

MPF/PR0679/L06

13 June 2025

Pat Weightman
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64 Jersey Street
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Dear Pat

HOUSE OF SOCIAL, MANCHESTER – PLANNING CONDITION 23

I write with confirmation of the measured external noise levels due to emergency and non-emergency plant at House of Social, First 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 House of Social, First Street, Manchester and to compare the noise levels to the requirements of Conditions 23 of the planning approval for the development.

PLANNING CONDITION

In relation to building services plant the planning approval for House of Social (planning application number 136170/FO/2023) states:

Condition 23:

- *“Prior to occupation of (a) The PBSA; and (b) The Food Hall (Sui Generis) a scheme for the acoustic insulation of any plant including externally mounted ancillary equipment, lift equipment, substation and any emergency plant associated with the development to ensure that it achieves a background noise level of 5dB below the existing background (LA90) at the nearest noise sensitive location 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 equipment.*

The approved scheme shall be completed before the premises is occupied and a verification report submitted for approval by the City Council as local planning authority for each of (a) and (b) and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation.

The approved scheme shall remain operational thereafter. The approved details shall be implemented and remain in place for as long as the above uses are operational.

Reason - To secure a reduction in noise in order to protect future residents from noise nuisance, pursuant to policies SP1, H1 and DM1 of the Core Strategy.

Condition 23 states that emergency plant associated with the development is required to achieve 'a background noise level of 5dB below the existing background (LA90) at the nearest noise sensitive location'.

However, it has been confirmed by the Environmental Protection Section of Manchester City Council that the above wording is incorrect. The Environmental Protection Section has confirmed that the typical requirement is that noise levels from emergency plant can be up to 10dB above the pre-existing background noise level during testing of the emergency equipment and that testing should only be undertaken on a weekday in the day time (between 9am and 5pm).

In relation to condition 23, the discharge of conditions for House of Social (planning reference CDN/24/1107, dated 20 February 2025) states:

- *Condition 23 (a) (Noise Plant) (PBSA): On the basis of ongoing compliance with the following:*

Recommendations and specifications as set out within the HOUSE OF SOCIAL, MANCHESTER - PLANNING CONDITION 23 Note dated 09-10-24 by Fisher Acoustics and Deloitte's e-mail (response from Fisher Acoustics on Condition 23) dated 03-01-25 this part of the condition is discharged.

The approved scheme shall be completed before the premises is occupied and a verification report submitted for approval by the City Council as local planning authority for (a) (PBSA) and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation. The approved scheme shall remain operational thereafter.

The approved details shall be implemented and remain in place for as long as the above uses are operational.

Reason - To secure a reduction in noise in order to protect future residents from noise nuisance, pursuant to policies SP1, H1 and DM1 of the Core Strategy.

It has been confirmed by Manchester City Council that the verification report must include measurements of noise emitted by the installed and operation plant at House of Social.

ENVIRONMENTAL NOISE LIMITS

Table 1 identifies the applicable plant noise limits at noise sensitive locations close to the House of Social development for non-emergency building services plant, as detailed in the Fisher Acoustics document referred to by the planning condition discharge.

Plant Noise Limit (dB LAeq)	
Daytime (07:00 hrs to 23:00 hrs)	Night time (23:00 hrs to 07:00 hrs)
51	47

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

Similarly, Table 2 identifies the maximum allowable noise level at any residential façade during testing of the external emergency plant at House of Social.

Period	Noise Level (dB LAeq)
Daytime (07:00 hrs to 23:00 hrs)	66

Table 2: Environmental noise limits for emergency building services plant when under test

BUILDING SERVICES PLANT AND LOCATIONS

Roof-mounted

The following non-emergency external plant items have been installed on the roof at House of Social:

- 6 no. VRF condensers
- 4 no. Air Source Heat Pumps (ASHP)
- 2 no. corridor air extract fans

Figure 1 identifies the locations of the non-emergency plant at House of Social on the northern section of the roof.

