

## Appendices

### APPENDIX A. DEVELOPMENT CONSENT FOR DEVELOPMENT APPLICATION LDA 2011/0648

City of Ryde  
Civic Centre, Devlin Street, Ryde  
Locked Bag 2069, North Ryde NSW 1670  
Facsimile 9952 8070  
Telephone 9952 8222



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## ***Development Consent***

**Applicant:**        **Architecture & Building Works**  
                         **6/4 Hogben Street**  
                         **KOGARAH NSW 2217**

**Consent No:**      **LDA2011/0648**

**Consent Date:**   **2 May 2012**

**Valid until:**      **2 May 2017**

The City of Ryde, as the consent authority under the provisions of the Environmental Planning and Assessment Act, 1979 hereby consents to the development as follows:

**Property:**        **1-9 Monash Rd Gladesville**        **Lot 1 DP 24099, Lot 4 DP 24099,**  
   **Lot 2 DP 24099, Lot 5 DP 24099,**  
   **Lot D DP 371644, Lot 6 DP**  
   **24099, Lot 3 DP 24099**

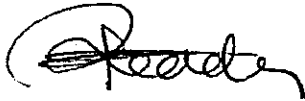
- Development:**
- Demolition of the existing buildings on the development site excluding the cottage located at 9 Monash Road that is listed as a local heritage item.
  - Construction of a six (6) storey mixed use (retail/ residential flat building) development comprising a retail tenancy (2,520m<sup>2</sup>) at the ground floor level, 70 residential apartments (14 x 1 bedroom apartments, 48 x 2 bedroom apartments and 8 x 3 bedroom) over five levels on upper floors, and 204 car parking spaces over three (3) basement levels.
  - Construction and dedication of a new public laneway to allow vehicular access to the site and future vehicular access along the rear of the properties in the street block that face Victoria Road.
  - The strata subdivision of the development upon its completion.
  - Alterations to the heritage cottage including the removal of air conditioning units, boundary walls and replacement of existing carport.

Subject to the conditions 1 to 155 specified in this consent.

You are advised that failure to observe any condition of approval set out in the consent is an offence and legal proceedings may be instituted by Council.

This Consent does not guarantee compliance with the Disability Discrimination Act and you should, therefore, investigate your liability under the Act.

You are advised of your right of appeal to the Land and Environment Court under Section 97 of the Environmental Planning & Assessment Act and your right to request a review of the determination to Council under Section 82A of the Environmental Planning & Assessment Act within 6 months after you have received the Consent.

A handwritten signature in black ink, appearing to read 'Sanju Reddy', with a stylized flourish at the end.

**Sanju Reddy**  
**Senior Town Planner**

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The fees quoted at the time of issue of this Consent may be subject to variation. Council's annual fees and charges are published in the Management Plan. To confirm fees please contact Customer Service on 9952-8222.

## **Conditions of Consent for LDA2011/0648 :-**

### **GENERAL**

The following conditions of consent included in this Part identify the requirements, terms and limitations imposed on this development.

1. **Approved Plans.** Except where otherwise provided in this consent, the development is to be carried out strictly in accordance with the following plans (stamped approved by Council) and support documents:

<b>Plan Numbers:</b>	<b>Document Description</b>	<b>Date</b>	<b>Issue</b>
Drawing #: A-008	Lower Basement Floor – B3 Car Parking	3/4/12	5
Drawing #: A-009	Middle Basement Floor – B2 Car Parking	3/4/12	5
Drawing #: A-010	Upper Basement Floor Plan	3/4/12	5
Drawing #: A-011	Ground Floor Plan - Retail	3/4/12	5
Drawing #: A-012	First Floor Plan	3/4/12	5
Drawing #: A-013	Second Floor Plan	3/4/12	5
Drawing #: A-014	Third Floor Plan	3/4/12	5
Drawing #: A-015	Fourth Floor Plan	3/4/12	5
Drawing #: A-016	Fifth Level - Loft	3/4/12	5
Drawing #: A-017	Roof & Site Plan	3/4/12	5
Drawing #: A-018	Elevations (Monash & Victoria Rd)	3/4/12	5
Drawing #: A-019	Elevations (South & East)	3/4/12	5
Drawing #: A-020	Section AA	3/4/12	5
Drawing #: A-021	Adaptable/ Access Plan	13/12/2011	-
Drawing #: A-022	Adaptable/Access Plan	13/12/2011	-
Drwg #: IS0104DA1	Landscape Plan	March 2012	C
Drwg #: IS0104DA2	Landscape Plan	March 2012	C
Drwg #: IS0104DA3	Landscape Plan	March 2012	C
	Colour Scheme/Montage		
385805M_02	BASIX Certificate	21/11/2011	-

Prior to the issue of a Construction Certificate, the following amendments shall be made (or as marked in red on the approved plans where applicable):

- (a) Unit numbers A6, A7, C10, C16, A10, C21, and A11 are to be designed as adaptable units. Each of these units is to be allocated an *accessible* parking bay.
- (b) The height of the street awning is to be a minimum of 3m measured from the finished pavement level of the footpath.

- (c) The street awning should continue the full length of the Victoria Road street frontage. The awning must not be glazed.
- (d) The planters along the Monash Road footpath (between the front boundary and building wall) are to be deleted. The glazed street front on Monash should not be impeded. The setback area can be paved/ concreted as suited.

The Development must be carried out in accordance with the amended plans approved under this condition.

2. **Building Code of Australia.** All building works approved by this consent must be carried out in accordance with the requirements of the Building Code of Australia.
3. **Excavation Works.** If the development involves excavation that extends below the base of the footings of a building on adjoining land, the person having the benefit of the development consent must, at the person's own expense:
  - (a) Protect and support the adjoining premises from possible damage from the excavation, and
  - (b) Where necessary, underpin the adjoining premises to prevent any such damage, in accordance with relevant Australian Standards.
4. **Advertising Signs:** This consent does not authorise the erection of any signs or advertising structures not indicated on the approved plans. Separate approval must be obtained from Council for any additional signs, unless such signage is "exempt development".
5. **Security Grill:** This consent does not authorise the erection of any security grilles or barriers on the shopfront. Separate approval must be obtained for any such works.
6. **Public Domain Works & Landscaping–** Public domain improvement works including (but not limited to) footpath paving, street tree planting, provision of street lighting along the Victoria Road and Monash Road reserve fronting the subject site is to be carried out by the applicant (at applicant's/developer's cost). Full engineering details, including plans, sections, finished levels and material schedules are to be submitted and approved by Council prior to the issue of any Occupation Certificate. These works are to be completed prior to issue of any Occupation Certificate. All works must be carried out in accordance with the Ryde Public Domain Technical Manual and relevant street tree master plan. The design plans to be submitted to Council are to incorporate the following:
  - (a) Street lighting and footpath paving to be constructed in accordance with DCP2010 (Part 4.6) Gladesville Town Centre and Victoria Road Corridor and Ryde Public Domain Technical Manual and specifications provided by Council's Urban landscape Architect.
  - (b) Overhead powerlines are to be undergrounded along Victoria Road and Monash Road frontages of the property. The developer or the owner shall arrange for electricity and telecommunications utilities to be undergrounded. Such utility modifications will be carried out to the satisfaction of the responsible authority (e.g. Energy Australia) and cost borne by the applicant.
  - (c) The developer or the owner is required to install multifunction poles along the Victoria Road frontage. These poles are to incorporate street lights.

- (d) Street trees along Victoria Road frontage:
  - The street trees are to be 200L *Platanus acerifolia* (London Plane Tree).
  - The planting details are to comply with the drawing 'Vic Rd Planting Details'
  - The groundcover in each tree pit is to be *Liriope muscari* 'Royal Purple'
- (e) Street trees along Monash Road frontage:
  - The street trees are to be 200L. Species to be decided in consultation with Council.
  - Tree pit size and treatment to be decided in consultation with Council.
- (f) The following will apply to the paving to be carried out as part of the public domain works:
  - The grey granite paving is to comply with Council's written specification.
  - Victoria Road, Monash Road and Eltham Street are to be paved in grey granite in accordance with Council's *Ryde Public Domain Technical Manual* (paving type 2).
  - The paving at the corner of Victoria Road and Monash Road and the corner of Monash Road and Eltham Street is to be angled as in the drawing 'Vic Rd Surface Finishes'.
- (g) The developer /owner must ensure that the health of the street trees is guaranteed for a minimum of 2 years to ensure that the character and appearance of the streetscape is established and maintained. Any species that die within two years of planting must be replaced by the applicant with a specimen of a similar size and maturity.
- (h) The footpath must be constructed in accordance with the site-specific street and footpath alignment levels obtained from Council.
- (i) A 3m wide awning is to be erected along the Victoria Road and Monash Road frontage. The awning along Monash Road frontage must have 1m X1m cut outs to allow tree canopy.

7. **Hours of work.** Building activities (including demolition) may only be carried out between 7.00am and 7.00pm Monday to Friday (other than public holidays) and between 8.00am and 4.00pm on Saturday. No building activities are to be carried out at any time on a Sunday or a public holiday.

#### 8. **Hoardings.**

- (a) A hoarding or fence must be erected between the work site and any adjoining public place.
- (b) An awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place.
- (c) Any hoarding, fence or awning erected pursuant this consent is to be removed when the work has been completed.

9. **Public place kept lit:** Any public place affected by works must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place.

10. **Construction within site boundaries.** The development must be constructed wholly within the boundaries of the premises. No portion of the proposed structure shall encroach onto the adjoining properties. Gates must be installed so they do not open onto any footpath.

11. **No obstruction to the public way.** The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances, without prior approval from Council.
12. **Site construction.** The development is to be constructed entirely on the subject site and must not encroach on any other public, private or land owned by the Roads and Maritime Services.
13. **Works on public road.** Compliance with the requirements (including financial costs) of any relevant utility provider (e.g. Energy Australia, Sydney Water, Telstra, RTA, Council etc) in relation to any connections, works, repairs, relocation, replacements and/or adjustments to public infrastructure or services affected by the development.
14. **Works in public road.** Any works performed in, on or over a public road pursuant to this consent must be carried out in accordance with this consent and with the Road Opening Permit issued by Council as required under section 139 of the Roads Act 1993.
15. **Design and Construction Standards.** All engineering plans and work shall be carried out in accordance with the requirements as outlined within Council's publication *Environmental Standards Development Criteria 1999 and City of Ryde Development Control Plan 2010 Section 8* except as amended by other conditions.
16. **Service Alterations.** All mains, services, poles, etc., which require alteration shall be altered at the applicant's expense.
17. **Restoration.** Public areas must be maintained in a safe condition at all times. Restoration of disturbed road and footway areas for the purpose of connection to public utilities will be carried out by Council following submission of a permit application and payment of appropriate fees. Repairs of damage to any public stormwater drainage facility will be carried out by Council following receipt of payment. Restoration of any disused gutter crossings will be carried out by Council following receipt of the relevant payment.
18. **Road Opening Permit.** The applicant shall apply for a road-opening permit where a new pipeline is proposed to be constructed within or across the footpath. Additional road opening permits and fees may be necessary where there are connections to public utility services (e.g. telephone, electricity, sewer, water or gas) are required within the road reserve. No drainage work shall be carried out on the footpath without this permit being paid and a copy kept on the site.
19. **Public Utilities** Should any public utilities, services and/or structures require alterations, relocation and/or removal, it shall be conducted at the applicant's expense, in consultation with the relevant public authority for approval.
20. **Vehicle accessing the site** To ensure that the proposed loading dock and the site access arrangements can be operate in a safe manner, the largest vehicle permitted to access the site, including the loading dock area is to be restricted to a Heavy Rigid Vehicle as defined under AS/NZS 2890.

## DEMOLITION CONDITIONS

The following conditions are imposed to ensure compliance with relevant legislation and Australian Standards, and to ensure that the amenity of the neighbourhood is protected.  
A Construction Certificate is not required for Demolition.

21. **Demolition work.** All demolition work must be carried out in accordance with Australian Standard AS 2601-1991 *The Demolition of Structures*.
22. **Notification of works to Council.** The applicant must notify Council of the following particulars in writing at least seven (7) days before demolition work commences:
- (a) the name, address, telephone contact details and licence number of the person responsible for carrying out the work; and
  - (b) the date the work is due to commence and the expected completion date.
23. **Notification of works to adjoining property owners.** At least seven (7) days before demolition work commences the applicant must notify the occupiers of all neighbouring premises of the date the work is due to commence by placing a written notice in the letter box of each premises.
24. **Asbestos materials.** All work involving asbestos products and materials, including asbestos-cement sheeting (ie. fibro), must be carried out in accordance with the guidelines for asbestos work published by WorkCover New South Wales.
25. **Hours of work.** All demolition and construction work must be restricted to between the hours of 7.00am and 7.00pm Mondays to Fridays and 8.00am and 4.00pm on Saturdays. No work is to be carried out on Sundays or public holidays.
26. **Noise.** Noise must be minimised by the selection of appropriate methods and equipment and the use of screening or barriers where practical.
27. **Noise monitoring.** Noise monitoring must be carried out by a qualified acoustical consultant if complaints are received, or if directed by Council, and any control measures recommended by the acoustical consultant must be implemented during the work.
28. **Removal of wastes.** All demolition and construction wastes must be stored in an environmentally acceptable manner and be removed from the site at such intervals as may be necessary to ensure that no nuisance or danger to health, safety or the environment is created.
29. **Recycling wastes.** All wastes nominated for recycling or re-use must be segregated from other wastes and be transported to a place or facility where they will be recycled or re-used.



