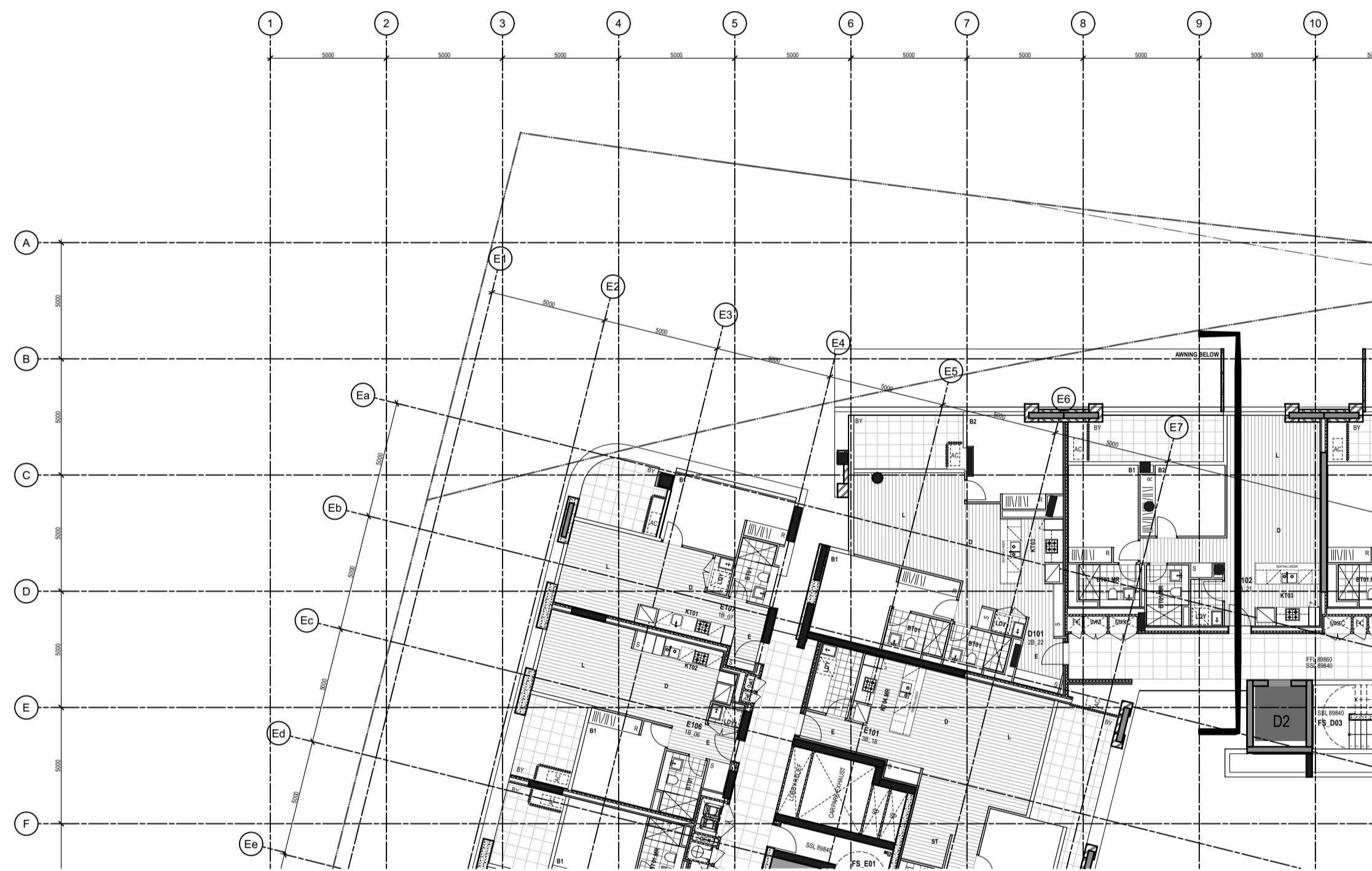


1
Plenum Natural Ventilation to Apartments
1:50

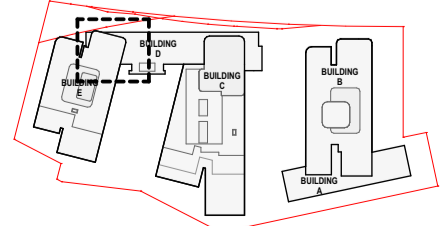


2
Key Plan
1:200

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DLCS Quality Enhanced Company ISO 9001:2015, Registration Number 25476
Newstead Australia National Number 9555 4894 85 264 524 871