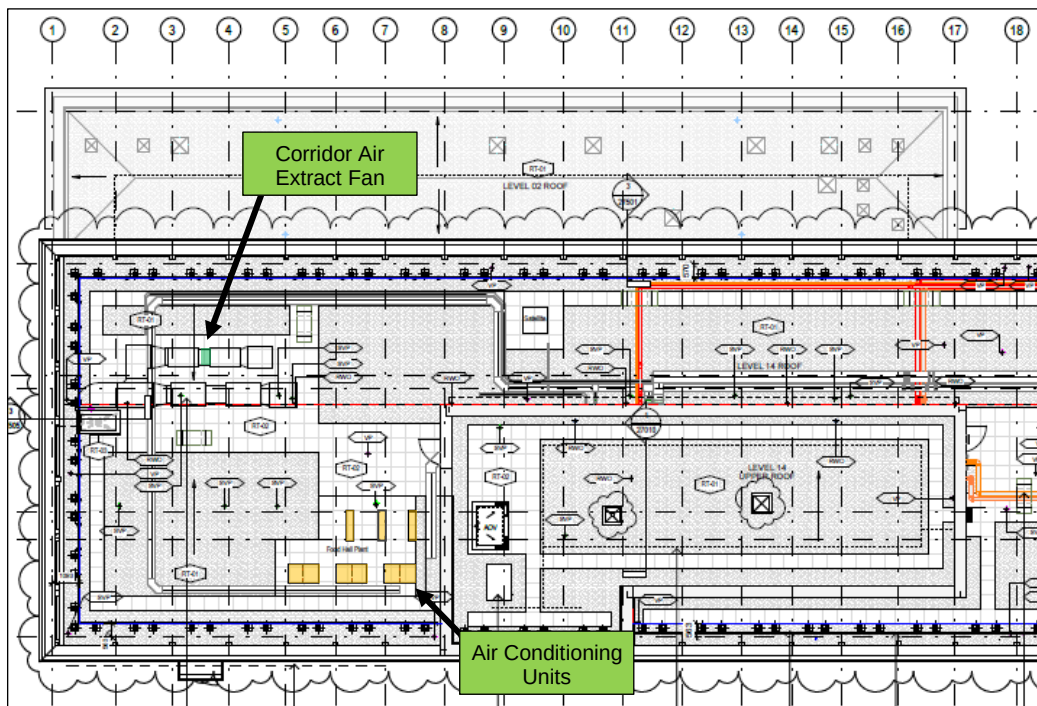


Figure 1: Rooftop non-emergency plant layout, House of Social (northern)

Figure 2 identifies the locations of the non-emergency plant at House of Social on the southern section of the roof.