30. **Contaminated soil.** All potentially contaminated soil excavated from the site must be stockpiled in a secure area and be assessed and classified in accordance with the *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes* (EPA, 1999) before being transported from the site.
31. **Transportation of wastes.** All demolition and construction wastes must be transported in an environmentally safe manner to a facility or place that can lawfully be used as a waste facility for those wastes. Copies of the disposal dockets must be kept by the applicant for at least 3 years and be submitted to Council on request.
32. **Asbestos wastes.** All asbestos wastes, including used asbestos-cement sheeting (ie. fibro), must be disposed of at a landfill facility licensed by the New South Wales Environment Protection Authority to receive asbestos waste.

### **PRIOR TO CONSTRUCTION CERTIFICATE**

A Construction Certificate must be obtained from a Principal Certifying Authority to carry out the relevant building works approved under this consent. All conditions in this Section of the consent must be complied with before a Construction Certificate can be issued.

Council Officers can provide these services and further information can be obtained from Council's Customer Service Centre on 9952 8222.

Unless an alternative approval authority is specified (eg Council or government agency), the Principal Certifying Authority is responsible for determining compliance with the conditions in this Section of the consent.

Details of compliance with the conditions, including plans, supporting documents or other written evidence must be submitted to the Principal Certifying Authority.

33. **Section 94 Contribution.** A monetary contribution for the services in Column A and for the amount in Column B shall be made to Council prior to the issue of any **Construction Certificate:**

<b>A – Contribution Type</b>	<b>B – Contribution Amount</b>
Community & Cultural Facilities	\$205,169.66
Open Space & Recreation Facilities	\$441,829.84
Civic & Urban Improvements	\$191,145.91
Roads & Traffic Management Facilities	\$32,013.23
Cycleways	\$16,288.74
Stormwater Management Facilities	\$56,613.10
Plan Administration	\$4,383.89
<b>The total contribution is</b>	<b>\$947,444.37</b>

These are contributions under the provisions of Section 94 of the Environmental Planning and Assessment Act, 1979 as specified in Section 94 Development Contributions Plan 2007 (2010 Amendment) adopted by City of Ryde on 16 March 2011.

The above amounts are current at the date of this consent, and are subject to **quarterly** adjustment for inflation on the basis of the contribution rates that are applicable at time of payment. Such adjustment for inflation is by reference to the Consumer Price Index published by the Australian Bureau of Statistics (Catalogue No 5206.0) – and may result in contribution amounts that differ from those shown above.

A copy of the Section 94 Development Contributions Plan may be inspected at the Ryde Planning and Business Centre, 1 Pope Street Ryde (corner Pope and Devlin Streets, within Top Ryde City Shopping Centre) or on Council's website <http://www.ryde.nsw.gov.au>.

34. **Damage security.** The Council must be provided with security for the purposes of section 80A(6) of the *Environmental Planning and Assessment Act 1979* in a sum determined by reference to Council's Management Plan (category: other buildings with delivery of bricks or concrete or machine excavation).
35. **Payment of fees.** The following fees must be paid to Council in accordance with Council's Management Plan:
- (a) Infrastructure Restoration and Administration Fee
  - (b) Enforcement Levy
36. **Long Service Levy.** Documentary evidence of payment of the Long Service Levy under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 is to be submitted to the Principal Certifying Authority prior to the issuing of the **Construction Certificate**.
37. **Comply with Australian Standards.**
- (a) **Relevant Australian Standards:** The development is required to be carried out in accordance with all relevant Australian Standards. Details demonstrating compliance with the relevant Australian Standard are to be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.
  - (b) **Disabled Access & Adaptable Units:** Disabled access is to be provided within the development in accordance with the recommendations contained in the Access Review Report prepared by Architecture and Building Works Pty Ltd dated December 2011. Details indicating compliance with the AS1428 & AS4299, Building Code of Australia and the recommendations contained in the above Report are to be submitted to the Principal Certifying Authority (PCA) prior to the Construction Certificate being issued.
38. **Dilapidation Survey.** A dilapidation survey is to be undertaken that addresses all properties (including any public place) that may be affected by the construction work. A copy of the survey is to be submitted to the PCA (*and Council, if Council is not the PCA*).
39. **Road Opening Permit.** The Council must be provided with evidence that there has been compliance with all matters that are required by the Road Opening Permit issued by Council as required under section 139 of the Roads Act 1993 to be complied with prior to issue of the **Construction Certificate**.

40. **Reflectivity.** Roofing and other external materials must be of low glare and reflectivity. Details of finished external surface materials, including colours and texture must be provided to the Principal Certifying Authority.

41. **Lighting.** Details of lighting for internal driveways, visitor parking areas and the street frontage shall be submitted for approval prior to issue of the **Construction Certificate**. The details are to include certification from an appropriately qualified person that there will be no offensive glare onto adjoining residents.

42. **Basix Commitments.** The development must comply with all commitments listed in BASIX Certificate numbered 385805M\_02, dated 21/11/2011. The fittings, fixtures and materials installed in association with the retail tenancy (including but not limited to hot water systems, ceiling/roof insulation, shower heads, toilet cisterns and the like) shall comply with the requirements of Council's DCP. Details are to be noted on the plans submitted with the **Construction Certificate**.

43. **Motorcycle and bicycle parking.** An area shall be designated for motorbike and bicycle parking on the site within the basement levels. Bicycle parking racks must be provided. Details are to be submitted on the Construction Certificate.

44. **Disabled parking.** Disabled parking should be provided for both residential and commercial activities. At least twelve (12) parking spaces including an accessible parking space are to be provided evenly distributed over all 3 basement level. Details are to be submitted on the Construction Certificate plans.

45. **Access to resident parking.** Access to residential parking should be restricted to residents and their visitors only. Details demonstrating compliance are to be submitted on the Construction Certificate plans.

46. **Driveway access in Monash Road.** The driveway access located between the existing heritage listed building and the proposed building, including the apron crossing on Monash Road shall be designed to incorporate, but not be limited to the following:

- (a) Limited in size, such that it can accommodate the turning manoeuvre of a HRV vehicle entering the site from Eltham Street and exiting via a left turn onto Monash Road only (HRV shall not be permitted to perform a right turn out and into the site from Monash Road). The turning manoeuvre must also allow for the docking manoeuvre of the HRV vehicle without encroaching onto Monash Road footpath. A schematic plan of this arrangement and computer plotted turning paths prepared by a traffic engineer is to be submitted to Council or the PCA prior to issue of a Construction Certificate.

47. **Intercom facility.** An intercom should be provided at the entry to the basement parking. In addition it will also be necessary to provide a median island at the entry to the basement parking so as to provide segregation to opposing traffic flows. Details are to be submitted on the Construction Certificate plans.

48. **Noise requirements.** In order to minimise unnecessary noise generated by the driveway the following measures are to be implemented:

- (a) The paving conditions of the car park and ramps shall be sufficiently smooth and level to ensure minimal vertical displacement and potential for noise generated by wheels to concrete impacts and floor grating impacts.
- (b) The surface of the car park should be covered with surface coating that does not promote squealing of car tyres.
- (c) An acoustic screen of masonry construction to be provided at the property boundary separating the development and 78 Eltham Street. This screen/ acoustic fence must not exceed 1.8m in height measured from existing ground level (pre-development level) on the affected common boundary. The height of the return fence should also be reduced to 1 metre to ensure that it complies with the Council's DCP for Fencing.
- (d) The following is recommended to attenuate noise generated from the external sources:
  - Glazing to achieve appropriate internal noise criteria as per table 11 included in the Acoustic Report prepared by SLR Global Environmental Solutions dated 29 November 2011 (Ref#610.07939.05469).
  - To prevent sleep disturbance, no truck deliveries are to occur during the time period (9:00pm and 7:00am during weekdays and 5:00pm to 8:00am during weekday).

Details are to be submitted on the Construction Certificate plans demonstrating compliance with the above requirements.

49. **Photographic record.** A detailed Photographic Recording of the workshop (proposed for demolition) must be undertaken and submitted for Council's approval and keeping prior to any Construction Certificate being issued.
50. **Waste Storage and Handling Facilities:** A service compartment with a garbage chute hopper and containers for the intermediate storage of recyclables must be provided on each residential floor serviced by the garbage chutes. It is essential that the garbage chute and recycling receptacles are located in the same room. The proposed service compartments must comply with Schedule 4.4 of Part 7.2 of the City of Ryde Development Control Plan 2010. The garbage chutes must comply with Schedule 4.3 of Part 7.2 of the City of Ryde Development Control Plan 2010 and discharge into dedicated garbage rooms on the First Floor. Details demonstrating compliance are to be submitted on the Construction Certificate plans.
51. **Garbage and recycling rooms** must be provided on the First Floor of each unit block for the exclusive use of the residents of that floor separate from the chute room. Details demonstrating compliance are to be submitted on the Construction Certificate plans.
52. **Separate waste and recycling storage** rooms must be provided on the Ground Floor for the storage of residential and commercial waste. These rooms must have separate keys and locking systems to prevent commercial tenants from using the residential waste facilities. Details demonstrating compliance must be submitted on the Construction Certificate plans.
53. **Goods Lift:** A dedicated goods lift must be provided to convey the residential waste containers between the Ground and First Floors. Details demonstrating compliance must be submitted on the Construction Certificate plans.

54. **Garbage room construction:** All garbage rooms, garbage and recycling rooms, and waste storage and recycling rooms must comply with the requirements for waste storage and recycling rooms specified in Schedule 4.2 of Part 7.2 of the City of Ryde Development Control Plan 2010. Details demonstrating compliance must be submitted on the Construction Certificate plans.
55. **Bulky Discarded Items:** A separate room must be provided in a convenient location on the premises for the storage of bulky discarded items such as furniture and white goods. Details demonstrating compliance must be submitted on the Construction Certificate plans.
56. **Full Details for Waste Storage Facility:** Full details of the proposed waste storage and handling facilities must be submitted with the plans and specifications for the **Construction Certificate**.
57. **Road traffic noise.** The residential flat building(s) must be designed and constructed so that road traffic noise levels inside the building(s) comply with the satisfactory design sound levels recommended in Australian/New Zealand Standard AS/NZS 2107: 2000 *Acoustics – Recommended design sound levels and reverberation times for building interiors*, and AS3671-1989 – Traffic Noise Intrusion, when the windows and doors are closed. If the noise level with windows and doors open exceeds the above noise criteria by more than 10dBA, an approved system of mechanical ventilation must be provided so that the building occupants can leave the windows and doors closed.

A report from a qualified acoustical consultant detailing the measures required to comply with the relevant noise criteria must be submitted with the plans and specifications for the **Construction Certificate**.

58. **Mechanical ventilation.** Details of all proposed mechanical ventilation systems must be submitted with the plans and specifications for the **Construction Certificate**. Such details must include:
  - (a) Plans and specifications of the mechanical ventilation systems;
  - (b) A site survey plan showing the location of all proposed air intakes exhaust outlets and cooling towers, and any existing cooling towers, air intakes, exhaust outlets and natural ventilation openings in the vicinity; and
  - (c) A certificate from a professional mechanical services engineer certifying that the mechanical ventilation systems will comply with the *Building Code of Australia* and setting out the basis on which the certificate is given and the extent to which the certifier has relied upon relevant specifications, rules, codes of practice or other publications.

59. **Boundary Levels.** The levels of the street alignment shall be obtained from Council. These levels shall be incorporated into the design of the internal driveway, carparking areas, landscaping and stormwater drainage plans and must be obtained prior to the issue of the construction certificate.

60. **Hoarding Fees.** Where applicable fees shall be paid to Council in accordance with Council's Management Plan, prior to the issue of the Construction Certificate for the

*MUST obtain these from council*

erection of a protective hoarding along the street frontage of the property. The fee is based on Council schedule of fees and charges and is for a period of 6 months. If the time of use of Council's footpath varies from this, an adjustment of the fee will be made on completion of the works.

61. **Road Anchors Fee** Where proposed road anchors are required to support the basement excavation, the applicant shall submit detailed structural plans including certification from a structural engineer specifying the number of proposed anchors to be applied and fees applicable based on Council's Management Plan are to be paid to Council.

62. **Driveway Grades.** The maximum grade of all internal driveways and vehicular ramps shall be 1 in 4 and in accordance with the relevant section of AS 2890.1. The maximum change of grade permitted is 1 in 8 (12.5%) for summit grade changes and 1 in 6.7 (15%) for sag grade changes. Any transition grades shall have a minimum length of 2.0m. The driveway design is to incorporate Council's issued footpath and gutter crossing levels where they are required as a condition of consent. A driveway plan, longitudinal section from the centreline of the public road to the garage floor, and any necessary cross-sections clearly demonstrating that the driveway complies with the above details, and that vehicles may safely manoeuvre within the site without scraping shall be submitted with the Construction Certificate application.

63. **Car Parking.** All internal driveways, vehicle turning areas, garage opening widths, parking space dimensions including headroom clearances and driveway gradients etc shall be designed to comply with relevant sections of AS 2890 for the applicable class. Plans including engineering **certification** indicating compliance with this requirement are to be submitted with the construction certificate application.

64. **Excavation.** The proposed development will result in substantial excavation that has the potential to affect the foundations of adjoining properties.

The applicant shall:-

- Seek independent advice from a Geotechnical Engineer on the impact of the proposed excavations on the adjoining properties.*
- Detail what measures are to be taken to protect those properties from undermining during construction.*
- Provide Council with a certificate from the engineer on the necessity and adequacy of support for the adjoining properties.*

The above matters shall be completed prior to the issue of the construction certificate.

All recommendations of the Geotechnical Engineer are to be carried out during the course of the excavation. The applicant must give at least seven (7) days notice to the owner and occupiers of the adjoining allotments before excavation works commence.

65. **On-Site Stormwater Detention.** Stormwater runoff from the site shall be collected and piped by gravity flow to the existing or new public drainage system via a suitable on-site detention system designed in accordance with City of Ryde, Development

Control Plan 2010: - Part 8.2; Stormwater Management. Accordingly, amended detailed stormwater plans incorporating, but not be limited to the following matters are to be incorporate into the site drainage design.

