PENRITH
CITY COUNCIL

MAJOR ASSESSMENT REPORT

Application number:	DA18/0860
Proposed development:	Demolition of Existing Structures & Construction of a Six (6) Storey Residential Flat Building including 17 Apartments & Two (2) Levels of Basement Car Parking
Property address:	1 Station Lane, PENRITH NSW 2750
Property description:	Lot 2B DP 161921
Date received:	27 August 2018
Assessing officer	Lauren Van Etten
Zoning:	Zone R4 High Density Residential - LEP 2010
Class of building:	Class 2 , Class 7a
Recommendations:	Refuse

Executive Summary

Council is in receipt of a development application for the Demolition of Existing Structures & Construction of Six (6) Storey Residential Flat Building including 17 Apartments & Two (2) Levels of Basement Car Parking at Lot 2B DP 161921, No. 1 Station Lane, Penrith.

The subject site is zoned R4 High Density Residential under Penrith Local Environmental Plan 2010 (PLEP). Development for the purposes of a residential flat building is a permissible land use in the zone, with consent.

This application is to be determined by the Penrith Local Planning Panel who are the consent authority for the development application (as directed by the Minister for Planning under Section 9.1 of the Act), as the development is a development type to which State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development applies, and is 4 or more storeys in height.

Key issues identified for the proposed development and site include:

- Reliance on access over the adjoining Lot 18 DP 122079, Station Lane, owned by Penrith City Council. No owner's consent for the use of this land or inclusion in this application has been provided and no agreement has been reached for purchase of the land or granting of an easement or right of carriageway to permit vehicular access.
- Inconsistency with State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development.
- Inconsistency with key objectives and the design criteria of the Apartment Design Guide (ADG) in relation to building bulk and scale, landscape design and residential amenity.
- Non compliance with Penrith Local Environmental Plan 2010 (PLEP) including the aims of objectives of the Plan, the objectives of the R4 High Density Residential zone and the objectives of the minimum lot size and height of buildings clauses.
- Non compliance with Penrith Development Control Plan 2014 (PDCP), including setbacks, waste management, landscaping, context and character, and amenity.
- Overbearing, built form presentation, visual and amenity impacts related to bulk and scale.
- Insufficient information related to waste management, manoeuvring, Water Sensitive Urban Design (WSUD) and flooding.
- No access to the site and no legal arrangements being in place.

These key issues were raised with the applicant and in correspondence dated 16 October 2018 it was requested

that the development application be withdrawn as without the acquisition of Council's land, the site's size and width cannot provide sufficient separation and setbacks between built forms to achieve the objectives and design criteria within the State Environmental Planning Policy 65 Design Quality of Residential Apartment Development, Apartment Design Guide and Penrith Local Environmental Plan 2010 and mitigate adverse impacts. The applicant was requested to present a revised proposal to Council's Urban Design Review Panel upon satisfactorily addressing all points raised within previous UDRP18/0006 correspondence. These points included discussions with Council's Property Division and the acquisition of Station Lane and the incorporation of this area into the landscape/open space design. It is considered premature to consider the application or re-lodgement of a new development application until all previously identified issues, in particular the adequacy of the lot size has been resolved.

Subsequently, the application was not withdrawn and amended plans were submitted on 9 November 2018. A review was undertaken of the amended plans, which form the basis of this assessment, however the fundamental issues remain unresolved. As part of the amended information, the applicant indicated that a request had been made to Penrith City Council to purchase the land. While so, this is a lengthy process separate to this Development Application and has a high level of uncertainty at this early stage. Further, this application has not been formally amended on the application form to include the additional land, nor has owner's consent been provided. It would be appropriate for a new Development Application to be made correctly if the land purchase is agreed to and the application can be dealt with in the appropriate manner with respect to transparency.

The application has been notified to adjoining properties and was exhibited and advertised between 14 September 2018 to 28 September 2018 in accordance with the applicable legislation. Eleven (11) submissions were received from the adjoining owners (including two separate submissions from the one person during this period). Matters raised related to traffic and access impacts, flooding, overdevelopment, character, overshadowing impacts, privacy loss and impacts during and post construction including damage to adjoining buildings.

The development application was also referred to the Nepean Local Area Command (LAC) of the NSW Police, however no response was received.

An assessment under Section 4.15 of the Environmental Planning and Assessment Act 1979 has been undertaken and the application is recommended for refusal. The constraints of the subject site do not make it currently suitable for a residential flat building. Without the acquisition of Station Lane, the site's size and width cannot provide sufficient separation and setbacks between built forms to achieve the objectives and design criteria within the State Environmental Planning Policy 65 Design Quality of Residential Apartment Development, Apartment Design Guide and Penrith Local Environmental Plan 2010. Matters related to bulk and scale, building separation, waste management, site isolation, parking, landscaping, common open space and amenity have not been adequately addressed by the amended design. Information related to flooding, water sensitive urban design and solar access has also not been provided.

Site & Surrounds

The subject site is located at the southern end of Station Lane approximately 80m south of Union Road, Penrith. The site comprises one allotment containing a single storey dwelling house with ancillary structures. The site has a total area of 663m².

