PENRITH
CITY COUNCIL

# MAJOR ASSESSMENT REPORT

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| **Application number:** | DA20/0141 |
| **Proposed development:** | Demolition of Existing Structures & Construction of Five (5) Storey Residential Flat Building containing 16 Apartments & Two (2) Basement Levels for Car Parking & Building Facilities |
| **Property address:** | 36 Rodley Avenue, PENRITH NSW 2750<br>38 Rodley Avenue, PENRITH NSW 2750 |
| **Property description:** | Lot 59 DP 33490<br>Lot 58 DP 33490 |
| **Date received:** | 20 March 2020 |
| **Assessing officer** | Sufyan Nguyen |
| **Zoning:** | Zone R4 High Density Residential - LEP 2010 |
| **Class of building:** | Class 7a |
| **Recommendations:** | Approve |

## Executive Summary

**The Minister for Planning has given directions under Section 9.1 of the *Environmental Planning and Assessment Act 1979* on development applications that are to be determined on behalf of Council by a Local Planning Panel. These directions, dated 23 February 2018, outline development within the Penrith Local Government Area that is for a residential flat building (RFB) under the provisions of *State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development* (SEPP 65) requires determination by a Local Planning Panel. The Penrith Local Planning Panel is therefore the determining authority for this development application.**

Council is in receipt of a development application (DA) from Morson Group Pty Ltd, proposing the demolition of existing structures and construction of a five storey residential flat building containing 16 apartments and two levels of basement for car parking and services at 36 - 38 Rodley Avenue, Penrith. The subject site is zoned R4 High Density Residential under the *Penrith Local Environmental Plan 2010* (LEP 2010) and a residential flat building is a permissible land use in the R4 zone with consent.

The key issues identified and addressed as part of the assessment of the proposal were in regard to the following matters:

- Non-compliance with the minimum DCP car parking requirement for car wash and service vehicle parking spaces,
- Traffic safety regarding the one-way basement ramp,
- Servicing of the site in relation to stormwater and waste management,
- An indented on-street waste collection area, and
- Impacts on visual privacy and solar access to neighbouring properties.

The development proposal was advertised in the local newspaper and notified to adjoining and nearby properties. The public exhibition period was between 10 April and 24 April 2020. Two public submissions were received in response, however, the concerns raised are not considered to impede approval of the application.

An assessment under Section 4.15 of the Environmental Planning and Assessment (EP&A) Act 1979 has been undertaken and the application is recommended for approval, subject to recommended conditions.

## Site & Surrounds

The subject site has a property address of 36 - 38 Rodley Avenue, Penrith and is legally described as Lots 58 and 59 DP 33490. The site has a combined land area of 1,112.8m² and is rectangular in shape, with a 30.5m frontage onto Rodley Avenue and a 36.6m depth. The site is relatively flat and each lot currently accommodates a single storey dwelling and associated structures. A drainage easement is situated on the western side boundary of Lot 58 DP 33490, which connects to a drainage easement situated on the southern adjoining site, being Penrith Paceway (127 - 141 Station Street, Penrith). Penrith Paceway is a large parcel of land, which runs from the eastern side of Mulgoa Road to the western side of Station Street and accommodates a range of events and functions, including harness racing, Penrith markets, functions room, etc.

Rodley Avenue and its surrounds is currently largely low density residential, however, the locality is currently transitioning to higher density development (reflecting its current R4 High Density Residential zoning) with a number of RFB approvals. In this regard, to the west of the site at 50 - 54 Rodley Avenue, is a 6 storey residential flat building containing 42 apartments with basement car parking (approved under DA16/0262) and to the north-west at 12 Vista Street, Penrit) are two 6 storey residential flat buildings containing 79 apartments and basement car parking (approved under DA17/0311).

## Proposal

The applicant seeks approval for the demolition of existing structures and construction of a five storey residential flat building containing 16 apartments and two levels of basement for car parking and services. The development proposal comprises of the following key aspects;

Basement Level 2

- 16 x residential storage spaces,
- 4 x bicycle parking spaces,
- Waste bin storage room,
- Lift core, and
- Fire staircase.

Basement 1

- 22 x car parking spaces, including 3 x stacked parking spaces, 2 x accessible spaces, 2 x visitor spaces and a shared visitor/car washing/service parking space,
- 1 x bicycle parking space,
- Lift core,
- Fire stair case,
- Ramp access for vehicles to ground floor, and
- Traffic signals.

Ground Floor Level

- 2 x 2 bedroom adaptable units, each with a separate private open space terrace area,
- Vehicular access to the basement level from Rodley Avenue,
- Waste bin room and bulky waste storage,
- Foyer entry area and circulation core providing for lift,
- Waste bin storage room,
- Bulky household goods storage room,
- Waste chutes,
- Pump room,
- Cleaner's WC,
- Stairs to basement levels and upper floor levels, and
- Two-way vehicular access to the basement level via a single lane ramp, including traffic signals.

Level 1- 3

- 3 x 2 bedroom units and 1 x 3 bedroom unit, each with an associated balcony, and
- Lobby area with circulation core providing for lift, fire stairs, waste chutes and service cupboard.

Level 4

- 2 x 2 bedroom units with associated balconies, and
- Lobby area with circulation core providing for lift, fire stairs, waste chutes and service cupboard.

The proposed apartment mix is as per the table below;

| Unit Type | No. of Units |
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| 2 bedroom unit | 13 |
| 3 bedroom unit | 3 |

**Background**

The proposal was subject to a pre-lodgement meeting held with relevant Council staff members on 22 May 2019. In addition, the proposal was subject to an Urban Design Review Panel (UDRP) meeting held with Council on 20 February 2020. Following lodgement of the application on 20 March 2020, a preliminary assessment was conducted with an additional information letter provided to the applicant on 29 April 2020. In response to this correspondence and subsequent correspondence, additional plans and documentation were provided in May and June 2020. Subsequent UDRP advice was provided on 29 May 2020, which was largely supportive of the proposal on urban design grounds.

It is noted that previous applications for the site for a six storey residential flat building (DA18/0890) and for a five storey residential flat building (DA18/0890.01 - review of refusal determination) were refused by the Penrith Local Planning Panel in 2019.

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## Plans that apply

- Local Environmental Plan 2010 (Amendment 4)
- Development Control Plan 2014
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy No 55—Remediation of Land
- State Environmental Planning Policy No 65—Design Quality of Residential Flat Development
- Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River

## Planning Assessment

- ## Section 4.15 - Evaluation

The development proposal has been assessed in accordance with the matters for consideration under Section 4.15 of the EP&A Act, and having regard to those matters, the following issues have been identified for further consideration.

### Section 4.15(1)(a)(i) The provisions of any environmental planning instrument

#### State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004* ensures the implementation of the BASIX scheme which aims to encourage sustainable residential development. The Policy requires certain kinds of residential development to be accompanied by a list of commitments to be carried out by applicants and as such, the application is subject to these requirements, as it involves BASIX affected development.

In this regard, an assessment has been undertaken of the development proposal against relevant criteria within the Policy. The application was accompanied by a list of BASIX commitments detailed in the originally submitted BASIX Certificate No. 952452M _02, dated 31 March 2020, as to the manner in which the development will be carried out. However, the proposal, as amended at the request of Council, requires an updated BASIX Certificate to reflect the revised architectural plans. As such, the carrying out of the development will be subject to a recommended consent condition requiring a revised BASIX Certificate to reflect the amended plans to ensure that BASIX commitments are maintained in perpetuity for the development.

#### State Environmental Planning Policy No 55—Remediation of Land

*State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) provides aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Under Clause 7 of SEPP 55, it must be considered as to whether the land is contaminated, and if so, Council must be satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which development is proposed to be carried out.

In this regard, Council has no record that the subject site is contaminated. The proponent has outlined that the site has been historically used for residential purposes, noting that the surrounding area is also used for residential purposes. It is also noted that a review of historical aerial mapping indicates that the site does not appear to contain any unknown imported fill. In consideration of the residential use of the site and surrounding properties, it is not considered that further analysis is required, as the proposal is not for a change of land use and the site will continue to remain as a residential property. While so, should any 'unexpected findings' occur during excavation and earthworks, work is to cease immediately and Penrith City Council is to be notified, which will be addressed by way of a recommended consent condition.

#### State Environmental Planning Policy No 65—Design Quality of Residential Flat Development

An assessment has been undertaken of the development proposal against the relevant provisions of SEPP 65, as detailed below.

***Clause 28 Determination of development applications***

*(1) After receipt of a development application for consent to carry out development to which this Policy applies (other than State significant development) and before it determines the application, the consent authority is to refer the application to the relevant design review panel (if any) for advice concerning the design quality of the development.*

*(2) In determining a development application for consent to carry out development to which this Policy applies, a consent authority is to take into consideration (in addition to any other matters that are required to be, or may be, taken into consideration):*

*(a) the advice (if any) obtained from the design review panel, and*

*(b) the design quality of the development when evaluated in accordance with the design quality principles, and*

*(c) the Apartment Design Guide*

***Urban Design Review Panel (UDRP) Advice***

The proposal was referred to Council's UDRP both prior to and after lodgement of the DA, whereby a range of issues were discussed, including:

- Front lobby and waste storage area layouts result in a long corridor for the waste storage rooms with doors that opened to the lobby area,
- Undercroft area being a deep large space. Integrate a communal room to create separation and insert a pergola with vines to buffer the lobby corridor,
- Relocate intercom to not be extended on footpath area,
- Move access pathway away from substation and increase landscaping around this vicinity,
- Slight narrowing of vehicular access arrangements and overall traffic safety to be addressed in Traffic Report,
- Architectural design - thin edge box elements shaping with roof, increase of vertical slot windows, more visual interest on side elevations and balustrades setback,
- 1.8m high fencing and garden to surround common open space (COS) area, and
- Potential privacy issues in lobby/shared area.

The development proposal, as amended (Amendment B), is considered to be overall acceptable when assessed against the above matters and the SEPP 65 principles and Apartment Design Guide. In summary, the UDRP advised that the T-shaped building footprint, which is orientated to the street and rear, in addition to the varying setbacks, is appropriate. The setbacks, building scale and massing are considered acceptable and provide a positive precedent for future developments in this precinct. The generous separation distances clearly differentiate side boundary relationships and permit landscaping. The amenity of the apartments is high, as they provide excellent cross ventilation and adequate floor plan layouts.

It is noted the proposal does include a double width driveway, a substation and stormwater detention areas in the front setback. However, it is noted that these services are necessary for the development and given the constraints of the site, this is considered acceptable, noting that the landscaping within the stormwater detention areas will be able to grow and mature, as advised by the proponent's Landscape Architect and Council's Landscape Architect. Further, the applicant has provided section details, which demonstrate that there will be minimal overlooking from the ground floor to neighbouring properties and that plant screening will minimise privacy impacts.

***Clause 30 Standards that cannot be used as grounds to refuse development consent or modification of development consent***

*(2) Development consent must not be granted if, in the opinion of the consent authority, the development or modification does not demonstrate that adequate regard has been given to:*

*(a) the design quality principles, and*

*(b) the objectives specified in the Apartment Design Guide for the relevant design criteria.*

In addition, under Clause 50(1A)(1AB) of the *Environmental Planning and Assessment Regulation 2000* specifies:

***Clause 50 How must a development application be made?***

*(1A) If a development application that relates to residential apartment development is made on or after the commencement of the Environmental Planning and Assessment Amendment (Residential Apartment Development) Regulation 2015, the application must be accompanied by a statement by a qualified*

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*designer.*

*(1AB) The statement by the qualified designer must:*

*(a) verify that he or she designed, or directed the design, of the development, and*

*(b) provide an explanation that verifies how the development:*

*(i) addresses how the design quality principles are achieved, and*

*(ii) demonstrates, in terms of the Apartment Design Guide, how the objectives in Parts 3 and 4 of that guide have been achieved.*

The DA was accompanied with a design verification statement prepared by Peter Morson - qualified Architect, verifying that design quality principles and Apartment Design Guide (ADG) provisions are achieved for the development, as detailed in Drawing No. DA02.

An assessment against Schedule 1 Design quality principles of the Policy has been undertaken and is detailed in **Table 1** below and an assessment against the provisions of Parts 3 and 4 of the Apartment Design Guide is provided in **Table 2** below.

| **Table 1: Assessment Against Schedule 1 - Design Quality Principles** | **Discussion** |
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| **Principle 1: Context and neighbourhood character** | Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.<br><br>Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.<br><br>Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change. | The neighbourhood character is currently undergoing change with the R4 High Density Residential zoning, which allows lots to achieve higher yields than what has been traditionally a low to medium density suburban environment. The locality accommodates a number of existing medium-density villa and townhouse developments, which generally consist of central 'gun-barrel' driveways with terraces on either side.<br><br>It is noted that there are two high density buildings to the west of the subject site, an RFB along Rodley Avenue and two RFBs to the north-west, along Vista Street, which demonstrate the emerging neighborhood context.<br><br>In this regard, the building design is considered to respond to the context of the site in that, overall, the development satisfies the required building separation distances and responds to the existing single and two storey buildings in the immediately surrounding area, as required under the ADG requirements.<br><br>The proposal maintains consistent and appropriate setbacks as an example for any future RFBs. The building separations, landscaped area and streetscape interface are considered to be in balance to the built form and is consistent with the future desired character of landscaping in the neighbourhood. |

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| **Principle 2: Built form and scale** | Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.<br><br>Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.<br><br>Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook | The overall bulk and scale of the proposal is considered to be aligned with the desired future character of the neighbourhood, noting the single tower design and appropriate building separations provided, in addition to the compliant maximum 17.8m building height.<br><br>The visual presentation of the built form is considered to be an acceptable addition to a streetscape, which is currently in transition from older low scale residential dwellings to larger residential flat buildings. The facades incorporate a mix of traditional colours, materials and contemporary design, whereby the high level of articulation, as advised by the UDRP, provides sufficient visual interest and reduces overall bulk. |
| **Principle 3: Density** | Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.<br><br>Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment. | The development is considered to provide for acceptable internal and external residential amenity. Adequate private open space (POS) and communal open space (COS) is provided.<br><br>Waste infrastructure has been relocated, which is discreetly accessed along the corridors and removed front the front lobby and out of street view. |

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| **Principle 4: Sustainability** | Good design combines positive environmental, social and economic outcomes.<br><br>Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and livability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs.<br><br>Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation. | The application is considered to adequately identify that solar access is provided in accordance with the ADG rates, as detailed in the 'Eyes on the Sun' plans and solar access compliance table provided with the application. The compliance table demonstrates that 75% of the units achieve adequate solar access.<br><br>The development provides natural cross ventilation and incorporates awnings to reduce energy consumption in summer by protecting west-facing apartments and controlling the internal conditions of the apartments.<br><br>Bicycle parking has been provided in basement level 1 to promote active transport.<br><br>Landscaped areas are in accordance with ADG design criteria. |

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| **Principle 5: Landscape** | Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.<br><br>Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.<br><br>Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management. | Deep soil planting embellishment is provided along all site boundaries and adjacent to private and open common spaces, allowing full height trees to grow and mature and provide for privacy between neighbouring properties and potential future adjacent developments. The deep soil pockets have been maximised and replacement trees are proposed to accommodate landscaping, complementing the design, which is consistent with the landscape character of the streetscape, in particular, the front setback.<br><br>Landscaping along the remaining boundaries comprise of a combination of small shrubs and medium sized trees within the easement, and planter boxes with larger trees on the private terraces, which provide for adequate privacy screening. Landscaping has been maximised through locating planters on the ground level structure to provide amenity to the COS.<br><br>It is noted that the existing easement along the western boundary does not permit canopy trees in the deep soil area in this location. As such, planters on structure have been provided adjacent to the easement so that canopy trees can be provided to the western setback.<br><br>The car parking levels have been designed to minimize the footprint in consideration to accommodating all the necessary car parking and services. |

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| **Principle 6: Amenity** | Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.<br><br>Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility. | The proposal is considered to provide for an appropriate level of amenity for the majority of future occupants in accordance with the requirements of the ADG in regard to room dimensions and privacy. Adequate natural ventilation, solar access and storage space are provided.<br><br>The floor plan layouts provide suitable access to future residents of all ages and demonstrate that servicing for the development is sufficient.<br><br>Acoustic privacy is considered to be of minimal impact. |

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| **Principle 7: Safety** | Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.<br><br>A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose. | The proposal is considered to have appropriate regard to the principles of Crime Prevention through Environmental Design. The proposal will present to Rodley Avenue with casual surveillance achieved via the location of balconies and windows to all elevations.<br><br>The building design is considered to address areas of concealment via separate public and private areas. The lobby areas, corridor and access to the COS room are within view of the front entry. Although the lift is not visible from the front entrance, adequate circulation is provided in its vicinity and it is noted that a view of outside the building is provided at the west side of the building, via a maintenance door.<br><br>Intercom access and CCTV at the entry provides security from the street. Entry into the basement car park is via a roller shutter control point with swipe card security to gain access. Although the pedestrian and vehicle entries are co-located, each access point is separated with a separate access point.<br><br>Side fences at the building line secure the external areas of the development. Gates are provided in the side fences to allow for egress and access to services within the development, such as the stormwater easement and bio-filtration basin. |

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| **Principle 8: Housing diversity and social interaction** | Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.<br><br>Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.<br><br>Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents. | The development features a mix of two and three bedroom apartments, which responds to current market demands in the local area and facilitates affordability relative to inner city living.<br><br>Social interaction between future residents is enriched by the design of the lift lobbies. Lift lobbies are attractive spaces to interact, as they are provided with two sides with views to the front entrance and western maintenance access, with direct connection to the lift access point. |
| **Principle 9: Aesthetics** | Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.<br><br>The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape. | The development is considered to be of an appropriate bulk and scale. The development is considered to be consistent with the design criteria and design guidance statements of the ADG.<br><br>The composition of facade elements, such as the expanse of brickface is sympathetic to the scale of the surrounding residential houses and lower scale buildings.<br><br>The combination of facade articulation and landscaping emphasises the building entry.<br><br>The facades of the building define a hierarchy for the site. The Rodley Avenue facade is primary and the facades looking to the side setbacks maintain a secondary role. Through a mix of materials, facade articulation and colours, the facades deliver rationality, clarity, proportion and rhythm, which results in a simple elegance. |

| **Table 2: Assessment Against Applicable Provisions of Apartment Design Guide (ADG)** | | | |
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| **Part** | ***Design Guidance*** | **Discussion** | **Complies** |
| **Part 3 Siting the development** | | | |
| **3A Site analysis** | | | |

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| **3A-1** | Each element in the Site Analysis Checklist should be assessed | A Site Analysis plan was submitted with the original package of documents and a ADG compliance table included on the amended plans identify applicable key elements, as required within the Checklist. A written description of the development proposal and subject site are also included in the submitted Statement of Environmental Effects and accompanying plans and reports. | Yes |
| **3B Orientation** | | | |
| **3B-1** | Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1) | The proposal provides a northern orientation, which adequately addresses the street frontage and solar access requirements. Direct access from the street is provided to the main front entry and also to the ground floor apartment (Unit 01) via a separate pathway to its private front terrace.<br><br>The common entry and foyer areas are of an appropriate design and location, which provide acceptable circulation. | Yes |
| | Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2) | Additional overshadowing attributed to the development will predominantly fall southwards to the open space of the adjoining Penrith Paceway, which negates overshadowing to any buildings to the south of the site. | Yes |
| **3B-2** | Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access | Refer to discussion in Parts 3D and 4A. | Yes |
| | Solar access to living rooms, balconies and private open spaces of neighbours should be considered | A solar analysis has been provided to demonstrate that a minimum of 4 hours of solar access to the eastern and western neighbouring properties is maintained. | Yes |
| | Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20% | Solar access to neighbouring properties is adequate, as above. | Yes |

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| | If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy | Acceptable levels of solar access are maintained to neighbouring properties between the primary daylight hours during the winter solstice. As such, an increase in building separation is not required. | Yes |
| | Overshadowing should be minimised to the south or down hill by increased upper level setbacks | Overshadowing to the south falls towards the open space of Penrith Paceway and therefore upper level setbacks are appropriate, as detailed above. | Yes |
| | It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher<br>than the adjoining development | The building design is appropriately orientated to minimise overshadowing and privacy impacts on neighbouring properties. | Yes |
| | A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings | The proposal does not impede on the 4 hour minimum solar access requirements for neighbouring dwellings, as demonstrated in the submitted shadow diagrams and 'Eye on the Sun' plans. | Yes |
| **3C Public domain interface** | | | |
| **3C-1** | Terraces, balconies and courtyard apartments should have direct street entry, where appropriate | Ground floor Unit 01 is provided with a separate pathway and direct access to its private terrace from Rodley Avenue. | Yes |
| | Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1). | A level difference of approximately up to 700mm is provided between the pavement height and the finished floor height of the ground floor apartment fronting Rodley Avenue. Landscaped areas and fencing are provided to protect unit privacy and allow for opportunities for passive surveillance. As such, the relationship between the building edge and public domain is considered to be acceptable. | Yes |
| | Upper level balconies and windows should overlook the public domain. | All upper level apartments along the street frontage are provided with balconies, which provide an outlook to Rodley Avenue. | Yes |
| | Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m | No front fencing is proposed. | Yes |

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| | Length of solid walls should be limited along street frontages. | Walls are adequately articulated, including fenestration and sufficient openings with balconies. No large expanses of blank wall are proposed. | Yes |
| | Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets | It is noted that seating was originally provided within the front setback, immediately adjacent to the public domain. However, due to the requirement to relocate an on-site detention basin from the drainage easement to the front setback, the seating has been deleted. As such, a recommended consent condition will require that the seating be reinstated in an appropriate location adjacent to the front entrance. | Yes |
| | Opportunities for people to be concealed should be minimised | Entryways are wide, straight and located to reduce opportunity for crime and concealment. While so, the lift is not visible from the front entry, adequate circulation is provided in this vicinity. | Yes |
| **3C-2** | Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking | Adequate landscaping is provided immediately adjacent to the front terrace and basement ramp. A pergola and green growers are provided above the basement ramp. | Yes |
| | Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided | Mailboxes are situated within the lobby, perpendicular to the street. | Yes |
| | The visual prominence of underground car park vents should be minimised and located at a low level where possible | Basement vents are of minimal view from the streetscape. | Yes |
| | Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view | It is noted that that the substation is located at the street frontage due to lot dimensions constraints. However, the substation is orientated perpendicular to the street and surrounded by landscaping to minimise visual impacts on the streetscape. | No |
| | Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels | Ramping is proposed relative to the street with a compliant 1:20 gradient to provide for adequate accessibility. | Yes |
| | Durable, graffiti resistant and easily cleanable materials should be used | Suitable materials and finishes are provided. | Yes |

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| | Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions:<br>• street access, pedestrian paths and building entries which are clearly defined<br>• paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space<br>• minimal use of blank walls, fences and ground level parking | The proposal provides an appropriate interface to the southern boundary, which abuts a large open space of the Penrith Paceway.<br><br>coFencing delineates between the POS of the development and the green space of Penrith Paceway.<br><br>Adequate articulation is provided along the southern and side facades. | Yes |
| | On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking | The basement car park is of minimal view from the streetscape. | Yes |
| **3D Communal and public open space** | | | |
| **3D-1** | ***Design criteria*** | | |
| | 1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) | The ADG requirement for 25% of the site for COS equates to 278.2m² of COS. While so, the amended plans demonstrate that 278.1m² of COS is provided, the minor variation is negligible and is considered to be acceptable. | No |
| | 2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter) | The COS receives a minimum of 50% solar access between 9:30am to 11:30am, as demonstrated in the solar analysis. | Yes |
| | ***Design guidance*** | | |
| | Communal open space should be consolidated into a well designed, easily identified and usable area | COS is provided along the eastern side and southern rear boundaries, which are provided with direct access front the street and is also delineated from private open space. | Yes |
| | Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions | COS dimensions vary between 3m to 8.2m, which is compliant and is considered to be acceptable. | Yes. |
| | Communal open space should be co-located with deep soil areas | COS is integrated with deep soil areas and is provided with a range of landscaping, including large trees. | Yes |

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| | Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies | COS is provided with access via the front entry through the lobby to a double door. | Yes |
| **3D-2** | Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements:<br>• seating for individuals or groups<br>• barbecue areas<br>• play equipment or play areas<br>• swimming pools, gyms, tennis courts or common rooms | Adequate facilities are provided for the COS, including a BBQ area and adequate seating. | Yes |
| | The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts | The COS is provided with adequate solar access and tree shading. The COS room is located under a cantilevered upper floor level, which provides additional shading and shelter. | Yes |
| | Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks | The substation is located along the streetscape and orientated perpendicular to minimise visual impacts.<br><br>Rooftop equipment is below the 18m maximum building height standard.<br><br>The on-site detention basins/flood storage areas include retaining wall heights of 300mm above ground level (AGL) and the adjacent planter box had a height of 800mm AGL, which are not considered to be visual dominant to the streetscape. | Yes |
| **3D-3** | Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include:<br>• bay windows<br>• corner windows<br>• balconies | Upper level rooms with windows, including balconies are located adjacent to the COS to permit passive surveillance. | Yes |
| | Communal open space should be well lit | COS is provided with adequate solar access and a recommended consent condition will ensure adequate lighting is provided across the site. | Yes |

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| **3D-4** | Boundaries should be clearly defined between public open space and private areas | The POS areas of the development are clearly defined by the use of landscaping, walls, fencing and paving elements. | Yes |
| **3E Deep soil zones** | | | |
| | ***Design criteria*** | | |
| **3E-1** | Deep soil is to be provided at a rate of 7% of site area with a min. dimension of 3m | 77.9m² of deep soil is required under the ADG (7% of total site area). The submitted plans state that a total of 286.5m² of the site is provided as deep soil with a minimum dimension of 3m to 5m. However, a review of the deep soil areas reveal that much of the space does not meet the minimum 3m depth required by the ADG due to the basement footprint. Notwithstanding, the deep soil areas with a minimum dimension of 3m is calculated to be approximately 207m², which is compliant with the ADG. | Yes |
| **3F Visual privacy** | | | |
| **3F-1** | ***Design criteria*** | | |
| | Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:<br>Up to 12m (4 Storeys) – 6m habitable rooms and balconies and 3m for non-habitable rooms<br><br>Up to 25m (5-8 storeys) – 9m habitable rooms and balconies and 4.5m for non-habitable rooms | Building separation is as follows (measured from the face of the balcony/building to the side boundary):<br><br><u>North Separation</u><br>Ground: 5.25m to terrace, 6.0m to window, Levels 1-3: 6m to windows and balconies, and level 4: 7m to balconies and 9m to windows<br><br>It is noted that the frontage onto Rodley Avenue provides additional separation to adjoining properties.<br><br><u>South Separation</u><br>Ground: 6m to window and COS terrace<br>Levels 1-3: 6m to windows and balconies, and<br>Level 4: 9.1m to windows<br><br>It is noted that the subject site directly adjoins the Penrith Paceway track to the rear.<br><br><u>Western Separation</u><br>Ground to level 3: 4m to non-habitable windows and 6m to windows<br>Levels 4: 7m to non-habitable rooms and 9m to window<br><br>The proposal is provided with compliant separation distances to all levels, noting a number of non-habitable rooms/no windows that face neighbouring elevations.<br><br>The UDRP advised that 4m side setbacks at the front of the building, which transition to 6m minimum side setbacks are acceptable. In that, it provides for an improved streetscape form with greater variation in building frontage and surveillance so as to avoid uniformity in bulk and mass between developments as viewed from the street. | Yes<br><br>Yes<br><br>Yes |

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| | | The 4.0m side setbacks have been designed to negate views between habitable rooms and balconies, ensuring compliance with the ADG, as the ADG allows for lesser building separation being 6.0m between non habitable rooms (effectively being 3.0m to the common boundary).<br><br>Suitable landscaping is provided to mitigate visual privacy impacts and it is noted that the western side boundary abuts the western adjoining property's driveway and rear garage.<br><br><u>East Separation</u><br>Ground: 6m to COS windows<br>Levels 1-3: 4m to non-habitable rooms and 6m to window, and<br>Level 4: 7m to non-habitable rooms and 9m to window<br><br>As above, in addition to 2.1m high fencing along the eastern site boundary being provided. | Yes |
| **3F-2** | Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. | The proposal is provided with sufficient landscaping and fencing to allow for appropriate separations in this regard. | Yes |
| | Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas | Acceptable separation distances are provided between habitable rooms and circulation spaces, noting that service areas are located centrally, distant from unit entrances. | Yes |
| | Balconies and private terraces should be located in front of living rooms to increase internal privacy | Either balconies or terraces are provided adjacent to all living rooms. | Yes |
| | Windows should be offset from the windows of adjacent buildings | Suitable privacy measures are in place, including appropriate separation distances from neighbouring windows and landscape buffers. | Yes |
| | Recessed balconies and/or vertical fins should be used between adjacent balconies | A separation wall is provided between the adjacent balconies for Level 4 apartments. | Yes |
| **3G-1** | Entry locations relate to the street and subdivision pattern and the existing pedestrian network | The front entry provides a traditional orientation to the street, which is consistent with neighbouring and nearby properties. | Yes |

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| | Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries | The front entry/lobby entry is wide and adequately articulated to differentiate from the discreet private entry to ground floor unit 01. | Yes |
| **3G-2** | Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces | The main building entry and front lobby are clearly visible from the street. | Yes |
| | The design of ground floors and underground car parks minimise level changes along pathways and entries | The level changes are less than 1m, which is considered to be acceptable. | Yes |
| | Steps and ramps should be integrated into the overall building and landscape design | Steps and ramps are adequately integrated into the overall design. | Yes |
| **3H-1** | Carpark access should be integrated with the building's overall façade. | The basement ramp is adequately integrated into the building design given that it provides direct access off Rodley Avenue. Landscaping is provided around the vehicle entry way. | Yes |
| | Clear sight lines to be provided for drivers and pedestrians. | Adequate sight lines are provided for drivers and pedestrians at the street frontage. Signal lights will advise drivers of vehicles exiting the basement car park and for incoming vehicles. | Yes |
| | Garbage collection, loading and servicing areas are screened. | The waste collection rooms are provided on the ground floor and are non-visible to residents and visitors, with the exception of roller shutters. | Yes |
| | Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include:<br>• changes in surface materials<br>• level changes<br>• the use of landscaping for separation | Pedestrian access is separated via landscaping.<br><br>Additional pathways are provides with stepping stones. | Yes |
| **3J-1** | The site is located within 800m of a railway station and as such car parking rates are set by the RMS (formerly RTA) Guide to Traffic Generating Developments document. | Refer to the Appendix of this report. | N/A |
| **3J-2** | Conveniently located and sufficient numbers of | One motorcycle parking space is provided within basement level 1. | Yes |

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| | parking spaces should be provided for motorbikes and scooters<br><br>Secure undercover bicycle parking should be provided for motorbikes and scooters. | Four bicycle parking spaces are provided within basement level 2. | Yes |
| **3J-3** | Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces | The basement car parking area is provided with bicycle parking and amenities, which are accessed from common areas and do not rely on access through parking spaces.<br><br>Service rooms are co-located with access stairs and lifts. | Yes |
| | Direct, clearly visible and well lit access should be provided into common circulation areas | Common circulation area are provided with adequate solar access via open corridors with glazing, with the exception of Level 4, however, this level has only two units and will be of less use. | Yes |
| **3J-4** | Excavation should be minimised through efficient car park layouts and ramp design | Adequate on-site parking is provided on basement level 1 and basement level 2 for servicing has a considerably smaller footprint, which minimises overall excavation required. | Yes |
| | Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles | The car parking layout provides adequate vehicle manoeuvring. | Yes |
| | Natural ventilation should be provided to basement and sub basement car parking areas | Basement vents are provided for natural ventilation. | Yes |
| | Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design | As above. | Yes |
| **3J-6** | Positive street address and active frontages to be provided at ground floor | Direct pedestrian access pathways integrated with landscaping are provided to the front entrances. | Yes |
| **Part 4 Designing the building** | | | |
| **4A Solar and daylight access** | | | |
| | ***Design criteria*** | | |

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| **4A-1** | 1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area | Submitted documentation confirms that 13 of 16 (81.25%) of the apartments are provided with compliant levels of sunlight. | Yes |
| | 2. A maximum of 15% of apartments to receive no direct sunlight between 9am and 3pm mid-winter. | Submitted documentation demonstrates that all apartments receive sunlight | Yes |
| | ***Design guidance*** | | |
| | The design maximises north aspect and the number of single aspect south facing apartments is minimised | The building design utlises the northern orientation of the subject site. | Yes |
| | Living areas are best located to the north and service areas to the south and west of apartments | Front apartments are provided with a northern aspect. Southern facing apartments are provided with balconies and fenestration. | Yes |
| **4A-3** | A number of the following design features are used:<br>• balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas<br>• shading devices such as eaves, awnings, balconies,<br>pergolas, external louvres and planting<br>• horizontal shading to north facing windows<br>• vertical shading to east and particularly west facing windows<br>• operable shading to allow adjustment and choice<br>• high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided) | Balconies are designed deep and provided with vertical privacy louvres to provide for adequate shading. | Yes |
| **4B Natural ventilation** | | | |

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| **4B-1** | The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms | The building design provides for adequate natural ventilation, as demonstrated in the submitted documentation. | Yes |
| | Depths of habitable rooms support natural ventilation | As above | Yes |
| | The area of unobstructed window openings should be equal to at least 5% of the floor area served | As above. | Yes |
| | Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:<br>• adjustable windows with large effective openable areas<br>• a variety of window types that provide safety and<br>flexibility such as awnings and louvres<br>• windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors | A range of fenestration is provided to ensure adequate natural ventilation. | Yes |
| | ***Design criteria*** | | |
| **4B-3** | 1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed | Submitted documentation and a review of the provided plans confirms that all of the apartments receive natural cross flow ventilation. | Yes |
| | ***Design guidance*** | | |
| | The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths | The building design incorporates dual aspect apartments to the southern side of the building on Levels 1 - 3 and for Level 4. | Yes |

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| | Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow | The floor plan layouts are designed to minimise obstructions to airflow. | Yes |
| | Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow | The floor plan layouts provide sufficient depths and ceiling heights to provide for cross ventilation and airflow for all apartments. | Yes |
| **4C Ceiling heights** | | | |
| **4C-1** | ***Design criteria*** | | |
| | Measured from finished floor level to finished ceiling<br>level, minimum ceiling heights are:<br>2.7m for habitable rooms and 2.4m for non-habitable rooms | The proposal provides for 3.24m finished floor levels to the underside of ceiling heights for all apartments. | Yes |
| **4C-2** | A number of the following design solutions can be used:<br>• the hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces<br>• well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings<br>• ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist | Ceiling heights of 3.24m are well above the 2.7m minimum ceiling height requirement, which will provide for spacious higher ceilings without affecting the ceiling height of the centrally located service rooms | Yes |
| **4D Apartment size and layout** | | | |
| | ***Design criteria*** | | |

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| **4D-1** | 1. Apartments are to have the following minimum internal areas:<br>2 bed – 70m²<br>3 bed – 90m²<br><br>2. The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each | Apartment sizes comply with the ADG requirements, as demonstrated on the submitted plans.<br><br>It is noted that Units 11, 21 and 31 contain study rooms with floor areas of approximately 3m². Given the potential to use these study rooms as small bedrooms, a recommended consent condition will require that these study rooms are deleted and consolidated with adjoining bedrooms | Yes |
| | ***Design guidance*** | | |
| | Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space) | Kitchens are appropriately located away from hallways and entry spaces. | Yes |
| | A window should be visible from any point in a habitable room | Windows are provided in appropriate locations for bedrooms, such that they are clearly visible. | Yes |
| **4D-3** | ***Design criteria*** | | |
| | 1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height | All units comply with this requirement, noting the high 3.24m ceiling heights for all apartments. | Yes |
| | 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window | The maximum habitable depth rooms are measured at approximately 7.9m. | Yes |
| | ***Design guidance*** | | |
| | Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths | High 3.24m ceiling heights for all apartments permits larger and compliant habitable room depths. | Yes |
| | All living areas and bedrooms should be located on the external face of the building | Living areas and bedrooms for all apartments are located adjacent to the the external facades of the building. | Yes |
| **4D-3** | ***Design criteria*** | | |
| | 1. Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space) | Master bedrooms and other bedrooms are provided with compliant minimum floor areas. | Yes |
| | 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) | All bedrooms are provided with a minimum dimension of 3m. | Yes |

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| | 3. Living rooms or combined living/dining rooms have a minimum width of:<br>• 3.6m for studio and 1 bedroom apartments<br>• 4m for 2 and 3 bedroom apartments | Combined living/dining rooms are provided with a minimum dimension of 4m | Yes |
| | 4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts | The width of all apartments are a minimum of 4m deep to provide for adequate natural cross ventilation. | Yes |
| | ***Design guidance*** | | |
| | Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas | Overall, bedrooms and bathrooms for all apartments are appropriate separated from living spaces and service areas. | Yes |
| | All bedrooms allow a minimum length of 1.5m for robes | Bedroom robes with a minimum length of 1.5m are provided for all apartments | Yes |
| | The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high | Master bedroom robes for all apartments are provided with compliant dimensions. | Yes |
| | Apartment layouts allow flexibility over time, design<br>solutions may include:<br>• dimensions that facilitate a variety of furniture<br>arrangements and removal<br>• spaces for a range of activities and privacy levels<br>between different spaces within the apartment<br>• room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1))<br>• efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms | Floor plan layouts are considered to provide for flexibility and useable floor areas for the future occupants. | Yes |
| **4E Private open space and balconies** | | | |
| **4E-1** | ***Design criteria*** | | |

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| | 1. All apartments are required to have primary balcony areas as follows:<br>2 bed – 10m² (2m depth)<br>3 bed – 12m² (2.4m depth)<br><br>The minimum balcony depth to be counted as contributing to the balcony area is 1m | All apartments meet the minimum area required for balcony areas and provide a usable balcony space for future occupants, as demonstrated on the submitted plans. | Yes |
| | 2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m | Ground floor apartments are provided with terraces, which meet the minimum 15m² required, as demonstrated on the submitted plans. | Yes |
| **4E-2** | ***Design guidance*** | | |
| | Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space | Terraces and balconies are located adjacent to living rooms for all apartments. | Yes |
| | Private open spaces and balconies predominantly face north, east or west | Terraces and balconies are appropriately orientated. It is noted that the rear apartment balconies face south, however, given that the site adjoins the open space of Penrith Paceway, this is considered acceptable. | Yes |
| | Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms | Terraces and balconies are orientated to receive maximum daylight. South facing balconies are provided with vertical louvres to provide for daylight. | Yes |
| **4E Private open space and balconies** | | | |
| **4E-3** | Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred | Partially solid balustrades are provided to the balconies of all apartments and solid fencing is provided for the ground floor terraces. | Yes |
| | Downpipes and balcony drainage are integrated with the overall facade and building design. | Drainage pipes are of minimal view. | Yes |

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| | Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design | Air-conditioning units are located on the roof. | Yes |
| **4E-4** | Changes in ground levels or landscaping are minimised | Level changes are minimal across the ground level and COS areas. | Yes |
| | Design and detailing of balconies avoids opportunities for climbing and falls | Balconies are void and include partially solid balustrades for safety. | Yes |
| **4F Common circulation and spaces** | | | |
| **4F-1** | ***Design criteria*** | | |
| | The maximum number of apartments off a circulation core on a single level is eight | The floor plan layouts provide for a maximum of four apartments off a circulation core for levels 1 to 3. | Yes |
| | ***Design guidance*** | | |
| | Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors | 1.8m corridor widths and 3.24m ceiling heights provide for appropriate movement and access for all floor levels. | Yes |
| | Daylight and natural ventilation should be provided to all common circulation spaces that are above ground | Daylight and natural ventilation are provided to the central lobby and lift core circulation spaces. | Yes |
| | Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors | Overall, windows are provided at the end of corridors for all floor levels, with the exception of Level 4, which is access for only two apartments and is considered to be acceptable. | Yes |
| | Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled | No windows adjoin common circulation spaces for all apartments, which provides for adequate visual and acoustic privacy. | Yes |
| **4F-2** | Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines | Straight and clear sight lines are provided for each corridor for all floor levels of the building. | Yes |

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| | Tight corners and spaces are avoided | As above, noting that the ground floor corridor is provided with enlarged corner areas, which provides access to the COS room. | Yes |
| | Circulation spaces should be well lit at night | Windows at the end of corridors are provided and lighting will be required, as per a recommended consent condition. | Yes |
| | Legible signage should be provided for apartment numbers, common areas and general wayfinding | A recommended consent condition will be imposed to address this requirement. | Yes |
| | Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided | Seating is provided at the front lobby area. | Yes |
| **4G Storage** | | | |
| | ***Design criteria*** | | |
| **4G-1** | In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:<br>2 bed – 6m²<br>3 bed – 10m²<br><br>At least 50% of the required storage is to be located within the apartment. | Adequate storage is provided within each apartment, in addition to storage cages located within basement level 2. | Yes |
| | ***Design guidance*** | | |
| | Storage is accessible from either circulation or living areas | Storage areas are provided within the circulation areas and/or in living areas for the apartments. | Yes |
| **4G-2** | Storage not located in apartments is secure and clearly allocated to specific apartments | Storage cages located in basement level 2 are numbered and allocated to each apartment accordingly. | Yes |
| | Storage is provided for larger and less frequently accessed items | Adequate storage space is provided in basement level 2 for all apartments. | Yes |
| | Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible | Storage cages are located in basement level 2 and do not encumber any car spaces. | Yes |
| | Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain | As above. | Yes |
| **4H Acoustic privacy** | | | |

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| **4H-1** | Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy) | Adequate building separations, in addition to landscaping buffers provide acoustic privacy for neighouring buildings. | Yes |
| | Window and door openings are generally orientated away from noise sources | Windows are adequately setback from neighbouring POS areas. | Yes |
| | Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas | Highly habitable rooms are appropriately located away from corridors, opposite to the other end of the building for all apartments. | Yes |
| | Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources | Storage, circulation areas and non-habitable rooms are predominately located adjacent to corridors for all apartments to assist in buffering external noise sources. | Yes |
| | Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms | Service rooms are located centrally within the corridors for each level to minimise external noise sources for all apartments. | Yes |
| **4H-2** | Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions:<br>• rooms with similar noise requirements are grouped together<br>• doors separate different use zones<br>• wardrobes in bedrooms are co-located to act as sound buffers | With the exception of the ground floor and level 4 apartments, bedrooms are coupled together. However, some bedrooms wardrobes are located along the partition wall of adjacent living rooms. | No |
| **4J Noise and pollution** | | | |

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| **4J-1** | To minimise impacts the following design solutions may be used:<br>• physical separation between buildings and the noise or pollution source<br>• residential uses are located perpendicular to the noise source and where possible buffered by other uses residential uses and communal open spaces<br>• buildings should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer<br>• landscape design reduces the perception of noise and<br>acts as a filter for air pollution generated by traffic and<br>industry | Compliant and adequate separation distances are provided along the rear southern boundary, which adjoins Penrith Paceway.<br><br>Landscaping will assist in mitigating noise impacts. | Yes |
| **4J-2** | Design solutions to mitigate noise include:<br>• limiting the number and size of openings facing noise sources<br>• providing seals to prevent noise transfer through gaps<br>• using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)<br>• using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades,<br>external screens and soffits | It is noted that the submitted Noise and Race Track Impact Assessment assessment indicates that the development is compliant with relevant noise criteria, subject to the recommended upgraded glazing along the southern elevation, which will be imposed by way of a recommended consent condition. | Yes |
| **4K Apartment mix** | | | |
| **4K-1** | A variety of apartment types is provided | A mix of two and three bedroom apartments are provided. | Yes |

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| | The apartment mix is appropriate, taking into consideration:<br>• the distance to public transport, employment and education centres<br>• the current market demands and projected future demographic trends<br>• the demand for social and affordable housing<br>• different cultural and socioeconomic groups | The apartment mix has been designed in response to market demands in the area, as stated in the submitted plans.<br><br>Two apartments are nominated as adaptable unit types. | Yes |
| | Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households | The development proposes an apartment mix as follows:<br><br>13 x 2 bedroom apartments (81.25%)<br>3 x 3 bedroom apartments (18.75%) | Yes |
| **4K-2** | Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3) | Although the mix of apartments is limited, the stepped side elevations, in addition to solar access for all apartments are considered to be acceptable. | Yes |
| **4L Ground floor apartments** | | | |
| **4L-1** | Direct street access should be provided to ground floor apartments. | Direct street access is provided to the ground floor apartment via a separate pathway to its private terrace. | Yes |
| | Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include:<br>• both street, foyer and other common internal circulation entrances to ground floor apartments<br>• private open space is next to the street<br>• doors and windows face the street | Ground floor terraces, circulation entrances and windows that face the street are provided to ensure activity is generated. | Yes |
| | Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion | The front ground floor apartment has a suitable configuration to permit a SOHO conversion. | Yes |

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| **4L-2** | Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include:<br>• elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4)<br>• landscaping and private courtyards<br>• window sill heights that minimise sight lines into apartments<br>• integrating balustrades, safety bars or screens with the exterior design | The front terrace is elevated by approximately 500mm above ground level, however, a higher finished floor level will accentuate overall bulk. Further, suitable landscaping is provided within the front setback and western side boundary.<br><br>Fencing surrounding the terraces are proposed to mitigate visual and privacy impacts. | No |
| | Solar access should be maximised through:<br><br>• high ceilings and tall windows<br>• trees and shrubs that allow solar access in winter and shade in summer | 3.24m high ceiling heights and full height windows face the street.<br><br>Suitable landscaping is provided to permit both solar access and shading. | Yes |
| **4M Facades** | | | |
| **4M-1** | Design solutions for front building facades may include:<br>• a composition of varied building elements<br>• a defined base, middle and top of buildings<br>• revealing and concealing certain elements<br>• changes in texture, material, detail and colour to modify the prominence of elements | The proposal was subject to reviews by Council's UDRP prior to lodgement and a final review during the assessment process. The proposed building design, as amended, provides for a high level of articulation.<br><br>Varied façade materials, colours and design features are provided to break up and define the different levels of the building and provide elements of contrast. | Yes |
| | Building services should be integrated within the overall facade | Building services are located centrally and the rooftop plant equipment will be of minimal view from the street | Yes |

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| | Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include:<br>• well composed horizontal and vertical elements<br>• variation in floor heights to enhance the human scale<br>• elements that are proportional and arranged in patterns<br>• public artwork or treatments to exterior blank walls<br>• grouping of floors or elements such as balconies and windows on taller buildings | The building facades incorporate a high level of articulation, including an appropriate balance of horizontal and vertical elements. a thin edge box is provided to the front facade and vertical slot windows along the front section of the side elevations.<br><br>Large side windows that incorporate non-symmetrical vertical privacy louvres are incorporated.<br><br>Stacked balconies are provided, which assist in delineating the floor levels. | Yes |
| | Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights | The floor level of Level 1 is closely aligned to the neighbouring two storey building's second storey levels. | Yes |
| | Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals | Adequate articulation and balconies create shadows to the facades, as demonstrated by the submitted solar analysis. | Yes |
| **4M-2** | Building entries should be clearly defined | The front entry is clearly defined with a separate pathway surrounding by landscaping. | Yes |
| | The apartment layout should be expressed externally through facade features such as party walls and floor slabs | Partition walls and a raised slab are provided. | Yes |
| ***4N Roof design*** | | | |

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| **4N-1** | Roof design relates to the street. Design solutions may include:<br>• special roof features and strong corners<br>• use of skillion or very low pitch hipped roofs<br>• breaking down the massing of the roof by using smaller elements to avoid bulk<br>• using materials or a pitched form complementary to adjacent buildings | The front facade incorporates a thin edge elements box with a skillion roof to reduce overall bulk. | Yes |
| | Roof treatments should be integrated with the building design. Design solutions may include:<br>• roof design proportionate to the overall building size, scale and form<br>• roof materials compliment the building<br>• service elements are integrated | As above, noting that the roof is considered to be in proportion with level 4 and the overall building size. | Yes |
| | Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include:<br>• the roof lifts to the north<br>• eaves and overhangs shade walls and windows from summer sun | The roof design provides shading to level 4 apartments. | Yes |
| | Skylights and ventilation systems should be integrated into the roof design | Ventilation systems are centrally located and integrated with the roof design. | Yes |
| **4O Landscape design** | | | |
| **4O-1** | Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating:<br>• diverse and appropriate planting<br>• bio-filtration gardens<br>• appropriately planted shading trees<br>• areas for residents to plant vegetables and herbs<br>• composting<br>• green roofs or walls | The submitted landscape plan provides for a selection of trees, shrubs and ground covers, which are appropriate for the site, as endorsed by Council's Landscape Architect. | Yes. |

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| | Ongoing maintenance plans should be prepared | A recommended consent condition is imposed to provide a 1 year landscape maintenance report. | Yes |
| | Microclimate is enhanced by:<br>• appropriately scaled trees near the eastern and western elevations for shade<br>• a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter<br>• shade structures such as pergolas for balconies and<br>courtyards | An appropriate balance of trees are provided along all the site boundaries.<br><br>Balconies are provided with a generous depth to act as a shading structure. | Yes |
| | Landscape design responds to the existing site conditions including:<br>• changes of levels<br>• views<br>• significant landscape features including trees and rock<br>outcrops | The landscape plan is considered to be adequate, as endorsed by Council's Landscape Architect. | Yes |
| | Plants selected should be endemic to the region and reflect the local ecology | Suitable plant species are provided to permit growth and maturity. | Yes |
| **4Q Universal design** | | | |
| **4Q-1** | Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features | The development provides 4 of 16 (20%) apartments that achieve the silver level universal design, as detailed in the submitted Access Report. | Yes |
| **4Q-2** | Adaptable housing should be provided in accordance with the relevant council policy | 10% of the apartments are required to be provided as adaptable, which equates to two units (rounded up from 1.6). The plans indicate two ground floor apartments are to be provided as adaptable, which will be imposes via a recommended consent condition. | Yes |

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| | Design solutions for adaptable apartments include:<br>• convenient access to communal and public areas<br>• high level of solar access<br>• minimal structural change and residential amenity loss when adapted<br>• larger car parking spaces for accessibility<br>• parking titled separately from apartments or shared car parking arrangements | The adaptable apartments are provided with adequate accessibility, residential amenity and accessible parking spaces. | Yes |
| **4Q-3** | Apartment design incorporates flexible design solutions which may include:<br>• rooms with multiple functions<br>• dual master bedroom apartments with separate bathrooms<br>• larger apartments with various living space options<br>• open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom | The proposal provides an acceptable level of flexible design with open plan living layouts. | Yes |
| **4U Energy efficiency** | | | |
| **4U-1** | Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) | All habitable rooms are provided with acceptable levels of natural light. Apartment depths and open floor plan arrangements allow light into kitchens, dining and living areas. | Yes |
| | Well located, screened outdoor areas should be provided for clothes drying | Balconies are provided with vertical louvres for screening. | Yes |

| | | | |
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| **4U-2** | A number of the following design solutions are used:<br><br>• the use of smart glass or other technologies on north and west elevations<br>• thermal mass in the floors and walls of north facing<br>rooms is maximised<br>• polished concrete floors, tiles or timber rather than carpet<br>• insulated roofs, walls and floors and seals on window and door openings<br>• overhangs and shading devices such as awnings, blinds and screens | Northern facing apartments are provided with large windows to permit direct daylight. Interior materials and finishes are to be in accordance with an updated BASIX Certificate, which will ensure energy efficiency criteria is satisfied, which will be imposed via a recommended consent condition. | Yes |
| **4U-3** | A number of the following design solutions are used:<br><br>• rooms with similar usage are grouped together<br>• natural cross ventilation for apartments is optimised<br>• natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible | Majority of bedrooms are grouped together, with the exception of the ground floor and level 4 apartments.<br><br>Adequate natural ventilation is provided to all apartments. | Yes |
| **4V Water management and conservation** | | | |
| **4V-1** | Water efficient fittings, appliances and wastewater reuse should be incorporated | Compliance with an updated BASIX Certificate will ensure that fixtures and appliances meet water conversation targets for all apartments, which will be imposed via a recommended consent condition. | Yes |
| | Apartments should be individually metered | Apartments are to be individually metered. | Yes |
| | Rainwater should be collected, stored and reused on site | A bio-retention basin is incorporated with the stormwater management system. | Yes |
| | Drought tolerant, low water use plants should be used within landscaped areas | Suitable species are provided in regard to the climate of the locality. | Yes |
| **4V-2** | Water sensitive urban design systems to be designed by suitably qualified professional. | The application has been referred to Council's Waterways Unit, who raised no objections in regard to the proposed WSUD measures, subject to recommended consent conditions. | Yes |

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| **4V-3** | Detention tanks should be located under paved areas,<br>driveways or in basement car parks | The bio-retention basin is located underneath the COS room terrace | |
| | A number of the following design solutions are used:<br><br>• runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation<br>• porous and open paving materials is maximised<br>• on site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits | The stormwater concept design provides adequate water reuse for the development, as endorsed by Council's Waterways Unit. | Yes |
| **4W Waste management** | | | |
| **4W-1** | Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park | Waste collection rooms are located discreetly behind the front lobby and accessed via the hallway. Waste storage rooms are provided on basement level 2. | Yes |
| | Waste and recycling storage areas should be well ventilated | Waste collection and storage rooms are provided with mechanical ventilation. | Yes |
| | Circulation design allows bins to be easily manoeuvred between storage and collection points | Design criteria is considered adequate, as endorsed by Council's Waste Services Unit. | Yes |
| | Temporary storage should be provided for large bulk items such as mattresses | A bulky household goods collection room is provided on the ground floor, behind the front lobby. | Yes |
| | A waste management plan should be prepared | An adequate waste management plan has been provided with the application. | Yes |
| **4W-2** | All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling | All dwellings are provided with sufficient storage areas in each kitchen. | Yes |
| | Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core | As above. | |
| **4X Building maintenance** | | | |

| | | | |
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| **4X-1** | A number of the following design solutions are used:<br>• roof overhangs to protect walls<br>• hoods over windows and doors to protect openings<br>• detailing horizontal edges with drip lines to avoid staining of surfaces<br>• methods to eliminate or reduce planter box leaching<br>• appropriate design and material selection for hostile locations | Acceptable design solutions are incorporated to address these requirements. | Yes |
| **4X-2** | Window design enables cleaning from the inside of the building | A number of vertical sliding windows provide some level of cleaning from inside majority of rooms. | Yes |
| | Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade | Appropriate design measures are incorporated, including suitable materials and finishes and accessibility for ease of building maintenance. | Yes |
| | Design solutions do not require external scaffolding for maintenance access | Maintenance access is provided via the roof. | Yes |
| | Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems | Internal fit-outs are up the discretion of the future occupants and opportunities are provided for mechanical operated systems. | Yes |
| | Centralised maintenance, services and storage should be provided for communal open space areas within the building | Centralised maintenance, services and basement level 2 storage is provided. | Yes |

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| **4X-3** | A number of the following design solutions are used:<br>• sensors to control artificial lighting in common circulation and spaces<br>• natural materials that weather well and improve with time such as face brickwork<br>• easily cleaned surfaces that are graffiti resistant<br>• robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors | Thermal specifications are provided on the plans which are reasonable and acceptable. | Yes |

## Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River

An assessment has been undertaken of the proposal against relevant criteria within *Sydney Regional Environmental Plan No. 20—Hawkesbury-Nepean River (No. 2—1997).* This Policy aims "to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context". The Policy requires Council to assess development applications with regard to general and specific considerations, policies and strategies.

The proposal is not found to be contrary to these general and specific aims, planning considerations, planning policies and recommended strategies of the plan. The site is not located within a scenic corridor of local or regional significance and it is considered that the proposed development will not significantly impact on the environment of the Hawkesbury-Nepean River either in a local or regional context, noting that soil and sediment control and water quality measures will be in place via recommended consent conditions.

## Local Environmental Plan 2010 (Amendment 4)

| Provision | Compliance |
|---|---|
| Clause 1.2 Aims of the plan | Complies - See discussion |
| Clause 2.3 Permissibility | Complies - See discussion |
| Clause 2.3 Zone objectives | Complies - See discussion |
| Clause 2.7 Demolition requires development consent | Complies |
| Clause 4.1A Minimum lot sizes for dual occupancies, multi dwelling housing and residential flat buildings | Complies |
| Clause 4.3 Height of buildings | Complies - See discussion |
| Clause 4.4 Floor Space Ratio | N/A |
| Clause 5.10 Heritage conservation | N/A |
| Clause 7.1 Earthworks | Complies |
| Clause 7.2 Flood planning | Complies - See discussion |
| Clause 7.4 Sustainable development | Complies - See discussion |
| Clause 7.6 Salinity | Complies - See discussion |
| Clause 7.7 Servicing | Complies - See discussion |

**Clause 1.2 Aims of the plan**
The development proposal aims to provide alternative housing opportunities within an established residential area, which has access to nearby amenities and services. The proposal will not result in any unreasonable environmental impacts and provides substantial landscaping to enhance the amenity of the immediately surrounding area. It is noted that flooding risks are adequately addressed, as endorsed by Council's Development Engineer Unit and it is considered that servicing for the proposal is adequate. Further, the building design meets sustainability development principles, including building design and orientation, solar access, natural ventilation, etc, and as such, the proposal is considered to generally meet the aims of the plan, in particular:

- *(c) to accommodate and support Penrith's future population growth by providing a diversity of housing types, in areas well located with regard to services, facilities and transport, that meet the current and emerging needs of Penrith's communities and safeguard residential amenity,*
- *(g) to minimise the risk to the community in areas subject to environmental hazards, particularly flooding and bushfire, by managing development in sensitive areas, and*
- *(h) to ensure that development incorporates the principles of sustainable development through the delivery of balanced social, economic and environmental outcomes, and that development is designed in a way that assists in reducing and adapting to the likely impacts of climate change.*

**Clause 2.3 Permissibility**
The subject site is zoned R4 High Density Residential under the LEP. Residential flat buildings are permissible with consent in the R4 zone.

**Clause 2.3 Zone objectives**
The development proposal makes provision for housing diversity. The building design provides sufficient articulation and is not considered to be of unreasonable impact on neighouring and nearby properties, and as such, the proposal is considered to satisfy the objectives of the R4 zone, in particular:

- *To provide for the housing needs of the community within a high density residential environment,*
- *To provide a variety of housing types within a high density residential environment,*
- *To ensure that a high level of residential amenity is achieved and maintained,*
- *To encourage the provision of affordable housing, and*
- *To ensure that development reflects the desired future character and dwelling densities of the area.*

**Clause 4.3 Height of buildings**
The proposal has a building height of 17.8m, which complies with the 18m maximum height of building provision applicable to the subject site.

**Clause 7.2 Flood planning**
The site is affected by local overland flooding flows and an existing 1.8m wide stormwater easement located on the western boundary of Lot 58 DP 33490. It is noted that the site is located adjacent to a trapped low point within the roadway and therefore the proposal is required to adequately demonstrate that overland flows can be conveyed around the development proposal.

In this regard, the application proposes to create a new easement on the western boundary of Lot 59, 33490. Part 2.6 of Council's Stormwater Drainage Specifications for Building Developments Policy requires a 450mm pipe diameter and a 2.5m wide easement to accommodate over flows from the upstream catchment. The original application proposed a 2.3m wide easement, whereby Council's Development Engineer indicated that a variation to the Policy may be acceptable due to the location of the basement being 2.36m from the western boundary. However, due to discrepancies between the stormwater plans and architectural plans, a number of amendments were required at the request of Council and as such, the proposal, as amended, provides a 2.5m wide drainage easement that is clear of the basement footprint. The proposed 2.5m wide easement is considered to be adequate, as endorsed by Council's Development Engineer, subject to recommended consent conditions.

In addition, floor levels are above the 1% AEP and recommended consent conditions will ensure that the building is flood proof and can withstand the forces of floodwater.