- a. The stormwater analysis shall be designed using Drains or IIsax computer programs.
- b. The design shall ensure pre-development flows equal post development values for all storm event and durations up to and including the 100 year storm event. With the pre-development flows calculated by assuming the site is 100% grassed pre-development.
- c. All gutters, downpipes and pipeline conveying the runoff to the OSD system shall be designed to cater for the 1 in 100 year storm event.
- d. The OSD design shall incorporate an overflow mechanism to ensure surcharged flow from the OSD system will travel safely to the public road drainage system.

Revised detailed engineering plans, including certification indicating compliance with this condition is to be submitted with the Construction Certificate application. The system is to be cleaned regularly and maintained to the satisfaction of Ryde City Council.

66. **Pump System.** The wet well shall be designed and constructed in accordance with section 7.3 of AS 3500.3. The pumps shall be dual submersible and shall be sized and constructed in accordance with section 7.3 of AS 3500.3.

Direct connection of the pumps rising main into the kerb will not be permitted. The rising main is to be connected into the on site detention tank. Details shall be submitted with the Construction Certificate application.

In the event of pump failure, all runoff that otherwise would have been pumped from the property is to be stored on the site for up to the 100 year Average Recurrence Interval 3 hour storm event. A detailed drainage design by a qualified Civil Engineer is to be submitted with the **Construction Certificate application**. The tank volume is to be determined using the ILSAX drainage program or its equivalent. The rational method is not permitted.

67. **External Road & Drainage Works.** To facilitate safe access to and from the proposed development, the following works are to be constructed at no cost to Council along the entire site frontage to the public roads.

- a. The reconstruction of all damaged and or dilapidated sections of kerb and gutters, footpath.
- b. The removal and replacement of all redundant vehicular lay back and crossing with vertical kerb and gutter and concrete footpath including turfing all disturbed areas as directed by Council's engineer.
- c. The upgrade and amplification of all Council's drainage system where determined necessary under engineering assessment and design to ensure the system will have adequate capacity to accept flows from the subject development.
- d. The relocation and adjustment, including reconstruction and/or construction of new public utilities where determined necessary by Council's engineer.

Detailed engineering plans prepared by a qualified and experienced chartered civil engineer with NPER registration with Engineers Australia, in accordance with City of Ryde Environmental Standards - Development Criteria - 1999 Section 4 - Public Civil Works are to be submitted to, and approved by Council prior to the issue of **Construction Certificate**.

Engineering plans assessment and work inspections fee associated with this work are payable in accordance with Council's Management Plan at the time of approval being given by Council.

68. **Proposed Laneway To be Dedicated.** The proposed laneway to be dedicated to Council shall be designed to incorporate but not be limited to the following:
- a. The proposed road formation shall be 9m wide comprising of 6m wide carriageway and between face of kerbs and 1.5m full width concrete footpath on both sides.
  - b. The road pavement shall be a flexible pavement
  - c. Provision of underground piped drainage designed to collect and piped runoff from the site, laneway including any upstream catchments where applicable for a minimum 1:20 year ARI storm event to Council's existing drainage system in Monash Road.
  - d. The connection of the laneway piped drainage system to the existing Council's drainage system in Monash Road. Accordingly, the Council's drainage system in Monash Road shall be amplified where determined necessary under engineering design and assessment to ensure it has capacity to convey the 1 in 20 storm event.
  - e. An easement of at least 2.5m wide shall be created over the section of Council's pipeline where it traverse over private land located between the existing heritage building the basement carpark. The easement shall be located clear of any structures including eaves etc. Accordingly, the basement western wall will need to be relocated further west by at least approximately 0.5m to comply with this requirement. An unobstructed overland flow path shall be provided above the pipeline for conveyance of overland flows from the Laneway to Monash Road
  - f. Provision of a turning area at the end of the laneway near the entrance to the basement to enable a small rigid vehicle (SRV) to enter and leave in a forward direction.
  - g. Provision of signage prohibiting left turn from Monash Road into the site, including limiting the largest vehicle accessing the site and loading dock area to a Heavy Rigid Vehicle (HRV) as per AS 2890
  - h. The construction of any other necessary works where required to make the construction effective.
  - i. Provision of lighting of the laneway to relevant Australian Standards for street lighting.

Detailed engineering plans prepared by a qualified and experienced chartered civil engineer with NPER registration with Engineers Australia, in accordance with City of Ryde Environmental Standards - Development Criteria - 1999 Section 4 - Public Civil Works are to be submitted to Council for approval prior to the issue of Construction Certificate and works completed prior to the issue of any Occupation



Certificate.

Engineering plans assessment and work inspections fee associated with this work are payable in accordance with Council's Management Plan at the time of approval being given by Council.

69. **Maintenance Bond.** To ensure satisfactory performance of the completed external works, a maintenance period of six (6) months shall apply to all external engineering works completed in relation to this application. The performance period shall commence from Council's Compliance Certificate issue date.

70/300  
The applicant shall be liable for any part of the work which fails to perform in a satisfactory manner as outlined in Council's standard specification. **A bond in the form of a cash deposit or Bank Guarantee of \$40000 shall be lodged with City of Ryde prior to issue of the Construction Certificate to guarantee this requirement will be met.** The bond will only be refunded when the works are determined to be satisfactory to Council after the expiry of the six (6) months maintenance period.

70. **Construction & Traffic Management Plan.** To ensure safe construction traffic flow on site a Traffic Management Plan (TMP) and report shall be prepared by an RTA accredited person and submitted to and approved by Council and RMS prior to issue of Construction certificate.

The TMP shall be prepared in accordance with Australian Standard 1742 – "Manual of Uniform Traffic Control Devices", the RTA's Manual – "Traffic Control at Work Sites" and City of Ryde, Development Control Plan 2006: - Part 8.1; Construction Activities. The TMP is to address but not be limited to the loss of on-street parking, construction vehicles travel routes, safety of the public, materials storage, handling and deliveries including construction traffic parking

Additionally, all traffic controllers on site must be RTA accredited traffic controllers and a minimum of seven (7) days notice shall be given to residents if their access will be affected by proposed construction activities.

71. **Soil and Water Management Plan.** A *Soil and Water Management Plan (SWMP)* shall be prepared by a suitably qualified consultant in accordance with the guidelines set out in the manual "*Managing Urban Stormwater, Soils and Construction*" prepared by the Department of Housing. **This is to be submitted to and approved by the Consent Authority prior to the release of the Construction Certificate.** These devices shall be maintained during the construction works and replaced where considered necessary. Suitable erosion control management procedures are to be practiced during the construction period.

The following details are to be included in drawings accompanying the *Soil and Water Management Plan*:

- (a) Existing and final contours.
- (b) The location of all earthworks, including roads, areas of cut and fill, and regrading.
- (c) Location of all impervious areas.
- (d) **Location and design criteria of erosion and sediment control structures including sediment collection basins.**

- (e) Location and description of existing vegetation.
- (f) Site access point/s and means of limiting material leaving the site.
- (g) Location of proposed vegetated buffer strips.
- (h) Location of critical areas (drainage lines, water bodies and unstable slopes).
- (i) Location of stockpiles.
- (j) Means of diversion of uncontaminated upper catchment around disturbed areas
- (k) Proposed techniques for re-grassing or otherwise permanently stabilising all disturbed ground.
- (l) Procedures for maintenance of erosion and sediment controls.
- (m) Details for any staging of works.
- (n) Details and procedures for dust control.

## **PRIOR TO COMMENCEMENT OF CONSTRUCTION**

**Prior to the commencement of any demolition, excavation or building work the following conditions in this Part of the Consent must be satisfied, and all relevant requirements complied with at all times during the operation of this consent.**

### **72. Site Sign**

- (a) A sign must be erected in a prominent position on site:
  - (i) showing the name, address and telephone number of the Principal Certifying Authority for the work,
  - (ii) showing the name of the principal contractor (if any) or the person responsible for the works and a telephone number on which that person may be contacted outside working hours, and
  - (iii) stating that unauthorised entry to the work site is prohibited.
- (b) Any such sign must be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.

### **73. Excavation adjacent to adjoining land**

- (a) If an excavation extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation must, at their own expense, protect and support the adjoining premises from possible damage from the excavation, and where necessary, underpin the adjoining premises to prevent any such damage.
- (b) The applicant must give at least seven (7) days notice to the adjoining owner(s) prior to excavating.
- (c) An owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this condition, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

**74. Site Fencing.** The site must be fenced throughout demolition and/or excavation and must comply with WorkCover New South Wales's requirements and be a minimum of 1.8m in height.

**75. Sediment and Erosion Control.** The applicant shall install appropriate sediment control devices in accordance with an approved plan **prior** to any earthworks being carried out on the site. These devices shall be maintained during the construction period and replaced where considered necessary. Suitable erosion control

management procedures shall be practiced. This condition is imposed in order to protect downstream properties, Council's drainage system and natural watercourses from sediment build-up transferred by stormwater runoff from the site.

76. **Compliance Certificate.** A Compliance Certificate should be obtained confirming that the constructed erosion and sediment control measures comply with the construction plan and City of Ryde, Development Control Plan 2010: - Part 8.1; Construction Activities.
77. **Pre Construction meeting.** A pre-construction meeting shall be arranged with Council's public works engineer in relation to the staging and inspections requirement for external road and drainage works.

## DURING CONSTRUCTION

Unless otherwise specified, the following conditions in this Part of the consent must be complied with at all times during the construction period. Where applicable, the requirements under previous Parts of the consent must be implemented and maintained at all times during the construction period.

78. **Critical stage inspections.** The person having the benefit of this consent is required to notify the Principal Certifying Authority during construction to ensure that the critical stage inspections are undertaken, as required under clause 162A(4) of the *Environmental Planning and Assessment Regulation 2000*.
79. **Noise and Vibration.** The construction of the development and preparation of the site, including operation of vehicles, must be conducted so as to avoid unreasonable noise or vibration and not cause interference to adjoining or nearby occupations.
80. **Noise and Vibration.** The  $L_{10}$  noise level measured for a period of not less than 15 minutes while demolition and construction work is in progress must not exceed the background noise level by more than 20 dB(A) at the nearest affected residential premises.
81. **Survey of footings and walls.** All footings and walls within 1 metre of a boundary must be set out by a registered surveyor. On commencement of brickwork or wall construction a survey and report must be prepared indicating the position of external walls in relation to the boundaries of the allotment.
82. **Sediment, soil and dust.** No sediment, dust, soil or similar material shall leave the site during construction work.
83. **Excavation material.** Excavated material must not be reused on the property except as follows:
- (a) Fill is allowed under this consent;
  - (b) The material constitutes Virgin Excavated Natural Material as defined in the *Protection of the Environment Operations Act 1997*;
  - (c) the material is reused only to the extent that fill is allowed by the consent.
84. **Site Facilities.** The following facilities must be provided on the site:

- (a) toilet facilities in accordance with WorkCover NSW requirements, at a ratio of one toilet per every 20 employees, and
  - (b) a garbage receptacle for food scraps and papers, with a tight fitting lid.
85. **Site maintenance.** The applicant must ensure that:
- (a) approved sediment and erosion control measures are installed and maintained during the construction period;
  - (b) building materials and equipment are stored wholly within the work site unless an approval to store them elsewhere is held;
  - (c) the site is clear of waste and debris at the completion of the works.
86. **Work within a public road.** At all times work is being undertaken within a public road, adequate precautions shall be taken to warn, instruct and guide road users safely around the work site. Traffic control devices shall satisfy the minimum standards outlined in Australian Standard No. AS1742.3-1996 "Traffic Control Devices for Work on Roads".
87. **Surveillance cameras** must be installed in and around the property to maximise surveillance opportunities. Digital technology should be used to record images from the cameras. Recording equipment is to be installed in a secure area to avoid tampering. Installed surveillance equipment needs to be able to zoom in on a person without loss of focus. It should be maintained in working order and regularly tested. Staff should be trained in the correct use of the system. Any surveillance system should be manufactured and installed by a qualified and reputable company and regularly function tested. Management must ensure that the requirements of the Surveillance and Privacy Act are adhered to.
88. **Landscape maintenance plan must be prepared for the site.** Landscaping close to the building should be regularly maintained to ensure branches cannot act as a natural ladder to gain access to higher parts of the building and trimmed to ensure concealment opportunities are eliminated.
89. **Lighting** shall be provided to all common areas including the car parking levels as well as the stairs and access to and including the public outdoor courtyard, communal gardens and the bin storage rooms. Such lighting to be automatically controlled by time clocks, and where appropriate, sensors to provide an energy efficient and controlled environment for residents.
90. **Signage.** Signage must be provided at entry/exit points and throughout the development to assist users and warn intruders that they will be prosecuted.  
**Warning:** these premises are under constant surveillance  
**Warning: trespassers** will be prosecuted
91. **Use of lifts.** Lifts B & C to be restricted to resident use only. Signage or appropriate control mechanism/ barrier should be implemented to alert the retail customers that those lifts are for residents use only.
92. **Entry exit doors.** The main entry/exit doors to individual units to be fitted with single cylinder locksets (Australia and New Zealand Standard - Lock Sets) to restrict unauthorized access to the unit.