Development in the immediate vicinity of the site is dominated by 3 to 4 storey residential flat buildings. The wider area is populated by a mixture of single dwelling houses and multi dwelling housing ranging in height from 1 to 2 storeys. The site shares its eastern boundary with part of Station Lane which is technically a private lot that is Council owned. The western boundary is shared with one allotment with frontage to the cul-de-sac off Union Road known as 28A Union Road which contains a 4 storey residential flat building. A residential flat building also exists immediately to the north of the site at 20 Station Lane and east of Station Lane at 115 Station Lane.

Ripples Leisure Centre is located directly to the south-west with the Penrith Paceway further to the south-west. Penrith City Centre is to the north of the site. Penrith Railway Station is located approximately 450m to the north.

Station Lane is a narrow lane servicing other residential flat buildings in the locality. Council's Local Traffic Committee has recently endorsed a proposal to implement "No Parking" restrictions along the western side of the Lane. Several street trees are located within the site and no pedestrian pavement is currently provided along the lane.

The southern end of Station Lane is an individually titled lot known as Lot 18 DP 1220719 and is currently utilised for access to the subject site and Council's stormwater channel to the south and is highly constrained by existing services. There are no formal legal access rights over this land in favour of the subject site and as such the subject site is historically landlocked with no legal access.

Proposal

Background

The applicant attended a pre-lodgement meeting (PL18/0012). The discussion of the design was deferred to the UDRP however other key matters raised as issues included:

- Undersized site resulting in a non-compliance with Clause 4.1A of PLEP 2010..
- If the purchase of the part closed Station St is agreed by Council, the land is required to be incorporated into the overall site area to satisfy PLEP 2010 lot size requirements.
- Noted that Station Lane is highly constrained by services and required for access to Council's stormwater channel to south.
- Height limit is exceeded and should have appropriate regard to surrounding context and lower built form.
- SEPP 65 Compliance.
- General planning issues including contamination, noise, waste, water quality, stormwater, flooding, traffic, earthworks and Building Code of Australia compliance.

The applicant attended a UDRP meeting (UDRP18/0006) where advice was provided which expanded on the pre-lodgement concerns, with the key issues being:

- Proposal does not suitably respond to the constraints of the site or sufficiently demonstrate compliance with key requirements of planning controls.
- Variation to minimum lot size not supported.
- Acquisition of laneway is necessary and incorporation into the development design as usable space to contribute to the built form and landscape design.
- Insufficient basement boundary setbacks.
- No identifiable entry into the development, common open space at ground level, suitable waste collection arrangements or landscape treatments.
- Changes required for ADG compliance in particular solar access and setbacks / separation.
- Green space separation, visual breaks between built form and landscape solution including deep soil and canopy tree plantings required.

- Reduction in setbacks to the southern and northern boundaries may be reasonable due to the existing setback of the northern RFB development (greater than 12m) and the drainage infrastructure to the south.
- A variation to building height is not suitable given the surrounding established lower built form and the battle axe / constrained nature of this site.
- Proposal does not meet floor to ceiling and floor to floor requirements.
- The proposal requires stepping of the built form at level 5 and 6 to both the western and eastern boundaries to address these requirements noting the adjacent development to the east is only 4 storey's in height and to the west is indicated to be 3 storey's in height. The scale of the proposal must suitably transition and respond to the existing built form that surrounds it.
- Revised plans should show how the surrounding built form character has informed the proposed development in terms of setback, separation and building height.
- The landscape design will be critical in considering any variations or departures from the ADG or SEPP provisions.
- The solution to waste management should not be at the expense of good urban design outcomes with respect to ground floor design treatments and landscaping outcomes.
- The acquisition of the closed laneway and the resulting incorporation of this land into the development must be meaningful and ensure that a suitable development outcome is achieved on the site. This is necessary to ensure that the objectives of the zone and the lot size restrictions within the LEP have been met. The closed laneway and the existing easements that restrict development potential in the laneway must be carefully considered, integrated into the design of the development and ensure that any access or maintenance requirements to Council's drainage infrastructure are integrated into the landscape design of the space.
- A further urban design review panel meeting is required once a revised design is prepared, which addresses the above comments and satisfies the requirements outlined within the pre-lodgement meeting.

Current Proposal

The development proposal was amended during the assessment of the application. The final proposal upon which the assessment has been based comprises of the following:

- Demolition of all structures on the site and construction of a 6 storey residential flat building containing 17 Apartments (8 x 1 bed, 8 x 2 bed & 1 x 3 bed);
- Two levels of basement car parking containing 14 car parking spaces, a Hercules turning table to allow vehicles to enter and leave in a forward direction and single car lift to upper floors and to ground level providing for access to and from Station Lane.
- Vehicular and pedestrian access to the site and basement from Station Lane and Lot 18 DP 1220719 via either the purchase of Lot 18 or creation of a right of carriageway (note: not yet agreed by Council's Property Section).
- Provision of a waste collection bay within the ground floor of the building with access via Station Lane and Lot 18 DP 1220719. Orientation of the proposed building to the east, towards Station Lane and Lot 18 DP 1220719, with a zero boundary setback.
- Ancillary pavement, landscaping, fencing, utility services and retaining walls. Provision of an embellished area of common open space and detention basin along the western side of the building.
- Tree removal.
- Materials comprise a mixture of face brick, render, metallic copper, within a complimentary colour palette of orange, brown and grey.
- A maximum height of RL 46.4m AHD or 19m.
- Consolidation of the two parcels of land and creation of appropriate easements and rights-of-access over the land to accommodate services and access to Council's drainage channel at the southern end of Station Lane, subject to agreement being breached with Council's Property Section. (Note: a request only has been made at this stage and Lot 18 DP 1220719 was not included in the application).