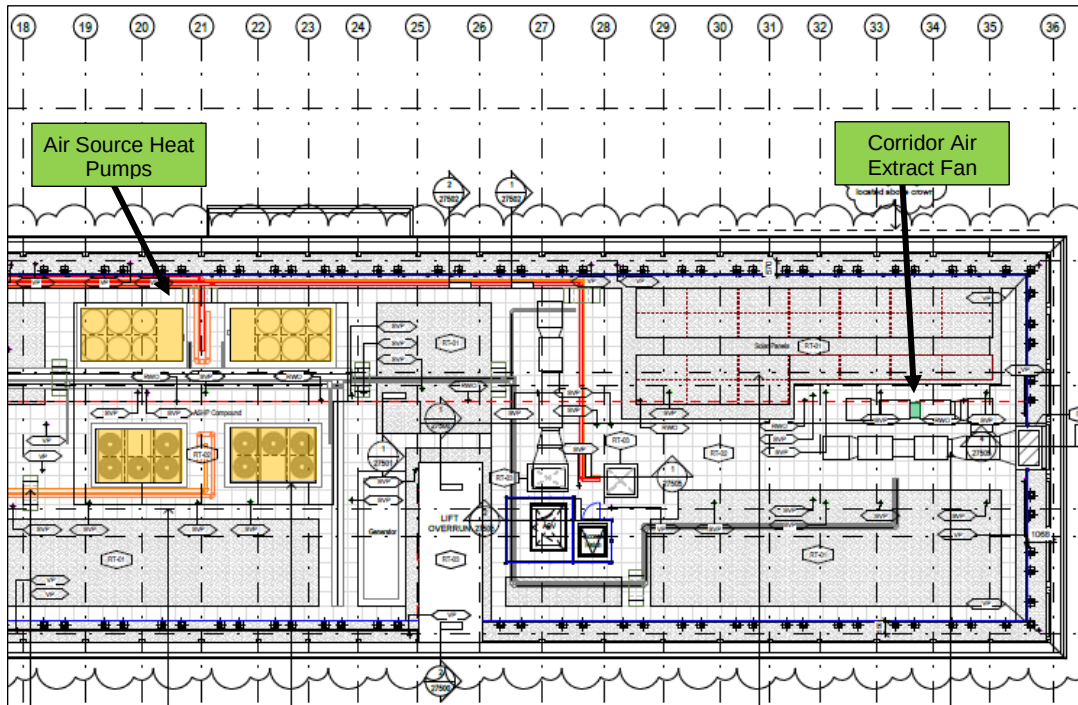


Figure 2: Rooftop non-emergency plant layout, House of Social (southern)

Internal plant items

In addition to the roof-mounted external plant, there are internal extract fans and heat-recovery ventilation units that are ducted to the external envelope of the building. These will be able to contribute to the external noise climate and have therefore been included in the assessment.

Figure 3 identifies the locations of the extract fans and heat-recovery ventilation units (HRUs) installed in the northern zone of the ground floor of House of Social.

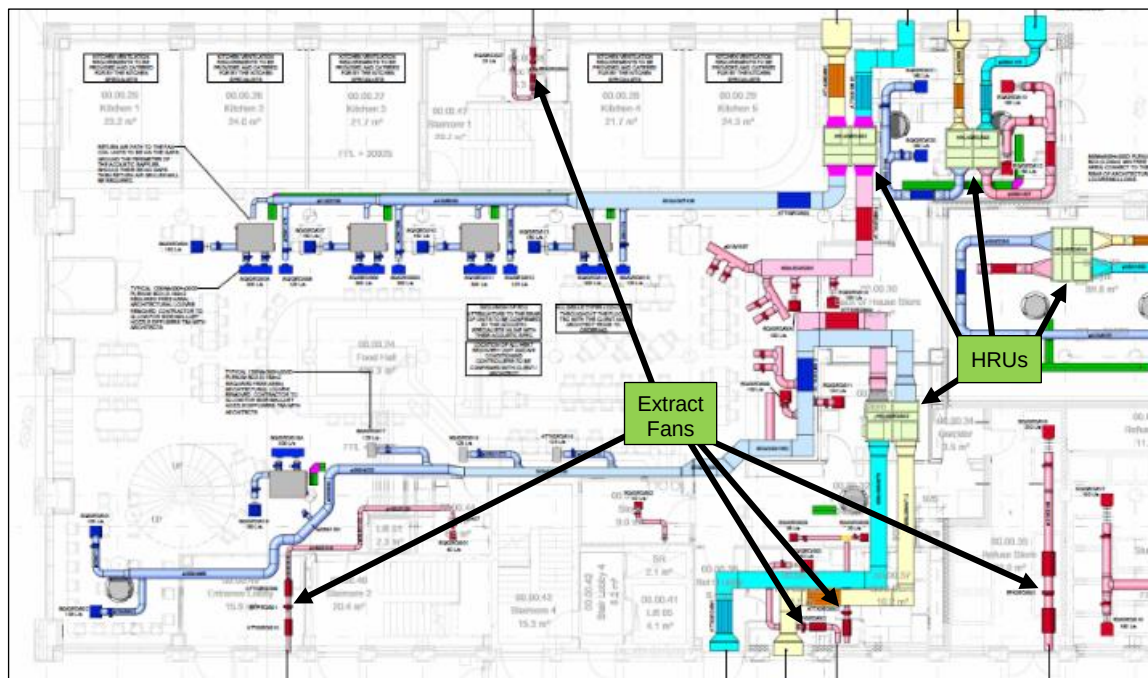


Figure 3: Ground floor plant layout, House of Social (north of gridline 18)

Figure 4 identifies the locations of the extract fans and HRUs installed in the southern zone of the ground floor of House of Social.

