DISCHARGE OF PLANNING CONDITIONS

Conversion of existing building to 2no. flats

FOR

TAYLOR WIMPY CENTRAL LONDON

AT

PULSE HOUSE, BONNY STREET
CAMDEN NW1 9PG

CLARIFICATION OF CONDITION 12 - SOUND
& NOISE CONTROL MEASURES

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arb Architects Registration Board
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partner LABC

INTRODUCTION

Planning consent ref: 2011/2072/P was granted on 23rd September 2011 for development at Twyman House, 31-39 Camden Road, NW1 9LR. Proposals for Pulse House were included under the umbrella of that application and approval.

Planning Permission was granted subject to 23 planning conditions: of these conditions, the majority have been discharged under the Twyman House development. Further details were submitted for Discharge of Planning Conditions regarding Pulse House, and approval granted on 15th May 2014

Further details and clarifications were requested in respect of Condition 12: Details of sound insulation and noise control measures to be submitted and approved.

This submission clarifies outstanding details with regard to Condition 12.

Condition 12: Details of sound insulation and noise control

The original submission for Discharge of Conditions of March 2014 confirmed that the proposals for sound mitigation within the apartments would comprise closed double glazed thermal windows. The report stated that this will be sufficient for all facades to reduce noise levels to be within BS 8233 'good' criteria and meets the performance criteria of Camden Councils Condition 12 (as amended) - see Appendix A

Double glazed thermal windows will produce the following acoustic performance:

Facade noise levels - Bonny Street - Day	66dB
Facade noise levels - Bonny Street - Night	58dB
Internal noise levels - Bonny Street - Day	33dB
Internal noise levels - Bonny Street - Night	24dB
Internal noise levels - Rear Courtyard - Day	27dB
Internal noise levels - Rear Courtyard - Night	19dB

The sound and noise performance assessments allow for windows to remain closed at night to manage any sound impacts. The design allows for mechanical ventilation to habitable rooms to maintain fresh air to rooms with windows closed.

Mechanical ventilation details have been previously submitted for Building Regulations, and have been approved. Drawings are appended - See Appendix B

Sound and noise levels of the mechanical ventilation equipment has been assessed and confirmed as being compliant with Camden Councils Policy DP28 - see Appendix C. In summary, the data is a follows:

Ground Floor Plant - Vent Axia Kinetic Horizontal 300Z
Sound data - rear wall extract 30.6dB(A)(3m)

First Floor Plant - Vent Axia Kinetic Plus B
Sound data - roof extract 28dB(A)(3m)

Noise egress from the proposed plant (including a 5dB penalty without any distance corrections) is 35.6dB and 33dB respectively - with the accumulative noise level at 37.5dB.

Target values to meet Camden Council Policy DP28 is a daytime noise level of 46.8dB, and a night-time noise level of 39.8dB

Conclusion:

Proposals meet Camden Council policy for sound mitigation and internal noise levels - day and night.

Proposals meet Camden Council policy for external noise levels - day and night.

APPENDIX A

SOUND AND NOISE ASSESSMENT
(AS SUBMITTED WITH ORIGINAL APPLICATION)

Our Ref: E656A/SP

Your Ref:

Date: 11 March 2014

Entran Ltd
12 Greenway Farm
Bath Road
Wick
Bristol
BS30 5RL

Telephone: 0116 288 7186
Email: sunilpatel@entranltd.co.uk

Taylor Wimpey Central London

For the attention of Mr S Harding

Dear Sam,

Pulse House, Bonny Street, Twyman House Development – Noise Condition 12

Further to recent discussions with regards to the noise condition 12 in relation to Pulse House (located off Bonny Street), we have the following observations:

Noise Condition 12

This condition states:

Prior to commencement on the relevant part of the development hereby approved details of sound insulation and noise control measures shall be submitted to and approved in writing by the Local Planning Authority. The sound insulation and noise control measures shall achieve the following internal noise targets (in line with BS 8233:1999):

Bedrooms (23.00-07.00 hrs) 30 dB LAeq, and 45 dB Lmax (fast)
Living Rooms (07.00-23.00 hrs) 30 dB LAeq,
Kitchens, bathrooms, WC compartments and utility rooms
(07.00 –23.00 hrs) 45 dB LAeq

The sound insulation and noise control measures shall be carried out strictly in accordance with the details so approved and implemented prior to the first occupation of the development and shall be maintained as such thereafter.