**Clause 7.4 Sustainable development**

The proposal is considered to meet the overall principles of sustainable development, in that, the building design has a northern orientation, provides solar access and natural ventilation to all apartments and makes provision for stormwater quality treatment measures in the form of bio-retention, waste servicing, bicycle parking spaces and two adaptive apartments.

**Clause 7.6 Salinity**
The application has been accompanied by a geotechnical report prepared by a suitably qualified person for the basement car parking areas addressing excavation adjacent to Council infrastructure (with reference to RMS Technical Direction GTD 2012/2001 Excavation adjacent to RMS infrastructure), ground water movement, salinity and contamination. In this regard, the application adequately considers the impact of the development proposal on salinity processes.

**Clause 7.7 Servicing**
The site has has existing connections to facilities and services and it is noted that the proposed stormwater management system and on-street indented waste bay will ensure adequate servicing for the proposal, as endorsed by Council's Development Engineer for drainage and Waste Services Units for waste management.

## Section 4.15(1)(a)(ii) The provisions of any draft environmental planning instrument

It is noted that both the *Draft Environment SEPP* and *Draft Remediation of Land SEPP* are at present applicable to the subject site, but while so, does not affect or alter the recommendations of this report.

## Section 4.15(1)(a)(iii) The provisions of any development control plan

### Development Control Plan 2014

| Provision | Compliance |
|---|---|
| DCP Principles | Complies - see Appendix - Development Control Plan Compliance |
| C1 Site Planning and Design Principles | Complies |
| C2 Vegetation Management | Complies |
| C3 Water Management | Complies - see Appendix - Development Control Plan Compliance |
| C4 Land Management | Complies |
| C5 Waste Management | Complies - see Appendix - Development Control Plan Compliance |
| C6 Landscape Design | Complies |
| C7 Culture and Heritage | N/A |
| C8 Public Domain | Complies |
| C9 Advertising and Signage | N/A |
| C10 Transport, Access and Parking | Does not comply - see Appendix - Development Control Plan Compliance |
| C11 Subdivision | N/A |
| C12 Noise and Vibration | Complies |
| C13 Infrastructure and Services | Complies |
| D2.5 Residential Flat Buildings | Complies - see Appendix - Development Control Plan Compliance |

## Section 4.15(1)(a)(iiia) The provisions of any planning agreement

There are no planning agreements in place, which are applicable to the development proposal.

## Section 4.15(1)(a)(iv) The provisions of the regulations

The relevant prescribed conditions of the Regulations, such as the requirement for compliance with the Building Code of Australia (BCA) and fire safety requirements, will be imposed as consent conditions where applicable, as recommended by Council's Building Surveyor, who reviewed the proposal and raised no objections. In this regard, the proposal complies with the relevant BCA and fire safety requirements of the *Environmental Planning and Assessment Regulation 2000*.

In addition, the development application has been advertised, notified and publicly exhibited in accordance with the requirements of the Regulations.

## Section 4.15(1)(b)The likely impacts of the development

***Context & Setting***

The development proposal incorporates a compliant building height and setbacks. The proposed built form is compatible with the immediate surrounding area given that the R4 zone is transitioning to high density developments, noting the 48 unit residential flat building located 80m to west of the site. The building design has gone through vigorous design amendments in comparison to previous applications and concepts, as advised by the UDRP and therefore is considered to be consistent with the desired future character of the locality. Moreover, sufficient solar access is retained to neighbouring properties and privacy impacts have been minimised by way of appropriate fenestration and the requirement for vertical privacy louvres for sides of balconies via a recommended consent condition.

***Site Design and Internal Design***

The proposal makes provision for a landscaped area of approximately 39.75% for the site, which satisfies the minimum 35% landscaped area requirement in the R4 zone, noting that adequate deep soil zones and landscaping embellishment are provided. In terms of the floor plan layouts, two ground floor adaptable apartments are provided and it is noted that overall, the floor plan layouts provide a high level of residential amenity. Further, compliance with BCA requirements will provide for the health and safety of the future residents.

***Access, Parking and Traffic***

The proposal provides acceptable access and off-street parking by way of basement parking. It is noted that a one-way basement ramp and internal traffic signal system is proposed, which is considered to be adequate, as detailed in the Appendix of this report. In regards to traffic generation, the proposal is not considered to result in any adverse impacts on local traffic flows, as indicated in the submitted Traffic and Parking Impact Assessment (TPIA) Report and as detailed in the Appendix of this report.

***Utility Services***

The proposed stormwater infrastructure and indented on-street waste collection bay will provide adequate servicing for the proposal.

***Heritage***

The property is not subject to any heritage order or listed as a heritage item, nor are there any listed heritage items in proximity to the site.

***Environmental Impacts***

The proposal does not involve the removal of any significant biodiversity or threatened species. The proposed earthworks are unlikely to result in any detrimental impacts on soil quality or water resources, as detailed in the submitted Geotechnical Report and endorsed by Council’s Development Engineer Unit, subject to recommended consent conditions. The amounts of waste to be generated are considered to be manageable and adherence to an updated BASIX Certificate will ensure that the proposal meets energy efficiency and water conservation targets. The proposed works will result in noise and vibration impacts, however, to maintain the acoustic privacy and amenity of the surrounding area, a standard consent condition restricting construction work hours is recommended. In addition, the site is not subject to bushfire or subsidence.

***Hazards***

The subject site is identified as being subject to a 1% AEP overland flow path. In this regard, the proposal is compliant with the flood planning controls, as endorsed by Council’s Development Engineer Unit, as detailed in this report.

***Socio-Economic Impacts***

The proposal facilitates housing diversity and contributes to diverse demographics in the neighbourhood. The additional residents will support local businesses, subsequently contributing to strengthening the locality, a key element for supporting Penrith City's vision of achieving a sustainable and prosperous region. Given that the proposal is of a suitable scale, it is not considered likely that there will be unreasonable impacts on neighbouring or surrounding property values, noting the R4 zoning and current transition to high density residential developments in the neighbourhood.

## Section 4.15(1)(c)The suitability of the site for the development

The site is deemed suitable for the development proposal for the following reasons:

- The site is zoned R4 and the proposal is permissible,
- The proposal is compatible with surrounding and future land uses,
- The grade and area of the site is capable of providing for and/or connecting to the infrastructure required to service and maintain the development,
- The proposal will not result in any unacceptable negative environmental impacts, including parking and traffic flows in the locality, and
- The development site is not subject to any unmanageable natural hazards, nor does it contain any significant ecosystems or threatened species.

## Section 4.15(1)(d) Any Submissions

### Community Consultation

In accordance with Appendix F4 of the *Penrith Development Control Plan 2014* (DCP), the proposed development was advertised in the local newspaper, notified and publicly exhibited. The proposal was advertised in the Western Weekender newspaper on 9 April 2020 and notified to 86 adjoining and nearby property owners/occupiers and exhibited between 10 April and 24 April 2020. Two public submissions were received in response, however, the concerns raised are not considered to impede approval of the application.

Key concerns raised in relation to the development proposal were as follows:

| **Issue Raised** | **Comments** |
|---|---|
| **Notification** | • The proposal was advertised, notified to adjoining and nearby properties and publicly exhibited in accordance with Appendix F4 of the DCP.<br>• The proposal was advertised in the Western Weekender newspaper on 9 April 2020, notified to adjoining and nearby property owners/occupiers and exhibited between 10 April and 24 April 2020.<br>• It is noted that the submission raising these matters was received within the notification period and that the concerns raised have formed part of the assessment of the proposal. |
| **Visual Privacy** | • The proposal includes rear balconies, which have the potential to overlook onto neighouring rear private open space areas. It is noted that the western and eastern sides of these balconies incorporate rails for safety, however, a recommended consent condition is imposed to provide for partially closed solid vertical privacy louvres to minimise overlooking concerns and privacy impacts on neighbouring properties. |

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| **Solar Access and Overshadowing** | • The application was accompanied with a solar analysis, including shadow diagrams and 'Eye on the Sun' plans, which demonstrates that a minimum of 4 hours of solar access to neighbouring properties is maintained in accordance with the Apartment Design Guide requirements.<br>• It is noted that adequate solar access is maintained to the eastern neighbouring property between 9am to 1pm and to the western adjoining property between 11am to 3pm. |
| **Off-Street Parking** | • It is acknowledged that the proposal has a shortfall of two parking spaces (service vehicle and car wash spaces) in accordance with the DCP requirements. A minimum parking rate of 24 parking spaces is required for the 16 unit development, being 13 spaces for the two bedroom units (1 space per 1 or 2 bedrooms), 6 spaces for the three bedroom units (2 spaces per 3 or more bedrooms), 1 service vehicle space (1 space per 40 dwellings), 3 visitor spaces (1 space per every 5 dwellings, or part thereof for visitors) and 1 car washing space (1 space per 50 units).<br>• In consideration of the nature of the development, being of a smaller scale residential flat building, a shared use of a visitor/car wash/service vehicle parking space is proposed and is considered to be acceptable given the low scale nature of the development.<br>• As such, the proposal technically has a shortfall of two parking spaces in consideration of a shared parking space, which is not considered likely to result in any unreasonable impacts on-street parking and local traffic flows, as detailed in the submitted Traffic and Car Parking Impact Assessment Report. |

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|---|---|
| **Traffic Safety** | • It is noted Rodley Avenue is a narrow street, which raises concerns regarding traffic safety. However, the submitted Traffic and Car Parking Impact Assessment Report, which has consideration of the Roads & Maritime Services' Guide to Traffic Generating Developments, indicates that the low traffic flow along Rodley Avenue, being less than one vehicle every minute, and observations of current courteous driving conditions ensure that two-way traffic flow occurs in a reasonably safe and efficient manner. Further, it is noted that across the Penrith Local Government Area and the greater Sydney area, narrow two-way traffic flow streets are commonly restricted to only one-way traffic flow and therefore motorists are generally aware of these existing conditions, which results in more courteous and safe driving to permit traffic flow in this regard.<br>• In regards to projected traffic impacts due to the development, the proposal is expected to generate up up to 9 peak hour trips to and from the site, i.e. one vehicle movement every 7 minutes during commuter peaks, or one additional vehicle movement every 9 minutes relative to the existing uses on the site, which is considered to be acceptable.<br>• Further, the proposed indented on-street waste bay and on-site waste collection rooms have undergone several amendments to the design criteria in accordance with Council's Waste Services requirements and are considered to be acceptable.<br>• In consideration of the above, the minor increase of traffic generation and the proposed indented on-street waste collection service are not considered likely to result in any unreasonable impacts on parking, traffic flows and safety in the locality. |

## Referrals

The application was referred to the following stakeholders and their comments have formed part of the assessment:

| Referral Body | Comments Received |
|---|---|
| Building Surveyor | No objections - subject to conditions |
| Development Engineer | Not supported, however conditions provided |
| Environmental - Environmental management | No objections - subject to conditions |
| Environmental - Waterways | No objections - subject to conditions |
| Waste Services | No objections - subject to conditions |
| Traffic Engineer | Not supported |
| Community Safety Officer | No objections - subject to conditions |

**Development Engineer**

It is noted that both Council's Development Engineer and Traffic Engineer raised objections in regard to the proposed one-way basement ramp. However, due to the constraints of the site dimensions and that traffic safety measures via the utilisation of an internal traffic signal system will be in place, this is considered to be acceptable in this instance, as detailed in the Appendix of this report.

## Section 4.15(1)(e)The public interest

In consideration of the nature and scale of the development proposal, in addition to the proposal being largely compliant with the applicable development controls, the development is not considered likely to generate any significant issues of public interest. The proposal is consistent with the relevant planning provisions and therefore the public interest is served as it is considered to be an an orderly and economic use of land, which has adopted the predominant design characteristics for high density development within the surrounding area and will also improve opportunities for housing diversity in an appropriate location.

## Section 94 - Developer Contributions Plans

The following development contribution plans apply to the site:

- Cultural Facilities
- District Open Space Facilities
- Penrith City Local Open Space

The following development contributions apply to the proposed development:

### Calculations for Residential Flat Building

***Cultural Facilities***

| No. of units | x | Rate | Credit for existing dwellings | Contribution rate |
|---|---|---|---|---|
| 16 | x | 2.4 | 6.0 | 32.4 |

***District and Local Open Space Facilities***

| No. of units | x | Rate | Credit for existing dwellings | Contribution rate |
|---|---|---|---|---|
| 16 | x | 2 | 6.2 | 25.8 |

### AMOUNTS

| Contribution Plan | Contribution Rate x Calculation Rate | Total |
|---|---|---|
| Cultural Facilities | 32.4 x $182.00 | $5,897.00 |
| District Open Space | 25.8 x $2,012.00 | $51,910.00 |
| Local Open Space | 25.8 x $728.00 | $18,783.00 |
| | **NET TOTAL** | **$76,590.00** |

## Conclusion

In assessing this development proposal against the relevant environmental planning policies, including *Penrith Local Environmental Plan 201*0, *Penrith Development Control Plan 2014*, *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*, *State Environmental Planning Policy No. 55—Remediation of Land*, *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development* and *Sydney Regional Environmental Plan No. 20— Hawkesbury Nepean River (No. 2—1997)*, the proposal generally satisfies the aims, objectives and provisions of these policies. Overall, the development is unlikely to have any unreasonable impacts on the surrounding natural, social or economic environments. The site is suitable for the development and the proposal is in the public interest. Therefore, the application is worthy of support and is recommended for approval, subject to conditions.

## Recommendation

1. That DA20/0141 for demolition of existing structures and construction of a five storey residential flat building containing 16 apartments and two levels of basement for parking and services at 36 - 38 Rodley Avenue, Penrith be approved. subject to the attached conditions, and

2. That those who made a submission in relation to the proposal are notified of the determination.

## General

1 A001 - Approved plans table

The development must be implemented substantially in accordance with the following plans and documents stamped approved by Council, the application form and any supporting information received with the application, except as may be amended in red on the stamped approved plans and by the following conditions.

| Sheet Name | Prepared By | Drawing No. | Issue | Dated |
|---|---|---|---|---|
| Demolition Plan | Morson Group | DA05 | A | 16-03-2020 |
| Site Plan | Morson Group | DA04 | A | 16-03-2020 |
| Ground Level | Morson Group | DA06 | C | 15-06-2020 |
| Level 1 | Morson Group | DA07 | B | 04-05-2020 |
| Level 2 | Morson Group | DA08 | B | 04-05-2020 |
| Level 3 | Morson Group | DA09 | A | 16-03-2020 |
| Level 4 | Morson Group | DA10 | A | 16-03-2020 |
| Roof | Morson Group | DA11 | A | 16-03-2020 |
| Basement 1 | Morson Group | DA12 | B | 04-05-2020 |
| Basement 2 | Morson Group | DA13 | A | 16-03-2020 |
| Elevation North | Morson Group | DA14 | B | 04-05-2020 |
| Elevation South | Morson Group | DA15 | A | 16-03-2020 |
| Elevation West | Morson Group | DA16 | B | 04-05-2020 |
| Elevation East | Morson Group | DA17 | B | 04-05-2020 |
| Section 1 | Morson Group | DA18 | A | 16-03-2020 |
| Section 2 | Morson Group | DA19 | B | 04-05-2020 |
| Section 3 | Morson Group | DA20 | A | 16-03-2020 |
| Material Schedule | Morson Group | DA23 | A | 16-03-2020 |
| Section Details | Morson Group | DA25 | A | 04-05-2020 |
| Landscape Plan | Paul Scrivener Landscape | 1 of 2 (Job Ref: 20/2142 | D | 16-03-2020 |
| Planting Plan & Details | Paul Scrivener Landscape | 2 of 2 (Job Ref: 20/2142 | D | 16-03-2020 |
| Stormwater Concept Design Basement 02 Plan | S&G Consultants Pty Ltd | SW200 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Basement 01 Plan | S&G Consultants Pty Ltd | SW201 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Ground Floor Plan | S&G Consultants Pty Ltd | SW202 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Roof Plan | S&G Consultants Pty Ltd | SW203 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Details Sheet 1 of 2 | S&G Consultants Pty Ltd | SW300 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Details Sheet 2 of 2 | S&G Consultants Pty Ltd | SW301 (Project No. 20180061) | H | 17-06-2020 |
| Erosion and Sediment Control Plan and Details | S&G Consultants Pty Ltd | SW400 (Project No. 20180061) | H | 17-06-2020 |
| Stormwater Concept Design Music Catchment Plan | S&G Consultants Pty Ltd | S500 (Project No. 20180061) | H | 17-06-2020 |

**Documents**

- Aoustic Report prepared by Rodeny Stevens Acoustics, Reference No. 180128R1, Revision 1, dated 10 June 2020,
- Asbestos Management Register prepared by JMB Environmental Consulting, Reference No. 19380, dated August 2019,
- DA Access Report prepared by Vista Access Architect, Reference No. 18167, Issue C, dated 16 March 2020,
- Flood Impact Statement, prepared by S&G Consultants Pty Ltd, Reference No. 2018.0061-L06, dated 16 March

2020,
- Geotechnical Report prepared by Morrow, Reference No. P1720_01 rev1, dated 13 August 2019,
- Road Noise and Race Track Impact Assessment - Proposed Residential Development at 36-38 Rodley Avenue, Penrith prepared by Rodney Stevens Acoustics, Reference No. 180128R1, Revision 1, dated 10/6/2020,
- Tier 1 Preliminary Site Investigation prepared by SESL Australia, Reference No. J001922, Revision 1.0, dated 9 August 2019,
- Traffic & Parking Impact Assessment prepared by Stanbury Traffic Planning, Reference No. 18-045-2, dated March 2020, and
- Waste Management Plan prepared by Peter Morson, dated 16 March 2020.

2 A014 - LOT CONSOLIDATION

Lot 58 DP 33490 and Lot 59 DP 33490 are to be consolidated as one lot. A copy of the registered plan of consolidation from NSW Land Registry Services is to be submitted to the Principal Certifying Authority (PCA) and Penrith City Council, if Council is not the PCA, prior to the issue of an Occupation Certificate for the development.

3 A019 - OCCUPATION CERTIFICATE (ALWAYS APPLY)

**The development shall not be used or occupied until an Occupation Certificate has been issued.**

4 A038 - LIGHTING LOCATIONS

**Prior to the issue of an Occupation Certificate**, a lighting system shall be installed for the development to provide uniform lighting across common areas and driveways. Exterior lighting shall be located and directed in such a manner so as not to create a nuisance to surrounding land uses. The lighting shall be the minimum level of illumination necessary for safe operation. The lighting shall be in accordance with AS 4282 “Control of the obtrusive effects of outdoor lighting” (1997).

5 A039 - Graffiti

The finishes of all structures and the building are to be maintained at all times and any graffiti or vandalism immediately removed/repaired.

6 A046 - Obtain Construction Certificate before commencement of works

A **Construction Certificate** shall be obtained prior to commencement of any building works.

7 A Special (BLANK)

**Prior to the issue of a Construction Certificate**, an amended BASIX Certificate that reflects the stamped approved plans shall be submitted with and approved by the Certifying Authority.

8 A Special (BLANK)

Prior to the erection of any crane or any temporary construction structure at a height greater than the roof of the subject development, written notice shall be provided to Council and the Nepean Blue Mountains Local Health District at least 21 days prior to the erection, indicating at least the following:

- Name of responsible company and relevant contact details,
- Dimensions (height, length, etc.),
- Position and orientation of boom/jib and counterboom/jib,
- Length of time that such a crane or structure will be erected on the site, and
- The management plan and measures that will ensure that the crane or structure will be of least possible impact on flight operations for Ambulance NSW.

Any crane or any temporary construction structure erected at a height greater than the roof of the subject development shall comply with the following:

- A medium intensity, steady red lighting positioned at the highest point and both ends of the boom/jib and counterboom/jib, so that such lighting will provide an indication of the height of the crane and the radius of the crane boom/jib. Such lighting, which should be displayed at night, should be positioned so that when displayed it is visible from all directions,
- When a crane is unattended for an extended period of time ensure the crane’s boom is retracted and lowered as far as possible, and
- No part of the crane or structure shall extend beyond the boundaries of the development site unless approved by Penrith City Council in consultation with the Nepean Blue Mountains Local Health District. Any encroachment beyond the boundaries of the subject site shall be the minimum amount required to facilitate construction and access all parts of the construction site.

9 A Special (BLANK)

In the event that a hydrant booster is necessary to service the approved development, the booster shall be integrated into the design of the development. **Prior to the issue of a Construction Certificate**, Council shall be consulted regarding the proposed location of the booster, (as the location of the booster may impact on other services and buildings, driveway or landscape design). Confirmation will also be required with regard to any heat shield or other such structures required to be installed with the booster.

10 A Special (BLANK)

**Prior to the issue of a Construction Certificate**, the design recommendations of the 'DA Access Report' prepared by Vista Access Architects, Reference No. 18167, Issue C, dated 16 March 2020 shall be incorporated into the Construction Certificate plans.

11 A Special (BLANK)

All mechanical ventilation equipment, including ducts, air conditioner services and the like must be shown on the Construction Certificate documentation as being contained within the approved buildings. Any gutters and down pipes shall be integrated into the architecture of the buildings. Any plant or unsightly structures installed on the rooftop must be screened from view.

12 A Special (BLANK)

A minimum of two (2) apartments shall be constructed as adaptable apartments to meet the requirements for persons with a disability and in accordance with the stamped approved plans. The adaptable units shall each be allocated an accessible car parking space compliant with AS 2890.6.

**The Construction Certificate application must be accompanied by certification** from a person suitably qualified by the Association of Consultants in Access Australia confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Housing Standard (AS 4299-2009). A Compliance Certificate in this regard, shall be provided **prior to the issue of an Occupation Certificate.**

13 A Special (BLANK)

**Prior to the issue of an Occupation Certificate**, all street trees are to be provided as identified on the landscape plan forming part of Condition 1 of this consent.

14 A Special (BLANK)

**Prior to the issue of a Construction Certificate**, the sides of all upper level rear balconies shall be amended to incorporate vertical privacy louvres. This amendment shall be shown on the Construction Certificate plans.

15 A Special (BLANK)

All fencing and retaining wall works shall be at the full cost of the applicant/property owner. The materials and colours of any fencing and retaining walls shall match or complement the external materials of the approved dwellings. All retaining walls shall be of masonry (or similar) construction (not timber). All fencing forward of front building lines is to be lower than 1.2m in height.

16 A Special (BLANK)

**Prior to the issue of a Construction Certificate**, an updated BASIX Certificate that reflects the stamp approved plans shall be submitted with and approved to the Principal Certifying Authority.

17 A Special (BLANK)

**Prior to the issue of a Construction Certificate**, the study rooms of Units 11, 21 and 31 shall be deleted and consolidated with the adjoining bedrooms. This amendment shall be shown on the Construction Certificate plans.

18 A Special CPTED Requirements

The following community safety and crime prevention through environmental design (CPTED) requirements are required to be implemented:

**Lighting**

- All outdoor/public spaces throughout the development must be lit to the minimum Australian Standard of AS 1158. Lighting must be consistent in order to reduce the contrast between shadows and illuminated areas and must be designed in accordance with AS 4282 - Control of the obtrusive effects of outdoor lighting.

**Basement Car Parking**

- A security system must be installed on any pedestrian and vehicle entry/exit points to the car park, including the lift and stairwell, to minimise opportunities for unauthorised access.
- All areas of the car park must be well-lit, with consistent lighting to prevent shadowing or glare.
- Car park surfaces including walls and ceilings are to be light coloured with details included with the **Construction Certificate** application.

**Building Security & Access Control**

- Intercom, code or card locks or similar must be installed for all entries to the building, and all resident only areas within the complex.
- Australian Standard 220 – door and window locks must be installed in all dwellings.
- CCTV is to be provided to cover communal public space areas, including the entrance to the basement car park. Cameras must be of sufficient standard to be useful for police in the event of criminal investigations. Lighting must be provided to support cameras at night (alternatively infra-red cameras are recommended). Signage must be displayed to indicate that CCTV cameras are in use.
- Letterboxes must be positioned from with a secure area (i.e internal lobby) to minimise opportunities for mail theft.
- Storage cages in the basement car park must be sturdy and well secured.

**Graffiti/Vandalism**

- Graffiti resistant coatings must be used to external surfaces where possible, including signage, furniture, retaining walls, etc.
- Procedures must be in place to ensure the prompt removal and/or repair of graffiti or vandalism to the buildings, fencing, and common areas. This includes reporting incidents to police and/or relevant authorities.

**Landscaping**

- All vegetation must be regularly pruned to ensure that sight lines are maintained.

## Demolition

19 B001 - Demolition of existing structures

Structures nominated for demolition on the approved plans shall be demolished as part of the approved works.

20 B002 - AS FOR DEMOLITION AND DISPOSAL TO APPROVED LANDFILL SITE

All demolition works are to be conducted in accordance with the provisions of AS 2601-1991 “The Demolition of Structures” and in accordance with the 'Asbestos Management Register' prepared for 36 and 38 Rodley Avenue, Penrith prepared by JMB Environmental Consulting, Reference No. 19380, dated 09/08/2019. **Prior to demolition**, all services shall be suitably disconnected and capped off or sealed to the satisfaction of the relevant service authority requirements.

All demolition and excavated material shall be disposed of at a Council approved site or waste facility. Details of the proposed disposal location(s) of all excavated material from the development site shall be provided to the Principal Certifying Authority **prior to commencement of demolition**.

21 B003 - ASBESTOS

You should read Council's Fact Sheet titled "Handling and Disposal of Fibrous Cement Products" **before any demolition works commence on-site**.

**Prior to commencement of demolition works on-site**, a portaloo with appropriate washing facilities shall be located on the site and the Principal Certifying Authority is to be satisfied that:

- Measures are in place so as to comply with the SafeWork NSW "Short Guide to Working with Asbestos Cement" and
- The person employed to undertake the works is a licensed asbestos removal contractor and is holder of a current SafeWork NSW Asbestos Licence.

Any demolition works involving the removal of all asbestos shall only be carried out by a licensed asbestos removal contractor who has a current SafeWork NSW Asbestos Licence.

All asbestos laden waste, including asbestos cement flat and corrugated sheeting must be disposed of at a tipping facility licensed by the Environment Protection Authority to receive asbestos wastes.

22 B004 - Dust

Dust suppression techniques are to be employed during demolition and construction works to reduce any potential nuisances to surrounding properties.

23 B005 - Mud/Soil

Mud and soil from vehicular movements to and from the site during demolition and construction works must not be deposited on the road.

24 B006 - Hours of work

Demolition works will be restricted to the following hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines:

- Mondays to Fridays, 7am to 6pm
- Saturdays, 7am to 1pm (if inaudible on neighbouring residential premises), otherwise 8am to 1pm
- No demolition work is permitted on Sundays and Public Holidays.

In the event that the demolition relates to works inside the building that does not involve external walls or the roof and does not involve the use of equipment that emits noise, then the demolition works are not restricted to the hours stated above.

The provisions of the *Protection of the Environment Operations Act 1997* in regulating offensive noise also apply to all construction works.

## Environmental Matters

25 D001 - Implement approved sediment& erosion control measures

Erosion and sediment control measures shall be installed **prior to the commencement of works on site** including approved clearing of site vegetation. The erosion and sediment control measures are to be maintained in accordance with the approved erosion and sediment control plan(s) for the development and the Department of Housing's “Managing Urban Stormwater: Soils and Construction” 2004.

The sediment and erosion control measures are to be installed **prior to and maintained throughout the construction phase of the development until the land, that was subject to the works, has been stabilised and grass cover established.** These measures shall ensure that mud and soil from vehicular movements to and from the site does not occur during the construction of the development.

26 D005 – No filling without prior approval (may need to add D006)

No fill material is to be imported to the site without the prior approval of Penrith City Council in accordance with *Sydney Regional Environmental Plan No. 20 (Hawkesbury- Nepean River) (No .2-1997)*. No recycling of material for use as fill material shall be carried out on the site without the prior approval of Council.

27 D006 - No filling without prior approval (Use always, except for bulk earthworks/ major fill operations)

No fill material shall be imported to the site until such time as a Validation Certificate (with a copy of any report forming the basis for the validation) for the fill material has been submitted to, considered and approved by Council. The Validation Certificate shall:

- state the legal property description of the fill material source site,
- be prepared by an appropriately qualified person (as defined in *Penrith Development Control Plan 2014*) with consideration of all relevant guidelines (e.g. EPA, ANZECC, NH&MRC), standards, planning instruments and legislation,
- provide details of the volume of fill material to be used in the filling operations,
- provide a classification of the fill material to be imported to the site in accordance with the Environment Protection Authority's "Environmental Guidelines: Assessment, Classification & Management of Non-Liquid Wastes" 1997, and
- (based on the fill classification) determine whether the fill material is suitable for its intended purpose and land use and whether the fill material will or will not pose an unacceptable risk to human health or the environment.

{**Note**: *Penrith Development Control Plan 2014* defines an appropriately qualified person as "a person who, in the opinion of Council, has a demonstrated experience, or access to experience in hydrology, environmental chemistry, soil science, eco-toxicology, sampling and analytical procedures, risk evaluation and remediation technologies. In addition, the person will be required to have appropriate professional indemnity and public risk insurance."}.

If the Principal Certifying Authority or Penrith City Council is not satisfied that suitable fill materials have been used on the site, further site investigations or remediation works may be requested. In these circumstances the works shall be carried out prior to any further approved works.

28 D009 - Covering of waste storage area

All waste materials stored on-site are to be contained within a designated area such as a waste bay or bin to ensure that no waste materials are allowed to enter the stormwater system or neighbouring properties. The designated waste storage areas shall provide at least two waste bays /bins so as to allow for the separation of wastes, and are to be fully enclosed when the site is unattended.

29 D010 – Appropriate disposal of excavated or other waste

All excavated material and other wastes generated as a result of the development are to be re-used, recycled or disposed of in accordance with the approved waste management plan.

Waste materials not specified in the approved waste management plan are to be disposed of at a lawful waste management facility. Where the disposal location or waste materials have not been identified in the waste management plan, details shall be provided to the Certifying Authority as part of the waste management documentation accompanying the Construction Certificate application.

All receipts and supporting documentation must be retained in order to verify lawful disposal of materials and are to be made available to Penrith City Council on request.

30 D013 - Approved noise level 1

Noise levels for the premises shall not exceed the relevant noise criteria detailed in 'Road Noise and Race Track Impact Assessment - Proposed Residential Development at 36-38 Rodley Avenue, Penrith' prepared by Rodney Stevens Acoustics, Reference No. 180128R1, Revision 1, dated 10/6/2020. The recommendations provided in the above-mentioned acoustic report shall be implemented and incorporated into the design and construction of the development, and shall be shown on plans accompanying the Construction Certificate application. A certificate is to be obtained from a qualified acoustic consultant certifying that the building has been constructed to meet the noise criteria in accordance with the approved acoustic report. This certificate is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

The provisions of the *Protection of the Environment Operations Act 1997* apply to the development, in terms of regulating offensive noise.

31 D014 - Plant and equipment noise

The operating noise level of plant and equipment shall not exceed 5dB(A) above the background noise level when measured at the boundaries of the premises. The provisions of the *Protection of the Environment Operations Act 1997* apply to the development, in terms of regulating offensive noise.

32 D020 - Vehicle wash bay

All vehicle washing shall be conducted in a wash bay approved, installed and connected to the sewer in accordance with Sydney Water's requirements.

33 D Special BLANK

Councils bin infrastructure and collection service will be provided/commenced for the development upon the completion of all on-site waste collection infrastructure and the attainment of an Occupation Certificate.

34 D Special BLANK

**Prior to the issue of an Occupation Certificate**, the following waste management requirements must be complied with and details of compliance demonstrated to Council:

- The developer is to enter into a formal agreement with Penrith City Council for the utilisation of Councils Waste Collection Service. This is to include Council being provided with indemnity against claims for loss and damage.

**Note**: By entering into an agreement with Council for Waste Collection, the development will be required to operate in full compliance with Penrith City Councils Waste Collection and Processing Contracts for Standard Waste Collection. The provision of Councils waste collection service will not commence until formalisation of the agreement.

- All on-site waste collection infrastructure, doors and access points (waste collection room, bulky household goods collection room and main foyer doors) are to be locked/accessed through Councils Abloy Key System. System specifications are outlined in Section 3.5.5 of the 'Residential Flat Building Waste Management Guideline' document.,
- All on-site waste collection infrastructure (waste collection room, bulky household goods collection room, chute rooms, chute cupboards) are to be provided with wash facilities through the use of a centralised mixing valve and hose cock. Respective drainage and water proofing is to be installed to support the use of hose facilities,
- The waste collection room, bulky household goods collection room, chute room, chute cupboards are to be provided with a minimum 2.7m high unobstructed ceiling height clearances throughout all intersections,
- The chute cupboards on each residential level are to incorporate self-closing sealed doors to inhibit the permeation of odour within the residential corridor,
- The chute cupboards on each residential level are to be waterproofed in accordance with the Building Code of Australia to permit scheduled cleaning,
- The bulky goods, waste collection and chute room to incorporate dual, 180-degree outwards opening, sealed self-closing doors,
- 'No Parking – Waste Collection and Removalist Vehicle Excepted' signage is to be installed on the loading bay to permit unobstructed access for scheduled waste collection servicing, and
- Council's Waste and Resource Recovery Department is to conduct a site inspection of the on-site infrastructure to permit a safe and efficient waste collection service.

## BCA Issues

35 E01A - BCA compliance for Class 2-9

All aspects of the building design shall comply with the applicable performance requirements of the Building Code of Australia so as to achieve and maintain acceptable standards of structural sufficiency, safety (including fire safety), health and amenity for the on-going benefit of the community. Compliance with the performance requirements can only be achieved by:

(a) complying with the deemed to satisfy provisions, or

(b) formulating a performance solution which:

- complies with the performance requirements, or
- is shown to be at least equivalent to the deemed to satisfy provision, or

(c) a combination of (a) and (b).

It is the owner's responsibility to place on display, in a prominent position within the building at all times, a copy of the latest fire safety schedule and fire safety certificate/statement for the building.

## Utility Services

36 G002 - Section 73 (not for

A Section 73 Compliance Certificate under the *Sydney Water Act 1994* shall be obtained from Sydney Water. The application must be made through an authorised Water Servicing Coordinator. Please refer to “Your Business” section of Sydney Water’s website at www.sydneywater.com.au then the “e-developer” icon, or telephone 13 20 92.

The Section 73 Compliance Certificate must be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

37 G004 - Integral Energy

**Prior to the issue of a Construction Certificate**, a written clearance is to be obtained from Endeavour Energy stating that electrical services have been made available to the development or that arrangements have been entered into for the provision of services to the development.

In the event that a pad mounted substation is necessary to service the development, Penrith City Council shall be consulted over the proposed location of the substation before the Construction Certificate for the development is issued as the location of the substation may impact on other services and building, driveway or landscape design already approved by Council.

38 G006 -

**Prior to the issue of a Construction Certificate**, the Principal Certifying Authority shall be satisfied that telecommunications infrastructure may be installed to service the development, which complies with the following:

- The requirements of the Telecommunications Act 1997:
- For a fibre ready facility, the NBN Co’s standard specifications current at the time of installation; and
- For a line that is to connect a lot to telecommunications infrastructure external to the premises, the line shall be located underground.

Unless otherwise stipulated by telecommunications legislation at the time of construction, the development must be provided with all necessary pits and pipes, and conduits to accommodate the future connection of optic fibre technology telecommunications.

**Prior to the issue of an Occupation Certificate**, written certification from all relevant service providers that the telecommunications infrastructure is installed in accordance with the requirements above and the applicable legislation at the time of construction, must be submitted to the Principal Certifying Authority.

## Construction

39 H001 - Stamped plans and erection of site notice

Stamped plans, specifications, a copy of the development consent, the Construction Certificate and any other Certificates to be relied upon shall be available on site at all times during construction.

The following details are to be displayed in a maximum of 2 signs to be erected on-site:

- the name of the Principal Certifying Authority, their address and telephone number,
- the name of the person in charge of the work site and telephone number at which that person may be contacted during work hours,
- that unauthorised entry to the work site is prohibited,
- the designated waste storage area must be covered when the site is unattended, and
- all sediment and erosion control measures shall be fully maintained until completion of the construction phase.

Signage but no more than 2 signs stating the above details are to be erected:

- at the commencement of, and for the full length of the, construction works on-site, and
- in a prominent position on the work site and in a manner that can be easily read by pedestrian traffic.

All construction signage is to be removed when the Occupation Certificate has been issued for the development.

40 H002 - All forms of construction

Prior to the commencement of construction works:

(a) Toilet facilities at or in the vicinity of the work site shall be provided at the rate of one toilet for every 20 persons or part of 20 persons employed at the site. Each toilet provided must be:

- a standard flushing toilet connected to a public sewer, or
- if that is not practicable, an accredited sewage management facility approved by Council, or
- alternatively, any other sewage management facility approved by Council.

(b) All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with the appropriate professional standards. All excavations associated with the erection or demolition of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

(c) If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:

- must preserve and protect the building from damage, and
- if necessary, must underpin and support the building in an approved manner, and
- must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished. The 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 (includes a public road and any other public place).

(d) If the work involved in the erection or demolition of a building is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place:

- if necessary, an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place,
- the work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place, and
- any such hoarding, fence or awning is to be removed when the work has been completed.

41 H041 - Hours of work (other devt)

Construction works that are carried out in accordance with an approved consent that involve the use of heavy vehicles, heavy machinery and other equipment likely to cause offence to adjoining properties shall be restricted to the following hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines:

- Mondays to Fridays, 7am to 6pm
- Saturdays, 7am to 1pm if inaudible on neighbouring residential premises, otherwise 8am to 1pm
- No work is permitted on Sundays and Public Holidays.

Other construction works carried out inside a building/tenancy that do not involve the use of equipment that emits noise are not restricted to the construction hours stated above.

The provisions of the *Protection of the Environment Operations Act 1997* in regulating offensive noise also apply to all construction works.

## Engineering

42 K101 - Works at no cost to Council

All roadworks, stormwater drainage works, signage, line marking, associated civil works and dedications, required to effect the consented development shall be undertaken by the applicant at no cost to Penrith City Council.

43 K201 - Infrastructure Bond

An Infrastructure Restoration Bond is to be lodged with Penrith City Council for development involving works around Penrith City Council's Public Infrastructure Assets. The bond is to be lodged with Penrith City Council prior to commencement of any works on site or prior to the issue of any Construction Certificate, whichever occurs first. The bond and applicable fees are in accordance with Council's adopted Fees and Charges.

An application form together with an information sheet and conditions are available on Council's website.

Contact Penrith City Council's City Works Department on 4732 7777 or visit Penrith City Council's website for more information.

44 K202 - S138 Roads Act – Works and Structures - Minor Works in the public road DRIVEWAYS ROAD OPENINGS

**Prior to the issue of any Construction Certificate**, a Section 138 Roads Act application, including payment of application and inspection fees together with any applicable bonds, shall be lodged with and approved by Penrith City Council (being the Roads Authority for any works required in a public road). These works may include but are not limited to the following:

a) Vehicular crossings (including kerb reinstatement of redundant vehicular crossings)
b) Concrete footpaths and or cycleways
c) Road opening for utilities and stormwater (including stormwater connection to Penrith City Council roads and other Penrith City Council owned drainage)
d) Road occupancy or road closures
e) The placement of hoardings, structures, containers, waster skips, signs etc. in the road reserve
f) Temporary construction access
g) Temporary ground anchors (for basement construction)

All works shall be carried out in accordance with the Roads Act approval, the development consent, including the stamped approved plans, and Penrith City Council's specifications, guidelines and best engineering practice.

Contact Penrith City Council's City Assets Department on 4732 7777 or visit Penrith City Council's website for more information.

**Note**:

a) Where Penrith City Council is the Certifier for the development, the Roads Act approval for the above works may be issued concurrently with the Construction Certificate or Subdivision Works Certificate.
b) All works associated with the Roads Act approval must be completed **prior to the issue of an Occupation Certificate**.

45 K203 - S138 Roads Act – Works and structures - Roadworks requiring approval of civil drawings. CIVIL CONSTRUCTION IN THE ROAD RESERVE

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that a Section 138 Roads Act application, including payment of application and inspection fees, has been lodged with and approved by Penrith City Council (being the Roads Authority under the Roads Act) for the diversion of Council's road drainage system and construction of an indented waste collection bay in Rodley Avenue, Penrith.

Engineering plans are to be prepared in accordance with the development consent, Penrith City Council's Design Guidelines for Engineering Works for Subdivisions and Developments Policy, Engineering Construction Specification for Civil Works, Austroads Guidelines, and best engineering practice.

Contact Penrith City Council's Development Engineering Department on 4732 7777 to obtain a formal fee proposal prior to lodgement and visit Penrith City Council's website for more information.

**Note**:

- Where Penrith City Council is the Certifier for the development the Roads Act approval for the above works may be issued concurrently with the Construction Certificate.
- All works associated with the Roads Act approval must be completed **prior to the issue of an Occupation Certificate**, as applicable.

46 K205 - S68 Local Government Act – Stormwater drainage works CIVIL CONSTRUCTION IN LOTS

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that an application under Section 68 of the Local Government Act, including payment of application and inspection fees, has been lodged with and approved by Penrith City Council for relocation of Council's stormwater drainage line through the site. The new drainage line shall be fully constructed and the old drainage line decommissioned prior to the commencement of any building works.

Engineering plans are to be prepared in accordance with the development consent, Penrith City Council's Design Guidelines for Engineering Works for Subdivisions and Developments Policy, Engineering Construction Specification for Civil Works, Austroads Guidelines, and best engineering practice.

Contact Penrith City Council's Development Engineering Department on 4732 7777 to obtain a formal fee proposal prior to lodgement and visit Penrith City Council's website for more information.

**Note**:

- All works associated with the Section 68 Local Government Act approval must be completed **prior to the issue of an Occupation Certificate**, as applicable.

47 K210 - Stormwater Management

The stormwater management system shall be consistent with the plans lodged for development approval prepared by SGC, Project No. 20180061, Drawing Numbers SW100 to SW500, Revision H, dated 17/06/2020.

Engineering plans and supporting calculations for the stormwater management systems are to be prepared by a suitably qualified person and shall accompany the application for a Construction Certificate or Subdivision Works Certificate.

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that the stormwater management system has been designed in accordance with Penrith City Council's Stormwater Drainage Specification for Building Developments and Water Sensitive Urban Design (WSUD) Policies.

48 K211 - Stormwater Discharge – Basement Car parks

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that the stormwater drainage system for the basement car park has been designed in accordance with the requirements for pumped systems in AS 3500.3 (or as amended) (Plumbing and Drainage – Stormwater Drainage).

49 K212 - No loading on easements

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that the foundations of proposed structures adjoining the drainage easement have been designed clear of the zone of influence.

50 K214 - Flooding – Floor levels

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that all habitable floor levels are in accordance with the stamped approved plans with a minimum floor level of RL 27.6m AHD (1% AEP flood level +0.5m freeboard).

51 K217 - Flooding – Flood Compatible Materials

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that any structures below RL 27.6m AHD (1% AEP flood level +0.5m freeboard) have been detailed with flood compatible building components in accordance with the publication 'Reducing the Vulnerability of Buildings to Flood Damage' produced by the Hawkesbury-Nepean Floodplain Management Steering Committee.

52 K218 - Flooding – Structural Adequacy

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that the structure/s can withstand the forces of floodwater including debris and buoyancy up to the 1% Annual Exceedance Probability Event in accordance with the requirements of the Building Code of Australia (BCA).

53 K219 - Flooding - Flood Proofing

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that all electrical services associated with the proposed building works are adequately flood proofed in accordance with *Penrith Development Control Plan 2014* relating to flood liable land. Flood sensitive equipment (including electric motors and switches) shall also be located above RL 27.1m AHD.

54 K221 - Overland Flow - General

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that:

a) The proposed development will not concentrate, dam or divert overland flows onto adjoining properties.
b) The crest in the access ramp to the basement car park is a minimum of RL 27.4m AHD.
c) That all new fencing within the overland flowpath is open style to allow the free passage of overland flows.

Details prepared by a qualified person, demonstrating compliance with these requirements, shall form part of any Construction Certificate issued.

55 K222 - Access, Car Parking and Manoeuvring – General

**Prior to the issue of any Construction Certificate**, the Certifier shall ensure that vehicular access, circulation, manoeuvring, pedestrian and parking areas associated with the subject development are in accordance with AS 2890.1, AS 2890.2, AS 2890.6 and *Penrith Development Control Plan 2014*.

56 K224 - Construction Traffic Management Plan

**Prior to the commencement of any works on-site (including demolition works) or prior to the issue of any Construction Certificate, whichever occurs firs**t, a Construction Traffic Management Plan (CTMP) shall be submitted to Council's City Assets Department for endorsement. The CTMP shall be prepared by a suitably qualified consultant with appropriate training and certification from the Traffic for NSW (TfNSW). The CTMP shall include details of any required road closures, work zones, loading zones and the like. Approval of the CTMP may require approval of the Local Traffic Committee. Please contact Council's City Assets Department on 4732 7777 and refer to Council's website for a copy of the Temporary Road Reserve Occupancy Application Form.

57 K225 - Performance Bond

**Prior to the issue of a Roads Act Approval**, a Performance Bond is to be lodged with Penrith City Council for the the diversion of Council's road drainage system and construction of an indented waste collection bay in Rodley Avenue, Penrith.

The value of the bond shall be determined in accordance with Penrith City Council's adopted Fees and Charges.

**Note**:

- Contact Penrith City Council's Development Engineering Department on 4732 7777 for further information relating to bond requirements.

58 K226 - Basement Geotechnical Testing/ Dilapidation Report

**Prior to the issue of a Construction Certificate**, a Geotechnical investigation report and strategy shall be submitted to the Certifier to ensure stability of the Council infrastructure and surrounding developments. The geotechnical investigation, report and strategy shall comply with the recommendations contained in the technical direction GTD 2012/001 prepared by the Road and Maritime Services, as amended.

59 K227 - Stormwater Legal Discharge Point

**Prior to the issue of any Construction Certificate**, associated with the development, the site must be serviced by a legal point of discharge including the required infrastructure drainage works. The drainage works may include inter-allotment drainage construction, upgrades and/or road drainage extensions located on lands owned by others.

60 K228 - Dilapidation Report

The developer shall undertake a dilapidation report for all surrounding buildings and Council owned infrastructure that confirms that no damage occurs due to the excavations associated with the development. If Council is not the Certifier the dilapidation report shall be submitted to Council prior to Construction Certificate and then updated and submitted prior to an Occupation Certificate confirming no damage has occurred.

61 K301 - Sediment & Erosion Control

Prior to commencement of works sediment and erosion control measures shall be installed in accordance with the approved Construction Certificate and to ensure compliance with the *Protection of the Environment Operations Act 1997*.

The erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.

62 K401 - Flooding – Surveyor Verification of floor levels

A certificate by a registered surveyor verifying that all habitable floor levels are at or above RL 27.6m AHD (1% AEP flood level +0.5m freeboard) shall be submitted upon completion of the building to that level. No further construction of the building is to be carried out until approval to proceed is issued by the Certifier.

63 K405 - Turf to Verge

Upon completion of all works in the road reserve, all verge areas fronting and within the development are to be turfed. The turf shall extend from the back of kerb to the property boundary, with the exception of concrete footpaths, service lids or other infrastructure which is not to be turfed over. Turf laid up to concrete footpaths, service lids or other infrastructure shall finish flush with the edge.

64 K406 - Underground Services

All existing (aerial) and proposed services for the development, including those across the frontage of the development are to be located or relocated underground in accordance with the relevant authorities regulations and standards.

65 K501 - Penrith City Council clearance – Roads Act/ Local Government Act

**Prior to the issue of an Occupation Certificate**, the Principal Certifier shall ensure that all works associated with a Section 138 Roads Act approval and Section 68 Local Government Act approval have been inspected and signed off by Penrith City Council.

66 K503 - Works as executed – General and Compliance Documentation

**Prior to the issue of an Occupation Certificate**, works-as-executed drawings, final operation and maintenance management plans and any other compliance documentation for the stormwater management systems shall be submitted to the Principal Certifying Authority in accordance with Penrith City Council's Engineering Construction Specification for Civil Works, WSUD Technical Guidelines and Stormwater Drainage for Building Developments Policy.

An original set of works-as-executed drawings and copies of the final operation and maintenance management plans and compliance documentation shall also be submitted to Penrith City Council with notification of the issue of the Occupation Certificate where Penrith City Council is not the Principal Certifying Authority.

67 K504 - Stormwater Compliance

**Prior to the issue of an Occupation Certificate**, the Principal Certifier shall ensure that the:

a) Stormwater management systems (including water sensitive urban design), and
b) Overland flowpath works

- Have been satisfactorily completed in accordance with the approved Construction Certificate Certificate and the requirements of this consent.
- Have met the design intent with regard to any construction variations to the approved design.
- Any remedial works required to be undertaken have been satisfactorily completed.

Details of the approved and constructed system/s shall be provided as part of the works-as-executed drawings.

68 K505 - Restriction as to User and Positive Covenant

Prior to the issue of any Occupation Certificate a restriction as to user and positive covenant relating to the:

a) Stormwater management systems (including water sensitive urban design)
b) Overland flowpath works

Shall be registered on the title of the property. The restriction as to user and positive covenant shall be in Penrith City Council's standard wording as detailed in Penrith City Council's Stormwater Drainage Specification for Building Developments.

69 K506 - Easement to Penrith City Council

**Prior the issue of an Occupation Certificate**, the applicant shall grant a 2.5m wide easement for drainage to Penrith City Council over the drainage line that is to be relocated to the western boundary of the site, including extinguishment of the existing easement for drainage through the site, and evidence of registration of the easement with Land and Registry (LRS) shall be submitted to the Principal Certifying Authority and Penrith City Council, if Penrith City Council is not the Principal Certifying Authority, and on the basis that no claim for compensation will be made and that the applicant will meet all associated survey and legal costs. No part of the basement wall shall encroach the drainage easement.

70 K515 - Maintenance Bond

**Prior to the issue of an Occupation Certificate**, a Maintenance Bond is to be lodged with Penrith City Council for the diversion of Council's road drainage system and construction of an indented waste collection bay in Rodley Avenue, Penrith

The value of the bond shall be determined in accordance with Penrith City Council's adopted Fees and Charges.

**Note**:

- Contact Penrith City Council's Engineering Services Department on 4732 7777 for further information relating to bond requirements.

71 K601 - Stormwater management system operation and maintenance

The stormwater management systems shall continue to be operated and maintained in perpetuity for the life of the development in accordance with the final operation and maintenance management plan.

Regular inspection records are required to be maintained and made available to Penrith City Council on request. All necessary improvements are required to be made immediately upon awareness of any deficiencies in the stormwater management systems.

72 K Special (BLANK)

**Prior to the issue of an Occupation Certificate**, a "Loading Zone" restriction is to be implemented for the on-street waste collection bay on Rodley Avenue. This arrangement is to be approved by Council's Local Traffic Committee prior to the implementation and installed at not cost to Council.

73 K Special (BLANK)

The subleasing of car parking spaces is not permitted by this consent. All car parking spaces are to be line marked and dedicated for the parking of vehicles only and not to be used for storage of materials, products, waste materials, etc.

74 K Special (BLANK)

(a) Each 2 bedroom apartment is to be allocated a minimum of one car parking space within the development.
(b) Each 3 bedroom apartment is to be allocated a minimum of two car parking spaces within the development.
(c) Stacked car parking spaces are to be allocated to 3 bedroom units to prevent user conflict.
(d) All adaptable units are to be allocated with a minimum of one accessible car parking space within the development.

75 K Special Condition BLANK

**Prior to the issue of any Construction Certificate**, a traffic management plan for the basement car park shall be submitted to and approved by Penrith City Council. The plan shall address the operation and management requirements for the single width basement ramp, including the locations of sensors/detectors, vehicle circulation, locations of waiting areas, passing opportunity at the street frontage, satisfactory operation of the proposed signal system and safety measures if the system fails.

## Landscaping

76 L001 - General

All landscape works are to be constructed in accordance with the stamped approved plans and *Penrith Development Control Plan 2014*, in particular Section F5 "Planting Techniques", Appendix F5 - 2.9.1 Tree/Vegetation Protection during Construction and 2.9.2 Landscape Quality Assurance Standards and C2 Vegetation Management.

Landscaping shall be maintained:

- in accordance with the approved plan, and
- in a healthy state, and in perpetuity by the existing or future owners and occupiers of the property.

If any of the vegetation comprising that landscaping dies or is removed, it is to be replaced with vegetation of the same species and, to the greatest extent practicable, the same maturity as the vegetation which died or was removed.

77 L002 - Landscape construction

The approved landscaping for the site shall be constructed by a suitably qualified and experienced landscape professional.

78 L003 - Report requirement

Upon completion of the landscape works associated with the development and **prior to the issue of an Occupation Certificate** for the development, an Implementation Report must be submitted to the Principal Certifying Authority attesting to the satisfactory completion of the landscaping works for the development. The report is to be prepared by suitably qualified and experienced landscape professional.

An Occupation Certificate should not be issued until such time as a satisfactory Implementation Report has been received. If Penrith City Council is not the Principal Certifying Authority, a copy of the satisfactory Implementation Report is to be submitted to Council together with the Occupation Certificate for the development.

79 L005 - Planting of plant

All plant material associated with the construction of approved landscaping is to be planted in accordance with the Tree Planting Specification prescribed in *Penrith Development Control Plan 2014.*

80 L006 - Aust Standard

All landscape works are to meet industry best practice and the following relevant Australian Standards:

- AS 4419 Soils for Landscaping and Garden Use,
- AS 4454 Composts, Soil Conditioners and Mulches, and
- AS 4373 Pruning of Amenity Trees.

81 L007 - Tree protectionmeasures–no TMPwith DA

All trees that are required to be retained as part of the development are to be protected in accordance with the minimum tree protection standards prescribed in *Penrith Development Control Plan 2014.*

82 L008 - Tree PreservationOrder

No trees are to be removed, ringbarked, cut, topped or lopped or wilfully destroyed (other than those within the proposed building footprint or as shown on the approved plans) without the prior consent of Penrith City Council and in accordance with Council's Tree Preservation Order and Policy.

## Development Contributions

83 N001 - Section 94 contribution (apply separate condition for each Contribution Plan)

This condition is imposed in accordance with Penrith City Council's Development Contributions Plan for Cultural Facilities. Based on the current rates detailed in the accompanying schedule attached to this Notice, **$5,897.00 is to be paid to Council prior to a Construction Certificate being issued for this development** (the rates are subject to quarterly reviews). If not paid within the current quarterly period, this contribution will be reviewed at the time of payment in accordance with the adopted contributions plan. The projected rates of this contribution amount are listed in Council's Fees and Charges Schedule.

Council should be contacted prior to payment to ascertain the rate for the current quarterly period. The invoice accompanying this consent should accompany the contribution payment. The Development Contributions Plan for Cultural Facilities may be inspected at Council's Civic Centre, 601 High Street, Penrith.

84 N001 - Section 94 contribution (apply separate condition for each Contribution Plan)

This condition is imposed in accordance with Penrith City Council's Development Contributions Plan for District Open Space. Based on the current rates detailed in the accompanying schedule attached to this Notice, **$51,910.00 is to be paid to Council prior to a Construction Certificate being issued for this development** (the rates are subject to quarterly reviews). If not paid within the current quarterly period, this contribution will be reviewed at the time of payment in accordance with the adopted contributions plan. The projected rates of this contribution amount are listed in Council's Fees and Charges Schedule.

Council should be contacted prior to payment to ascertain the rate for the current quarterly period. The invoice accompanying this consent should accompany the contribution payment. The Development Contributions Plan for District Open Space may be inspected at Council's Civic Centre, 601 High Street, Penrith.

85 N001 - Section 94 contribution (apply separate condition for each Contribution Plan)
This condition is imposed in accordance with Penrith City Council's Development Contributions Plan for Local Open Space. Based on the current rates detailed in the accompanying schedule attached to this Notice, **$18,783.00 is to be paid to Council prior to a Construction Certificate being issued for this development** (the rates are subject to quarterly reviews). If not paid within the current quarterly period, this contribution will be reviewed at the time of payment in accordance with the adopted contributions plan. The projected rates of this contribution amount are listed in Council's Fees and Charges Schedule.

Council should be contacted prior to payment to ascertain the rate for the current quarterly period. The invoice accompanying this consent should accompany the contribution payment. The Development Contributions Plan for Local Open Space may be inspected at Council's Civic Centre, 601 High Street, Penrith.

## Certification

86 Q006 - Occupation Certicate (Class 2 - 9)
An Occupation Certificate is to be obtained from the Principal Certifying Authority on completion of all works and prior to the occupation of the building and commencement of the approved use. The Occupation Certificate shall not be issued if any conditions of this consent, but not the conditions relating to the operation of the development, are outstanding, and the development does not comply with the provisions of the Environmental Planning and Assessment Act and Regulation.

Before the Occupation Certificate can be issued for the development, Fire Safety Certificates issued for the building are to be submitted to Penrith City Council and the New South Wales Fire Brigades.

A copy of the Occupation Certificate and all necessary documentation supporting the issue of that Certificate including the above mentioned documents shall be submitted to Penrith City Council, if Council is not the Principal Certifying Authority.

87 Q01F - Notice of Commencement & Appointment of PCA2 (use for Fast Light only)
Prior to the commencement of any earthworks or construction works on-site, the proponent is to:
(a) employ a Principal Certifying Authority to oversee that the said works carried out on the site are in accordance with the development consent and related Construction Certificate issued for the approved development, and with the relevant provisions of the Environmental Planning and Assessment Act and accompanying Regulation, and
(b) submit a Notice of Commencement to Penrith City Council.

The Principal Certifying Authority shall submit to Council an "Appointment of Principal Certifying Authority" in accordance with Section 6.6 of the *Environmental Planning and Assessment Act 1979*.

Information to accompany the Notice of Commencement
Two (2) days before any earthworks or construction/demolition works are to commence on site (including the clearing site vegetation), the proponent shall submit a "Notice of Commencement" to Council in accordance with Section *6.6 of the Environmental Planning and Assessment Act 1979*.

# Appendix - Development Control Plan Compliance

## Development Control Plan 2014

### Part B - DCP Principles

The proposal, as amended, is considered to supportive of Council's vision for a Sustainable City given that it seeks to facilitate housing diversity at a suitable site. The proposed built form is of a universal design, which permits accessibility and mobility for residents of all ages, noting that two ground floor adaptable apartments are provided. The site is in proximity to a range of facilities and services to provide for the well-being of the future residents, who will in turn stimulate socioeconomic activity in the locality. The proposal is of a suitable scale and is unlikely to result in any unreasonable impacts on the surrounding built or natural environments or cultural or heritage values. The proposal is therefore supportive of sustainable development principles, which satisfies the DCP principles.

### Part C - City-wide Controls

**C3 Water Management**

**C3.2 Catchment Management and Water Quality**

The proposed stormwater management system incorporates a rain garden with an area of 12m² with an overflow weir during high rainfall events. A review of the MUSIC Modelling confirms that the proposed rain garden will reduce water quality parameters to meet Council's standards. Although the filter layer depth and plant density is not clarified, consent conditions will address this matter, as recommended by Council's Senior Water Management Officer.

**C3.6 Stormwater Management and Drainage**

The proposed stormwater concept design incorporates a basement pump out system, a 2.5m wide drainage easement along the western side boundary, flood storage areas, a bio-retention basin and a new kerb sag inlet pit, which provide adequate servicing for the site, as endorsed by Council's Development Engineer Unit.