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 Environmental Planning and Assessment Act 1979, and having regard to those matters, the following issues have been identified for further consideration:

Section 79C(1)(a)(i) The provisions of any environmental planning instrument

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

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 aims ensure consistency in the implementation of the BASIX scheme throughout the States and achieves its aim by overriding provisions of other environmental planning instruments and development control plans that would otherwise add to, subtract from or modify any obligations arising under the BASIX scheme.

The Policy requires certain kinds of residential development to be accompanied by a list of commitments to be carried out. This application is subject to these requirements as it involves the construction of a residential flat building. A BASIX Certificate was submitted with the development application demonstrating compliance with set sustainability targets for water and energy efficiency and thermal comfort. Information submitted with the development application and accompanying BASIX certificate are assessed to satisfy the provisions of the Policy, however, the application is recommended for refusal based on other matters detailed elsewhere within this report.

State Environmental Planning Policy No 55—Remediation of Land

The proposal has been assessed against the applicable provisions of the State Environmental Planning Policy No 55 - Remediation of Land and is found to be acceptable. The development application and the accompanying additional information was referred to Council's environmental management team and no objections were raised.

The applicant has submitted a *Preliminary Site Investigation: 1 Station Lane, Penrith NSW*, prepared by Benviron Group dated July 2018. This report generally followed the methodology required by the guidelines, and gave consideration to historic aerial photographs, records and included preliminary sampling at two locations. The investigation concluded that the risks to human health and the environment are low, and that the site is suitable for the proposed development subject to waste classification and asbestos clearance post demolition.

It is noted that the Preliminary Site Investigation was referred to Council's Environmental Management Section who have advised that the proposal is considered compliant with the provisions of SEPP55.

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

An assessment has been undertaken of the development proposal against the aims and objectives and specific provisions of State Environmental Planning Policy No. 65—Design Quality of Residential Apartment Development. In particular, the development proposal has been assessed against Clause 30 of the Policy which states that:

"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 the design quality principles, and the objectives specified in the Apartment Design Guide for the relevant design criteria"

The development application as lodged, was submitted with a design verification statement (DVS) which addressed the principles and ADG. However, it is considered that the proposed development has not demonstrated that adequate regard has been given to all of the design quality principles of the Policy.

An assessment against Schedule 1 Design quality principles, of the Policy has been undertaken and is included in **Table 1** and an assessment against the accompanying Apartment Design Guide is also provided in **Table 2** below.

Table 1: Assessment Against Schedule 1 - Design Quality Principles	Officer Discussion

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. 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. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.	The DVS indicates the area is under transition and that the development includes articulation and modulation. The design is not considered to appropriately respond to the context of the site, the constraints of the site or positively contribute to the identity of this area or its context. The development as proposed does not have sufficient regard to the smaller scale development in the vicinity, which is 3-4 storeys comprising residential flat buildings and multi-unit housing. These are unlikely to be redeveloped in the immediate future and as such the adjoining area is not under transition from low to medium or high scale residential development that would substantiate the form of development proposed. The site is located along Station Lane with no direct street frontage, however the proposed 6 storey building will be highly visible from the south and will extend 2 or more storeys above the existing adjacent built form. The zero setback to the eastern boundary is uncommon in the area and is not considered desirable. The current proposal, without permission from Council to use Lot 18, DP 1220719 or an agreement reached for purchasing, is not considered to achieve an appropriate design solution with its surrounds. In considering and designing with respect to local context, the building should be lower in height and the access and ownership issues resolved prior to design being finalised to allow for a cohesive development with its surrounds.

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. 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. 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	As detailed above the development does not adequately respond to the site's context, that being an infill development on a small and narrow site, irregular in shape at the northern and southern boundaries and without legal access. It is considered that the proposed development does not incorporate high quality facades with balanced composition of varied building elements. The solid, flat wall to the east, hard on the boundary has no visual interest or relief or opportunity for landscaping. The building exceeds the maximum 18m height control by up to 1m, which appears to be a response to the small site, but in doing so, the scale is not appropriate with respect to the 3-4 storeys surrounding and is not a desirable outcome for this area. Even without a street frontage, the 6 storey building will be visible from the public domain above the existing buildings and from the south. The built form and scale is not suitable for the subject site and not reflective of the desired future character of the area.
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. 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 DVS indicates that the density and yield is appropriate for the site and its location. The development is considered to be excessive in bulk and scale and does not provide for acceptable internal or external amenity for residents. The density of the development is considered to result in poor unit amenity and insufficient setback to balconies from the boundaries as well as insufficient landscaping surrounding the building.

Principle 4: Sustainability	Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.	The DVS indicates that cross ventilation and solar access requirements are satisfied and that good size balconies, shading devices and insulation are proposed, in addition to BASIX requirements. Therefore, there is no issue with this principle.