Update for Condition 12

LB Camden (letter dated 19 February 2013)has formally granted the application to relax condition 12 and therefore the above noise levels relaxed by 5 dB during the day and 3 dB during the night

Noise Survey, Bonny Street

The following noise survey (3 hour sample) results were recorded during the surveys conducted on the 5/6 March 2014 (Pulse House façade facing Bonny Street):

Location	Time Period	L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
		dB			
Bonny Street	Day	63.2	77.2	65.1	49.1
	Night	55.4	72.2	56.1	38.9
Court Yard (rear of Pulse House)	Day	57.4	63.2	59.1	47.5
	Night	48.9	62.1	49.1	37.8

Assessment

Facade levels for any habitable rooms (windows) facing Bonny Street will 66 dB during the day and 58 dB $L_{Aeq,T}$ during the night. There were no noise sources at the rear façade of Pulse House.

For a road traffic noise spectrum (RTRA), standard thermal double glazing (e.g. 4mm glass, 4mm airgap, 4mm glass or similar mass) will provide a façade sound insulation performance of 33 dB(A).

The internal noise levels for any habitable room facing Bonny Street will be 33 dB during the day and 24 dB $L_{Aeq,T}$ during the night.

For the court yard facing façade, internal noise levels will be 27 dB during the day and 19 dB $L_{Aeq,T}$ during the night.

The above assessment indicates that mitigation measures in the form of closed thermal double windows will be sufficient for all façades to reduce internal noise levels to be within BS8233's 'good' criteria as well within Council's planning condition 12 (as amended).

If the above window arrange also apply for all bedrooms at night, then L_{Amax} levels will also be within the criteria outlined in Condition 12.

Should windows remain closed to keep out noise most particularly from Bonny Street, habitable rooms on Bonny Street will require an additional means of ventilation. Although the court yard area (rear façade of Pulse House) is relatively quiet, the local authority may insist that an additional means of ventilation will be necessary for habitable rooms facing the court-yard as well.

I trust that the above covers all matters in sufficient detail, however please do not hesitate to contact me if you require any further information, otherwise I look forward to speaking with you in due course.

