

Subject 1 Triton Square Life Sciences Fit-out
Job No/Ref 297393-05
Date 20 August 2024

1. Introduction

This note provides a technical background and explanation for the noise emissions characteristics of proposed roof plant associated with the Life Sciences fit-out at 1 Triton Square (**ref 2024/0409/P**), in the context of the original consent (**ref 2016/6069/P**), noise policy introduced by Camden in 2017, and recent discussions on related noise conditions.

2. The consented roof plant

2.1 Basis of design

The original Arup base build planning report *Triton Square - Noise report for planning*, dated 7 December 2016, set out the basis on which landlord and tenant plant would cumulatively meet Camden Council's requirements, based on the council's development policy "DP28" and according to which (for non-tonal plant) noise emissions were to be at least 5dB below background noise levels at any time, at "sensitive" facades of nearby buildings. Elsewhere in the DP28 document it is stated that "noise sensitive development includes housing, schools and hospitals as well as offices, workshops and open spaces." Therefore the requirement was considered in practice to apply to all of the adjacent buildings.

On the basis of a survey of background noise levels included in the report, the noise control design and the known noise output of the various selected plant items, the report demonstrated that emissions levels from the landlord systems would be lower than the emission limits at all locations by a margin of at least 4dB, which allowed suitable headroom for future tenant plant.

For context, nine noise sensitive receptors (NSRs) were identified, as below, and owing to the fact that background noise levels were found to vary in the vicinity of the development, being lower to the North, two different limits were established, one for NSRs 1-7 to the East, South and West, and one for NSRs 8 and 9 to the North (8dB lower than for NSRs1-7). NSRs 1-7 are commercial; NSRs 7 and 8 are residential, and NSR9 is community use.

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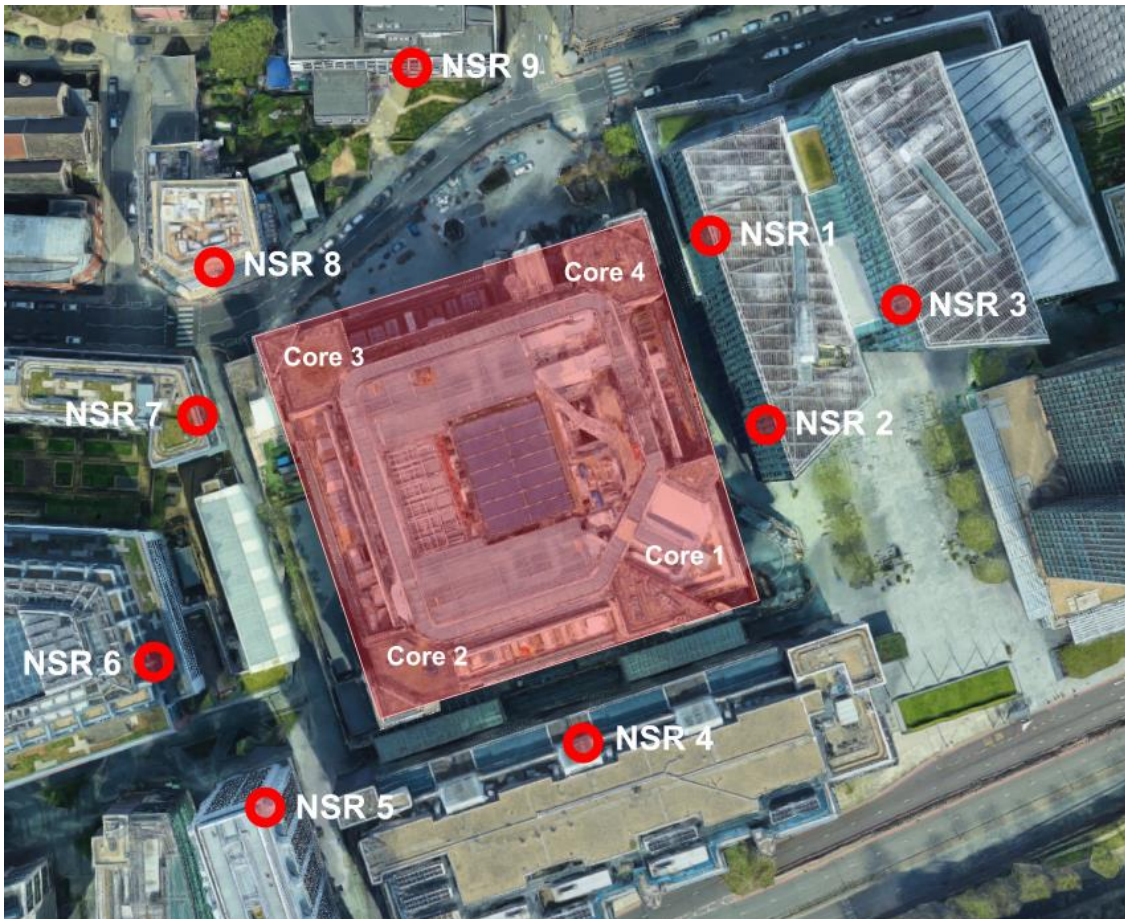