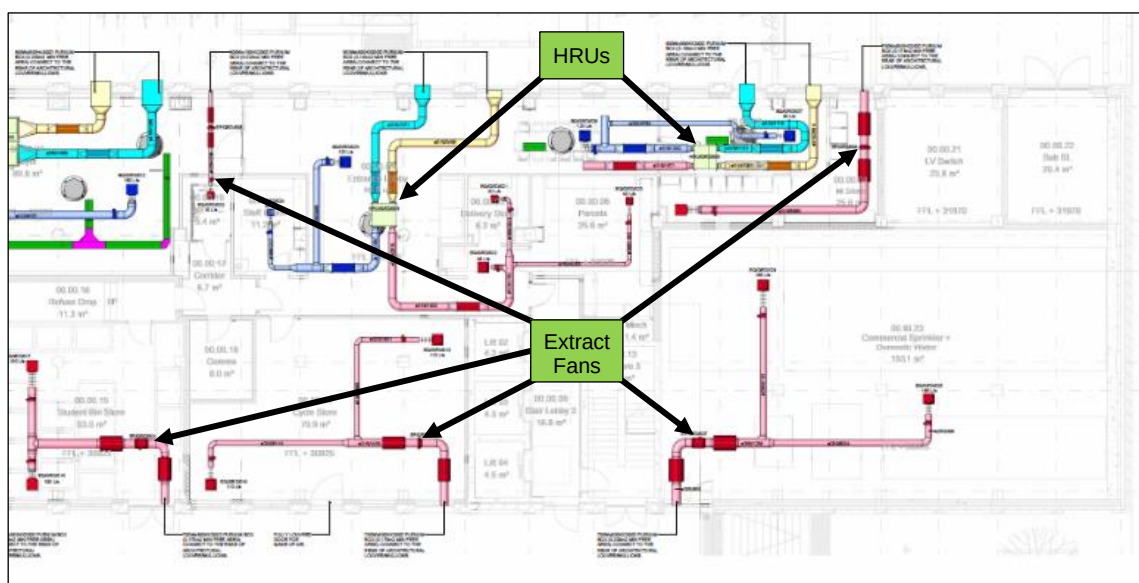


Figure 4: Ground Floor plant layout, House of Social (south of gridline 18)

Figure 5 identifies the locations of the extract fans and HRUs installed on the first floor of House of Social.

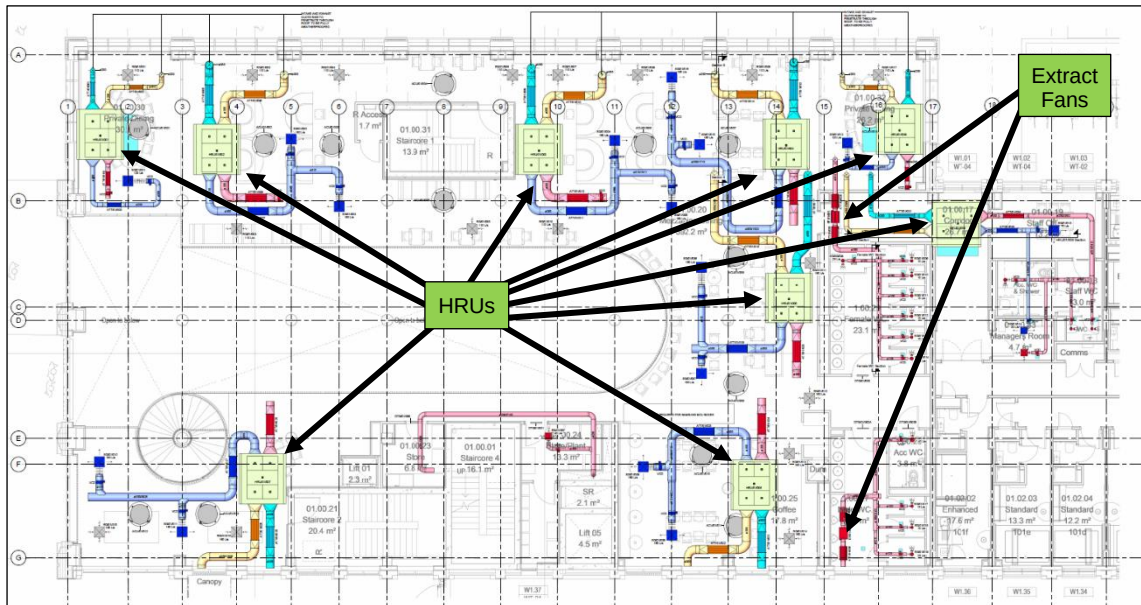


Figure 5: Level 01 plant layout, House of Social

Emergency Plant Items

The following emergency plant items have been installed externally on the roof of House of Social:

- 6 no. Elta 630mm diameter inverter driven roof mounted smoke-rated axial fan
- 1 no. Scania Emergency Generator in acoustic enclosure

Only three of the smoke extract fans will run at any time as the remaining units are standby units.