Yours sincerely

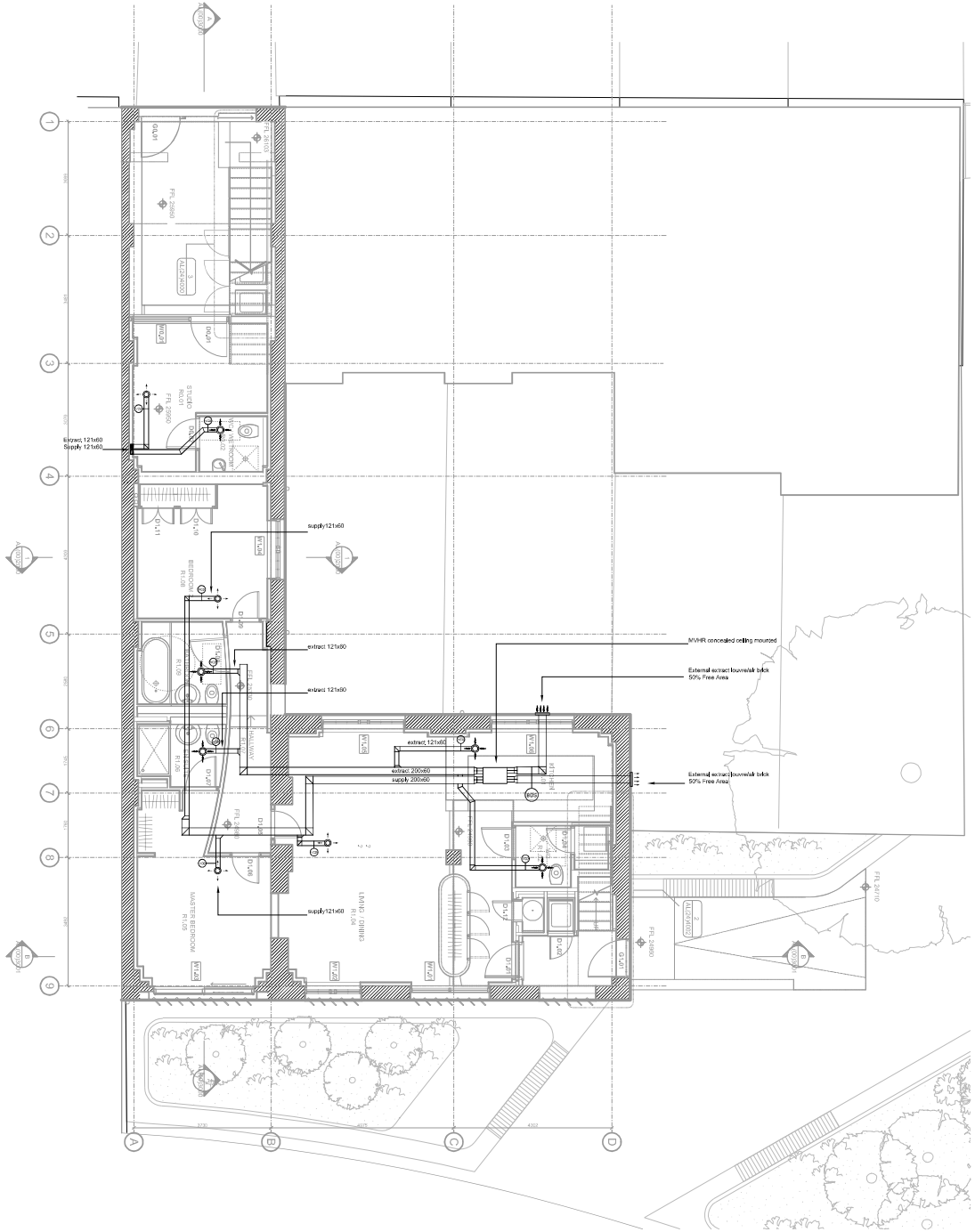
Sunil

Sunil Patel *MInstP CPhys MIOA*
Technical Director (Acoustics)
M. 07875 123425

APPENDIX B

MECHANICAL VENTILATION

PROPOSALS DRAWINGS



NOTES: DO NOT SCALE

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates preliminary design intent only and shall not be used as a detailed working drawing or installation drawing. The sizes given are indicative.
3. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
4. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
5. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to the engineer for clarification before proceeding.
6. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
7. All ductwork to be installed and designed in accordance with CIBSE and DW 144 specification
8. Fire dampers to be provided on ductwork passing through compartment walls & floors.
9. All ductwork to have thermal insulation in accordance with specification

LEGEND:

	Pipework in Ceiling Space
	Pipework at High Level
	Pipework at Low Level
	Pipework in Floor Void
DTLL	Drop to Low Level
TA	To Above
TB	To Below
FA	From Above
FB	From Below
	Extract grille
	Supply grille
VCD	Volume control damper
FD	Fire damper
BDD	Back Draught Shutter

Revisions:	Date:	Description:	Drwn	Chkd
-	25/Oct/13	Tender	LS	SK

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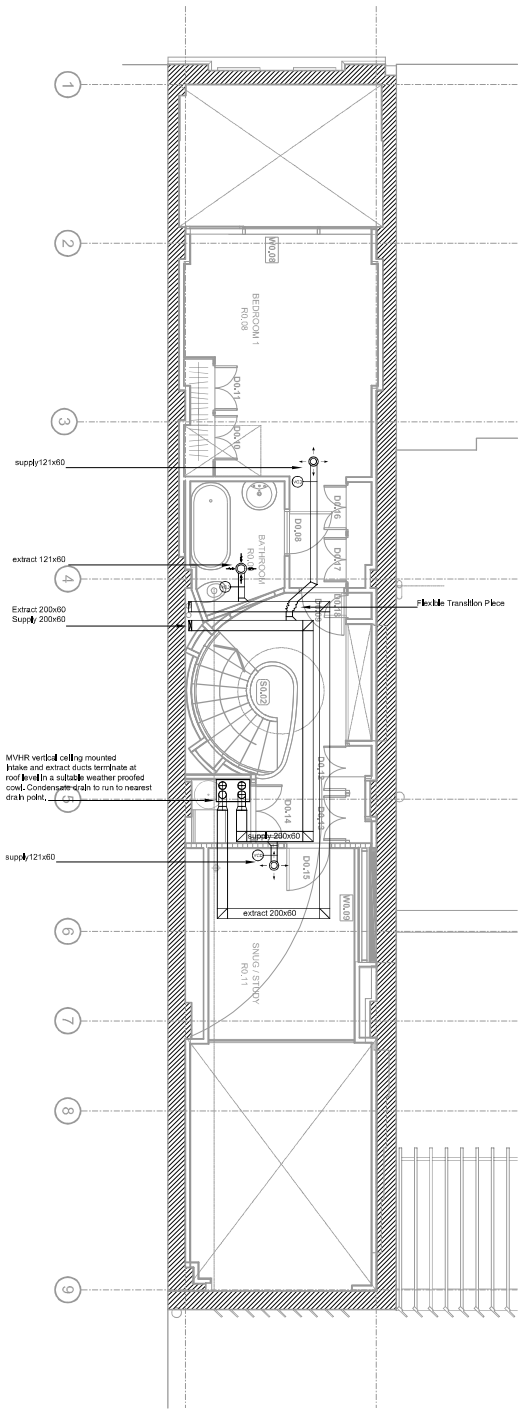
Project:
Pulse House
Bonny Street
London

