



Ref: P3725/L22/NRS

5 July 2023

To:	Paul Guilfoyle	of:	Morgan Sindall
Cc:	As per email distribution	of:	

Dear Paul

Islington Wharf, Phase 4 – Discharge of Planning Conditions 12a and 12b

Further to the noise measurements undertaken by AEC on Friday 30 June 2023 from the smoke extraction unit, I am providing the results compared to the required limits.

This letter has been prepared to discharge planning conditions 12a and 12b which relates to noise from externally mounted ancillary plant items.

1.0 CRITERIA

1.1 Planning Condition 12a and 12b associated with the development states the following:

12a *“Prior to the first occupation of the residential element of the development, details of any externally mounted ancillary plant, equipment and servicing shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt, externally mounted 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.*

Reason - *To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995)*

12b *“Prior to the first occupation of the residential element of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.*

Reason: *To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995)”*

1.2 AEC understands that the only mechanical services plant item serving the development is the smoke extraction unit mounted on Level 11 roof top. This unit is an emergency plant which is only tested for two minutes per week and is also serviced and maintained twice annually in line with British Standard 7346-8:2013 “Components for smoke control systems. Code of practice for planning, design, installation, commissioning and maintenance” (BS7346-8). Testing and serving times will only be during normal operating hours (approximately 0900h to 1700h) on a weekday.

- 1.3 As such, considering the smoke extraction unit is an emergency plant, the criteria set in the condition does not really apply. However, AEC understands that Manchester City Council (MCC) has stated the following with respect to emergency plant:

“For emergency plant we allow noise levels up to 10dB above the typical background due to the nature of the plant. They therefore need to show that this will be achieved via an acoustic assessment before condition 12a can be discharged.”

- 1.4 Therefore the below assessment has followed the above emergency plant criteria i.e. the noise level external to the nearest apartments due to the emergency plant should be controlled to 60dB(A) , which is 10dB above the measured background noise level of 50dB_{LA90}.

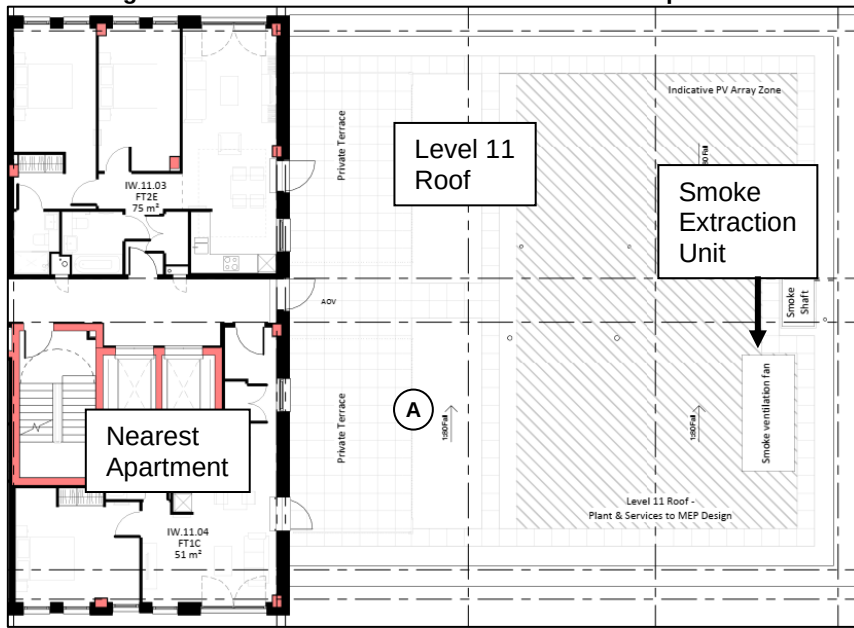
2.0 METHODOLOGY

- 2.1 AEC undertook noise level measurements at about 1m away from the smoke extraction fan case and 1m away from the outlet as seen in Figure 2.1, below.
- 2.2 Noise level measurements were also undertaken from the smoke extraction fan external to the nearest apartment, at Location A, as identified in Figure 2.2, below.
- 2.3 Noise level measurements and the assessment below have been undertaken in general accordance with British Standard 4142: 2014+A1:2019 'Methods for rating and assessing industrial and commercial sound' (BS4142).

Figure 2.1 – Smoke Extraction Fan and Outlet



Figure 2.2 – Smoke Extraction Unit and Nearest Apartment



3.0 RESULTS

3.1 The noise level measurements from the smoke extraction unit undertaken at different locations is presented in Table 3.1, below.

Table 3.1 – Measured Noise Levels from Smoke Extraction Unit

Location	Measured Noise Level, $dBL_{Aeq,T}$
1m from Fan	80
1m from Outlet	84
Location A	68

- 3.2 Given that the smoke extraction unit is only tested for around 2 minutes per week, it is reasonable to adjust the measured noise level to a reference time interval of 1 hour. This is based on guidance in BS4142 for daytime noise that occurs between 0700h and 2300h.
- 3.3 Based on the above, calculations indicate that the noise levels from the unit external to the apartments, equivalent to 1 hour reference time interval, will be $53dBL_{Aeq,1hr}$.
- 3.4 Therefore, based on the above, the noise level from the smoke extraction unit external to the apartment is about 7dB below the criteria of 60dB(A) and hence is deemed acceptable.
- 3.5 As mentioned above, the unit will be serviced and maintained twice annually and hence it is unlikely that there will be any increase in noise levels from the unit in the future.

- 3.6 In addition to the above with the windows closed, calculations indicate that the noise level external to the nearest apartment in the worst-case two minute period of testing ($68\text{dB}_{\text{LAeq,T}}$) translates to an internal noise level of $37\text{dB}_{\text{LAeq,T}}$ in the living room which is only about 2dB above the internal noise level limit of $35\text{dB}_{\text{LAeq,T}}$ for living rooms. Considering 2dB is imperceptible to human hearing and that the duration of testing is only two minutes, this is deemed acceptable.
- 3.7 AEC also understands that the unit is a 'life safety system' which must run at the required performance and that noise levels cannot be reduce on this unit.
- 3.8 Therefore, based on the above both planning conditions 12a and 12b can be discharged.

I trust the above is clear and of assistance.

Yours sincerely



Naveen Simha

Checked by: 