93. **Balcony doors.** The balcony doors to individual units should also be fitted with single cylinder locksets (Australia and New Zealand Standard - Lock Sets) to restrict unauthorized access to the unit.
94. **Windows.** The windows to individual units should also be fitted with key operated locksets (Australia and New Zealand Standard - Lock Sets) to restrict unauthorized access to the unit.
95. **Fire exit doors.** Fire exit doors to the development should be fitted with single cylinder locksets (Australia and New Zealand Standard - Lock Sets) to restrict unauthorized access to the development.
96. **Security of doors.** To prevent forced entry and manipulation of the lockset on doors FS-A1 A2, A3 and FS-A4, a metal covering plate should be fitted on the door.
97. **Lighting of pedestrian pathways.** The lighting of pedestrian pathways within the development shall be designed, installed and maintained to Australian Standard AS1158.3.1 – 1999: Road Lighting Pedestrian Area (Category P) Performance and Installation Design Requirements. Areas besides thoroughfares should be evenly lit to avoid concealment or entrapment opportunities. The same is applicable to communal courtyards and letterbox areas.
98. **Security lighting.** Where security lighting is provided within the development, it should not illuminate observers or vantage points. Light should be projected outwards towards pathways and gates, not towards windows and doors.
99. **Intercom facilities.** Intercom facilities should be incorporated into these entry/exit points to enable residents to communicate and identify with people prior to admitting them to the development.
100. **Heritage works.** All works in relation to the heritage cottage including restoration, removal of air conditioning units, boundary wall treatment and replacing the existing carport must be carried out in accordance with the Conservation Management Plan prepared by Weir Phillips, dated November 2011.
101. **Food Premises:** All proposed food premises must comply with Food Safety Standard 3.2.3: *Food Premises and Equipment* and Australian Standard AS 4674 - 2004 *Design, construction and fit-out of food premises*.
102. **Plumbing and drainage works.** All plumbing and drainage work must be carried out in accordance with the requirements of Sydney Water Corporation.
103. **Grease trap.** A grease trap must be installed if required by Sydney Water Corporation. The grease trap must be located outside the building or in a dedicated grease trap room and be readily accessible for servicing. Access through areas where exposed food is handled or stored or food contact equipment or packaging materials are handled or stored is not permitted.
104. **Air handling and water systems.** All air-handling and water systems regulated under the *Public Health Act 1991* must be installed, operated and maintained in

accordance with the requirements of the *Public Health (Microbial Control) Regulation 2000*.

105. **Relocation of bus stop.** To facilitate construction works it may be necessary to temporarily relocate the bus stop on Victoria Road. Prior to this work occurring, the applicant is to consult with and gain approval from the relevant authorities including Council. All costs associated with the relocation and reinstatement are to be covered by the applicant. The bus stop is to be reinstated prior to the issue of any Occupation Certificate.

#### **PRIOR TO OCCUPATION CERTIFICATE**

An Occupation Certificate must be obtained from a Principal Certifying Authority prior to commencement of occupation of any part of the development, or prior to the commencement of a change of use of a building.

Prior to issue, the Principal Certifying Authority must ensure that all works are completed in compliance with the approved construction certificate plans and all conditions of this Development Consent.

Unless an alternative approval authority is specified (eg Council or government agency), the Principal Certifying Authority is responsible for determining compliance with conditions in this Part of the consent. Details to demonstrate compliance with all conditions, including plans, documentation, or other written evidence must be submitted to the Principal Certifying Authority.

106. **Basix commitments.** The submission of documentary evidence of compliance with all commitments listed in BASIX Certificate referred to in this Development Consent.
107. **Public domain.** All landscaping & public domain improvement works required to be carried out under condition 6 are to be completed.
108. **Consolidation.** All land titles within the site must be consolidated into one allotment. Documentary evidence of such consolidation shall be submitted prior to the issue of any Occupation Certificate under the Environmental Planning and Assessment Act 1979.
109. **Disabled access.** Access for disabled people shall be provided in the building or portion of the building in accordance with the applicable standards and the requirements set out in AS 1428.1. Documentary evidence is to be submitted from a suitable qualified person confirming that the development meets these requirements is to be provided prior to the issue of any Occupation Certificate.
110. **Fire safety matters.** At the completion of all works, a Fire Safety Certificate must be prepared, which references all the Essential Fire Safety Measures applicable and the relative standards of Performance (as per Schedule of Fire Safety Measures). This certificate must be prominently displayed in the building and copies must be sent to Council and the NSW Fire Brigade.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Interim/Final Occupation Certificate.

Each year the Owners must send to the Council and the NSW Fire Brigade an annual Fire Safety Statement which confirms that all the Essential Fire Safety Measures continue to perform to the original design standard.

111. **Road opening permit.** The submission of documentary evidence to Council of compliance with all matters that are required by the Road Opening Permit issued by Council under Section 139 of the *Roads Act 1993* in relation to works approved by this consent.
112. **Sydney Water.** A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. Application must be made through an authorised Water Servicing Co-ordinator. Please refer to the Building Developing and Plumbing section of the web site [www.sydneywater.com.au](http://www.sydneywater.com.au) then refer to "Water Servicing Coordinator" under "Developing Your Land" or telephone 13 20 92 for assistance.

Following application a "Notice of Requirements" will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any Interim/Final Occupation Certificate.

113. **Post construction dilapidation report.** The submission of a post-construction dilapidation report which clearly details the final condition of all property, infrastructure, natural and man-made features that were recorded in the pre-commencement dilapidation report. A copy of the report must be provided to Council, any other owners of public infrastructure and the owners of the affected adjoining and private properties.
114. **Works as executed plan.** A works as executed plan for works carried out in the public domain must be provided to and endorsed by Council.
115. **Letterboxes and street house numbering.** All letterboxes are to be designed and constructed to be accessible from the public way. Council must be contacted in relation to any specific requirements for street numbering.
116. **Connection to Sewer:** All sanitary fixtures must be connected to the sewerage system by gravity flow and documentary evidence of compliance must be submitted to the Principal Certifying Authority before the issue of any **Occupation Certificate**.
117. **Acoustic report required.** A report from a qualified acoustical consultant demonstrating compliance with the relevant noise criteria must be submitted to the Principal Certifying Authority before the issue of an **Occupation Certificate**.
118. **Mechanical ventilation.** Where mechanical ventilation systems have been installed a certificate from a professional mechanical services engineer certifying that the systems comply with the approved plans and specifications must be

submitted to the Principal Certifying Authority before the issue of an **Occupation Certificate**.

119. **Design verification.** Prior to an Occupation Certificate being issued to authorise a person to commence occupation or use of a residential flat building, the Principal Certifying Authority (PCA) is to be provided with a Design Verification from a qualified designer. The statement must include verification from a qualified designer that the residential flat development achieves the design quality of the development shown on plans and specifications in respect to any Construction Certificate issued, having regard to the design quality principles set out in Part 2 of State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development. This condition is imposed in accordance with Clause 154 of the Environmental Planning and Assessment Act, 1979.
120. **Compliance Certificates – Engineering.** Compliance Certificates should be obtained for the following (If Council is appointed the Principal Certifying Authority [PCA] then the appropriate inspection fee is to be paid to Council) and **submitted to the PCA**:
- Confirming that all vehicular footway and gutter (layback) crossings are constructed in accordance with the construction plan requirements and Ryde City Council's *Environmental Standards Development Criteria – 1999 section 4*.
  - Confirming that the driveway is constructed in accordance with the construction plan requirements and Ryde City Development Control Plan 2010: - Part 8.3; Driveways.
  - Confirming that the constructed internal car park and associated drainage complies with AS 2890, the construction plan requirements and Ryde City Council's *Environmental Standards Development Criteria – 1999 section 4 and Development Control Plan 2010: - Part 8.2; Stormwater Management*
  - Confirming that the site drainage system (including the on-site detention storage system) servicing the development complies with the construction plan requirements and City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management
  - Confirming that after completion of all construction work and landscaping, all areas adjacent the site, the site drainage system (including the on-site detention system), and the trunk drainage system immediately downstream of the subject site (next pit), have been cleaned of all sand, silt, old formwork, and other debris.
  - Confirming that the connection of the site drainage system to the trunk drainage system complies with Section 4.7 of AS 3500.3 - 1990 (National Plumbing and Drainage Code).
  - Confirming that the footings adjacent to the drainage easements have been constructed to below the zone of influence in accordance City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management
  - From Council Confirming that external public works including works and laneway to be dedicated to Council have been completed to Council's satisfaction
121. **Disused Gutter Crossing.** All disused gutter and footpath crossings shall be removed and the kerb and footpath reinstated to the satisfaction of Council.
122. **Work-as-Executed Plan.** To ensure all external and internal road and drainage works have been completed in accordance with approved plans, a Work-as-Executed plan for the constructed site drainage system including external road and drainage



works certified by a registered surveyor is to be submitted to the Principal certifying Authority and Council (If Council is not the appointed PCA) prior to issue of Occupation Certificate.

The W.A.E plans is to note all departures clearly in red on a copy of the approved Construction Certificate plans and certification from a qualified and experienced civil engineer should be submitted to support all variations from approved plan

123. **On-Site Stormwater Detention System - Marker Plate.** Each on-site detention system basin shall be indicated on the site by fixing a marker plate. This plate is to be of minimum size: 100mm x 75mm and is to be made from non-corrosive metal or 4mm thick laminated plastic. It is to be fixed in a prominent position to the nearest concrete or permanent surface or access grate. The wording on the marker plate is described in City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management. An approved plate may be purchased from Council's Customer Service Centre on presentation of a completed City of Ryde OSD certification form.
124. **Positive Covenant, OSD.** The creation of a Positive Covenant under Section 88 of the Conveyancing Act 1919, burdening the property with the requirement to maintain the stormwater detention system on the property. The terms of the instruments are to be generally in accordance with the Council's draft terms of Section 88E instrument for Maintenance of Stormwater Detention Systems and to the satisfaction of Council.
125. **Dedication of Road and Creation Of Easement.** The proposed laneway is to be dedicated to Council as public road, including the creation of a minimum 2.5m wide drainage easement over that section of the Council's pipeline traversing over private land, at no cost to Council, prior to the issue of any Occupation Certificate.
126. **Positive Covenant, Vehicle Size Limitation.** The creation of a Positive Covenant under Section 88 of the Conveyancing Act 1919, burdening the property with the requirement to ensure the largest vehicle utilising the loading dock and garbage facility be limited to a Heavy Rigid Vehicle (HRV) as defined under AS 2890

#### **PRIOR TO SUBDIVISION CERTIFICATE**

The following conditions in this Part of the consent apply to the Subdivision component of the development.

All conditions in this Part of the consent must be complied with prior to the issue of a Subdivision Certificate.

127. **Final plan of subdivision.** The submission of a final plan of subdivision plus 3 copies suitable for endorsement by the Authorised Officer of Council.
128. **Final plan of subdivision – title details.** The final plan of subdivision shall contain detail all existing and/or proposed easements, positive covenants and restrictions of the use of land.
129. **Section 88B Instrument.** The submission of an Instrument under Section 88B of the Conveyancing Act 1919 plus 3 copies, creating Easements, Positive Covenants and

Restrictions on Use. This Instrument shall nominate the City of Ryde as the authority empowered to release, vary or modify the terms of the Instrument.

130. **Occupation Certificate.** A final occupation certificate in relation to this development must be in force. A copy of the Occupation Certificate is to be submitted with the application for final subdivision certificate.
131. **Section 73 Certificate.** A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be submitted with the application for final subdivision certificate.
132. **Utility provider – compliance documents.** The submission of documentary evidence of compliance with the requirements (including financial costs) of any relevant utility provider (e.g. Energy Australia, Sydney Water, Telstra, RTA, Council etc).

## OPERATIONAL CONDITIONS

The conditions in this Part of the consent relate to the on-going operation of the development and shall be complied with at all times

133. **Traffic, parking and loading dock requirements.** The following conditions apply to the development on the site in relation to traffic, parking & loading dock management on the site:
- (a) The number of car parking spaces to be provided in the basement car parking area for the retail component shall not exceed 101 spaces and for residential/visitor it must not exceed 103 spaces.
  - (b) Residential garbage is to be prepared for collection by the caretaker who will place bins in the loading area where they can be accessed by the garbage collectors. When the residential garbage has been collected the bins are to be returned to the bin room by the caretaker.
  - (c) All trucks & vehicles accessing the site must do so from Eltham Street entry
  - (d) The number of HRV deliveries to the retail tenancy be limited to 2 per day.
  - (e) The largest truck to service the site must not exceed 12.5m in length (heavy rigid vehicle).
  - (f) Delivery vehicles must be properly docked in the loading/ unloading area before loading or unloading goods.
  - (g) Delivery vehicles must not encroach onto the Monash Road reserve or the footpath at any time while loading or unloading goods.
  - (h) Delivery of goods to and from the site must not occur outside the hours between 7:00am – 9:00pm Monday to Friday and 8:00am – 5:00pm during weekends.
  - (i) Measures must be taken to ensure pedestrian safety and minimum disruption to the flow of pedestrian traffic along the footpath in front of the site and next to the kiosk/ heritage cottage, when delivery vehicle is leaving the site via Monash Road.
  - (j) Heavy vehicles wishing to enter the site must approach the site via Monash Road and then a right-turn into the site from Eltham Street. Appropriate permanent signage is to be displayed on the site at all times to ensure compliance with this requirement.

- (k) Under no circumstances shall heavy vehicles approach the site via a left-turn entry from Eltham Street (east). Appropriate permanent signage and traffic management plan/policy is to be displayed on the site at all times to ensure compliance with this requirement.
- (l) All heavy vehicles will enter the loading dock in a forward direction only.
- (m) Trucks shall not encroach on the pedestrian footpath in Monash Road, except when departing the site.
- (n) All heavy vehicles shall exit the loading dock whilst travelling in a forward direction only.
- (o) All heavy vehicles shall depart the site via a *Left-Turn Only* into Monash Road and proceed directly to Victoria Road.
- (p) HRV shall not be permitted to perform a right turn out and into the site from Monash Road.
- (q) A sign shall be erected at the exit driveway (in Eltham Street) indicating "TO VICTORIA ROAD" with an arrow pointing towards the left to discourage traffic departing the site from using Eltham Street (east).
- (r) A maximum speed limit of driveway is to be 10km/h within the site.
- (s) Prominent notices shall be placed on the site to remind people that minimum amount of noise is to be generated when entering or leaving the premises during night time period.