**C5 Waste Management**

**C5.3.4 Siting and Design of Waste Storage and Collection Areas**

An indented waste collection bay at the street frontage is proposed due to the constraints of the site's width and depth. Generally, on-site waste collection is required for RFBs in accordance with the DCP, however, it is noted that the proposal is a smaller scale RFB, being for 16 apartments, and an alternative solution is considered to be more suitable and acceptable in this instance. The design criteria for the indented on-street waste collection bay has been comprehensively reviewed and amended, as advised by Council's Waste Services Unit and is considered to provide for safe and efficient waste servicing.

Further, it is noted that an existing RFB, which accommodates 48 units is located approximately 80m to the west of the site, at 50 – 54 Rodley Avenue, which is serviced by indented on-street waste collection bay and this has not raised any major concerns since its establishment in this regard.

It is also noted that the proposed indented on-street waste collection bay will require alterations to on-street parking and therefore an approval by Transport for NSW is required given the proximity of a railway station to the site. As such, a recommended consent condition is to be imposed to address this matter, which will be in accordance with the requirement for Section 68 and Section 138 Road Act approvals.

**C10 Transport, Access and Parking**

**C10.5.1 Parking**

The proposal is for a total of 16 units (13 x 2 bedroom units and 3 x 3 bedroom units) and makes provision for a total of 22 off-street parking spaces, including two visitor parking spaces and one shared visitor/car wash/service parking space. In accordance with the DCP, a minimum of 24 parking spaces is required for the development, being 13 spaces for the two bedroom units (1 space per 1 or 2 bedrooms), 6 spaces for the three bedroom units (2 spaces per 3 or more bedrooms), 1 service vehicle space (1 space per 40 dwellings), 3 visitor spaces (1 space per every 5 dwellings, or part thereof for visitors) and 1 car wash space (1 space per

50 units).

In consideration of the nature of the development and it being of a smaller scale, the shared use of a visitor/car wash/service vehicle parking space is considered to be acceptable. Further, it is not considered that there will be any unreasonable impacts on on-street parking and local traffic flows as detailed in the submitted Traffic and Parking Impact Assessment (TPIA) Report (TPIA).

**C10.5.2 Access and Driveways**

The proposal includes a two-way driveway and one-way lane basement ramp with an internal traffic signal system to regulate traffic flows. It is noted that Council's Senior Traffic Engineer raised objections in this regard and advised that the TPIA Report incorrectly references Clause 3.2.2 of AS 2890.1, which does not refer to ramps or allow for a contraflow arrangement and as such, a two-way (6.1m wide) basement ramp must be provided. Concerns are raised due to the opposing vehicles being in direct conflict with one another and that the use of operated traffic signals is not best practice nor is it fail safe in this regard.

Notwithstanding, a review of the TPIA Report and AS 2890.1 guidelines, in particular Clauses 2.5.2 and 3.22, indicates that one-way ramps and one-way traffic movements are required to be a 3m minimum width for domestic properties where there is less than 30 movements in a peak hour. In this regard, the TPIA Report states that the proposed access ramp/driveway is expected to generate up to 9 peak hour vehicle movements and that the proposal provides a 7.4m wide ingress/egress driveway with a basement ramp width between 6m to 8m then reduced to 3m. In addition, an internal traffic signal system is provided, which will limit the direction of traffic flow within the basement access ramp to one-way at any given time.

Further, it is noted that the likelihood of delay being a function of opposing traffic demands and service time for a vehicle entering the basement car park during weekday peak hours is merely 0.4%. That is, an approximate 1 in 250 chance for the probability of opposing vehicles in conflict area during both morning and evening peak hour, which is based on a worst case scenario for a vehicle requiring 60 seconds to travel between the basement parking level and the egress driveway, noting that the expected travel distance time is 30 seconds. Given that any traffic conflicts are contained within the site and do not impinge upon any external users of the road network, the one-way basement ramp and internal traffic signal system is considered to provide adequate traffic control measures and therefore is considered to be acceptable in this instance.

It is also noted that development consent no. DA14/0795 approved a 32 apartment residential flat building with basement parking, including a one-way ramp and traffic signals, whereby similar matters were raised and considered resolved.

In addition, Council's Senior Traffic Engineer also raised concerns regarding the proposed on-street waste collection bay due to a loss of parking and the safety and amenity of pedestrians when large capacity bins are being transported via a motorized tug device back and forth in the footway area, noting that the application does not address this pedestrian safety matter. However, the indented waste collection bay is considered acceptable in this instance, as detailed above and in the TPIA Report.

## D2 Residential Development

**D2.5 Residential Flat Buildings**

The development proposal is considered to be overall compliant with the applicable and specific development controls in the DCP, noting that many provisions either overlap or are superseded by SEPP 65 and/or ADG requirements or are previously discussed in other sections in this report. In summary, the proposal is considered to be compatible with the desired future character of the neighourhood, whereby the building design provides an appropriate building footprint, with adequate setbacks, articulation, landscaping, residential amenity and maintains acceptable levels of amenity and visual privacy to neighouring and nearby properties.

(SCIMS BY SS180/76 ~ SS41572)

# RODLEY AVENUE

KERB
CROSSING
TOP OF KERB
LINTEL SL 26.66 IL 25.96
KERB CROSSING
KERB
BM IN KERB RL 26.63
SEALED PIT SL 26.87
SEALED PIT
POWER POLE
TELSTRA PIT
BRICKED FENCE

264°12'05" 13.627
264°12'05" 15.24
264°12'05" 15.24
264°12'05" 15.24

DP33490 LOT 60 575.4m²
DP33490 LOT 59 556.4m²
DP33490 LOT 58 556.4m²
LOT 57 IN DP 33490 556.4m² SP62332

DRAINAGE EASEMENT (1.826 WIDE )
DRIVEWAY
AREA
GRASSED
CONCRETE
GARDEN
AWNING
RIDGE 34.83
RIDGE 34.36
EAVE 33.3
TWO STORY BRICK RESIDENCE ALUMINIUM CLADDING TILED ROOF NO.40
FFL 27.65
RIDGE 31.62
EAVE 30.11
RIDGE 32.425
SINGLE STORY FIBRO COTTAGE TILED ROOF NO.38
CONRETE
CONCRETE
METAL AWNING
EAVE 30.510
FFL 28.22
RIDGE 31.665
RIDGE 32.835
SINGLE STORY BRICK COTTAGE TILED ROOF NO.36
FENCE
COLOURBOND
174°12'05" 36.576
264°12'05" 36.576
RIDGE 31.68
EAVE 29.58
RIDGE 34.0
RIDGE 35.153
T: 29.585 B: 27.385
WINDOWS
TWO STORY BRICK COTTAGE TILED ROOF NO.34
CONCRETE
AWNING
PIT SL 26.89
METAL SHED
FIBRO GARAGE
BRICK GARAGE
GARDEN
RETAINING WALL
PIT SL 26.865
264°12'05" 15.24
84°12'05" 15.24
COLOURBOND
FENCE

## LEGEND

SHRUBS

NOTE-ALL BOUNDARY DIMENSIONS ARE RED

NOTE-DO NOT SCALE OFF THIS PLAN
ALL LEVELS SHOULD BE TAKEN FROM THE BENCHMARK SHOWN ON PLAN
NO BOUNDARY DEFINITION HAS BEEN MADE
THE LOCATION OF ANY BUILDINGS OR IMPROVEMENTS SHOWN ARE APPROX ONLY
ONLY VISABLE SERVICES HAVE BEEN LOCATED

NO ATTEMPT HAS BEEN MADE TO LOCATE UNDERGROUND SERVICES.

**DIAL BEFORE YOU DIG 1100**

| | |
|---|---|
| JOB No :96937 | PLOT DATE : 09/02/18 |
| CLIENT : INGLOW INVESTMENT | DATE OF SURVEY : 06/02/18 |
| LOCATION : PENRITH | DATUM: AHD (SSM 10978) |
| SCALE : 1:100 A1 SHEET | DRAWN BY: M.M |

## CONTOUR OVER LOTS 58-59 IN DP 33490

CHECKED BY JOHN LOWE/CANDICE LOWE
REGISTERED SURVEYOR UNDER THE SURVEYING ACT 2002


JOHN LOWE AND ASSOCIATES PTY LTD
CONSULTING LAND AND ENGINEERING SURVEYORS

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Document Set ID: 9088182
Version: 1, Version Date: 18/02/2020

# PROPOSED RESIDENTIAL FLAT BUILDING

## 36-38 Rodley Avenue, Penrith, NSW, 2750



| DEVELOPMENT DETAILS | | |
|---|---|---|
| Site Area | | 1112m² |
| Gross Floor Area (GFA) | | 1642m² |
| Zoning | R4 High Density Residential | |
| | Allowable | Proposed |
| Floor Space Ratio (FSR)* | n/a | 1.48:1 |
| Height | 18 m | 17.8 m |

| | | |
|---|---|---|
| Communal Open Space | 25% | 278.1m² 25% |
| Deep Soil Zones | 7% | 286.5m² 26% |

*LEP REQUIREMENT
^SEPP 65 REQUIREMENT
REFER SHEET DA02 FOR DETAILS

**UNITS TYPES**

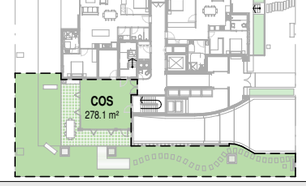
| Type | Count |
|---|---|
| 2B | 11 |
| 2B Adaptable | 2 |
| 3B | 3 |
| | 17 |

GROSS FLOOR AREA

| Level | Area |
|---|---|
| GROUND LEVEL | 278.2 m² |
| LEVEL 1 | 375.8 m² |
| LEVEL 2 | 394.1 m² |
| LEVEL 3 | 394.1 m² |
| LEVEL 4 | 200.4 m² |
| Grand total: 5 | 1642.7 m² |

COMMON OPEN SPACE

| Area | % of Site |
|---|---|
| 278.1 m² | 25.01 |




DEEP SOIL AREA

| Name | Area | % the Site |
|---|---|---|
| DEEP SOIL - 3m | 224.7 m² | 20.15 |
| DEEP SOIL - 5.5m | 61.9 m² | 5.55 |
| | 286.5 m² | 25.70 |

LANDSCAPE SCHEDULE

| Name | Area | % of site |
|---|---|---|
| LANDSCAPE | 379.7 m² | 34.06% |
| LANDSCAPE | 63.5 m² | 5.70% |
| | 443.3 m² | 39.75% |

**CAR SPACES REQUIRED**

| | |
|---|---|
| 2 Bed units: 11 | 11 |
| 2 Bed units Adaptable: 2 | 2 |
| 3 BED units: 3 | 6 |
| Visitors (1/5) | 3 |
| Service vehicles (1/40) | 1 |
| Washing bay (1/50) | |
| Grand total | 23 |

**CAR SPACES - TYPES**

| Type | Number |
|---|---|
| Disabled - 2400w x 5400d | 2 |
| Service/Washing - 2500w x 5400d | 1 |
| Standard - 2500w x 5400d | 17 |
| Visitor - 2500w x 5400d | 2 |
| | 22 |
| Motorcycle Parking | 1 |
| | 1 |

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

SCALE BAR NORTH POINT

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING
ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750
CLIENT
Inglow Investments Two

MORSON GROUP
NOMINATED ARCHITECT - P F MORSON REGISTRATION NUMBER 8100
ACN 159 480 036, ABN 41 159 480 036
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PO Box 170, Potts Point, NSW 1335

SHEET SIZE: A1 DAT E
SCALE As indicated

SHEET NAME VIEWS AND SCHEDULES

DRAWING NUMBER DA01
ISSUE NO. B

Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

## Compliance Schedule (SEPP65-2015 Apartment Design Guide - Design Criteria & Objectives)

| | Design Criteria | Compliance | Proposal |
|---|---|---|---|
| 3D-1 | 1. **Communal open space** has a minimum area equal to 25% of the site<br><br>2. Developments achieve a minimum of 50% **direct sunlight** to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter) | Yes<br><br>Yes | 1. The Common Open Space is 280m² comprising 25% of the site.<br>The Common Open Space has an Area that fulfils the ADG minimums requirements. The units facing the south and those on ground have Terraces and Balconies which are in excess of the ADG minimums. The location and quality of the common area exceeds the requirements of the ADG and is a better design outcome as opposed to locating a complaint sized Common area at ground level in the rear corner & east side of the site.<br>2. Sunlight Access Requirements are met . |
| 3E-1 | 1. **Deep soil zones** are to meet the following minimum requirements:<br><br>Site Area: <650m² — Min. Dimension: - — Deep Soil Zone (% of site Area): 7%<br>650m²-1,500m² — 3m<br>>1,500m² — 6m | Yes | 1. Deep soil zones provided well exceed the minimum requirements. The site provides for a total area of 286.5m² of deep soil zone or 26% of total site. |
| 3F-1 | **Separation between windows and balconies** is provided to ensure visual privacy is achieved. Min required separation distances from buildings to the side and rear boundaries are as follows:<br><br>Up to 12m (4 storeys): Habitable rooms and balconies 6m; Non-habitable rooms 3m<br>Up to 25m (5-8 storeys): 9m; 4.5m<br>Over 25m (9+ storey): 12m; 6m<br><br>Gallery access circulation treated as habitable space when measuring privacy separation distances between neighbouring properties. | - | **Setbacks:**<br>**Northen Boundary:** [NOTE: Street Frontage of Rodley Ave, residential housing across the road] Setback from 6.0m to 8.0m [Ground-Level 3] & Setback from 7.9m to 9.0m [Level 4]<br>**Southern Boundary:**<br>Setback from 6.0m to 9.0m [Ground-Level 3] Setback 9.0m to 11.0m [Levels 4]<br>**Western Boundary:**<br>Setback from 4.0m to 7.5m [Ground-Level 3] Setback from 7.0m to 9.0m [Levels 4]<br>**Eastern Boundary:**<br>Setback from 4.0m to 7.5m [Ground-Level 3] Setback from 7.0m to 9.0m [Levels 4] |
| 4A-1 | 1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours **direct sunlight** between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.<br><br>3. A maximum of 15% of apartments in a building receive **no direct sunlight** between 9 am and 3 pm at mid winter | Yes<br><br>Yes | 1. 75% [12-16] of apartments receive 2 hours of direct sunlight.<br><br>3. None of the apartments receive no direct sunlight between 9am & 3pm at mid winter |
| 4B-3 | 1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed<br><br>3. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line | Yes<br><br>n/a | 1. 100% [16-16] of apartments are cross-ventilated |
| 4C-1 | Measured from finished floor level to finished ceiling level, **minimum ceiling heights** are:<br><br>Minimum ceiling height for apartment and mixed use buildings<br>Habitable rooms: 2.7m<br>Non-habitable: 2.4m<br>For 2 storey apartments: 2.7m for main living area; 2.4m for second floor, where its area does not exceed 50% of the apt area. | Yes | Minimum ceiling heights exceed the design criteria |
| 4D-1 | 1. Apartments are required to have the following **minimum internal areas**:<br><br>Studio 35m²<br>1 bedroom 50m²<br>2 bedroom 70m²<br>3 bedroom 90m²<br><br>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each<br><br>2. Every habitable room must have a window in an external wall with a total **minimum glass area** of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms. | Yes<br><br>Yes | Minimal internal areas are in accordance with the design criteria |
| 4D-2 | 1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height<br><br>2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window | Yes<br><br>Yes | Habitable room depths are in accordance with the design criteria |
| 4D-3 | 1. Master bedrooms have a minimum area of 10m² and other bedrooms to have 9m² (excluding wardrobe space)<br><br>2. Bedrooms have a minimum dimension of 3m (excl. wardrobe space)<br><br>3. Living rooms or combined living/dining rooms have a minimum width of:<br>• 3.6m for studio and 1 bed apartments<br>• 4m for 2 and 3 bedroom apartments | Yes<br><br>Yes<br><br>Yes | All bedrooms are 9m² & Master bedrooms 10m².<br><br>All bedrooms have minimum dimension of 3m.<br><br>All living rooms have minimum dimension of 4m. |
| 4E-1 | 1. All apartments are required to have **primary balconies** as follows:<br><br>Studio apartments: 4m² — Minimum depth -<br>1 bedroom apartments: 8m² — 2m<br>2 bedroom apartments: 10m² — 2m<br>3+ bedroom apartments: 12m² — 2.4m<br><br>The minimum balcony depth to be counted as contributing to the balcony area is 1m.<br><br>2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m | Yes<br><br>Yes | 1. Balconies provided to apartments are in accordance with this design criteria.<br><br>2. Terraces provided to apartments are in accordance with this design criteria. |
| 4F-1 | 1. The maximum number of apartments off a circulation core on a single level is eight<br>2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40 | Yes<br>n/a | 1. All levels provide 4 or less apartments off a circulation core. |
| 4G-1 | 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:<br><br>Studio 4m³<br>1 bedroom 6m³<br>2 bedroom 8m³<br>3+ bedroom 10m³<br><br>At least 50% of the required storage is to be located within the apartment | Yes | All storage requirements are in accordance with this design criteria. Sotrage Cages are provided in the basement in addition to sorage cupboards provided within the apartment. |

## Design Statement (SEPP65-2015 SCHEDULE 1 - Design Quality Principles)

**Principle 1: Context and Neighbourhood Character**

Low-density Residential: The remaining neighbouring properties to the North, along Rodley Ave to the East, and South side of Rodley Ave, predominantly consist of low density single and two storey residential dwellings (houses and townhouses). The majority of these lots contain single low-density housing located on long rectangular lots with the short boundary addressing the street. Scattered throughout the low-density housing are some medium-density villa and townhouse developments which are generally consist of central 'gun-barrel' driveways with terraces on either side.

High density Residential : There are three high density buildings in Rodley Avenue which show the emerging neighborhood context.

Short term to future growth pattern: We note the urban fabric is changing from a low-density to an urban high-density with recent legislative amendments in the Penrith LGA. To clarify, the change in scale is from a one or two storey single dwelling per lot to a 5-6 storey residential development.

Context, Neighbourhood Character and UDRP recommendations have been taken into consideration during the design. It is believed that the design responds and contributes to its context, setting a good example for the future proposed developments in the area.

**Principle 2: Built Form and Scale**

The design responds to its associated context (identified in Principle 1): The proposal is to construct a single tower addressing Rodley Ave. The facade is well articulated and the footprint sits well within the regular shaped site, mimicing the layout pattern of dwellings along Rodley Ave. Common open space is located on Ground Floor at the rear of the property to maximise Solar access. The result is an outcome which allows cross ventilation and natural light to a large number of the units. The cross ventilation meets the minimum requirements as well as the direct sunlight between 9am & 3pm at mid winter.

UDRP panel recommended design solutions have been taken on board and integrated into the design. Facade articulation and innovation is successfully achieved through both form and colours reducing bulk and scale. The design achieves a positive outcome for built form, scale, context and neighbouring character.

R4 zoning and SEPP65 setbacks and height controls have been generally adopted in the proposal. In order to accommodate the stepping of upper storeys and for the building to be well articulated, proposed setbacks and height may vary in parts from the minimum SEPP65 requirements.
It is assumed that the proposed setbacks and heights would be found acceptable.
The top of lift shaft at nominal is under the allowable 18m height control and has an RL 44.800. The lift shaft being centrally located within the site presents no adverse impacts on neighbouring properties.

**Principle 3: Density**

The Penrith LGA has recently seen an upzoning of residential areas to R4 High-Density Residential.

The subject site lies within such an area with several Development Applications having already been submitted to Council in the close proximity of Devlinls Parade and Vista Streets.

As there is no FSR control on the site, the density of the proposed development is controlled by the height limits and setbacks as per the ADG Tower Seperation Controls.

Moreover, Communal Open Spaces and Deep Soils zones in the proposed development meet the minimum requirements of the ADG, further controlling the allowable density on the site.

The proposal consists of a mixture of large 2 and 3 bedroom apartments.

It is believed that the proposed development seeks full compliance in this SEPP 65 Principle.

**Principle 4: Sustainability**

The Apartment Design Guide 2015 aims *to deliver improved sustainability through better traffic and transport solutions, greater building adaptability and robustness, improved energy efficiency and water sensitive urban design.*

The proposed development aims to exceed the minimum standards of the ADG 2015 wherever possible. Consideration has been given to the increased apartment areas throughout the development to facilitate future sustainable growth of Sydney's outer suburbs.

Bicycle parking has been located on basement 1 to promote the use of active transport to the Penrith area in lieu of vehicle use. (See Principle 6 for details). The development also features landscape areas in accordance with the requirements of the ADG 2015 design criteria. (See Principle 5 for details).

The development also features well designed apartments with cross ventilation and solar access to the vast majority of the apartments, and well exceeds the minimum ADG 2015 requirements. Use of awnings will reduce the energy consumption in summer months by protecting west-facing apartments and controlling the internal conditions of the apartments.

**Principle 5: Landscape**

Deep soil planting has been embellished along all boundaries allowing full height trees to grow and provide privacy between the neighbouring properties and potential future adjacent developments.

Due to the easement diversion to the western boundary canopy trees are unable to be provided in the deep soil area in this location. To compensate for this planters on structure have been provided adjacent the easement so that canopy trees can be provided to the western setback.

Deep soil pockets were maximized and replacement trees are proposed to accommodate landscaping complementing the design and street frontages.

The carparking levels have been designed to minimize the footprint but accommodate all the necessary carparking and services.

Landscaping has been maxmised through locating planters on the ground level structure to provide amentiy to the Common Open Space.

**Principle 6: Amenity**

Penrith Progression 2015 identifies walking & cycling as a "Shaping Element" to make Penrith an Active City (2.7).

The site is located about 1.1km walking distance to the Penrith Train Station and 0.4km to Penrith Westfields. On site Bicycle Parking has been provided to promote active transport in and around the Penrith CBD.

This design consideration is intended to improve the amenity of the internal living areas of the apartments by maximizing the amount of daylight access and natural cross ventilation, as per the ADG minimum requirements.

The apartment layouts are efficient and meet the minimum ADG requirements.
10% of the units have been provided as accessible per the NCC requirements.

Sunshading Devices have been applied to the facade to improve the internal environment of each apartment, exceeding minimum standards with regards to BASIX compliance.

The Common Open Space has been provided on Ground Level to acheive the highest degree of amenity and Solar Access. The Common Area has access to the best views of the proposal and features gardens and planting to provide amenity.

**Principle 7: Safety**

Secure pedestrian entry into the site has been logically located through the centre of the building along side the vehicle entry and expressed in the facade to read as such. Intercom access & CCTV at the entry provides security from street.
Although the pedestrian and vehicle entries a re co-located, each access point is seperated with a seperate access point.

Entry into the basement carpark is via a roller shutter control point with swipe card security to gain access

Side Fences at the building line secure the external areas of the development. Gates are provided in the side fences to allow for egress and access to services within the development such as the stormwater easement and biofiltration bed.

**Principle 8: Housing Diversity & Social Interaction**

Residential areas of Penrith have traditionally included a mix of detached housing (3br+) with a scattering of villa developments closer to the Penrith CBD (2br+).
With the recent rezoning to R4 High-Density Residential, the proposed development aligns itself to the existing demographic while providing increase density to respond to the demands of the growing outer suburban ring of Western Sydney.

The development features a mix of 2br & 3br apartments which also responds to current market demands in the area. Located in Western Sydney, apartments prices are considerably lower than inner city equivalents which facilitates affordability by default.

Social interaction between residents of the development is enriched by the design of the lift lobbies.
Lift Lobbies are pleasant spaces to interact as they are Open at 2 sides with views to the outside world and direct connection to the lift access point.

**Principle 9: Aesthetics**

The character of the building reflects the context in which it is located (as identified in Principle 1).

Rodley Ave frontage is set in a moderately quiet residential context. The composition of facade elements is sympathetic to the scale of the surrounding residential houses and lower scale buildings.

The combination of facade articulation and landcsaping successfully emphasize the building entry.

The facades of the building define a hierarchy for the site. Rodley Ave facade is primary and the facades looking to the side setbacks maintain a secondary role. However, through materials & facade articulation & colour, both facades pursue rationality, clarity, proportion and rhythm which results in a simple elegance (values frequently lost).

## THERMAL PERFORMANCE SPECIFICATIONS: (20331_02 – 36 Rodley Ave)

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.
This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

SCALE BAR | NORTH POINT

PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING
ADDRESS: 36-38 Rodley Avenue, Penrith, NSW, 2750
CLIENT: Inglow Investments Two

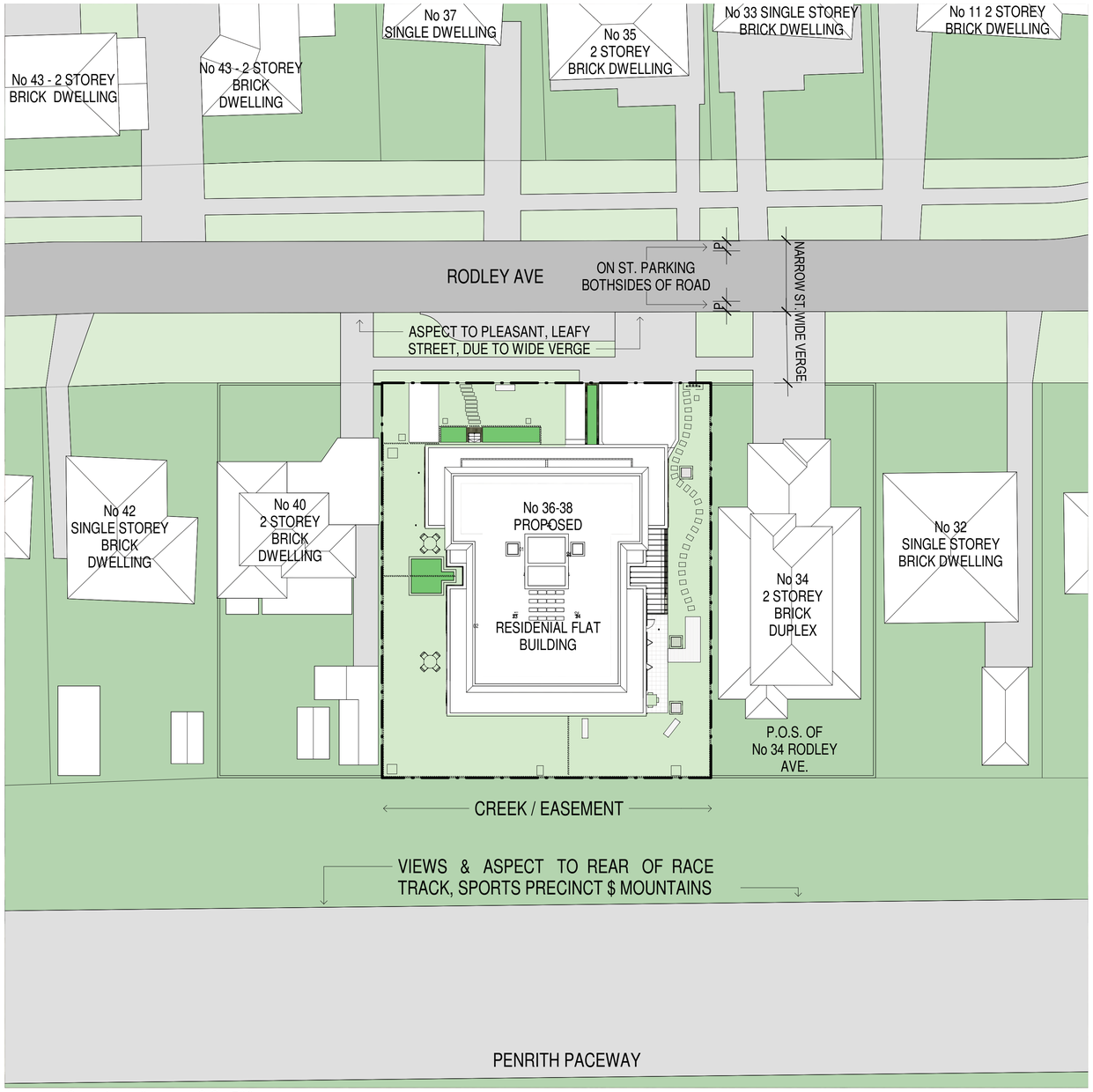
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SHEET SIZE: A1 | SCALE: DAT E
SHEET NAME: SEPP 65 COMPLIANCE SUMMARY & DESIGN STATEMENT
DRAWING NUMBER: DA02
ISSUE NO.: A

Document Set ID: 9088183
Version: 1, Version Date: 36/03/2020



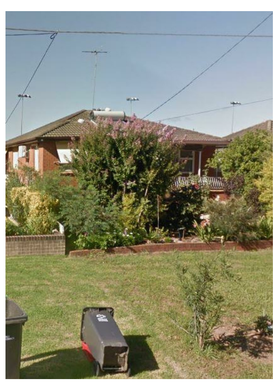

1 DA14 **SITE PLAN - 1500**
1 : 1500




2 DA14 **SITE PLAN & ANALYSIS - 500**
1 : 250


No 36 & No 34 BOUNDARY


No 36 EASTERN BOUNDARY


No 36 FROM RODLEY ST


CREEK


No 38 WESTERN BOUNDARY


No 38 & No 40 SIDE BOUNDARY


No 38 & No 40 SIDE BOUNDARY

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

SCALE BAR — NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**
ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750
CLIENT
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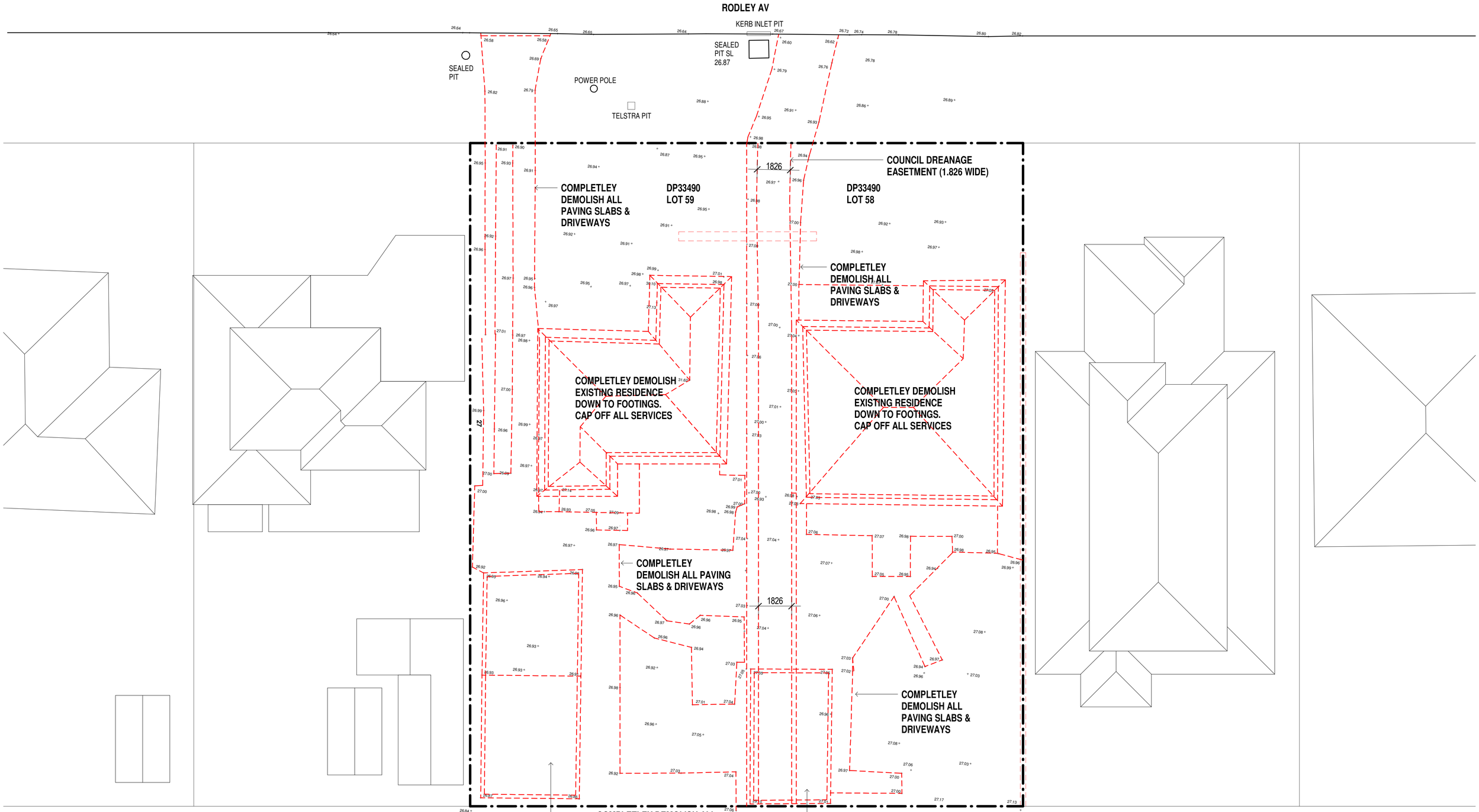
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SCALE E
As indicated

SHEET NAME **SITE PLAN**

DRAWING NUMBER **DA04**
ISSUE NO. **A**

Document Set ID: 9082180
Version: 1, Version Date: 16/03/2020




NOTE:

1. ALL DEMOLITION WORK TO BE CARRIED OUT IN ACCORDANCE WITH AS 2601-2001(THE DEMOLITION OF STRUCTURES)

2. THIS DEMOLITION DRAWING GIVES AN INDICATION OF THE SCOPE REQUIRED TO CARRY OUT THE ALTERATIONS & ADDITIONS AS PROPOSED. THE BUILDER IS ASSUMED TO HAVE INSPECTED THE SITE DURING TENDERING & ALLOWED FOR ALL DEMOLITION INCLUDING SUNDRY WORKS NOT INDICATED ON THIS DRAWING THAT ARE REQUIRED IN ORDER TO CONSTRUCT THE WORKS.

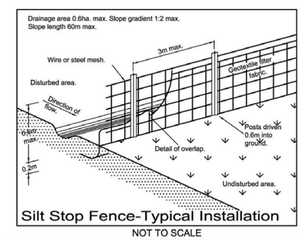
**SEDIMENT & EROSION CONTROL**

1. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES TO THE COUNCIL'S SPECIFICATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION.

2. ALL EROSION & SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN A SATISFACTORY WORKING ORDER DURING THE CONSTRUCTION PERIOD. INSPECTIONS OF THESE DEVICES SHALL BE CARRIED OUT AFTER EACH STORM. REPAIRS AND/OR DE-CLOGGING SHALL BE CARRIED OUT TO ENSURE PROPER OPERATION OF THE DEVICE.

3. STORAGE OF MATERIALS AND EQUIPMENT SHALL BE WITHIN SEDIMENT CONTROLLED AREAS.

4. REMOVE SILT STOP FENCING AND DRAINAGE STRUCTURE SEDIMENT CONTROL TRAPS AFTER VEGETATION IS ESTABLISHED.



Silt Stop Fence-Typical Installation
NOT TO SCALE

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

LEGEND: NEW WALL/WORK; EXISTING WALL; DEMOLITION; TREE TO BE REMOVED; TREE TO BE RETAINED; NEW PLANTING; RL PROPOSED LEVEL

0 1 2 3 4 5 7 10m SCALE BAR

NORTH POINT

PROJECT: PROPOSED RESIDENTIAL FLAT BUILDING

ADDRESS: 36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT: Inglow Investments Two

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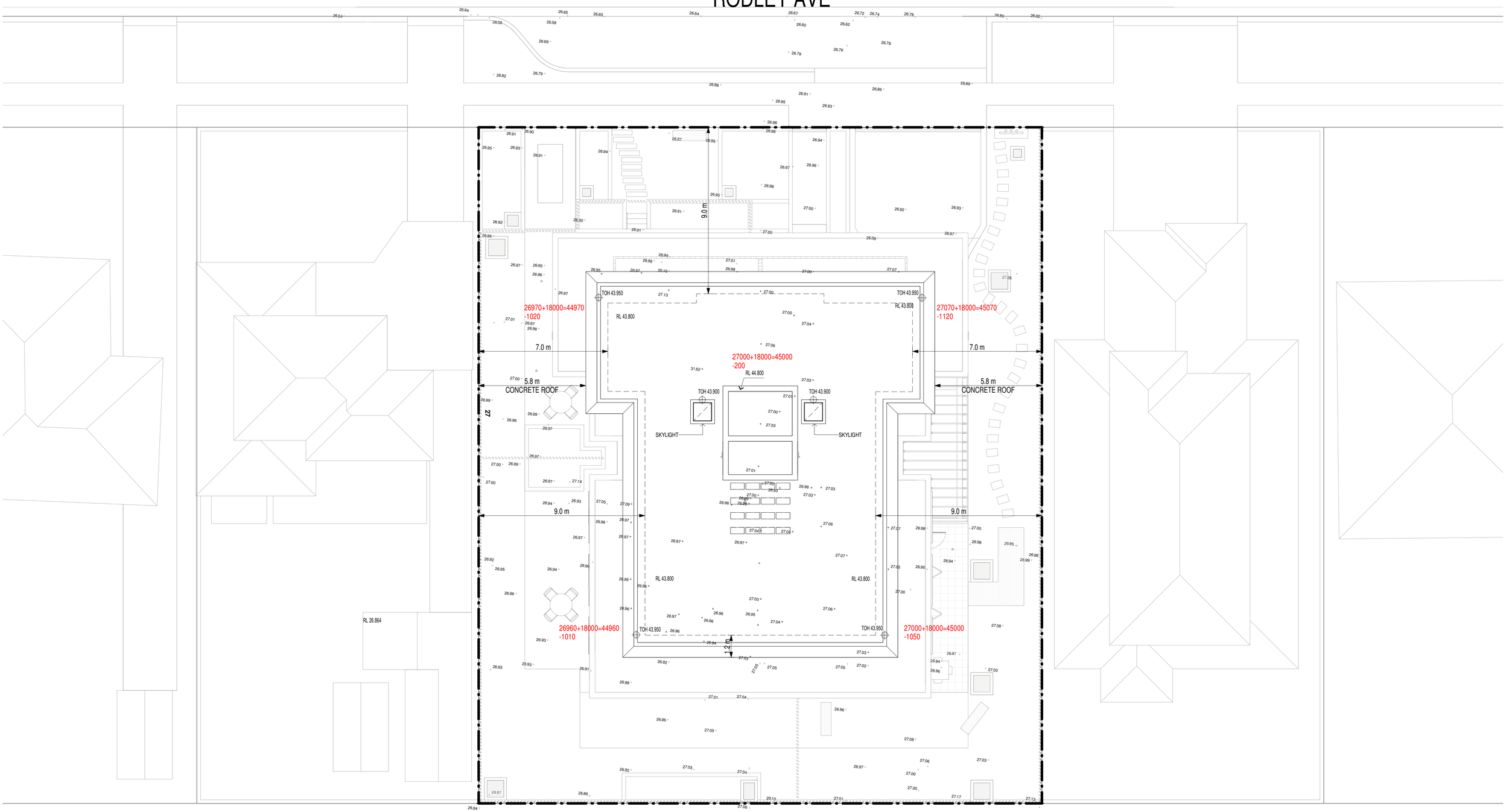
SHEET SIZE: A1 DAT E
SCALE 1 : 100

SHEET NAME: DEMOLITION PLAN

DRAWING NUMBER: DA05

ISSUE NO. A

Document Set ID: 9082180
Version: 1, Version Date: 26/03/2020




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

LEGEND

- NEW WALL/WORK
- EXISTING WALL
- DEMOLITION
- TREE TO BE REMOVED
- TREE TO BE RETAINED
- NEW PLANTING
- RL PROPOSED LEVEL

0 1 2 3 4 5 7 10m

SCALE BAR

NORTH

NORTH POINT

PROJECT

**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
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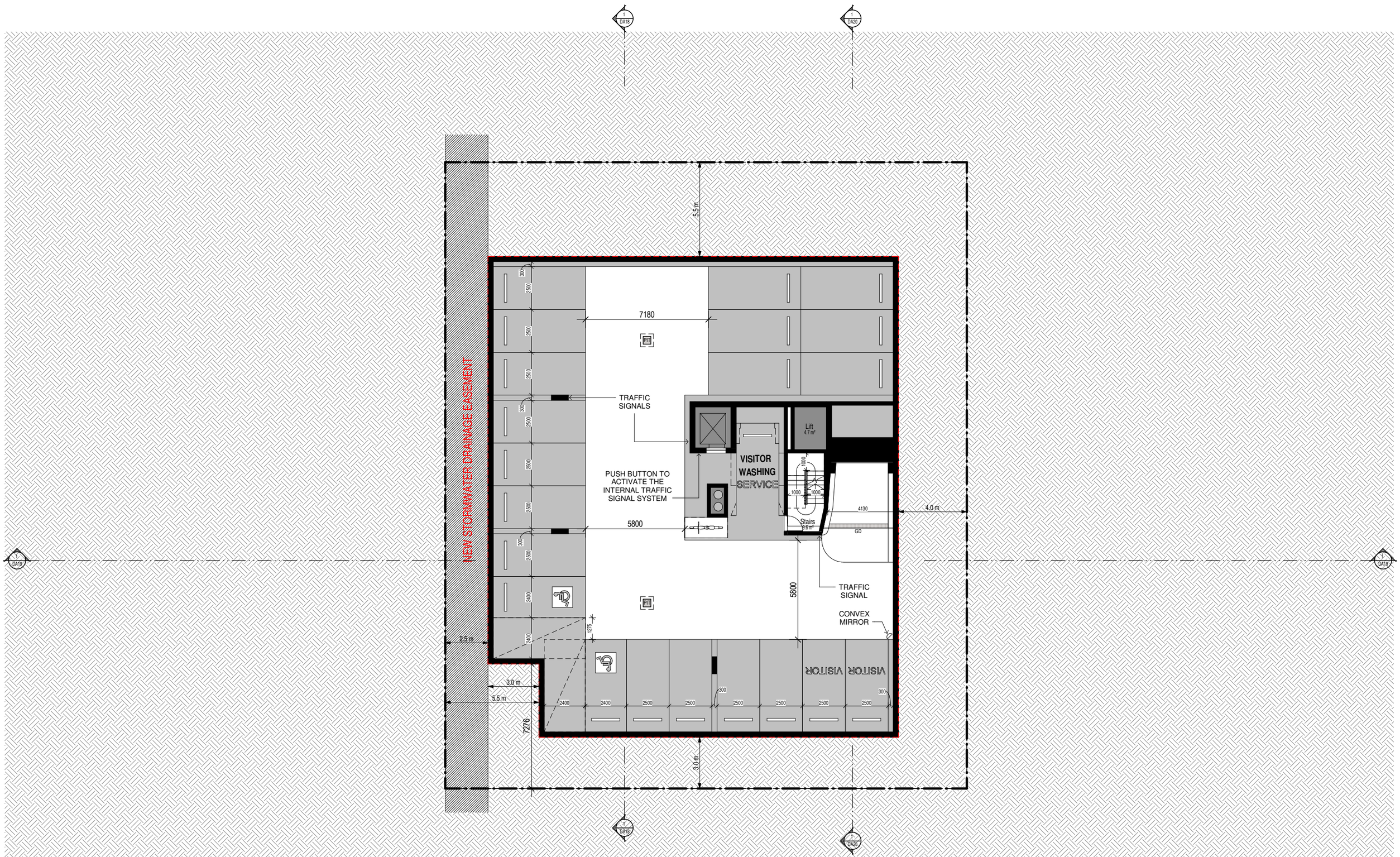
SHEET SIZE: A1
SCALE 1 : 100
DATE

SHEET NAME **ROOF**

DRAWING NUMBER **DA11**

ISSUE NO. **A**

Document Set ID: 9082180
Version: 1, Version Date: 16/03/2020




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH
NORTH POINT

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING
ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

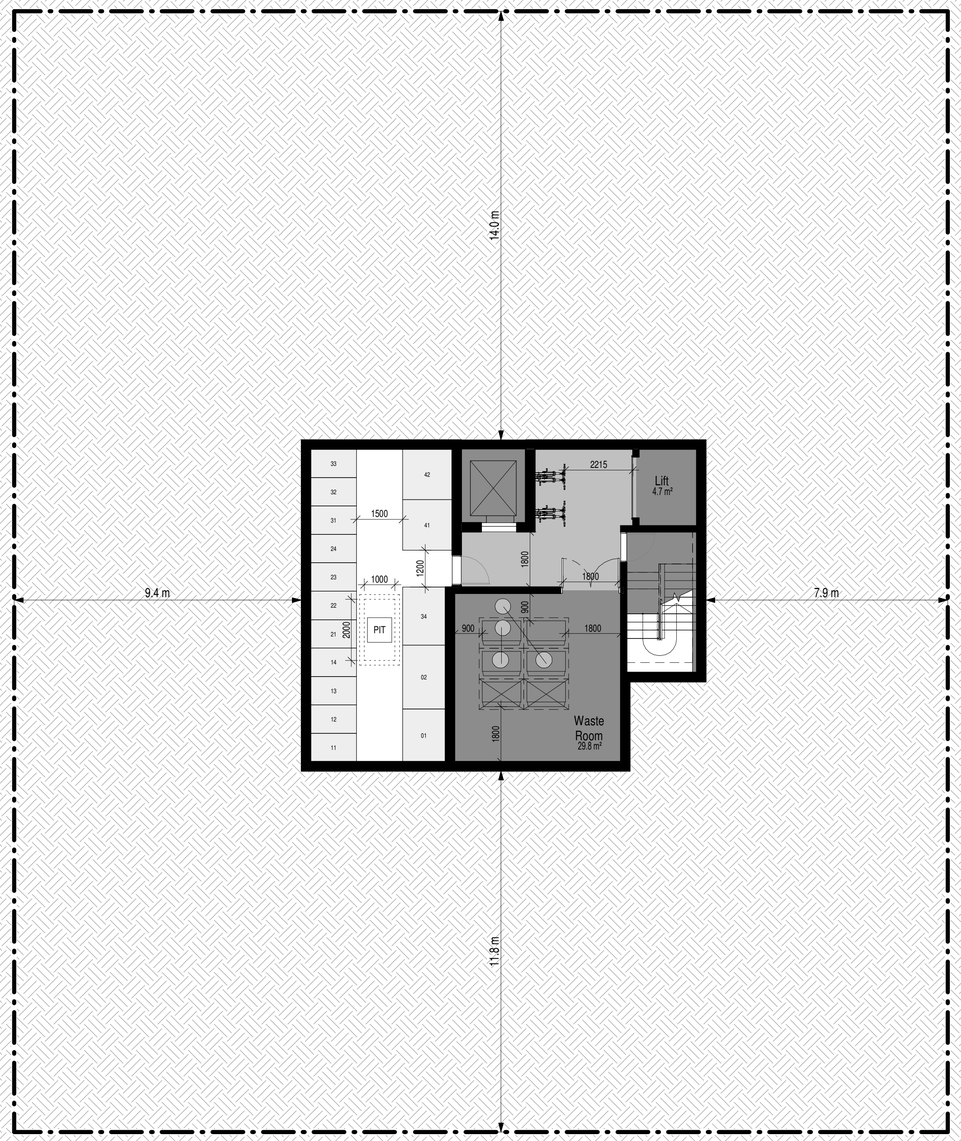
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SHEET SIZE: A1
SCALE 1 : 100

SHEET NAME: BASEMENT 1

DRAWING NUMBER: DA12
ISSUE NO.: B

Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |
| | | |
| | | |
| | | |

0 1 2 3 4 5 7 10m

SCALE BAR

NORTH

NORTH POINT

PROJECT

**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

MORSON GROUP

NOMINATED ARCHITECT – P.T.
MORSON REGISTRATION NUMBER 8100
ACN 159 460 054, ABN 41 159 460 054
www.morsongroup.com
(02) 9360 4144
PO Box 170, Potts Point, NSW 1335

SHEET SIZE: A1
SCALE 1 : 100

DAT E

SHEET NAME **BASEMENT 2**

DRAWING NUMBER **DA13**

ISSUE NO. **A**

Document Set ID: 9082180
Version: 1, Version Date: 25/02/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.

This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT – P F MORSON REGISTRATION NUMBER 6100
ACN 139 480 034, ABN 41 139 480 034
www.morsongroup.com
(02) 9360 4944
PO Box 170, Potts Point, NSW 1335


SHEET SIZE: A1
SCALE 1 : 100
DAT E

SHEET NAME **ELEVATION NORTH**

DRAWING NUMBER **DA14**
ISSUE NO. **B**


Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.

This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |
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0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT - P F MORSON REGISTRATION NUMBER 8100
ACN 159 480 056, ABN 41 159 480 056
www.morsongroup.com
(02) 9380 4944
PO Box 170, Potts Point, NSW 1335


SHEET SIZE: A1
SCALE 1 : 100
EXT E

SHEET NAME **ELEVATION SOUTH**

DRAWING NUMBER **DA15**
ISSUE NO. **A**


Document Set ID: 9282180
Version: 1, Version Date: 16/03/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.

This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT – P F MORSON REGISTRATION NUMBER 8102
ACN 139 480 036, ABN 41 139 480 036
www.morsongroup.com
(02) 9361 4744
PO Box 170, Potts Point, NSW 1335


SHEET SIZE: A1
SCALE 1 : 100
DATE

SHEET NAME **ELEVATION WEST**

DRAWING NUMBER **DA16**
ISSUE NO. **B**


Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.

This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT – P F MORSON REGISTRATION NUMBER 6100
ACN 159 480 056, ABN 41 159 480 056
www.morsongroup.com
(02) 9360 4944
PO Box 170, Forth Point, NSW 1335


SHEET SIZE: A1
SCALE 1 : 100
DAT E

SHEET NAME **ELEVATION EAST**

DRAWING NUMBER **DA17**
ISSUE NO. **B**


Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.
This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT - P F MORSON REGISTRATION NUMBER 6100
ACN 139 480 056, ABN 41 139 480 056
www.morsongroup.com
(02) 9380 4944
PO Box 170, Potts Point, NSW 1335


SHEET SIZE: A1
SCALE 1 : 100
DAT E

SHEET NAME **SECTION 1**

DRAWING NUMBER **DA18**
ISSUE NO. **A**


Document Set ID: 9382183
Version: 1, Version Date: 16/03/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.
This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
- loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
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- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

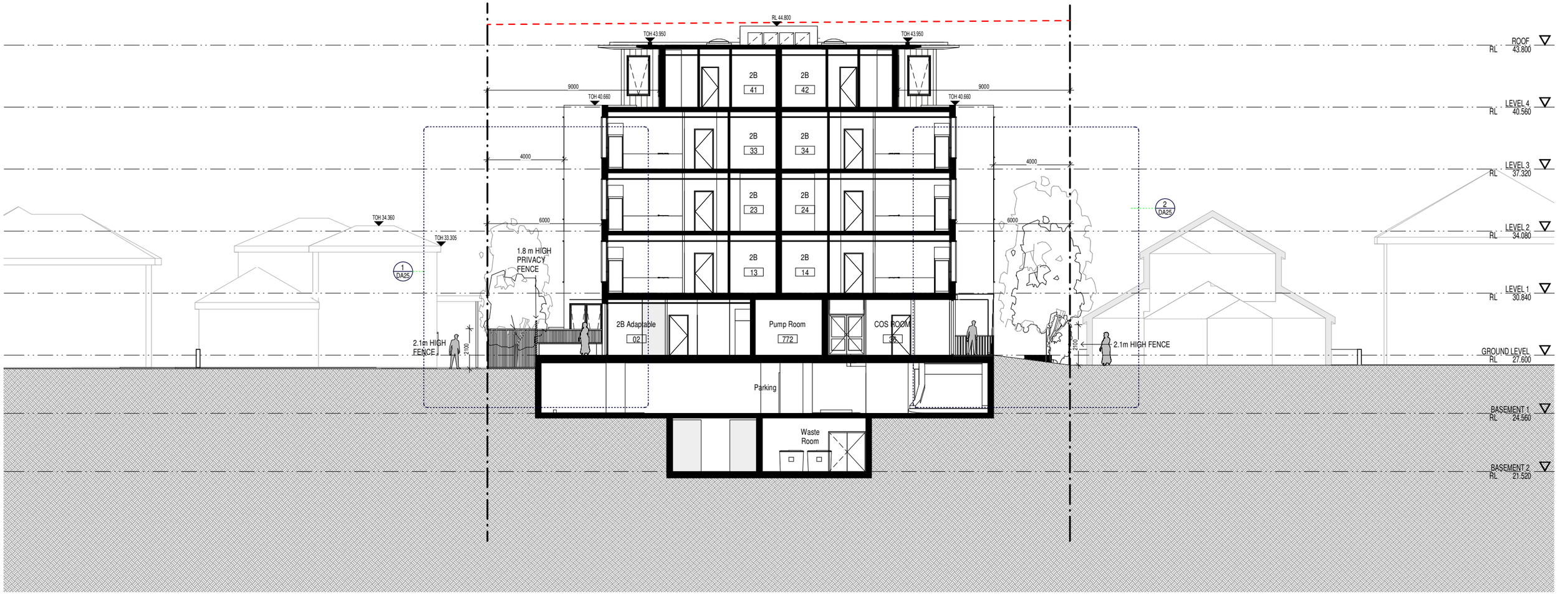
**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| B | 04-05-2020 | DA SUBMISSION |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two


MORSON GROUP
NOMINATED ARCHITECT – P F MORSON REGISTRATION NUMBER 8100
ACN 139 480 036, ABN 41 139 480 036
www.morsongroup.com
(02) 9360 4644
PO Box 170, Ports Point, NSW 1333


SHEET SIZE: A1
SCALE 1 : 100
DATE

SHEET NAME **SECTION 2**

DRAWING NUMBER **DA19**
ISSUE NO. **B**


Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

**THERMAL PERFORMANCE SPECIFICATIONS:** **(20331_02 – 36 Rodley Ave)**

**The following specifications take precedence over other plan notations for the construction of this building.**

**NOTE:** In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 1, at the time of building.
This includes New South Wales Part J(A). Specifically:

- Building thermal construction is in accordance with part J1.2
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- where metal frames are used that thermal breaks are installed in accordance with Part J1.3(d) and J1.5(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance Part J3
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- Any new mechanical ventilation system is installed in accordance with Part J5.3
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4
- Any new heated water system is installed in accordance Part J7.2
- Energy monitoring equipment is installed in accordance Part J8.3

**WINDOWS (total product specification – glass + frame)**
U-value 6.70 (or less than) & SHGC 0.70 (+/-5%) (Default: Plain Glass in AL. frame)

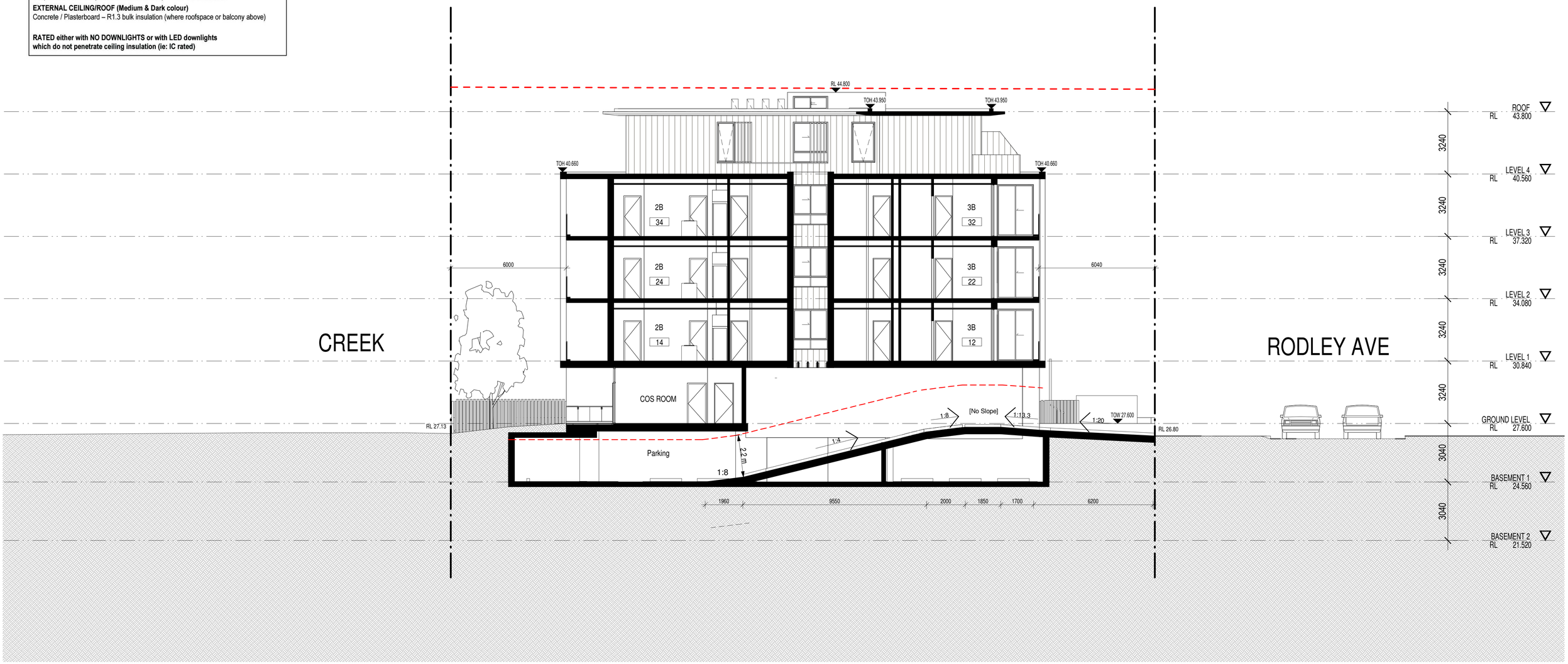
**EXTERNAL WALL (Medium & Dark colour)**
Brick Veneer – R2.5 – 90mm thick Bulk insulation with reflective airgap
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier

**INTERNAL WALL**
Cavity Panel/Concrete/Brick – No Insulation
Partition walls – No thermal insulation required

**EXTERNAL FLOOR**
Concrete Slab on Ground – No insulation
Suspended Concrete (above Basement areas) – R1.3 Bulk insulation

**EXTERNAL CEILING/ROOF (Medium & Dark colour)**
Concrete / Plasterboard – R1.3 bulk insulation (where roofspace or balcony above)

**RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)**




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |
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0 1 2 3 4 5 7 10m
SCALE BAR NORTH POINT

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING
ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750
CLIENT
Inglow Investments Two

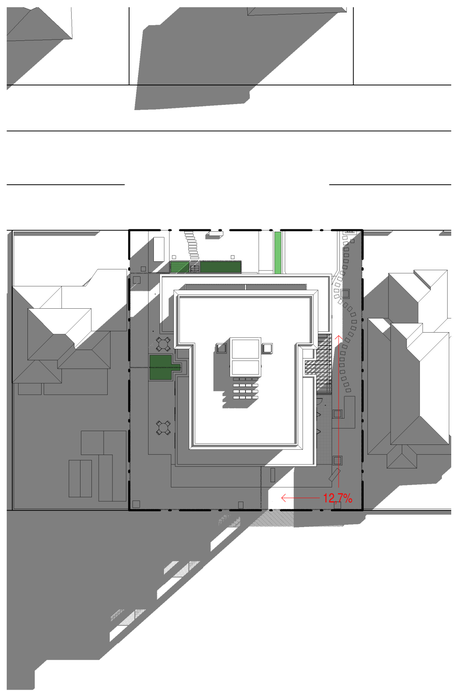

MORSON GROUP
NOMINATED ARCHITECT – P.F. MORSON REGISTRATION NUMBER 8100
ACN 159 480 056, ABN 41 159 480 056
www.morsongroup.com
(02) 9380 4946
PO Box 170, Potts Point, NSW 1335


SHEET SIZE: A1 DAT E
SCALE 1 : 100

SHEET NAME **SECTION 3**

DRAWING NUMBER **DA20**
ISSUE NO. **A**


Document Set ID: 9082183
Version: 1, Version Date: 26/02/2020




1 DA14 **SHADOWS - JUNE 21st 9AM**
1 : 400

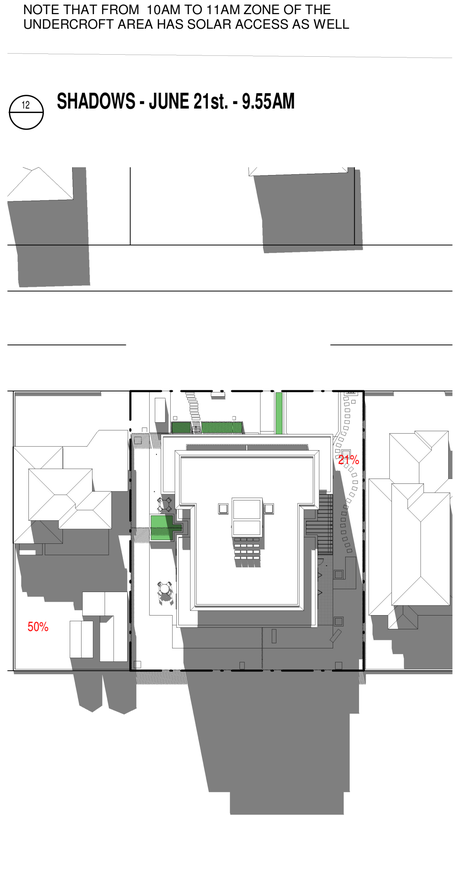



13 **SHADOWS - JUNE 21st. - 12.20PM**

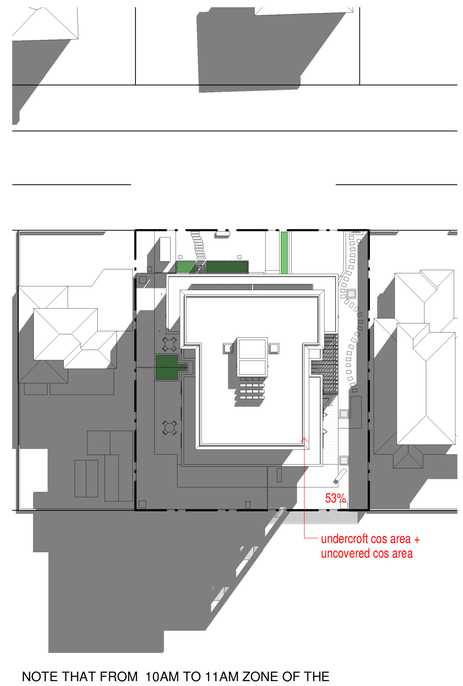



NOTE THAT FROM 10AM TO 11AM ZONE OF THE UNDERCROFT AREA HAS SOLAR ACCESS AS WELL

12 **SHADOWS - JUNE 21st. - 9.55AM**

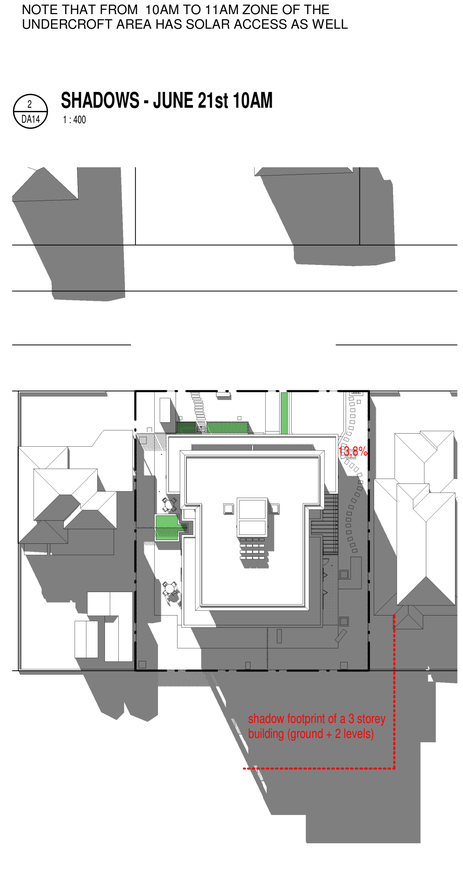



5 DA14 **SHADOWS - JUNE 21st 13PM**
1 : 400

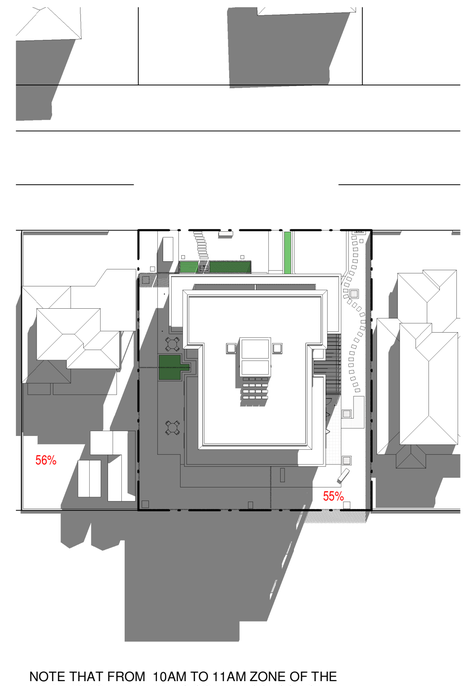



NOTE THAT FROM 10AM TO 11AM ZONE OF THE UNDERCROFT AREA HAS SOLAR ACCESS AS WELL

2 DA14 **SHADOWS - JUNE 21st 10AM**
1 : 400

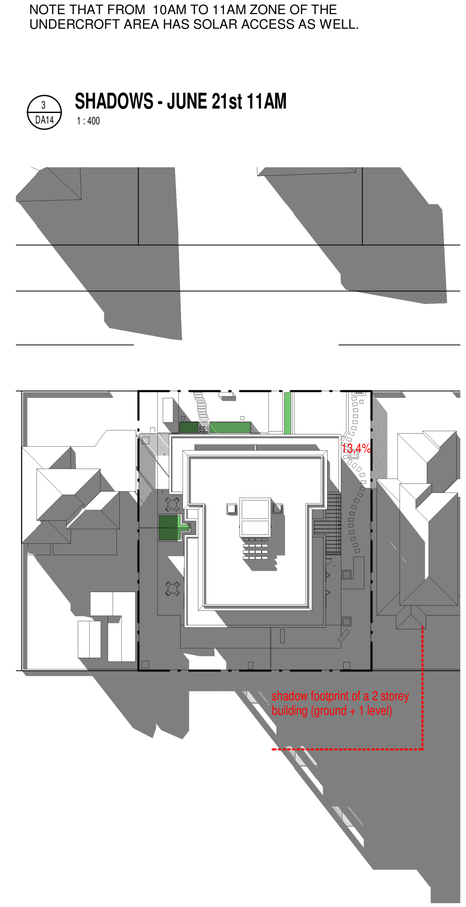



6 DA14 **SHADOWS - JUNE 21st 14PM**
1 : 400

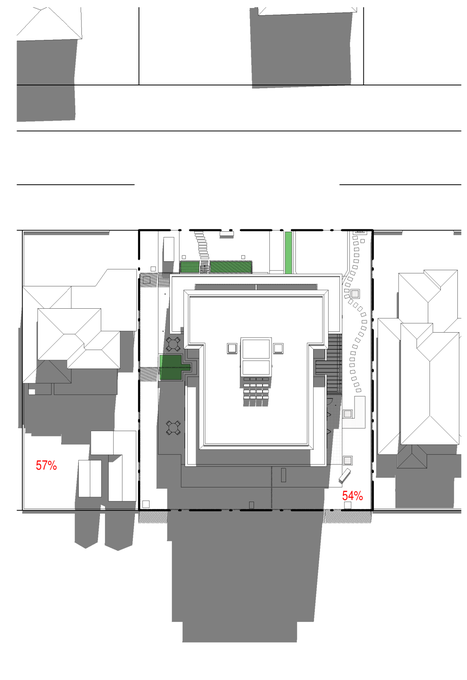



NOTE THAT FROM 10AM TO 11AM ZONE OF THE UNDERCROFT AREA HAS SOLAR ACCESS AS WELL.

