

Acoustic Compliance Statement

Phase 1B (North), Plot 113

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Hammerson/Standard Life Investments



ONE DISCOVERY PLACE | COLUMBUS DRIVE
FARNBOROUGH | HAMPSHIRE | GU14 0NZ
T: +44 (0)1252 550 500 | F: +44 (0)1252 550 501
www.hilsonmoran.com | info@hilsonmoran.com

HILSON
MORAN

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AUTHOR: **JACK RICHARDSON**
CHECKER: **HUGH MCMANUS**
APPROVER: **JON WILMOTT**



ONE DISCOVERY PLACE | COLUMBUS DRIVE
FARNBOROUGH | HAMPSHIRE | GU14 0NZ
T: +44 (0)1252 550 500 | F: +44 (0)1252 550 501
www.hilsonmoran.com | info@hilsonmoran.com



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1. Introduction

Planning Permission Ref No. C/17559/08 for the comprehensive redevelopment of the Brent Cross Cricklewood (“BXC”) Regeneration Area was granted in October 2010 (the “2010 Permission”). A Section 73 (“S73”) permission Ref No. F/04687/13 to develop land without complying with conditions attached to permission Ref No. C/17559/08 was granted by the Council on 23 July 2014 (“2014 Permission”).

Planning Condition 29.1 requires the internal noise levels within the dwellings to comply with the standards in BS 8233.

This report responds to Planning Condition 2.1, detailing how the design proposals of Plot 113 (Residential) comply with the requirements of Planning Condition 29.1. It is intended to provide a summary of the design commitments to comply with Planning Condition 29.1. This report should be read in conjunction with Hilson Moran’s Acoustic Planning Report (ref: 17279/A/AC01/03, dated 13 February 2017), which was submitted to the Council for approval (Ref 17/1366/CON) in March 2017.

2. Planning Condition 29.1

Planning Condition 29.1 states the following:

“Prior to, or coincident with the submission of any Reserved Matters Application for residential uses, the Acoustic Design Report shall be submitted to and approved by the LPA describing the design features that have been used to achieve good internal noise standards with reference to BS 8233 as referred to in Paragraph 2.82 of the DSF. The report shall demonstrate that the following hierarchy of noise mitigation measures has been considered so that the use of noise insulation, whilst necessary in some areas, is minimised:

- a) *Site layout to locate non-sensitive buildings adjacent to road/rail noise sources to provide screening to residential units*
- b) *Residential block layout design to locate non-sensitive uses on noisy facades;*
- c) *The provision of ‘quite facades’ to residential units where practicable;*
- d) *Architectural features such as balconies used to provide local screening to windows to sensitive rooms;*
- e) *Resurfacing of roads with low noise surfaces, including the A406 running planes past the development;*
- f) *Opportunities for noise barriers adjacent to road and railway noise sources;*
- g) *Upgraded glazing and external building fabric to attenuate noise ingress, and where necessary, acoustic ventilation, passive wherever practicable (provided a positive flow of air, e.g. passive stack not trickle vents), to allow windows to remain closed where necessary;*

The Details submitted in connection with the relevant Reserved Matters Application shall be in accordance with the Acoustic Design Report to be approved in accordance with this Condition.

Reason: *To protect the amenities of local residents and other sensitive receptors.*

3. Design Compliance

Planning Condition 29.1 requires a hierarchy of noise mitigation measures to be considered. Where applicable, we have highlighted how the Phase 1b (North) design proposals comply with each item of the hierarchy of noise mitigation.

a) Site layout to locate non-sensitive buildings adjacent to road/rail noise sources to provide screening to residential units.

The layout of the Phase 1b North development is such that the proposed commercial uses have been situated directly adjacent to the A406, and the residential Plot 113 is proposed towards the western corner of the development, approximately 300m away from the A406.

Several commercial buildings will be introduced as part of the Phase 1b North development, which are predicted to provide significant screening of the A406 noise to Plot 113.

b) Residential block layout design to locate non-sensitive uses on noisy facades.