Drawing Title:
Conceptual Ventilation Layout
Ground Floor

Client:
Taylor Wimpey

Drawn:	Checked:	Date:	Scale:	Paper Size:
LS	SK	24.10.13	1:50	A1

Job No.:	Dwg No.:	Stage:	Revision:
84342	410	Tender	-



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Project:
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Bonny Street
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Drawing Title:
Conceptual Ventilation Layout
1st & 2nd Floor

Client:
Taylor Wimpey

Drawn:	Checked:	Date:	Scale:	Paper Size:
LS	SK	24.10.13	1:50	A1

Job No.:	Dwg No.:	Stage:	Revision:
84342	411	Tender	-

APPENDIX C

SOUND AND NOISE ASSESSMENT

(ADDITIONAL)

Our Ref: SP/ND/Jul14

Your Ref:

Date: 22 July 2014

Entran Ltd
12 Greenway Farm
Bath Road
Wick
Bristol
BS30 5RL

Telephone: 0116 288 7186
Email: sunilpatel@entranltd.co.uk

Bowden Moss Ltd
1 Tower House
Hoddesdon
Hertfordshire
EN11 8UR

For the attention of Mr D Moss

Dear Mr Moss,

Pulse House, Noise Condition Discharge

Further to recent discussions, we have outlined below a noise assessment for the purposes of discharging the noise condition associated with building services.

LB Camden Condition

Discussions with the planning officer at LB Camden indicates that in order to discharge the condition, the applicant is “required to provide an acoustic assessment of the cumulative noise levels of fans (units) to meet our standard noise condition/DP28”.

Noise criteria outlined in Policy DP8 is presented below:

Table A: Noise levels on residential sites adjoining railways and roads at which planning permission will not be granted

Noise description and location of measurement	Period	Time	Sites adjoining railways	Sites adjoining roads
Noise at 1 metre external to a sensitive façade	Day	0700-1900	74 dB L_{Aeq} 12h	72 dB L_{Aeq} 12h
Noise at 1 metre external to a sensitive façade	Evening	1900-2300	74 dB L_{Aeq} 4h	72 dB L_{Aeq} 4h
Noise at 1 metre external to a sensitive façade	Night	2300-0700	66 dB L_{Aeq} 8h	66 dB L_{Aeq} 8h

Table B: Noise levels on residential streets adjoining railways and roads at and above which attenuation measures will be required

Noise description and location of measurement	Period	Time	Sites adjoining railways	Sites adjoining roads
Noise at 1 metre external to a sensitive façade	Day	0700-1900	65 dB L_{Aeq} 12h	62 dB L_{Aeq} 12h
Noise at 1 metre external to a sensitive façade	Evening	1900-2300	60 dB L_{Aeq} 4h	57 dB L_{Aeq} 4h
Noise at 1 metre external to a sensitive façade	Night	2300-0700	55 dB L_{Aeq} 1h	52 dB L_{Aeq} 1h
Individual noise events several times an hour	Night	2300-0700	>82 dB L_{Amax} (S time weighting)	>82 dB L_{AMAX} (S time weighting)

Table C: Vibration levels on residential sites adjoining railways and roads at which planning permission will not be granted

Vibration description and location of measurement	Period	Time	Vibration levels
Vibration inside critical areas such as a hospital operating theatre	Day, evening and night	0000-2400	0.1 VDV ms-1.75
Vibration inside dwellings	Day and evening	0700-2300	0.2 to 0.4 VDV ms-1.75
Vibration inside dwellings	Night	2300-0700	0.13 VDV ms-1.75
Vibration inside offices	Day, evening and night	0000-2400	0.4 VDV ms-1.75
Vibration inside workshops	Day, evening and night	0000-2400	0.8 VDV ms-1.75

Where dwellings may be affected by ground-borne regenerated noise internally from, for example, railways or underground trains within tunnels, noise levels within the rooms should not be greater than 35dB(A)max

