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ADDENDUM REPORT

ROAD/RAIL TRAFFIC NOISE

NO. 21-35 TREACY STREET, HURSTVILLE

Date: 16th December, 2011

Report Reference: R161211mf2001Hurstville.docx

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ADDENDUM REPORT

NO. 21-35 TREACY STREET, HURSTVILLE

1.0 INTRODUCTION

Koikas Acoustics Pty Ltd was commissioned by Henlia No.24 Pty Ltd to undertake an acoustic assessment for the proposed mixed use development at No.21-35 Treacy Street, Hurstville based on the revised architectural drawings.

This addendum report is to be read in conjunction with the previous acoustic report conducted by Koikas Acoustic. Hereafter call the "acoustic report". Acoustic report references are detailed below:

Report Title: *Acoustic Assessment – 21-35 Treacy Street, Hurstville*
Data: *23 November 2010*
Reference: *R231110mf2001.docx*

This addendum report was prepared based on the following revised architectural drawings provided by Stanislav Associates Architects:

<u>Drawing Title</u>	<u>Drawing No.</u>	<u>Date</u>	<u>Revision</u>
LEVEL 1	CD09	14.12.11	H
LEVEL 2	CD10	14.12.11	H
LEVEL 3	CD11	14.12.11	H
LEVEL 4	CD12	14.12.11	H
LEVEL 5	CD13	14.12.11	H
LEVEL 6	CD14	14.12.11	H
LEVEL 7	CD15	14.12.11	H
LEVEL 8	CD16	14.12.11	H
LEVEL 9	CD17	14.12.11	H
LEVEL 10	CD18	14.12.11	H
LEVEL 11	CD19	14.12.11	H
LEVEL 12	CD20	14.12.11	H
LEVEL 13	CD21	14.12.11	H
LEVEL 14	CD22	14.12.11	H
LEVEL 15	CD23	14.12.11	H

The above architectural drawings were also referenced with project no. 10 011.

The following revised Unit Type layout plan has also been provided:

- A1, A2, A5
- B3, B9
- E2, E3, E4, E5, E7, E10, E12, E12R, E15/1, E15/1(OPTION), E16, E17, E18, E20, E21, E22, E23, E24
- F1, F1R, F2
- H3, H4, H5

2.0 NOISE CRITERIA

The rail/road traffic noise criteria used for this assessment is the NSW Government Department of Planning *Development Near Rail Corridors and Busy Roads - Interim Guidelines December 2008*. The noise and vibration criteria nominated in this document is summarised below.

RAIL/ROAD TRAFFIC NOISE CRITERION

If the development is for the purpose of a building for residential use, the consent authority must be satisfied that appropriate measures will be taken to ensure that the following L_{Aeq} levels are not exceeded:

- *in any bedroom in the building : 35dB(A) at any time 10pm-7am*
- *anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time.*

It is also stated that if the internal noise levels with windows and doors open exceed the criteria by more than 10dB(A), the design of the ventilation for that space must be such that the windows and doors can remain closed.

The note to Table 3.1 in Section 3.6.1 Airborne Noise in the *NSW Government Department of Planning Development Near Rail Corridors and Busy Roads - Interim Guidelines December 2008* states that the airborne noise is calculated as:

$$\begin{array}{ll} L_{eq (9hr)} & \text{for nighttime - } 10pm \text{ to } 7am, \text{ and} \\ L_{eq (15hr)} & \text{for daytime - } 7am \text{ to } 10pm. \end{array}$$

In addition to the above, buildings need to be designed and constructed to comply with an **L_{Amax} ground borne noise limit of 40 dBA** during the daytime and 35 dB(A) during the night time measured using the Slow-time weighting on a sound level meter.

3.0 RAIL/ROAD TRAFFIC CALCULATIONS

Some changes has been made to the external building envelop, therefore, calculations of rail/road traffic noise intrusion were carried out so as to ascertain the building materials required to achieve the desired rail/road traffic noise reductions to comply with the nominated noise criterion.

The recommended building materials are provided in **Section 4.0** of this addendum report.

Mechanical ventilation system is required in most of the habitable spaces on account of the high rail/traffic noise levels currently pertaining in this area.

4.0 RECOMMENDATIONS

4.1 SELECTION OF BUILDING MATERIALS

4.1.1 External Walls

The proposed solid masonry wall system with 180 mm of concrete and one layer of 13 mm plasterboard with 28 mm furring channel in the cavity is satisfactory.

4.1.2 Windows/Sliding Doors

The required minimum glazing thickness of the windows and the sliding doors are presented in **Annexure A** attached with this addendum report.

The following are noted:

- ▶ All glazing systems should be built into a solid frame, and
- ▶ All open-able windows and glazed door systems should be air tight when closed.

The recommended glazing requirement provided in **Annexure A** supersedes **Appendix E** of the Acoustic Report.