Plot 113 comprises residential dwellings only and therefore this is not practicable.

c) The provision of 'quiet facades' to residential units.

Due to the orientation of Plot 113, the rear (west) façade would be screened from the adjacent access road and other surrounding noise sources. The noise levels predicted along this façade will therefore be quieter than the other facades.

d) Architectural features such as balconies used to provide local screening to windows to sensitive rooms.

Balconies are proposed along the front and rear facades. However, due to the height of the proposed Plot 113, these are predicted to have a negligible effect on the external noise levels.

e) Resurfacing of roads with low noise surfaces, including the A406 running planes past the development.

Calculations show that variations in noise from the A406 would have a negligible effect on the sound insulation requirements of the façade of Plot 113, and therefore resurfacing the road would not be necessary.

Noise from the adjacent access road will determine the sound insulation requirements of the external façade of Plot 113. We anticipate that traffic using this road will be travelling at low speeds (< 20mph) and therefore resurfacing would not be expected to have significant effect on the external noise levels.

f) Opportunities for noise barriers adjacent to road and railway noise sources.

Due to the distance between the access road and Plot 113, it would not be feasible to incorporate acoustic barriers. The external noise levels measured are such that we would not expect the use of noise barriers to be unnecessarily onerous.

g) Upgraded glazing and external building fabric to attenuate noise ingress, and where necessary, acoustic ventilation, passive wherever practicable (provided a positive flow of air, e.g. passive stack not trickle vents), to allow windows to remain closed where necessary.

Detailed calculations have been undertaken for a representative sample of worst-case bedrooms and living rooms to determine the sound insulation requirements of the glazing, external building fabric and ventilation openings for each façade.

Calculations were based on the ambient noise levels measured at the existing site, with corrections made to reflect the changes in noise climate as part of the Phase 1b North development.

Full details of the calculation process can be seen in Hilson Moran’s Acoustic Planning Report, dated 13 February 2017. As per Item (g) in the above hierarchy, the tables below provides the calculated sound reduction requirement for the glazing and trickle ventilators on each façade, required to comply with the internal standards of Planning Condition 29.1.

These values shall be used to procure suitable glazing and ventilation products at a later stage.

Glazing Reference Group	Façade Location	Minimum Glazing Sound Reduction Performance (R) at Octave Band Centre Frequency (Hz)								Rw (dB)
		63	125	250	500	1k	2k	4k	8k	
A	Front (East)	20	25	25	33	38	38	38	38	36
B	South	13	21	20	26	38	38	38	38	31
C	North & Rear (West)	13	21	17	24	35	35	35	35	29

Table 1 Minimum glazing sound reduction performance requirements

The performance of Glazing Reference Group A could typically be achieved by an acoustic laminated double configuration e.g. 10/12/6.4.

The performance of Glazing Reference Group B could typically be achieved by a thermal double glazing configuration e.g. 6/12/4.

The performance of Glazing Reference Group C could typically be achieved by a thermal double glazing configuration e.g. 4/12/4.

Please note that the sound reduction performances above should be achieved by the complete glazing system, including glazing, frames, seals, openings and sliding lights etc.



Façade Location	Minimum Trickle Ventilator Sound Reduction Performance (D_{ne}) at Octave Band Centre Frequency (Hz)								$D_{ne,w}$ (dB)
	63	125	250	500	1k	2k	4k	8k	
Front (East) & South*	35	43	42	36	38	40	40	40	38
North & Rear (West)	Can be achieved with a non-acoustic in frame trickle ventilator								

Table 2 Minimum trickle ventilator sound reduction performance requirements

*This performance can typically be achieved by a high performance in frame acoustic trickle ventilator.

For clarity, Figure 2.1 below highlights the location of each glazing reference group.



Figure 2.1 Location of recommended glazing specifications



4. Conclusion

It is concluded that the Phase 1B (North) Reserved Matters Application provides acceptable noise mitigation in regard to Planning Condition 29.1 and the relevant guidance.