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# Ian Sharland

## LIMITED

Noise & Vibration Control Specialists

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6 September 2021

Mr Joe Dickeson  
Jefferson Heard Architects  
3<sup>rd</sup> Floor  
7 – 15 Rosebery Avenue  
London  
EC1R 4SP

Dear Joe

**RE: THE CAVENDISH CENTRE, WINCHESTER – APPLICATION REF 19/01055/FUL  
DISCHARGE OF CONDITION 24, NOISE MITIGATION**

Further to our recent conversations, please find below the information which we believe to be sufficient to discharge Condition 24 of the planning consent for the above planning application:

*Demolition of the existing office building, mixed-use redevelopment of the site comprising: 1,343sq.m (gross internal area) of B1(a) Office; purpose built student accommodation consisting of 3 no. 6 bed cluster flats, 3 no. 4 bed cluster flats, 3 no. 5 bed cluster flats, 1 no. 8 bed cluster flat, 35 no. studios, including 5 no. accessible studios (total of 88 student beds) and a warden's flat, associated communal facilities, external works including landscaping, car parking, bin storage, cycle parking and associated infrastructure.*

Condition 24 requires:

*Prior to the commencement of development above damp-proof course level, details of a scheme for protecting the proposed dwellings from external noise shall be submitted, and approved in writing by the Local Planning Authority. Such a scheme shall ensure that, upon completion of the development, the following noise criteria (as recommended in BS8233:2014) shall be met:*

- i. all bedrooms shall achieve an 8-hour LAeq (23:00 to 07:00) of 30dB(A)*
- ii. all living rooms and bedrooms shall achieve a 16-hour LAeq (07:00 to 23:00) of 35dB(A)*
- iii. all private amenity spaces shall achieve a 16-hour LAeq (07:00 to 23:00) of 55dB(A)*

At the time of the planning application, an acoustic assessment was submitted to support the proposals. The report by Ian Sharland Limited, entitled 'Environmental Noise Assessment (v2 dated 1<sup>st</sup> May 2019), described a number of acoustic measures which would be required to achieve the noise targets repeated in Condition 24.

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These measures included the following four items:

**(i) Glazing**

All windows to bedrooms and living areas should feature a glazing system rated at 27 dB  $R_w + C_{tr}$ , which could be achieved with a standard 4/16/4 configuration.

The Client has confirmed that this level of glazing is to be adopted throughout.

**(ii) External Walls**

The assessment of noise ingress was based on a cavity masonry external wall.

It is confirmed that the residential accommodation will be faced with External Wall Type EW1, comprising brick outer skin, partially insulated cavity, and SFS insulated studwork. The latter will be faced with 12mm sheathing board to one side and 2 x 15mm standard plasterboard to the other.

This detail is acceptable.

**(iii) Ventilation**

The report offered three options for ventilating the accommodation, in a manner which would not adversely affect the acoustic integrity of the façade construction.

It is proposed that the individual units will be ventilated using a Mechanical Extract Ventilation (System 3) solution. Fresh air will be provided through trickle vents in the windows heads. It is confirmed that these are specified with an acoustic rating of 35 dB  $D_{n,e,w}$ , which will be sufficient to sustain the sound insulation of the external walls and glazing.

The extract fan, drawing air from the Ensuite bathrooms and (where relevant) kitchenette areas will exhaust directly through the façade of the buildings. On advice from ISL, it is confirmed that the ducting will include a 300mm long straight-through duct attenuator, located between the external grill and first room grill.

Appendix 1 provides a calculation of the highest expected noise levels, to confirm compliance with the internal noise targets, based on the adopted construction details. Day time and night time predictions are 31 dB(A) and 25 dB(A), respectively – both comfortably within the LPA targets.

**(iv) External Amenity Space**

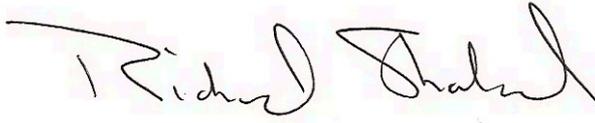
The report recommended a 1.8m high close boarded fence to the north boundary of the warden's private garden, located on the east side of the building. This detail was included within the proposed landscaping drawing submitted with the application (Drg. DH 333-01-06B). The drawing is copied here as Figure 1.

Fencing will be constructed in 25mm thick boards, with either tongued and grooved or square edged joints. If the latter, these will be reinforced with 25mm x 150mm thick cover strips behind.

I am therefore pleased to confirm that the Client has generally adopted the specific recommendations of the initial acoustic report. Where there is a deviation from these details, the alternative proposal is acoustically sufficient to ensure that the criteria of Condition 24 will be achieved.

I trust that this information is all self-explanatory but please do not hesitate to contact me with any queries arising.

