



Tangmere

Overheating Report

Technical Note

July 2026

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This Technical Note has been drafted as a supplementary document to the submitted report (ref: CS2895/T/OH/202607-JT) issued by NRG Consulting with respect to **Planning Condition 48a Tangmere, Broadwater Farm, N17**. This note is intended to provide additional information following comments raised by the Local Authority during determination.

Comments

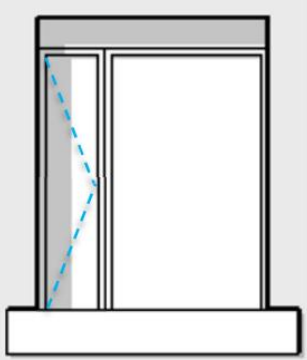
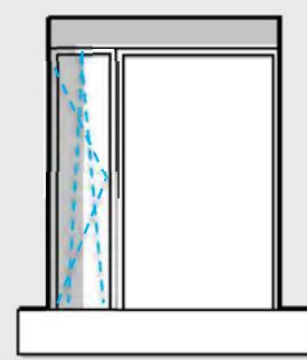
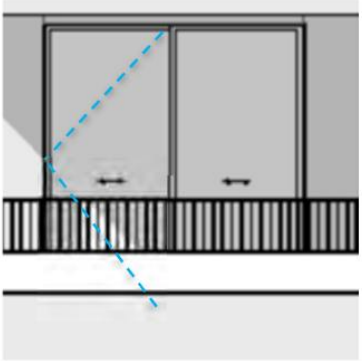
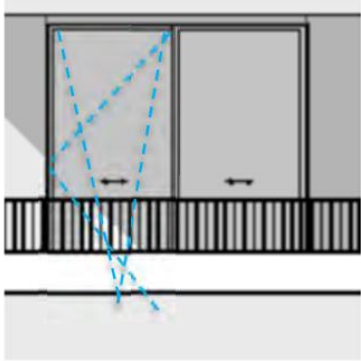
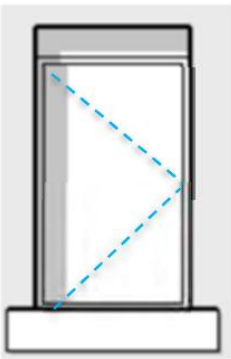
London Borough of Haringey	NRG Reply
The OH modelling of the consented scheme was based on no acoustic constraint due to the noise levels being below the AVO guidance threshold at all times. However the current OH modelling has been based on restricted opening angles at nighttime in compliance with Part O acoustic requirements. Given the acoustic constraints are fundamental to the OH modelling, applicant should provide more context for the changes compared with the consented scheme e.g. policy change or actual acoustic change; and demonstrate the impact of the acoustic constraints and confirm if the additional measures (MVHR with pre-tempered air and increased ventilation rate) have been proposed as a result?	The policy change relates to the implementation of Part O in June 2022 and the amendments to CIBSE TM59 methodology that were implemented. The ones relevant to window opening are (before this, openings were subjective to the assessment and assessor: <i>All the following limits on CIBSE's TM59, section 3.3, apply:</i> <i>a. When a room is occupied during the day (8am to 11pm), openings should be modelled to do all of the following:</i> <i>i. Start to open when the internal temperature exceeds 22 °C.</i> <i>ii. Be fully open when the internal temperature exceeds 26 °C.</i> <i>iii. Start to close when the internal temperature falls below 26 °C.</i> <i>iv. Be fully closed when the internal temperature falls below 22 °C.</i> <i>b. At night (11pm to 8am), openings should be modelled as fully open if both of the following apply.</i> <i>i. The opening is on the first floor or above and not easily accessible.</i> <i>ii. The internal temperature exceeds 23 °C at 11pm.</i> <i>c. When a ground floor or easily accessible room is unoccupied, both of the following apply.</i> <i>i. In the day, windows, patio doors and balcony doors should be modelled as open, if this can be done securely.</i> <i>ii. At night, windows, patio doors and balcony doors should be modelled as closed.</i> <i>And</i> <i>Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits.</i> <i>a. 40dB LAeq,T, averaged over 8 hours (between 11pm and 7am).</i> <i>b. 55dB LAFmax, more than 10 times a night (between 11pm and 7am).</i>