KEY PLAN



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Acoustic Engineer
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Rev	Date	Approved by	Revision Notes
01	30.09.24	TK	For Information

Project Title
Beecroft Rd
242-244 Beecroft Road Epping NSW 2121

Drawing Title
Condition B11 Plenum Natural Ventilation

Scale: 1:50, 1:200 @A1, 50% @A3
Project No: 21044
Drawing No: SK-501-901
Drawn by: NH
Rev: 01
Status: For Information

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R240724L1

242 - 244 Beecroft Road, Epping

2 October 2024

Dear Peter

This letter is to address condition B11 Plenum natural ventilation to apartments at 242 – 244 Beecroft Road, Epping. Condition B11 requires the following:

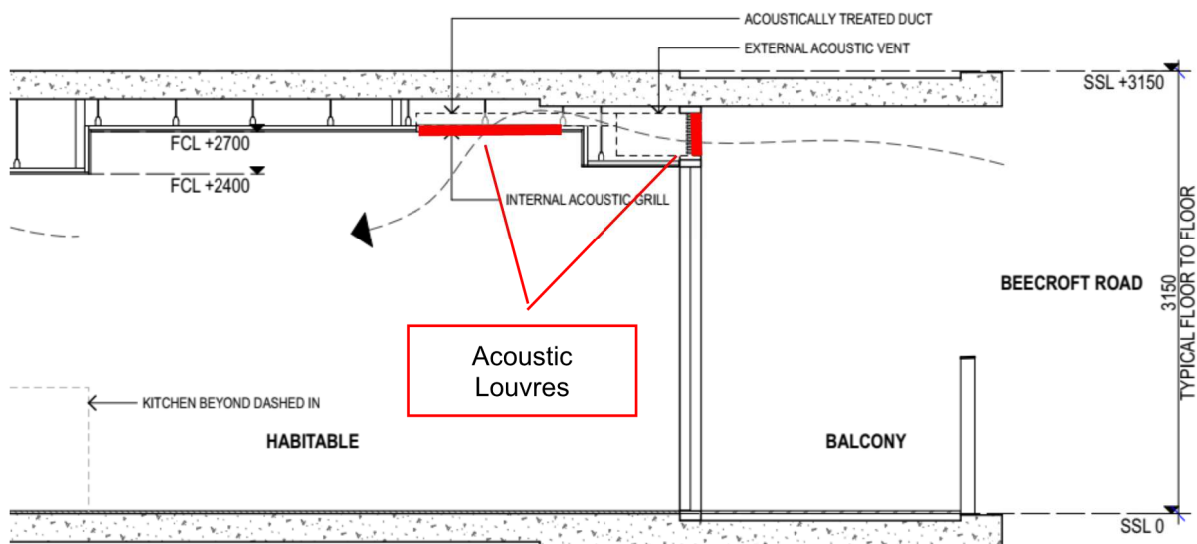
PLENUM NATURAL VENTILATION TO APARTMENTS

- B11. Prior to the issue of the first Construction Certificate, the Applicant must submit to the satisfaction of the Planning Secretary construction drawings and specifications of the plenum natural ventilation systems to apartments affected by road and rail noise, along with an acoustic verification statement that the ventilation system will achieve compliant noise levels for internal rooms under State Environmental Planning Policy (Transport and Infrastructure) 2021, Section 2.120. The design details must include sections and details at 1:100 or 1:50 scale and show all elements of the ventilation design including control dampers, insect screens and acoustic baffling.

