

REF: L1662.4 V1

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16<sup>th</sup> September 2025

**RE: SEVEN SISTERS INDUSTRIAL UNITS, NEATH PORT TALBOT  
DISCHARGE OF CONDITION 18**

Dear Mr Crimp,

Further to our recent correspondence relating to the discharge of condition 18 of planning permission P2024/0435, this letter details our review of the proposed ventilation plant in relation to the 6 No industrial units.

Condition 18 states:

*'The combined noise rating level emitted from the use of the new industrial units, both individually and cumulatively, together with the operation of any associated external fixed plant/machinery, shall not exceed the predicted levels as set out in Table 4 of the noise reports dated 2nd July 2024 hereby approved and shall remain below background noise levels as modelled, being 48 dB(A) LA90,1hr during the daytime period at façade level at the nearest affected receiver.*

*Measurements and assessments shall be made in accordance with 'BS 4142:2014 Method for rating and assessing industrial and commercial sound'.*

*To ensure there is sufficient attenuation to comply with the noise modelling, the building construction must comply with the specifications set out within the approved noise reports and prior to first operation of the approved heating and ventilation plant, a further Noise Impact Assessment demonstrating compliance with the target noise rating level shall be first submitted to, and approved in writing by, the Local Planning Authority.*

*Reason:*

*To ensure that the amenities of occupiers of residential properties in the vicinity are protected, and to ensure compliance with Policies SP16, EN8 and BE1 of the Adopted Neath Port Talbot Local Development Plan.'*

This letter should be read in conjunction with our previous assessments at this site for fixed plant (L1662.1 V3 dated 2<sup>nd</sup> July 2024) and operational noise impact (L1662.3 V1 dated 22<sup>nd</sup> August 2024) in which noise limits were set and operational noise impact was assessed respectively.

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The noise limits previously set for fixed plant for operation during the daytime period was a maximum rating level of 45 dB(A)  $L_{Ar,Tr}$ . The rating level for operational noise when roller shutter doors are closed (with additional absorption within the workshop spaces) was calculated as being 45 dB(A)  $L_{Ar,Tr}$ . Therefore, the combined rating level was predicted as being equal to the predevelopment background level i.e. 48 dB(A)  $LA_{90,1hr}$ .

It is proposed to install 1 No Nuaire wall mounted dMEV NA100XP-12 extract fans and 1 No Nuaire wall mounted XS12WA extract fans to the WC and Tea Point respectively in each of the 6 No industrial units (12 No new fans in total).

We have obtained the sound emission data from the manufacturer for each of the units and include these details in the appendix to this letter. As a worst-case scenario, we have assumed that each extract fan is to operate continuously. This is a conservative approach as it is likely that they are switched on only when the facilities are in use and operate on a timer.

We have modelled the proposed fixed plant and can conclude that the calculated rating level at the receiver (identified in previous assessments) of all 12 No extract fans is expected to be **23 dB(A)  $L_{Ar,Tr}$** . As such, and as the calculated rating level is in excess of 10 dB(A) below the calculated rating level of the operational noise of the industrial units, they would not contribute to the calculated rating level and sound scape at the receiver.

We would advise that in order to fully comply with the condition as it is worded, the industrial units will need to be built and operated in accordance with the analysis and recommendations to the building fabric and operational practices previously offered.

I trust you find this assessment provides suitable information for consideration by the local authority. Please don't hesitate to contact me if you require anything further.

