
	Day Time	Night Time	Limit		100% Duty	Limit
			Day Time	Night Time		
Plot F2, Level 2 N/NE Corner	44	44	49	49	46	71
Plot F2, Level 2 E Corner	36	36	49	49	45	71
Plot F2, Level 2 SE Elev	42	42	49	49	52	71
Plot F2, Level 2 S Corner	42	42	49	49	45	71
Plot F2, Level 50, SE Elev	44	44	60	51	52	74
Plot F2, Level 50, NW Elev	48	48	60	51	62	74
Deansgate East, Level 1	41	41	43	42	45	71
Deansgate West, Level 50	38	38	58	50	58	73
Boatmans, Level 1	47	47	48	47	51	66

Table 9: Specific noise levels due to Plot F2 Great Jackson Street plant operation

It can be seen that the measured non-emergency plant noise levels identified in Table 9 comply with the applicable noise limits.

It can also be seen that the measured emergency plant noise levels identified in Table 9 comply with the noise limits.

CONCLUSION

The derived noise levels at the closest noise sensitive receptors due to the operation of all non-emergency and emergency building services plant at Plot F2 Great Jackson Street comply with the applicable noise limits in relation to Condition 24 of the planning permission for the development.

If there are any aspects that you would like to discuss, please do not hesitate to contact the undersigned.

Yours sincerely



MATT FISHER BEng(Hons) CEng MIOA
For and on behalf of Fisher Acoustics Limited