It is proposed to provide natural ventilation to the units via the installation of vents within the ceilings of habitable areas, this will introduce a path of noise from traffic noise generated from Beecroft Road

In order to comply with the requirements of Condition B11 the natural ventilation system must be upgraded to acoustic louvres on the façade and the ceiling of any unit directly facing Beecroft Road. The following figure shows the propose location of the acoustic louvres

Figure 1-1 Acoustic Louvres



The acoustic louvres must installed at the intake and outtake of the ventilation system and must have a minimum transmission loss as per table below

Table 1-1 Louvre Transmission Loss

Reference	63	125	250	500	1000	2000	4000	8000
SL-150	6	6	8	10	14	18	16	15

The system will be designed to comply with the requirements of Condition B11 with the implementation of the recommendations above

Prepared by:



Camilo Castillo
Principal Acoustic Consultant

Approved by:



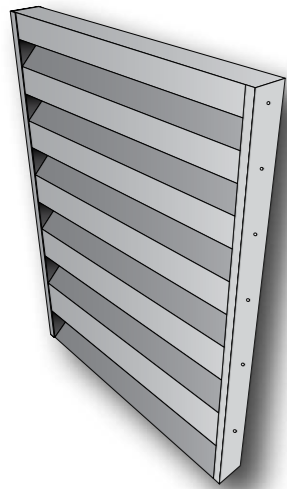
Desmond Raymond
Director

Acoustic Louvre Specifications

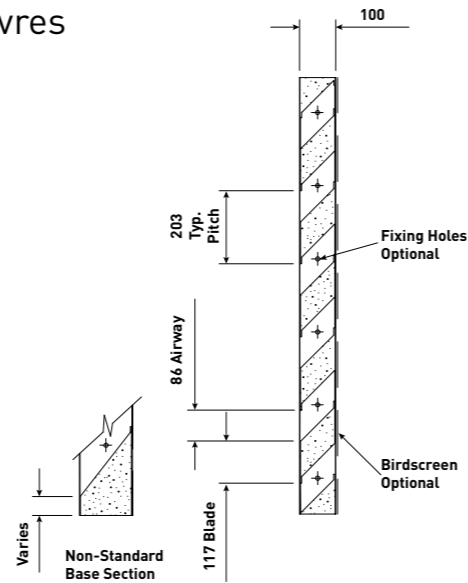
Page

- 14 Noishield™ Acoustic Louvre Type R
- 15 Noishield™ Acoustic Louvre Type 2R
- 16 Noishield™ Acoustic Louvre Type LP
- 17 Noishield™ Acoustic Louvre Type 2LP
- 18 Slimshield™ Acoustic Louvre SL-100
- 19 Slimshield™ Acoustic Louvre SL-150
- 20 Slimshield™ Acoustic Louvre SL-300
- 21 Slimshield™ Acoustic Louvre SL-600

SL-100 Slimshield™ Acoustic Louvres

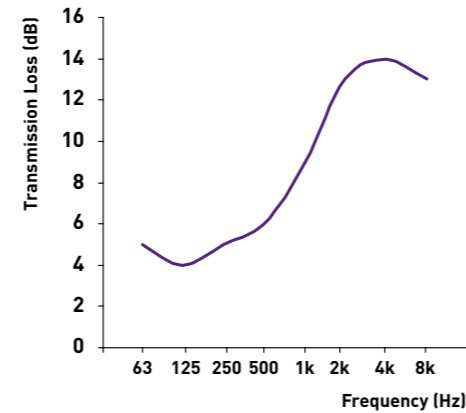


Weight 20kg/m²
Module Width 300 - 1800mm
Standard Module Height 400mm minimum,
 (increasing increments of 203mm)
 Intermediate heights are available



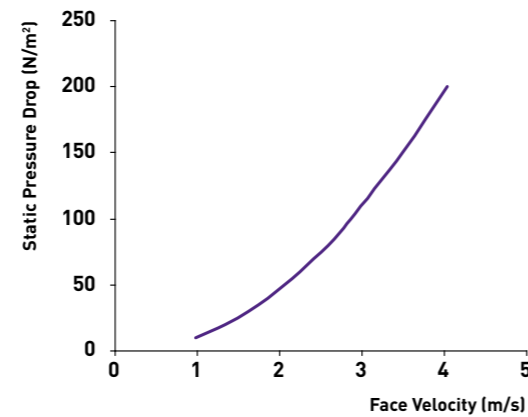
Acoustic Performance

Octave Band Centre Frequency (Hz)	63	125	250	500	1k	2k	4k	8k
Transmission Loss (dB)	5	4	5	6	9	13	14	13
Acoustic Rating	R_w10dB / D_{new}16dB							