**134. Traffic and Parking Management Plan.** Prior to the occupation of the retail tenancy, a comprehensive Traffic and Parking Management Plan (TPMP) incorporating (but not limited to) the requirements under condition 133) must be developed by a qualified Traffic Engineer for the owner/ occupier and submitted to Council for approval prior to the occupation of the site. The comprehensive TPMP must provide the following:

- (a) Provision of signage, written instructions, monitoring and training in place to ensure compliance with the TPMP.
- (b) Provision of physical barrier such as a boom gate or the like to prevent vehicles other than heavy vehicles (delivery trucks) from entering the loading area or exiting the site via the driveway on Monash Road.
- (c) Incorporate a Loading Dock Management Plan to adequately manage the loading dock and deliveries of goods to and from the site so as to minimise traffic impact on the locality.
- (d) Provision of Signage to ensure vehicle entry/egress management. This may include (but not be limited to):
  - Signs to be erected on the site in accordance with Australian Standard AS1742: including NO ENTRY, EXIT ONLY, NO RIGHT TURN & LEFT TURN ONLY.
  - Directional arrows at the entry and exit of the development site
  - Traffic Management System put in place to avoid vehicles entering the site via Monash Road.
  - Use of different coloured paving to delineate the laneway, loading dock, manoeuvring area adjacent to the loading dock and the pedestrian/ shared zone adjacent to the Monash Road exit driveway.
- (e) A review of pedestrian movements at the intersection of College, Monash and Eltham Streets to determine the need (if any) for an upgrade in facilities to improve pedestrian safety at that intersection.

135. **Waste Management.** Arrangements must be made with Council for the provision of garbage services to the residential units before occupation commences.
136. **Waste management.** All wastes generated on the premises must be stored and disposed of in an environmentally acceptable manner.
137. **Waste management.** An adequate number of suitable waste containers must be provided on the premises for the storage of all wastes likely to be generated between collections.
138. **Waste management.** Wastes for recycling must be stored in separate bins or containers and be transported to a facility where the wastes will be recycled or re-used.
139. **Waste management.** Staff or contractors must be employed to:
- (a) Take the recyclables from the service compartments to the residential waste storage and recycling room.
  - (b) Take the waste containers from garbage rooms and garbage and recycling rooms to the residential waste storage and recycling room and to replace the containers as required.
  - (c) Take the waste containers from residential waste storage and recycling room to the container emptying point for servicing and to return the containers to the room after servicing.
140. **Liquid waste.** All liquid wastes generated on the premises must be treated and discharged to the sewerage system in accordance with the requirements of Sydney Water Corporation or be transported to a liquid waste facility for recycling or disposal.
141. **Trade Waste Permit.** The applicant must contact the Wastewater Source Control Branch of Sydney Water Corporation on Tel. 13 11 10 to determine whether a Trade Waste Permit is required before discharging any trade wastewater to the sewerage system.
142. **Maintenance of waste storage area.** All waste storage areas must be maintained in a clean and tidy condition at all times.
143. **Use of the premises.** The use of the premises, including any plant or equipment installed on the premises, must not cause the emission of smoke, soot, dust, solid particles, gases, fumes, vapours, mists, odours or other air impurities that are a nuisance or danger to health.
144. **Any discharges to the atmosphere.** Any discharge to atmosphere from the premises must comply with the requirements of the *Protection of the Environment Operations (Clean Air) Regulation 2010*.
145. **Noise pollution.** The use of the premises must not cause the emission of 'offensive noise' as defined in the *Protection of the Environment Operations Act 1997*.
-

146. **Restriction to delivery truck movements.** Delivery truck movements must be restricted to between the times of 7.00am and 10.00pm.
147. **Operation of plant or machinery.** The operation of any plant or machinery installed on the premises must not cause:
- (a) The emission of noise that exceeds the background noise level by more than 5dBA when measured at the most affected noise sensitive location in the vicinity. Modifying factor corrections must be applied for tonal, impulsive, low frequency or intermittent noise in accordance with the New South Wales Industrial Noise Policy (EPA, 2000).
  - (b) An internal noise level in any adjoining occupancy that exceeds the recommended design sound levels specified in Australian/New Zealand Standard AS/NZS 2107:2000 *Acoustics – Recommended design sound levels and reverberation times for building interiors*.
  - (c) The transmission of vibration to any place of different occupancy.
148. **Satisfaction of noise requirements.** A report from a qualified acoustical consultant demonstrating compliance with the above noise criteria must be submitted if requested by Council.
149. **Water pollution.** Only clean unpolluted water is permitted to enter Council's stormwater drainage system.
150. **Duty to notify pollution incidents.** Pollution incidents causing or threatening harm to the environment must be reported immediately to all relevant authorities in accordance with Section 148 of the Protection of the Environment Operations Act 1997.
151. **Traffic and Parking Management Plan.** Owner/ operator must ensure compliance with the Traffic and Parking Management Plan.
152. **Public Health Act.** All water-cooling and warm-water systems regulated under the *Public Health Act 1991* must be registered with Council within one (1) month of installation.
153. **Hours of operation.** The use of the retail part of the development is restricted to the following hours of operation: 7.00am and 9pm Monday to Saturday and 8.00am to 8pm on Sunday.
154. **Service infrastructure/ utilities.** All service infrastructure/ utilities including electrical substations, fire hydrants, gas meters and the like shall be located within the building envelope. Where this is not possible and subject to Council approval such infrastructure shall be located on the subject site and appropriately screened from view. Details of all service infrastructure/ utilities are to be approved prior to the issue of the Construction Certificate.
155. **Shopping Trolleys:** A mechanism, to the satisfaction of the Council, must be installed and maintained at all times, to prevent shopping trolleys being taken from the site.

**End of consent**

## Appendices

**APPENDIX B.      AMENDED ACOUSTIC REPORT PREPARED BY SLR CONSULTING DATED 18 APRIL  
2013 AND FURTHER MEMO DATED 10 MAY 2013**

# MEMORANDUM

610.11805.00100 Memorandum 20130510

mirwan@optusnet.com.au Mirwan Hanna  
Hanna & Hanna Group Pty Ltd

DATE: 10 May 2013  
NO OF PAGES: 1  
TO BE MAILED: No

## CONFIDENTIALITY

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Dear Mirwan

## **JRPP 2013SYE005 1-9 Monash Road & 407-417 Victoria Road Delivery Truck Noise Emission**

This document is based on the findings of the Noise Impact Assessment prepared by SLR Consulting report no. 610.11805-R4, dated 18 April 2013. It is understood that the proponent wishes to use the proposed ALDI loading bay for a 15.2m delivery truck.

In reference to Section 11 of the *JRPP report 2013SYE2013 dated 15 May 2013*, a "4.7m high barrier wall between the subject site and 78 Eltham Street" the modelled wall is inclusive of a 1.86m retaining wall with the addition of a 1.8m acoustic masonry wall and 1.1m high Perspex wall as per report 610.11805-R4 Figure 11. SLR does not warrant the conclusion of any acoustic data and findings as per Section 11 of the JRPP report.

In the absence of the masonry and Perspex wall on the boundary of the subject site and 78 Eltham Street, SLR fully supports the delivery times between 7.00am to 10.00pm 7 days. This also extends the approval of trading hours between 7.00am to 9.00pm Monday to Saturday and 7.00am to 9.00pm on Sunday. Based on our modelled results and previous experience with industrial development assessments, we anticipate the noise emission to the adjacent property will comply within the hours of 7.00am and 10.00pm, 7 days on the condition that a 1.8m high boundary fence with a 1m return fence is implemented as per Condition 48 of LDA2011/0648.

It is our opinion that the 15.2m truck movements would result in compliance within the revised hours of 7.00am and 10.00pm, 7 days to the surrounding residential dwellings and compliance with trading hours of 7.00am to 9.00pm Monday to Saturday and 7.00am to 9.00pm on Sunday.

Yours sincerely



Zul Khasmuri  
Project Consultant – Acoustics and Vibration





global environmental solutions

s96 Application Number NOD2012/0207  
Proposed Mixed Use Development  
407-417 Victoria Road & 1-9 Monash Road  
Gladesville

Report Number 610.11805-R4

18 April 2013

Hanna & Hanna Group  
12/27 Crinan Street  
HURLSTONE PARK NSW 2193

Version: Revision 4

# s96 Application Number NOD2012/0207

## Proposed Mixed Use Development

### 407-417 Victoria Road & 1-9 Monash Road

### Gladesville

#### PREPARED BY:

SLR Consulting Australia Pty Ltd  
ABN 29 001 584 612  
2 Lincoln Street Lane Cove NSW 2066 Australia

(PO Box 176 Lane Cove NSW 1595 Australia)  
T: 61 2 9428 8100 F: 61 2 9427 8200  
E: sydney@slrconsulting.com www.slrconsulting.com

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Hanna & Hanna Group.  
No warranties or guarantees are expressed or should be inferred by any third parties.  
This report may not be relied upon by other parties without written consent from SLR Consulting.

SLR Consulting disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

#### DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.11805-R4	Revision 4	18 April 2013	Zul Khasmuri	Mark Blake	Zul Khasmuri
610.11805-R4	Revision 3	14 March 2013	Zul Khasmuri	Mark Blake	Zul Khasmuri
610.11805-R2	Revision 2	17 December 2012	Zul Khasmuri	Mark Blake	Rodney Stevens
610.11805-R1	Revision 1	17 December 2012	Zul Khasmuri	Mark Blake	Rodney Stevens

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### APPENDICES

Appendix A	Statistical Ambient Noise Levels – Victoria Road
Appendix B	Statistical Ambient Noise Levels – Monash Road & Eltham Street

## 1 INTRODUCTION

Hanna & Hanna Group Pty Ltd, on behalf of the proponent, is proposing to construct a six (6) storey building at 1-9 Monash Road, Gladesville and 407 417 Victoria Road Gladesville. Accordingly, SLR Consulting Australia Pty Ltd (SLR Consulting) has been engaged by Hanna & Hanna Group to provide a Noise Impact assessment for the development and in support of the subject development application in order to satisfy the requirements of the *State Environmental Planning Policy* (SEPP), Industrial Noise Policy (INP) and The City of Ryde Council.

The nearest residential receivers are located approximately 9 m to the north-east of the site and will remain the nearest when the facility is in operation.

This report presents the criteria documented by the SEPP infrastructure, assesses the proposed development against the documented design objectives and controls, and where required, provides design recommendations to promote the acoustical amenity of the proposed dwelling.

## 2 PROJECT DESCRIPTION

### 2.1 Site Location

The site is located at 1-9 Monash Road (at the corner of Victoria Road), Gladesville as shown in **Figure 1**. The site is zoned mixed use.

**Figure 1 Site Location**

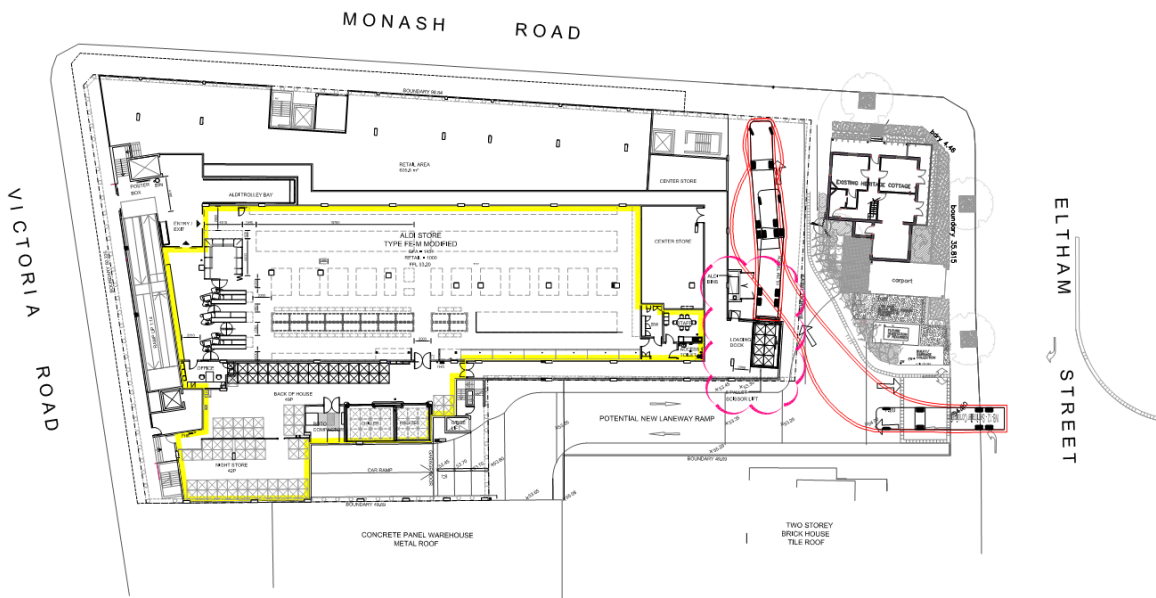


Note: Image courtesy of Google Earth.