During testing of the smoke extract systems, the smoke extract fans will be operated at 33% of the emergency duty.

Figure 6 identifies the location of the roof mounted smoke extract fans at House of Social on the northern section of the roof.

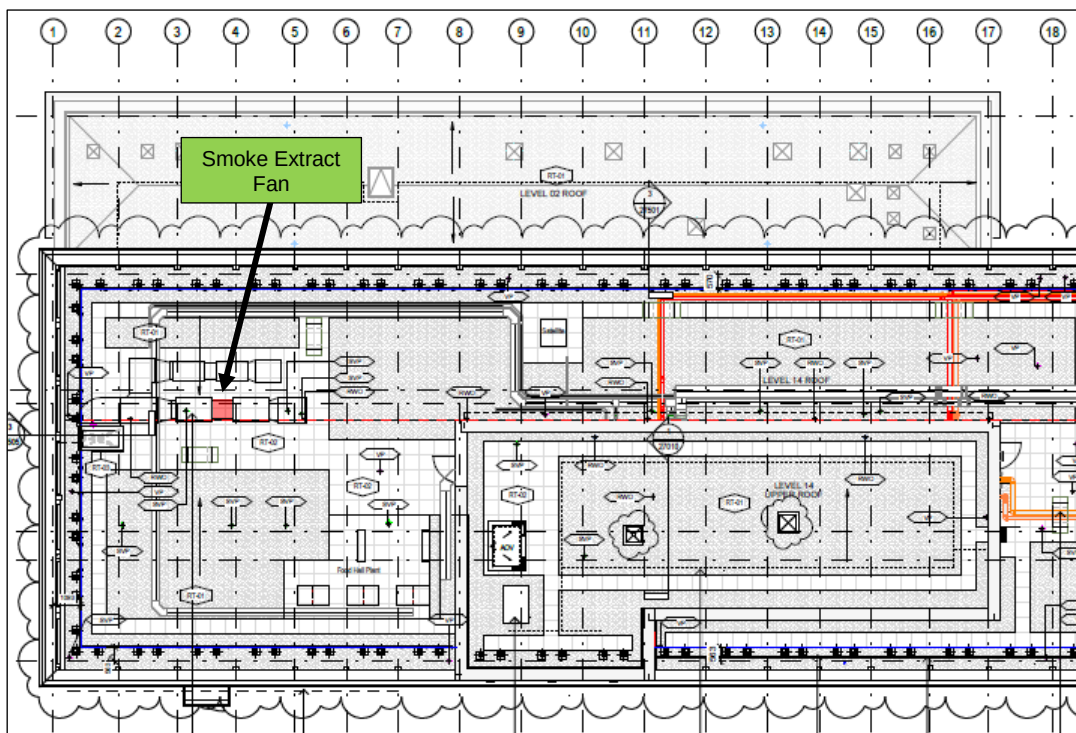


Figure 6: Rooftop external emergency plant layout, House of Social (North of grid line 18)

Figure 7 identifies the location of the roof mounted smoke extract fans and emergency generator on the southern section of the roof.