The calculations were based on that the winter gardens to the southern façade consist of a minimum of 6.38mm thick louvered type windows with rubber seals on the periphery of the glazing and extending along the full length and height of these balustrades.

4.2 MECHANICAL VENTILATION

In order to achieve the indoor design sound levels to habitable spaces from rail/road traffic noise intrusion, windows/doors will be required to be closed for some of the spaces. Therefore in order to meet the Codes and recommendations of relevant Australian Standards it will be necessary to provide mechanical ventilation to these particular spaces.

It is noted that rail/road traffic noise transmitted into the habitable spaces through the mechanical ventilation duct work should be at least 10 dB less than the recommended indoor sound level of road noise intrusion through the building envelope. This can be achieved by using internally lined (rigid grade fibreglass batts 50 mm thick)) metal duct work and selecting a quiet fan unit and properly sealed.

The spaces where mechanical ventilation is required are nominated in the **Annexure A** with glazing schedule.

5.0 CONCLUSIONS

Koikas Acoustics Pty Ltd was requested to review the revised architectural drawings and provided recommendations where necessary to reflect the changes of updated drawings.

All the recommendations provided in the Acoustic Report are to be remained, except **Appendix E**, which has been superseded by **Annexure A** attached with this document.

When the recommendations stated in this addendum report and “Acoustic Report” are faithfully implemented in the design of the proposed residential development at No. 21-35 Treacy Street Hurstville, the nominated rail/road traffic noise criteria will be achieved, therefore satisfying the requirements of Issue No.21 “Noise and Vibration Assessment” of the NSW Government Planning’s Director-General’s requirements, Section 75F of the Environmental Planning Assessment Act 1979.