Yours sincerely,  
For Red Twin Limited



Dr Ashley Punter BEng EngD MSc MRTPI MIOA  
Acoustic Consultant

## APPENDIX A – EXTRACTOR FAN DETAILS...

| EXTRACT |       |           | MOTOR CURRENTS |        | SOUND POWER LEVELS RE 1 PWATT (Hz) INDUCT INLET |     |     |     |    |    |    |    | dB(A) 3M |
|---------|-------|-----------|----------------|--------|-------------------------------------------------|-----|-----|-----|----|----|----|----|----------|
| CODE    | PHASE | RPM SPEED | FLC (A)        | SC (A) | 63                                              | 125 | 250 | 500 | 1K | 2K | 4K | 8K |          |
| XS6CL   | 1     | 2000      | 0.19           | 0.6    | 46                                              | 52  | 55  | 51  | 58 | 58 | 53 | 42 | 42       |
| XS6FR   | 1     | 2000      | 0.19           | 0.6    | 47                                              | 52  | 49  | 52  | 57 | 58 | 54 | 44 | 41       |
| XS6GL   | 1     | 2000      | 0.19           | 0.6    | 46                                              | 51  | 52  | 52  | 57 | 57 | 53 | 42 | 41       |
| XS6PR   | 1     | 2000      | 0.19           | 0.6    | 47                                              | 52  | 49  | 52  | 57 | 58 | 54 | 44 | 41       |
| XS6WA   | 1     | 2000      | 0.19           | 0.6    | 44                                              | 51  | 53  | 51  | 57 | 58 | 53 | 42 | 41       |
| XS9CL   | 1     | 1400      | 0.26           | 0.8    | 61                                              | 66  | 58  | 52  | 53 | 53 | 47 | 37 | 38       |
| XS9FR   | 1     | 1400      | 0.26           | 0.8    | 60                                              | 68  | 63  | 58  | 55 | 50 | 44 | 36 | 40       |
| XS9GL   | 1     | 1400      | 0.26           | 0.8    | 47                                              | 64  | 55  | 52  | 57 | 56 | 53 | 44 | 41       |
| XS9PR   | 1     | 1400      | 0.26           | 0.8    | 60                                              | 68  | 63  | 58  | 55 | 50 | 44 | 36 | 40       |
| XS9WA   | 1     | 1400      | 0.26           | 0.8    | 48                                              | 67  | 61  | 55  | 62 | 59 | 54 | 45 | 44       |
| XS12CL  | 1     | 1370      | 0.48           | 1.32   | 67                                              | 70  | 64  | 64  | 63 | 59 | 53 | 46 | 46       |
| XS12FR  | 1     | 1370      | 0.44           | 1.32   | 64                                              | 67  | 66  | 65  | 65 | 62 | 57 | 50 | 48       |
| XS12GL  | 1     | 1370      | 0.48           | 1.32   | 58                                              | 63  | 61  | 62  | 65 | 61 | 56 | 49 | 47       |
| XS12PR  | 1     | 1370      | 0.44           | 1.32   | 64                                              | 67  | 66  | 65  | 65 | 62 | 57 | 50 | 48       |
| XS12WA  | 1     | 1370      | 0.48           | 1.32   | 57                                              | 63  | 65  | 62  | 64 | 61 | 55 | 48 | 47       |

FIGURE 1: SOUND POWER DATA FOR XS12WA

| Code       | dB(A) @3m | Operating voltage | Control function                                                                                                                                                                                           |
|------------|-----------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NA100XPC   | 39        | 230               | Continuous low duty with boost facility operated by pull cord or remote switch.                                                                                                                            |
| NA100XP-12 | 39        | 12                | Continuous low duty with boost facility operated by pull cord or remote switch, 12V SELV. This version must be installed using the remote transformer supplied (see current IEE Regulations for guidance). |
| NA150XPC   | 49        | 230               | Continuous low duty with boost facility operated by pull cord or remote switch.                                                                                                                            |

FIGURE 2: SOUND EMISSION DATA FOR NA100XPC

Note – we have adjusted the spectra for the XS12WA unit to match the stated dB(A)@3m level of 39 dB and for our calculations we have converted this into a sound power spectra in accordance with the methodology set out in BS4142.