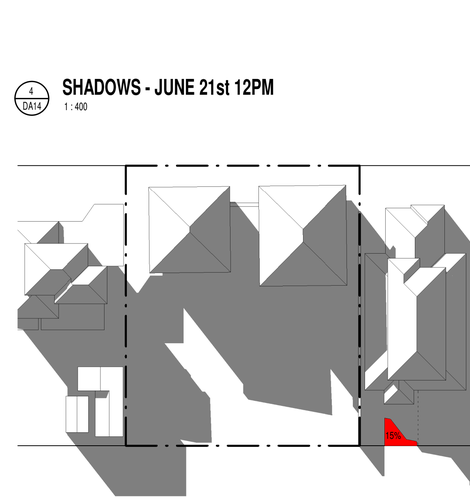
3 DA14 **SHADOWS - JUNE 21st 11AM**
1 : 400




7 DA14 **SHADOWS - JUNE 21st 15PM**
1 : 400




4 DA14 **SHADOWS - JUNE 21st 12PM**
1 : 400




8 DA14 **SHADOWS - JUNE 21st 14PM Existing**
1 : 400




9 DA14 **SHADOWS - JUNE 21st 15PM Existing**
1 : 400

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

MORSON GROUP

NOMINATED ARCHITECT – P F McORSCHY REGISTRATION NUMBER 8100
ACN 139 480 056, ABN 41 139 480 056
www.morsongroup.com
(02) 9280 4944
PO Box 170, Ports Point, NSW 1335

SHEET SIZE: A1
SCALE 1 : 400
DAT E

SHEET NAME **SHADOW DIAGRAMS**

DRAWING NUMBER **DA21**
ISSUE NO. **A**

Document Set ID: 9082180
Version: 1, Version Date: 16/03/2020









| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |
| | | |
| | | |
| | | |

SCALE BAR

NORTH POINT

PROJECT

**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

MORSON GROUP

NOMINATED ARCHITECT - P E MORSON REGISTRATION NUMBER 8100
ACN 159 480 056, ABN 41 159 480 056
www.morsongroup.com
(02) 9380 4946
PO Box 170, Ports Point, NSW 1335

SHEET SIZE: A1
SCALE

DAT
E

SHEET NAME **VIEWS**

DRAWING NUMBER **DA22**

ISSUE NO. **A**

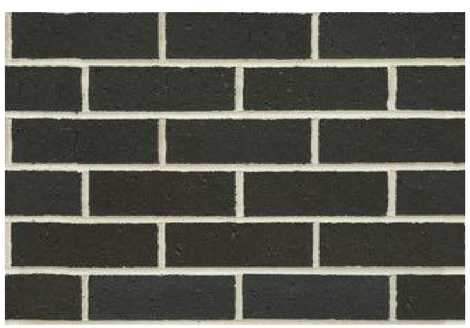
Document Set ID: 9082183
Version: 1, Version Date: 36/02/2020



**FBK1**

AB-Bricks
WhitsundayBrampton
230x76-110-240-NAT

Level 1-4



**FBK2**

AB-Bricks
ExpressionsBlackstone
230x76-110-240-NAT

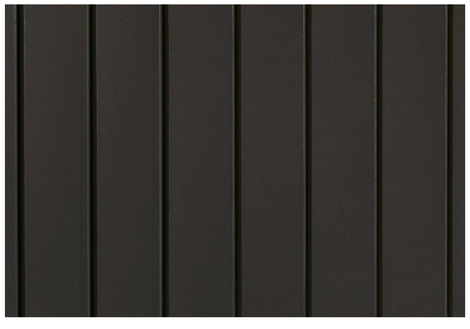
Window sill



**PDC1**

Dulux Eternity Titanium Pearl Satin
90087728

Louvres and Window Frames



**MLC**

Dark Grey Aluminium
Cladding

Top Floor
Window Sill



**PT01**

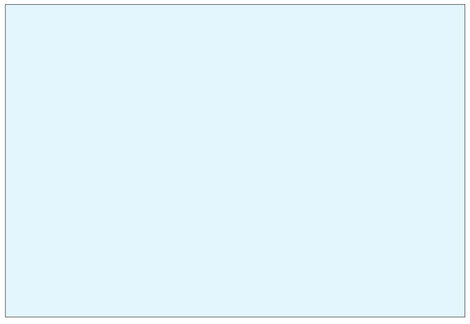
Render Painted Finish
Dulux Chanson Grey

Ground level
Balconies and Awnings



**PT02**

Render Painted Finish
Dulux Primal  A113



**GL01**

Clear Glass Window



**GL02**

Obscure Glass Window

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |
| | | |
| | | |
| | | |

SCALE BAR

NORTH POINT

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SHEET SIZE: A1
SCALE 1 : 1

DAT E

SHEET NAME **MATERIAL SCHEDULE**

DRAWING NUMBER **DA23**

ISSUE NO. **A**

Document Set ID: 9088183
Version: 1, Version Date: 16/03/2020



Shadow Plan - GF - 9am



Shadow Plan - GF - 10am



Shadow Plan - GF - 11am



Shadow Plan - GF - 12pm



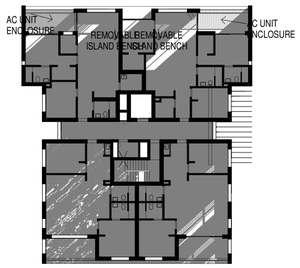
Shadow Plan - GF - 1pm



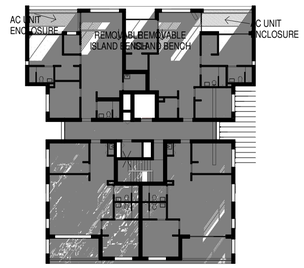
Shadow Plan - GF - 2pm



Shadow Plan - GF - 3pm




Shadow Plan - L1 - 9am



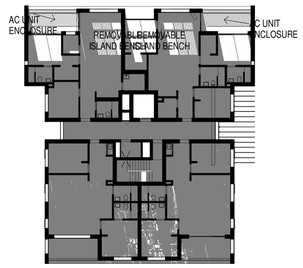

Shadow Plan - L1 - 10am



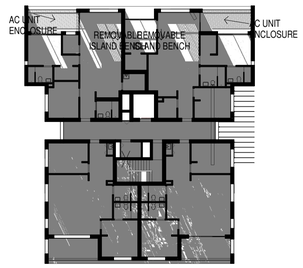

Shadow Plan - L1 - 11am



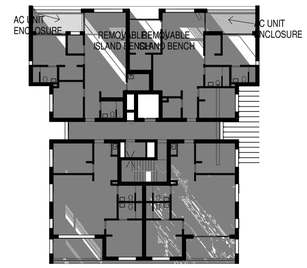

Shadow Plan - L1 - 12pm



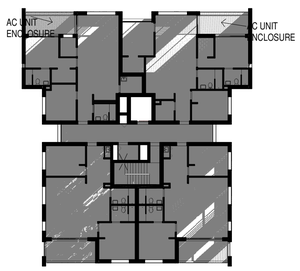

Shadow Plan - L1 - 1pm



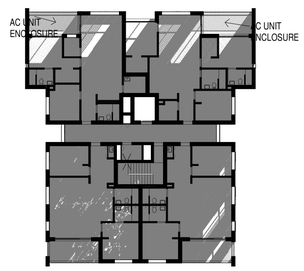

Shadow Plan - L1 - 2pm



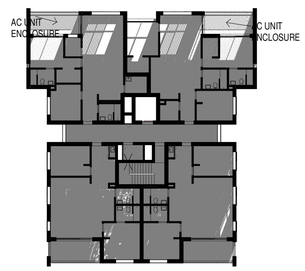

Shadow Plan - L1 - 3pm



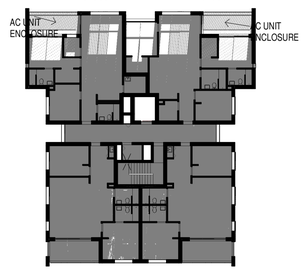
Shadow Plan - L2 - 9am



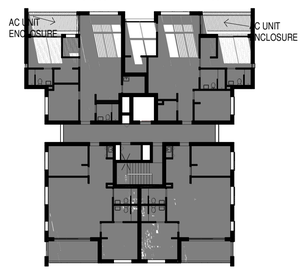
Shadow Plan - L2 - 10am



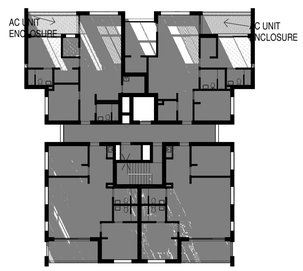
Shadow Plan - L2 - 11am



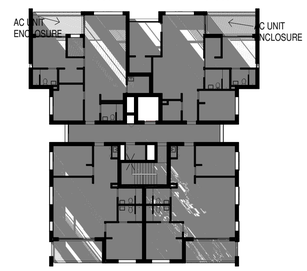
Shadow Plan - L2 - 12pm



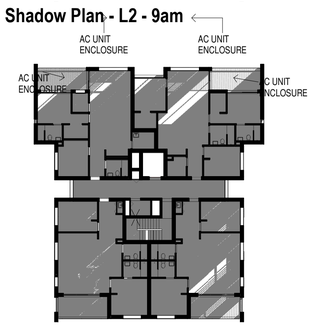
Shadow Plan - L2 - 1pm



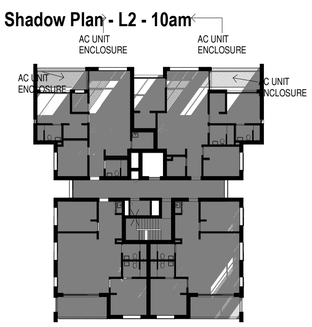
Shadow Plan - L2 - 2pm



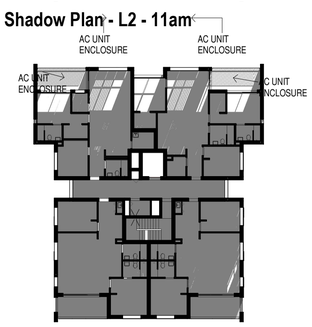
Shadow Plan - L2 - 3pm



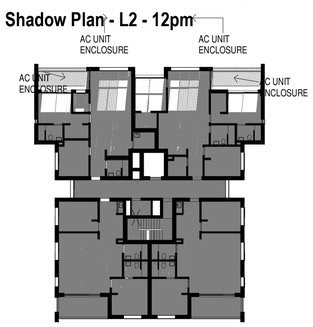
Shadow Plan - L3 - 9am



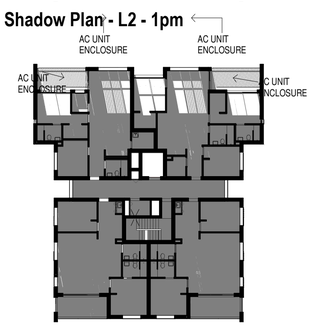
Shadow Plan - L3 - 10am



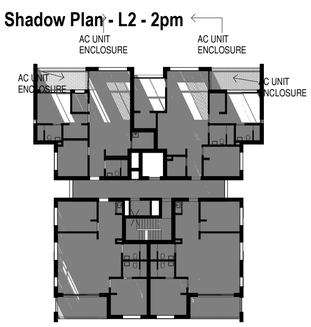
Shadow Plan - L3 - 11am



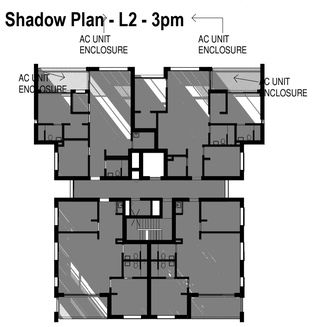
Shadow Plan - L3 - 12pm



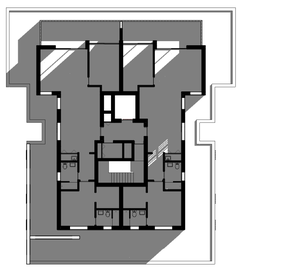
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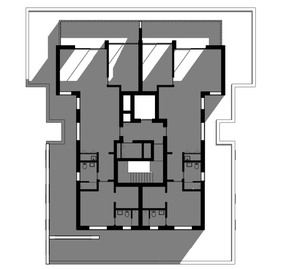
Shadow Plan - L3 - 2pm



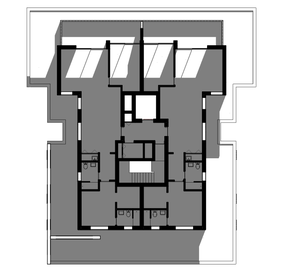
Shadow Plan - L3 - 3pm



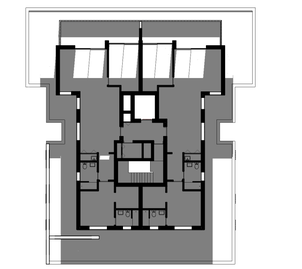
Shadow Plan - L4 - 9am



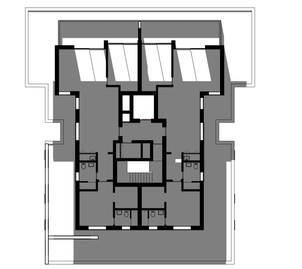
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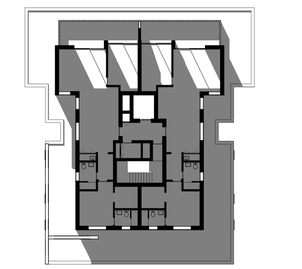
Shadow Plan - L4 - 11am



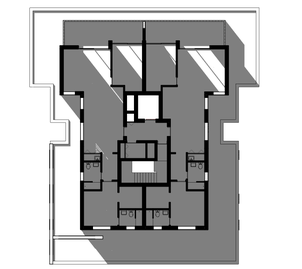
Shadow Plan - L4 - 12pm



Shadow Plan - L4 - 1pm



Shadow Plan - L4 - 2pm



Shadow Plan - L4 - 3pm

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 16-03-2020 | DA SUBMISSION |
| P1 | 12-02-2020 | UDRP MEETING |

SCALE BAR

NORTH POINT

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

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NOMINATED ARCHITECT : P F MORSON REGISTRATION NUMBER 8100
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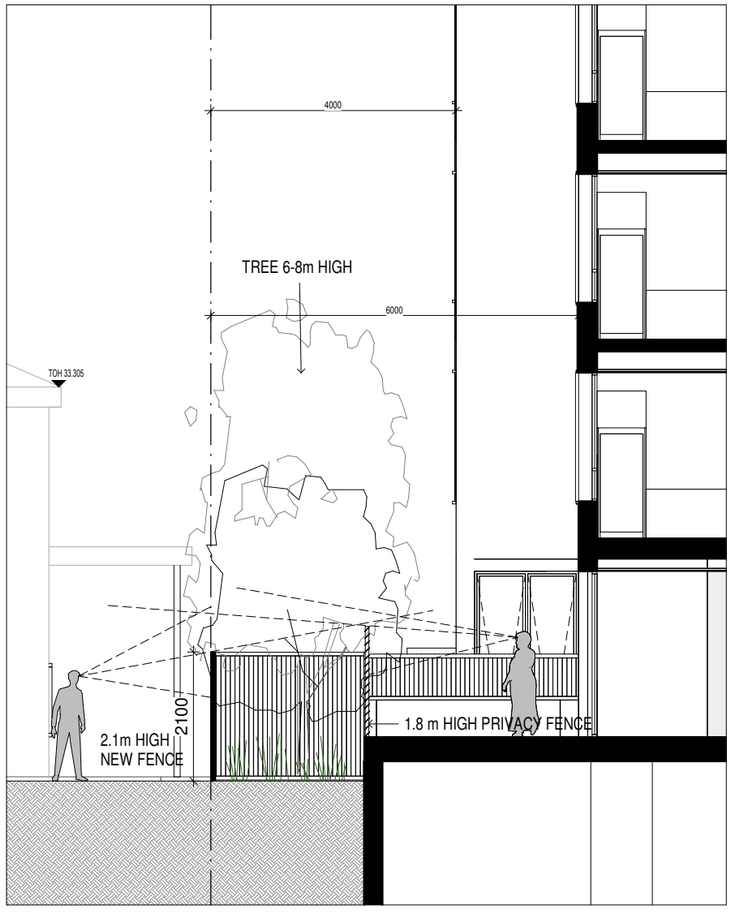
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SCALE 1 : 300
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SHEET NAME: SHADOW PLANS

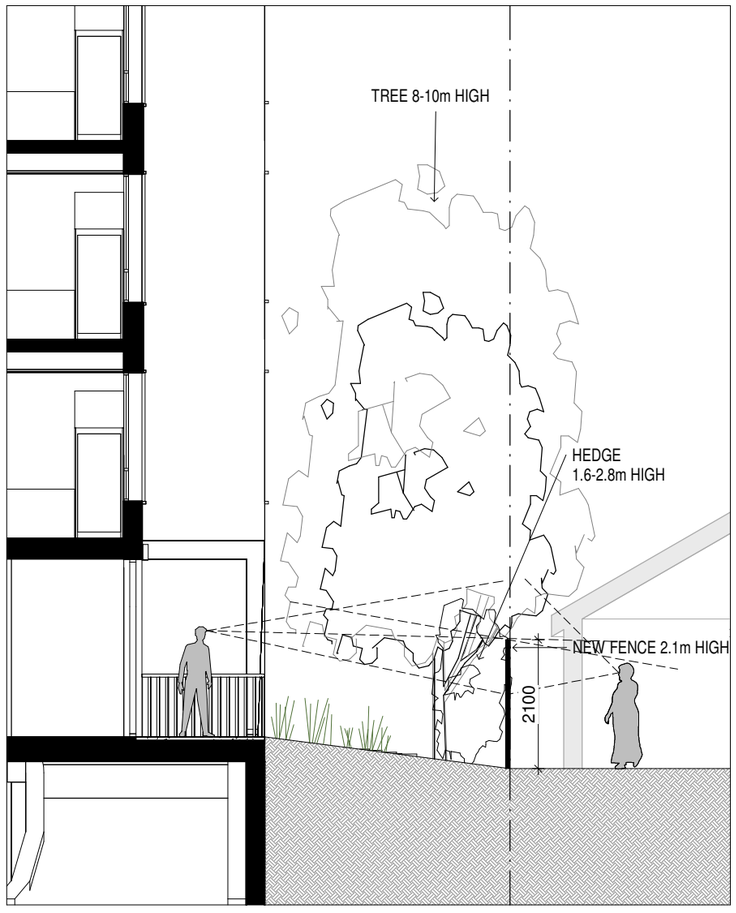
DRAWING NUMBER: DA24
ISSUE NO.: A

Document Set ID: 9082180
Version: 1, Version Date: 26/02/2020

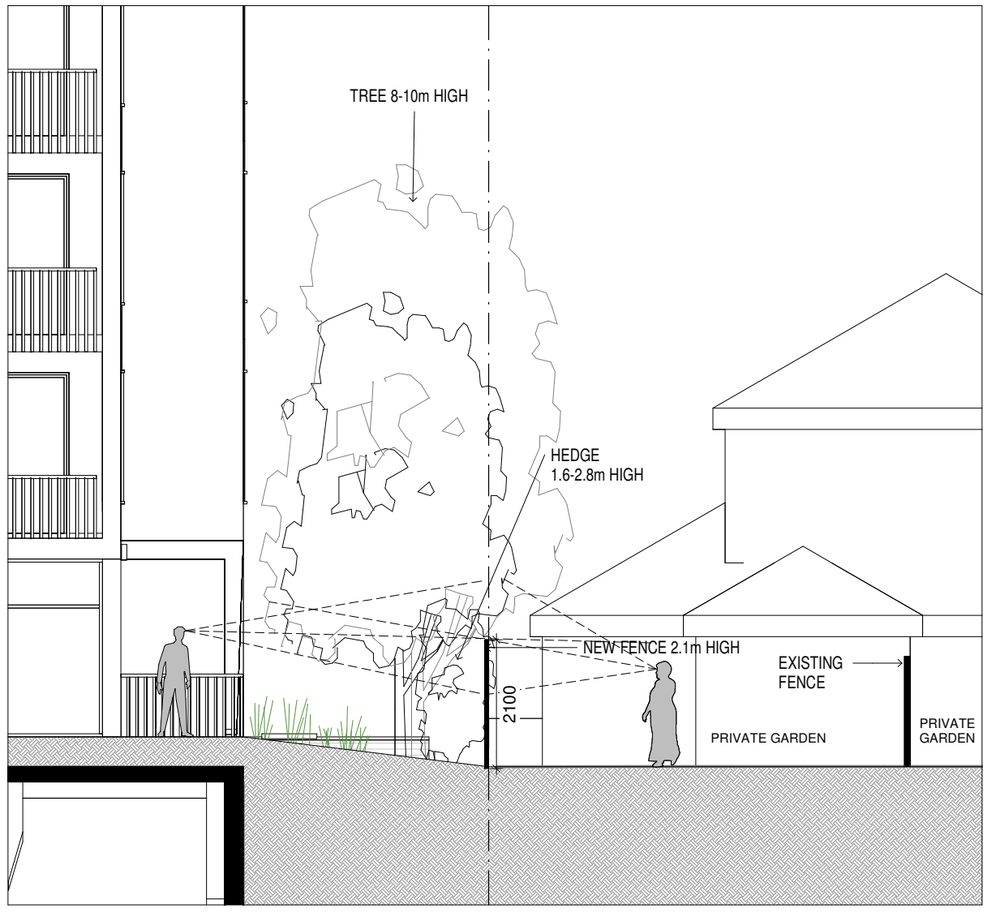



1 / DA06 **Section Detail 1**
1 : 50




2 / DA19 **Section Detail 2**
1 : 50




3 / DA25 **Section Detail 3**
1 : 50

| ISSUE | DATE | AMENDMENT |
|---|---|---|
| A | 04-05-2020 | DA SUBMISSION |

**LEGENDS / NOTES:**

| | | | | | |
|---|---|---|---|---|---|
| BR | BEDROOM | GAS | GAS CUPBOARD | RWO | RAINWATER OUTLET |
| COM | COMMS CUPBOARD | GD | GRATED DRAIN | SWP | STORM WATER PIT |
| DP | DOWNPIPE | GEX | GARBAGE EXHAUST | TOH | TOP OF HOB |
| E | ELECTRICAL CUPBOARD | MBX | MAILBOX | TOW | TOP OF WALL |
| FHR | FIRE HOSE REEL | RL | RELATIVE LEVEL | TTI | TACTILE INDICATORS |

SCALE BAR

NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

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SHEET SIZE: A1
SCALE: As indicated

SHEET NAME: **SECTION DETAILS**

DRAWING NUMBER: **DA25**

ISSUE NO.: **A**

Document Set ID: 9218181
Version: 1, Version Date: 16/07/2020

A1

DATE PLOTTED: 17 June 2020 10:43 AM BY: USER

SGC Reference Number: 20180061

# RESIDENTIAL DEVELOPMENT
# 36-38 RODLEY AVENUE, PENRITH
# STORMWATER CONCEPT DESIGN




LOCALITY PLAN
NOT TO SCALE
COPYRIGHT OF SIX MAPS

| DRAWINGS LIST | | | |
|---|---|---|---|
| SHEET No. | DWG No. | TITLE | REV |
| 1 | SW100 | COVER SHEET | H |
| 2 | SW200 | STORMWATER CONCEPT DESIGN - BASEMENT 2 PLAN | H |
| 3 | SW201 | STORMWATER CONCEPT DESIGN - BASEMENT 1 PLAN | H |
| 4 | SW202 | STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN | H |
| 5 | SW203 | STORMWATER CONCEPT DESIGN - ROOF PLAN | H |
| 6 | SW300 | STORMWATER CONCEPT DESIGN - DETAILS SHEET - SHEET 1 OF 2 | H |
| 7 | SW301 | STORMWATER CONCEPT DESIGN - DETAILS SHEET - SHEET 2 OF 2 | H |
| 8 | SW400 | EROSION AND SEDIMENT CONTROL - PLAN AND DETAILS | H |
| 9 | SW500 | STORMWATER CONCEPT DESIGN - MUSIC CATCHMENT PLAN | H |

PREPARED BY:
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ARCHITECT:

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(02) 9380 4946
PO Box 170, Potts Point, NSW 1335

CLIENT :

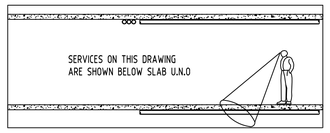
INGLOW INVESTMENT
TWO PTY LTD

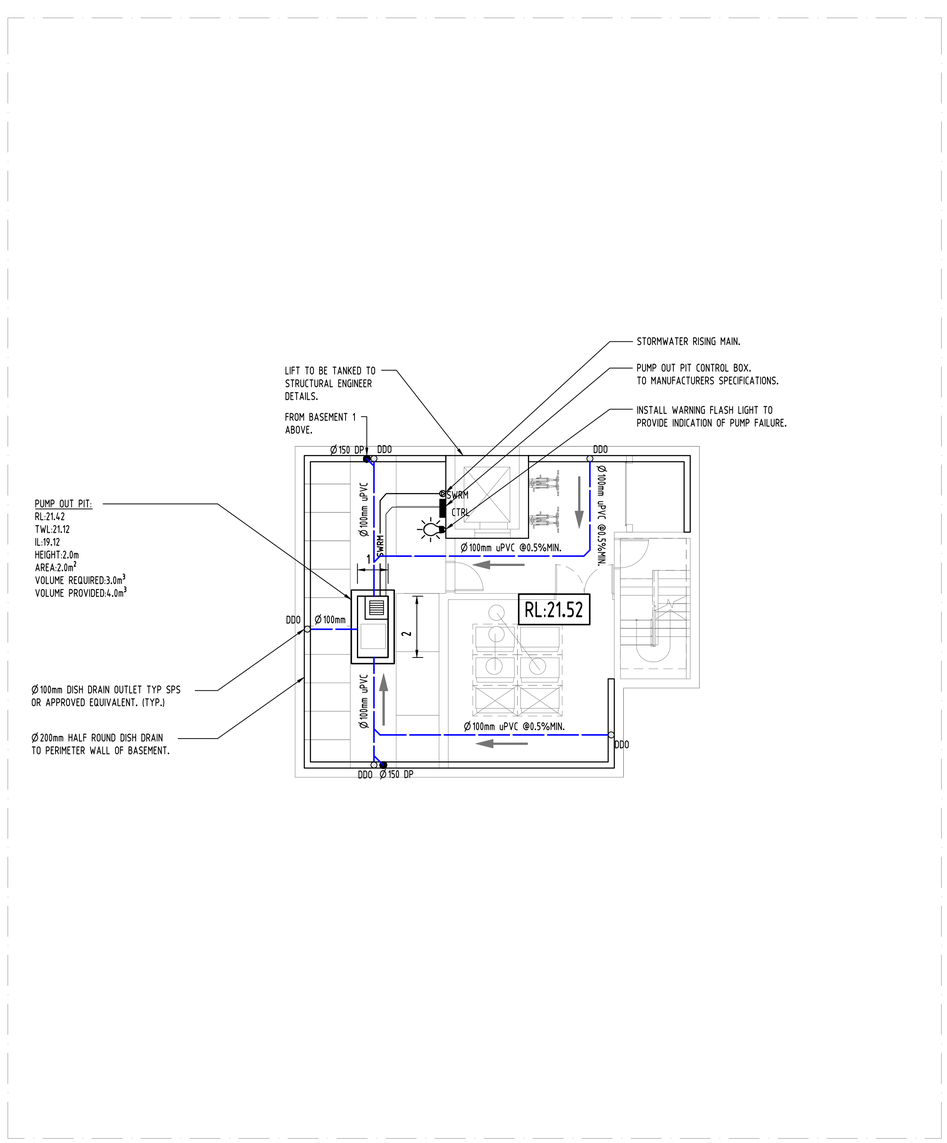
Drawing Number: SW1100 Revision Number: H

PLOT BY: C:\Users\User\AppData\Local\Temp\Bricscad\Dsp_3\SW100.dwg

Document Set ID: 9280351
Version: 1, Version Date: 18/08/2020

DATE PLOTTED: 17 June 2020 10:43 AM BY: USER
A1




## SUBSOIL DESIGN CALCS:

AS3500 10yr 2hr ARI STORM= 31.10 mm/hr

ARIx2 = 62.20mm
AREA OF DRIVEWAY RAMP UNCOVERED = 25.2m$^2$

VOL. OF RUNOFF (Vr):
= 18x(62.20/1000)
= 1.12m$^3$

VOL.PUMPED (Vp) IN 30min@10L/S = 18m3

WET WELL STORAGE
MAXIMUM OF, AS PER AS3500:
(Vr - Vp) OR 3m$^3$ = 3m$^3$

MANUFACTURER (ALL-PUMPS) RECOMMENDS MAX. OPERATION TIMES OF 10/HR

## PUMP-OUT PIT NOTE:

INSTALL WITH THE FOLLOWING ITEMS.
- 900SQ HEAVY DUTY STEEL GRATED LID FOR ACCESS AND MAINTENANCE PURPOSES.
-CONFINED SPACE SIGN ABOVE PUMP OUT PIT FOR PUBLIC AWARENESS AND WARNING.
-STEP IRONS. REFER TO DETAILS.
-PUMPOUT PIT CONTROL BOX (CTRL) TO MANUFACTURERS SPECIFICATIONS. LOCATIONS TO BE CONFIRMED WITH ARCHITECT.
-PUMPS TO OPERATE IN ALTERNATE MODE TO INCREASE LIFESPAN
-INSTALL VISIBLE FLASHING LIGHT SYSTEM IN CASE OF PUMP FAILURE

## NOTES

BASEMENT DRAINAGE DESIGN SUBJECT TO GEOTECHNICAL INVESTIGATION AND STRUCTURAL DESIGN OF WALLS AND SLABS IN CC STAGE.

ALL SUBSOIL DRAINAGE (SSD) TO BE 100AG AND ALL DISH DRAIN OUTLETS (DDO) TO BE Ø 100mm U.N.O

## NOTES

ALL STORMWATER PUMPS TO BE CLASS 1 ZONE 2 FLAME SAFE TO ELECTRICAL CONSULTANT'S REQUIREMENTS.

## NOTES

BASEMENT TO BE TANKED AS PER STRUCTURAL DETAILS.

| Issue | Last revision title | by | Date | Status |
|---|---|---|---|---|
| H | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 17.06.2020 | 2 |
| G | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 09.06.2020 | 2 |
| F | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 11.05.2020 | 2 |
| E | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 16.03.2020 | 2 |
| D | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 11.03.2020 | 2 |
| C | FOR DA RESUBMISSION | FZ | 30.07.2019 | 2 |
| P3 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 |
| P2 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 |
| B | FOR DA SUBMISSION | FZ | 01.02.2019 | 2 |

Issuer internal sequence and revision history
1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other

Reference Coordination Drawing

| Discipline | Drawing Title and Number | Date | Rev. |
|---|---|---|---|
| ARCH | | | |
| ARCH | | | |
| STRUCT | | | |
| MECH | | | |
| ELEC | | | |
| HYD | | | |
| FIRE | | | |
| LANDS | | | |
| CIVIL | | | |
| SURVEY | | | |

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
36-38 RODLEY AVENUE
PENRITH

| Grid | Datum | Sheet | Scale (at original size) |
|---|---|---|---|
| - | A.H.D. | 2 OF 9 | 1:100 @ A1 |

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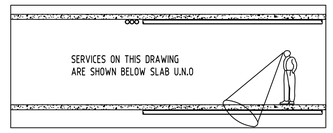
Drawing Title
STORMWATER CONCEPT DESIGN
BASEMENT 02 PLAN

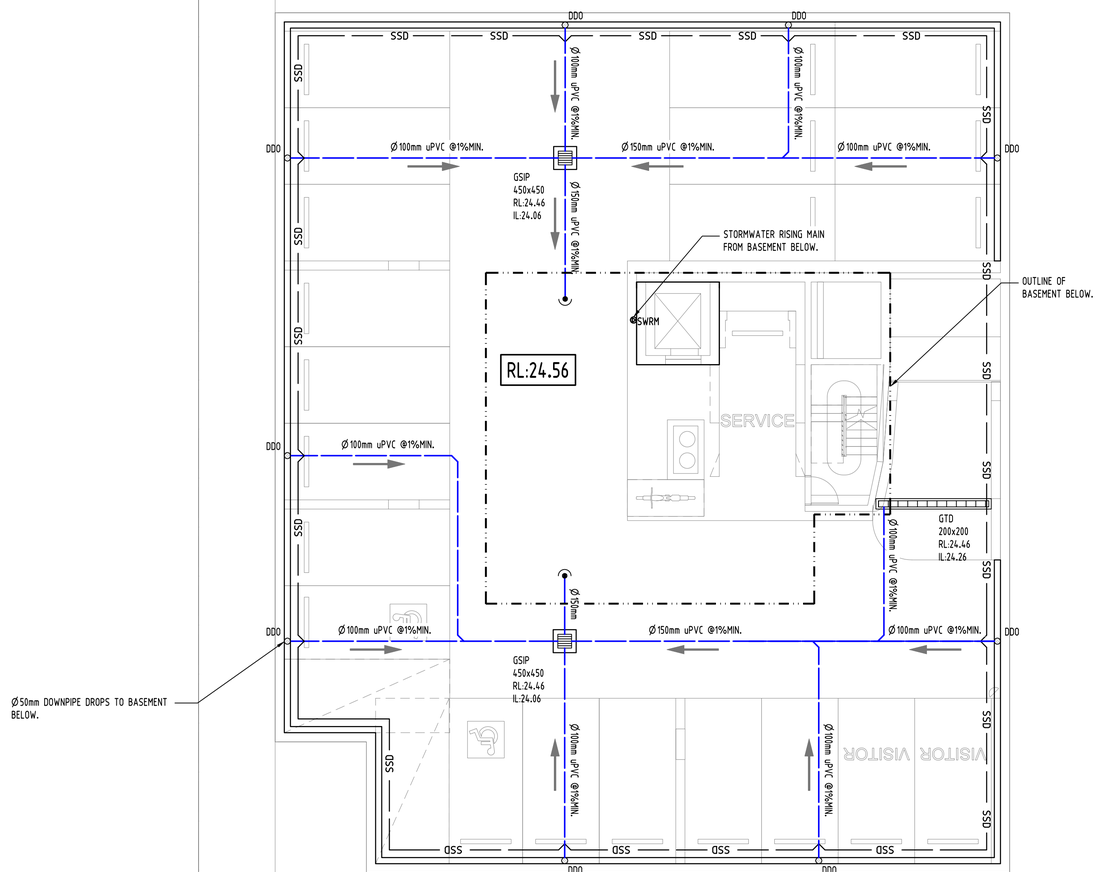
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|---|---|---|
| 20180061 | SW200 | H |

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| | | | | | | | | |
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| F | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 11.05.2020 | 2 | Discipline | Drawing Title and Number | Date | Rev. |
| E | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 16.03.2020 | 2 | ARCH | | | |
| D | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 11.03.2020 | 2 | ARCH | | | |
| C | FOR DA RESUBMISSION | FZ | 30.07.2019 | 2 | STRUCT | | | |
| P3 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 | MECH | | | |
| P2 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 | ELEC | | | |
| B | FOR DA SUBMISSION | FZ | 01.02.2019 | 2 | HYD | | | |
| Issue | Last revision title | by | Date | Status | FIRE | | | |
| | Issuer internal sequence and revision history | | | | LANDS | | | |
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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
36-38 RODLEY AVENUE
PENRITH

| Grid | Datum | Sheet | Scale (at original size) |
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| - | A.H.D. | 3 OF 9 | 1:100 @ A1 |

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Drawing Title
STORMWATER CONCEPT DESIGN
BASEMENT 01 PLAN

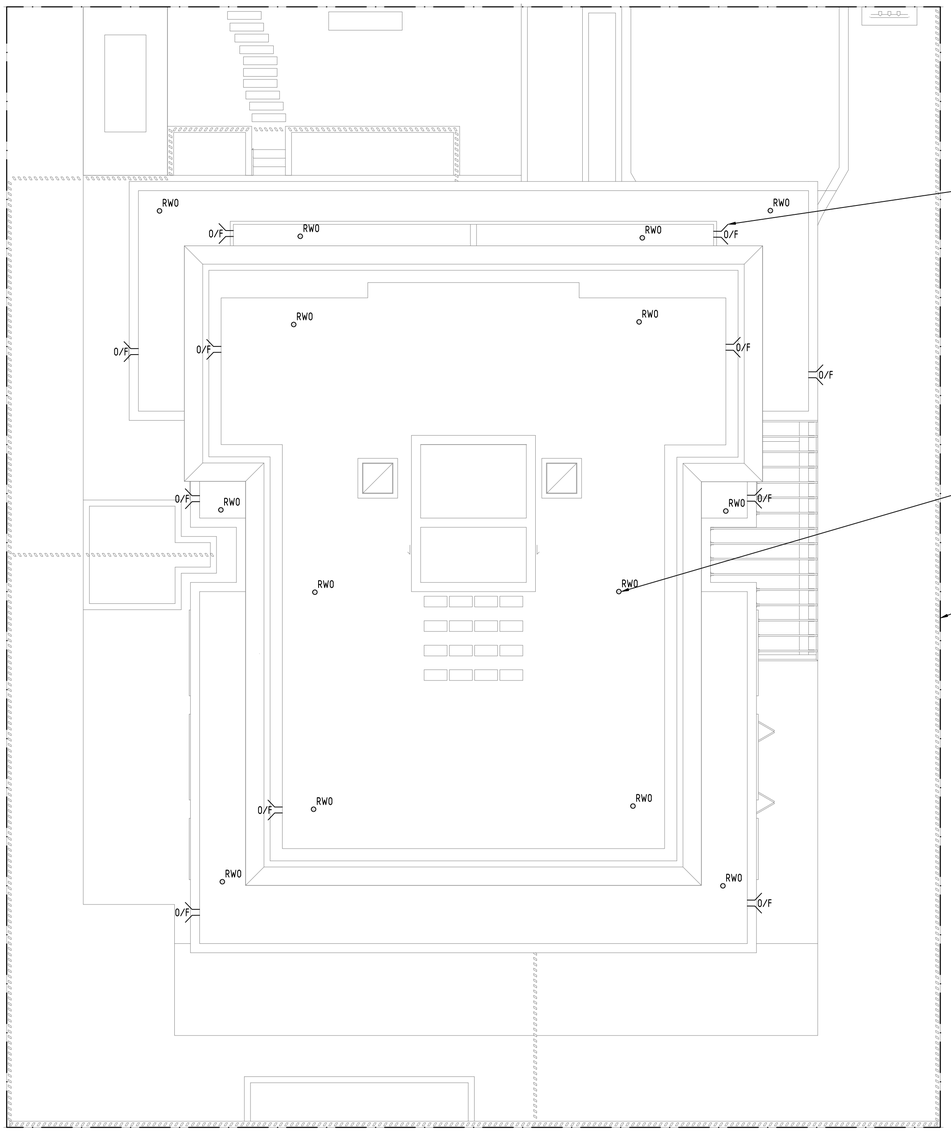
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**NOTEs:**
RWOs ARE INDICATIVE ONY AND SUBJECT TO CHANGE IN THE LATER STAGES.

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| Issue | Last revision title | by | Date | Status |

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| ARCH | | | |
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36-38 RODLEY AVENUE
PENRITH

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|---|---|---|---|
| - | A.H.D. | 5 OF 9 | 1:100 @ A1 |

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Drawing Title
STORMWATER CONCEPT DESIGN
ROOF PLAN

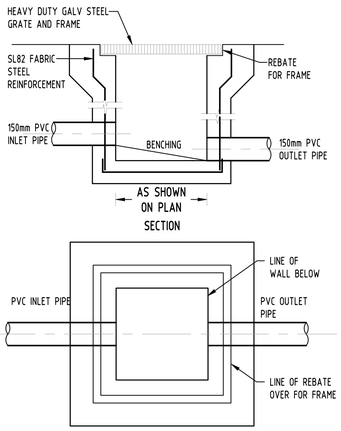
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| 20180061 | SW203 | H |

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Version: 1, Version Date: 18/08/2020

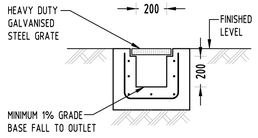
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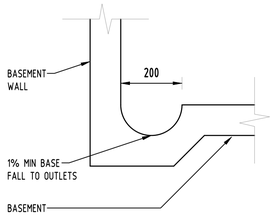
A1



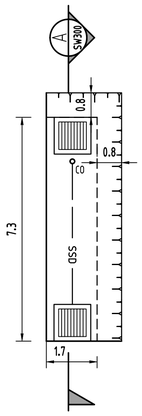

## STORMWATER PIT
NOT TO SCALE




## GRATED TRENCH DRAIN
NOT TO SCALE




## DISH DRAIN
NOT TO SCALE




## BIO-RETENTION PLAN
NOT TO SCALE

## DESIGN NOTES:
THE SITE IS LOCATED IN PENRITH COUNCIL.

SITE AREA = 1115m²

OSD IS NOT REQUIRED BECAUSE THE SITE IS NOT IN A OSD MANDATORY AREA.

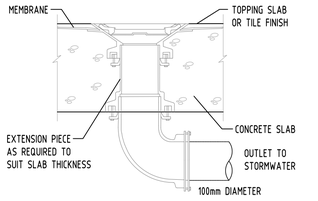
MUSIC MODELLING IS REQUIRED BY COUNCIL. REQUIRED TARGETS ARE AS FOLLOWING:
TSS: 85%
TP: 60%
TN: 45%

THE SITE IS FLOOD AFFECTED. A FLOOD STORAGE AREA AND A NEW EASEMENT ARE PROPOSED.

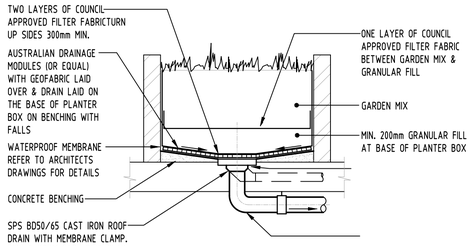
## LEGEND:
- STORMWATER LINE
- SSD — SUBSOIL LINE
- SWRM — SWRM — STORMWATER RISING MAIN
- GRATED SURFACE INLET PIT
- KERB INLET PIT
- RWO — RAINWATER OUTLET
- CO — CLEAR OUT POINT
- DDO — DISH DRAIN OUTLET
- PD — PLANTER DRAIN
- WALL PENETRATION

## LEGEND:
- W — AUTHORITY WATER LINE
- G — G — AUTHORITY GAS LINE
- TEL — AUTHORITY COMMS LINE
- eTEL — EXISTING TELSTRA PIT
- ePP — EXISTING POWER POLE

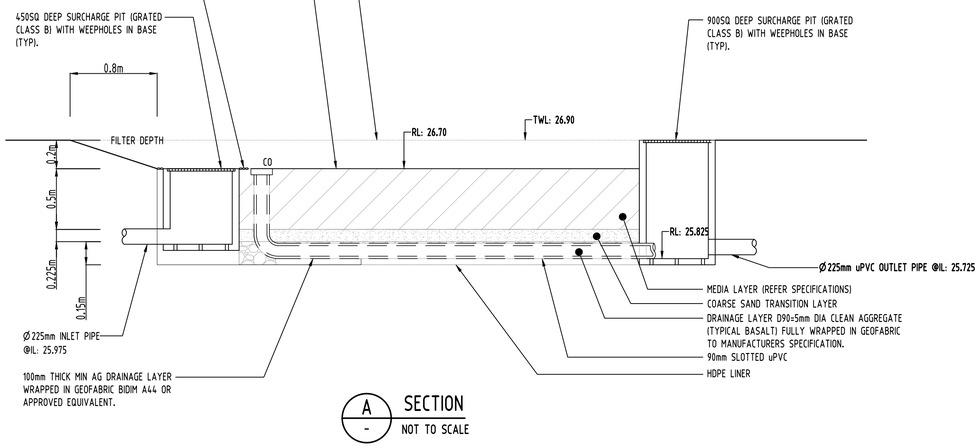
SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.