A N N E X U R E A

Level 1	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0101	L/D	10.38 mm laminated	Yes
		Master Bedroom	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2 / B3	12.38 mm laminated	Yes
	0102 / 0104 / 0105 / 0107 / 0109 / 0110 / 0112 / 0113 / 0116	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0103 / 0106 / 0108 / 0111	L/D	10.38 mm laminated	Yes
		B1 / B2	10.38 mm laminated	Yes
	0114	L/D	10.38 mm laminated	Yes
		B1/B2	6.38 mm laminated*	Yes
		B3	12.38 mm laminated	Yes
	0115 / 0118	L/D	10.38 mm laminated	Yes
		B1/B2	10.38 mm laminated	Yes
	0117	L/D	10.38 mm laminated	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 2	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0201	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2/B3	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0202 / 0204 / 0205 / 0207 / 0213 / 0214 / 0215 / 0216 / 0220 / 0221	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0203	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0206	L/D	10.38 mm laminated	Yes
		B1/B2	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0208 / 0209 / 0210 / 0211 / 0212 (Level 2-3)	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated*	Yes
	0217 / 0222	L/D	10.38 mm laminated*	Yes
		B	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (east)*	Yes
	0218 / 0223 / 0227	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	0219	L/D	10.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	0224	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	12.38 mm laminated	Yes
	0225	L/D	10.38 mm laminated	Yes
		B1 /B2	12.38 mm laminated	Yes
	0226	L/D	10.38 mm laminated (south)	Yes
			6.38 mm laminated (west)*	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 3	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0301	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0302 / 0304 / 0305 / 0307 / 0308 / 0313	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0303	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0306	L/D	10.38 mm laminated	Yes
		B1/B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0309	L/D	12.38 mm laminated*	Yes
		B	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (east)*	Yes
	0310 / 0315 / 0319	L/D	10.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0311	L/D	10.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	0314	L/D	12.38 mm laminated*	Yes
		B	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (east)*	Yes
	0316	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	12.38 mm laminated	Yes
	0317	L/D	10.38 mm laminated	Yes
		B1/B2	12.38 mm laminated	Yes
	0318	L/D	12.38 mm laminated*	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 4 / 5	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0401 / 0501	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0402 / 0403 / 0404 / 0409 / 0413 / 0414 0502 / 0503 / 0504 / 0509 / 0513 / 0514	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0405 / 0505	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0406 / 0506	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	0407 / 0507	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (east)*	Yes
	0408 / 0508	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0410 / 0415 / 0510 / 0515	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated* (east)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0411 / 0416 / 0420 / 0511 / 0516 / 0520	L/D	10.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0412 / 0512	L/D	10.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	0417 / 0517	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	12.38 mm laminated	Yes
	0418 / 0518	L/D	10.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0419 / 0519	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 6	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0601	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0602 / 0603 / 0604 / 0609 / 0613 / 0614	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0605	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0606	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	0607	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0608	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0610 / 0615	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0611 / 0616 / 0620	L/D	6.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes
	0612	L/D	6.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	0617	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	10.38 mm laminated	Yes
	0618	L/D	6.38 mm laminated	Yes
		B1/B2	10.38 mm laminated	Yes
	0619	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 7	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0701	L/D	6.38 mm laminated	Yes
		MB	10.38 mm laminated	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0702	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0703 / 0704 / 0705 / 0710 / 0713	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0706	L/D	10.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0707	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	0708	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
			12.38 mm laminated (east)*	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0709	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0711	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0712	L/D	12.38 mm laminated*	Yes
		B1/B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0714	L/D	6.38 mm laminated (north)	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B1/B2	12.38 mm laminated*	Yes
	0715	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	10.38 mm laminated	Yes
	0716	L/D	6.38 mm laminated	Yes
		B1/B2	10.38 mm laminated	Yes
	0717	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0718	L/D	6.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 8 / 9	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	0801 / 0901	L/D	6.38 mm laminated	Yes
		MB	6.38 mm laminated	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0802 / 0902	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	0803 / 0804 / 0805 / 0810 0903 / 0904 / 0904 / 0910	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	0806 / 0906	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	0807 / 0907	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	0808 / 0908	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0809 / 0909	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	0811 / 0911	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	0812 / 0818 0912 / 0918	L/D	6.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes
	0813 / 0913	L/D	6.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	0814 / 0914	L/D	6.38 mm laminated (north)	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B1/B2	12.38 mm laminated*	Yes
	0815 / 0915	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	10.38 mm laminated	Yes
	0816 / 0916	L/D	6.38 mm laminated	Yes
		B1/B2	6.38 mm laminated	Yes
	0817 / 0917	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 10 / 11	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	1001 / 1101	L/D	6.38 mm laminated	Yes
		MB	6.38 mm laminated	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1002 / 1102	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1003 / 1008 / 1011 / 1012 / 1013 1103 / 1108 / 1112 / 1113	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	1004 / 1104	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	1005 / 1105	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	1006 / 1106	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1007 / 1107	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	1009 / 1014 1109 / 1114	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1010	L/D	12.38 mm laminated*	Yes
		B1/B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1015 / 1019 1110 / 1115 / 1119	L/D	6.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes
	1111	L/D	6.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	1016 / 1116	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	10.38 mm laminated	Yes
	1017 / 1117	L/D	6.38 mm laminated	Yes
		B1/B2	6.38 mm laminated	Yes
	1018 / 1118	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 12	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	1201	L/D	6.38 mm laminated	Yes
		MB	6.38 mm laminated	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1202	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1203 / 1208 / 1212 / 1213	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	1204	L/D	6.38 mm laminated	Yes
		B1	6.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	1205	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	1206	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1207	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	12.38 mm laminated	Yes
	1209	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1210 / 1218	L/D	6.38 mm laminated	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes
	1211	L/D	6.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
	1214	L/D	6.38 mm laminated	Yes
		B1/B2	12.38 mm laminated*	Yes
		B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	
	1215	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated*	Yes
		B2	10.38 mm laminated	Yes
	1216	L/D	6.38 mm laminated	Yes
		B1/B2	6.38 mm laminated	Yes
	1217	L/D	12.38 mm laminated (west)*	Yes
			6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

Level 13 / 14 / 15	Unit	Habitable Space	Minimum Glazing Thickness	Ventilation requirement
	1301 / 1401 / 1501	L/D	5 mm	Yes
		MB	5 mm	Yes
		B2/B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1302 / 1402 / 1502	L/D	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
			12.38 mm laminated (west)*	Yes
		B1	12.38 mm laminated	Yes
		B2	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
	1303 / 1304 / 1305 / 1310 / 1314 / 1315 1403 / 1404 / 1405 / 1410 / 1414 / 1415	L/D	5 mm	Yes
		B1	5 mm	Yes
		B2	5 mm	Yes
	1306 / 1406 / 1506	L/D	5 mm	Yes
		B1	5 mm	Yes
		B2	5 mm	Yes
	1307 / 1407 / 1507	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated	Yes
	1308 / 1408 / 1508	L/D	12.38 mm laminated*	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated	Yes
		B2	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1309 / 1409 / 1509	L/D	6.38 mm laminated	Yes
		B1	12.38 mm laminated	Yes
		B2	6.38 mm laminated	Yes
	1311 / 1411 / 1511	L/D	12.38 mm laminated*	Yes
		B	12.38 mm laminated (east)*	Yes
			10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		S	6.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
	1312 / 1412 / 1512	L/D	5 mm	Yes
		B1	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes
		B2	12.38 mm laminated	Yes
	1313 / 1413 / 1513	L/D	5 mm	Yes
		B1/B2	12.38 mm laminated*	Yes
	1316	L/D	12.38 mm laminated*	Yes
		B1	12.38 mm laminated*	Yes
	1416 / 1516	L/D	5 mm	Yes
		B1/B2	12.38 mm laminated*	Yes
		B3	10.38 mm laminated + 150 mm air gap + 10.38 mm laminated (south)	Yes