## APPENDIX B – INTERNAL LAYOUTS...

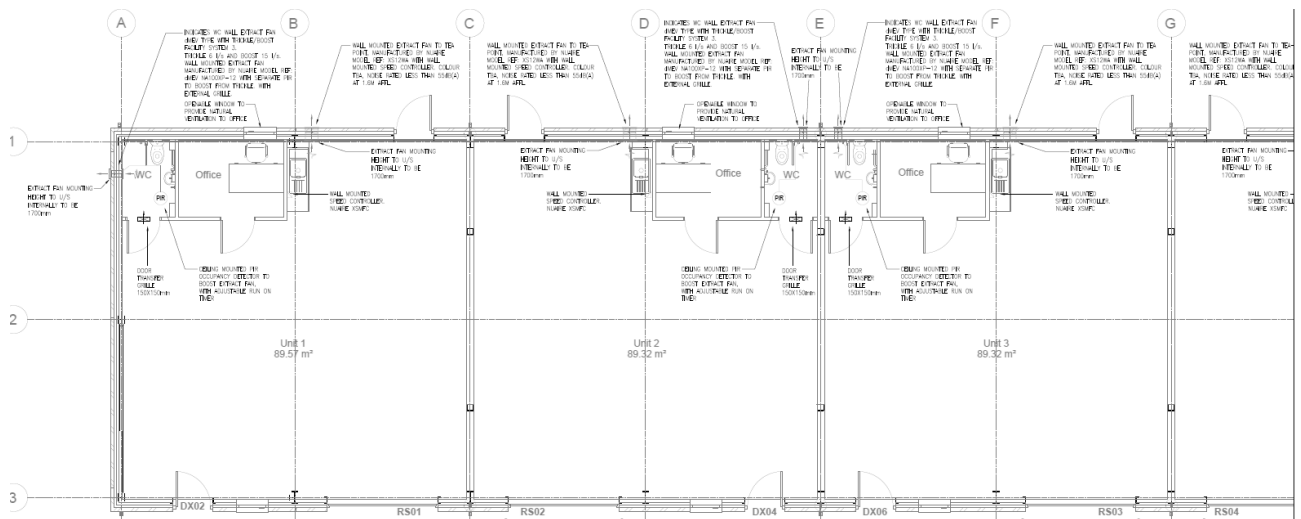


FIGURE 3: LEFT HAND 3 NO INDUSTRIAL UNITS AND FAN LOCATIONS

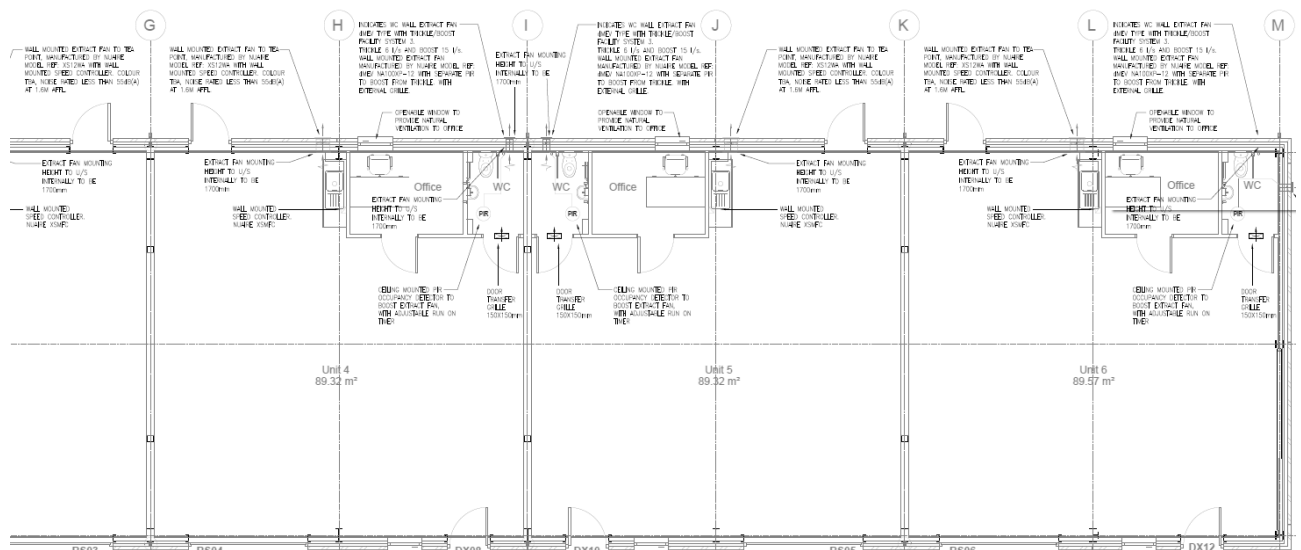


FIGURE 4: RIGHT HAND 3 NO INDUSTRIAL UNITS AND FAN LOCATIONS

## APPENDIX B – CALCULATION OF RATING LEVEL...

### Noise Modelling Methodology

We have undertaken prediction of the noise exposure of the receiver locations based on the method described in ISO 9613-2 *Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation*.

The ISO propagation model calculates the sound pressure level from a source sound power level in each 1/1 octave band and subtracts various attenuation factors as follows,

$$L_{ft}(DW) = L_w + D_c - (A_{div} + A_{atm} + A_{gr} + A_{bar} + A_{misc})$$

Where

$L_{ft}(DW)$  is the equivalent continuous downwind octave-band sound pressure level (dB)

$L_w$  is the octave band sound power level (dB)

$D_c$  is a directivity correction that describes the extent by which the  $L_{ft}(DW)$  deviates in a specified direction from the level of an omni-directional sound source (dB)

$A_{div}$  is the attenuation due to geometrical divergence (dB)

$A_{atm}$  is the attenuation due to atmospheric absorption (dB)

$A_{gr}$  is the attenuation due to the ground effects (dB)

$A_{bar}$  is the attenuation due to a barrier (dB)

$A_{misc}$  is the attenuation due to miscellaneous other effects such as foliage, industrial sites and housing (dB).

The A-weighted total level is obtained by combining the octave band levels with the appropriate weighting and summing the contributions from each source.

Our calculations are performed using a proprietary software package, Predictor V2024 available through Softnoise in the UK, and it should be noted that the model is an approximation of the real situation. The calculated values are based on geometry information included in the model, some of which is approximate.

The model has assumed a 'hard' ground surface and has included the effects of air absorption at 273 K at 101 kPa and 60% humidity.