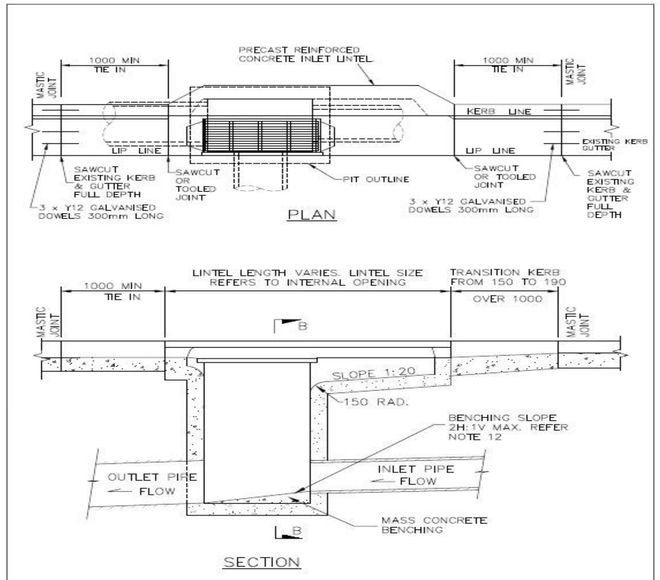

## RAINWATER OUTLET
NOT TO SCALE




## PLANTER DRAIN DETAIL
NOT TO SCALE




A / - SECTION
NOT TO SCALE




| DRAWN: M.WARDA | KERB INLET PIT SHEET 1 OF 3 | APPROVED: |
|---|---|---|
| PENRITH CITY COUNCIL | | PLAN No: SD2001/1 |

## KERB INLET PIT DETAILS
NOT TO SCALE

| Issue | Last revision title | by | Date | Status |
|---|---|---|---|---|
| H | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 17.06.2020 | 2 |
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| C | FOR DA RESUBMISSION | FZ | 30.07.2019 | 2 |
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| B | FOR DA SUBMISSION | FZ | 01.02.2019 | 2 |

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PROJECT
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36-38 RODLEY AVENUE
PENRITH

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| - | A.H.D. | 6 OF 9 | AS SHOWN |

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Drawing Title
STORMWATER CONCEPT DESIGN
DETAILS SHEET
SHEET 1 OF 2

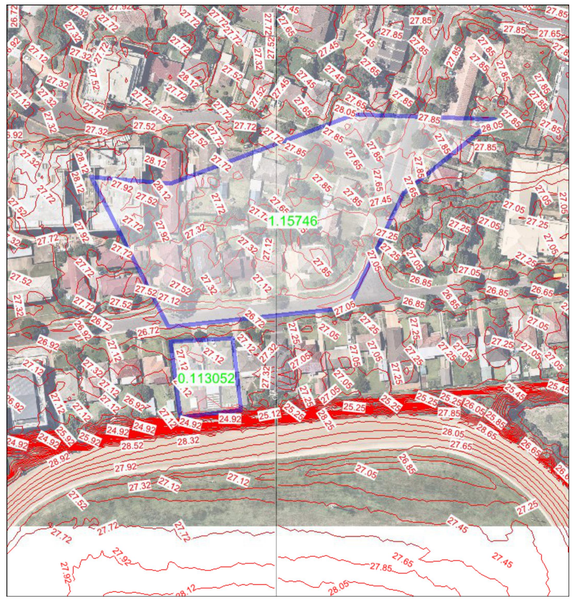
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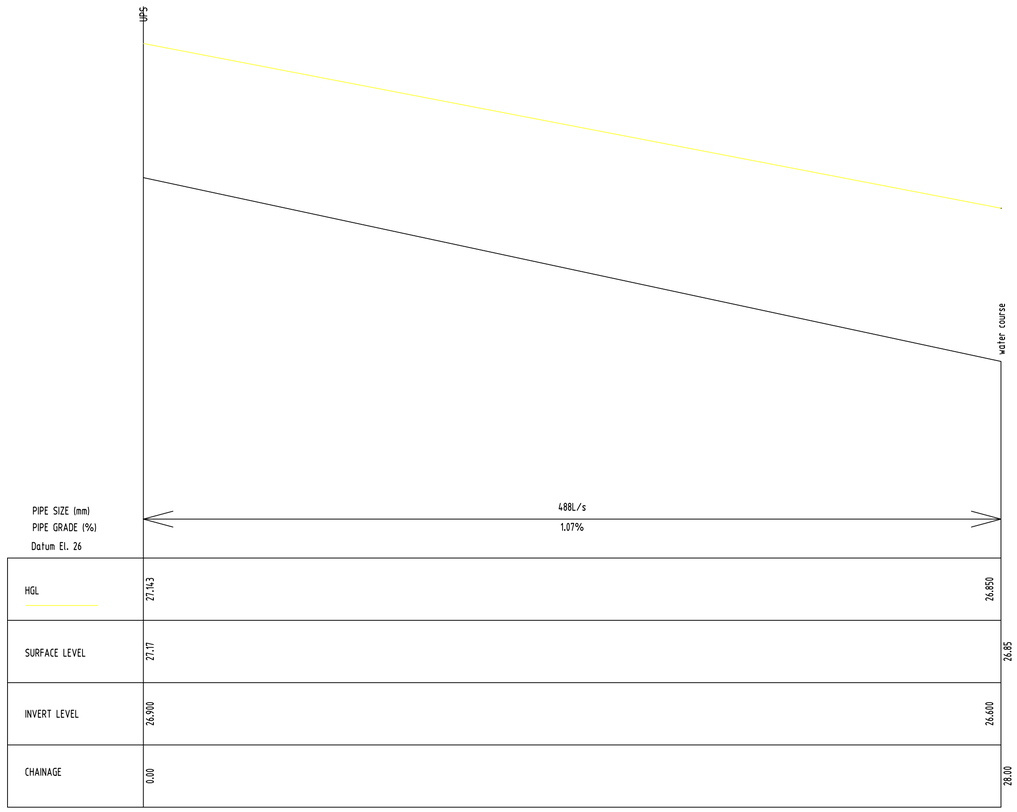
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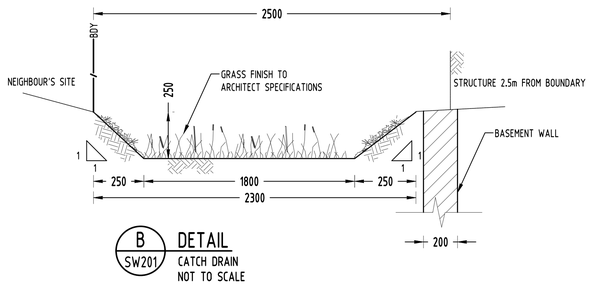

## UPSTREAM CATCHMENT PLAN

NOT TO SCALE




## HYDRAULIC GRADE LINE ALONG PROPOSED EASEMENT

SCALE 20 (H): 1(V)




B
SW201

## DETAIL

CATCH DRAIN
NOT TO SCALE

## CATCHMENTS RUNOFF CALCULATIONS

UPSTREAM CATCHMENT AREA = 1.15746ha

SLOPE = 0.0089m/m
n = 0.08 (NORMAL RESIDENTIAL)
L = 150m (LONGEST DISTANCE OF TRAVEL)
Tc = 15mins
$I_{100}$ = 164mm/hr

f = 0.72 (72% IMPERVIOUS - OLDER RESIDENTIAL LOT ONLY)
$C_{10}$ = 0.74
$C_{100}$ = 0.89

$Q_{100}$ = 0.89x197x19557/3600 = 0.469$m^3/s$

| **Trapezoidal Section** | | | | | |
|---|---|---|---|---|---|
| **Formula** | | $Q = (1/n)\ AR^{2/3}\ S^{1/2}$ | | | |
| Q: Flow ($m^3/s$) | | | | | |
| A: Area of Flow ($m^2$) | | | | | |
| S: Longitudinal Slope (m/m) | | | | | |
| R: Hydraulic Radius (m) = A / P (where P is the perimeter of the flow) | | | | | |
| n: Surface Roughness | | | | | |
| **Trapezoidal Section** | | | | | |
| w = | 1.80 | 1.80 | 1.80 | m | base width |
| y = | 0.25 | 0.25 | 0.25 | m | depth |
| $slope_1$ = | 1.00 | 1.00 | 1.0 | | left edge slope |
| $slope_2$ = | 1.00 | 1.00 | 1.0 | | right edge slope |
| **Flow Calculation** | | | | | |
| | **1:1 year ARI** | **1:20 year ARI** | **1:100 year ARI** | **units** | |
| **A =** | 0.51 | 0.51 | 0.51 | $m^2$ | |
| **P =** | 2.51 | 2.51 | 2.51 | m | |
| **R =** | 0.20 | 0.20 | 0.20 | m | |
| **n =** | 0.030 | 0.030 | 0.030 | | |
| **S =** | 0.0100 | 0.0100 | 0.0100 | m/m | |
| **Q =** | **0.5928** | **0.5928** | **0.5928** | **$m^3/s$** | **(>0.469m3/s, OK)** |
| **Width of flow =** | 2.30 | 2.30 | 2.30 | m | |

## CATCH DRAIN CAPACITY CALCULATION

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|---|---|---|---|---|
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| P2 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 |
| B | FOR DA SUBMISSION | FZ | 01.02.2019 | 2 |

Issuer internal sequence and revision history
1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other

Reference Coordination Drawing

| Discipline | Drawing Title and Number | Date | Rev. |
|---|---|---|---|
| ARCH | | | |
| ARCH | | | |
| STRUCT | | | |
| MECH | | | |
| ELEC | | | |
| HYD | | | |
| FIRE | | | |
| LANDS | | | |
| CIVIL | | | |
| SURVEY | | | |

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| CHECKED | SH | DATE | 17.06.20 |
| DESIGNED | AA | DATE | 17.06.20 |
| VERIFIED | SH | DATE | 17.06.20 |
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SCALE 1:100 ON ORIGINAL SIZE

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
36-38 RODLEY AVENUE
PENRITH

| Grid | Datum | Sheet | Scale (at original size) |
|---|---|---|---|
| - | A.H.D. | 7 OF 9 | AS SHOWN |

Drawing Status: FOR APPROVAL
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Drawing Title
STORMWATER CONCEPT DESIGN
DETAILS SHEET
SHEET 2 OF 2

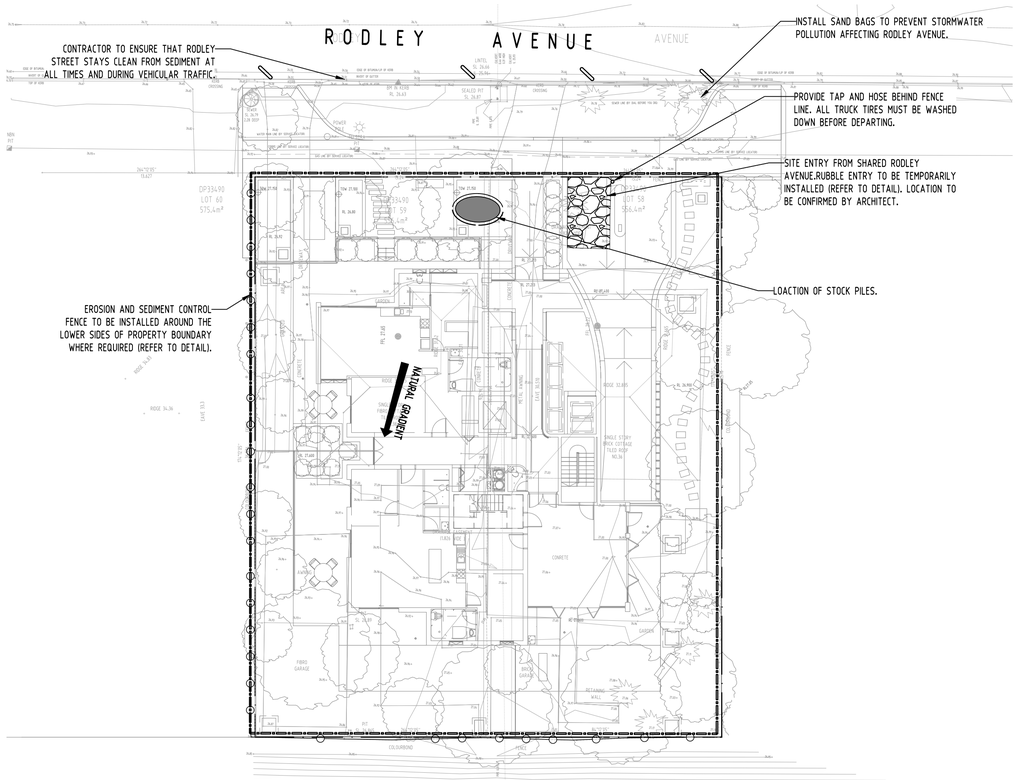
| Project No | Drawing No | Revision No |
|---|---|---|
| 20180061 | SW301 | H |

Document Set ID: 9280381
Version: 1, Version Date: 18/08/2020

PLOT BY: C:\Users\User\AppData\Local\Temp\BricsCAD\Dwg_0\SW300.dwg

DATE PLOTTED: 17 June 2020 10:43 AM BY: USER

A1




## EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:200

## EROSION & SEDIMENTATION CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

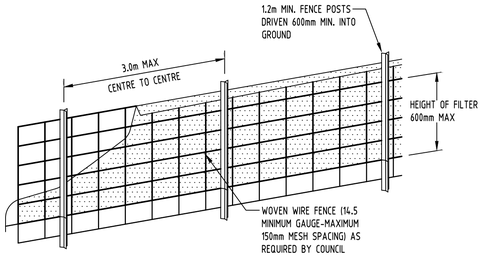
## GENERAL NOTES

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

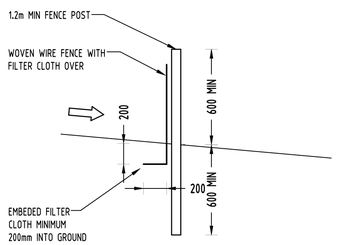
## CLAY SOILS

A SYSTEM SHALL BE INSTALLED TO EITHER:

1. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
2. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL

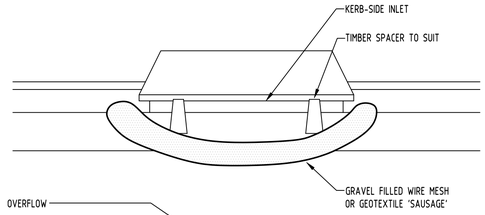


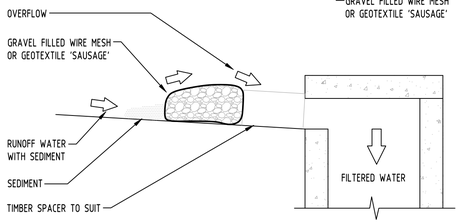

DIAGRAMMATIC VIEW




TYPICAL SECTION

## SEDIMENT FENCE
NOT TO SCALE




CONSTRUCTION NOTES:

FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAT THE LENGTH OF THE INLET PIT

FILL THE SLEEVE WITH 25mm TO 50mm GRAVEL

FORM AN ELLIPTICAL CROSS-SECTION OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY

MAINTAIN THE OPENING WITH SPACER BLOCKS

FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER

FIT TO ALL KERB INLETS AT SAG POINTS

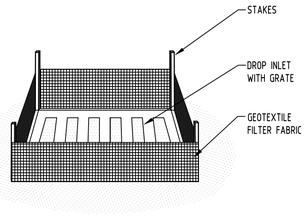
## GEOTEXTILE INLET FILTER

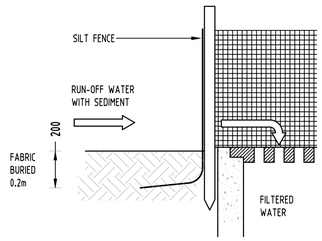
GEOTEXTILE INLET FILTER IS PLACED IN EVERY PIT WITHIN THE SITE TO ENSURE THE RUNOFF WATER DURING CONSTUCTION NOT ENTER THE PITS.

## GRAVEL INLET FILTER (SAUSAGE)
NOT TO SCALE

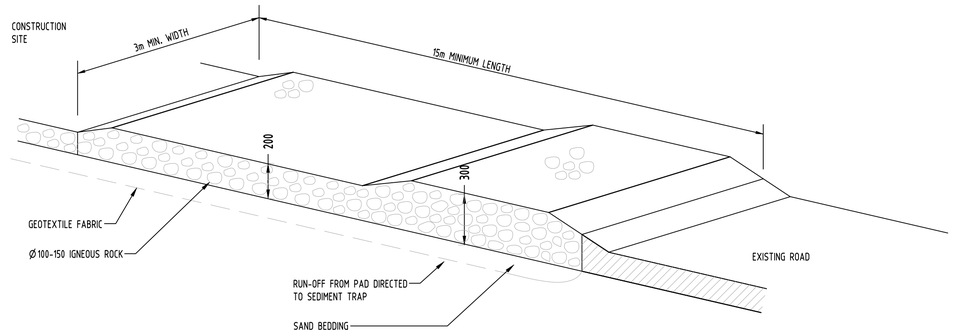
## LEGEND

- SEDIMENT FENCE
- STABILISED SITE ACCESS
- SANDBAGS




## GEOTEXTILE INLET FILTER
NOT TO SCALE




## TEMPORARY CONSTRUCTION EXIT RUBBLE ALTERNATIVE
NOT TO SCALE

| Issue | Last revision title | by | Date | Status |
|---|---|---|---|---|
| H | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 17.06.2020 | 2 |
| G | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 09.06.2020 | 2 |
| F | AMENDED TO SUIT ARCHITECTURAL PLAN | AA | 11.05.2020 | 2 |
| E | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 16.03.2020 | 2 |
| D | AMENDED TO SUIT ARCHITECTURAL PLAN | RJ | 11.03.2020 | 2 |
| C | FOR DA RESUBMISSION | FZ | 30.07.2019 | 2 |
| P3 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 |
| P2 | AMENDED TO SUIT ARCHITECTURAL PLAN | FZ | 12.07.2019 | 1 |
| B | FOR DA SUBMISSION | FZ | 01.02.2019 | 2 |

Issuer internal sequence and revision history
1-preliminary, 2-development application, 3-construction certificate, 4-tender, 5-construction, 6-other

Reference Coordination Drawing

| Discipline | Drawing Title and Number | Date | Rev. |
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| ARCH | | | |
| STRUCT | | | |
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| ELEC | | | |
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| FIRE | | | |
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| DRAWN | AA | DATE | 17.06.20 |
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SCALE 1:100 ON ORIGINAL SIZE

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
36-38 RODLEY AVENUE
PENRITH

| Grid | Datum | Sheet | Scale (at original size) |
|---|---|---|---|
| - | A.H.D. | 8 OF 9 | AS SHOWN |

Drawing Status: FOR APPROVAL
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Drawing Title
EROSION AND SEDIMENT CONTROL
PLAN AND DETAILS

| Project No | Drawing No | Revision No |
|---|---|---|
| 20180061 | SW400 | H |

Document Set ID: 9280381
Version: 1, Version Date: 18/08/2020

# EYE OF THE SUN - COVER SHEET

MORSON GROUP

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Project No. **17022**

Project **PROPOSED RESIDENTIAL FLAT BUILDING**

Address 36-38 Rodley Avenue, Penrith, NSW, 2750

Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



| EOS - SHEET LIST | | | |
|---|---|---|---|
| Number | Name | Current Revision Date | Revision |
| EOS00 | EYE OF THE SUN - COVER SHEET | 16-03-2020 | A |
| EOS01 | EYE OF THE SUN - EAST (SHEET 1-7) | 16-03-2020 | A |
| EOS02 | EYE OF THE SUN - EAST (SHEET 2-7) | 16-03-2020 | A |
| EOS03 | EYE OF THE SUN - EAST (SHEET 3-7) | 16-03-2020 | A |
| EOS04 | EYE OF THE SUN - EAST (SHEET 4-7) | 16-03-2020 | A |
| EOS05 | EYE OF THE SUN - EAST (SHEET 5-7) | 16-03-2020 | A |
| EOS06 | EYE OF THE SUN - EAST (SHEET 6-7) | 16-03-2020 | A |
| EOS07 | EYE OF THE SUN - EAST (SHEET 7-7) | 16-03-2020 | A |
| EOS08 | EYE OF THE SUN - WEST (SHEET 1-7) | 16-03-2020 | A |
| EOS09 | EYE OF THE SUN - WEST (SHEET 2-7) | 16-03-2020 | A |
| EOS10 | EYE OF THE SUN - WEST (SHEET 3-7) | 16-03-2020 | A |
| EOS11 | EYE OF THE SUN - WEST (SHEET 4-7) | 16-03-2020 | A |
| EOS12 | EYE OF THE SUN - WEST (SHEET 5-7) | 16-03-2020 | A |
| EOS13 | EYE OF THE SUN - WEST (SHEET 6-7) | 16-03-2020 | A |
| EOS14 | EYE OF THE SUN - WEST (SHEET 7-7) | 16-03-2020 | A |
| EOS15 | EYE OF THE SUN - SUN LIGHT ACCESS SCHEDULE | 16-03-2020 | A |



16/3/2020 19:41:09
Document Set ID: 9282130
Version: 1, Version Date: 16/03/2020

# EYE OF THE SUN - EAST (SHEET 1-7)

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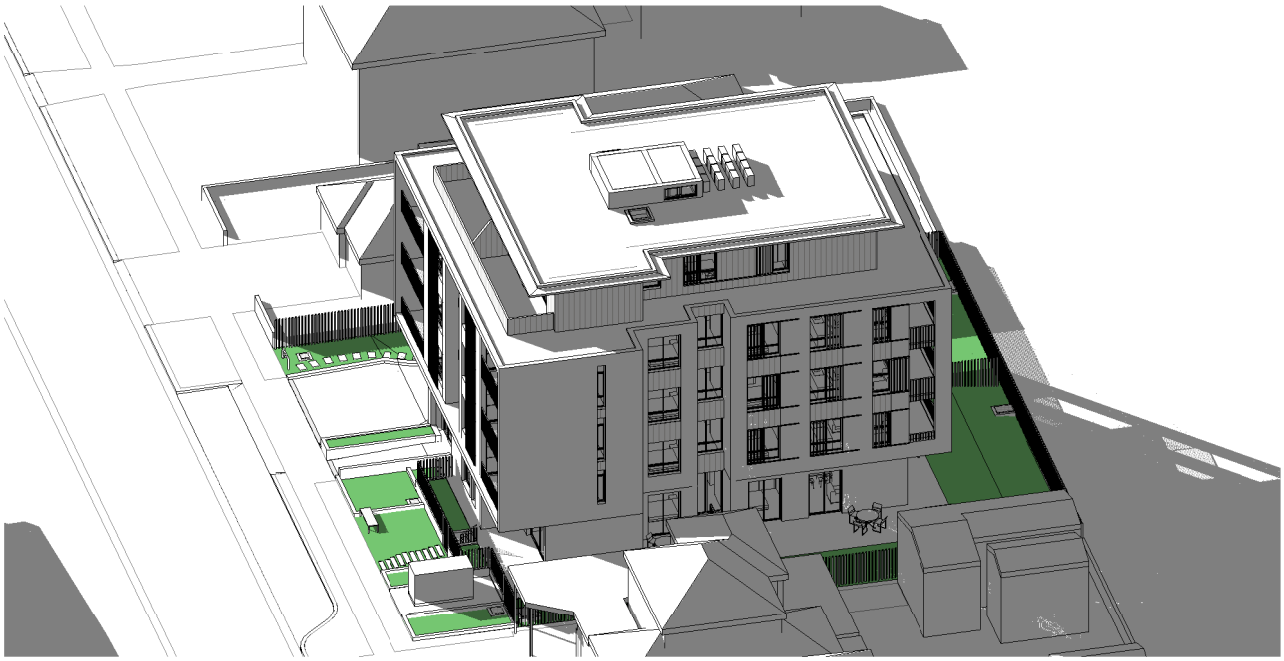
Project No. **17022**

Project **PROPOSED RESIDENTIAL FLAT BUILDING**

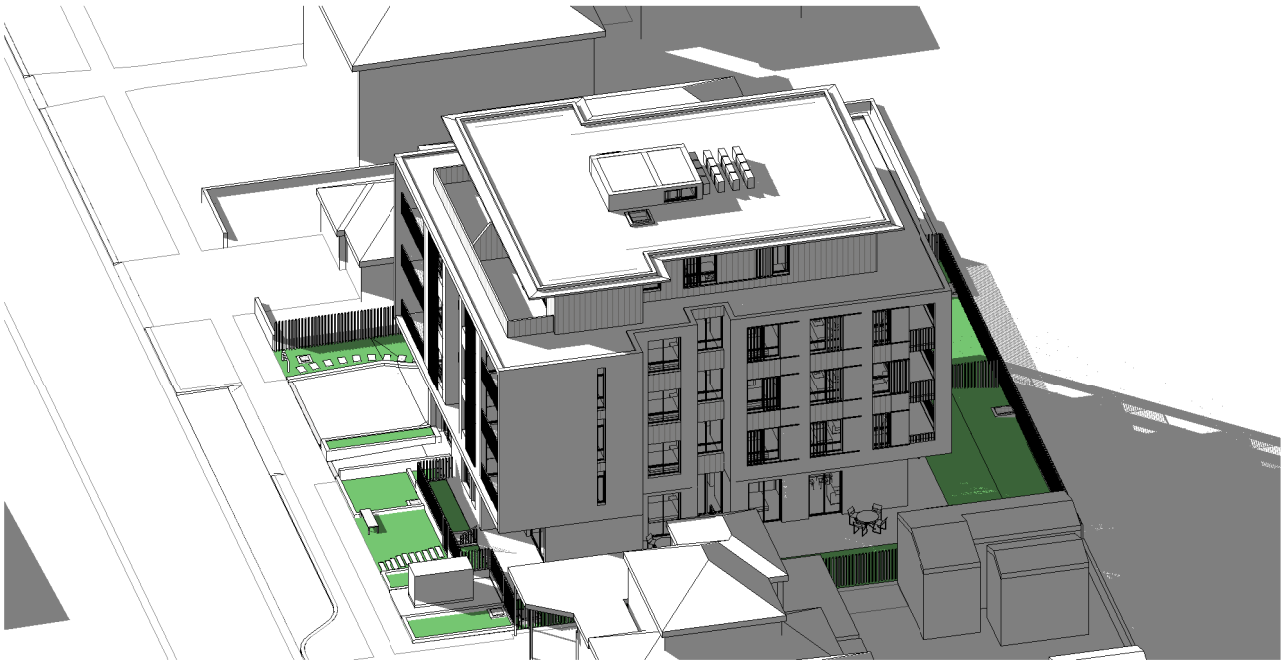
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Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## EAST VIEW - 9AM JUN 22



## EAST VIEW - 9.30AM JUN

DRAWING NUMBER **EOS01** ISSUE NO. **A**

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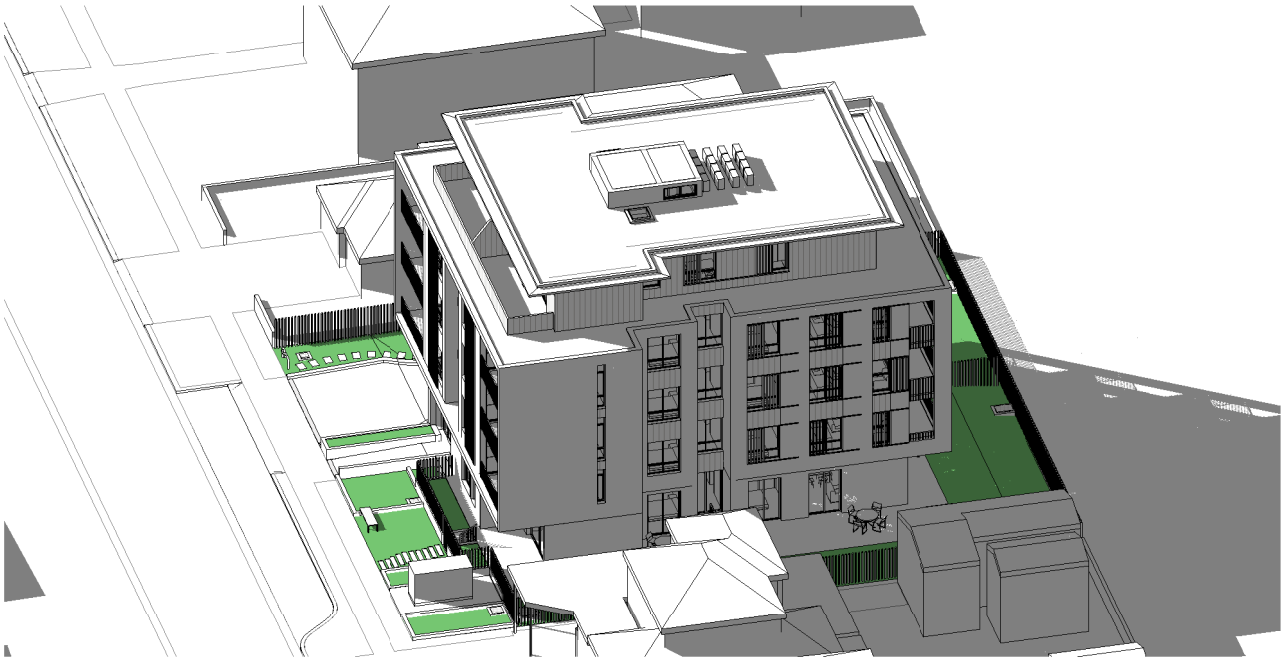
Project No. **17022**

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Project Status **DA SUBMISSION**

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## EAST VIEW - 10AM JUN 22



## EAST VIEW - 10.30AM JUN 22

DRAWING NUMBER **EOS02** ISSUE NO. **A**

16/3/2020 19:41:17
Document Set ID: 9282180
Version: 1, Version Date: 16/03/2020

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Project No. **17022**

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Address 36-38 Rodley Avenue, Penrith, NSW, 2750

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Client **Inglow Investments Two**



## EAST VIEW - 11AM JUN 22



## EAST VIEW - 11.30AM JUN 22

DRAWING NUMBER **EOS03** ISSUE NO. **A**

16/3/2020 19:41:21
Document Set ID: 9282180
Version: 1, Version Date: 16/03/2020

# EYE OF THE SUN - EAST (SHEET 4-7)

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Address 36-38 Rodley Avenue, Penrith, NSW, 2750

Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## EAST VIEW - 12PM JUN 22



## EAST VIEW - 12.30PM JUN 22

DRAWING NUMBER **EOS04** ISSUE NO. **A**

16/3/2020 19:41:25
Document Set ID: 9282180
Version: 1, Version Date: 16/03/2020

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Address 36-38 Rodley Avenue, Penrith, NSW, 2750

Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## EAST VIEW - 1PM JUN 22



## EAST VIEW - 1.30PM JUN 22

DRAWING NUMBER **EOS05** ISSUE NO. **A**

16/3/2020 19:41:29
Document Set ID: 9282130
Version: 1, Version Date: 16/03/2020

# EYE OF THE SUN - EAST (SHEET 6-7)

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Project No. **17022**

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Client **Inglow Investments Two**



## EAST VIEW - 2PM JUN 22



## EAST VIEW - 2.30PM JUN 22

DRAWING NUMBER **EOS06** ISSUE NO. **A**

16/3/2020 19:41:22
Document Set ID: 9288130
Version: 1, Version Date: 16/03/2020

# EYE OF THE SUN - EAST (SHEET 7-7)

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Client **Inglow Investments Two**



## EAST VIEW - 3PM JUN 22

DRAWING NUMBER **EOS07** ISSUE NO. **A**

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Project No. **17022**

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Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## WEST VIEW - 9AM JUN 22



## WEST VIEW - 9.30AM JUN 22

DRAWING NUMBER **EOS08** ISSUE NO. **A**

16/3/2020 19:41:41
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# EYE OF THE SUN - WEST (SHEET 2-7)

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Project No. **17022**

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Address 36-38 Rodley Avenue, Penrith, NSW, 2750

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Client **Inglow Investments Two**



## WEST VIEW - 10AM JUN 22



## WEST VIEW - 10.30AM JUN 22

DRAWING NUMBER **EOS09** ISSUE NO. **A**

16/3/2020 19:41:45
Document Set ID: 9282130
Version: 1, Version Date: 16/03/2020

# EYE OF THE SUN - WEST (SHEET 3-7)

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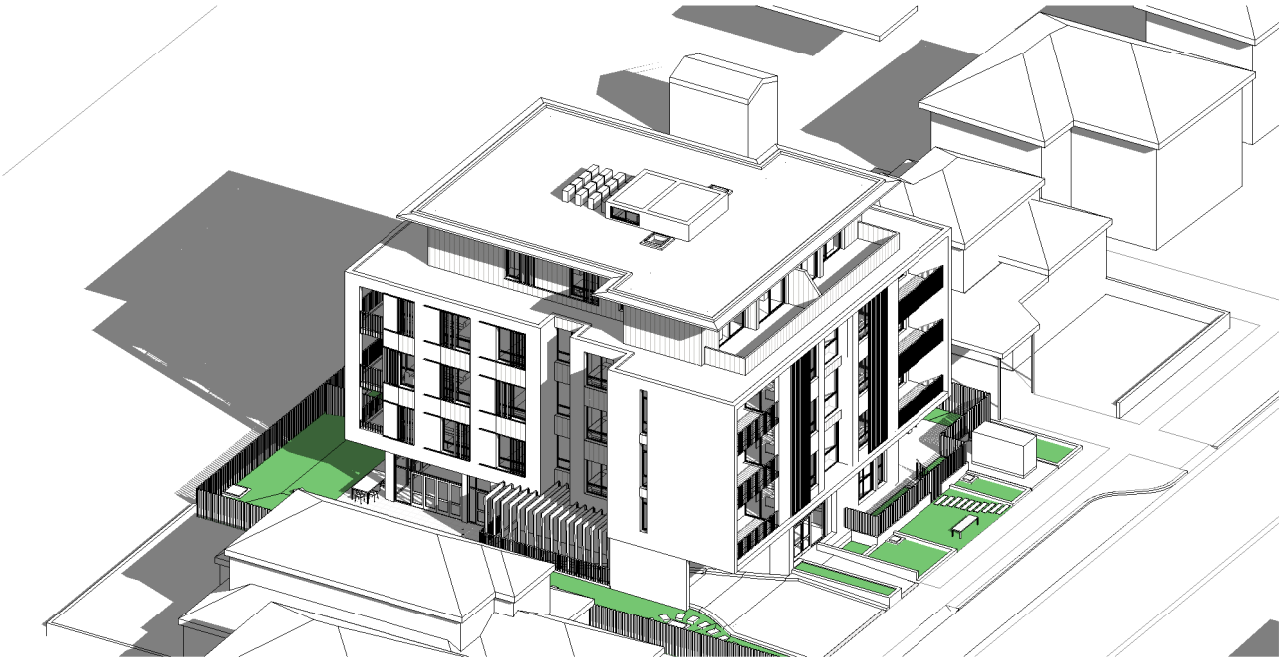
Project No. **17022**

Project **PROPOSED RESIDENTIAL FLAT BUILDING**

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Client **Inglow Investments Two**



## WEST VIEW - 11AM JUN 22



## WEST VIEW - 11.30AM JUN 22

DRAWING NUMBER **EOS10** ISSUE NO. **A**

16/3/2020 19:41:50
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## WEST VIEW - 12PM JUN 22



## WEST VIEW - 12.30PM JUN 22

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Client **Inglow Investments Two**



## WEST VIEW - 1PM JUN 22



## WEST VIEW - 1.30PM JUN 22

DRAWING NUMBER **EOS12** ISSUE NO. **A**

16/3/2020 19:41:58
Document Set ID: 9282130
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# EYE OF THE SUN - WEST (SHEET 6-7)

MORSON GROUP

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Project No. **17022**

Project **PROPOSED RESIDENTIAL FLAT BUILDING**

Address 36-38 Rodley Avenue, Penrith, NSW, 2750

Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## WEST VIEW - 2PM JUN 22



## WEST VIEW - 2.30PM JUN 22

DRAWING NUMBER **EOS13** ISSUE NO. **A**

16/3/2020 19:42:02
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# EYE OF THE SUN - WEST (SHEET 7-7)

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Project **PROPOSED RESIDENTIAL FLAT BUILDING**

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Project Status **DA SUBMISSION**

Client **Inglow Investments Two**



## WEST VIEW - 3PM JUN 22

DRAWING NUMBER **EOS14** ISSUE NO. **A**

Document Set ID: 9282180
Version: 1, Version Date: 16/03/2020
16/3/2020 19:42:04

# EYE OF THE SUN - SUN LIGHT ACCESS SCHEDULE

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Project No. **17022**

Project **PROPOSED RESIDENTIAL FLAT BUILDING**

Address 36-38 Rodley Avenue, Penrith, NSW, 2750

Project Status **DA SUBMISSION**

Client **Inglow Investments Two**

## SOLAR ACCESS - COMPLIANCE TABLE

| No. | Type | Solar & Daylight Access | Time | Hours |
|---|---|---|---|---|
| GROUND LEVEL | | | | |
| 01 | 2B Adaptable | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 02 | 2B Adaptable | No | From 1:30pm to 3:00pm | 1:30 hs |
| LEVEL 1 | | | | |
| 11 | 2B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 12 | 3B | Yes | From 9.00am to 3.00pm | 6:00 hs |
| 13 | 2B | No | From 2:00pm to 3:00pm | 1:00 hs |
| 14 | 2B | Yes | From 9:00am to 11:30am | 2 hs 30´ |
| LEVEL 2 | | | | |
| 21 | 2B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 22 | 3B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 23 | 2B | No | From 1:30pm to 3pm | 1 hs 30´ |
| 24 | 2B | Yes | From 9:00am to 11:30am | 2 hs 30´ |
| LEVEL 3 | | | | |
| 31 | 2B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 32 | 3B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 33 | 2B | No | From 1:30pm to 3.00pm | 1 hs 30´ |
| 34 | 2B | Yes | From 9.00am to 11:30am | 2 hs 30´ |
| LEVEL 4 | | | | |
| 41 | 2B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| 42 | 2B | Yes | From 9:00am to 3:00pm | 6:00 hs |
| UNITS: 16 | | 75% | | |

DRAWING NUMBER **EOS15** ISSUE NO. **A**

16/3/2020 19:42:25
Document Set ID: 9282130
Version: 1, Version Date: 16/03/2020

# Statement of Environmental Effects

Proposed Demolition of Existing Structures and Construction of Residential Flat Building

36-38 Rodley Ave, Penrith

March 2020

Inglow Investment Two Pty Ltd

Document Set ID: 9088181
Version: 1, Version Date: 16/03/2020

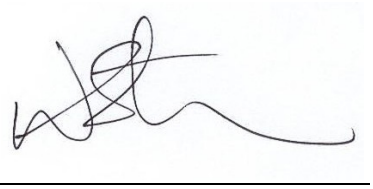
# Statement of Environmental Effects

Statement of Environmental Effects prepared by:

| | |
|---|---|
| Name: | Warwick Stimson |
| Qualification: | Bachelor of Arts (Geography and Planning) (UNE) |
| Address: | Stimson & Baker Planning<br>Suite 5<br>488 High Street<br>Penrith NSW 2750 |

Client and Land Details

| | |
|---|---|
| Client: | Inglow Investment Two Pty Ltd |
| Subject Site: | Lot 58 and Lot 59, DP33490, 36-38 Rodley Ave, Penrith |
| Proposal: | Proposed Demolition of Existing Structures and Construction of Residential Flat Building |



**Warwick Stimson** RPIA
Director

PIA Registered Planner
Planning Institute Australia

This report dated March 2020 is provided to 'the client' exclusively. No liability is extended for any other use or to any other party. Whilst the report is derived in part from our knowledge and expertise, it is based on the conditions prevailing at the time of the report and upon the information provided by the client.

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# 1 Introduction

## 1.1 Project Overview

Stimson & Baker Planning has been engaged by Inglow Investment Two Pty Ltd to prepare a Statement of Environmental Effects in relation to a proposed residential flat building on the property known as 36-38 Rodley Avenue, Penrith.

The proposed development includes the demolition of all existing structures and the construction of a new 5 storey flat building. Associated basement car parking and landscaping also form part of the application.

The site is zoned R4 High Density Residential under Penrith Local Environmental Plan 2010 with the proposal being permissible with consent.

The proposal is defined as *development* in Section 4 of the Act. The Act stipulates that the development must not be carried out on the subject site until consent has been obtained. Furthermore, the application does not trigger any of the 'integrated development' provisions of the Act and so no third-party approvals are required

This report describes the proposed development and subject site in detail and undertakes an assessment of the proposal against the relevant aims, objectives and development provisions of Council's LEP and DCP, and Section 4.15 of the Act.

## 1.2 Report Structure

This Statement of Environmental Effects is structured as follows:

- Section 1: Introduction – provides an overview of the proposal, planning history for the site and background to the application.
- Section 2: The Site and Surrounds – provides an analysis of the subject site, development within the locality and a consideration of the local and regional context.
- Section 3: Project Description – provides a detailed description of the proposed development and its characteristics.
- Section 4: Statutory Considerations – provides for an assessment of the proposal against the specific planning instruments and policies that are applicable.
- Section 5: Key Planning Issues – provides an assessment of the key issues identified in the preparation of the application.
- Section 6: Section 4.15 Assessment – provides an assessment against section 4.15 of the EPA Act.
- Section 7: Conclusion and Recommendation – summarises the report and presents a recommendation.



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## 1.3 History of the Application

The development of this site has been the subject of extensive planning assessment since 2018. DA18/0890 was refused by the Local Planning Panel on 22 May 2019, mainly for reasons relating to compliance with SEPP 65 and the ADG's, and the perceived potential impacts on the adjoining property.

A request to review the determination under Section 8.2 of the Act (DA18/0890.01) was subsequently refused by the Local Planning Panel on 13 November 2019. The Panel provided the following comments:

> *While the Panel supports refusal of the review, it notes that the site meets the minimum lot size required under PLEP 2010 but is unable to achieve a compliant development due to the Council's (on-site) Waste Collection Policy. The Panel recommends that the site should be allowed to be developed in accordance with the DCP with an alternate (on-street) waste collection solution, as this is likely to bring about a better design solution for the site and with the context of this streetscape.*

Since that decision, there have been a number of further consultative meetings with Council, including an Urban Design Review Panel meeting.

### 1.3.1 Urban Design Review Panel Meeting

The proposal was discussed at an Urban Design Review Panel Meeting held with the relevant officers at Penrith Council on 21 February 2020.

| Key Issue | Consideration |
|---|---|
| The Panel was generally supportive of the amended development proposal noting that the vast majority of recommended amendments have been reflected within the revised plans considered. Notwithstanding that, a number of matters will need to be resolved and reflected on the plans submitted as part of any development application pursued. These matters are outlined below: | Noted. |
| The waste management arrangement and intercom / driveway design items outlined by Council's Development Assessment Coordinator in email correspondence dated 21 January 2020 remains unresolved. Please refer to this email and ensure that Items 1 – 4 of that advice are resolved as recommended. | The proposal includes an arrangement that has evolved from the original application. Kerbside collection is proposed from a dedicated bay.<br>Waste will be managed from Basement Level 2 but held at ground level on day of collection. |
| The spatial arrangement of the floor plans, noting the 4.0m side setbacks, are supported and is considered to reflect the grain of the streetscape and ensure that suitable levels of privacy and amenity is maintained to adjoining land owners as well as occupants of the future development. Design treatments to the external walls at the 4.0m setback points was discussed and opportunities for façade design treatments are available to negate presentation of side facing blank walls. | This has been addressed in the current design. |
| The architectural treatments of the built form require further refinement. During the course of various amendments, some of the design quality expressed in earlier iterations has been lost. The Panel suggested key changes that maintain the floor plate arrangements as proposed but improve the design quality presentation of the built form. A sketch of a recommended façade treatment was provided to the applicant at the conclusion of the Panel meeting. The design language in the recommended front façade should be replicated to the other elevations of the proposal. | This has been addressed in the current design. |



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| Key Issue | Consideration |
|---|---|
| The communal open space should be amended to provide an indoor and outdoor offering. Minor changes to corridors and fire stairs would enable the provisions of a communal room (underneath the projecting upper floor) that gains solar access in the morning. Opportunities would exist for bi-fold doors or similar to open the indoor space as an extension of outdoor space. | This has been addressed in the current design. |
| The duplication of pedestrian pathways to the terrace of Unit 1 is discouraged in combination with the substation. | Noted and responded to. |
| The landscape design plan must ensure that a layering of tree canopy spread is provided being either end of the waste collection bay) and within the front setback zone. | Provided for in the design. |

## 1.4 Supporting Documentation

The proposed is accompanied by the following documentation:

| Documentation | Prepared by |
|---|---|
| **Survey** | John Lowe & Associates |
| **Architectural Drawings** | Morson Group |
| **Hydraulic Report/Stormwater Plans** | SGC Consulting Engineers |
| **Erosion and Sediment Control Plan** | SGC Consulting Engineers |
| **Landscape Plan** | Paul Scrivener Landscape |
| **Traffic Impact Assessment** | Stanbury Traffic |
| **Access Report** | Vista Access Architects |
| **BASIX/NatHERs** | Partners Energy Management |
| **Waste Management Plan** | Morson Group |

## 1.5 Legislation, Environmental Planning Instruments and Policies to be considered

- *Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River (No 2 - 1997)*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development*
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*
- *Penrith Local Environmental Plan 2010*
- *Penrith Development Control Plan 2014*

## 1.6 Consent Authority

The consent authority for this application is Penrith City Council.



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# 2 The Site and Surrounds

The subject site and its surrounds has the following characteristics.

| | |
|---|---|
| **Site Address** | 36-38 Rodley Ave, Penrith |
| **Lot/DP** | Lot 58 DP 33490 & Lot 59 DP 33490 |
| **Site Area** | 1112.8 sqm (by survey) |
| **Local Government Area** | Penrith City Council |
| **Zoning** | R4 High Density |
| **Current Land Use** | Residential |
| **Proposed Land Use** | Residential |
| **Surrounding Land Uses** | Residential, transitioning from low density to high density. |
| **Topography** | Generally flat |
| **Terrestrial Biodiversity** | Not mapped in LEP |
| **Vegetation** | Not mapped in LEP |
| **Heritage** | None within the vicinity |
| **Flooding/Overland Flow** | Noted. Details in Pre DA advice |
| **Bushfire** | Not mapped |



Figure 1 Subject Site - Aerial



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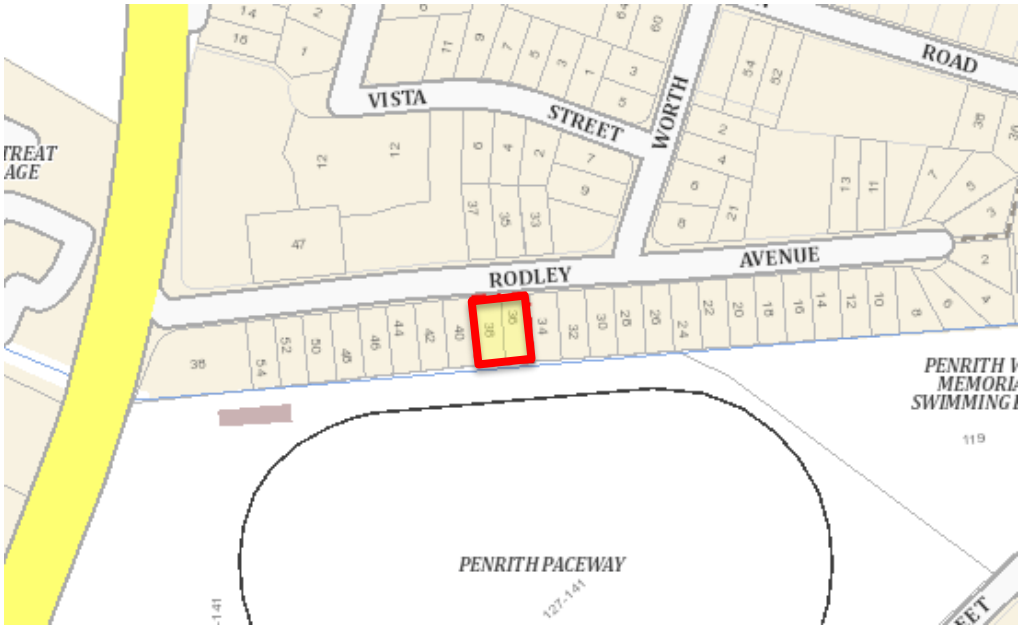



Figure 2 Subject Site - Cadastre



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# 3 Project Description

## 3.1 Overview

The proposal is for the demolition of all existing structures, site clearing and preparation, and the construction of a residential flat building and associated basement car parking, stormwater and landscape works.

## 3.2 The Proposed Development

The development comprises the following elements.

Basement Level 1

- 21 Car Spaces, inclusive of 3 stacked (6 in total) spaces, 2 accessible spaces and 2 visitor spaces.
- Wash Bay
- Lift core. Lobby, bicycle parking

Basement Level 2

- Storage cages
- Bicycle parking
- Lift core
- Waste room

Ground Level

- 2 x 2 bedroom adaptable units
- Internal communal open space room for residents
- Ground level waste holding room
- Lift lobby, services and plant rooms
- Two way vehicular access to the basement level (via a single lane ramp)
- Common open space, deep soil landscaping and external private open space

Levels 1-3

- 3 x 2 Bedroom units
- 1 x 3 Bedroom units

Level 4

- 2 x 2 Bedroom Units

In summary, a total of 16 units are proposed, along with 22 car parking spaces (inclusive of a visitor/wash bay).



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### 3.3 Vehicular Elements

The proposal includes the provision of 22 car spaces comprising 2 accessible spaces, 1 motorcycle space, 17 residential spaces (including 6 in a 'stacked' configuration), 1 service (wash bay) space and 3 visitor spaces. The DCP controls require 22 spaces to be provided in total.

The proposed parking spaces are to be provided over a single basement level and are accessed via a two way signalised driveway with priority given to vehicles entering the site.

In terms of waste collection, the proposal includes an indented bay in Rodley Street, providing street pick up. Garbage would be stored internally on Basement level 2 but transferred to a ground floor holding room on collection day.

### 3.4 Landscaping and Open Space

A Landscape Plan accompanies the application and demonstrates high quality landscaping outcomes. We note the following aspects of the proposed landscaping approach:

- The easement and flood storage requirements have determined the type of species and location.
- Because of the above, large planter boxes on the basement are proposed in order to provide larger trees on site.

### 3.5 Stormwater Drainage

A stormwater drainage concept plan accompanies the application and demonstrates compliance with Council's controls. This includes the provision of a stormwater easement along the western boundary.

Further information is appended to this report in regards to the stormwater management on the site. MUSIC modelling has been carried out and accompanies the application.

### 3.6 Utilities

The site will be appropriately serviced to accommodate the proposed use. Some utility upgrades are likely to be required and will be confirmed with the relevant service authority. We note the proposed waste collection arrangements will require the relocation of a power pole.

### 3.7 Waste Management Strategy

Waste bins will be provided for each of the tenancies in dedicated waste storage areas within Basement Level 2. Waste will be transferred to a ground level holding room ready for collection. Waste will be collected by commercial contractors and organised through the owners/managers of the building or the body corporate if subject to strata subdivision in the future.



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### 3.8 Contamination

The site has historically been used for residential purposes and so contamination is highly unlikely. Consideration of SEPP 55 is provided later in this report.

### 3.9 National Construction Code Compliance

All works will be carried and comply with the National Construction Code (now incorporating the BCA). A Construction Certificate will be required in relation to the proposal and it is expected that Council will require matters relating to NCC compliance.



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# 4 Statutory Considerations

The applicable statutory planning instruments and relevant guidelines have been considered below.

## 4.1 Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River

The aim of SREP 20 is to protect the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.

Appropriate conditions of consent would normally be applied to any approval to ensure the health of the river system is not compromised by way of sediment or erosion from the works or use.

## 4.2 State Environmental Planning Policy No 55 – Remediation of Land

Under Clause 7(1)(A) the consent authority must not consent to a development application unless consideration has been given to whether the land is contaminated.

The historic use of this site for residential purposes suggests there have been no uses that could potentially pose a contamination risk on the land, and therefore not triggering the SEPP. Further studies are therefore not required.

## 4.3 State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development

The objectives of the SEPP are as follows:

> *(1) This Policy aims to improve the design quality of residential apartment development in New South Wales.*
>
> *(2) This Policy recognises that the design quality of residential apartment development is of significance for environmental planning for the State due to the economic, environmental, cultural and social benefits of high quality design.*
>
> *(3) Improving the design quality of residential apartment development aims:*
>
> *(a) to ensure that it contributes to the sustainable development of New South Wales:*
>
> *(i) by providing sustainable housing in social and environmental terms, and*
>
> *(ii) by being a long-term asset to its neighbourhood, and*
>
> *(iii) by achieving the urban planning policies for its regional and local contexts, and*
>
> *(b) to achieve better built form and aesthetics of buildings and of the streetscapes and the public spaces they define, and*
>
> *(c) to better satisfy the increasing demand, the changing social and demographic profile of the community, and the needs of the widest range of people from childhood to old age, including those with disabilities, and*
>
> *(d) to maximise amenity, safety and security for the benefit of its occupants and the wider community, and*
>
> *(e) to minimise the consumption of energy from non-renewable resources, to conserve the environment and to reduce greenhouse gas emissions, and*



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> *(f) to contribute to the provision of a variety of dwelling types to meet population growth, and*
>
> *(g) to support housing affordability, and*
>
> *(h) to facilitate the timely and efficient assessment of applications for development to which this Policy applies.*
>
> *(4) This Policy aims to provide:*
>
> *(a) consistency of policy and mechanisms across the State, and*
>
> *(b) a framework for local and regional planning to achieve identified outcomes for specific places.*

A full assessment of the proposal against the SEPP and the Apartment Design Guidelines (ADG's) are within the architectural set of plans. Compliance with the ADG's has been achieved.

### 4.4 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The application is accompanied by the required BASIX documentation.

### 4.5 Penrith Local Environmental Plan 2010

The Penrith LEP is the main environmental planning instrument applicable to the subject site. The objectives of the LEP are as follows:

> *(a) to provide the mechanism and planning framework for the management, orderly and economic development, and conservation of land in Penrith,*
>
> *(b) to promote development that is consistent with the Council's vision for Penrith, namely, one of a sustainable and prosperous region with harmony of urban and rural qualities and with a strong commitment to healthy and safe communities and environmental protection and enhancement,*
>
> *(c) to accommodate and support Penrith's future population growth by providing a diversity of housing types, in areas well located with regard to services, facilities and transport, that meet the current and emerging needs of Penrith's communities and safeguard residential amenity,*
>
> *(d) to foster viable employment, transport, education, agricultural production and future investment opportunities and recreational activities that are suitable for the needs and skills of residents, the workforce and visitors, allowing Penrith to fulfil its role as a regional city in the Sydney Metropolitan Region,*
>
> *(e) to reinforce Penrith's urban growth limits by allowing rural living opportunities where they will promote the intrinsic rural values and functions of Penrith's rural lands and the social well-being of its rural communities,*
>
> *(f) to protect and enhance the environmental values and heritage of Penrith, including places of historical, aesthetic, architectural, natural, cultural, visual and Aboriginal significance,*
>
> *(g) to minimise the risk to the community in areas subject to environmental hazards, particularly flooding and bushfire, by managing development in sensitive areas,*
>
> *(h) to ensure that development incorporates the principles of sustainable development through the delivery of balanced social, economic and environmental outcomes, and that development is designed in a way that assists in reducing and adapting to the likely impacts of climate change.*

It is submitted that the proposed development is not inconsistent with these objectives.



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The subject site is zoned *R4 High Density Residential* with the following zone objectives applying to that zone.

> - *To provide for the housing needs of the community within a high density residential environment.*
> - *To provide a variety of housing types within a high density residential environment.*
> - *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
> - *To ensure that a high level of residential amenity is achieved and maintained.*
> - *To encourage the provision of affordable housing.*
> - *To ensure that development reflects the desired future character and dwelling densities of the area.*

The proposed development is consistent with the objectives of the zone in that:

- The additional high-density development in this locality is consistent with the zoning controls and will contribute to the housing needs and diversity in the area.
- As the proposal largely satisfies the planning controls, SEPP 65 and AGD provisions, a high level of amenity will be provided for.
- The proposal is consistent with the future character of this high-density locality.

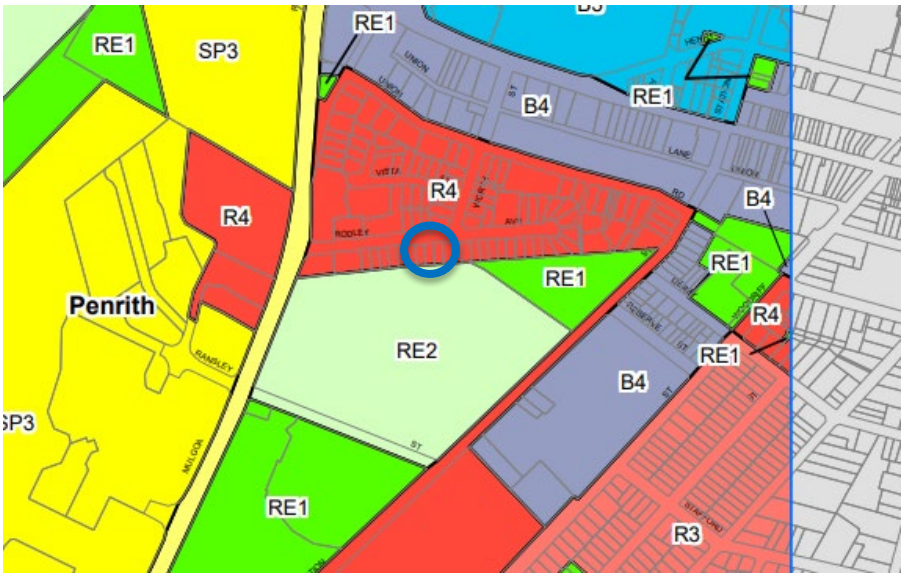



Figure 3 Subject Site – Zoning Map

The Land Use Table of the LEP nominates *residential flat building* as a permissible form of development in the zone. The Dictionary definition of *residential flat building* is:

> ***residential flat building*** *means a building containing 3 or more dwellings but does not include an attached dwelling or multi dwelling housing.*

The following relevant clauses have also been considered in respect of this development proposal.



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| Part 4 Principal Development Standards: | | | | |
|---|---|---|---|---|
| Standard | | Permitted | Proposed | Comment |
| 4.1A | Minimum lot size | 800sqm | 1112sqm | Complies |
| 4.2 | Rural Subdivision | N/A | N/A | |
| 4.3 | Height of Buildings | 18m | 17.8 | Complies |
| 4.4 | Floor Space Ratio | N/A | 1.42:1 | |

| Part 5 Miscellaneous Provisions | | |
|---|---|---|
| Provision | | Comment |
| 5.1 | Relevant acquisition authority | N/A |
| 5.2 | Classification and reclassification of public land | N/A |
| 5.3 | Development near zone boundaries | N/A |
| 5.4 | Controls relating to miscellaneous permissible uses | N/A |
| 5.6 | Architectural roof features | N/A |
| 5.7 | Development below mean high water mark | N/A |
| 5.8 | Conversion of fire alarms | N/A |
| 5.10 | Heritage conservation | N/A |
| 5.11 | Bush fire hazard reduction | N/A |
| 5.12 | Infrastructure development and use of existing buildings of the Crown | N/A |
| 5.13 | Eco-tourist facilities | N/A |
| 5.14 | Siding Spring Observatory—maintaining dark sky | N/A |
| 5.15 | Defence communications facility | N/A |
| 5.16 | Subdivision of, or dwellings on, land in certain rural, residential or environment protection zones | N/A |
| 5.17 | Artificial waterbodies in environmentally sensitive areas in areas of operation of irrigation corporations | N/A |
| 5.18 | Intensive livestock agriculture | N/A |
| 5.19 | Pond-based, tank-based and oyster aquaculture | N/A |



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| Part 7 Additional Local Provisions | | |
|---|---|---|
| Provision | | Comment |
| 7.1 | Earthworks | The proposal includes the excavation of a basement car park. Extracted fill will be disposed of to an appropriate location that will be able to accept it. |
| 7.2 | Flood planning | A flood analysis has been undertaken on the site and accompanies the application. The design accommodates the required freeboard, and flood storage requirements. As a result of the accompanying assessment, it I considered that:<br>• Flood risk to life and property has been minimised;<br>• if required, safe excavation could occur; and<br>• the existing flood regime and conveyance is not impacted by the development.<br>The required flood levels have been achieved and in this context the development can be supported. |
| 7.3 | Development on natural resources sensitive land | N/A |
| 7.4 | Sustainable development | A 'whole of building' approach has been taken with the design of the proposed building. It is also noted that compliance is achieved with both the ADG's and the development can satisfy the BASIX requirements |
| 7.5 | Protection of scenic character and landscape values | N/A |
| 7.6 | Salinity | N/A |
| 7.7 | Servicing | The site can be appropriately serviced to accommodate the proposal. |
| 7.8 | Active street frontages | N/A |
| 7.9 | Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport | N/A |
| 7.10 | Dual occupancies and secondary dwellings in certain rural and environmental zones | N/A |
| 7.11 | Penrith Health and Education Precinct | N/A |
| 7.12 | Maximum gross floor area of commercial premises | N/A |
| 7.13 | Exhibition homes limited to 2 years | N/A |
| 7.14 | Cherrywood Village | N/A |
| 7.15 | Claremont Meadows | N/A |
| 7.16 | Glenmore Park Stage 2 | N/A |
| 7.17 | Dwelling houses on certain land in Castlereagh, Cranebrook, Llandilo, Londonderry, Kemps Creek and Mulgoa | N/A |
| 7.18 | Mulgoa Valley | N/A |
| 7.19 | Villages of Mulgoa and Wallacia | N/A |
| 7.20 | Orchard Hills | N/A |
| 7.21 | Twin Creeks | N/A |
| 7.22 | Waterside | N/A |



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| | | |
|---|---|---|
| 7.23 | Location of sex services premises and restricted premises | N/A |
| 7.24 | Sydney Science Park | N/A |
| 7.25 | Warehouses and distribution centres on land zoned B7 Business Park | N/A |
| 7.26 | Serviced apartments | N/A |

## 4.6 Penrith Development Control Plan 2014

The following assessment has been made in respect of the industrial development controls within the DCP.

**Part C1: Site Planning and Design Principles**

The design methodology is explained on the accompanying plans The site has been responded to with the proposed development and a Context and Site Analysis Plan accompanies the application.

**Part C2: Vegetation Management**

A Landscape Concept Plan accompanies the application and provides for a mix of planting that integrates with the development and surrounding area. Good deep soil areas can accommodate deep rooted tree planting. The required flood storage and easements have been incorporated into the design.

**Part C3: Water Management**

Appropriate initiatives are proposed for on-site stormwater management and a BASIX assessment has been carried out. These have been incorporated into the design of the development. A Stormwater Concept Plan accompanies the application demonstrating suitable management of stormwater quality and quantity. A WSUD Strategy also accompanies the application and addresses the requirements of the DCP.

**Part C4: Land Management**

Appropriate measures will be put in place to ensure the site is protected from erosion and sedimentation. An erosion and sedimentation control plan is provided. It is submitted that there are no concerns around potential contamination of the site given the historical residential use.

**Part C5: Waste Management**

The provision for waste management on site is considered satisfactory and there is provision for a waste chute, waste room sufficient for the scale and size of the building. A Waste Management Plan accompanies the application outlining the waste requirements. The collection arrangements are consistent with the Panel comments in November 2019.

**C6: Landscape Design**

A detailed Landscape Concept Plan accompanies this application. The provisions of SEPP 65 have been considered in respect of the landscaping proposed and the stormwater requirements for the site have also been accommodated.

The plants that will be used in the landscaping will be varieties that require low levels of maintenance and are drought resistant to reduce water use within the development. The proposal also includes rooftop communal space.

**C7: Culture and Heritage**

The site is not a heritage item and does not adjoin a heritage item or precinct.

**C10: Transport, Access and Parking**

A Traffic Impact Assessment accompanies the application. The report concludes that the proposed development is satisfactory in terms of car parking, vehicular access and traffic generation.

There is also provision for bicycle parking areas.

**C12: Noise and Vibration**

There is no anticipated noise or vibration generated from the proposed development. However, the adjoining Paceway Club has been considered in the Acoustic Impact Assessment that accompanies this application. The proposal is considered to be satisfactory.



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| C13: Infrastructure and Services |
| --- |
| As stated previously, the subject site is already serviced to accommodate the proposed development and any augmentation required will be confirmed with the relevant service providers. |

| D2 – Residential Development<br>2.5 Residential Flat Buildings |
| --- |
| The proposal generally satisfies the SEPP 65 and ADG requirements and these are detailed within the architectural plans. |



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# 5 Key Planning Issues

The following impacts have been considered in the preparation of this development proposal.

## 5.1 Flora and Fauna

There are no significant examples of vegetation on the site, nor any evidence of any fauna communities. No negative impacts are expected in this regard.

## 5.2 Stormwater and Flooding

A stormwater concept plan has been submitted with the development application demonstrating compliance with Council's requirements in this regard and is consistent with the discussions held at the pre-lodgement meeting. An easement has been accommodated along with the required on-site flood storage.

## 5.3 Erosion and Sediment Control

It is expected that Council would impose appropriate conditions of consent to ensure that erosion and sediment control measures were installed on the site prior to construction commencing.

## 5.4 Traffic Generation and Parking

The proposed development does not propose any significant increase in traffic generation as a result of the proposed development. On site car parking is also considered to be adequate and this is supported in the accompanying Traffic Impact Assessment.

The Assessment also supports the kerbside collection of household waste.

## 5.5 Noise Impacts

Whilst there will be some noise associated with the construction of the development, longer term there is not expected to be any noise impacts above and beyond what might normally be associated with a residential environment. Notwithstanding an acoustic report has been commissioned and accompanies the application giving consideration to the adjoining Paceway Club. No unacceptable impacts are expected.

## 5.6 Heritage Issues

There are no unacceptable heritage impacts arising from the proposed development.

## 5.7 Visual Impact

The proposed development is designed with a high level of architectural merit that exceeds that or nearby and adjoining properties. Its visual impact will be imperceptible from the public domain given the setbacks and the central location of the building.



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## 5.8 Services

The site is appropriately serviced to allow for the proposed development.

## 5.9 Overshadowing

There will be no unacceptable overshadowing impacts as a result of the proposed development. This is largely due to the central location of the building and the substantial setbacks that are proposed.

## 5.10 Social and Economic

There are no negative economic or social impacts considered relevant to the proposed development.

## 5.11 Crime Prevention Through Environmental Design (CPTED)

The consideration of CPTED issues has been prepared having regard to various published CPTED literature and academic works, and specifically includes the *"Crime Prevention and Assessment of Development Application Guidelines under Section 4.15 of the Environmental Planning and Assessment Act 1979"* published by the former Department of Urban Affairs and Planning.

The advice is structured in accordance with Part B of the above guidelines – *Principles for Minimising Crime Risk*. In this regard, the advice considers the responsiveness of the proposed design to each of the adopted four principles for CPTED (surveillance; access control; territorial reinforcement and space management).

CPTED principles have been adopted by the NSW Police Force, based on recognition that the design of spaces plays a pivotal role in facilitating the safety and security of its users. The NSW Police Force has identified key principles of CPTED being:

- Establish opportunities for **good surveillance**, both casually and technically.
- Provide legible barriers for **access control** for spatial definition.
- Create a sense of ownership over spaces that are also clearly demarcated between public and private ownership for **territorial reinforcement**.
- Establish spaces that are utilised appropriately through **proper space management**, relating to litter and graffiti removal, and ensuring lighting fixtures are working.

