

MPF/PR0510/L12

4 January 2021

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Dear Nigel

OXYGEN, MANCHESTER

We write with regard to condition 18 of the planning permission for Oxygen, Store Street, Manchester, relating to building services plant noise.

PLANNING CONDITION 24 OF ORIGINAL PLANNING PERMISSION

Planning condition 24 of the original planning permission for Oxygen, reference 110276/FO/2015/C2, dated 4 March 2016, stated:

- *'Prior to occupation of the development a scheme for the acoustic insulation of any externally mounted ancillary equipment to ensure that it achieves a background noise level of 5dB below the existing background (LA90) in each octave band 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 levels of noise emanating from the equipment. The approved scheme shall be implemented prior to occupancy and shall remain operational thereafter.'*

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

The above planning condition was discharged following submission of Fisher Acoustics' letter report dated 19 May 2017, reference MPF/PR0510/L03A, which detailed the sound power levels of proposed external plant which at that time was to be located on the roof of Core 1 and Core 2 of the building. The letter report also identified the recommended noise control measures to achieve appropriate noise levels at the nearest residential receptors.

PLANNING CONDITION 18 OF REVISED PLANNING PERMISSION

Planning condition 18 of the revised planning permission for Oxygen, Store Street, reference 122258/JO/2018, dated 16 May 2019, states:

- The pre-commencement requirements of the condition are discharged on the basis of compliance with the recommendations of the Fisher Acoustics letter dated 19th May 2017 full compliance requires:

Prior to occupation a verification report to demonstrate that the recommended attenuators and acoustic screen has been implemented and to verify that all of the recommended noise levels are achieved shall be submitted and agreed in writing by the City Council as local planning authority. Any non-compliance suitably mitigated in accordance with an agreed scheme prior to occupation.

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

BUILDING SERVICES NOISE LIMITS

The building services noise limits detailed in Fisher Acoustics' letter report reference MPF/PR0510/L03A, as referenced by planning condition 18 are given in Tables 1 and 2.

Location	Rating Noise level (dB LAeq)	
	Daytime (07:00 hrs to 23:00 hrs)	Night time (07:00 hrs to 23:00 hrs)
James Brindley Basin	45	40
William Jessop Court	42	40
Islington Wharf	51	41
Oxygen, Store street Elevation	47	41
Oxygen, Millbank Street, Elevation	42	40

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

Location	Daytime noise level (dB LAeq)
James Brindley Basin	62
William Jessop Court	62
Islington Wharf	80
Store street Elevation	76
Millbank Street, Elevation	62

Table 2: Environmental noise limits for emergency building services plant

REVISED BUILDING SERVICES SCHEME

Since the submission of Fisher Acoustics' letter report dated 19 May 2017, the building services design for the development has changed substantially.

In particular, the only remaining external plant items are an emergency smoke extract fan and a general corridor extract fan on the roof of Core 1 and Core 2.

Table 1 identifies the reported sound power levels of the corridor ventilation fans.

Building services plant item	Sound Power Level (dB re 1 x 10 ⁻¹² W)							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
Stair/ Corridor Ventilation, Core 1 and Core 2	63	66	66	61	61	58	54	49
Stair/ Corridor Ventilation, Core 1 and Core 2	63	66	66	61	61	58	54	49

Table 1: Sound power levels of building services plant

Table 2 identifies the reported sound power levels of the smoke extract fans.

Building services plant item	Sound Power Level (dB re 1 x 10 ⁻¹² W)							
	dB(A)	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1k	2k	4k
Smoke Extract, Core 1	107	104	111	102	101	103	99	94
Smoke Extract, Core 2	110	101	99	101	104	105	105	101

Table 2: Sound power levels of building services emergency plant

EXPECTED NOISE LEVELS DUE TO BUILDING SERVICES PLANT

Based on the sound level data for the proposed external building services plant and the distance from the proposed plant, the expected noise levels at the nearest noise sensitive properties have been calculated. Table 3 identifies the calculated noise levels.

Location	Sound Pressure Level		
	Daytime (dB L _{Aeq}) Non-Emergency (07:00 to 23:00 hrs)	Night time (dB L _{Aeq}) Non-Emergency (23:00 to 07:00 hrs)	Emergency Services (dB L _{Aeq})
James Brindley Basin	28	28	51
William Jessop Court	27	27	50
Islington Wharf	24	24	49
Store Street elevation of Oxygen	34	34	58
Millbank Street elevation of Oxygen	34	34	58

Table 3: Calculated building services noise levels at the nearest noise sensitive locations

With reference to Tables 1 and 3, it can be seen that full compliance with the recommended environmental noise limits at the noise-sensitive receptors is expected in relation to operation of the proposed external non-emergency building services plant.

Similarly, with reference to Tables 2 and 3, the calculated noise levels at the noise sensitive receptors due to the operation of the proposed external emergency services plant comply with the recommended noise limits.

The previous building services design included an external car park extract fan on the roof of the building. This fan is now located internal to the building at basement level, with an attenuated discharge at ground level on Store Street.

Fisher Acoustics attended site on 1 December 2021 in order to assess the environmental noise levels from the car park fan. The car park extract fan was operated at the two speeds relating to normal car park extract operation (3 air changes per hour and 6 air changes per hour). External noise from the car park extract fan directly in front of the discharge louvre on Store Street was not measurable above the ambient external noise level and was not audible at the face of the louvre.

In addition, the internal noise level within the closest apartment bedroom to the car park extract louvre did not change when the car park fan was switched on and remained at 23dB L_{Aeq}, which is 7dB(A) lower than the target night time noise level within apartment bedrooms and therefore fully maintains residential amenity.

It is therefore considered that compliance with the requirements of condition 18 of the planning approval for Oxygen has been achieved.

CONCLUSION

The calculated noise levels at the nearest noise-sensitive properties due to the non-emergency and emergency building services plant serving the development comply with the identified noise limits relating to planning condition 18 of the planning approval.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matt Fisher', is written over a light blue rectangular background.

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