* Winter garden with minimum 6.38 mm thick glass louvres are required

A N N E X U R E B





STANISIC ASSOCIATES ARCHITECTS LEVEL 3, 25-35 TREACY STREET HURSTVILLE NSW 1555 T: 02 9550 1111 F: 02 9550 1112 E: info@stanisic.com.au W: www.stanisic.com.au	PROJECT 25-35 TREACY STREET HURSTVILLE NSW	CLIENT HENLIA 24 PTY LTD	REVISIONS NO. DATE DESCRIPTION 01 10/10/11 FOR PRELIMINARY DESIGN 02 11/10/11 FOR PRELIMINARY DESIGN 03 11/10/11 FOR PRELIMINARY DESIGN 04 11/10/11 FOR PRELIMINARY DESIGN 05 11/10/11 FOR PRELIMINARY DESIGN	LEVEL RL 73.80 LEVEL 3	SCALE 1:500 DATE 10/11/11 CD11 REVISION H
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STANISIC ASSOCIATES ARCHITECTS 21-35 TREACY STREET HURSTVILLE NSW	HENLIA 24 PTY LTD	10-15-18 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	10-15-18 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	10-15-18 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	10-15-18 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
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STANISIK ASSOCIATES ARCHITECTS LEVEL 6, 35-45 TREACY STREET SYDNEY, NSW 2049 T: 02 9550 1001 F: 02 9550 1002 E: info@stanisik.com.au WWW.STANISIK.COM.AU	PROJECT 35-35 TREACY STREET HURSTVILLE NSW	CLIENT HENLIA 24 PTY LTD	NO. 16 DATE 2018-11-15 REVISIONS 01-16-17 FOR PRELIMINARY DESIGN 02-16-17 FOR PRELIMINARY DESIGN 03-16-17 FOR PRELIMINARY DESIGN 04-16-17 FOR PRELIMINARY DESIGN 05-16-17 FOR PRELIMINARY DESIGN 06-16-17 FOR PRELIMINARY DESIGN 07-16-17 FOR PRELIMINARY DESIGN	PROJECT TYPE RL 82.75 LEVEL 6	DATE 15-11-17 CD14 CD14 H
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STANBIC ASSOCIATES ARCHITECTS LEVEL 1, 100 RIVER STREET SYDNEY, NSW 2000 T: (02) 9550 1011 F: (02) 9550 1010 E: info@stanbic.com.au W: www.stanbic.com.au	21-35 TREACY STREET HURSTVILLE NSW	PERLJA 24 PTY LTD	PROJECT NO: 2018/001 DATE: 10/04/2018 DRAWING NO: 101 SCALE: 1:500 SHEET NO: 101 TOTAL SHEETS: 101	PL 04.35 LEVEL 10	DRAWN BY: J. SMITH CHECKED BY: J. SMITH DATE: 10/04/2018 SCALE: 1:500 SHEET NO: 101 TOTAL SHEETS: 101
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STANISIC ASSOCIATES ARCHITECTS

STANISIC ASSOCIATES ARCHITECTS
 10/11-12/13
 10/11-12/13
 10/11-12/13
 10/11-12/13



21-35 TREACY STREET
 HURSTVILLE NSW

HENLIA 24 PTY LTD

NO.	DATE	REVISION / DESCRIPTION
1	10/11/13	ISSUED FOR PERMIT
2	10/11/13	ISSUED FOR PERMIT
3	10/11/13	ISSUED FOR PERMIT
4	10/11/13	ISSUED FOR PERMIT
5	10/11/13	ISSUED FOR PERMIT
6	10/11/13	ISSUED FOR PERMIT
7	10/11/13	ISSUED FOR PERMIT
8	10/11/13	ISSUED FOR PERMIT
9	10/11/13	ISSUED FOR PERMIT
10	10/11/13	ISSUED FOR PERMIT

PL 101.05
 LEVEL 12

10011

CO22





STANISIC ASSOCIATES ARCHITECTS LEVEL 15, 104 TREACY STREET SYDNEY NSW 1500 T: 02 9550 1011 F: 02 9550 1012 E: info@stanisic.com.au www.stanisic.com.au	PROJECT 21-35 TREACY STREET HURSTVILLE NSW	CLIENT HEALIA 24 PTY LTD	DATE 15/01/2018 REVISION 1.0 DESCRIPTION PRELIMINARY ARCHITECTURAL DRAWINGS FOR CONSTRUCTION AND CONSTRUCTION PERMITS APPLICATION	PROJECT NO. PL 104.10 LEVEL LEVEL 13	SCALE 1:100 DATE 15/01/2018 DESIGNED BY CD21 CHECKED BY H
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