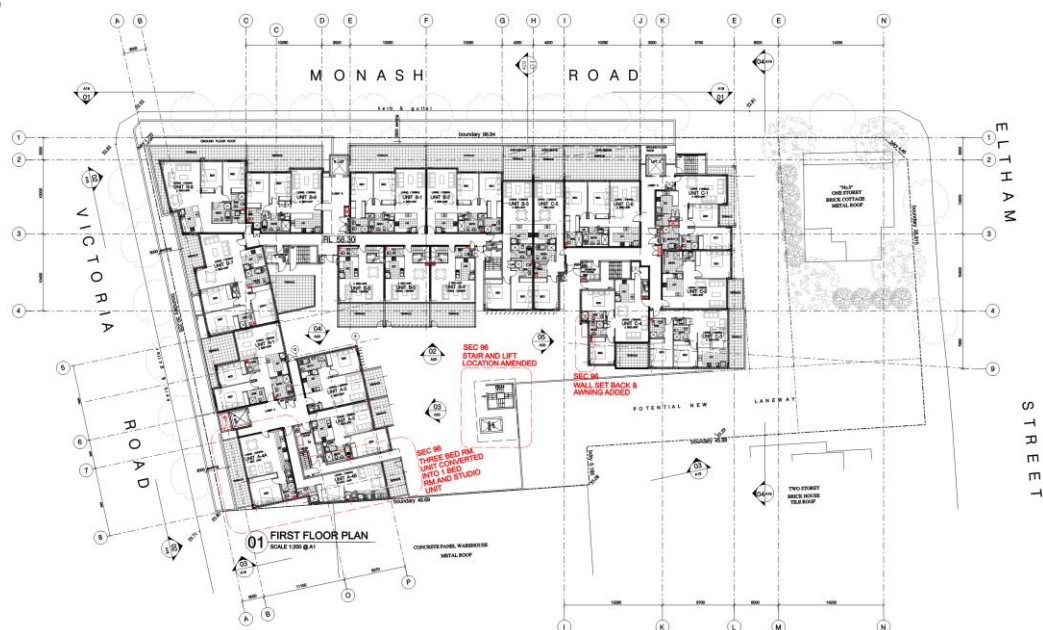
## 2.2 Proposed Development

The proposed development will comprise of a 6 (six) storey mixed use development with retail tenancy on the ground floor and 74 residential apartments. The ground and fourth floor plans are shown in Figure 2 to Figure 7.

**Figure 2 Proposed Ground Floor Plan**

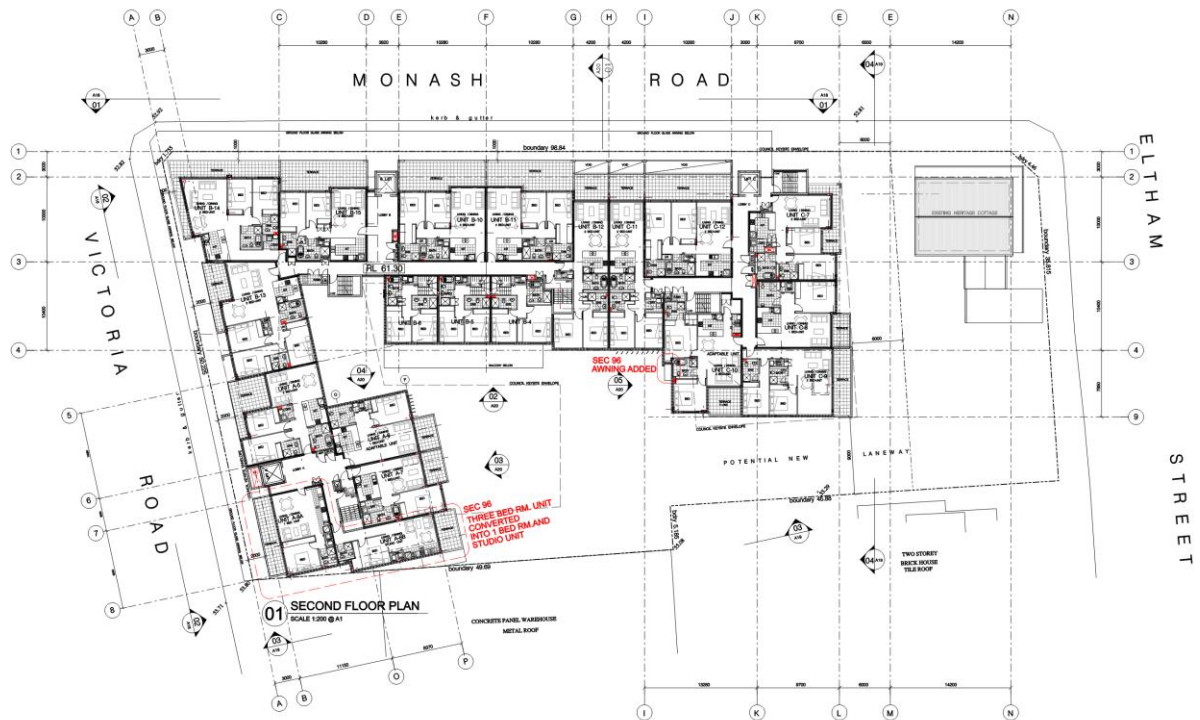


**Figure 3 Proposed First Floor Plan**

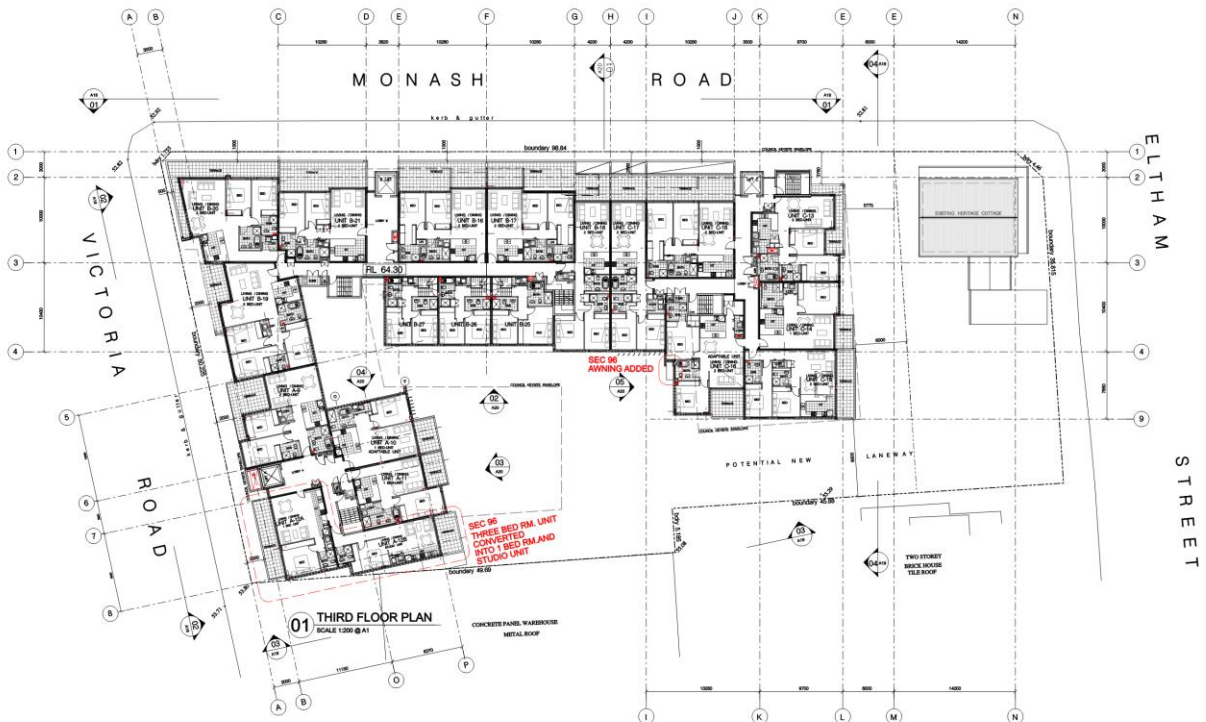




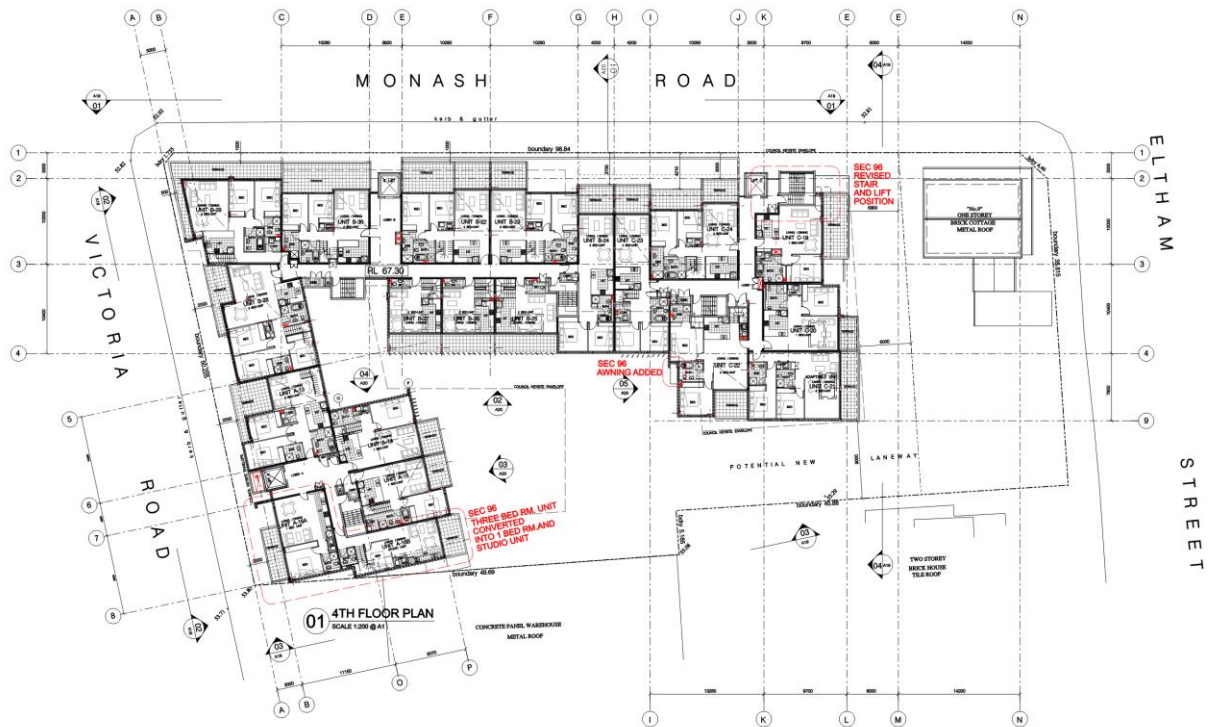
**Figure 4 Proposed Second Floor**



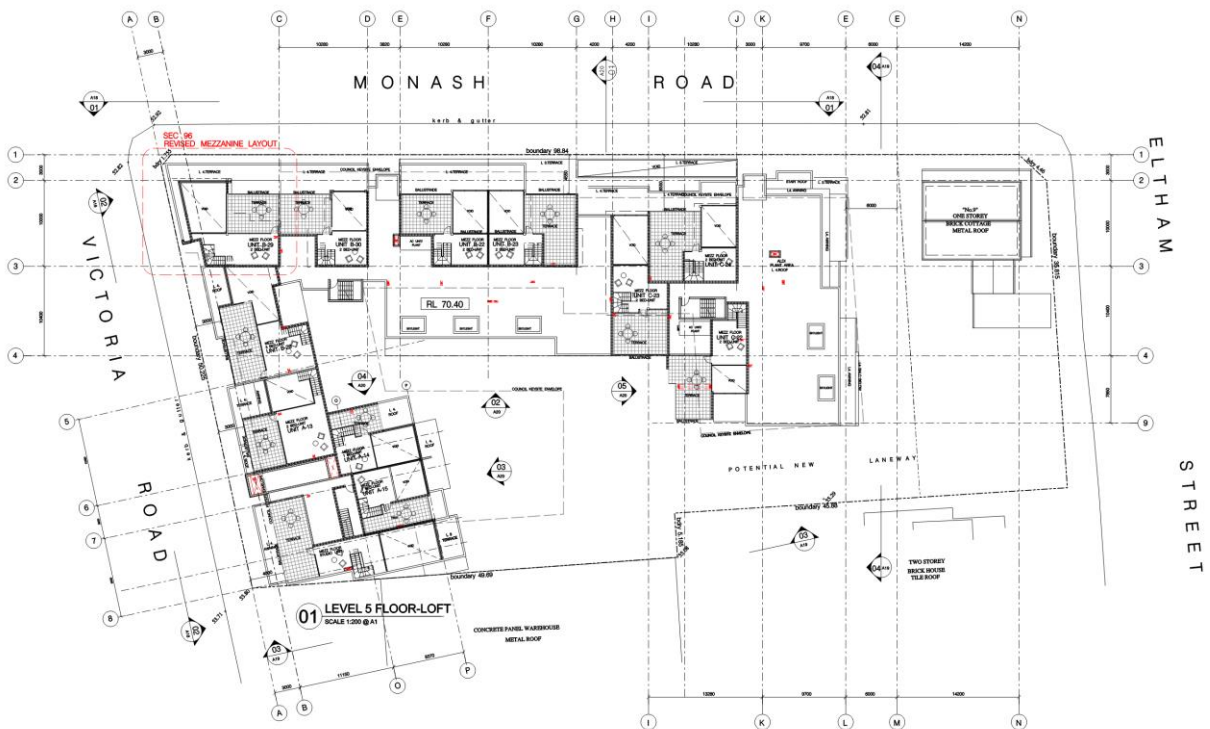
**Figure 5 Proposed Third Floor**



**Figure 6 Proposed Fourth Floor**



**Figure 7 Proposed Fifth Floor**





### 3 EXISTING AMBIENT NOISE LEVEL

Ambient noise level measurements were carried out from Monday 15 October 2012 to Tuesday 23 October 2012.

The measurements were carried out in the “A” weighting scale using an ARL Type 1 (EL 316) Environmental Noise Logger (serial number 16-207-050). This noise logger continuously records noise levels over the entire 24 hour period, and records relevant statistical noise levels for each 15 minute interval.

Calibration of the noise logger was checked prior to and following the measurements using an ARL ND9 Calibrator. The drift in calibration during pre and post measurements did not exceed  $\pm 0.5$  dBA.