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. 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. Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.	Deep soil on the calculations drawing was identified along the western boundary. However, the submitted hydraulic plans indicate this area will include a bioretention basin with limited shrubs in part and the majority ground covers. As such, deep soil planting and the associated screening and softening benefits from landscaping are not being achieved for a large part of the deep soil area. Minimal deep soil is provided for substantial or sustainable canopy tree planting. Inadequate landscaping is provided to the frontage as a zero setback is proposed to the east. The plans indicate indicative landscaping on Council's land (Lot 18) however this land is not part of this application. Further, the detailed landscape plan does not cover this area. Landscaping primarily has only been provided for the western side with the common open space and drainage basin. This results in a hard appearance to the other three sides. It is considered necessary for the built form to be softened and integrated into the existing lower scale environment and layered landscaping around the building is necessary but not provided. The site streetscape or public domain is not considered to be enhanced or complemented by the development.

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. 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 amenity of the lower scale (2-4 storey) development to the adjoining sites has not been adequately addressed by the scale, density, landscaping or massing of the development. Given these comprise many owners it is unlikely these buildings will be re-developed in the near future and as such it can reasonably be assumed that the existing form will remain. The DVS indicates the balconies are an extension of the living areas, a high level of privacy is provided by use of louvres, 2 hours of sunlight is achieved and the unit sizes comply. The balcony siting up to the boundaries raises concern with respect to potential amenity impacts in terms of overlooking, noise and amenity for the occupants. The siting of the building hard on the eastern boundary without having resolved the ownership of Lot 18 has the potential for future amenity issues for the occupants in this area of the building, as well as a conflict with the need for Council's vehicles to access the stormwater drainage to the south.

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. 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 DVS indicates the proposal is well lit along pedestrian access points into the building and basement and that one clear entry point is provided and the basement is secure. The unresolved issue of Lot 18 ownership, along with a zero side setback of the building to the east results in this lot not being included in the overall design to provide clear pedestrian pathways into the development, in conjunction with a landscape design and necessary vehicle access for Council vehicles to the south and other vehicles such as garbage trucks. As such, this area to the east of the building is considered unsafe and due to the multiple conflicting uses to be provided does not clearly identify what is public and private land. The entryway to the site via the side is not improved by the inactivity of this area, a recessed entry or the location of the lift entry doors that face away from the ground floor lobby entry. Poor CPTED outcomes are foreseeable due to the above unresolved ownership issue and lack of design of the eastern side of the development.
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. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. 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 mix of units in the development is acceptable and a central lobby is proposed.

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. 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 DVS indicates that the proposed design is contemporary in style and materials and makes a positive contribution to the streetscape. The review against the principles has concluded that the large amount of hard form, with lack of landscaping, breaks or articulation or reduction in massing results in a development that is assessed to be excessive in bulk and scale. As detailed elsewhere in this table and in the assessment of the development against the Apartment Design Guide (ADG) below, the development is contrary to the design criteria and design guidance statements of the ADG. The design of the building does not respond adequately to the constrains of the site, the site dimensions, adjoining development or the needs of the future residents. The lack of design along the eastern portion of the site in both built form, connectivity for pedestrians and vehicles and landscaping has resulted in an unbalances development. The development will detract from the streetscape, being highly visible above the existing built form and does not provide for adequate landscaping, deep soil or canopy tree planting around the edges of the site.

Table 2: Assessment Against the Apartment Design Guide (ADG)

Part 3	Required	Discussion	Complies
3A-1	Each element in the Site Analysis Checklist should be assessed.	A Site Analysis plan was submitted with the application and identifies applicable elements as required within the Checklist. A written description of the proposal and subject site are also included in the submitted Statement of Environmental Effects and accompanying plans and reports.	Yes.

3B-1	Buildings to address street frontages.	The proposed access to the lobby at ground floor is not supported as no landscaped buffer is provided to the east. No deep soil areas capable of accommodating substantial planting such as canopy trees are provided within the front setback or along the entryway or adjacent the lobby. No clear delineation of pedestrian and vehicular access or public or private domain is provided noting the nil building setback proposed along the eastern elevation fronting Station Lane. The eastern elevation to Station Lane (Lot 18) functions as the main entry, service area, basement entry and access for Council to the stormwater drain. As the building is hard on this boundary, there is no street frontage. As the ownership or permission to use Lot 18 has not been resolved, improvements on this land cannot be considered as part of this application, but must be considered in the overall design.	No.
3B-2	Living areas, Private Open Space (POS) and Communal Open Space (COS) to received compliant levels of solar access.	Refer discussion under Part 3D and 4A.	N/A.
	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%	Submitted shadow diagrams do not adequately demonstrate that additional overshadowing attributed to the subject development will not reduce the amount of solar access available for the private open spaces and living zones of the adjacent properties. It is noted that the 3pm shadow diagrams are cut off and do not detail the full extent of the impact for existing buildings adjoining to the east of the subject site. Further, adjoining buildings have not been plotted on the shadow diagrams to ensure the review can be accurately undertaken. The shadow diagrams provided are considered inadequate in nature to allow for a full and proper analysis of the proposed impact to adjoining built forms with only basic 9am, 12pm and 3pm shadow casting shown rather than a more analytical assessment of the impacts.	No.
	If the proposal will significantly reduce the solar access of neighbours, building separation should be increased.	As discussed above, inadequate information has been submitted with the development application to enable an accurate assessment.	No.
3C-1	Terraces, balconies and courtyard apartments should have direct street entry, where appropriate.	No units in this development has street frontage.	N/A