Figure 1 – Noise Sensitive Receiver locations

The limits for (non-tonal) normally operating plant are summarised below (pre-existing background noise levels are shown in brackets):

	Weekday daytime, dBA	Other times, dBA
NSR 1-7	48 (53)	46 (51)
NSR 8, 9	40 (45)	38 (43)

2.2 Installed plant

The Arup report *1 Triton Square Life Sciences fit-out*, dated 3 January 2024, set out the estimated noise emissions from the landlord systems, obtained using SoundPlan software and based on the final installation information. This showed that noise emissions from the landlord systems were well within the original limits, and therefore allowed headroom for tenant plant.

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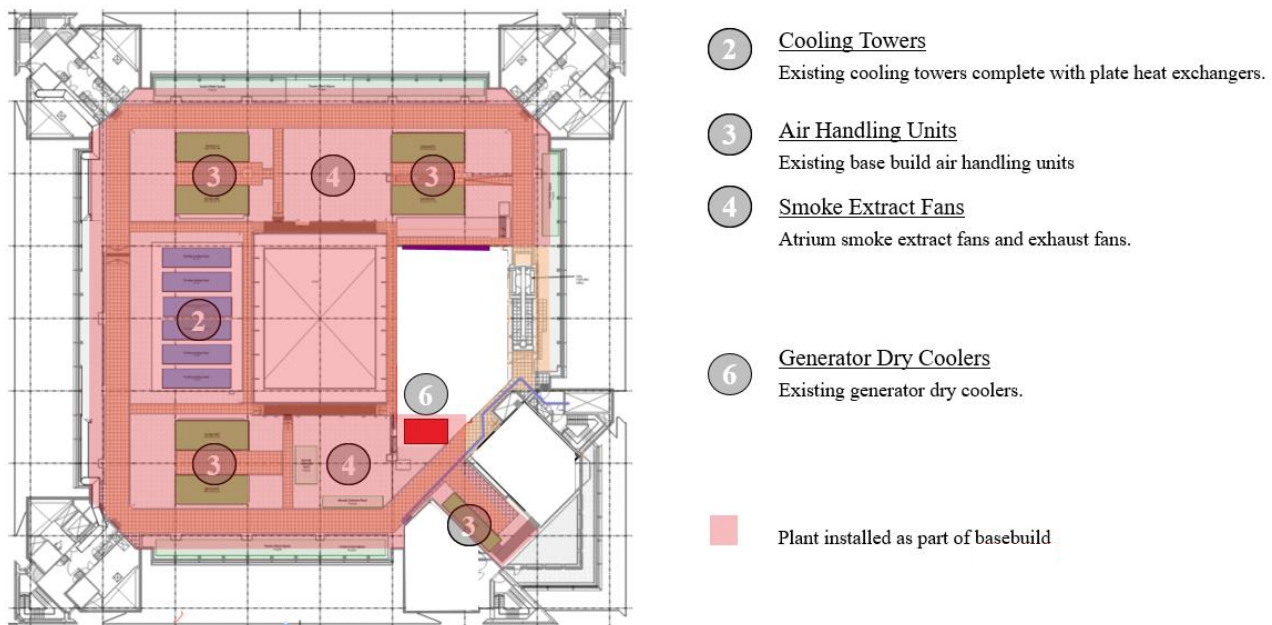


Figure 2 – plant installed on roof as part of basebuild

2.3 Tenant plant

The proposed tenant plant in the original consented locations includes Air Source Heat Pumps (ASHPs); condensers; on floor AHUs; generator cooling plant. The Life Sciences fit-out also necessitates “strobic” fume extract fans. As shown in the 3 January 2024 report, our analysis of the tenant plant, operating alongside the landlord plant, shows that at all NSRs emissions would be consistent with the limits above. This includes a reasonable worst case assumption that outside of weekday daytimes, the fume extracts would be running at full load together with one ASHP at full load. At the two residential receivers, NSRs 7 and 8, the emissions levels would be 2 or 3dB below the limit at all times, ie 7-8dB below pre-existing background noise levels.