When implemented, these measures are likely to reduce opportunities for crime by using design and place management principles.

*Surveillance*

The proposed development will provide numerous opportunities for surveillance. The following casual surveillance opportunities have been provided through the design of the project:

- Opportunities for visual observance through a high percent of transparent glazing along all frontages allow normal space users to see and be seen by others.
- Entries are located in highly visible locations.



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- Active communal areas at the front and rear of the building are well positioned.
- Clear visual pathways within resident areas as well as from public streets to private entrances.
- Areas of entrapment are limited due to multiple exit points from around the development.
- CCTV should be incorporated into the basement level.

*Access Control*

Access control to public, semi public and private areas of the development is considered to be well managed and effective. Access control to the building can be effectively managed through lockable entry doors. Common areas at all locations and levels should have access control measure in place. With respect to fire escape points and building services rooms, the location of these access points, the use of lockable doors and other environmental cues will make it clear that these are not public entry points. Access to the basement level will be via lockable roller door.

Overall access to the building will be managed by the on-site manager.

*Territorial Reinforcement*

Clear separation exists between public and private space in terms of the relationship between the proposal and the public domain. Appropriate signage, landscaping, site furnishings and paving will provide good environmental cues about the transition or movement from public to private domain.

*Space Management*

For most modern residential developments, space management is increasingly carried out in a professional manner, often by third party specialist building management businesses. Therefore, the effectiveness of management systems such as light globe replacement, removing graffiti, and fixing broken site furnishings will influence the perceived level of care of the project. In this case, the on-site manager will ensure that processes are established to respond to and fix services and structures and under whose responsibilities these services are assigned.

Site cleanliness is also a factor that influences the perceived and actual level of care of an area.

Cleanliness of the project is dependent upon the management practices of individual tenants as well as the implementation of waste removal and street cleaning processes. This will be overseen by the on-site manager. The selection of lighting should also be vandal proof, and materials facilitate ease of maintenance in the long-term, to delay the appearance of decay.

## 5.12 Waste Management

Appropriate waste management measures would be put in place on the site that are consistent with the Local Planning Panels comments in November 2019. The alternative solution proposed by this development arises out of ongoing discussions with Council.



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# 6 Section 4.15 Assessment

An assessment of the proposal has been undertaken in accordance with the statutory requirements of the EPA Act. The following assessment against Section 4.15 of the EPA Act has been undertaken.

## 6.1 Section 4.15(1)(a)(i) – Any Environmental Planning Instruments

The relevant environmental planning instruments have been considered earlier in this report. These include the following:

- Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River
- State Environmental Planning Policy No 55 – Remediation of Land
- State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- Penrith Local Environmental Plan 2010
- Penrith Development Control Plan 2014

The proposal is permissible with consent and is considered satisfactory when assessed against the relevant controls.

## 6.2 Section 4.15(1)(a)(ii) – Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority

There are no known draft Environmental Planning Instruments specifically relevant to the subject proposal.

## 6.3 Section 4.15(1)(a)(iii) – Any Development Control Plan

Compliance against the relevant DCP's has been considered earlier in this report.

## 6.4 Section 4.15(1)(a)(iiia) – Any Planning Agreement or Draft Planning Agreement entered into under Section 7.4

There are no known planning agreements that apply to the site or development.

## 6.5 Section 4.15(1)(a)(iv) – The Regulations

There are no sections of the regulations that are relevant to the proposal at this stage.

## 6.6 Section 4.15(1)(a)(v) – Any coastal zone management plan

Not relevant to the proposed development.



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## 6.7 Section 4.15(1)(b) – The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality

The potential impacts of the development have been considered throughout this report. There are no unacceptable environmental impacts. In terms of built environment impacts the development is compliant with the relevant controls, and it has been demonstrated that the potential impacts on adjoining properties has been minimised. There are no negative social or economic impacts expected as a result of this proposal.

## 6.8 Section 4.15(1)(c) – The suitability of the site for the development

The proposal is generally consistent with the planning controls that apply in this zone. Moreover, the objectives of the zone have been satisfied, ensuring that the residential development would not result in any unacceptable impact on any adjoining landowners or buildings.

The site is considered to be suitable for the development for the reasons outlined below:

- The proposal is permissible with consent in the R4 zone.
- The proposal represents an appropriate land use and built form located on an appropriately serviced site that is in an accessible location.
- The proposal is compatible with surrounding land uses which include similarly sized and designed residential flat buildings.

## 6.9 Section 4.15(1)(d) – Any submission made

Council will undertake a notification process in accordance with its controls and policies. We welcome the opportunity to provide additional information in response to any submissions that are made.

## 6.10 Section 4.15(1)(e) – The public interest

Given the type of development, its general compliance with the planning controls, how the objectives are satisfied and the suitability of the site it is considered that the public interest would not be jeopardised as a result of this development.



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# 7 Conclusion and Recommendation

The proposed residential flat building has been assessed against the requirements of the Penrith LEP and DCP and is considered to represent a form of development that is acceptable.

The proposed development would not result in any unacceptable impact on the locality.

The site is considered quite suitable for a use of this nature and is consistent with nearby and adjoining development.

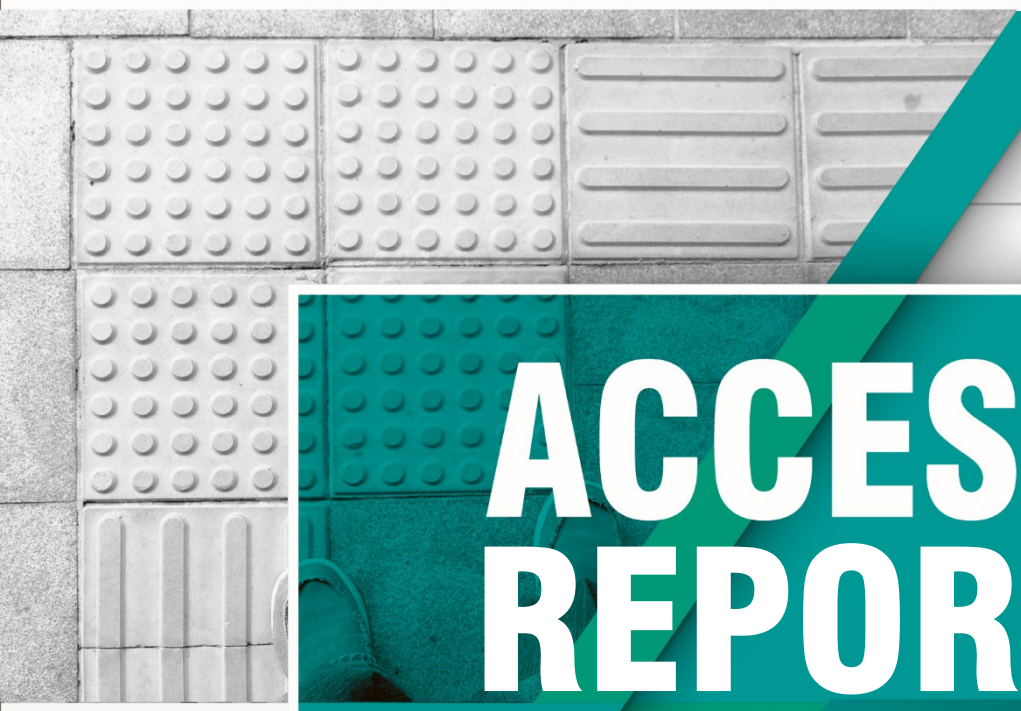
An assessment against Section 4.15 of the EPA Act has not resulted in any significant issues arising.

Accordingly, it is recommended that the proposed development be approved.



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**Report Type:** DA Access Report
**Reference Number:** 18167
**Client:** Morson Group
**Site Address:** 36-38 Rodley Avenue, Penrith NSW



vista access architects

# ACCESS REPORT

## Vista Access Architects




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## Project Summary:

This Access Compliance Report is to accompany a Development Application for the development proposed at 36-38 Rodley Avenue, Penrith NSW

This development proposes a New Building with a total of 16 Residential units. The development is within Penrith Council LGA that requires the provision of 10% Adaptable units and therefore the development proposes 2 Adaptable units. A total of 2 Accessible parking spaces have been provided in the development.

The project also provides 4 Livable units to comply with the SEPP 65 Objective 4Q1, that requires 20% of the units to incorporate the features of the Silver level of the Livable Housing Guidelines.

The development has building classification as detailed below;

- Class 2 (building containing more than 2 SOUs i.e. sole-occupancy units)
- Class 7a (car park)

This Access report is based on the relevant components of;

- Building Code of Australia (BCA) 2016, Volume 1- Performance requirements of DP1, DP2, DP8, DP9, EP3.4, FP2.1 and Parts D2, D3, E3 and F2 (where applicable)
- Disability (Access to Premises-Building) Standards 2010 (henceforth referred to as APS)
- AS1428.1-2009 Part 1: General requirements for access, including any amendments
- AS1428.4.1-2009 Part 4.1: TGSIs (Tactile ground surface indicators), including any amendments
- AS2890.6-2009 Part 6: Off-street parking for people with disabilities.
- AS4299-1995 Adaptable Housing
- AS1735 Lifts types included in the BCA including Part 12: Facilities for persons with disabilities
- State Environmental Planning Policy 65 (SEPP 65), Objective 4Q1, relating to requirements of the provision of Livable Housing Australia's Silver Level Apartments
- Livable Housing Australia's Livable Housing Design Guidelines- Fourth Edition

The assessment of the proposed development has been undertaken to the extent necessary to issue DA (Development application) consent under the Environmental Planning and Assessment Act. The proposal achieves the spatial requirements to provide access for people with a disability and it is assumed that assessment of the detailed requirements such as assessment of internal fit-out, details of stairs, ramps and other features will occur at CC (Construction Certificate) stage.

By compliance with the recommendation in this report, the development complies with the requirements of Access Code of Disability (Access to Premises-Building) Standards 2010, the Disability Access relevant sections of Building Code of Australia 2016, the requirements of SEPP 65 related to Objective 4Q1 - Livable Housing, and the essential criteria of AS4299-Adaptable Housing.

ASSESSED BY

Vanessa Griffin
*Access Consultant and LHA Assessor*
*ACAA Associate Membership number 500*
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PEER REVIEWED BY

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**Vista Access Architects Pty. Ltd.**



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## Relevant dates:

Fee proposal, number FP-8089 dated 16-03-2018. Fee proposal was accepted by Client on 11-08-2018.

## Assessed Drawings:

The following drawings by Morson Group Architects have been assessed for compliance.

| Drawing no | Issue | Date | Details |
|---|---|---|---|
| DA03 | P2 | 05-03-2020 | SEPP 65 compliance schedule |
| DA06 | P2 | 05-03-2020 | Ground Level |
| DA07 | P2 | 05-03-2020 | Level 1 |
| DA08 | P2 | 05-03-2020 | Level 2 |
| DA09 | P2 | 05-03-2020 | Level 3 |
| DA10 | P2 | 05-03-2020 | Level 4 |
| DA12 | P2 | 05-03-2020 | Basement 1 |
| DA13 | P2 | 05-03-2020 | Basement 2 |
| | | | |
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## Document Issue:

| Issue | Date | Details |
|---|---|---|
| A | 08-08-2018 | Issued for DA |
| B | 09-03-2020 | Issued for DA |
| C | 16-03-2020 | Issued for DA |
| | | |
| | | |

## Limitations and Copyright information:

*This report is based on discussions with the project architect and a review of drawings and other relevant documentation provided to us. No site visit was undertaken for the purposes of this project.*

*This assessment is based on the provided drawings and not based on constructed works, hence the assessment will provide assurance of compliance only if all the recommendations as listed in this report are complied with and constructed in accordance with the requirements of the current BCA, AS1428.1-2009 and other latest, relevant standards and regulations applicable at the time of construction. Assessment is based on classification/use of the building. If the Class of the building changes to any other building Class, this access report will have to be updated accordingly.*

***Unless stated otherwise, all dimensions mentioned in the report are net (CLEAR) dimensions and are not be reduced by projecting skirting, kerbs, handrails, lights, fire safety equipment, door handles less than 900mm above FFL (finished floor level) or any other fixtures/fit out elements. When we check drawings, we assume that the dimensions noted are CLEAR dimensions and therefore the Architect / Builder is to allow for construction tolerances.*** *Only some numerical requirements from relevant AS (Australian Standards) have been noted in the report and for further details and for construction purposes refer to the latest relevant AS.*

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*This report is does not assess compliance matters related to WHS, Structural design, Services design, Parts of DDA other than those related to APS or Parts of BCA or Parts of AS other than those directly referenced in this report. VAA gives no warranty or guarantee that this report is correct or complete and will not be liable for any loss arising from the use of this report. We will use our best judgement in regards to the LHA assessments. However, we are not to be held responsible if another licenced LHA assessor comes to a different conclusion about compliance, certification or allocation of a particular Quality mark to us as a number of items are subject to interpretation.*

*We have no ability to check for slip resistance of surfaces. All wet areas, parking areas, pavement markings shall have the appropriate slip resistance for the location. We also have no ability to check for wall reinforcements once the walls have already been constructed. The builder is to take full responsibility that the requirements listed in this report are met and the construction to be as per requirements of AS1428.1/ AS4299 / AS2890.6/ AS3661/ AS4586*

*A report issued for DA (development application) is not suitable for use for CC (construction certificate) application.*

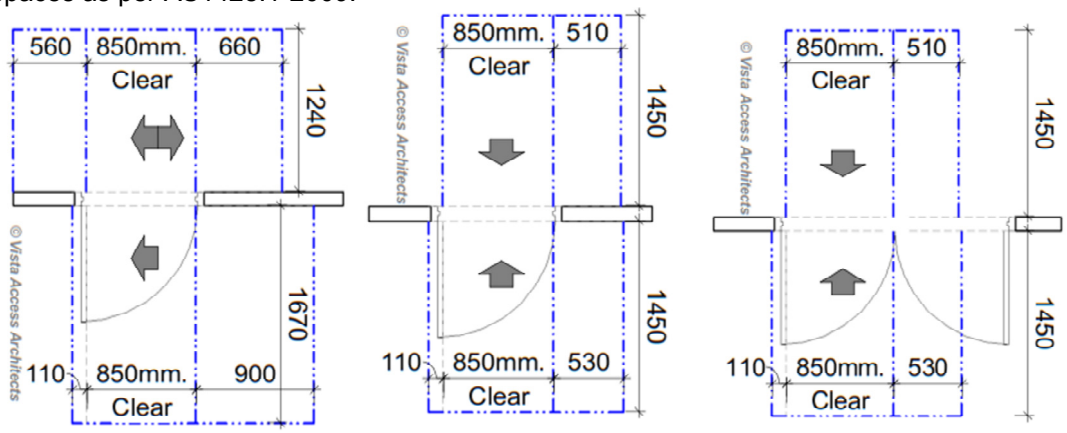
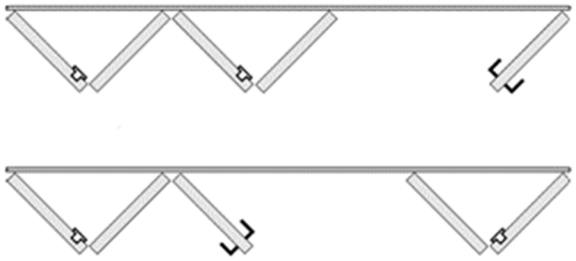


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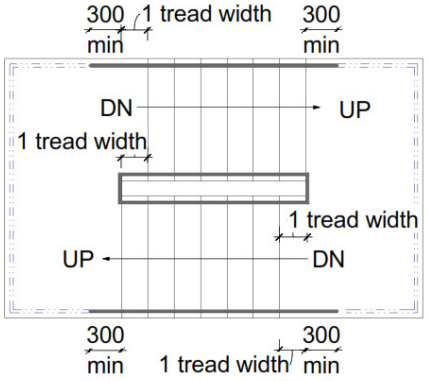
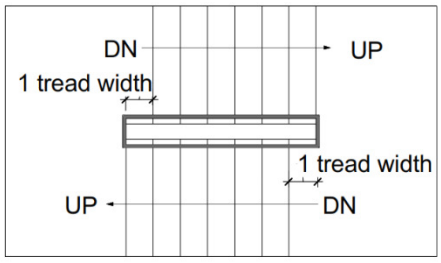
## BCA Part D3 Access for People with a Disability

| | |
|---|---|
| | **BCA D3.1 General building Access requirements**<br>SOU refers to a Sole Occupancy Unit |
| **Requirement** | **Class 2**<br>For residential use components, access is required:<br>- From a required accessible pedestrian entrance to at least 1 floor with SOUs and till the entry of door of each SOU on that level.<br>- To and within 1 of each type of room or space in common use.<br>- Where floor is accessed by an AS1428.1 ramp or lift, access is required to the entry doorway of each SOU on that level and to and within all common use areas on that level. |
| **Compliance Comments** | Complies.<br>- Access has been provided from the main pedestrian entry doorway to the entry doors of all SOUs on all levels by means of accessible pathways and lifts.<br>- Access has been provided to at least 1 of each common use space such as the common room on Ground Floor Level.<br>- Access has been provided to common use garbage chutes within a dedicated waste room on each floor level and bulky waste storage room on ground floor level.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Class 7a**- Covered car park.<br>- To and within any level containing accessible carparking spaces. |
| **Compliance Comments** | Complies.<br>Access has been provided to all Basement levels containing Accessible carparking spaces.<br>Details to be verified at CC stage of works. |
| | |
| | **BCA Part D3.2 Access to buildings** |
| **Requirement** | **Accessway is required from;**<br>- Main pedestrian entry at the site boundary for new buildings.<br>- Any other accessible building connected by a pedestrian link.<br>- Accessible car parking spaces. |
| **Compliance Comments** | Complies.<br>- Access by means of 1:20 grade walkways have been provided from the main pedestrian entry at the site boundary.<br>- Access has been provided from accessible car parking spaces by means of lifts.<br>Details to be verified at CC stage of works. |
| **Requirement** | **External Walkway / Pedestrian Access-** to be as per requirements of AS1428-2009. |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Accessway** is required through:<br>- Main entry; and<br>- Not less than 50% of all pedestrian entrances; and<br>- In building with floor area over 500m², non-accessible entry and accessible entry to be not more than 50M apart. |
| **Compliance Comments** | Complies<br>The building has only 1 pedestrian entry, which has been designed to be accessible.<br>Details to be verified at CC stage of works. |


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| **Requirement** | Where accessible pedestrian entry has **Multiple doorways:**<br>- At least 1 to be accessible if 3 provided<br>- At least 50% to be accessible, if more than 3 provided<br>- Where doorway has multiple leaves, at least 1 leaf is to have clear opening of 850mm (excluding automatic doors) |
| **Compliance Comments** | Capable of compliance.<br>In common use areas, all single hinged doors and in case of multiple leaf doorways, at least 1 operable leaf is required to provide a clear opening of 850mm with the door circulations spaces as per AS1428.1-2009.<br>  <br><br>[Image description: Different types of doorways with door circulation requirements as per AS1428.1]<br><br>Note that the circulation spaces (other than doorway threshold ramp) to have a maximum floor grade of 1:40. Where there is a level difference at the door threshold, the maximum level difference can be 35mm if provided with a 1:8 doorway threshold ramp.<br><br>Where there is an external level difference at the door threshold, the maximum level difference can be 35mm if provided with a 1:8 doorway threshold ramp.<br>This is achievable and the door selections are to be verified at CC stage of works.<br><br>  <br>Where bi-fold doorways have been provided, one door panel is to be provided such that it can be used as a 850mm clear opening hinged door with door circulation spaces as per AS1428.1<br>[Image description: Bi-fold type doorway showing provision of a hinged door]<br><br>This is achievable and the door selections are to be verified at CC stage of works. |
| | |
| | BCA Part D3.3 Parts of buildings required to be accessible |
| **Requirement** | Every **Ramp** with grades steeper than 1:20 and less than or equal to 1:14 (excluding fire-isolated ramp) is to be compliant with:<br>- AS1428.1-2009 (including but not limited to - maximum grade of 1:14 with appropriate landings at a maximum of 9M of a flight of ramp).<br>- 1M clear width to be provided between handrails / kerb / kerbrails.<br>- Handrails and kerbs to be provided on both sides with appropriate handrails extensions.<br>- Slip resistance of ramp and landings to comply with BCA Table D2.14 |
| **Compliance Comments** | Capable of compliance.<br>Detailed features of the ramp will be assessed with the requirements of AS1428.1-2009 at the CC stage of works. |

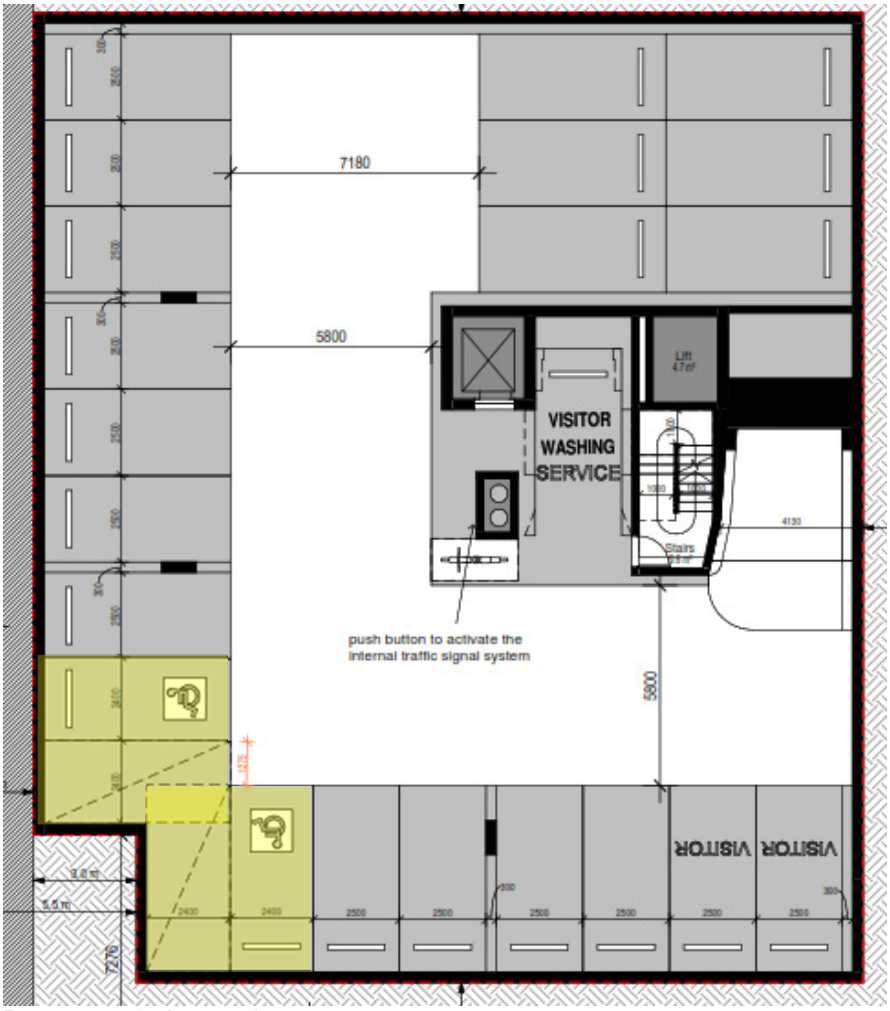

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| **Requirement** | **Step ramp** if provided is to be compliant with:<br>- AS1428.1-2009 including max grade of 1:10, max height of 190mm, max length of 1.9M<br>- Slip resistance of ramp and landings to comply with BCA Table D2.14. |
| **Compliance Comments** | N/A<br>No step ramps have been identified in the development. |
| **Requirement** | **Kerb ramp** if provided is to be compliant with:<br>- AS1428.1-2009 including max grade of 1:8, max height of 190mm, max length of 1.52M<br>- Slip resistance of ramp and landings to comply with BCA Table D2.14. |
| **Compliance Comments** | N/A<br>No kerb ramps have been identified in the development. |
| **Requirement** | Every **Stairway** (excluding fire-isolated stairway) is to be compliant with:<br>- AS1428.1-2009 (including but not limited to opaque risers, handrails on both sides including appropriate handrail extensions between 1M clear width and compliant nosing strips).<br>- Slip resistance to comply with BCA Table D2.14 when tested in accordance with AS4586. |
| **Compliance Comments** | Capable of compliance.<br>Where non-fire-isolated stairways have been provided, the features of the stairway will be assessed with the requirements of AS1428.1-2009 at the CC stage of works.<br>  <br><br>**Note:** In some cases, the stairway from the basement to the ground floor level is considered to be non-fire-isolated, in which case full compliance will be required as per AS1428.1-2009. Verify with the BCA consultant.<br><br>**Note:** For stairways with 90˚ to 180˚ turns at landings, in order for the handrails to comply with the consistent height requirement, the risers have to be offset at the mid-landings so that no vertical sections are created in the handrails. This applies to both non- fire-isolated and fire-isolated stairways. |
| **Requirement** | **Handrail cross-section** – for stairways and ramps to comply with AS1428.1-2009.<br>- Diameter of handrails to be between 30mm-50mm and located not less than 50mm from adjacent walls with no obstructions to top 270˚ arc. |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at CC stage of works. |
| **Requirement** | Every **Fire-isolated Stairway** is to be compliant with AS1428.1-2009 in the following aspects:<br>- Handrail on one side (requirement under D2.17) with 1M clear space. Handrail extensions are not required however since the handrails cannot have any vertical sections and since handrail is required to be at a consistent height throughout the stairway including at landings, it may be essential to either provide handrail extensions or offset first riser going up at mid landings to achieve this at 90˚ to 180˚ turns.<br>- Nosing strips 50mm-75mm wide with minimum of 30% luminance contrast and<br>- Slip resistance to comply with BCA Table D2.14. |
| **Compliance Comments** | Capable of compliance.<br>Detailed features of the fire-isolated stairways will be assessed with the requirements of AS1428.1 at the CC stage of works.<br>  <br><br>**Note:** For stairways with 90˚ to 180˚ turns at landings, in order for the handrails to comply with the consistent height requirement, the risers have to be offset at the mid-landings so that no vertical sections are created in the handrails. This applies to both non- fire-isolated and fire-isolated stairways. |

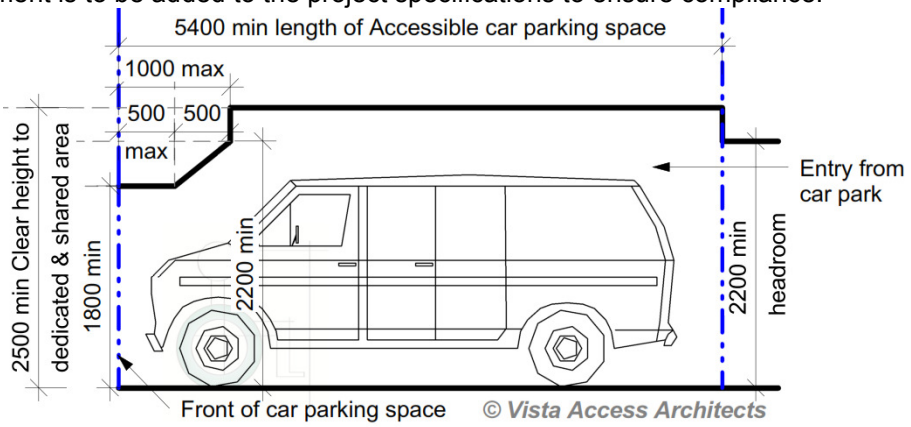

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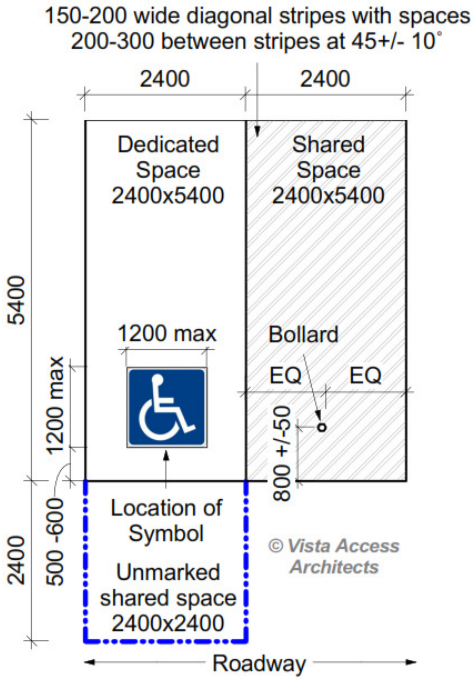
<table>
<tr><td>Requirement</td><td>Slip resistance requirements as per BCA<br>BCA Table D2.14 has the following Slip –resistance requirements when tested in accordance with AS4586:<br><table><tr><th>Application</th><th colspan="2">Surface conditions</th></tr><tr><td></td><td>Dry</td><td>Wet</td></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table><br>Slip resistance requirements as per AS4299<br>AS4299 has slip resistance requirements based on requirements of AS3661 (Slip resistance of pedestrian surfaces) for the following areas:<br>- Floor surfaces in sanitary facilities including all toilets and bathrooms (essential feature).<br>- Floor surfaces in the kitchens and Laundries (essential feature).<br>- Pathways / walkways within the site, within landscaped areas, balconies and other external paved areas (desirable feature for Class A or B developments).<br>- AS3661.1-1993 is an old Australian standard which has been superseded with AS4586:2013 (Slip resistance classification of new pedestrian surface materials).<br><br>HB 197 An introductory guide to the slip resistance of pedestrian surface materials provides guidelines for the selection of slip-resistant pedestrian surfaces</td></tr>
<tr><td>Compliance Comments</td><td>Capable of compliance.<br>For Slip resistance of surfaces the builder is required to provide a Certificate stating that the Slip resistance of the surfaces comply with the above listed requirements when tested as per AS4586. Details to be provided at the CC stage of works.</td></tr>
<tr><td>Requirement</td><td>Every Passenger lift is to comply with the requirements of BCA E3.6.</td></tr>
<tr><td>Compliance Comments</td><td>This has been assessed further in the report in the Lifts section.<br>Refer to Lifts section.</td></tr>
<tr><td>Requirement</td><td>Passing spaces requirement<br>It is a requirement to provide passing spaces in accessways complying with AS1428.1 at maximum 20 M intervals, where a direct line of sight is not available. Space required is 1800x2800mm (in the direction of travel). Chamfer of 400x400mm is permitted at corners.</td></tr>
<tr><td>Compliance Comments</td><td>Complies<br>Adequate passing spaces have been provided.<br>Details to be verified at CC stage of works.</td></tr>
<tr><td>Requirement</td><td>Turning spaces requirement<br>It is a requirement to provide turning spaces in accessways complying with AS1428.1-2009 within 2M of the end of accessways where it is not possible to continue travelling and at every 20M intervals. CLEAR Space required is 1540mmx2070mm in the direction of travel (measured from skirting to skirting).</td></tr>
<tr><td>Compliance Comments</td><td>Complies.<br>- Adequate turning spaces have been provided with minimum common use passageway widths being 1540mm clear or alternatively a space of 1540mm x 2070mm provided at or within 2M of the end of the passageway.<br>- A space of 1540mm x 2070mm is also required / provided in front of all passenger lift doors.<br>Details to be verified at CC stage of works.</td></tr>
<tr><td>Requirement</td><td>Carpet specifications<br>Carpet if used in areas required to be accessible are to be provided with pile height or thickness not more than 11mm and carpet backing not more than 4mm bringing the total height to a maximum of 15mm.</td></tr>
<tr><td>Compliance Comments</td><td>Capable of compliance if carpets are provided in the common use areas. Carpet selections generally take place at CC stage of works. Selection of carpets as specified above will lead to compliance.<br>Details to be verified at CC stage of works.</td></tr>
<tr><td></td><td></td></tr>
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| | **BCA Part D3.4 Exemption** |
| **Requirement** | **Access is not required to be provided in the following areas:**<br>- Where access would be inappropriate because of the use of the area<br>- Where area would pose a health and safety risk<br>- Any path which exclusively provides access to an exempted area |
| **Compliance Comments** | For information only.<br>Areas such as lift machine rooms, fire services room, commercial kitchens etc. in the development are exempted from providing access under this clause due to WHS concerns.<br><br>Where a care taker is provided in the development, the toilet provided exclusively for use by the caretaker can be excluded from providing access based on the provisions in this clause. |
| | |
| | **BCA Part D3.5 Accessible Carparking** |
| **Requirement** | **Class 2**<br>There are no Accessible carparking requirements for a Class 2 under the BCA.<br>If adaptable housing has been mandated by the Council, then carparking spaces for Adaptable units will be required under the requirements of AS4299- Adaptable housing. |
| **Compliance Comments** | Complies.<br>Penrith Council requires provision of 10% Adaptable units in the development.<br>Development has total number of 16 units. 10% of 16 = 2 required Adaptable units.<br>Therefore, 3 accessible carparking spaces are required for the residential component of the development.<br>2 Accessible compliant car parking spaces have been provided in development. One accessible compliant parking space is required to be allocated to each of the Adaptable units.<br>  <br><br>Basement 1 shown above<br>Detailed features of the accessible parking spaces are to be verified at CC stage of works. |
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| | AS2890.6-2009 requirements for Accessible car parking space |
|---|---|
| **Requirement** | - Dedicated space 2.4Mx5.4M, Shared space 2.4Mx5.4M at the same level<br>- Slip resistant flooring surface with maximum fall 1:40 in any direction or maximum 1:33 if bituminous and outdoors.<br>- Central Bollard in shared space at 800+/-50mm from entry point .<br>- Pavement marking in dedicated space by means of access symbol between 800mm-1000mm high placed on a blue rectangle of maximum 1200mm and between 500mm-600mm from its entry point (marking not required where allocated to an Adaptable unit).<br>- Minimum headroom of 2.2M at entrances and 2.5M is required over shared zones as well as dedicated spaces.<br>- Non-trafficked area of the shared space to have marking strips at 45°, 150-200mm wide at 200mm-300mm spaces (not required where driveways are used as shared spaces) |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at the CC stage of works.<br>Refer to diagrams below for requirements, especially in regards to head height requirements.<br><br>**Note:** The pavement marking shall have the appropriate slip resistance for the location. This requirement is to be added to the project specifications to ensure compliance.<br>  <br><br>Head heights for both dedicated accessible parking space and the shared zone to be as shown above. No beams, pipes, sprinklers or any other encroachments are persmissible for the entire 5.4M width of the dedicated and shared zone as per Section shown above. |
| | |




The Accessible parking, shared zones, linemarking and bollards to be as shown above.
Access symbol is not to be provided when spaces are allocated to Adaptable units.

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| | BCA Part D3.6 Signage |
| **Requirement** | **Braille and Tactile signage is required to identify Accessible Sanitary facilities** |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been proposed in the development. |
| **Requirement** | **Braille and Tactile signage is required to identify Ambulant Sanitary facilities** |
| **Compliance Comments** | N/A<br>No common use, ambulant sanitary facilities have been provided in the development. |
| **Requirement** | **Braille and Tactile signage is required to identify Hearing Augmentation** |
| **Compliance Comments** | N/A<br>Hearing augmentation is not provided since there is no inbuilt amplification system proposed in the development. |
| **Requirement** |  <br>**Braille and Tactile signage is required to identify a Fire exit door** required by E4.5 by stating the 'Exit' and 'Level', followed by either:<br>- The floor level number or<br>- Floor level descriptor or<br>- A combination of both of the above.<br>Sign must be located on the side that faces a person seeking egress<br>The "?" shown in image above is to be replaced with the floor level where the door is located.<br>Image of the running person is optional. |
| **Compliance Comments** | Capable of compliance.<br>All doors nominated as Exit doors require signage as described above.<br>Signage selections generally take place at CC stage of works. Selection of signage as specified above will lead to compliance.<br>Details of selected signage to be verified at CC stage of works. |
| **Requirement** | **Signage is required to a non-accessible pedestrian entrance** |
| **Compliance Comments** | N/A<br>The development has only 1 entry which has been designed to be accessible. |
| **Requirement** | **Signage is required where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility.** |
| **Compliance Comments** | N/A |
| **Requirement** | **All signage is required to be as per Specification D3.6 Braille and Tactile Signs**<br>This includes location of signage, specifications in regards to braille and tactile characters, luminance contrast and lighting. |
| **Compliance Comments** | Capable of compliance.<br>Signage selections generally take place at CC stage of works. Selection of signage as specified above will lead to compliance.<br>Details of selected signage to be verified at CC stage of works. |
| | |
| | BCA Part D3.8 Tactile indicators (TGSIs) |
| **Requirement** | **TGSIs are required when approaching:**<br>- Stairways other than fire-isolated stairways.<br>- Escalators / passenger conveyor / moving walk.<br>- Ramp (other than fire-isolated ramps / kerb or step or swimming pool ramps).<br>- Under an overhead obstruction of <2M if no barrier is provided.<br>- When accessway meets a vehicular way adjacent to a pedestrian entry (if no kerb / kerb ramp provided at the location).<br>Compliance is required with AS1428.4.1 including Luminance contrast and slip resistance requirements for all TGSIs. |
| **Compliance Comments** | Capable of compliance.<br>TGSI selections generally take place at CC stage of works. Selection of TGSIs as specified will lead to compliance and these selection details are to be verified at CC stage of works. |
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| | BCA Part D3.11 Limitations on Ramps |
| **Requirement** | **On an accessway:**<br>- A series of connected ramps must not have a combined vertical rise of more than 3.6M;<br>- And a landing for a step ramp must not overlap a landing for another step ramp or ramp. |
| **Compliance Comments** | N/A<br>No ramps have been identified in the development. |
| | |
| | BCA Part D3.12 Glazing on Accessways |
| **Requirement** | **Glazing requirements**:<br>Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening are required to have a glazing strip as per requirements of AS1428.1 |
| **Compliance Comments** | Capable of compliance<br>Glazing strips are required to be provided to full length glazed areas (doors and windows) used in common use areas such as lift lobbies and common passageways. Glazing strip selections generally take place at CC stage of works. Selection of glazing strips as specified above will lead to compliance and these selection details are to be verified at CC stage of works. |
| | |
| | **BCA Part F Accessible Sanitary Facilities**<br>BCA F2.4 Accessible sanitary facilities |
| **Requirement** | **Accessible unisex toilet** is to be provided in accessible part of building such that;<br>- It can be entered without crossing an area reserved for 1 sex only<br>- Where male and female sanitary facilities are provided at different locations, Accessible unisex toilet is only required at one of the locations<br>- Even distribution of LH and RH facilities<br>- An accessible facility is not required on a level with no lift / ramp access. |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been proposed in the development. |
| **Requirement** | **Accessible unisex toilet are to be designed in accordance with AS1428.1-2009** |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been proposed in the development. |
| **Requirement** | **Ambulant use male / female toilets** are to be provided if an additional toilet to the Accessible unisex toilet is provided |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been proposed in the development. |
| **Requirement** | **Ambulant use toilets are to be designed in accordance with AS1428.1-2009** |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been proposed in the development. |
| | |
| | BCA F2.4(a) Accessible unisex sanitary compartments |
| **Requirement** | **Class 2**<br>- At least 1 unisex Accessible toilet when sanitary compartments are provided in common areas. |
| **Compliance Comments** | N/A<br>No common use sanitary facilities have been identified in the development. |
| | |
| | BCA F2.4(b) Requirements for Accessible unisex showers |
| **Requirement** | **Class 2**<br>- At least 1 unisex Accessible shower when showers are provided in common areas. |
| **Compliance Comments** | N/A<br>No common use shower facilities have been identified in the development. |
| | |


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| | **BCA Part E Lift Installations** |
| | |
| | BCA E3.2 Stretcher facility in lifts |
| **Requirement** | A **Stretcher lift** is to be provided if a passenger lift is installed to serve any storey with an effective height of 12M. The space requirement is 600mm wide x 2000mm deep x 1400mm high above the floor level. Confirm this requirement with your BCA consultant. |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |
| | |
| | BCA E3.6 Passenger lift |
| **Requirement** | In an accessible building, **Every Passenger Lift** (excluding electric passenger lift, electrohydraulic passenger lift, inclined lift) must be subject to limitations on use and must comply with **Tables E3.6a and E3.6b** |
| **Compliance Comments** | Capable of compliance.<br>A certificate of compliance from the lift supplier will be required at the CC stage of works stating that the proposed lift complies with the requirements of BCA Part E3- Lift installations. |
| **Requirement** | Limitations on use of Stairway platform lifts, Low-rise platform lift, Low-rise, low-speed constant pressure lift and small sized, low-speed automatic lift |
| **Compliance Comments** | N/A<br>Not identified in the development. |
| **Requirement** | **Handrail requirements for passenger lifts.** Apart from stairway platform lift and low-rise lifts, a handrail is required as per AS1735.12. |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Lift floor dimensions** (excluding stairway platform lift)<br>- Lifts traveling **12M** or under, floor size, **1100mm wide x 1400mm deep**<br>- Lifts travelling more than 12M, floor size 1400mm wide x 1600mm deep |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works.<br>Additional lift car size may apply if stretcher lift is required under the BCA. |
| **Requirement** | Minimum **Door opening size** complying with AS1735.12, not less than 900mm clear (excluding stairway platform lift). |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |
| **Requirement** | All lifts with a power operated door are required to have a **Passenger protection system** complying with AS1735.12. |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |
| **Requirement** | **Lift landing doors** to be provided at upper landing (excluding stairway platform lift). |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |
| **Requirement** | **Lift car and landing control buttons** to comply with AS1735.12 (excluding stairway platform lift and low-rise platform lift). |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |
| **Requirement** | **Lighting** (for all enclosed lift cars) to be provided in accordance with AS1735.12 and AS1680. Minimum illuminance of 100 lx is required at the level of the car floor and average of 50 lx is required on the control panel surface. |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |


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| **Requirement** | **To all lifts serving more than 2 levels**, audible and visual indication to be provided as per AS1735.12. |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Emergency hands free communication** (excluding stairway platform lift) – provide a button that alerts a call centre and a light that the call has been received. |
| **Compliance Comments** | Capable of compliance<br>Details to be verified at CC stage of works. |


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# Additional Features required as per AS1428

Refer to AS1428 for full list of requirements.

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| | **The following accessibility requirements apply only to:**<br>- Common use areas within the residential component (including passageways leading to SOUs) |
| **Requirement** | **Accessway width requirements**<br>- All Accessway widths are to be a minimum of 1M clear (measured from skirting to skirting) with vertical clearance of at least 2M |
| **Compliance Comments** | Complies.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Doorway requirements**<br>- All common use doorways in the development to be in accordance with AS1428.1<br>- Door thresholds are to be level or they can incorporate a Threshold ramp as per AS1428.1 i.e. max 1:8 grade, max height of 35mm and located within 20mm of door leaf.<br>- Distance between successive doorways in airlocks to be 1450mm which is measured when the door is in open position in case of swinging doors. |
| **Compliance Comments** | Capable of compliance.<br>Details to be verified at CC stage of works. |
| **Requirement** | **Door hardware requirements**<br>- Door hardware including door handles, door closers and the in-use indicators / snibs in accessible and ambulant toilets are required to comply with requirements of AS1428.1. |
| **Compliance Comments** | Capable of compliance.<br>Door hardware selections generally take place at CC stage of works.<br>Selection of door hardware as specified above will lead to compliance and these selection details are to be verified at CC stage of works. |
| **Requirement** | **Luminance contrast requirements for doorways.**<br>- All doorways to have a minimum luminance contrast of 30% provided as per AS1428.1 with the minimum width of the luminance contrast to be 50mm. |
| **Compliance Comments** | Capable of compliance.<br>Painting schedule is generally developed at the CC stage of works. The painting schedule of walls/doors and door frames are to consider the above requirements when colours are selected. Generally a light colour door with a dark colour frame will satisfy requirements.<br>Selection details are to be verified at CC stage of works. |
| **Requirement** | **Floor or ground surfaces**<br>- Use slip-resistant surfaces. The texture of the surface is to be traversable by people who use a wheelchair and those with an ambulant or sensory disability.<br>- Abutment of surfaces is to have a smooth transition. Construction tolerances to be as per AS1428.1<br>- Grates if used in the accessible path of travel is required to comply with the requirements as per AS1428.1 |
| **Compliance Comments** | Capable of compliance.<br>Floor surface selections generally take place at CC stage of works.<br>Selection of floor surfaces as specified above will lead to compliance and these selection details are to be verified at CC stage of works. |
| | **Switches, Controls and Lighting requirements**<br>- All switches and controls (including controls for intercom facilities and external lift control buttons) on an accessible path of travel, Accessible SOUs and Accessible sanitary facilities to be located as per requirements of AS1428.1 |
| **Compliance Comments** | Capable of compliance.<br>Lighting fixture selections and locations generally take place at CC stage of works. Selection of lighting fixtures and locating them as specified above will lead to compliance. These selection/location details are to be verified at CC stage of works. |
| | |

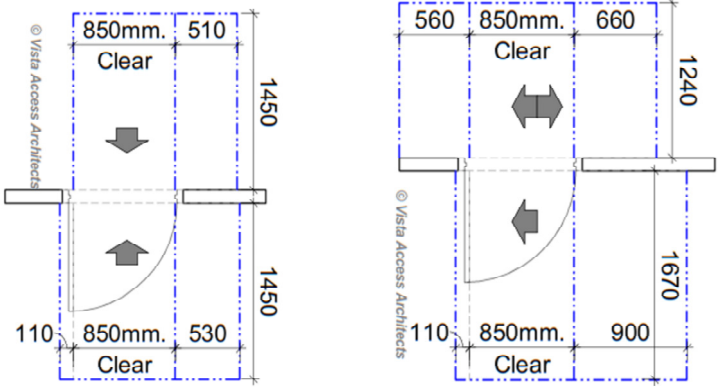

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By incorporating the essential requirements listed Checklist below in the Specifications, the nominated Adaptable units can achieve full compliance with Adaptable House Class C

## AS4299.1995 - Class C – Essential requirements.

R☑= Required;

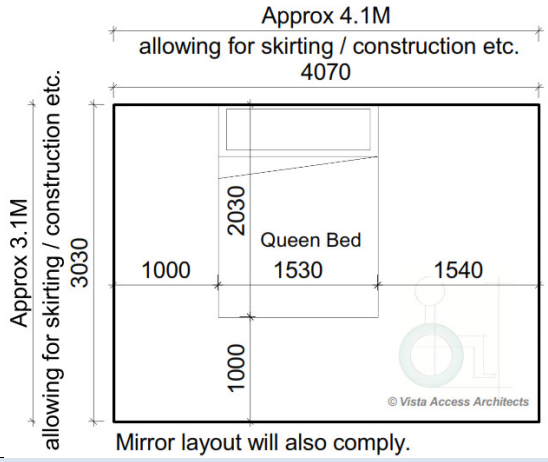
C☑ =Capable of compliance at **by adding the requirement to the project specifications** or in some cases capable of compliance at post adaptation stage (where noted in comments).

| Requirements as per AS4299 | R | C | Comments |
|---|---|---|---|
| **Siting** | | | |
| An AS1428.1 compliant, continuous accessible path of travel is required from street frontage and vehicle parking to entry doorway of the Adaptable unit. | ☑ | ☑ | Complies.<br>Access is provided from street by means of an AS1428.1 compliant ramp / walkway and from accessible parking space by means of a lift.<br>Details to be verified at the CC stage |
| **Letter boxes** | | | |
| Letterboxes to be on hard standing area connected to accessible pathway | ☑ | ☑ | Capable of compliance.<br>Details to be verified at the CC stage |
| **Parking** | | | |
| Car parking space or garage of minimum 6.0Mx 3.8M or a hard surfaced level outside of 5.4Mx3.8M is to be provided as a sheltered car park or can be provided in the future | ☑ | ☑ | Complies. Space can also be provided as per AS2890.6<br>Details to be verified at the CC stage |
| **Accessible Entry**<br>  | | | |
| Door circulation requirements of AS1428.1 with approach directions shown with arrows below.<br>Accessible entry to be provided with,<br>- An accessible door threshold<br>- 1550mm diameter landing<br>- 850mm clear opening door with clearances, door hardware operable with one hand and located 900-1100mm above floor | ☑ | ☑ | Capable of compliance.<br>Details to be verified at the CC stage |
| **Interior: General** | | | |
| - Internal doors to have 820mm minimum clearance with provision for compliance with AS1428.1 for door approaches and minimum corridors width of 1M<br>- Door hardware operable with one hand and located 900-1100mm above floor | ☑ | ☑ | Capable of compliance.<br>Provide an 850mm clear opening door to the adaptable bathroom and 1 main bedroom. Rest to have 820mm clear opening.<br>Details to be verified at the CC stage |
| **Living room and dining room** | | | |
| Circulation space of minimum 2250mm diameter. | ☑ | ☑ | Complies. |
| **Kitchen** | | | |
| It is general industry practice to accept that kitchen is something that has a very short life span and can be completely replaced when required to be adapted. As such only the following requirements apply,<br><u>Potential of achieving the following at Post- Adaptation:</u><br>- Minimum width 2.7M and 1550mm clear between benches | ☑ | ☑ | Can be compliant post adaptation.<br>Details to be verified at the CC stage |


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| - Provision for circulation at doors to comply with AS1428.1 (if doors provided)<br>- Provision for benches, taps, cooktops, ovens as required under AS4299 | | | |

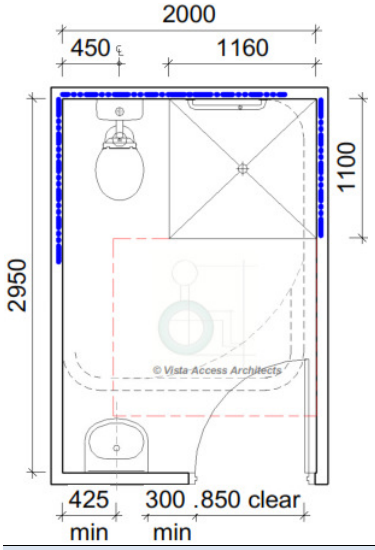
**Main bedroom**



Mirror layout will also comply.

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|---|---|---|---|
| At least one bedroom of area sufficient to accommodate a queen size bed and wardrobe and circulation space requirements of AS1428.2 | ☑ | ☑ | Complies<br>Details to be verified at the CC stage |

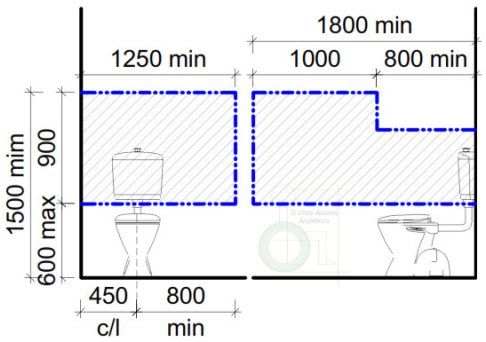
**Main Adaptable bathroom**

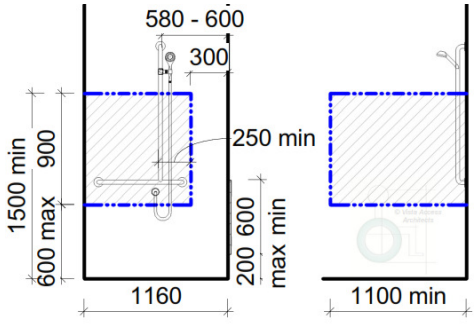



***Post Adaptation bathroom layout shown***
*Noted dimensions in these diagrams are approximate and depend on selected features such as size of the basin. These dimensions include allowances for reinforcements and normal construction tolerances.*
*Thick blue line indicates the location of wall reinforcements which are to be provided at pre-adaptation itself. Red dotted line indicates the shower circulation space. Black dotted line indicates the WC pan circulation space.*

| | | | |
|---|---|---|---|
| - Provision for bathroom area with Circulation spaces of Shower and WC (including fixtures) to comply with AS1428.1.<br>- Note that wall reinforcements and waterproofing details to comply with AS4299 | ☑ | ☑ | Complies<br>A bathroom with minimum space of 2Mx 2.95M or 2.3Mx2.7M or 2.4Mx2.45M is achievable.<br>Wall reinforcement details to be verified at the CC stage. |

**Wall reinforcement requirements at <u>Pre-adaptation</u>**
*Reinforcement requirements for the Adaptable unit for WC and shower (in post-adaptive position) showed hatched. Refer to AS4299 for further details.*



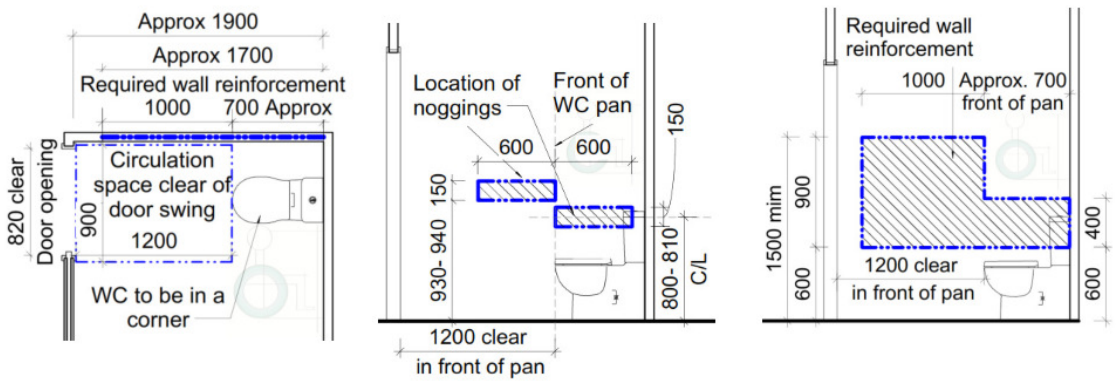


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| | | | | |
|---|---|---|---|---|
| | **Laundry** | | | |
| - | Provision for adequate circulation space in front of or besides appliances (minimum 1550mm depth)<br>- Circulation at doors to comply with AS1428.1<br>- Provision for automatic washing machine | ☑ | ☑ | Capable of compliance.<br>Details to be verified at the CC stage |
| | **Other General requirements** | | | |
| - | All surfaces to be Slip resistant to AS3661 and AS 4586<br>- All GPOs and Lighting/ lux requirements as per AS4299<br>- All waterproofing as per AS4730 | ☑ | ☑ | Capable of compliance.<br>Details to be verified at the CC stage |
| **Requirement** | - Where the location of fixtures such as WC pans, wash basins, sinks, laundry fixtures and any other fixtures are to be relocated post-adaptation to comply with AS1428.1, then the service pipes (waste and water supply pipes) have to be laid in the correct AS1428.1 specified position at pre-adaptation itself and the services to be capped off for future use. | | | |
| | | | | |
| **General recommendations** (Advisory only / not mandatory) | - It is recommended that where balconies / outdoor areas have been provided to Adaptable units, provide the sliding doors such that the floor tracks are recessed, so level access can be provided to the balcony / outdoor areas from inside the unit.<br>- Sliding doors in the living areas leading to outdoor areas are to be such that opening of the door is able to provide a clear opening space of 850mm with a latch side space of 530mm.<br>- If the balcony is to be brought up to the same level as the unit at post-adaptation by means of decking etc. then ensure that the minimum handrail height requirements required under the BCA are complied with, considering the raised height of the balcony.<br>- Consideration to be given to recess the slab in the wet areas so that there is no level difference once the floor finishes are applied (i.e. flush transition from carpeted area to tiles area). | | | |
| | | | | |

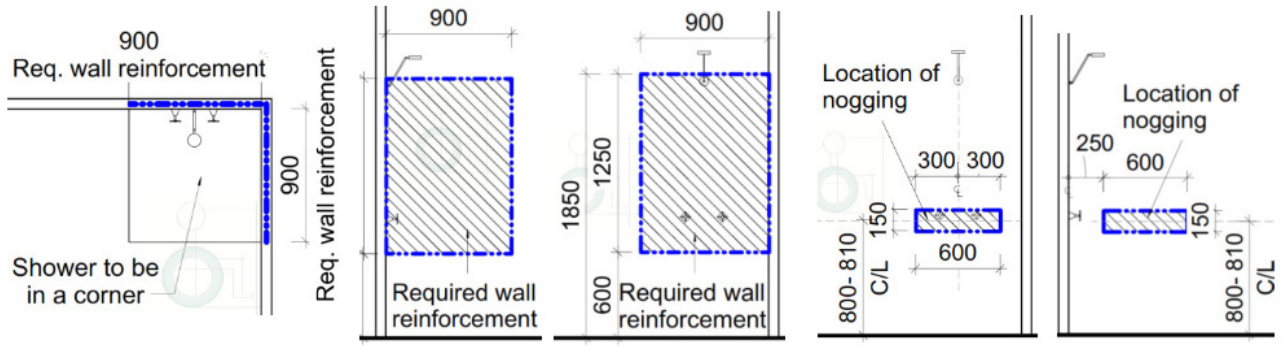

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| | | |
|---|---|---|
| | (d) Step ramp may be provided at an entrance doorway. The step ramp to be max 190mm height, max 1:10 grade, max 1900mm length. | N/A |
| | (e) Level landings of 1200mm are required exclusive of the swing of the door or gate and to be provided at the head and foot of the ramp. | N/A |
| **2 Dwelling entry** | (a) Dwelling Entry should provide an entrance door with<br>(i) min **clear** opening width of door to be 820mm<br>(ii) Step free threshold of max 5mm with rounded or bevelled lip<br>(iii) reasonable shelter from the weather | Capable of compliance. Verify at CC |
| | (b) Level landing of 1200x1200mm at step-free entrance door on the arrival / external side of the entrance door. | Complies Verify at CC |
| | (c) Max permissible threshold is less than 56mm where provided with a 1:8 grade threshold ramp. | N/A |
| | (d) Entrance to be connected to a pathway (specified under Element 1) Note: The entrance to incorporate waterproofing and termite management requirements as specified in the NCC | Complies |
| **3 Internal doors and corridors** | (a) Doors to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartments to be<br>(i) 820mm clear opening and<br>(ii) provided with a level threshold of max 5mm between abutting surfaces with rounded or bevelled lip | Capable of compliance. Verify at CC |
| | (b) Internal corridors and passageways to doorway to be min 1M clear (measured from skirting to skirting) | Capable of compliance. Verify at CC |
| **4 Toilet** | (a) One Toilet to be provided on the ground or entry level that provides,<br>(i) Min 900mm between walls or amenities<br>(ii) Min 1200mm clear space in forward of the WC pan exclusive of door swing.<br>(iii) The toilet pan to be positioned in the corner of a room to enable handrails | Complies. Verify at CC |
| | | |
| **5 Shower** | (a) One bathroom should feature a slip resistant, hobless shower recess. Shower screens are permitted provided they can be easily removed at a later date.<br>(b) The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date. | Capable of compliance. Verify at CC |
| | For hobless specification please see Australian Standard AS3740-3.6. Reinforcement guidelines for walls in bathrooms and toilets are found in element 6 | |
| **6 Reinforcement of bathroom & toilet walls** | (a) Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails. | Capable of compliance. Verify at CC |
| | (b), (c) and (d) the walls around toilet, bath and shower to be via:<br>(i) Noggins with a thickness of at least 25mm<br>(ii) Sheeting with a thickness of at least 12mm<br>Refer to diagrams provided in the Livable Housing Guideline document. | Capable of compliance. Verify at CC |





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| | | |
|---|---|---|
| |  | |
| **7**<br>**Internal Stairways** | Stairways in dwellings must feature:<br>(i) a continuous handrail on one side of the stairway where there is a rise of more than 1M. | N/A<br>No internal stairway in units. |

## Disability Discrimination Act

Advisory Only

The Federal Disability Discrimination Act 1992 (DDA) provides protection for everyone in Australia against discrimination based on disability. Section 32 of the DDA focuses on the provision of equitable and dignified access to services and facilities for people with mobility, sensory and cognitive disabilities.