	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.	The flood planning level difference required between the natural ground level and the finished floor height of the ground floor apartments results in 1m high concrete walls along the side boundary.	No
	Upper level balconies and windows to overlook the street.	No units in this development has street frontage.	N/A
	Length of solid walls should be limited along street frontages.	No street frontage.	N/A
	Opportunity for concealment to be minimised.	Due to the design fronting the laneway (Lot 18) and central location of the indented lobby, areas of concealment and crime are provided at several locations along the main ground floor lobby entry. The design does not provide for a direct sightline of the lifts from the main entry but will rather require persons to follow an irregular internal corridor to access them. The lift also faces internally and away from the lobby entry doors which is not an acceptable design solution.	No.
	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.	No seating near the building entry is provided. This is considered a consequence of the nil building setback for the eastern façade fronting Station Lane which restricts any opportunity for any design features to encourage casual interaction from the development to the public domain.	No.
3C-2	Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided.	Mail box locations are nominated on plans.	Yes

	Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view.	Electrical substation is unknown if required. Garbage storage rooms are integrated into the building and roller door entries are proposed to be aligned with the building. While so, the location of these roller doors are considered prominent on the round floor next to the main entry, fronting the east. Landscaping is inadequate and will not mitigate against negative visual impacts. The location of the fire hydrant booster set is not known at this stage as a position has not been identified. There is a potential for services not indicated on the plans to be necessary and located on Lot 18 (if agreement reached on purchasing). Theses services and the need for pedestrian pathways and landscaping may conflict with the need for vehicular access to the garage area and the stormwater drain.	No.
3D-1	Communal Open Space (COS) to have minimum area of 25% of site.	165m² of COS is required under the ADG (25% of total site area). 165m² is indicated on the plan, however this includes a bio-retention basin with accompanying retaining walls which is not considered suitable to be included in the calculations. The area of COS is provided centrally along the western boundary of the site. Notwithstanding the above, the reduced area of COS is not supported. The reduced proposed COS area is not assessed to be a high amenity or usable space for residents and positioned to create overlooking from the proposed building a well as it surrounds.	No.
	Achieve a minimum of 50% direct sunlight to the principle usable part of the communal open space.	Yes, but insufficient overall size.	No.
	COS to be consolidated into a well-designed, usable area.	Yes, but insufficient overall size.	No.
	COS to be co-located with deep soil.	Yes, but insufficient overall size.	No.
3D-2	COS is to be provided with facilities such as barbeque areas and seating.	Adequate seating or barbeque areas are provided within the COS area.	Yes
	COS is to be well lit and readily visible from habitable rooms.	Views down to the COS area are available.	Yes
3D-4	Boundaries should be clearly defined between public open space and private areas.	Boundaries between public and private space are unclear as the ownership issue with Lot 18 is unresolved.	No.

3E-1	Deep soil is to be provided at a rate 15% with a minimum dimension of 6m.	Deep soil is calculated as being 36% and is provided in a 6m wide strip along the west side of the site. However, a stormwater basin is proposed in this area with limited opportunity for deep soil planting so this full area is not achieved. No other opportunities exist for deep soil planting along the other three boundaries, which is not an acceptable design solution.	No.
3F-1	Minimum required shared separation distances between habitable rooms and balconies are to be as follows: 1-4 Storeys – 12m 5-8 storeys – 18m	The plans include details of the separation between habitable rooms and balconies and indicate compliance. However, the northern boundary has the balconies up to the boundary, with no room for landscaping for screening. This requires all privacy measures to be accommodated within the adjoining site in the existing setback, which is unreasonable to the existing residents and future occupants of this development. Further the eastern boundary is not stepped along the 5th and 6th floors as UDRP had required. The proposal is a zero setback and 6m if Station Lane were to be included. The proposal does not propose a greater setback as is required for storeys 5-8. The reduced setbacks on site are reflective of the small size of the site, inappropriate for this form of development which indicates an overdevelopment of the site.	No.
3F-2	Communal open space, common areas and access paths to be separated from private open space and windows to apartments.	Privacy to the ground floor rooms of the unit adjacent to the shared lobby access is not addressed by the design. Landscaping and deep soil is not provided such that it can assist in providing amenity or screening. Proposed landscaping along the entryway cannot be accommodated in this location as the building extends up to the boundary.	No.
	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas.	Yes.	Yes
	Balconies, and private terraces should be located in front of living rooms to increase internal privacy.	Balconies are generally provided adjacent living rooms.	Yes.