Table D: Noise levels from places of entertainment on adjoining residential sites at which planning permission will not be granted

Noise description and measurement location	Period	Time	Sites adjoining places of entertainment
Noise at 1 metre external to a sensitive façade	Day and evening	0700-2300	L_{Aeq} 5m shall not increase by more than 5dB*
Noise at 1 metre external to a sensitive façade	Night	2300-0700	L_{Aeq} 5m shall not increase by more than 3dB*
Noise inside any living room of any noise sensitive premises, with the windows open or closed	Night	2300-0700	L_{Aeq} 5m (in the 63Hz Octave band measured using the 'fast' time constant) should show no increase in dB*

* As compared to the same measure, from the same position, and over a comparable period, with no entertainment taking place

Table E: Noise levels from plant and machinery at which planning permission will not be granted

Noise description and location of measurement	Period	Time	Noise level
Noise at 1 metre external to a sensitive façade	Day, evening and night	0000-2400	5dB(A) <LA90
Noise that has a distinguishable discrete continuous note (whine, hiss, screech, hum) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise that has distinct impulses (bangs, clicks, clatters, thumps) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise at 1 metre external to sensitive façade where LA90>60dB	Day, evening and night	0000-2400	55dBL_{Aeq}

For mechanical building services noise, Table E of DP28 is applicable here.

At Pulse House, the following building services will be installed:

At Ground Floor: **Vent Axia Kinetic Horizontal 300Z;**
At Second Floor: **Vent Axia Kinetic Plus B**

The sound data provided by the manufacturer are as follows:

Kinetic Horizontal 300Z: Rear Wall Extract 30.6 dB(A) (3m);
Kinetic Plus B: Roof Extract 28 dB(A) (3m).

Allowing for 5 dB penalty for acoustic feature (intermittent use), noise levels at the nearest noise sensitive property (2 Bonny Street) will be 35.6 dB and 33 dB (without any corrections for distance attenuation).

Ambient noise levels on Bonny Street were measured as follows:

Date	Time	LAeq	LAmax	LA10	LA90
16 April 12	07:00:00	64.7	80.4	67.8	55.6
16 April 12	08:00:00	66.6	81.2	69.7	57.6
16 April 12	09:00:00	67.7	80.8	70.8	59.0
16 April 12	10:00:00	67.6	79.8	71.2	59.7
16 April 12	11:00:00	67.9	76.5	71.4	59.6
16 April 12	12:00:00	67.5	78.5	70.9	59.5
16 April 12	13:00:00	67.8	80.2	71.1	58.6
16 April 12	14:00:00	65.8	80.9	69.1	56.5
16 April 12	15:00:00	65.5	77.7	68.8	56.8
16 April 12	16:00:00	64.9	76.5	68.2	56.6
16 April 12	17:00:00	65.1	80.1	68.4	57.8
16 April 12	18:00:00	71.3	79.8	72.5	58.6
16 April 12	19:00:00	64.5	75.6	67.5	55.8
16 April 12	20:00:00	62.2	74.6	65.4	53.5
16 April 12	21:00:00	60.5	74.6	63.8	52.4
16 April 12	22:00:00	60.3	76.6	64.2	50.9
16 April 12	23:00:00	58.8	78.7	62.3	50.2
17 April 12	00:00:00	57.6	79.4	60.2	49.3
17 April 12	01:00:00	55.7	74.5	56.6	48.9
17 April 12	02:00:00	54.3	77.8	54.9	49.2
17 April 12	03:00:00	54.1	74.6	53.8	49.1
17 April 12	04:00:00	53.5	75.6	53.9	49.3
17 April 12	05:00:00	58.8	80.0	60.8	50.1
17 April 12	06:00:00	61.9	82.3	65.1	51.9

The noise levels are summarised below:

	LAeq	LAmax	LA10	LA90
Day	66.5	78.4	68.8	56.8
Night	57.7	77.9	58.4	49.8

The target value for compliance with policy DP28 is therefore 46.8 dB during the day and 39.8 dB during the night.

The noise egress from the proposed plant, including a 5 dB penalty without any distance corrections, is 35.6 dB and 33 dB (cumulatively 37.5 dB). The cumulative noise level is below the target noise criteria of Policy DP28 and therefore within the stipulated planning condition.

I trust that the above covers all matters in sufficient detail, however please do not hesitate to contact me if you require any further information, otherwise I look forward to speaking with you in due course.

Yours sincerely

Sunil

Sunil Patel CPhys MInstP MIOA
Technical Director (Acoustics)