Yours sincerely

A handwritten signature in black ink, appearing to read "Richard Sharland". The signature is written in a cursive style with a large initial 'R' and a distinct 'S'.

**RICHARD SHARLAND**

## Appendix 1 – Calculation of Noise Ingress

### Day time

Frequency	Hz	63	125	250	500	1000	2000	4000	8000	dB(A)
<b>Façade Noise Level, LAeq, 16hrs</b>	<b>dB</b>	53	55	50	55	54	51	44	36	<b>58</b>
<b>Glazing Specified: 27 dB Rw + Ctr</b>	<b>dB</b>	16	21	18	26	37	42	33	35	
Area of Window	m2	6	6	6	6	6	6	6	6	
Area Correction	dB	8	8	8	8	8	8	8	8	
Maximum RT in Room	sec	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	35	32	30	27	15	7	9	-1	<b>27</b>
<b>SRI External Wall, EW1</b>	<b>dB</b>	40	47	49	58	60	60	60	60	
Area of Wall	m2	8	8	8	8	8	8	8	8	
Area Correction	dB	9	9	9	9	9	9	9	9	
Maximum RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	12	7	0	-4	-7	-10	-17	-25	<b>-1</b>
<b>Trickle Ventilators, 35 dB Dn,e,w</b>	<b>dB</b>	34	37	39	37	36	37	39	40	
10logN (number of vents)	dB	0	0	0	0	0	0	0	0	
Likely RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	0	0	0	0	0	0	0	0	
Net SPL inside via vent	dB	19	18	11	18	18	14	5	-4	<b>21</b>
<b>SRI Extract System Attenuator</b>	<b>dB</b>	3	4	8	17	21	23	21	11	
Area of Duct, nom. 125 dia	m2	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	
Area Correction	dB	-19	-19	-19	-19	-19	-19	-19	-19	
Maximum RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	21	22	13	9	4	-1	-6	-4	<b>12</b>
Combined Level from elements	dB	35	33	30	28	20	15	11	2	<b>28</b>
Tolerance on Calculation	dB	3	3	3	3	3	3	3	3	
<b>Predicted Internal Noise Level</b>	<b>dB</b>	<b>38</b>	<b>36</b>	<b>33</b>	<b>31</b>	<b>23</b>	<b>18</b>	<b>14</b>	<b>5</b>	<b>31</b>

## Night time

Frequency	Hz	63	125	250	500	1000	2000	4000	8000	dB(A)
<b>Façade Noise Level, LAeq, 8hrs</b>	<b>dB</b>	47	49	44	49	48	45	38	30	<b>52</b>
<b>Glazing Specified: 27 dB Rw + Ctr</b>	<b>dB</b>	16	21	18	26	37	42	33	35	
Area of Window	m2	6	6	6	6	6	6	6	6	
Area Correction	dB	8	8	8	8	8	8	8	8	
Maximum RT in Room	sec	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	29	26	24	21	9	1	3	-7	<b>21</b>
<b>SRI External Wall, EW1</b>	<b>dB</b>	40	47	49	58	60	60	60	60	
Area of Wall	m2	8	8	8	8	8	8	8	8	
Area Correction	dB	9	9	9	9	9	9	9	9	
Maximum RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	6	1	-6	-10	-13	-16	-23	-31	<b>-7</b>
<b>Trickle Ventilators, 35 dB Dn,e,w</b>	<b>dB</b>	34	37	39	37	36	37	39	40	
10logN (number of vents)	dB	0	0	0	0	0	0	0	0	
Likely RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	0	0	0	0	0	0	0	0	
Net SPL inside via vent	dB	13	12	5	12	12	8	-1	-10	<b>15</b>
<b>SRI Extract System Attenuator</b>	<b>dB</b>	3	4	8	17	21	23	21	11	
Area of Duct, nom. 125 dia	m2	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	0.012271	
Area Correction	dB	-19	-19	-19	-19	-19	-19	-19	-19	
Maximum RT in Room	sec	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Room Volume	m3	30	30	30	30	30	30	30	30	
Absorption		10	10	10	10	10	10	10	10	
Absorption Correction	dB	10	10	10	10	10	10	10	10	
Net SPL Inside	dB	15	16	7	3	-2	-7	-12	-10	<b>6</b>
Combined Level from elements	dB	29	27	24	22	14	9	5	-4	<b>22</b>
Tolerance on Calculation	dB	3	3	3	3	3	3	3	3	
<b>Predicted Internal Noise Level</b>	<b>dB</b>	<b>32</b>	<b>30</b>	<b>27</b>	<b>25</b>	<b>17</b>	<b>12</b>	<b>8</b>	<b>-1</b>	<b>25</b>