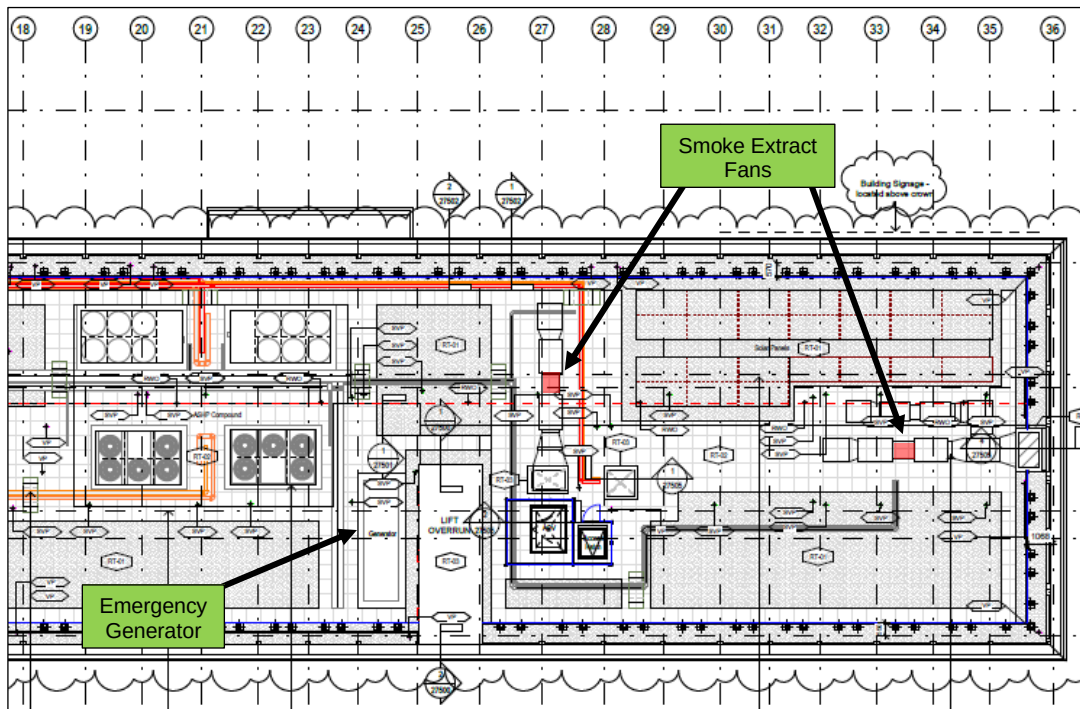


Figure 7: Rooftop external emergency plant layout, House of Social (South of grid line 18)

Plantroom emergency plant

The following emergency plant items are installed within the rooftop plantroom at House of Social:

- 2 no. Elta 630mm diameter inverter driven roof mounted smoke-rated axial fan

EXTERNAL NOISE MEASUREMENTS

Measurements of each plant item were made in normal operation and emergency test mode (where applicable). At the time of measurement, only three of the identical roof top VRF condensers were operating. A correction has been made to the measured data to determine the noise level when all eight condensers are fully operational.

Figure 8 identifies the locations of the non-emergency plant measurement positions on the northern section of the roof.