	The additional constraints on the window openings for Part O are the reason for the introduction of enhanced MVHR flow rates and pre-tempered air. See Section 1.1 for an illustration of the original requirements and their unsuitability for compliance in 2026.
The approved planning scheme has proposed the use of external shading with 0.8m for window type GDT3-UF, but this has not been included in the current OH analysis as part of the passive mitigation measures. Applicant should reinstate the provision of external shading as per the approved scheme. Please provide details, specifications and locations of the external shading.	The latest approved elevations do not have this window present: NMA link Planning Application: HGY/2025/1800
The proposed cooling module added to the MVHR uses refrigerant (R134a) with high GWP. Applicant should explore alternative with lower GWP.	There are no lower GWP systems available for MVHR pre-air tempering / comfort cooling.
	The refrigerant charge of the units is negligible (350g maximum) so overall GWP impact is still very low.
Please confirm if only the units listed under section 5.4 will be installed with MVHR comfort cooling. What is the number of units in total supplied with MVHR cooling and percentage in relation to the total number of units in phase 2?	This is confirmed. MVHR cooling is being supplied to 52 / 139 units i.e. 37%.
Please confirm the ventilation method of the communal corridor to achieve the air exchange rate of 0.93 ACH.	The corridors are naturally ventilated. This figure has been removed in Rev. B of the report and our modelling now only reflects the buildings passive air infiltration and naturally occurring ventilation through pedestrian movement only.
One of the proposed retrofit measures depends on the increasing the window opening angle. Applicant should clarify if this would go against the acoustic advice.	It would not go against acoustic advice <i>per se</i>, it would just be against the recommendations of Part O modelling. As there are no physical restrictors being installed, should there be increased temperatures, it is reasonable to assume the residents would open windows further if the outside air was providing a benefit in cooling their home. The facades here are only marginally above the Part O noise levels (hence the <i>orange</i> and <i>yellow</i> elevations rather
If the MVHR cooling modules are only provided to the required units, applicant should confirm if the rest of the units can be retrofitted with cooling modules as part of the retrofit plan.	Yes, these can be retrofitted.

Applicant has stated installation of external shutters might not be practical in future years due to cost and logistics, but feasibility and cost-benefits analysis will be re-evaluated in 10-15 years' time. However applicant should include this as part of the retrofit plan and should prioritise the evaluation of this passive mitigation measures where possible.

For budget purposes, we have spoken to the contractor and their QS department and based on current projects, an estimation of approximately £5,000-10,000 per dwelling at year 10, excluding VAT, with a further 20% project risk contingency.

1.1 Original BWF Report

Window Reference	Window Type: Baseline design free area	Baseline design openable area	Recommended free area for TM59 compliance	Proposed design openable area
WT2-GF		Side-hung 90° (daytime) Closed (night-time)		Side-hung 90° (daytime) Top-hung 10° (night-time) with restrictors
GDT1-GF		One pane openable: Side-hung 90° (daytime) Closed (night-time)		One pane openable: Side-hung 90° (daytime) Btm-hung 5° (night-time) with restrictors
Upper floor window types				
WT1-UF		Side-hung 90° (all day)	As per baseline reference	Side-hung 90° (all day)

Appendix A (Page 6) of the XC02 Overheating Report (December 2021) showing upper floor windows open all day and night (at 90 degrees...) and ground floor windows open partially at night. Both contravene later Part O and CIBSE TM59 requirements.

1.2 Appendices

Appendix 1 – Overheating Report (Rev. B)