The measurement locations were selected to acquire ambient noise levels indicative of those experienced in the vicinity of the proposed site. Location one was at the ground-floor of the nearest residential premises approximately 10 m to the north-east of the site, corner of Monash Road and Eltham Street and Location two on ground level, 436 Victoria Road as shown in **Figure 1**. Please note, SLR Consulting were aware of the boundary fence located on the corner of Eltham Street and Monash Road and as such have made adjustments to accommodate the most suitable position.

#### 3.1 Survey Results

The results of the noise monitoring have been processed in accordance with the procedures contained in the EPA’s Industrial Noise Policy so as to establish representative noise levels that can be expected on site. The results of this analysis are presented in **Table 1**.

**Table 1 Measured Ambient Noise Levels Corresponding to Defined INP Periods**

Location	Measurement Descriptor	Measured Noise Level - dBA re 20 $\mu$ Pa		
		Daytime 7.00 am - 6.00 pm	Evening 6.00 pm 10.00 pm	Night-time - 10.00 pm - 7.00 am
Corner Monash Rd and Eltham Street.	LAeq	61	58	56
	RBL	54	41	34
436 Victoria Road.	LAeq	65	63	61
	RBL	53	50	38

### 4 ROAD TRAFFIC ASSESSMENT METHODOLOGY

Traffic noise level has been determined by noise modelling using the Calculation of Road Traffic Noise (CoRTN) prediction method. Unattended noise monitoring was conducted at the proposed development site between Monday 15 October and Tuesday 23 October 2012 and the data used to calibrate the noise model.

The development site was inspected and assessed prior to noise monitoring process. Placement of the noise logger was chosen to be representative of the noise environment relevant to this study.

Two (2) ARL (Type 315 serial number 16207048 & 16207050) noise loggers was positioned at the selected location identified in **Figure 1** to continuously record ambient noise levels at the site. The logger was calibrated before and after the noise monitoring with a drift in noise levels not exceeding  $\pm 0.5$  dBA. The sample time interval was set at 15 minutes and the time weighting function set to “Fast”.

## 5 NOISE CRITERIA

The control of noise emission in NSW is vested in Local Government and the Environment Protection Authority (EPA). Noise emissions from the proposed facility should therefore be assessed in accordance with:

- The EPA's Industrial Noise Policy (INP) for mechanical noise emissions – including stationary and moving vehicles while on site.
- The SEPP's Criteria for Road Traffic Noise (CoRTN) for trucks and car related noise emissions – while the vehicles associated with the site are off site and are travelling to or from it.
- The recommendations set out in the EPA's Environmental Noise Control Manual (ENCM) and SEPP's CoRTN for sleep disturbance associated mainly with truck-related noise events at night-time.

### 5.1 Road Traffic Noise

The State Environmental Planning Policy (Infrastructure) 2007 (the 'Infrastructure SEPP') contains a specific clause, Clause 102, relating to residential development of land that may be adversely affected by road noise:

*"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 LAeq levels are not exceeded:*

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

The NSW Department of Planning and infrastructure (DoPI) document *Development near Rail Corridors and Busy Roads - Interim Guideline* (The Guideline) is intended to provide guidance on the planning, design and assessment of development adjacent to busy roads in order to meet the requirements of the infrastructure SEPP. The guideline states that the criteria in Clause 102 of the Infrastructure SEPP are mandatory if the traffic count is greater than 40,000 Average Annual Daily Traffic (AADT), or if the road is a freeway, tollway or transit way, otherwise the criteria are advisory. Victoria Road carries greater than 40,000 vehicles per day.

Accordingly, the noise assessment in DoPI's *Development near Rail Corridors and Busy Roads - Interim Guideline* has been adopted for the purposes of this assessment.

### 5.2 Industrial Noise Policy (INP)

The EPA oversees the INP which provides a framework and process for deriving criteria to control "industrial" noise emissions from any on-site activities – such as on-site truck movements, air conditioning condensers and exhaust fans – associated with proposed developments. The criterion is designed to avoid noise from proposed developments impacting upon the acoustic amenity of nearby premises.

The INP provides separate criteria for controlling intrusive noise levels to, and general noise amenity of, residential receivers during daytime, evening and night-time periods.

- Controlling the "intrusive" noise impacts for residents and other sensitive receivers in the short term; and
- Maintaining noise level "amenity" for particular land uses for residents and sensitive receivers in other land uses.

When the potential receivers are commercial or other industrial premises, only the "amenity" criterion applies – and only for the time of day that those premises are in use.

### 5.3 Sleep Disturbance

Truck deliveries within the loading dock between 10.00 pm and 7.00 am it is also necessary to assess the potential impact of sleep arousal from activities at the loading dock. The Office of Environment and Heritage (OEH) *Noise Guide for Local Government* recommends a screening criterion the LA1 1<sub>minute</sub> noise level should not exceed the background LA90 level by more than 15 dBA.

Delivery is proposed between 6.00 am and 7.00 am, the LA90 at 78 Eltham Street during that period provides the appropriate criterion. Although the RBL for the entire night time period (10.00pm to 7.00am) is 38 dBA, during the hour from 6.00 am to 7.00 am, traffic on Victoria Road and other local road is increasing, and the LA90 is 41dBA. This gives an initial sleep disturbance goal of LA1 1<sub>minute</sub> 56 dBA at all locations.

The OEH's Road Noise Policy (RNP) discusses sleep disturbance in more detail. It states that although the triggers for and effects of sleep disturbance have not been conclusively determined, it can be concluded that:

*“maximum internal noise levels below 50–55 dB(A) are unlikely to awaken people from sleep; and*

*one or two noise events per night, with maximum internal noise levels of 65–70 dB(A), are not likely to affect health and wellbeing significantly.”*

For one delivery during the night time period, an appropriate goal is an internal noise level of 55 dBA. Noise reduction through an open window is typically 10 dBA, so to achieve 55d dBA, the maximum external level should be 65 dBA. Accordingly the noise goal for sleep disturbance is LA1, 1<sub>min</sub> 65 dBA at the residential façade.

### 5.4 Intrusiveness

For assessing intrusiveness, the background noise generally needs to be measured. The intrusiveness criterion essentially means that the equivalent continuous noise level (LAeq) of the source should not be more than 5 dBA above the measured Rated Background Level (RBL), over any 15 minute period.

The RBL is the background noise level used for assessment purposes and is the median of the daily background noise levels during each assessment period. The LAeq noise level is the energy-averaged noise level during each assessment period

### 5.5 Amenity

The amenity criterion is based on land use and associated activities (and their sensitivity to noise emission). The cumulative effect of noise from industrial sources needs to be considered in assessing the impact. The criteria relate only to other industrial-type noise sources and do not include road, rail or community noise. The existing noise level from industry is measured. If it approaches the criterion value, then noise levels from new industrial-type noise sources, (including air-conditioning mechanical plant) need to be designed so that the cumulative effect does not produce total noise levels that would significantly exceed the criterion. For areas of high road traffic, there are further considerations that influence the selection of the noise criterion.

The LAeq noise levels within an area from all existing and new industrial development should not normally exceed the acceptable noise levels specified in **Table 2**. Where existing LAeq noise levels approach or exceed the acceptable noise levels given in **Table 2**, LAeq noise design criteria for a new development are set below the existing LAeq levels in order to limit any further increase or “creep” in the ambient LAeq noise levels.

## 5.6 Area Classification

We have deemed this area to fall under the “Urban Area” classification. The INP characterises an urban area as an area that is dominated by ‘urban hum’ or industrial source noise and/or is near commercial districts or industrial districts, or any combination thereof.

## 5.7 Project Specific Noise Level

Having defined the area type, the processed results of the unattended noise monitoring have been used to generate “project specific” noise criteria.

**Table 2 Criteria for Industrial Noise Emissions to Nearby Residences**

Location	Time of Day	ANL (LAeq) <sup>1</sup> (dBA)	Measured RBL (LA90) <sup>2</sup> (dBA)	Measured LAeq Noise Level (dBA)	Intrusive LAeq Criterion for New Sources (dBA)	Amenity LAeq Criterion for New Sources (dBA)
Residential Receiver	Day	60	50	61	55	<b>55</b>
	Evening	50	41	58	46	<b>47</b>
	Night	45	34	56	39	<b>45</b>

Note 1: ANL: Acceptable Noise Level for an “Urban” area

Note 2: RBL: Rating Background Level

Note 3: Assuming existing noise levels are unlikely to decrease

Note 4: Project Specific Criteria are shown in bold

## 6 NOISE ASSESSMENT

### 6.1 Road Traffic Flows

The AADT traffic volume figures for Victoria Road at this location are sourced from the RMS (Roads & Maritime Services) database. **Table 3** outlines traffic flow for 2012. The posted speed limit on the road is limited to 60 km/h.

**Table 3 Victoria Road Traffic Flows**

Year	Total Vehicles (AADT)	5% Heavy Vehicles
2012	80435	4022

Notes: Figures were based on 2005 data with calculated growth of 1.5% per annum.

### 6.2 Predicted External Noise Levels

The predicted external daytime and night-time LAeq noise levels are shown in **Table 4** for all facades of the proposed development.

**Table 4 Predicted External Noise Levels due to traffic on Victoria Road for Year 2022**

Year	Facade	Daytime LAeq(15hour) dBA	Night-time LAeq(9hour) dBA
2012	Northeast	63	61
	Southeast	58	54
	Southwest <sup>1</sup>	72	68
	Northwest	62	58

Note 1: A distance of 3 m between the southwest facade and Victoria Road has been assumed. This distance is based on Development Application drawings provided by Architecture & Building Works.

### 6.3 Road Traffic Noise Intrusion

The potentially most affected facade of the proposed development, the south west facade, will experience LAeq(15hour) daytime noise levels of around 72 dBA and LAeq(9hour) night-time noise levels of around 68 dBA from road traffic on Victoria Road.

Standard window glazing (4 mm thickness) of a building will typically attenuate these noise levels by up to 20 dBA with windows closed and 10 dBA with windows open (allowing for natural ventilation). The predicted internal noise levels with standard facade glazing are presented in **Table 5** for the windows open and windows closed scenarios for all facades.

**Table 5 Predicted 2022 Internal Road Traffic Noise Levels - Standard Glazing**

Location	Type of Occupancy	Descriptor	Internal Noise Level dBA		Internal Noise Criteria
			Windows Closed	Windows Open	
Northeast Facade	Living	LAeq(15hr)	43	53	40 dBA
	Bedrooms	LAeq(9hr)	41	51	35 dBA
Southeast Facade	Living	LAeq(15hr)	38	48	40 dBA
	Bedrooms	LAeq(9hr)	34	44	35 dBA
Southwest Facade	Living	LAeq(15hr)	52	62	40 dBA
	Bedrooms	LAeq(9hr)	48	58	35 dBA
Northwest Facade	Living	LAeq(15hr)	42	52	40 dBA
	Bedrooms	LAeq(9hr)	38	48	35 dBA

The predicted internal noise levels indicate that the criteria for noise intrusion to living and sleeping spaces will be exceeded with windows (and doors) open on all facades with standard glazing installed. Upgrades to the building facade will therefore be required to achieve internal noise levels.

Ventilation to the requirements of the National Construction Code (NCC) *F4.6a(i) Natural Ventilation* should be provided. This means as a minimum, an opening size not less than 5% of the *floor area* of the room *required* to be ventilated. Design input should be sought from an appropriately qualified mechanical consultant.

An alternate ventilation strategy to allow windows and doors to remain closed (when desired) will also be required in some areas of the development. Recommendations relating to the building construction and the required ventilation strategy are provided in the following section.

### 6.4 Assessment of Additional Traffic Noise

Future traffic level predictions were estimated by Varga Traffic and Planning Pty Ltd dated 10 December 2012. This report presents the peak periods for the ALDI store during Thursday and Saturday operating times.

**Table 6 Total Existing and Potentially New Generated Traffic**

Road	Thursday		Saturday	
	Existing	New Development	Existing	New Development
Victoria Road	3900		3900	
Monash Road	950	<b>166</b>	950	<b>194</b>
Eltham Street	150		150	

Data supplied by Varga Traffic Planning Pty Ltd

**Table 6** presents peak hour vehicle trips for the busiest period of the week. However, noise criteria are in terms of 15-hour daytime period. Noise logger data collected from Monash street indicated that the peak hour traffic noise is 3 dBA higher than the LAeq(15hour) daytime period.