	Windows should be offset from the windows of adjacent buildings.	The application is considered to be void of appropriate plans/documentation to allow for proper assessment.	No.
3G-1	Building entries to be clearly identifiable.	The entryway is inadequately articulated with landscaping and the zero setback allows for no opportunity for articulation or clear definition. The design of the entry is not clear from the street with no design features provided to clearly identify the main building entry.	No.
3G-2	Building access ways and lift lobbies to be clearly visible from the public domain and communal spaces.	The main pedestrian entry is not visible from the street. The lift faces away from the lobby entry and proposed COS area.	No.
3H-1	Carpark access should be integrated with the building's overall façade.	The entry to the basement carpark is not adequately integrated into the building nor are the service rooms. The zero boundary setback and location of the driveway access limits the ability of the development to provide a landscaped buffer, forward of the building. The location of the ground floor car lift adjoining the building entry is also considered to create potential safety concerns for pedestrians accessing the building.	No.
	Clear sight lines to be provided for drivers and pedestrians.	The single way entry and turning system is considered to cause safety issues for users of the basement, in particular visitors.	No.
	Garbage collection, loading and servicing areas are screened.	The bulky waste and garbage areas are incorporated into the building but not screened from the street by landscaping due to the zero lot line along the eastern boundary.	No.
3J-1	The site is located within 800m of a railway station and is required to comply with the car parking rates in the ADG.	The site is within 800m of the railway and as such the reduced car parking rates apply. A total of 14 spaces are proposed which exceeds the minimum requirements.	Yes.
3J-2	Secure undercover bicycle parking should be provided for motorbikes and scooters.	8 secure bicycle parking spaces are provided at ground level.	Yes.
3J-3	Carpark design and access is safe and secure - A clearly defined and visible lobby area or waiting area should be provided to lifts and stairs.	Lift lobby areas within Basement 1 and 2 are clearly defined and appropriately located and well lit and secured.	Yes.

4A-1	Living rooms and private open spaces of at least 70% of apartments to receive 2 hours direct sunlight between 9am and 3pm mid-winter.	The applicant has confirmed that greater than 70% has been achieved and shading devises have been incorporated into the development.	Yes.
4A-2	Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms.	Complies.	Yes.
4A-3	Sun shading devices are to be utilised.	Sun shading devices are provided.	Yes.
4B-3	60% of apartments are naturally ventilated and overall depth of cross-through apartments 18m maximum glass-to-glass line.	The submitted plans indicate that more than 60% of apartments can achieve natural cross ventilation.	Yes.
4C-1	Finished floor to finished ceiling levels are to be 2.7m for habitable rooms, 2.4m for non-habitable rooms.	The proposal will provide for 2.8m finished floor to underside of ceiling, which is compliant with the ADG.	Yes.
4D-1	Apartments are to have the following min. internal floor areas: 1 bed – 50sqm 2 bed – 70sqm 3 bed – 90sqm Additional bathroom areas increase minimum area by 5sqm.	All proposed apartment sizes comply with the ADG requirements.	Yes.
4D-2	In open plan layouts the maximum habitable room depth is 8m from a window.	All units comply with this requirement.	Yes.
4D-3	Master bedrooms to be 10sqm's and other rooms 9sqm's.	All units comply.	Yes.
	Bedrooms to have a minimum dimension of 3m.	All units comply.	Yes.
	Living rooms to have minimum width of 3.6m for a 1 bedroom unit and 4m for 2 & 3 bedrooms.	All units comply.	Yes.
4E-1	All units to have the following primary balcony areas: 1 bed – 8sqm (2m deep) 2 bed – 10sqm (2m deep) 3 bed – 12sqm (2.4m deep)	All units comply.	Yes.

4E-3	Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design.	Air conditioning units have not been nominated on plans.	No.
4F-1	Daylight and natural ventilation to be provided to all common circulation spaces. Maximum 8 units off single core corridor.	Satisfactory.	Yes.
4F-1	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.	All units comply.	Yes.
4G-1	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is to be provided: 1 bed – 4m^3 2 bed – 6m^3 3 bed – 10m^3 With 50% of the above to be provided within the Units.	Submitted plans indicate that storage cages are provided with the basement carpark. Adequate area for internal storage accommodated within apartments.	Yes.
4K-1	Flexible apartment configurations are provided to support diverse household types.	The development proposes a range of unit sizes, configurations and number of bedrooms to accommodate change over time and cater for differing households. Unit mix is as follows: 8 x 1 bedroom apartments 8 x 2 bedroom apartments 1 x 3 bedroom units	Yes.
4L-1	Direct street access should be provided to ground floor apartments.	No direct street access is provided for ground floor apartments which is considered a consequence of the irregular lot shape. It is noted that one studio apartment will front onto the laneway but while so, the design has not provided any consideration for a separate unit entry.	No.

4M-1	Building facades to be well resolved with an appropriate scale and proportion to the streetscape and human scale.	The proposal was subject to a review by Council's Urban Design Review Panel and was not supported. It was requested in the minutes from the meeting that the Panel review the amended design once the ownership of Lot 18 be resolved and prior to lodgement of the application. This did not occur. In this regard, the latest set of plans are not considered to address the concerns raised by the panel. The facades are considered to be inadequately articulated and setbacks are insufficient to provide adequate separation or landscaping to moderate impacts of bulk, scale or privacy and overbearing to the public domain or adjoining properties. Noting the above, the scale and size of the building does not adequately address the street or neighbouring sites. Proposed materials do not adequately provide relief from sheer wall heights which are punctuated with self imposed horizontally proportioned window openings, provided to mitigate privacy impacts owing to minimal building separation distances. No varying ground, mid and upper level materials are proposed to assist in the break up of bulk or to provide elements of contrast. The eastern side is of particular concern with a zero setback and minimal articulation or breaks.	No.
4O-1	Landscape design to be sustainable and enhance environmental performance.	The submitted landscape plan indicates a selection of trees, shrubs and ground covers for the site. However, all landscaping is limited essentially to one side of the building only. The detention basin within the communal open space will also limit planting opportunities in the deep soil zone and hence restrict the ability for landscaping to assist with privacy in that area. Noting the above, the proposed landscaping is not considered to enhance the environmental performance of the structure.	No.
4Q-2	Adaptable housing is to be provided in accordance with the relevant Council Policy.	A total of 2 adaptable units is proposed which is acceptable.	Yes.
4U-1	Adequate natural light is provided to habitable rooms.	Apartment depths and open floor plan arrangements allow light into kitchens, dining and living areas.	Yes.