Aerodynamic Performance

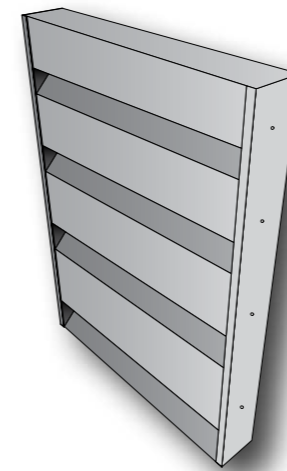
Static Pressure Drop (N/m ²)	10	20	30	40	50	60	70	80	90	100
Face Velocity (m/s)	0.92	1.30	1.59	1.84	2.05	2.25	2.43	2.61	2.76	2.90
Nominal Free Area	52%* * Average over louvre depth									
Aerodynamic Coefficient	19.83k									



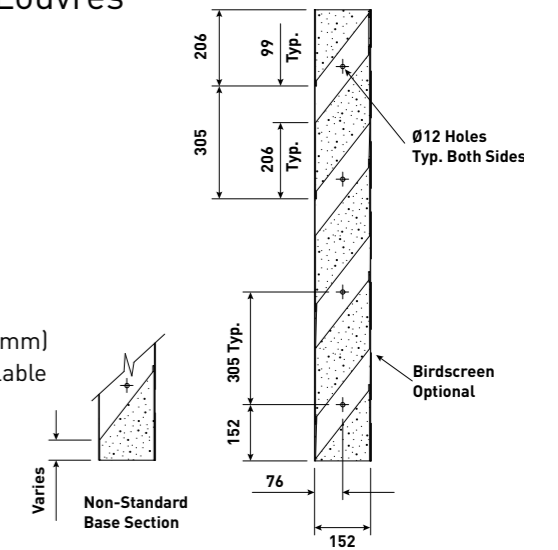
Acoustic Louvred Doors

- Single and double doors are available in the SL-100 louvre range.
- See page 22 for further details

SL-150 Slimshield™ Acoustic Louvres

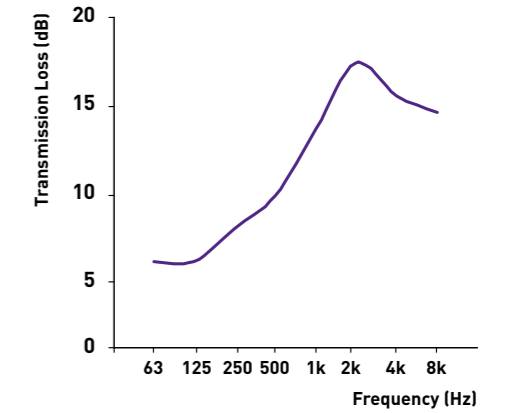


Weight 30kg/m²
Module Width 300 - 1800mm
Standard Module Height 305mm minimum,
 (increasing increments of 305mm)
 Intermediate heights are available



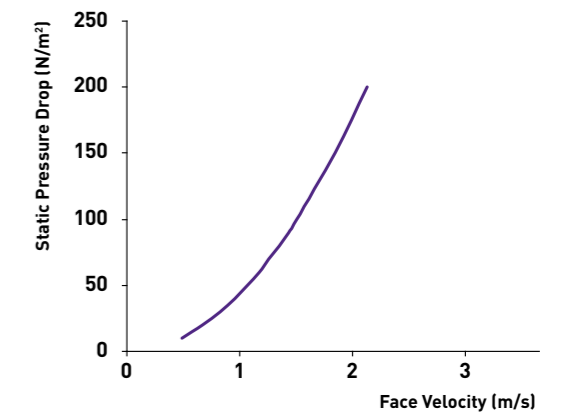
Acoustic Performance

Octave Band Centre Frequency (Hz)	63	125	250	500	1k	2k	4k	8k
Transmission Loss (dB)	6	6	8	10	14	18	16	15
Acoustic Rating	R_w15dB / D_{new}21dB							



Aerodynamic Performance

Static Pressure Drop (N/m ²)	10	20	30	40	50	60	70	80	90	100
Face Velocity (m/s)	0.53	0.73	0.90	1.04	1.16	1.28	1.37	1.47	1.56	1.64
Nominal Free Area	32%* * Average over louvre depth									
Aerodynamic Coefficient	61.93k									



Acoustic Louvred Doors

- Single and double doors are available in the SL-150 louvre range.
- See page 22 for further details