#### 6.4.1 Additional Generated Traffic

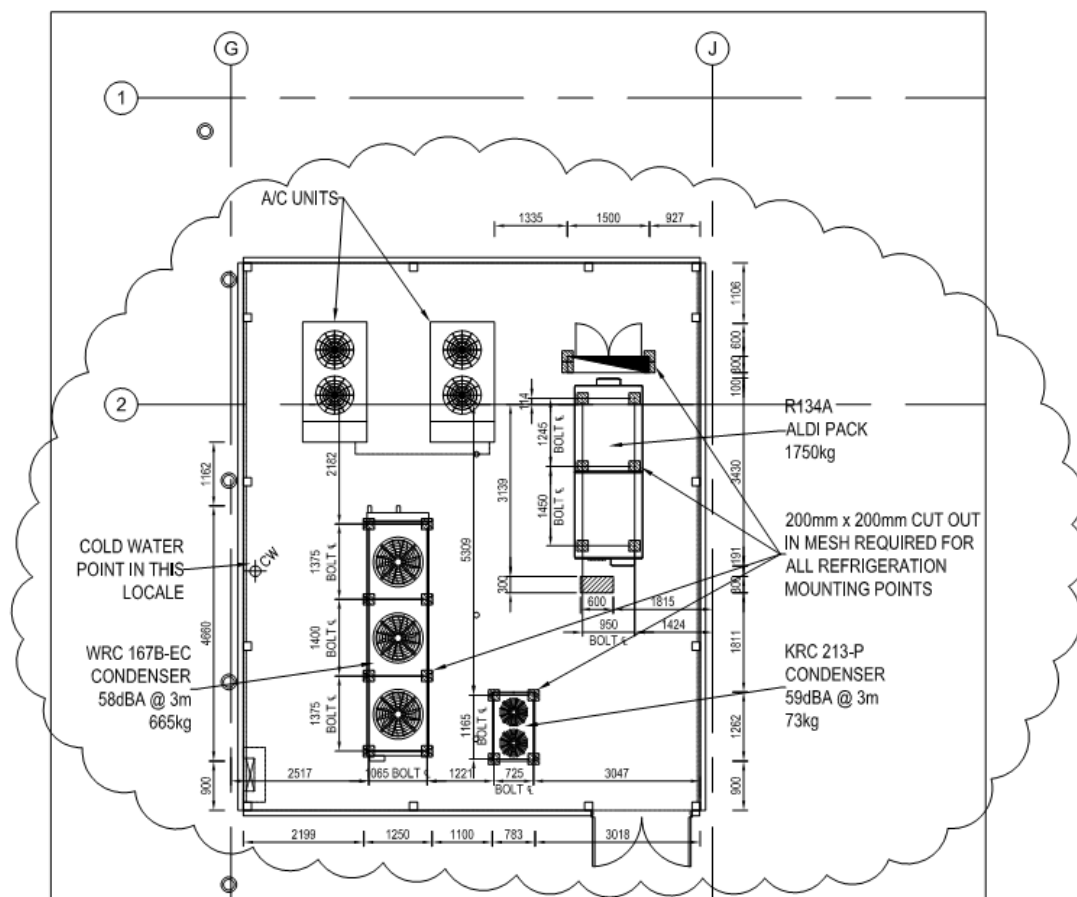
The additional traffic generated during Thursday and Saturday peak hour periods would increase in levels by less than 0.1 dBA therefore the impacts on nearby residence are not noticeable and no impact predicted. Extended trading hours periods would have

#### 6.5 Mechanical Plant

Mechanical plant for ALDI's refrigeration and air conditioning is to be positioned on the roof of the development with direct and unobstructed access of the platform. Details of plant selections have been supplied by A.J Baker & Sons Pty Ltd. Further discussions with Hanna and Hanna Group have established that the proposed layout of the mechanical plant is to be of similar configuration with the Winston Hills ALDI store shown in **Figure 8**.

Mechanical plant consisting of a compressor rack with a Sound Power Level (SWL) of 71 dB, small condenser with a SWL of 79 dB and a large condenser with a SWL of 86 dB have been modelled within SoundPLAN with projected impacts to the nearest residential receiver. Modelled results of noise impacts to the nearest residential receivers are shown in **Table 7**.

**Figure 8 Winston Hills Mechanical Plant layout**



#### 6.6 Loading Bay Area

It has been established that ALDI trucks will manoeuvre onsite in a forward manner in accordance to AS 2890.2-2002 whereby trucks will enter via Eltham Street and exit via Monash Road. Swept entry and exit paths for ALDI semi-trucks are shown in **Figure 9** to **Figure 10**.

Projections of truck noise emissions to the nearest residential receivers have been modelled within SoundPLAN. Projections are based on a semi-trailer with a Sound Power Level (SWL) of 92 dB within the loading dock area. Modelled results of noise impacts to the nearest residential receivers are shown in **Table 8**.

## 6.7 Predicted Operating Levels

**Table 7 Mechanical Plant Noise Impact Level at Nearest Receivers**

Receivers	Noise Direction	Noise Level (LAeq)
10 Monash Rd	South	36 dB
12 Monash Rd	West	38 dB
15 Monash Rd 2 <sup>nd</sup> Floor	West	41 dB
71 Eltham St	West	40 dB
73 Eltham St	West	40 dB
76 Eltham St	East	27 dB
76 Eltham St 2 <sup>nd</sup> Floor	East	28 dB
78 Eltham St	North	39 dB
78 Eltham St 2 <sup>nd</sup> Floor	North	41 dB
8 Monash Rd	South	33 dB

**Table 8 Loading Bay Noise Impact Level at Nearest Receivers**

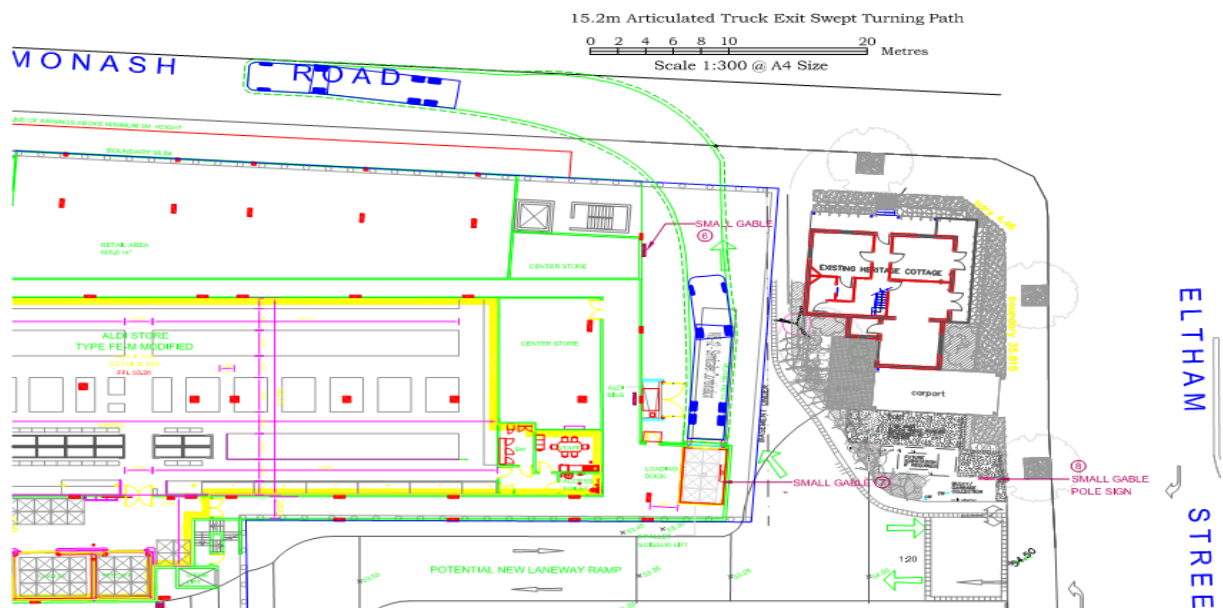
Receivers	Noise Direction	Noise Level (LAeq)	Sleep Disturbance (LA <sub>1</sub> )
10 Monash Rd	South	51 dB	65 dBA
12 Monash Rd	West	46 dB	65 dBA
15 Monash Rd 2 <sup>nd</sup> Floor	West	52 dB	65 dBA
71 Eltham St	West	51 dB	65 dBA
73 Eltham St	West	53 dB	65 dBA
76 Eltham St	East	45 dB	65 dBA
76 Eltham St 2 <sup>nd</sup> Floor	East	50 dB	65 dBA
78 Eltham St	North	49 dB	65 dBA
78 Eltham St 2 <sup>nd</sup> Floor	North	53 dB	65 dBA
8 Monash Rd	South	52 dB	65 dBA

Note: Bold indicates exceedances

**Figure 9 15.2m HRV Truck Entry Swept Turning Path**



**Figure 10 15.2m Articulated Truck Exit Swept Turning Path**





## 7 ROAD TRAFFIC DESIGN RECOMMENDATIONS

### 7.1.1 Facade

The facade construction should achieve a minimum Rw 50. This can typically be achieved with a standard brick veneer construction comprising 110 mm brick, 90 mm stud, minimum 50 mm cavity between brickwork and studwork, R2 insulation in the cavity with an internal 10 mm plasterboard lining.

Alternatively a 75mm Hebel Powerpanel with 90mm glasswool insulation with 10mm plasterboard or 75mm Hebel Powerpanel with 16mm plasterboard with 75mm glasswool insulation.

### 7.1.2 Roof/Ceiling

The roof/ceiling construction should achieve a minimum Rw 50. On pitched roofs, this can typically be achieved with terracotta/concrete tile or sheet metal roof with sarking, 1 layer 16 mm fire rated plasterboard to the underside of the joists with R2 insulation batts in the roof cavity.

### 7.1.3 Entry Door

The entry door construction should achieve a minimum Rw 35. This can typically be achieved with a 35 mm solid core timber door or glazed door with a minimum 6.3 mm laminated glazing with full perimeter acoustic seals.

### 7.1.4 Glazing

The acoustic performance of the glazing, frame and seals should be checked with the suppliers to ensure that the combined performance meets Rw requirements specified below.

### Habitable Rooms

**Table 9** presents the minimum glazing Rw rating to be achieved for bedrooms and other living areas.

**Table 9 Recommended Glazing for affected bedroom facades**

Facade	Minimum Rw Rating	
	Bedrooms	Living Areas
Northeast Facade	29	26
Southeast Facade	40	31
Southwest Facade	38	33
Northwest Facade	36	27

### Non Habitable Rooms

Standard glazing (4 mm, Rw 24) with full perimeter weather seals will be suitable for the southern facade.

## 8 VENTILATION

### Southeast, Southwest and Northwest Facades

Windows and doors to living and sleeping spaces will need to be closed to achieve acceptable internal noise levels. In such instances, alternative means of achieving the requirement for "comfort ventilation" will need to be considered to enable openings in the external facade (ie windows and doors) to remain fully closed during noisy periods.

Ventilation to the requirements of the National Construction Code and Australian Standard 1668.2 Table 4.2 should be provided. This means as a minimum, providing fresh air at a rate of 5 litres/second per person in habitable rooms, to meet the requirements of AS 1668. Design input should be sought from an appropriately qualified mechanical consultant.

### Northeast Facade

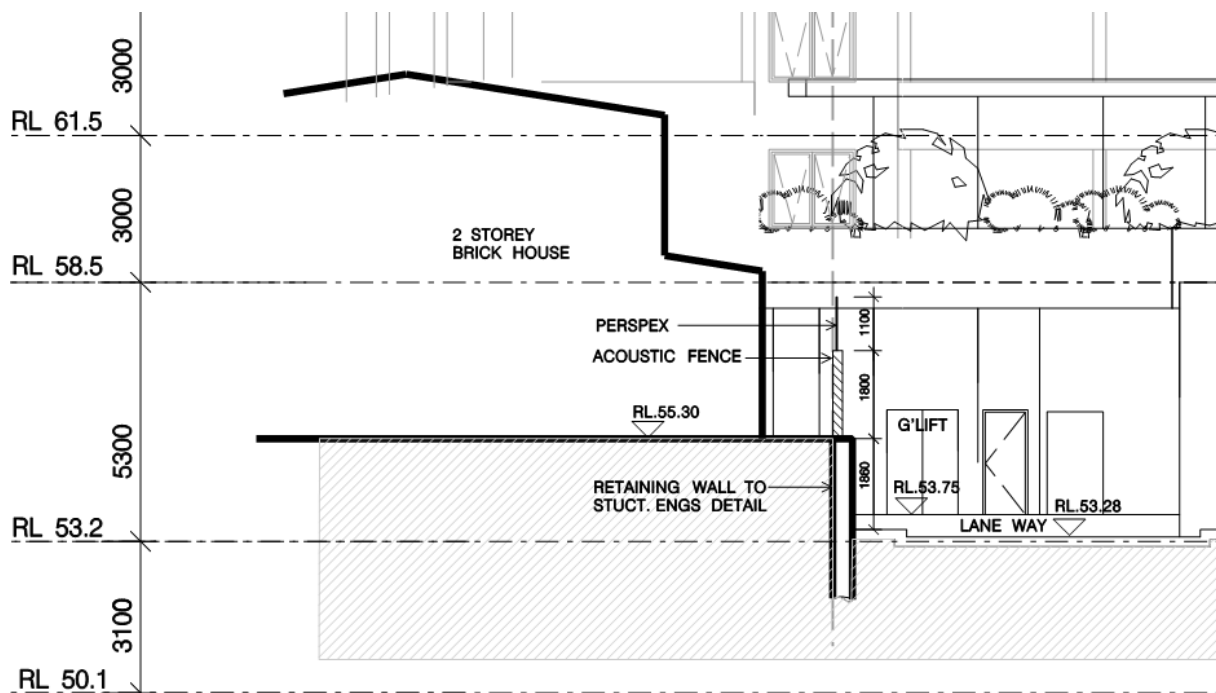
*Development near Rail Corridors and Busy Roads - Interim Guideline* allows a 10 dB relaxation to the day and night internal noise level requirements where open windows are used for natural ventilation.

Therefore, natural ventilation using open windows on the east facade will also provide acceptable internal noise levels, when so desired.

## 9 DISCUSSION AND RECOMMENDATIONS

Calculations for the loading bay were based on a 15 meter semi-truck with a SWL of 92 dB within the loading bay area for duration of 3 minutes. Consent of a 4.76 metre high barrier wall on the eastern boundary facing the façade of the residence of 78 Eltham Street have been added into the modelling calculations. In addition to a 1.8 m high retaining wall, will be a 1.8m high block wall and 20mm Perspex for the remaining 1.1m to effectively shield the residence of truck noise at 78 Eltham Street. **Figure 11** illustrates the design concept. With these provisions in place, compliance of noise impacts to 78 Eltham Street is achieved. Please note that the return fence will be at 1m as per the council's condition.

**Figure 11 Section Drawing of Barrier Wall**



Drawing Courtesy of Architects Construction Managers

### 9.1 Delivery Start Time

Delivery times for ALDI trucks are between 6am – 10pm (7 days). It is recommended that delivery hours are to be between the hours 6.00am to 10.00pm. Noise from truck deliveries are predicted to comply at all residences during those hours.