4V-2	Water sensitive urban design systems to be designed by suitably qualified professional.	The development application was referred to Council's internal Environmental Waterways Unit and was acceptable when considered with respect to the subject site in isolation. However, it was noted that Lot 18 may form part of the site and therefore needs to be included within the calculations and as such the details and calculations provided are not suitable for both lots. It is deemed that this development relies on lot 18 and it should form part of the overall site (subject to agreement from Council's Property Section) and as such the WSUD is inadequate.	No.
4W-1	A Waste Management Plan is to be provided.	A Waste Management Plan was submitted, however there are design issues with respect to the waste arrangements proposed following comments received from Council's Waste Services.	No.
	Circulation design allows bins to be easily manoeuvred between storage and collection points.	Waste areas and manoeuvring does not comply with Council's DCP which requires waste to be collected within the subject site. The proposed waste collection bay is located within the building but is reliant on Lot 18 and is not supported and detracts from the streetscape. Inadequate information has been provided with regard to swept paths for service vehicles to determine if appropriate garbage services can be provided for.	No.

Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River

An assessment has been undertaken of the application against the relevant criteria within Sydney Regional Environmental Plan No. 20—Hawkesbury-Nepean River (No. 2—1997) and although the proposal may not impact regionally upon the scenic and landscape values of the area or the health and conservation of the Hawkesbury-Nepean River, the application is found to be unsatisfactory with regard to bulk, scale and streetscape presentation and is not sympathetic to the local context and is recommended for refusal for the reasons stated at the end of this report.

Local Environmental Plan 2010 (Amendment 4)

Provision	Compliance
Clause 1.2 Aims of the plan	Does not comply - See discussion
Clause 2.3 Permissibility	Complies
Clause 2.3 Zone objectives	Does not comply - 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	Does not comply - See discussion
Clause 4.3 Height of buildings	Does not comply - See discussion
Clause 4.4 Floor Space Ratio	N/A
Clause 4.6 Exceptions to development standards	Does not comply - See discussion
Clause 5.9 Preservation of trees or vegetation	Complies - See discussion
Clause 5.10 Heritage conservation	N/A
Clause 7.1 Earthworks	Complies
Clause 7.2 Flood planning	Does not comply - See discussion
Clause 7.4 Sustainable development	Does not comply - See discussion
Clause 7.6 Salinity	Complies
Clause 7.7 Servicing	Does not comply - See discussion

Clause 1.2 Aims of the plan

The proposal is inconsistent with the aims of the plan (Clause 1.2) in particular, those relating to Council's commitment to the provision of healthy, safe communities and environmental protection and enhancement. The application fails to demonstrate how the design meets the current and emerging needs of Penrith's communities and safeguards residential amenity.

Clause 2.3 Zone objectives

The site is zoned R4 High Density Residential under Penrith LEP 2010. The objectives of the zone are:

- *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 assessed to be contrary to the objectives of the R4 High Density Residential zone, in that the proposal does not demonstrate that:

(a) a high level of residential amenity is achieved and can be maintained; and
(b) the development reflects the desired future character and dwelling densities of the area.

As detailed within the discussion under SEPP 65 of this report, the development proposal does not provide for a high level of residential amenity for the future occupants of the development due to the design and overdevelopment of the site by way of proposing a 6 storey building on an undersized allotment. The development proposal does not provide for acceptable levels of landscaping, privacy, building separation and open space.

The privacy and overbearing impacts of a building which exceeds the height limit by up to 1m and is considerably larger than the established 3-4 storey height limit of existing residential flat buildings adjoining the site, have not been appropriately moderated by landscaping or other design attributes.

Further, the development does not comply with the requirements of the ADG and as such, does not represent the desired future character or dwelling densities for the area.

Clause 4.1A Minimum lot sizes for dual occupancies, multi dwelling housing and residential flat buildings
The subject site is provided with a total area of 663m² which does not comply with LEP 2010 being an allotment significantly less than 800m² in site area required for a residential flat building within the R4 zoning.

As part of the amended information, a request to vary the development standard has been provided under Clause 4.6 of the LEP which as to be discussed, is not considered supportable.

The applicant indicated that a request had been made to Penrith City Council to purchase the land adjoining (owned by Council) however this is a lengthy process which is separate to this Development Application and has a high level of uncertainty at this early stage. Further, this application has not been formally amended on the application form to include the additional land, nor has owner's consent been provided. In this regard, any reliance on the adjoining parcel of land cannot be given consideration noting its acquisition would also provide for an alternate design as compared to the current proposal. It would be appropriate for a new Development Application to be made correctly if the land purchase is agreed to and the application can be dealt with in the appropriate manner with respect to transparency.
Clause 4.3 Height of buildings
The proposed development encroaches within the height limit of 18m for the features located on the roof including the terrace, lift overrun and balustrades, with a variation ranging between 0.5-1m above the height limit. A request to vary the development standard has been provided under Clause 4.6 of the LEP and is addressed later in the report.