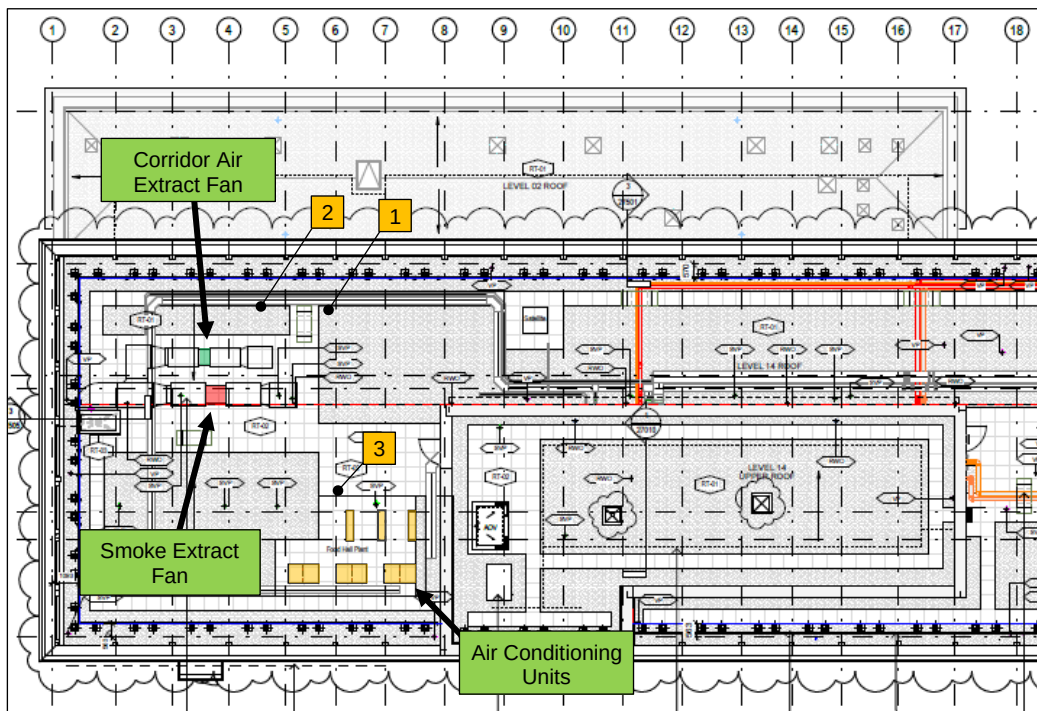


Figure 8: Rooftop measurement positions, House of Social (northern)

The roof top (northern) non-emergency and emergency plant noise measurement locations were as follows:

- Location 1: 3 metres from corridor extract outlet at a microphone height of 1.5m above roof level
- Location 2: 3 metres from corridor extract outlet at a microphone height of 1.5m above roof level
- Location 3: 3 metres from condenser units at a microphone height of 1.5m above roof level

Figure 9 identifies the locations of the non-emergency plant measurement positions on the southern section of the roof.

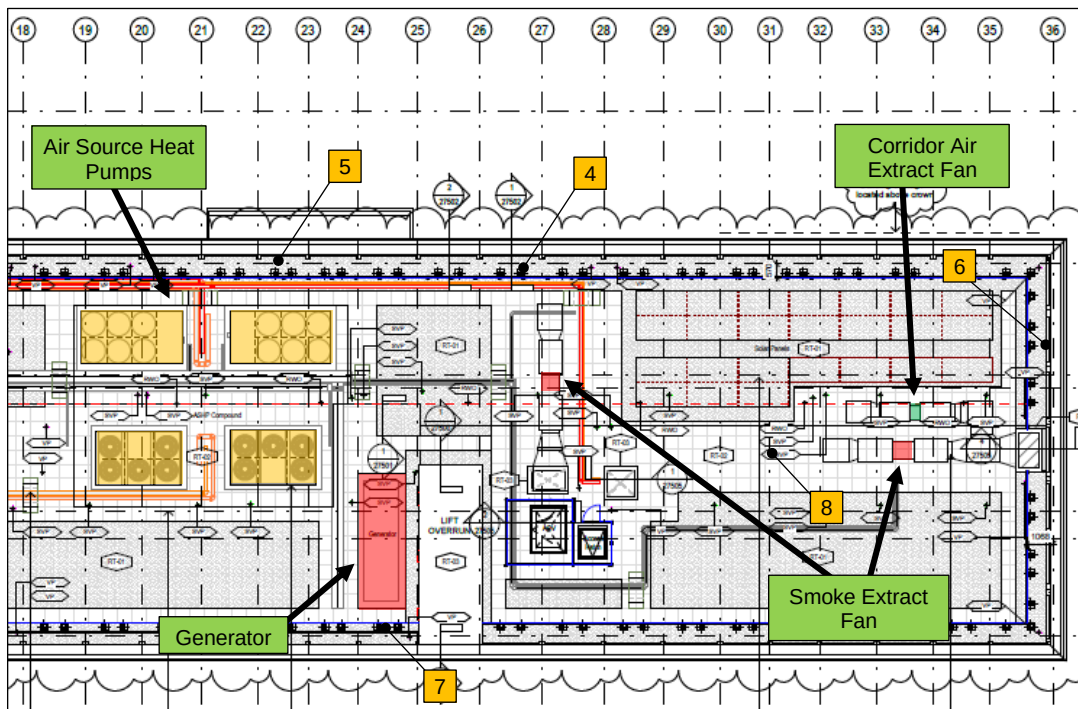


Figure 9: Rooftop measurement positions, House of Social (southern)

The roof top (southern) non-emergency and emergency plant noise measurement locations were as follows:

- Location 4: 2 metres from smoke extract outlet at a microphone height of 1.5m above roof level
- Location 5: 2 metres from the ASHP units at a microphone height of 1.5m above roof level
- Location 6: 30m from ASHPs at roof boundary at a microphone height of 1.5m above roof level
- Location 7: 1 metre from the Generator at a microphone height of 1.5m above roof level
- Location 8: 3 metres from smoke extract outlet at a microphone height of 1.5m above roof level

Figure 10 identifies the locations of the HRU exhaust and inlet measurement positions on the roof over Level 1 of the building.