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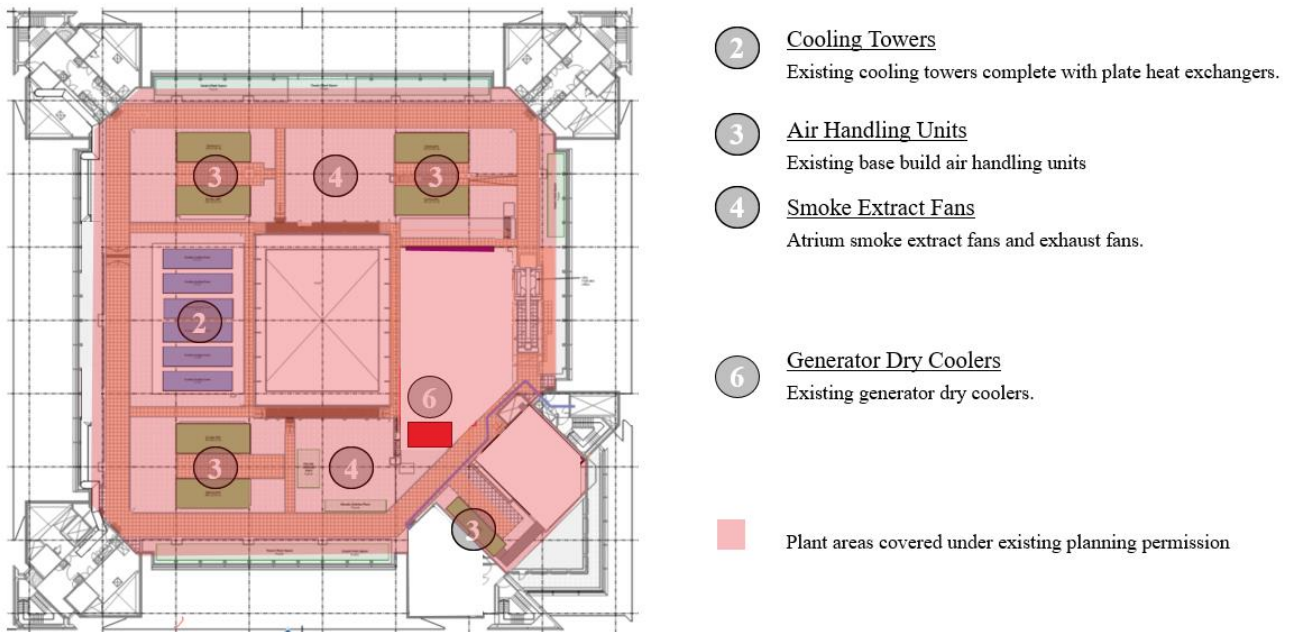


