

Design Note.

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From:	Adrian McCordick, Principal Acoustics Engineer
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Project:	Nigra House, Fishponds Road, Wokingham
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Nigra House, Fishponds Road – Condition 16.

Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
0	30/06/2025	Initial issue	AM	AP	PM

Introduction.

Following the submission of the Hoare Lea noise report reference ‘REP-1015295-SG-20240220-Acoustic planning report-Rev00’ dated 20th February 2024, and the Design Note reference ‘LET-1015295-AM-20240409-Response to EHO enquiry-Rev00’ dated 23rd April 2024, planning approval has been granted to the site, subject to a series of conditions, including Condition 26 which states the following:

Condition 26

Prior to above ground construction, details shall be submitted to and approved in writing by the Local Planning Authority demonstrating that the building envelope shall be constructed with a minimum sound reduction of Rw 27 dB, increasing to Rw 33 dB where Class B2 operations are proposed. The details thereby agreed shall be fully implemented prior to the occupation of the building and maintained in perpetuity.

This condition relates to Section 5.1 of the noise report which states, ‘In order to enable B2 operations at the development site, a higher performing façade building envelope is recommended. It is calculated that a façade envelope construction with a minimum sound reduction of Rw 33 dB would be sufficient to enable a level of a low impact at each of the nearest receptors during both the day and night-time periods’.

This Design Note confirms the proposed building envelope constructions and assesses their suitability in accordance with the requirements of Condition 26 above.



Building Envelope Elements.

Building Envelope:

The building envelope construction performance is detailed in Technical Information Paper TIP-401 as produced by CA Group. The relevant sections are attached to this Design Note.

This document confirms that the Twin-Therm® Wall Incorporating 0.7mm thick External Wall Profile with a MX180 MatriX Bracket has been tested to provide a sound reduction of Rw 45 dB.

In addition, the document confirms that the Twin-Therm® Roof Incorporating 0.7mm thick CA 32 1000RL Liner Profile with a MX 300 Matrix Bracket has been tested to provide a sound reduction of Rw 46 dB.

Glazing

We have been advised that the glazing elements of the building can achieve a sound reduction rating of Rw 35 dB.

Fire Doors

We have been advised that the fire doors can achieve a sound reduction rating of Rw 39 dB.

Loading Doors

We have been advised that the Loading Doors can achieve a sound reduction rating of Rw 25 dB.

Building Façade Composite Performances.

Roof

Roof: 3360m² Twin-Therm® Roof (Rw 46 dB)

The roof provides a performance well in excess of Rw 33 (dB+ 13 dB). This fully achieves the requirements of Condition 26.

South East Façade

Building envelope:	430 m ²	Rw 45 dB
Fire doors x 2:	4.8 m ²	Rw 39 dB
Composite performance		Rw 45 dB

The south east elevation provides a performance in excess of Rw 33 dB (+ 12 dB). This fully achieves the requirements of Condition 26.

South West Façade

Building envelope:	640 m ²	Rw 45 dB
Fire doors x 2:	4.8 m ²	Rw 39 dB
Composite performance		Rw 45 dB

The south west elevation provides a performance in excess of Rw 33 dB (+ 12 dB). This fully achieves the requirements of Condition 26.



North West Façade

Building Envelope	488 m ²	Rw 45 dB
Loading Bay Doors x 4:	80 m ²	Rw 25 dB
Fire doors x 1:	2.2 m ²	Rw 39 dB
Windows	72 m ²	Rw 35 dB
Composite performance		Rw 33 dB

The north west elevation provides a composite performance of Rw 33 dB thus achieving the requirements of Condition 26.

North East Facade

Building Envelope	540 m ²	Rw 45 dB
Fire doors x 1:	2.2 m ²	Rw 39 dB
Windows	103 m ²	Rw 35 dB
Composite performance		Rw 41 dB

The north east elevation provides a performance of Rw 41 dB (+8 dB) thus achieving the requirements of Condition 26.

Conclusions.

Based upon each the elements of the building envelope, each of the building facades can demonstrate compliance with the requirements of Condition 26 based upon the louder B2 usage of the building.

This document has been prepared for Indurent only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This document has been based solely on the specific design assumptions and criteria stated herein.



TIP 401

Technical Information Paper

TIP-401

Acoustics



TIP-401
Rev: 5.1
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Approved