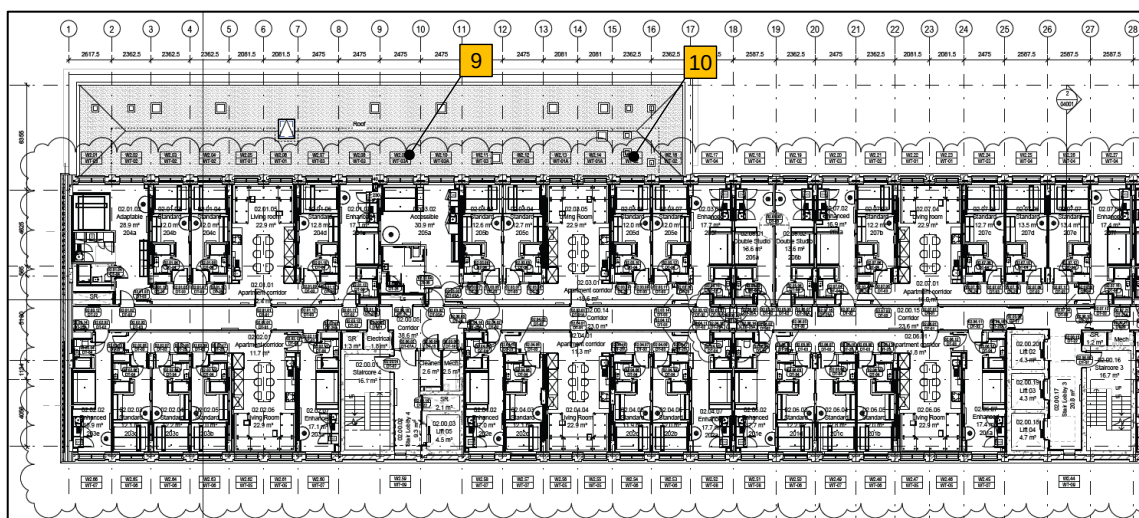


Figure 10: Second floor measurement positions - HRUs, House of Social

The second-floor level HRU noise measurement locations were as follows:

- Location 9: 1 metre from second floor bedroom window close to HRU inlets/exhausts
- Location 10: 1 metre from second floor bedroom window close to HRU inlets/exhausts

No noise from the air inlets or exhausts of the ground floor and 1st floor HRUs and extract fans was audible or measurable over the typical background noise levels around the site.

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 levels 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 at House of Social are the studios at Level 13. The nearest residential dwellings with a direct view of the plant are those at the Downing Buildings. The closest dwellings to the House of Social plant at ground and first floors are the Studios at Level 1.

Table 3 identifies the derived noise levels at the closest residential receptors due solely to the emergency and non-emergency plant serving House of Social.

Location	Free-field Sound Pressure Level (dB LAeq)					
	Non-Emergency plant operational noise level		Noise Limit		Emergency plant operational noise level	Noise Limit for Emergency plant
	Day Time	Night Time	Day Time	Night Time		
House of Social West Façade, Level 13	48	45	51	47	58	66
House of Social East Façade, Level 13	45	42	51	47	50	66
Downing Building, Level 14	34	31	51	47	44	66

Table 3: Specific noise levels due to House of Social plant operation

It can be seen that the measured non-emergency plant noise levels identified in Table 3 comply with the applicable noise limits.

It can also be seen that the measured emergency plant noise levels identified in Table 3 comply with the noise limits.

It is therefore considered that compliance with the requirements of planning condition 23 has been achieved in relation to the building services plant.

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 House of Social comply with the applicable noise limits in relation to condition 23 of the planning approval.

If there is any aspect of the above that you would like to discuss then please do not hesitate to contact the undersigned.

Yours sincerely



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