Figure 3 – plant areas on roof included in basebuild planning permission

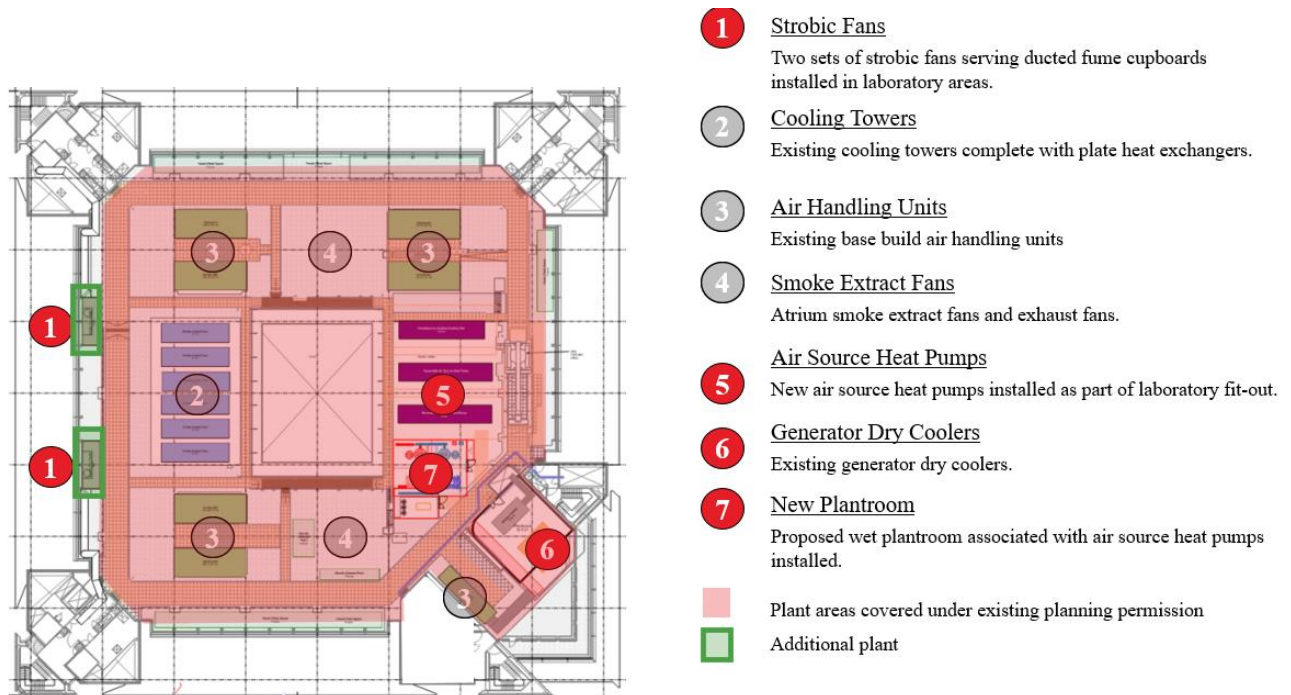


Figure 4 – new plant areas on roof with original areas included in basebuild planning permission

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3. Implications of new conditions

The 2017 Camden Local Plan includes Policy A4 “Noise and Vibration”, which is to seek to ensure that noise and vibration is controlled, and requiring development to have regard to Camden’s Noise and Vibration Thresholds set out in Appendix 3 of the Plan. The thresholds are set out in terms of various ‘effect levels’ described in the National Planning Policy Framework and Planning Practice Guidance:

- NOEL – No Observed Effect Level;
- LOAEL – Lowest Observed Adverse Effect Level; and
- SOAEL – Significant Observed Adverse Effect Level.

For new commercial development plant, levels are set out for dwelling receptors, with LOAL set at a rating level of 10dB below background (green); LOAL to SOAL at -9dB to +5dB (amber); and SOAL at greater than +5dB. Camden’s policy is that values will vary depending on the context, type of noise and sensitivity of the receptor:

- green – where noise is considered to be at an acceptable level;
- amber – where noise is observed to have an adverse effect level, but which may be considered acceptable when assessed in the context of other merits of the development; and
- red – where noise is observed to have a significant adverse effect.

In recent correspondence related to the Life Sciences planning application, and with reference to the 3 January 2024 noise report, Camden have proposed that the current policy should apply, and a rating level of 10dB below background should be met at the nearest and/or most affected noise sensitive premises.

The majority of the proposed tenant plant is allowed for by the existing consent, with the exception of the strobic fume extracts, for which specialist attenuation is proposed. Based on the associated technical data the SoundPlan model has been used to estimate propagation from these extracts, and their contribution at each NSR. This analysis shows that for all NSRs, the contribution of the strobic fume extracts will be at least 10dB below the pre-existing background during weekday daytimes, and at least 8dB below at other times.

4. Conclusion

The Proposed Development sits within the Lowest Observed Adverse Effect Level, ‘amber’ category, whereby the noise level ‘*may be considered acceptable when assessed in the context of other merits of the development.*’ The majority of the proposed tenant plant was allowed for by the existing consent, with the exception of the strobic fans for which specialist attenuation is proposed. The incorporated attenuation is sufficient to minimise the impact on surrounding amenities ensuring that the development does not generate unacceptable noise and vibration impacts.