Disability discrimination happens when people with a disability and their relatives, friends, carers, co-workers or associates are treated less fairly than people without a disability.

Compliance with Access to Premises Standards give certainty to building certifiers, building developers and building managers that, if access to (new parts) of buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the DDA. This however applies only to the new building or new parts of an existing building and its affected part. All areas outside the scope of these areas are still subject to the DDA. We cannot guarantee or certify for DDA compliance because DDA compliance can only be assessed by the Courts.

Scope of DDA extends beyond the building fabric and also includes furniture and fittings.

Some recommendations to address common furniture and fittings have been listed below. Non-provision of the below recommendations may not affect compliance under the BCA but may leave the building owner vulnerable to a claim under the DDA.

For new kitchens / BBQ areas in residential common use areas, it is suggested that this kitchen could be made partially accessible by providing a width of 900mm next to the sink as vacant space (without cabinetry under the bench top) and a tap within 300mm from the front of the sink next to the vacant space. The distance in between the benches to be 1550mm. This would allow a person in a wheelchair to independently move within the kitchen and use basic facility, being the sink independently.


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# Statement of Experience

## Farah Madon- Director

### ACAA Accredited Access Consultant, NDIS SDA Assessor, Livable Housing Assessor & Changing Places Assessor

- Accredited member of the Association of Consultants in Access Australia (ACAA). Membership no 281
- Architect registered with the NSW Architect's Registration Board. Reg number 6940
- Member of Australian Institute of Architects (RAIA), A+ Practice member. No 49397
- Registered Assessor of Livable Housing Australia. Licence no 10032
- Internationally Certified Access Consultant GAATES ICAC. Membership BE-02-021-20
- Registered Assessor of Changing Places Australia. Registration no CP006

### Farah's Educational Profile and Qualifications include:

- Bachelor of Architecture Degree with Honours (B.Arch.)
- International Certification of Accessibility Consultants– Built Environment (ICAC-BE) Program, Level 2 Advanced Accessibility Consultant
- Diploma of Access Consulting CPP50711
- Accredited Specialist Disability Accommodation (SDA) Assessor's Course
- Standards Australia's course on 'Writing Australian Standards'
- OHS Construction Induction Training Certificate
- Changing Places Australia's Training for Assessors

Farah has 20 years of experience of working in the field of Architecture and Access. Farah specialises in access consultancy services, including NDIS SDA Assessments, access related advise, auditing and reporting services, performance solution assessments for access related issues under the BCA.
Farah is the lead author of the NDIS SDA Design Standard. She has been invited as an expert witness for Access related matters in the Land and Environment Court.

### Farah currently participates on the following key committees concerning access for people with disabilities, on an honorary basis:

- Committee member of ME-064 Committee of Standards Australia responsible for the AS4299 and AS1428 suite of standards.
- Community Representative Member of the Penrith City Council's Access Committee
- Member of Australian Institute of Architect's (RAIA) National Access Work Group (NAWG)
- Management Committee member of NSW Network of Access Consultants
- Livable Housing Australia's Industry Reference Group (IRG) Member

### Farah has previously held the following roles:

- Vice President of ACAA from 2016 to 2019 and Management committee member of ACAA from 2011 till 2019.
- Convener of the ACAA's Access related Practice and Advisory Notes

## Meet our team

### Vanessa Griffin- ACAA Accredited Access Consultant, NDIS SDA Assessor, Livable Housing Assessor & Changing Places Assessor

- Accredited member of ACAA. Membership no 500
- Registered Assessor of Livable Housing Australia.
- Member of AIBS – Australian Institute of Building Surveyors

Vanessa's Educational Profile and Qualifications include:

- Diploma of Surveying and Diploma of Health and Building Surveying
- Certificate IV in Access Consulting
- OHS Construction Induction Training Certificate
- Changing Places Australia's Training for Assessors
- Accredited Specialist Disability Accommodation (SDA) Assessor's Course

### Jenny Desai- ACAA Accredited Access Consultant

- Accredited member of ACAA. Membership no 572

Jenny's Educational Profile and Qualifications include:

- Master of Design (M.Des) from University of Technology, Sydney
- Certificate IV in Access Consulting
- OHS Construction Induction Training Certificate



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STANBURY TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

# TRAFFIC & PARKING IMPACT ASSESSMENT

**PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT**
**36 – 38 RODLEY AVENUE**
**PENRITH**

**PREPARED FOR INGLOW INVESTMENT TWO PTY. LTD.**
**OUR REF: 18-045-2**



**MARCH 2020**

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# 1. INTRODUCTION

## 1.1 Background

A Development Application (DA18/0890) was lodged with Penrith Council in September 2018 seeking consent for the demolition of two existing detached dwellings at 36 – 38 Rodley Avenue, Penrith and the construction of a six storey residential flat building incorporating 20 apartments.

The original application was proposed to be serviced by two basement levels containing 36 passenger vehicle parking spaces. The development was proposed to be serviced by a single access driveway connecting with Rodley Avenue north-eastern corner of the site. Connectivity between the access driveway and the upper basement parking level was proposed by a single lane access ramp, whereby two-way traffic flow was proposed to be governed by internal traffic signals. A similar single lane ramp, governed by traffic signals, was proposed to facilitate connectivity between the upper and lower basement parking levels.

Further to the above internal site works, the proposal involved the construction of an indented bay within the southern Rodley Avenue footway. This bay, providing approximate dimensions of 20.5m x 2.5m, was proposed to partially encompass the passenger vehicle driveway but be primarily located to the west, to accommodate waste collection activities associated with the proposed development.

This Practice prepared a Traffic & Parking Impact Assessment in support of the original Development Application, dated August 2018, on behalf of Inglow Investment Two Pty. Ltd.

The Local Planning Panel refused the application on 22 May 2019 stating a number of reasons, including, but not limited to the following:

- *The application has not satisfied Council with respect to the requirements under Section C5 ' Waste Management', specifically:*
  - *The proposal provides for street collection and waste bin storage rooms on the ground floor.*
- *The application has not satisfied Council with respect to the requirements under Section C10 'Transport Access and Parking', specifically:*
  - *The proposal provides for single width ramps to the basement levels to cater for two way traffic.*
  - *The indented waste collection is not supported.*

Various amendments were made to the development scheme, including but not being limited to the accommodation of refuse collection vehicles and activities on-site. The amended development scheme was subject to a Section 8.2 Review which upheld the original refusal.



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An entirely new development application has now been formulated. The new application involves the demolition of the existing two dwellings and the construction of a new five storey residential flat building containing 16 apartments.

The current application is proposed to be serviced by a single basement level containing 22 passenger vehicle parking spaces. The development is proposed to be serviced by a single access driveway connecting with Rodley Avenue north-eastern corner of the site. Connectivity between the access driveway and the basement parking level is proposed by a single lane access ramp, whereby two-way traffic flow was proposed to be governed by internal traffic signals. These signals are however proposed to provide altered operational management arrangements to that originally proposed.

Further to the above internal site works, the current application involves the construction of an indented waste collection bay within the southern Rodley Avenue footway, providing increased width and length dimensions compared with the original application.

The current development scheme has been subject to pre-lodgement assessment and advice by Council officers and the Urban Design Review Panel.

This report forms an updated Traffic & Parking Impact Assessment, reflecting the current application scheme which is now subject to a new Development Application, and specifically addresses the originally cited reasons for refusal which relate to traffic and parking considerations.

## 1.2 Scope of Assessment

Stanbury Traffic Planning has been retained by Inglow Investment Two Pty. Ltd. to prepare an updated Traffic & Parking Impact Assessment to accompany the new Development Application to be lodged with Penrith City Council. The Development Application seeks consent for the demolition of two detached residential dwellings and the construction of a residential apartment development containing 16 dwellings at 36 – 38 Rodley Avenue, Penrith (hereafter referred to as the 'subject site').

This aim of this assessment is to investigate and report upon the potential traffic and parking consequences of the development application and to recommend appropriate ameliorative measures where required. This report provides the following scope of assessment:

- Section 1 provides a summary of the site location, details, existing and surrounding land-uses;
- Section 2 describes the proposed development;
- Section 3 assesses the adequacy of the proposed site access arrangements, parking provision, internal circulation and servicing arrangements with reference to relevant Council, Roads & Maritime Services and Australian Standard specifications;



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- Section 4 assesses the existing traffic, parking and transport conditions surrounding and servicing the subject development site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure; and

- Section 5 estimates the projected traffic generating ability of the proposed development and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner.

The report has been prepared pursuant to State Environmental Planning Policy (Infrastructure) 2007. The application is not of sufficient scale to be referred to the Roads & Maritime Services under this Instrument.

## 1.3 Reference Documents

Reference is made to the following documents throughout this report:

- The Roads & Maritime Services' *Guide to Traffic Generating Developments* and the more recently released *Technical Direction TDT 203/04a*;

- Penrith City Council's *Penrith Development Control Plan 2014* (DCP 2014);

- Australian Standard for *Parking Facilities Part 1: Off-Street Car Parking* (AS2890.1:2004);

- Australian Standard for *Parking Facilities Part 3: Bicycle Parking Facilities* (AS2890.3:2015); and

- Australian Standard for *Parking Facilities Part 6: Off-Street Parking for People with Disabilities* (AS2890.6:2009).

Architectural plans have been prepared by Morson Group and should be read in conjunction with this report, reduced copies of a selection of which (ground and basement plans only) are included as **Appendix 1** for reference.

## 1.4 Site Details

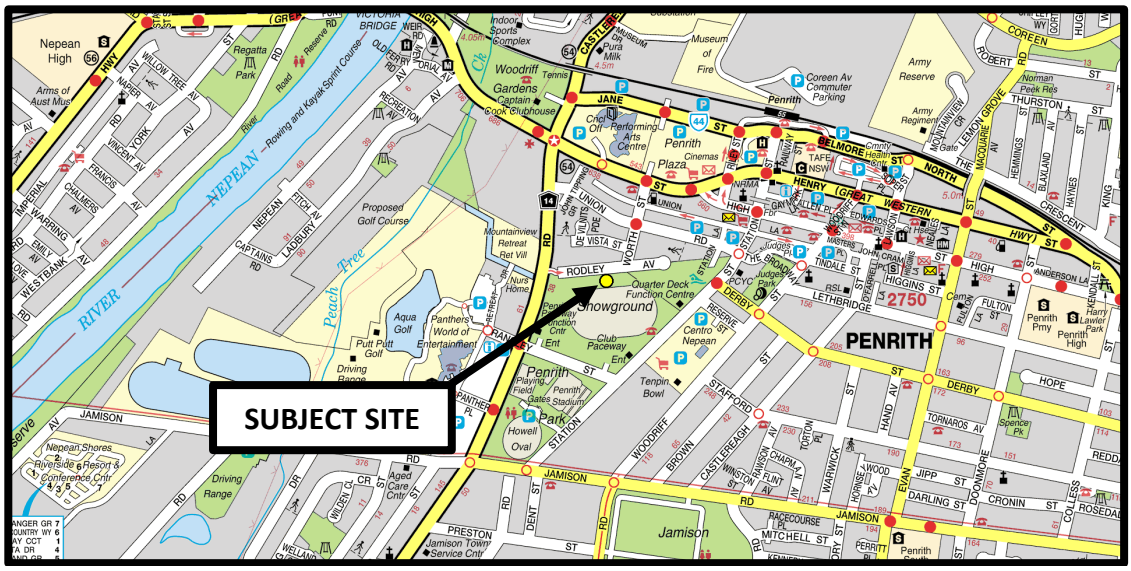
### 1.4.1 Site Location

The subject site is situated on the southern side of Rodley Avenue, approximately 60m to the west of Worth Street, Penrith. The site location is illustrated overleaf within a local and aerial context by **Figure 1** and **Figure 2**, respectively.



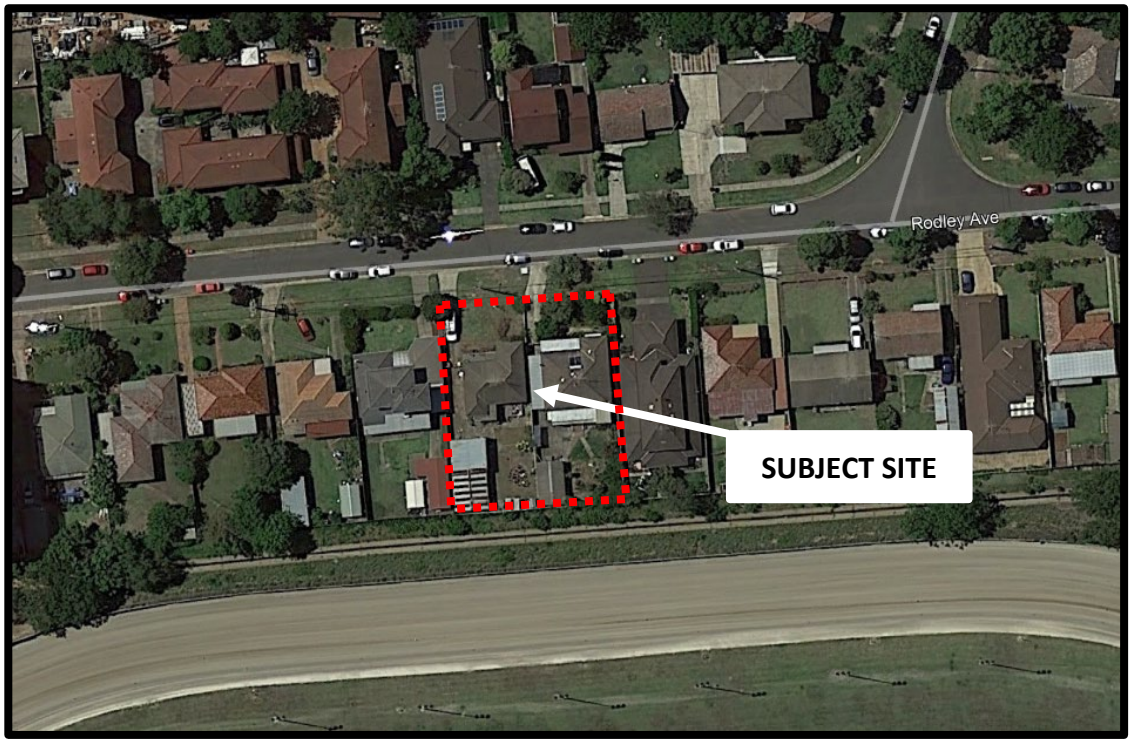
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**FIGURE 1**
**SITE LOCATION WITHIN A LOCAL CONTEXT**




Source: UBD's Australian City Streets – Version 4

**FIGURE 2**
**SITE LOCATION WITHIN AN AERIAL CONTEXT**




Source: Google Earth (accessed 11/03/20)



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### 1.4.2 Site Description

The subject site provides a real property description of Lot 58 and 59 DP 33490 and a street address of 36 and 38 Rodley Avenue, Penrith. Collectively, the allotments form a rectangular shaped parcel of land, providing an approximate frontage of 30.5m to Rodley Avenue. The site extends to the south away from Rodley Avenue some 36.5m, providing a total area of approximately 1,113m$^2$.

### 1.4.3 Existing Site Use

The subject site currently accommodates two detached residential dwellings and associated outbuildings. Each dwelling is serviced by vehicular access driveway connecting separately with Rodley Avenue, situated in the north-western corner of each lot.

### 1.4.4 Surrounding Uses

The site is adjoined to the north, east and west by similar detached residential dwellings, fronting and serviced by Rodley Avenue.

A series of medium density residential developments are situated to the north-west and north-east of the site, fronting Rodley Avenue, Worth Street and Vista Street.

Further, a recently constructed residential apartment building is situated some 80m to the west of the site, providing a street address of 50 – 54 Rodley Avenue. This development, comprising 42 apartments, contained within a six storey building is serviced by an indented waste collection bay along the southern side of Rodley Avenue in a similar manner to that proposed.

Penrith Paceway adjoins the site to the south.



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# 2. PROPOSED DEVELOPMENT

## 2.1 Built Form

The subject application seeks Council's approval to demolish the existing dwellings and the construction of residential apartment development comprising a total of 16 dwellings, made up of the following:

- 13 two bedroom dwellings; and
- 3 three bedroom dwellings

The dwellings are proposed to be contained within a five storey building located approximately central to the site.

The development is to be serviced a single level of basement parking accommodating 22 passenger vehicle spaces. Access between this parking area and Rodley Avenue is proposed via combined ingress / egress driveway located within the north-eastern corner of the site.

Pedestrian connectivity is proposed between the development and the southern Rodley Avenue footway to the west and separate from the abovementioned vehicular access driveway.

Further to the above internal site works, the proposal involves the construction of an indented bay within the southern Rodley Avenue footway. This bay, providing approximate dimensions of 22.5m x 2.8m, is proposed to partially encompass the passenger vehicle driveway but be primarily located to the west, to accommodate waste collection activities associated with the proposed development.



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# 3. SITE ACCESS & INTERNAL CIRCULATION

## 3.1 Passenger Vehicular Access

### 3.1.1 Driveway Design

Vehicular access between the development site and Rodley Avenue is proposed to be provided via a single combined ingress / egress driveway provided within the north-eastern corner of the site. The access driveway is proposed to provide a width of 7.4m.

This driveway is proposed to provide direct connectivity to an internal roadway which provides a 3m wide ingress lane separated from a 3.1m wide egress lane by a 0.7m wide median.

AS2890.1:2004 provides driveway design specifications based on the proposed primary land use, the functional order of the access road and the number of spaces the driveway is to serve. Tables 3.1 and 3.2 of AS2890.1:2004 specify that a Category 1 type driveway is required, providing a combined ingress / egress driveway width of between 3m and 5.5m based on the local (non-arterial) nature of Rodley Avenue, the residential land-use and the on-site passenger vehicle parking provision of less than 25 spaces. The proposed 7.4m wide combined ingress / egress driveway therefore exceeds the minimum AS2890.1-2004 specifications.

Swept path plans have been prepared in order to demonstrate the ability of passenger vehicles to enter and exit the site, copies of which are included as **Appendix 2**. These swept paths also indicate that an entering vehicle is capable of wholly being accommodated within the site prior to being required to stop.

The safety and efficiency of access / egress movements are also proposed to be assisted by the provision of a relatively level (maximum of 1:20) grade within the first 6m inside the property boundary.

The consistency of the horizontal and vertical alignment of Rodley Avenue in the vicinity of the subject site results in a good level of sight distance prevailing between the driveway and the frontage road. Sight distance between vehicles exiting the site and Rodley Avenue to the west of the site is proposed to be assisted by the provision of a triangle adjoining the southern side of the driveway measuring 2.5m into the site and 2.0m along the boundary being free of obstructions to visibility in accordance with the relevant AS2890.1:2004 requirements. In consideration of this and the abovementioned discussion, the proposed site access arrangement is considered to be satisfactory.

### 3.1.2 Basement Access Ramp

Connectivity between the site access driveway and the basement car parking area is proposed via a roadway / ramp running along the eastern site boundary. This ramp is to provide a width of between 6m and 6.8m for the first 6m inside



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the property prior to reducing in width to a minimum of 3m for a length of approximately 15m prior to linking with the basement parking area.

It is acknowledged that the narrow section of the access ramp is not capable of accommodating two-way traffic movements simultaneously. This roadway however suitably accords with Clause 3.2.2 of AS2890.1:2004, which allows for a two-way driveway and connecting roadway width of 3m, where the two directional traffic volume is less than 30 movements per hour.

Section 5.1 of this report presents that the access ramp / driveway could be expected to accommodate up to 9 peak hour vehicle movements based on the development yield, being significantly less than the abovementioned maximum of 30 movements. Accordingly, the width of the access driveway and connecting roadway is only required to accord with the one-way traffic requirements as specified within Clause 2.5.2 (a) (i) of AS2890.1:2004, which requires a minimum roadway width of 3m. Compliance with this Clause is achieved.

Notwithstanding the above, it is noted that the access driveway and immediately connecting internal roadway has been designed to be capable of accommodating an entering and exiting vehicle simultaneously. Entering vehicles are therefore able to wait wholly within the property in the event of a vehicle exiting the development at the same time.

### 3.1.3 Basement Access Ramp Management

Notwithstanding the findings of Section 3.1.2 of this report, it is proposed to provide for an internal traffic signal system to limit the direction of traffic flow within the basement access ramp to one-way at any given time. The traffic signal system is to utilise red / green traffic lanterns located at the access driveway and within the basement level. The lantern within the access driveway are to be supplemented with 'Stop Here on Red' signage and a stop line located clear of the access ramp and roadway thereby allowing vehicles to safely manoeuvre to / from the roadway / ramp clear of queued vehicles.

The default position will display a green to the movement for entering vehicles from Rodley Avenue and a red display for vehicles exiting the parking area. Under this arrangement, when vehicles approach the site, they will be provided with a green display and move towards the parking areas in an unimpeded fashion. An input is to be received by the operating system from radar direction units as the vehicle travels towards the parking areas.

Motorists wishing to exit the basement parking levels will activate the internal traffic signals via in-vehicle remotes (similar to a roller door remote) or a push button situated within the within the basement lift lobby. Visitors exiting the designed parking spaces within the upper basement parking area (whom will not hold an in-vehicle remote) will be required to utilise this push button system to activate the traffic signals and thence exit the site. Signage will be provided within the basement specifying that vehicles are not to exit car spaces until a green lantern is displayed within the basement to ensure there is no undesirable conflict within the basement circulation aisles.



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Upon activation of the remote / push button, the operating system will then display a red to the site entrance lantern while the vehicle/s wishing to exit the parking area will remain red. The operating system will have recorded any vehicles already in internal access roadway / ramp via radar detection units and commenced a timer to allow a vehicle to complete its journey into the parking area. The display for the activated traffic signal within the specific parking area will then change from red to green thereby allowing vehicles to safely exit the parking space within the basement parking level and travel unimpeded towards the site access driveway. When the directional sensitive radar unit located at the driveway is activated by the exiting vehicle/s, the system returns to the default position.

The indicative location of the entrance stop line, vehicle detector, lanterns and push button are illustrated on the amended architectural plans. Notwithstanding this, the specific details of the internal traffic signal system are typically specified by traffic signal contractors at construction certificate stage, complete with a management plan, including measures to be implemented during malfunctions or blackouts.

In regard to the above ,traffic signal systems such as that described above are typically fitted with a battery powered back up system to ensure that they continue to operate during power black outs. It is further understood that traffic signal systems such as that proposed tend to be very reliable and rarely malfunction. However, in the event of a malfunction occurring, the manufacturer provides a maintenance crew which is on call 24 hours per day, which will be dispatched to the site immediately. Further, the system incorporates a computer which in most cases can self-diagnose a problem and inform service personnel who can often fix the issue remotely via the internet.

The requirement for detailed design of the traffic signal system, including operational management measures to be implemented, could reasonably be imposed by Council as a condition of development consent.

This Practice notes that internal development traffic signal systems have been successfully implemented within numerous similarly sized residential developments throughout the Sydney metropolitan area, the closest of known example of which is situated a 8 John Tipping Grove, Penrith.

Incorporating such an internal traffic signal system, the proposed single lane vehicular ramp servicing the development is envisaged to be satisfactory.

### 3.1.4 Likelihood of Delay

In order to further assess the suitability of the proposed traffic signal system governing the basement access ramps, an assessment is made with respect to the likelihood that an entering vehicle will be delayed. It has previously been presented that the traffic signals are provide a green signal for entering traffic in default mode such that entering vehicles are generally not required to be delayed. Notwithstanding this, when a vehicle wishes to exit the basement level, the signal governing vehicle entry will change to a red until such time as the



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vehicle exiting the site has completed its travel from the basement to the egress driveway.

The likelihood of delay in this case is a function of opposing traffic demands and service time. The following discussion provides an assessment of delay on the basis of these development parameters.

Section 5.1 of this report estimates that the development will generate up to nine vehicle movements to and from the site during weekday commuter peak hours. For the purposes of this assessment, these vehicle trips are expected to comprise 2 inbound and 7 outbound trips during the morning peak period and 7 inbound and 2 outbound trips during the evening peak hour.

The service time is the time it takes for a vehicle to travel between the basement parking area and the egress driveway. The exiting vehicle is expected to take up to 30 seconds to travel between the basement parking level and the egress driveway, however in order to further generate an absolute worst case scenario, the service time is assumed to be 60 seconds.

On the basis of the above, **Table 1** provides an assessment of the probability of vehicles being delayed when entering the site, by a vehicle exiting the site.

**TABLE 1**
**ANALYSIS OF PROBILITY OF DELAY BETWEEN INBOUND / OUTBOUND VEHICLES DURING WEEKDAY COMMUTER PEAK HOURS**

| **MORNING PEAK HOUR** | | |
|---|---|---|
| | **Outbound** | **Inbound** |
| Arrivals at Conflict Area | 7 vehicles / hour | 2 vehicles / hour |
| Travel Time Through Conflict Area | 60 seconds | 60 seconds |
| Probability of Vehicle in Conflict Area | 11.7% | 3.3% |
| Probability of Opposing Vehicles in Conflict Area | 0.4% | |
| **EVENING PEAK HOUR** | | |
| Arrivals at Conflict Area | 2 vehicles / hour | 7 vehicles / hour |
| Travel Time Through Conflict Area | 60 seconds | 60 seconds |
| Probability of Vehicle in Conflict Area | 3.3% | 11.7% |
| Probability of Opposing Vehicles in Conflict Area | 0.4% | |

**Table 1** indicates that there is a 0.4% probability (approximately 1 in 250 chance) of an entering vehicle being delayed by an exiting vehicle during weekday commuter peak periods. It is accordingly most unlikely that there will be any unreasonable delay for entering vehicles, thereby ensuring that entering vehicles are most unlikely to queue from the site into the southern Rodley Avenue footpath or indeed, the adjoining public roadway pavement.

## 3.2 Pedestrian Access Arrangements

Pedestrian connectivity between the building and the southern Rodley Avenue footway is proposed via pathway separate and to the west of the abovementioned access driveway. Further to this access, pedestrian connectivity between all parking spaces within the basement parking levels and the building is proposed via lift and stairs located approximately central to the subject site.



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## 3.3 Parking Provision

### 3.3.1 Vehicular Parking Provision

The development is serviced by a total of 22 off-street passenger vehicle parking spaces provided as follows:

| | |
|---|---|
| Visitor spaces | 2 |
| Visitor / wash / service space | 1 |
| Resident spaces | 19 (including 2 adaptable) |
| **Total** | 22 spaces |

### 3.3.2 Council's Vehicular Parking Requirements

Penrith City Council provides the following locally sensitive parking requirements for residential flat building with DCP 2014:

*1 space per 1 or 2 bedrooms*
*2 spaces per 3 or more bedrooms*
*1 space per 40 units for service vehicles*

*1 space per every 5 dwellings, or part thereof for visitors*
*1 space for car washing for every 50 units, up to a maximum of 4 spaces per building*

**Table 2** below provides the off-street parking requirements based on the above Penrith City Council's car parking rate.

**TABLE 2**
**OFF-STREET PARKING REQUIREMENTS**
**PENRITH DCP 2014**

| Item | Rate | No. | Spaces Required |
|---|---|---|---|
| 1 or 2 bedroom dwellings | 1 space per dwelling | 13 | 13 |
| 3 bedroom dwellings | 2 space per dwelling | 3 | 6 |
| Service vehicles | 1 space per 40 dwellings | 16 | 0.4 (adopt 1) |
| Visitor Parking | 1 space per 5 dwellings | 16 | 3.2 (adopt 3) |
| Car Washing | 1 space per 50 units | 16 | 0.3 (adopt 1) |
| | | Total | 24 |

**Table 2** indicates that DCP 2014 requires the development provide a total of 24 passenger vehicle parking spaces, comprising 19 resident, three visitor, one service and one car wash space.

The proposed total passenger vehicle parking provision of 22 spaces therefore represents a numerical parking shortfall of two spaces in accordance with DCP 2014.

The following is however acknowledged:



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- The service vehicle, washing bay and third visitor parking space have been combined in a single parking space; and

- The visitor parking requirement of 3.2 spaces has been rounded down to three spaces.

The combining of the service bay and wash bay is considered to be satisfactory given the sporadic nature of the use of such bays. Further the rounding down of the visitor parking calculations is supported as the abovementioned service / wash bay could reasonably be utilised as by visitors if so required. In consideration of this, the proposed passenger vehicle parking provision and allocation is considered to be satisfactory.

### 3.3.2 Motorcycle Parking

The subject development is to provide one motorcycle parking space within the upper basement level.

Penrith City Council's DCP 2014 does not prescribe motorcycle parking rates for residential developments. Notwithstanding this, the proposed provision of one motorcycle space is considered to be appropriate and satisfactory.

### 3.3.3 Bicycle Parking

The subject development is to provide two bicycle storage racks capable of accommodating up to four bicycles within Basement Level 2.

Penrith Council refers to NSW Government's *Planning Guidelines for Walking and Cycling* 2004 with respect to the provision of bicycle parking. This publication provides the following recommendations relevant to the subject proposal:

***Resident***
*20% of units should provide a space*

***Visitors***
*5% of units should provide a space*

Based on 16 dwellings, the NSW Government's *Planning Guidelines for Walking and Cycling* recommends resident and visitor bicycle parking provision of 3.2 (adopt three) resident and 0.8 (adopt one) visitor parking spaces or a total of four spaces.

The proposed provision of four on-site bicycle parking spaces therefore complies with the requirement specified in the NSW Government's guidelines and accordingly, is considered to be satisfactory.



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## 3.4 Internal Circulation and Manoeuvrability

### 3.4.1 Site and Basement Access Ramps

Connectivity between the site access driveway and the basement car parking area is proposed via a roadway / ramp running along the northern site boundary. This ramp is to provide a minimum width of 6m for the first 6m inside the property prior to reducing in width to a minimum of 3m for an approximate length of 15m prior to linking with the upper basement parking area.

It is acknowledged that the narrow section of the access ramp is not capable of accommodating two-way traffic movements simultaneously. The access ramps and their connections to the access driveway and the basement parking levels are therefore proposed to be governed by traffic signal control to ensure that only one direction of traffic is accommodated at any one time, the suitability of which has been discussed in previous sections of this report.

The site and basement access ramp grades have been designed to accord with the relevant requirements of AS2890.1:2004, providing the following characteristics:

- Maximum ramp grade = 1 in 4;
- Maximum change in grade = 1 in 8; and
- Maximum ramp grade for the first 6m inside the site = 1 in 20.

In consideration of this and the above discussions, the site and basement access ramp is considered to be satisfactory.

### 3.4.2 Basement Car Park

Passenger vehicles, upon entry to the site, will travel in a forward direction via a ramp running along the eastern site boundary to access Basement Level 1. Basement Level 1 is proposed to contain a series of standard 90 degree angled parking spaces serviced by an adjoining parking / circulation aisle, with spaces being allocated to residents and visitors.

The basement parking areas have been designed with the following minimum dimensions in accordance with the requirements of AS2890.1:2004 and AS2890.6:2009:

- Standard vehicular parking space width = 2.4m;
- Disabled vehicular parking space width = 2.4m (with adjoining 2.4m wide shared area);
- Additional vehicular space width where parking spaces adjoins an obstruction = 0.3m;
- Standard and disabled vehicular parking space length = 5.4m;



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- Vehicular parking aisle width adjoining parking spaces = 5.8m;
- Motorcycle parking space width = 1.2m;
- Motorcycle parking space length = 2.5m;
- Headroom = 2.2m; and
- Headroom above disabled parking spaces and adjoining shared areas = 2.5m.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004, AS2890.3:2015 and AS2890.6:2009 specifications.

In order to demonstrate the internal passenger vehicle manoeuvrability within the vicinity of these areas and generally throughout the overall parking areas, this Practice has prepared a number of swept path plans which are included as **Appendix 2**. The turning paths provided on the plans have been generated using Autoturn software and derived from B85 and B99 vehicle specifications provided within AS2890.1-2004.

Section B4.4 of AS2890.1-2004 states the following with regard to the use of templates to assess vehicle manoeuvring:

*'Constant radius swept turning paths, based on the design vehicle's minimum turning circle are not suitable for determining the aisle width needed for manoeuvring into and out of parking spaces. Drivers can manoeuvre vehicles within smaller spaces than swept turning paths would suggest.'*

It would therefore appear that whilst the turning paths provided within AS 2890.1 - 2004 can be utilised to provide a 'general indication' of the suitability or otherwise of internal parking and manoeuvring areas, vehicles can generally manoeuvre more efficiently than the paths indicate. Notwithstanding this, the swept path plans illustrate that passenger vehicles can manoeuvre throughout and enter and exit the most difficult passenger vehicle parking spaces within the parking areas.

It is further noted that the basement parking area forms a dead end aisle. The alignment of the internal circulation aisle is however such that vehicles are able to turnaround in order to ensure that vehicles can exit the site in a forward direction in the event that all parking spaces are occupied. The proposed basement parking area layout as it relates to passenger vehicle manoeuvrability is therefore considered to be satisfactory.



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## 3.5 Site Servicing

The subject site is anticipated to generate the requirement for regular waste collection vehicle servicing. Waste collection vehicles are proposed to service the site via an indented bay provided within the southern Rodley Avenue footway, situated to the immediate west of the development vehicular access driveway.

Garbage bins are proposed to be contained within a storage room located within Basement Level 2. These bins are to be transferred to a holding room located approximately central to the site frontage to Rodley Avenue, which can efficiently be wheeled to the proposed indented collection bay within the southern public road footway.

The proposed indented bay provides the following design criteria:

- A width of 2.8m, measured from the existing kerb line to the new kerb line, for a length of 15m;
- A 7m ingress splay / manoeuvring space at the rear of the bay, measured along the existing kerb line (and partially encompassing the development access driveway);
- A 4m egress splay / manoeuvring space at the front of the bay, measured along the existing kerb line;
- A 1.2m wide footpath within the southern Rodley Avenue footway between and providing a minimum separation of 0.8m to the northern site boundary and the indented bay; and
- A 1.8m wide kerb ramp to facilitate wheeled bin access to the rear of the indented bay.

It is acknowledged that detailed design of the above arrangements, and any supplementary signage and line marking arrangements, will need to be submitted to and approved by Council through a Section 138 Application, including the payment of application and inspection fees. The requirement for this can reasonably be imposed by Council as a condition of consent.

It is further acknowledged that Council's PDCP 2014 specifies that it is desirable that development design facilitate the provision of on-site collection of waste by Council's 10.5m long collection vehicle and facilitate forward entry and exit movements between the site and the adjoining public road network. The DCP however also specify that on-site collection may not be practicable for all development sites due to site dimensions, topography or the resultant associated undesirable planning outcome achieved.

The above proposed waste collection arrangements have accordingly been formulated following a detailed assessment of potential on-site collection arrangements in accordance with Council's DCP. These alternate collection arrangements have also being the subject of various discussions with Council staff through pre-lodgement meetings / assessment and reviews by Council's



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Urban Design Panel both during the current and the previous development application.

In regard to the above, alternate development schemes have been prepared for discussions with Council officers which incorporated the provision of an at-grade heavy vehicle turntable within the south-eastern corner of the site and a dedicated waste collection area within the basement. These alternate on-site collection areas were to be accessed via driveways both separate to and combined with the passenger vehicle access driveway.

Swept path assessment of Council's collection vehicle with respect to the above alternate design schemes illustrated undesirable interaction with public road traffic flow and parking areas as well as vehicular access / egress movements associated with the development basement parking areas.

In comparison, swept path plans which have been prepared by this Practice, copies of which are attached as **Appendix 2**, demonstrate that Council's 10.5m long collection vehicle is capable of manoeuvring to and from the proposed indented bay without unreasonable encroachment on public road traffic flow and parking areas, also being clear of the development access driveway servicing the basement parking areas.

Whilst it is acknowledged that the proposed development access driveway and indented bay will result in the loss of approximately four on-street parallel parking spaces, a greater loss of approximately six on-street parking spaces would eventuate from the excessively wide driveways and manoeuvring which would be required in the event that collection vehicles were required to enter and exit the site. Graphical representations of the abovementioned existing and proposed modified on-street parking arrangements within Rodley Avenue are attached as **Appendix 3**.

It should further be acknowledged that any on-street reduction in parking would be limited to that immediately adjacent to the subject site. All adjoining properties provide formal off-street parking infrastructure and additional adjacent on-street kerb-side if so required. Indeed, recent observations have indicated that whilst demand for on-street parking within Rodley Avenue is notable, capacity exists to accommodate the minor reduction in supply. It is accordingly not expected that the minor loss of on-street parking supply will unreasonably impact adjoining residential amenity. In fact, it could be argued that the provision of the indented bay will provide for additional roadway capacity by providing additional pavement width to allow oncoming vehicles to pass.

Importantly, it should be noted that the proposed off-site collection arrangements and design are consistent with that recently approved and constructed residential apartment development at 50 – 54 Rodley Avenue via DA16/0262. Council's Major Assessment Report for this development dated 16 March 2016 specified the following:

> *Despite this department not generally accepting the provision of an on-street loading bay, in the circumstances of this case it is the most suitable solution*



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> *for the development given manoeuvring through the basement with a heavy vehicle is difficult to achieve. The amended proposal provides proximity to the collection area and to the basement driveway, and allows for the waste vehicle to enter and exit the property* (bay) *in a forward direction as required.*

Whilst it is acknowledged that the proposed indented bay provides for as reduction in footway width, the 6m width of footway facilitates the retention of 3.1m of usable footway in conjunction with the bay, which is considered to be readily capable of accommodating a formalised pedestrian footpath in conjunction with street trees as necessary.

It is further acknowledged that proposed indented bay will necessitate the alterations to existing unrestricted on-street parking, which requires approval by Transport for NSW given the proximity of the site to a railway station. Such a requirement could reasonably be imposed by Council through the implementation of a condition of consent in a similar manner to that applied to other recently approved and constructed developments providing indented waste collection bays.

In consideration of the above and the previous discussion, the proposed waste collection arrangements are therefore considered to be satisfactory and consistent with that previously approved within Rodley Avenue.



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# 4. EXISTING TRAFFIC CONDITIONS

## 4.1 Surrounding Road Network

The following provides a description of the road network surrounding the subject site:

- **Rodley Avenue** performs a local access road function under the care and control of Penrith City Council. It provides an east-west alignment connecting the southbound Mulgoa Road carriageway in the west with Worth Street approximately 60m to the east of the site. Rodley Avenue extends a further 160m to the east of Worth Street, at which point it forms a terminating cul-de-sac.

  Rodley Avenue provides an approximate pavement width of 7m providing one through lane of traffic in each direction in conjunction with parallel parking along both kerb alignments. Traffic flow is governed by a sign posted speed limit of 50km/h.

  Rodley Avenue provides a half road closure to the west on immediate approach to the Mulgoa Road southbound carriageway, from which left turn entry movements only are facilitated.

  Rodley Avenue forms a T-junction with Worth Street to the east, operating under major / minor priority control with Rodley Avenue performing the through route.

- **Worth Street** provides a north-south collector function, also under the care and control of Penrith City Council. It provides a connection between High Street and Penrith Plaza in the north, intersecting with which under traffic signal control, and Rodley Avenue in the south. Worth Street also intersects with Union Road under traffic signal control, some 150m to the north of Rodley Avenue.

  Worth Street, between Rodley Avenue and Union Road, provides a 7m wide pavement providing one through lane of traffic in each direction, in conjunction with indented parallel passenger vehicle parking bays. To the north of Union Road, Worth Street forms a 13m wide pavement providing two though lanes of traffic in each direction.

- **Union Road** provides an east-west collector function, linking Station Street in the east with Mulgoa Road in the west. Union Road provides a 13m wide pavement, primarily providing one through lane of traffic in each direction in conjunction with parallel parking along both kerb alignments. Parking restrictions apply on immediate approach to and departure from Worth Street, facilitating two through lanes on approach and departure from the signalised intersection.



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Union Road intersects with Station Street (and The Broadway) under single lane circulating roundabout control to the east. To the west, Union Road intersects with Mulgoa Road under major / minor priority control with Mulgoa Road performing the priority route. Whilst a dedicated right turn lane and break is provided within the Mulgoa Road central median, facilitating right turn movements to Union Road, right turn egress movements from Union Road are prohibited.

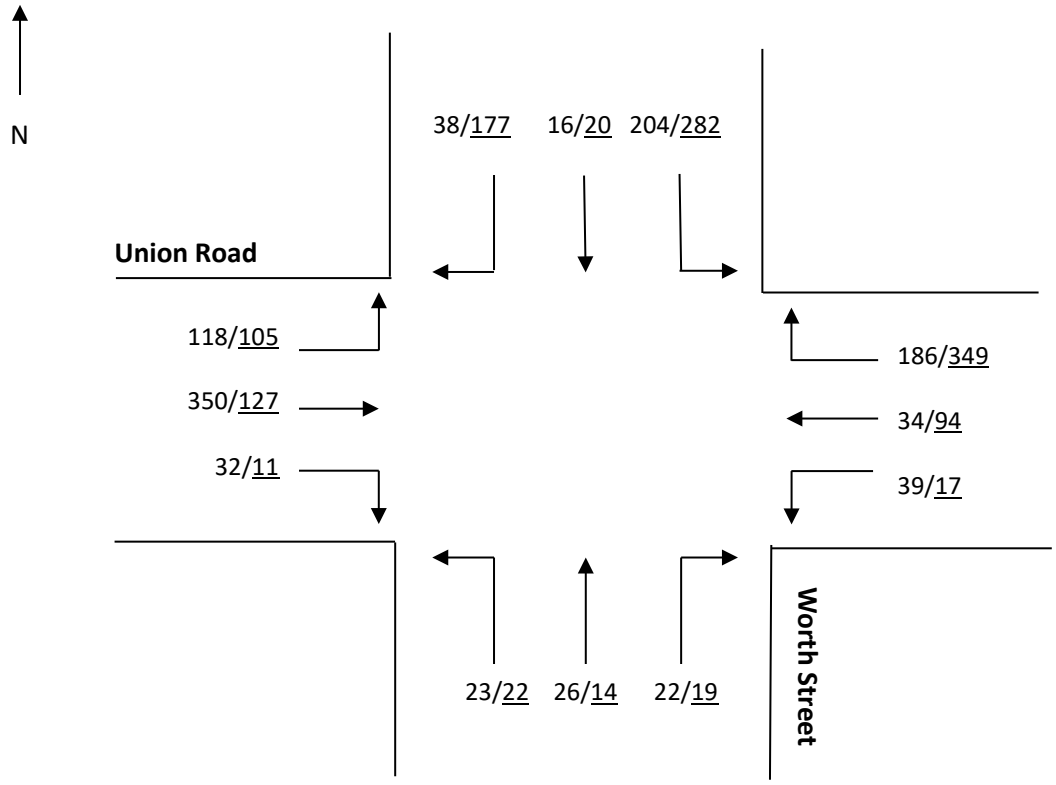
## 4.2 Existing Traffic Volumes

Staff of Stanbury Traffic Planning have undertaken surveys of the intersection of Union Road and Worth Street in order to accurately ascertain the traffic demands. Surveys were undertaken between 7:00am – 9:00am and 4:00pm – 6:00pm on the 28th of May 2018. Whilst it is acknowledged that these surveys are now almost two years now approach two years old, recent check observations indicate that the survey results remain valid.

**Figure 3** provides a summary of the surveyed commuter peak hour (8:00am – 9:00am and 4:00pm – 5:00pm) traffic flows at the intersections whilst full details are contained within **Appendix 4** for reference.

**FIGURE 3**
**EXISTING WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES**
**INTERSECTION OF UNION ROAD & WORTH STREET**

**Legend: AM Peak / PM Peak**






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**Figure 3** illustrates the following:

- Worth Street, to the south of Union Road, accommodates directional traffic demands of less than 100 vehicles per hour;
- Worth Street, to the north of Union Road, accommodates directional traffic demands of 300 – 500 vehicles per hour; and
- Union Road accommodates directional traffic demands of 300 – 500 vehicles per hour.

## 4.3 Existing Road Network Operation

### 4.3.1 Intersection Operation

The surveyed intersection of Union Road and Worth Street has been analysed utilising the SIDRA computer intersection analysis program in order to objectively assess the operation of the surveyed intersections. SIDRA is a computerised traffic arrangement program which, when volume and geometrical configurations of an intersection are imputed, provides an objective assessment of the operation efficiency under varying types of control (i.e. signs, signal and roundabouts). Key indicators of SIDRA include level of service where results are placed on a continuum from A to F, with A providing the greatest intersection efficiency and therefore being the most desirable by the Roads and Maritime Services.

SIDRA uses detailed analytical traffic models coupled with an iterative approximation method to provide estimates of the abovementioned key indicators of capacity and performance statistics. Other key indicators provided by SIDRA are average vehicle delay, the number of stops per hour and the degree of saturation. Degree of saturation is the ratio of the arrival rate of vehicles to the capacity of the approach. Degree of saturation is a useful and professionally accepted measure of intersection performance.

SIDRA provides analysis of the operating conditions that can be compared to the performance criteria set out in **Table 3** (being the RMS NSW method of calculation of Level of Service).

**TABLE 3**
**LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS**
**SIGNALISED INTERSECTIONS**

| Level of Service | Average Delay per Vehicle (secs/veh) | Expected Delay |
|---|---|---|
| **SIGNALISED INTERSECTIONS AND ROUNDABOUTS** | | |
| **A** | Less than 14 | Little or no delay |
| **B** | 15 to 28 | Minimal delay and spare capacity |
| **C** | 29 to 42 | Satisfactory delays with spare capacity |
| **D** | 43 to 56 | Satisfactory but near capacity |
| **E** | 57 to 70 | At capacity, incidents will cause excessive delays |
| **F** | > 70 | Extreme delay, unsatisfactory |



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The existing conditions have been modelled utilising the peak hour traffic volumes presented within **Figure 3**. **Table 4** provides a summary of the SIDRA output data whilst more detailed summaries are included as **Appendix 5**.

| TABLE 4<br>SIDRA OUTPUT – EXISTING WEEKDAY PEAK HOUR PERFORMANCE<br>INTERSECTION OF UNION ROAD & WORTH STREET | | |
|---|---|---|
| | **AM** | **PM** |
| **Average Vehicular Delay (seconds)** | 26.7 | 29.9 |
| **Degree of Saturation** | 0.54 | 0.71 |
| **Level of Service** | B | C |

**Table 4** indicates that the intersection of Union Road and Worth Street currently operates with a satisfactory level of service with spare capacity.

### 4.3.2 Rodley Avenue Performance

Rodley Avenue accommodates low traffic demands commensurate with its access function within the local road hierarchy. In this regard, directional traffic demands have been observed to be less than one vehicle every minute. The Roads & Maritime Services' *Guide to Traffic Generating Developments* specifies that a two-way two-lane roadway accommodating directional traffic demands of less than 200 vehicles per hour provides a level of service 'A' during peak periods, representing free flow where drivers are virtually unaffected by others in the traffic stream.

Notwithstanding the above, the 7m width of the Rodley Avenue pavement in conjunction with the prevalence of kerb side parking along both alignments results in one direction of traffic flow being permitted at any one time. Opposing traffic flow therefore has been observed to occur under courtesy conditions whereby a vehicle will utilise a break in kerb side parking, generally associated with a driveway, to stop and allow a vehicle travelling in the opposite direction to pass. The low traffic demands combined with general diligence displayed by motorists has been observed to ensure that two way traffic flow within Rodley Avenue occurs in a reasonably safe and efficient manner

### 4.3.3 Abutting Site Access Movements

Traffic movements from abutting development sites and Rodley Avenue have been observed to occur in a safe and efficient manner. These movements are assisted by the low traffic demands within Rodley Avenue resulting in regular and extended gaps in traffic flow, allowing motorists to undertake turning movements from abutting development driveways without unreasonable delay.

The proliferation of driveways servicing abutting development sites in the immediate vicinity result in trailing through traffic movements within Rodley Avenue being aware of the potential for vehicles to decelerate to access private properties. This situation, combined with the consistent vertical and horizontal alignment of Rodley Avenue in the immediate vicinity, results in vehicles being able to undertaken entry and egress movements between private abutting development sites and the public road in a safe and efficient manner.



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### 4.3.4 Arterial Road Network Connectivity

The local road network provides connectivity to the surrounding regional road network as follows:

- Worth Street intersects with High Street to the north under traffic signal control with all movements being facilitated;
- High Street intersects with Mulgoa Road to the north-west under traffic signal control with all movements being facilitated;
- High Street intersects with The Northern Road and Great Western Highway to the east under traffic signal control with all movements being facilitated;
- Both Ransley Street and Jamison Road (accessed via Station Street) intersect with Mulgoa Road, to the south-west under traffic signal with all movements being facilitated;
- Union Road intersects with Mulgoa Road under major / minor control to the north-west, albeit with right turn movements from Union Road being prohibited; and
- Rodley Avenue intersects with the southbound Mulgoa Road carriageway under major / minor priority control to the west, whereby left turn movements to the local road are facilitated.

Whilst traffic demands within the surrounding state road network (High Street, Mulgoa Road, The Northern Road and Great Western Highway) are considerable, commensurate with their functional hierarchy in the road network, the abovementioned precinct access controls provide motorists with safe and efficient connectivity to the surrounding regional and state road network.

## 4.4 Public Transport

### 4.4.1 Heavy Rail

The site is located approximately 1km walking distance to the south-west of Penrith Railway Station. Penrith Railway Station provides access to train services which operate along the T1 (North Shore, Northern & Western) Line.

The T1 Line provides regular services between Penrith and the remainder of the Sydney Trains network, servicing The Blue Mountains to the west and Blacktown, Parramatta and The City to the east.



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### 4.4.2 Buses

The following bus routes operate along High Street, with the closest stop being located approximately 500m walking distance from the site:

- Route 688 between Penrith and Emu Heights;
- Route 689 between Penrith and Leonay;
- Route 691 between Penrith and Mount Riverview; and
- Route 690P between Penrith and Springwood.

Further, the following bus routes operate along Station Street, with the closest stop being located approximately 600m walking distance from the site:

- Route 770 between Penrith and Mount Druitt;
- Route 774 between Penrith ad Mount Druitt via Nepean Hospital;
- Route 775 between Penrith and Mount Druitt via Erskine Park;
- Route 776 between Penrith and Mount Druitt via St Clair;
- Route 781 between Penrith and St Marys via Glenmore Park;
- Route 791 between Penrith and Jamisontown via South Penrith;
- Route 793 between Penrith and Jamisontown;
- Route 794 between Penrith and Glenmore via The Northern Road;
- Route 795 between Penrith and Warragamba;
- Route 797 between Penrith and Glenmore Park;
- Route 799 between Penrith and Glenmore Park via Regentville; and
- Route S13 between Penrith and Mountainview Village.

### 4.4.3 Pedestrians / Cyclists

Pedestrians and cyclists are provided with the following access and mobility infrastructure within the immediate vicinity of the subject site:

- A footpath is provided along the northern side of Rodley Avenue;
- A footpath is provided along the western side of Worth Street between Rodley Avenue and Union Road;



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- Signalised pedestrian crossings are provided over all approaches of the intersection of Union Road and Worth Street;

- Footpaths are provided along both sides of Worth Street to the north of Union Road and along both sides of Union Road;

- A shared path is provided along the eastern side of Mulgoa Road; and

- Signalised pedestrian crossings are provided over all approaches of the intersection of High Street and Worth Street.



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# 5. PROJECTED TRAFFIC CONDITIONS

## 5.1 Traffic Generation

Traffic generation rates for various land-uses have been established through extensive surveys undertaken throughout NSW and published within their *Guide to Traffic Generating Developments* and the more recently released *Technical Direction TDT 203/04a*. The following sub-sections provide a summary of the traffic generating potential of the previous and proposed site uses with respect to those rates established by the Roads & Maritime Services.

### 5.1.1 Existing Site Uses

Section 1.3.3 of this report presented that the subject site currently contains two detached residential dwellings.

The Roads & Maritime Services' *Technical Direction TDT 203/04a* specifies average traffic generation rates of 0.95 peak hour vehicle movements per dwelling during the morning peak and 0.99 peak hour vehicle movements per dwelling during the evening peak.

For the purposes of this assessment and for reasons of simplicity, a traffic generation rate of 1 peak hour vehicle trip per dwelling has been applied to detached residential dwellings. The current site development is therefore capable of generating up to two vehicle trips to and from the site during weekday commuter peaks periods.

### 5.1.2 Proposed Development

The proposed development involves the provision of a medium density residential apartment building, accommodating 16 dwellings. The *Guide to Traffic Generating Developments* provides the following peak hour generation rates for medium density residential development:

*Medium Density Residential Dwellings*
*0.5 trips per one and two bedroom dwelling*
*0.65 trips per three bedroom dwelling.*

The peak hour traffic generating ability of the proposed development is accordingly estimated to be in the order of 9 trips.

## 5.2 Traffic Impacts

The proposed development has been projected to generate up to 9 peak hour trips to and from the site, or 7 peak hour trips over and above that currently capable of being generated by the existing two detached dwellings provided on-site. This equates to approximately one vehicle movements every 7 minutes during commuter peaks, or one additional vehicle movement every 9 minutes over and above that capable of being generated by existing site uses. Such a level of additional traffic is not projected to, in itself, result in any unreasonable



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impacts on the existing operational performance of the surrounding local road network. The previous assessment contained within this report has revealed that traffic demands within the surrounding local road network are reasonably low and accordingly motorists are provided with a good level of service with space capacity.

Whilst it is acknowledged that traffic demands within the surrounding arterial road network are considerable, the positive intersection control servicing connection to / from the surrounding regional and state road network allows motorist to access and egress the local precinct in a safe and efficient manner.

In consideration of the above, the impact of the development is most likely to be a result of the safety and efficiency with which motorists are capable of entering and exiting the development. The low traffic demands within Rodley Avenue combined with the good sight distance provisions is such that it is envisaged that motorists will be capable of entering and exiting the site in a safe and efficient manner.

## 5.4 Transport Impacts

The subject site is located within reasonably close walking distance to a number of bus services and a 10 minute walk to train services. It is accordingly expected that a proportion of the future residents within the subject development will utilise the surrounding public transport infrastructure to access destinations throughout the Sydney metropolitan area. The capacity of the existing public transport system is however not envisaged to be measurably affected by any additional demand associated with the development, given its limited scale.



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Version: 1, Version Date: 16/03/2020

# 6. CONCLUSION

This report assesses the potential traffic and parking implications associated with a residential development containing 16 dwellings at 36 – 38 Rodley Avenue, Penrith. Based on this assessment, the following conclusions are now made:

- The proposed site access arrangements are projected to result in motorists being capable of entering and exiting the subject site in a safe and efficient manner;

- The proposed off-street vehicular parking provision is considered to be satisfactory, given the requirements of DCP 2014;

- The internal passenger vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring;

- The proposed indented bay within Rodley Avenue adjacent to the site is projected to safely and efficiently accommodate refuse servicing of the site and is consistent with that previously approved within the immediate precinct;

- The surrounding road network operates with a satisfactory level of service during peak periods;

- The subject development has been projected to generate up to 7 additional peak hour vehicle trips to and from the subject site over and above that capable of being generated by the existing site dwellings; and

- It is considered that the adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.

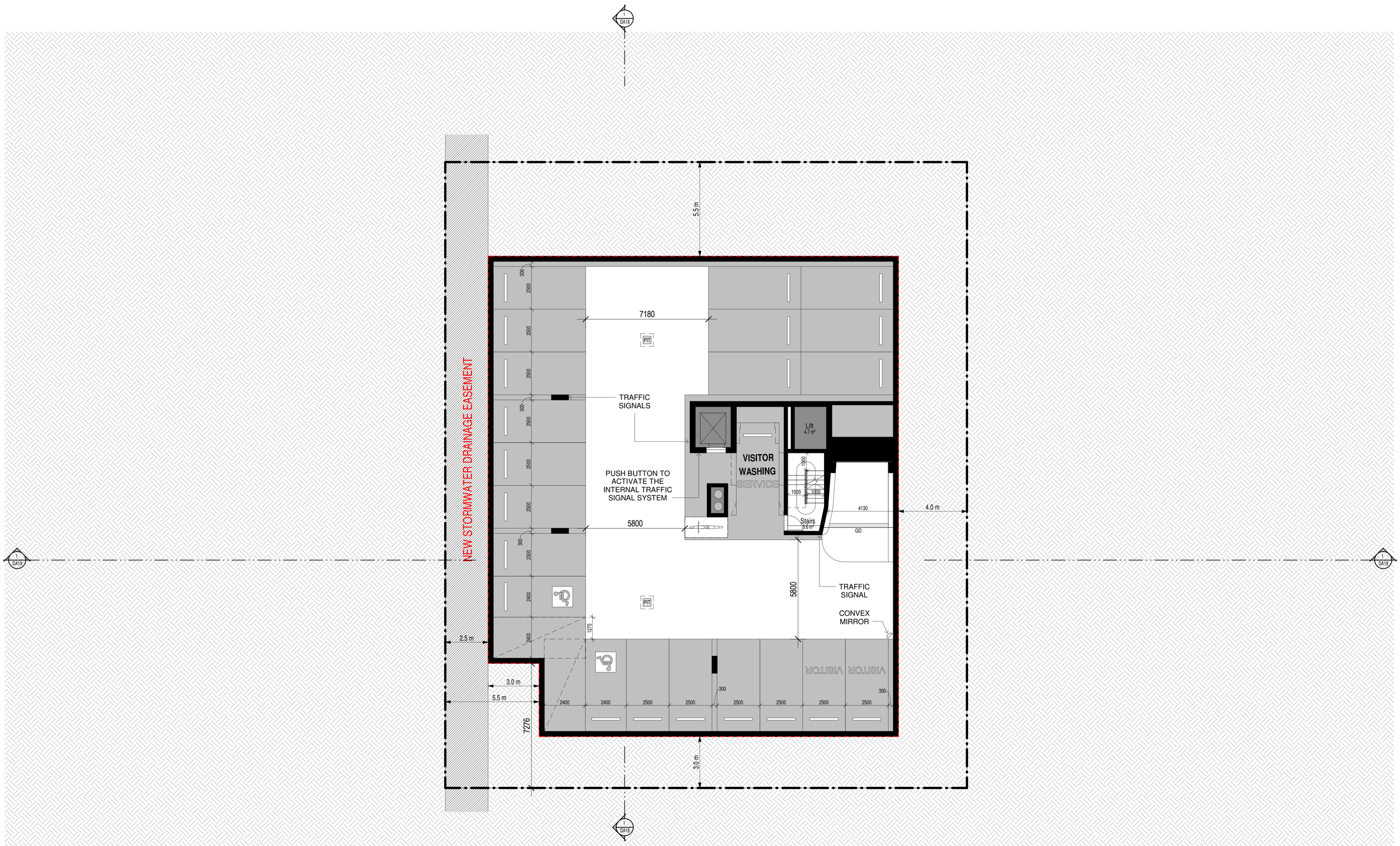
It is considered, based on the contents of this report and the conclusions contained herein, there are no traffic or parking related issues that should prevent approval of the subject application. This action is therefore recommended to Council.



Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

# APPENDIX 1

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| P1 | 12-02-2020 | UDRP Meeting |
| P2 | 05-03-2020 | TO CONSULTANTS |
| | | |
| | | |
| | | |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH
NORTH POINT

PROJECT
PROPOSED RESIDENTIAL FLAT BUILDING

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

MORSON GROUP
NOMINATED ARCHITECT – P F
MORSON REGISTRATION NUMBER 8100
ACN 159 460 054, ABN 41 159 460 054
www.morsongroup.com
(02) 9361 4144
PO Box 170, Potts Point, NSW 1335

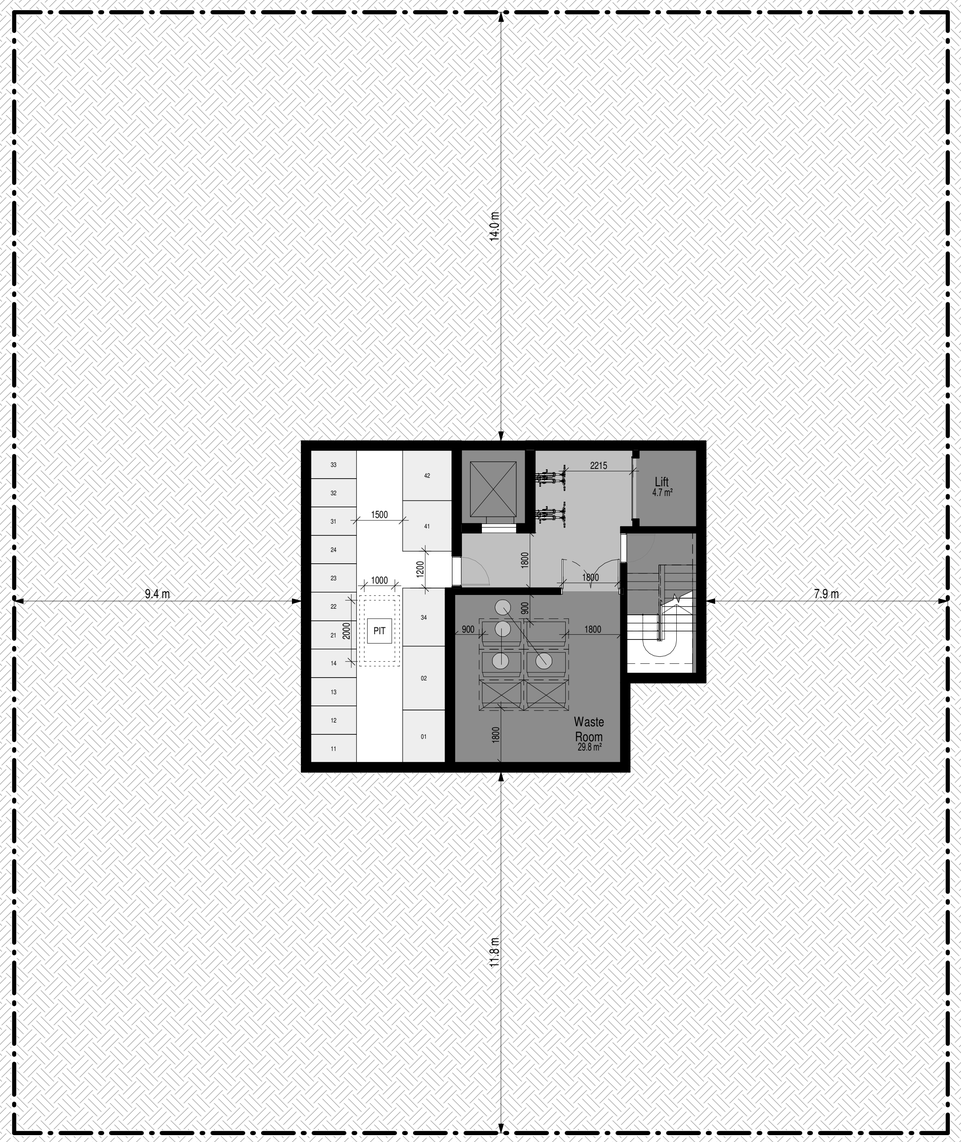
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SCALE 1 : 100
DAT E

SHEET NAME **BASEMENT 1**

DRAWING NUMBER **DA12**

ISSUE NO. **P2**

Document Set ID: 9082185
Version: 1, Version Date: 25/02/2020




| ISSUE | DATE | AMENDMENT |
|---|---|---|
| P1 | 12-02-2020 | UDRP Meeting |
| P2 | 05-03-2020 | TO CONSULTANTS |
| | | |
| | | |
| | | |

0 1 2 3 4 5 7 10m
SCALE BAR

NORTH
NORTH POINT

PROJECT
**PROPOSED RESIDENTIAL FLAT BUILDING**

ADDRESS
36-38 Rodley Avenue, Penrith, NSW, 2750

CLIENT
Inglow Investments Two

MORSON GROUP
NOMINATED ARCHITECT – P F
MORSON REGISTRATION NUMBER 8100
ACN 159 460 054, ABN 41 159 460 054
www.morsongroup.com
(02) 9360 4144
PO Box 170, Potts Point, NSW 1335

SHEET SIZE: A1
SCALE 1 : 100
DAT E

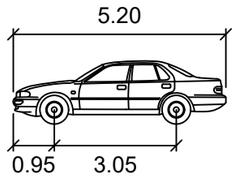
SHEET NAME **BASEMENT 2**

DRAWING NUMBER **DA13**
ISSUE NO. **P2**

Document Set ID: 9082185
Version: 1, Version Date: 25/02/2020

# APPENDIX 2

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020



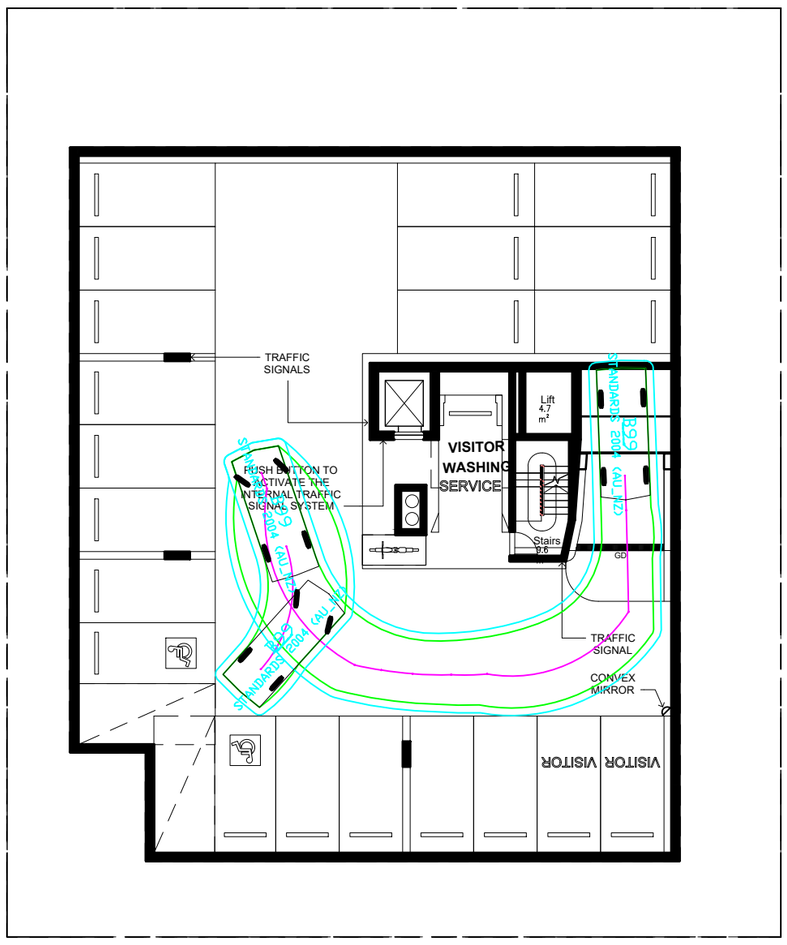

## B99

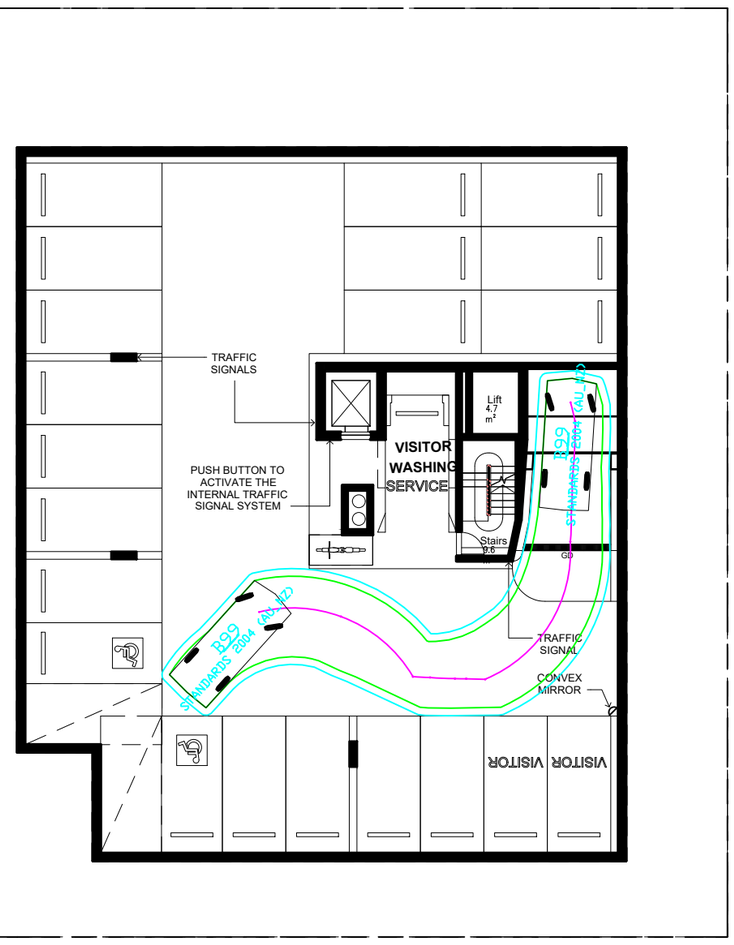
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| Steering Angle | : 33.9 |

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
ADDRESS: 302/166 GLEBE POINT RD, GLEBE
PH: (02) 8971 8314
MOB: 0410 561 848
EMAIL: info@stanburytraffic.com.au
WEBSITE: www.stanburytraffic.com.au

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY MORSON GROUP.
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 10 IN CONJUNCTION WITH B99 PASSENGER VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 1: OFF-STREET CAR PARKING (AS2890.1:2004).

STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS

UPPER BASEMENT LEVEL TURNAROUND MOVEMENTS

PROPOSED RESIDENTIAL DEVELOPMENT

36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3

FILE: 18-045

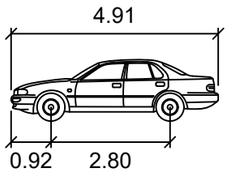
SUPERSEDES SHEET/ISSUE -

DATE: 17/03/2020

ISSUE A

SHEET 6

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

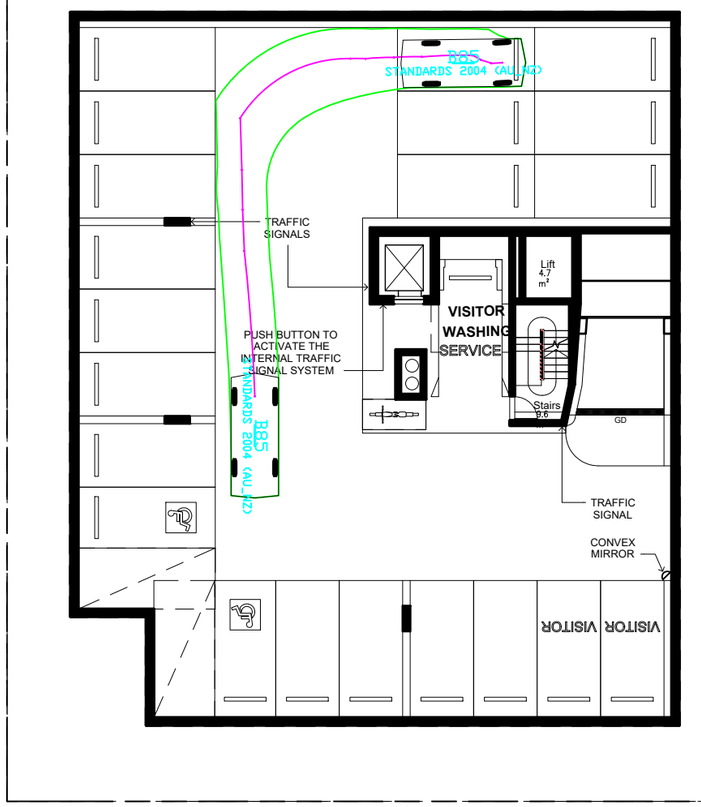


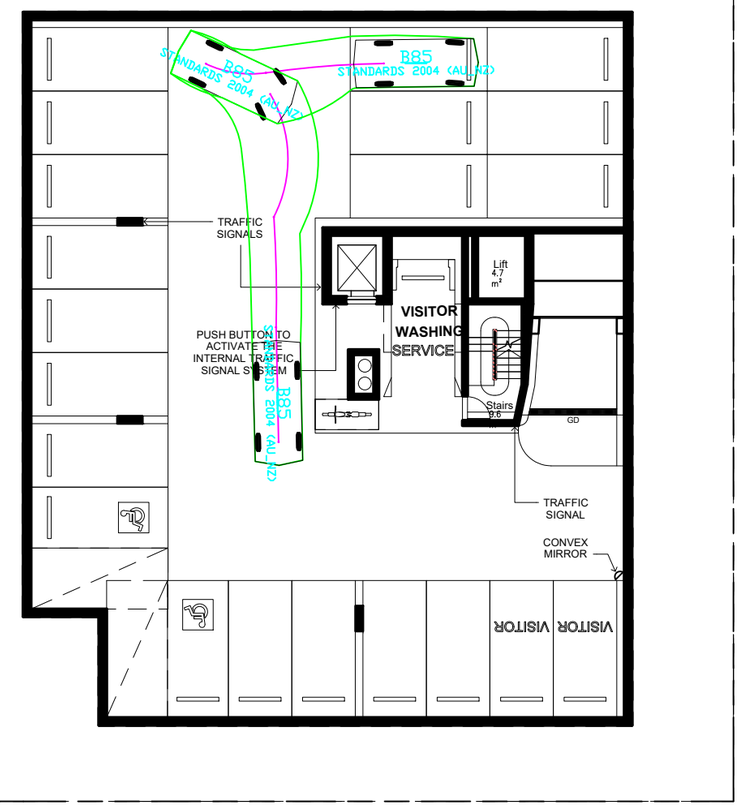

## B85

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| Width | : | 1.87 |
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| Lock to Lock Time | : | 6.0 |
| Steering Angle | : | 34.1 |

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
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PH: (02) 8971 8314
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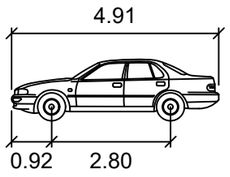
1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY MORSON GROUP.
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 10 IN CONJUNCTION WITH B85 PASSENGER VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 1: OFF-STREET CAR PARKING (AS2890.1:2004).

STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS
INTERNAL PARKING SPACE MANOEUVRING
PROPOSED RESIDENTIAL DEVELOPMENT
36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3
FILE: 18-045
SUPERSEDES SHEET/ISSUE -
DATE: 17/03/2020
ISSUE A
SHEET 7

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

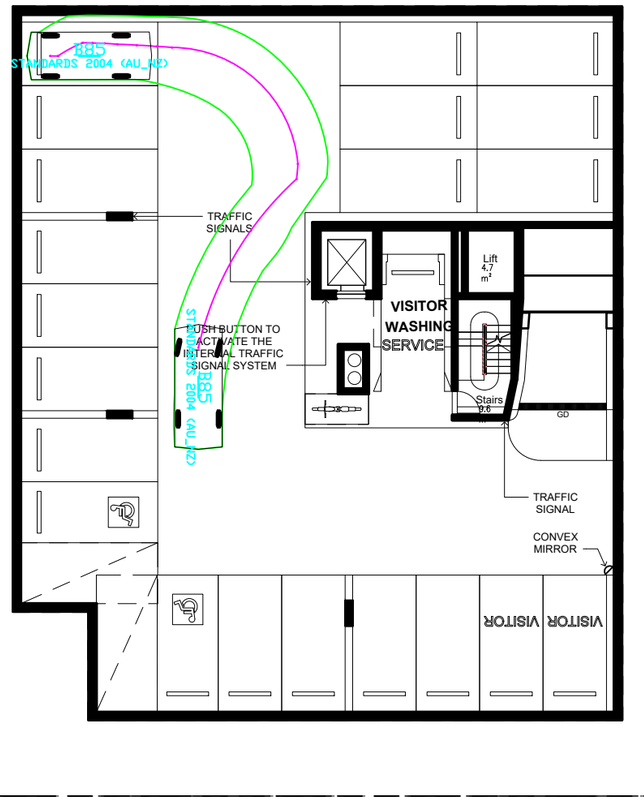


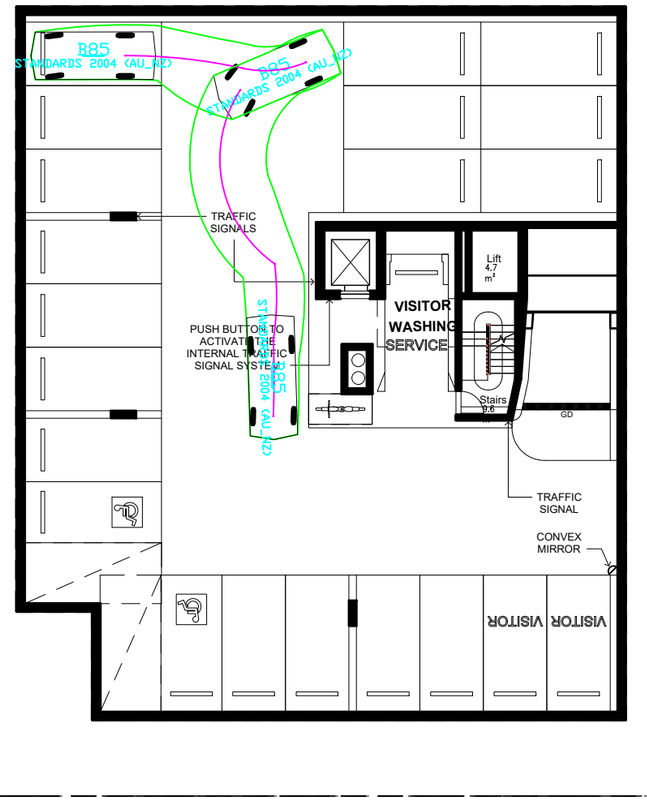

## B85

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| Track | : 1.77 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 34.1 |

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

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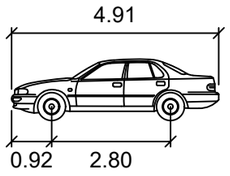
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STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS
INTERNAL PARKING SPACE MANOEUVRING
PROPOSED RESIDENTIAL DEVELOPMENT
36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3
FILE: 18-045
SUPERSEDES SHEET/ISSUE -
DATE: 17/03/2020
ISSUE A
SHEET 8

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

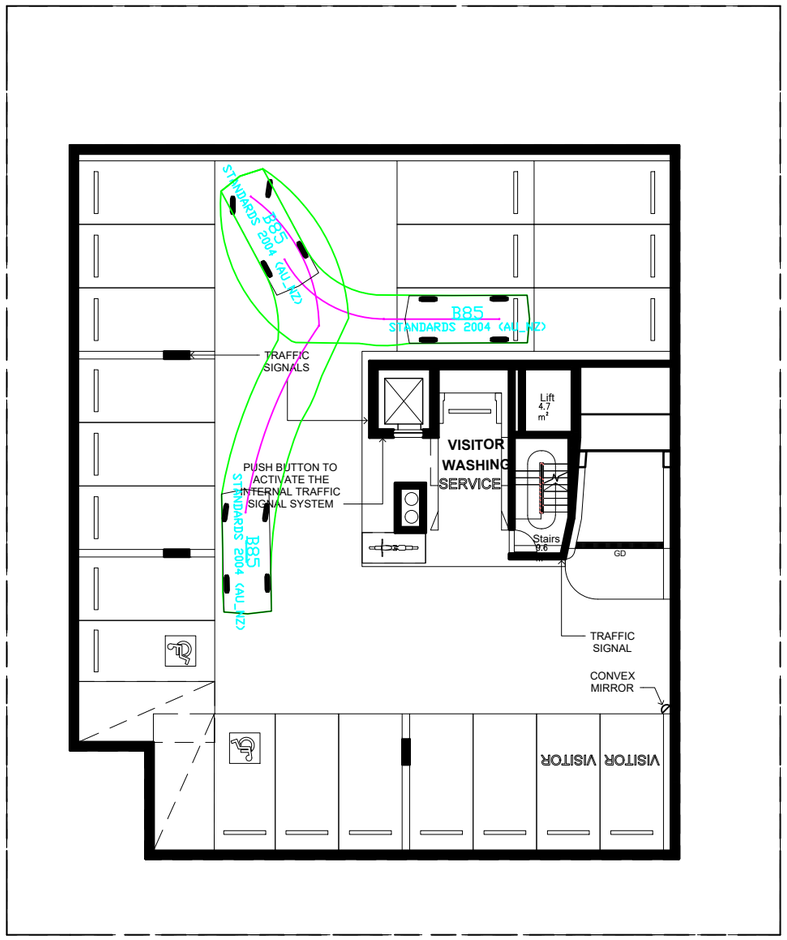


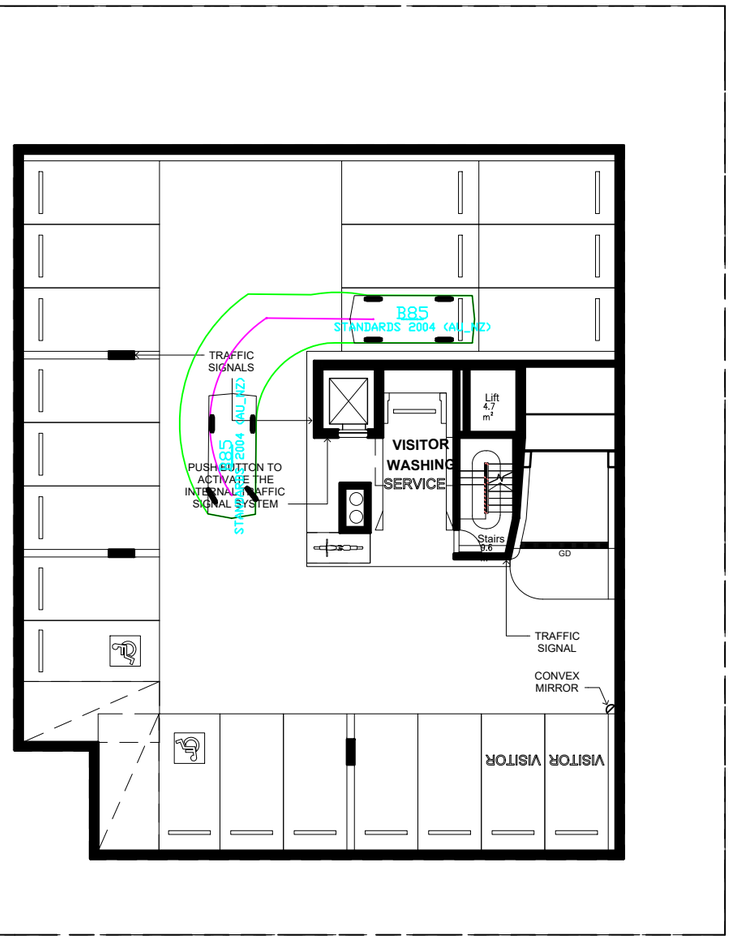

## B85

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| Lock to Lock Time | : 6.0 |
| Steering Angle | : 34.1 |

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
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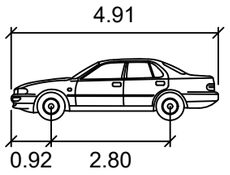
1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY MORSON GROUP.
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 10 IN CONJUNCTION WITH B85 PASSENGER VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 1: OFF-STREET CAR PARKING (AS2890.1:2004).

STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS
INTERNAL PARKING SPACE MANOEUVRING
PROPOSED RESIDENTIAL DEVELOPMENT
36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3
FILE: 18-045
SUPERSEDES SHEET/ISSUE -
DATE: 17/03/2020
ISSUE A
SHEET 9

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

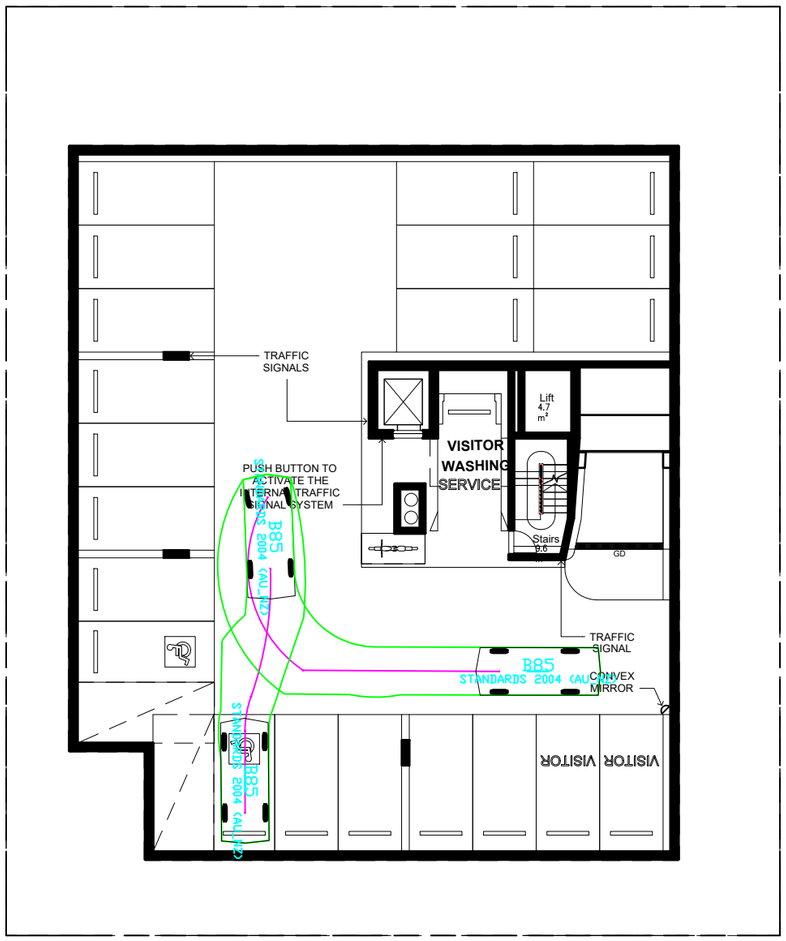


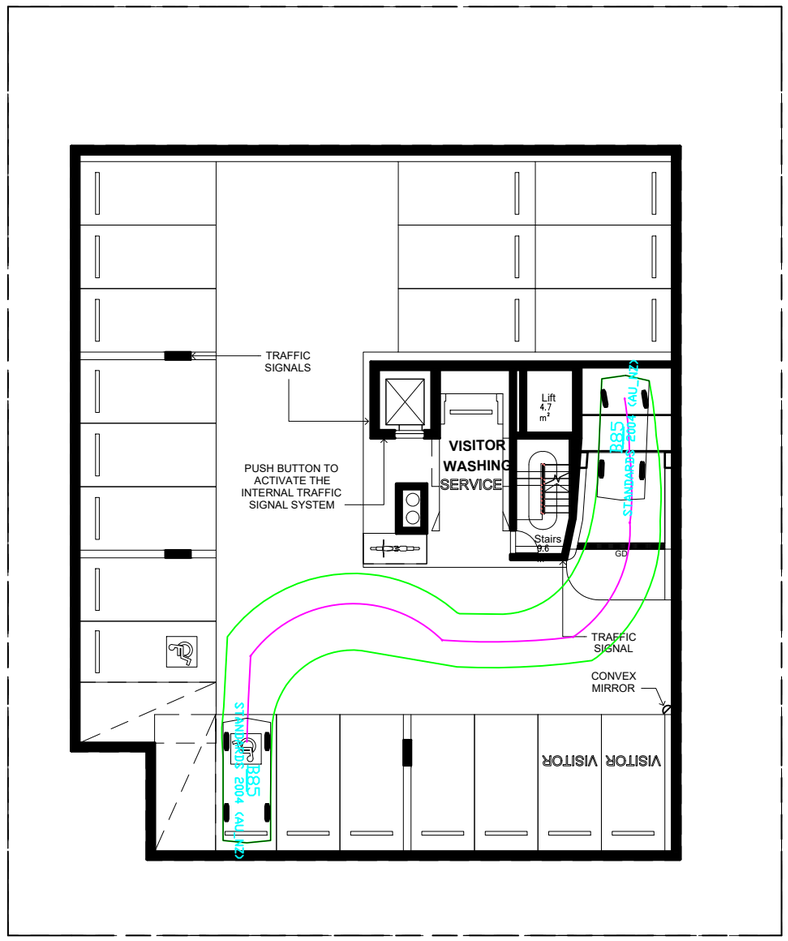

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| Width | : 1.87 |
| Track | : 1.77 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 34.1 |

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
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NOTES:

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# STANBURY TRAFFIC PLANNING

PASSENGER VEHICLE SWEPT PATHS
INTERNAL PARKING SPACE MANOEUVRING
PROPOSED RESIDENTIAL DEVELOPMENT
36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3
FILE: 18-045
SUPERSEDES SHEET/ISSUE -
DATE: 17/03/2020
ISSUE A
SHEET 10

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

# APPENDIX 3

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

ON-STREET CAR PARKING SPACE

NUMBER OF ON-STREET CAR PARKING SPACES WITHIN THE VICINITY OF THE SITE = 22

POTENTIAL KERBSIDE PARKING

RODLEY AVE

PRIVATE GARDEN

40 RODLEY AVE

38 RODLEY AVE

36 RODLEY AVE

34 RODLEY AVE

32 RODLEY AVE


STANBURY TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
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PH: (02) 8971 8314
MOB: 0410 561 848
EMAIL: info@stanburytraffic.com.au
WEBSITE: www.stanburytraffic.com.au


NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY MORSON GROUP.

STANBURY TRAFFIC PLANNING

EXISTING ON-STREET PARKING CONFIGURATION

PROPOSED RESIDENTIAL DEVELOPMENT

36 - 38 RODLEY AVENUE

PENRITH

SCALE: 1:250 AT A3

ISSUE: A

FILE: 18-045

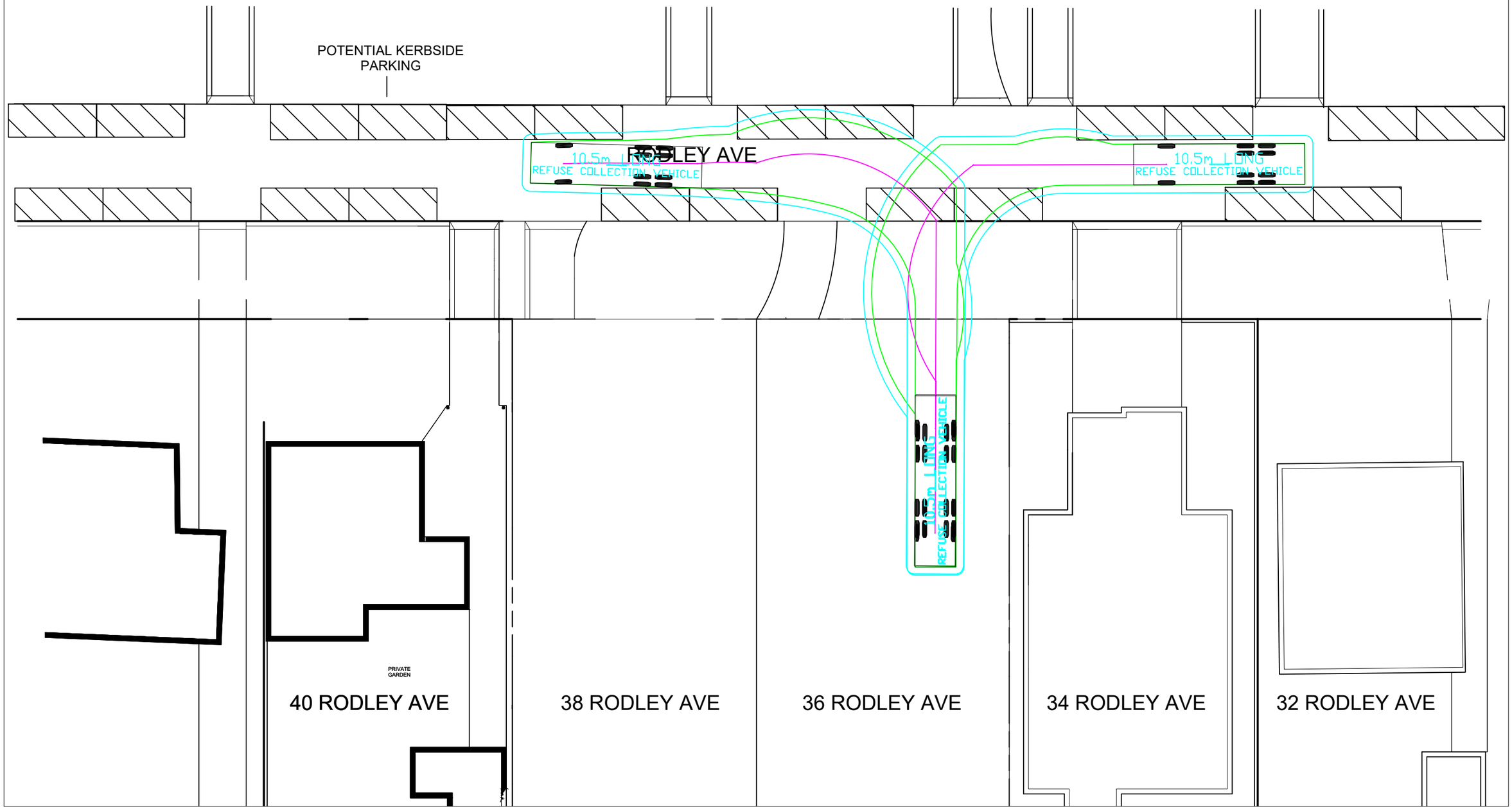
SUPERSEDES SHEET/ISSUE: -

DATE: 17/03/2020

SHEET: 1


Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

| ON-STREET CAR PARKING SPACE | NUMBER OF ON-STREET CAR PARKING SPACES WITHIN THE VICINITY OF THE SITE = 16 | REDUCTION IN ON-STREET CAR PARKING SPACES INCORPORATING ON-SITE REFUSE COLLECTION = 6 |
|---|---|---|




STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

STANBURY TRAFFIC PLANNING
ADDRESS: 302/166 GLEBE POINT RD, GLEBE
PH: (02) 8971 8314
MOB: 0410 561 848
EMAIL: info@stanburytraffic.com.au
WEBSITE: www.stanburytraffic.com.au

NOTES:
1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY MORSON GROUP.

STANBURY TRAFFIC PLANNING

ALTERNATE ON-STREET PARKING CONFIGURATION INCORPORATING ON-SITE REFUSE COLLECTION ASSOCIATED WITH PROPOSED RESIDENTIAL DEVELOPMENT
36 - 38 RODLEY AVENUE, PENRITH

SCALE: 1:250 AT A3
FILE: 18-045
SUPERSEDES SHEET/ISSUE -
DATE: 17/03/2020
ISSUE A
SHEET 3

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

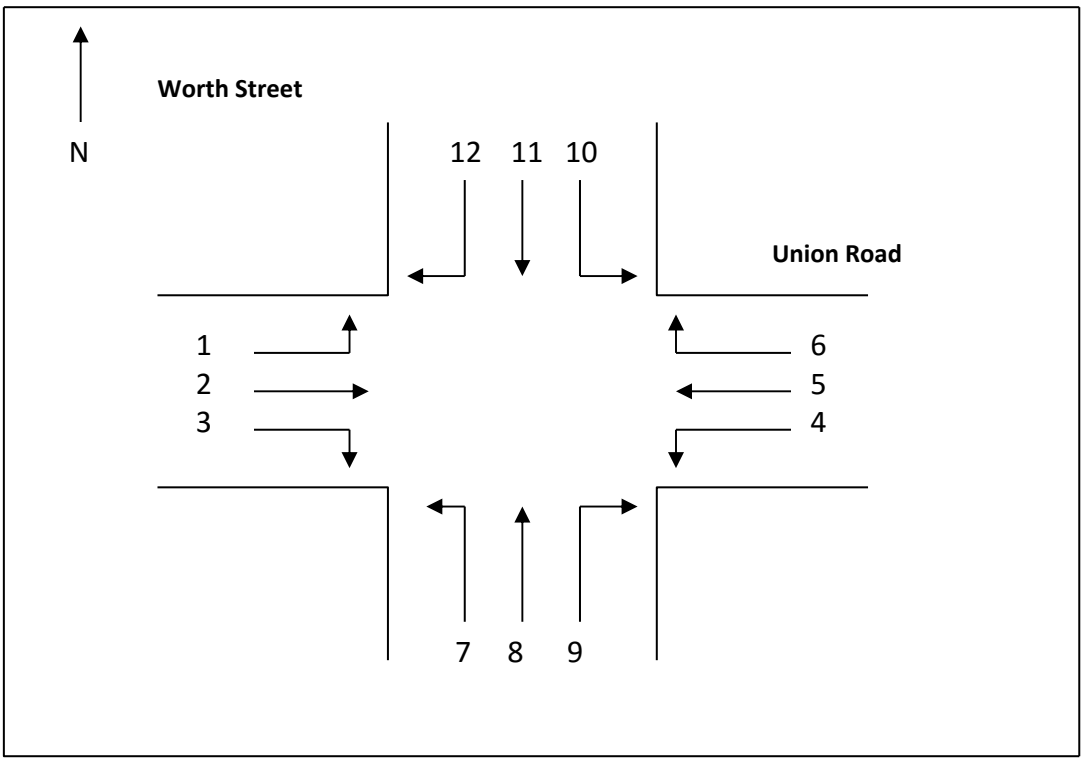
# APPENDIX 4

Document Set ID: 9088185
Version: 1, Version Date: 16/03/2020

STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

TRAFFIC COUNTS AT: Union Road & Worth Street, Penrith
DATE: 28th May 2018
TIME: Fine

| Time | Direction of Vehicular Traffic | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| 7.00 – 7.15pm | 19 | 98 | 4 | 4 | 8 | 35 | 3 | 2 | 3 | 39 | 3 | 9 |
| 7.15 – 7.30pm | 20 | 90 | 3 | 5 | 7 | 25 | 7 | 5 | 5 | 49 | 2 | 8 |
| 7.30 – 7.45pm | 15 | 101 | 2 | 2 | 9 | 30 | 5 | 3 | 3 | 45 | 1 | 6 |
| 7.45 – 8.00pm | 18 | 108 | 4 | 4 | 8 | 22 | 2 | 6 | 4 | 44 | 1 | 10 |
| **TOTAL** | **72** | **397** | **13** | **15** | **32** | **112** | **17** | **16** | **15** | **177** | **7** | **33** |
| 8.00 – 8.15pm | 28 | 110 | 5 | 6 | 10 | 37 | 6 | 8 | 7 | 55 | 5 | 9 |
| 8.15 – 8.30pm | 22 | 90 | 6 | 12 | 9 | 45 | 5 | 5 | 8 | 51 | 3 | 6 |
| 8.30 – 8.45pm | 35 | 85 | 9 | 9 | 10 | 49 | 7 | 7 | 5 | 57 | 5 | 12 |
| 8.45 – 9.00pm | 33 | 65 | 12 | 12 | 5 | 55 | 5 | 6 | 2 | 41 | 3 | 11 |
| **TOTAL** | **118** | **350** | **32** | **39** | **34** | **186** | **23** | **26** | **22** | **204** | **16** | **38** |
| 4.00 – 4.15pm | 25 | 29 | 3 | 5 | 25 | 95 | 5 | 1 | 5 | 67 | 5 | 40 |
| 4.15 – 4.30pm | 24 | 35 | 2 | 5 | 29 | 80 | 6 | 3 | 5 | 75 | 4 | 38 |
| 4.30 – 4.45pm | 34 | 34 | 2 | 4 | 23 | 91 | 8 | 3 | 6 | 57 | 7 | 45 |
| 4.45 – 5.00pm | 22 | 29 | 4 | 3 | 17 | 83 | 3 | 7 | 3 | 83 | 4 | 54 |
| **TOTAL** | **105** | **127** | **11** | **17** | **94** | **349** | **22** | **14** | **19** | **282** | **20** | **177** |
| 5.00 – 5.15pm | 29 | 25 | 5 | 6 | 25 | 101 | 8 | 5 | 5 | 79 | 5 | 55 |
| 5.15 – 5.30pm | 25 | 30 | 7 | 5 | 30 | 84 | 5 | 2 | 6 | 80 | 3 | 55 |
| 5.30 – 5.45pm | 20 | 36 | 4 | 4 | 17 | 99 | 5 | 1 | 7 | 71 | 5 | 35 |
| 5.45 – 6.00pm | 8 | 30 | 4 | 4 | 10 | 90 | 8 | 2 | 6 | 50 | 2 | 28 |
| **TOTAL** | **82** | **121** | **20** | **19** | **82** | **374** | **26** | **10** | **24** | **280** | **15** | **173** |




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# APPENDIX 5

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# MOVEMENT SUMMARY

## Site: [Union Road & Worth Street]

Existing AM
Site Category: (None)
Signals - Fixed Time Isolated  Cycle Time = 90 seconds (Site Optimum Cycle Time - Minimum Delay)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Worth Street South | | | | | | | | | | | | |
| 1 | L2 | 23 | 5.0 | 0.350 | 47.3 | LOS D | 3.0 | 22.1 | 0.96 | 0.75 | 0.96 | 33.8 |
| 2 | T1 | 26 | 5.0 | 0.350 | 41.7 | LOS C | 3.0 | 22.1 | 0.96 | 0.75 | 0.96 | 34.4 |
| 3 | R2 | 22 | 5.0 | 0.350 | 47.3 | LOS D | 3.0 | 22.1 | 0.96 | 0.75 | 0.96 | 33.7 |
| Approach | | 71 | 5.0 | 0.350 | 45.3 | LOS D | 3.0 | 22.1 | 0.96 | 0.75 | 0.96 | 34.0 |
| East: Union Road East | | | | | | | | | | | | |
| 4 | L2 | 39 | 5.0 | 0.079 | 17.5 | LOS B | 1.6 | 11.7 | 0.54 | 0.57 | 0.54 | 47.0 |
| 5 | T1 | 34 | 5.0 | 0.079 | 11.9 | LOS A | 1.6 | 11.7 | 0.54 | 0.57 | 0.54 | 48.2 |
| 6 | R2 | 186 | 5.0 | 0.529 | 30.6 | LOS C | 6.7 | 48.6 | 0.84 | 0.81 | 0.84 | 39.1 |
| Approach | | 259 | 5.0 | 0.529 | 26.2 | LOS B | 6.7 | 48.6 | 0.75 | 0.74 | 0.75 | 41.2 |
| North: Worth Street North | | | | | | | | | | | | |
| 7 | L2 | 204 | 5.0 | 0.539 | 40.5 | LOS C | 8.2 | 59.7 | 0.94 | 0.81 | 0.94 | 35.4 |
| 8 | T1 | 16 | 5.0 | 0.141 | 31.5 | LOS C | 2.0 | 14.3 | 0.85 | 0.71 | 0.85 | 38.0 |
| 9 | R2 | 38 | 5.0 | 0.141 | 37.1 | LOS C | 2.0 | 14.3 | 0.85 | 0.71 | 0.85 | 37.2 |
| Approach | | 258 | 5.0 | 0.539 | 39.4 | LOS C | 8.2 | 59.7 | 0.92 | 0.79 | 0.92 | 35.8 |
| West: Union Road West | | | | | | | | | | | | |
| 10 | L2 | 118 | 5.0 | 0.135 | 19.5 | LOS B | 2.9 | 21.2 | 0.59 | 0.71 | 0.59 | 44.5 |
| 11 | T1 | 350 | 5.0 | 0.441 | 16.7 | LOS B | 11.0 | 80.3 | 0.71 | 0.63 | 0.71 | 46.8 |
| 12 | R2 | 32 | 5.0 | 0.441 | 22.2 | LOS B | 11.0 | 80.3 | 0.71 | 0.63 | 0.71 | 45.5 |
| Approach | | 500 | 5.0 | 0.441 | 17.7 | LOS B | 11.0 | 80.3 | 0.68 | 0.65 | 0.68 | 46.2 |
| All Vehicles | | 1088 | 5.0 | 0.539 | 26.7 | LOS B | 11.0 | 80.3 | 0.77 | 0.71 | 0.77 | 41.2 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P2 | East Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P3 | North Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P4 | West Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| All Pedestrians | | 211 | 39.3 | LOS D | | | 0.94 | 0.94 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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# MOVEMENT SUMMARY

## Site: [Union Road & Worth Street]

Existing PM
Site Category: (None)
Signals - Fixed Time Isolated  Cycle Time = 90 seconds (Site Optimum Cycle Time - Minimum Delay)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Worth Street South | | | | | | | | | | | | |
| 1 | L2 | 22 | 5.0 | 0.272 | 46.9 | LOS D | 2.3 | 16.9 | 0.95 | 0.74 | 0.95 | 33.8 |
| 2 | T1 | 14 | 5.0 | 0.272 | 41.3 | LOS C | 2.3 | 16.9 | 0.95 | 0.74 | 0.95 | 34.4 |
| 3 | R2 | 19 | 5.0 | 0.272 | 46.8 | LOS D | 2.3 | 16.9 | 0.95 | 0.74 | 0.95 | 33.7 |
| Approach | | 55 | 5.0 | 0.272 | 45.4 | LOS D | 2.3 | 16.9 | 0.95 | 0.74 | 0.95 | 33.9 |
| East: Union Road East | | | | | | | | | | | | |
| 4 | L2 | 17 | 5.0 | 0.126 | 19.5 | LOS B | 2.7 | 19.6 | 0.59 | 0.51 | 0.59 | 47.1 |
| 5 | T1 | 94 | 5.0 | 0.126 | 13.9 | LOS A | 2.7 | 19.6 | 0.59 | 0.51 | 0.59 | 48.3 |
| 6 | R2 | 349 | 5.0 | 0.704 | 29.4 | LOS C | 13.0 | 94.9 | 0.86 | 0.85 | 0.90 | 39.6 |
| Approach | | 460 | 5.0 | 0.704 | 25.8 | LOS B | 13.0 | 94.9 | 0.80 | 0.77 | 0.82 | 41.4 |
| North: Worth Street North | | | | | | | | | | | | |
| 7 | L2 | 282 | 5.0 | 0.708 | 42.4 | LOS C | 12.0 | 87.7 | 0.98 | 0.86 | 1.04 | 34.7 |
| 8 | T1 | 20 | 5.0 | 0.492 | 33.7 | LOS C | 7.7 | 56.4 | 0.92 | 0.80 | 0.92 | 36.7 |
| 9 | R2 | 177 | 5.0 | 0.492 | 39.3 | LOS C | 7.7 | 56.4 | 0.92 | 0.80 | 0.92 | 36.0 |
| Approach | | 479 | 5.0 | 0.708 | 40.9 | LOS C | 12.0 | 87.7 | 0.96 | 0.84 | 0.99 | 35.3 |
| West: Union Road West | | | | | | | | | | | | |
| 10 | L2 | 105 | 5.0 | 0.077 | 8.6 | LOS A | 1.2 | 8.5 | 0.27 | 0.64 | 0.27 | 51.2 |
| 11 | T1 | 127 | 5.0 | 0.164 | 14.8 | LOS B | 3.5 | 25.3 | 0.61 | 0.52 | 0.61 | 48.0 |
| 12 | R2 | 11 | 5.0 | 0.164 | 20.4 | LOS B | 3.5 | 25.3 | 0.61 | 0.52 | 0.61 | 46.6 |
| Approach | | 243 | 5.0 | 0.164 | 12.4 | LOS A | 3.5 | 25.3 | 0.47 | 0.57 | 0.47 | 49.3 |
| All Vehicles | | 1237 | 5.0 | 0.708 | 29.9 | LOS C | 13.0 | 94.9 | 0.80 | 0.76 | 0.82 | 39.6 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P2 | East Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P3 | North Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| P4 | West Full Crossing | 53 | 39.3 | LOS D | 0.1 | 0.1 | 0.94 | 0.94 |
| All Pedestrians | | 211 | 39.3 | LOS D | | | 0.94 | 0.94 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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GMU
Urban Design & Architecture

**Urban Design Comments on Amended plans for 36-38 Rodley Ave, Penrith**

GMU has been requested by Council to provide an urban design review of the Amended Development Application plans (Amendment B) for 36-38 Rodley Ave, Penrith. This review has included consideration of the Architectural Plans and Landscape Plans against SEPP 65 principles and the Apartment Design Guide.

The site is located in Rodley Ave which is to the south of High St and the main centre of Penrith. The site is currently within a residential neighbourhood that abuts the Penrith Raceway. It is within an R4 zone that is intended for revitalisation and redevelopment to support Penrith town centre.

The area is in a state of transition from single family dwellings to residential flat buildings. Therefore, it is the desired future character which should be the main driver for considering new developments in this area.

The site is not subject to an FSR control and the height control is 18m. This is resolving into 5 storey buildings with a setback upper floor where new development is occurring in the zone nearby. The site is not in the vicinity of any heritage items. The site is outside the designated area for Penrith City Centre.

The site has the benefit of a sweeping outlook to the south over the Raceway. Whilst this provides expansive views it also means that the proposal is easily visible from the Raceway and to some degree from Mulgoa Road.

The site is not within any special area or Precinct and therefore Part 2.5 Residential Flat Buildings in DCP 2014 is the main document dictating key relationships and form for the development. In assessing this Development Application it is important to consider objectives within the DCP for how such buildings should be configured. These include:

- That new development should adopt key features of established suburban design
- That dwellings look towards the street and the rear boundary.
- Overlooking of neighbouring properties is to be avoided
- That development provide a ‘green corridor’ of trees and shrubs along the rear boundary

Further to the above the DCP Section 2.4 Urban Form seeks to avoid gun barrel style developments with rows of uniform width side setbacks. One method of achieving this in the DCP is to vary the widths of side setbacks with a combination of courtyards and accessways. The DCP seeks 35% of landscaped area. Front setbacks are to be an average of the street or 5.5m (whichever is greater), rear setbacks are to be a minimum of 6m and side setbacks are required to be ‘reasonable’. Privacy controls apply but are now overridden by the ADG.

Many of the controls in the DCP seem focused on low scale apartment development rather than 6 storey built form and therefore review of the proposal must adopt a merit assessment approach against the ADG and SEPP 65.

Rodley St exhibits a fairly consistent subdivision pattern to the southern side of the street. Sites are roughly 15-16m frontages with a depth of around 35m. The existing dwellings adopt a varied street frontage setback and rear setback line however they are reasonably consistent in the side setbacks with close proximity between dwellings close to the street and then the majority of landscaped space

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to the rear of the site. This establishes a strong rhythm to the street and clearly defines the rear of the lot from the side or front of the lot as a defensible and private space.

Comments on the proposal –

**Context and Neighbourhood Character:**

- This neighbourhood is in transition therefore the character will be set by the new controls. This results in 18m high apartment buildings which should establish a new 'grain and street rhythm' but should also respect key aspects of the traditional lot subdivision pattern, street setback to the front boundary and a clear definition of the front and rear of the lot. Side setbacks should be defined by a combination of establishing an appropriate relationship between buildings as a streetscape ie. narrow dimensions to demonstrate definition of public to private areas combined with separation distances under the ADG.
- Rear setbacks should respect the traditional lot pattern with a defined and clear 'rear' garden area along the back of the lots to sustain new trees.
- This site and others along the southern side of Rodley Ave benefit from overlooking a large green space therefore the rear setback that might otherwise be appropriate is supplemented by the open space of the Raceway.
- The characteristics of this area currently are tighter spatial relationships between the built forms to the side boundaries than to the front and rear boundaries. Therefore, an appropriate setback is needed that balances the height and frontage width of these new apartment buildings but still defines and defends the rear private areas from the public streetscape.
- Gun barrel consistent setback approaches should be avoided to achieve the character identified in Councils controls but also on good urban design grounds.

**Built form and scale:**

*Building footprint and boundary relationships -*

- The proposal adopts a 'fat' T shaped form and footprint. It responds to the predominant existing front setback and relates appropriately to the street in the positioning of the massing.
- The scheme then provides a 4m setback to each side boundary for the front portion of the building. This increases to between 6 and 7m along the remainder of the side boundary.
- The rear of the building adopts a 6m setback to the boundary.
- The design of the units does not orient habitable areas with their primary outlook towards the side boundary at the front where the side setbacks are 4m. The apartments are designed to be oriented to the street and rear of the lot ( and paceway) which is entirely appropriate. Where bedrooms are located with side boundary outlooks, they are setback 6m and satisfy the ADG on the lower levels.
- This scheme therefore responds to the DCP's objective to see dwellings oriented to the street and rear garden and not oriented to side boundaries.
- The T shaped form avoids the long gun barrel approach with consistent side setbacks for the entire building.
- This is a positive approach and good urban design practice as it establishes a different and slightly tighter rhythm of built form to space between buildings along the street creating the



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defensible boundary to the private areas and creates a sense of a more generous spatial arrangement to the private rear of the building.

- The separation of 4m when continued along the street, will deliver a positive and appropriate balance of 15m high street wall to 18m high buildings to 8m landscaped gaps between buildings. This creates approximately a 2:1 ratio which is a pleasant proportion for spatial definition. To the rear of the building the side setbacks widen out to 6 and 7m providing for more landscape and increased space between buildings that also responds to the rear setback. The different setbacks and this approach clearly differentiates side boundary relationships from separation distances, and this is expected and sought by the ADG.
- Provision of a consistent 6m all the way around such buildings would be a poor outcome with no hierarchy of space around the building and encourages dwellings overlooking side boundary conditions.
- This approach is consistent with 2H Side and Rear Setbacks in the ADG and is illustrated in Figure 2H.2 and 2H.3 which both show that on infill sites side setbacks should be limited so habitable rooms are located to face the street and rear boundary.
- The proposed rear setback is 6m. Given the benefit gained by looking onto the open space to the rear this is considered acceptable.

*Ground level response –*

- The proposal provides a driveway, pedestrian entry, front setback area including landscape and flood storage areas as well as a substation. One apartment addresses the street with habitable rooms providing surveillance. A side pathway is provided to the east to give access to the communal open space to the rear of the site. The western side is a stormwater easement.
- Side setbacks appear to be generally landscaped and that it will be possible to plant trees and landscape in the stormwater easement whilst creating a swale type environment for water movement.
- The double width driveway is not ideal but given Council traffic requirements in this situation it is unavoidable.
- The inclusion of a substation in the front setback is a poor result. Ideally such elements should be within the building form and if this is not possible then they should be screened by a removable fence that matches the remainder of the fence treatment.
- The inclusion of large areas of flood storage is also a concern.
- No sections are provided to explain the exact relationship of these areas to the street and courtyard RL's or to show whether use of this space for flood storage would impact the ability to successfully landscape the front setback. The landscape plan indicate some sort of planting, but it is not clear how this would work.
- The ground level apartment is provided with a direct street access which is supported.
- To the rear of the site are an apartment and common room. The apartment also benefits from generous private open space that is well landscaped. The common room is located with an outdoor area with facilities and landscaping. However, a bio retention basin is shown adjacent to the side boundary and it has a wooden deck structure over it. It is not clear whether this structure could create additional privacy impacts for the adjacent property.
- The fencing to the front boundary is overly high. Given the setback to the building and the raised level of the terrace to the unit addressing the street a fence of 1.1m is sufficient.

*General building layout –*



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- The general layout adopts a 4 unit configuration. This is an excellent layout that has two units facing the street and 2 to the rear with a central circulation area and core. The circulation area defines the two built form wings containing apartments and benefits from outlook, ventilation and light, whilst also providing articulation to the building form along the side boundaries. The T shaped form also assists in reducing the apparent building length and bulk to the side boundaries.
- All apartments have dual aspects with excellent amenity.
- A new top floor plan is not provided but the original top level shows 2 apartments per floor with 3 aspects per apartment and a setback to the top floor all the way around the building. This provides 7m and 9m setbacks and is an appropriate response to the streetscape and ADG separation requirements.
- With amendments to address the driveway width and impacts, the substation design and the flood storage impact the proposal satisfies this principle and would be supportable.

**Density:**

- There is no FSR for this site, so a merit assessment of other factors is needed to determine if the density is appropriate and if the proposal achieves quality outcomes under the other principles.
- The setbacks, building scale and massing are considered acceptable and provide a positive precedent for future developments in this precinct. Subject to resolution of the ground plane in the front setback area and ensuring appropriate privacy for adjacent lots the density is considered acceptable and the proposal would satisfy this principle.

**Sustainability:**

- No information has been provided on this aspect as Council is assessing it.

**Landscape:**

- The landscape strategy support 'greening' to all sides of the building including the side boundaries and stormwater easement.
- There is concern about the impacts of the flood storage areas on the capacity to achieve a quality landscape solution for the front setback.
- It is noted that only 2 street trees are proposed. Ideally an additional tree should be provided in the grass strip in front of the layby area.
- It is noted that the basement does not sit solely below the building which is not ideal. However, the layout does appear to be efficient.
- Councils landscape architect will assess the landscape proposition in greater detail.

**Amenity:**

- The amenity of the apartments is high. All are dual aspect or more, all benefit from excellent cross natural ventilation opportunities and have good spatial arrangements.
- Layouts for furniture appear workable although the location of the dining tables in front of the powder room doors is not ideal.
- Balconies are reasonable proportions.



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- All habitable rooms benefit from external windows and primary windows are all setback as required by the ADG to achieve reasonable privacy separation.
- Secondary windows are closer than 6m but these are narrow slot windows to create visual interest in the side walls and can be obscure glass, so they provide light but not outlook.
- There is no overlooking from the building and generally the units minimise their orientation to the side boundaries which is positive.
- The building entry is easily identified, and the pathway is separated from the driveway which is positive.
- The lobby is reasonably generous, and the location of the entry doors is appropriate.
- All residents have access to the ground level communal room and open space and this space appears to achieve the required solar access.
- Solar access is documented in a rather unorthodox manner in the original DA and new diagrams have not been provided for review, so it is assumed that Council is assessing solar compliance.
- Storage is provided in the subbasement and within all units.
- The only area of concern with privacy is with the raised ground level and terraces condition relative to the levels on adjoining properties. There is potential for overlooking due to this level difference and this is particularly of concern for the communal room terrace. To mitigate this the landscape between the boundary and terrace should include thick hedge species to ensure no overlooking results.
- Also, the area of terrace towards the side boundary for the COS should be reduced in depth to only 1.2m so it is used only for movement in and out of the communal room and not as a place to dwell.
- Fences of 2.1m height are proposed. This is not supported if these fences are solid for their full height as it will increase overshadowing to the neighbours. However, a slatted top portion could be provided that would provide some visual screening but still allow some light and a greater feeling of openness.

**Safety:**

- Overall the proposal has provided positive passive surveillance and safety for the development.
- The location of the intercom in the front setback is not considered ideal and should be reconsidered.

**Housing Diversity and Social Interaction:**

- The proposal provides 2 and 3 bedroom units. This offers some diversity but does not contribute particularly well to more affordable housing offerings in the area.

**Aesthetics:**

- The proposal is a well-mannered building that will fit well into the future context. It has a defined top, middle and base and offers articulation and well considered proportions.
- The predominant material is brickwork with Aluminium cladding and this creates an attractive building with reduced maintenance requirements for future residents.



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- The proposal achieves a reasonable aesthetic outcome and satisfies this principle.

Yours Sincerely,



Ms Gabrielle Morrish
Managing Director

**GM Urban Design & Architecture Pty Ltd**



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