Clause 4.6 Exceptions to development standards
The applicant has submitted a Clause 4.6 variation request with regard to the minimum lot size and maximum height limit. Both variations are connected and are directly related to the small lot size.

The reasons provided by the applicant for each variation is discussed below and a commentary provided. The two issues are closely related and the commentary addresses both together for completeness.

(a) Minimum Lot Size

The applicant submitted a request to vary the development standard under Clause 4.6 with respect to the minimum lot size, providing the following justification for the variation (full variation summarised):

- *The development standard requires an area of 800m². This represents a departure of 17% from the standard. Council's attention is drawn to previous discussions in relation to the purchase/acquisition of the adjoining Council owned land to the south east known as Lot 18 in DP1220719 which has an area of 198.3m². Council's attention is also drawn to the fact that the closure of Council's laneway and the creation of Lot 18 has caused my clients land to not have public road frontage.*
- *It is intended to formalise purchase negotiations with Penrith City Council for the consolidation of the two parcels of land and creation of appropriate easements and rights-of access over the land to accommodate services and access to Council's drainage channel at the southern end of Station Lane. The consolidation of the two allotments would give a total land area of 862.8m² which would result in the proposed development meeting the requirements of Clause 4.1A.*
- *In this instance, the site is generally level and is located at the rear of Station Lane with the existing medium density three and four storey flat buildings to the west, north and east. There is no residential development to the south as the site overlooks Councils War Memorial Swimming Pool complex. The existing dwelling will be demolished and the new six (6) storey residential flat building constructed with generous setbacks to the west with the existing laneway (to be purchased from Council) along the north eastern boundary providing separation to the adjoining developments. The bulk of the proposed structure will be hidden from street view by the existing four storey building façade at #20 Station Lane located at the entry to the laneway. From the west as viewed near #115 Station Street, the proposed building is hidden from view by the existing four storey brick flat building and large trees adjacent to the drainage reserve and Penrith War Memorial Swimming Pool.*
- *It is considered that the design (with the small height variation and variation to the minimum lot size) ensures that the building height represents a reasonable transition between the existing three and four storey built form which dates from the 1970's and 1980's to the current five storey outcomes anticipated in the Penrith Local Environmental Plan 2010 (ie: 18m = 6 storeys @ 3m per level). In fact, the proposed residential building represents a considerable improvement to the dated architectural quality of the current streetscape.*
- *Further, the variation to the minimum lot size will not have any significant additional visual impact on the adjoining property to the west, north and east nor create any significant additional loss in privacy due to its positioning at the end of the laneway with generous setbacks from the west and existing separation from the laneway frontage as shown on the amended architectural plans. The variation will have no significant impact on the areas of private open space within the development.*
- *The lot size variation is considered to be reasonable when considered within the context of the overall streetscape with its primary frontage to Station Lane (see Figure 4) and the intent of the Penrith Local Environmental Plan 2010. It is also considered reasonable on the basis that an application is being made under Council's Unsolicited Requests to Purchase Council Owned Land Policy.*
- *The variation to the Minimum Lot Size requirement will not hinder the promotion and co-ordination of the orderly and economic use and the development of the land.*
  In fact, the proposal ensures the highest and best use of the subject site by formalizing the trend to higher quality residential flat buildings utilising the natural features of the land and activating the street frontages (ie: Station Lane).
- *It is the applicants view that strict compliance with the Minimum Lot Size development standard is considered to be unreasonable in this particular case as the proposed variation simply seeks to optimise the site outcomes and improve the residential standard of the site and the surrounding precinct and respond to the density and height standards in the Penrith LEP 2010 with the knowledge that an application is being made under Council's Unsolicited Requests to Purchase Council Owned Land Policy to acquire the adjoining Lot 18 in DP1220719 which would result in a consolidated allotment having an area greater than the required 800m².*
- *It also proposes a high quality residential interface with the Station Lane frontage in line with the Penrith Local Environmental Plan 2010. It will ensure a more viable development and higher standard of residential yield compared to that which would otherwise be provided should strict adherence to the LEP standard be applied.*

- *It is considered that the proposed residential flat development will deliver a better planning outcome than one that strictly complies with the current minimum lot size for the following reasons:-*
  (i) the acquisition of the adjoining Lot 18 in DP1220719 is on foot and will be subject to an application made under Council's Unsolicited Requests to Purchase
  Council Owned Land Policy to acquire the Council land which would result in a consolidated allotment having an area greater than the required 800m²;
  (ii) strict compliance would not be responsive to the intent of the Penrith Local Environmental Plan 2010 which anticipates a six (6) storey built form;
  (iii) strict compliance would not be responsive to the intent of the Penrith Development Control Plan;
  (iv) strict compliance would restrict building height and subsequent floor space outcomes to the extent that the alternative would be an underutilization of the site
  in an area within the Penrith residential precinct that seeks residential development outcomes; and
  (v) strict compliance would not meet the desired future character of the precinct.

(b) Minimum Height

- *The height plane shown in red and the area in exceedance shown white (ie: degree of exceedance 500mm to 1000mm).*
- *The departure from the standard is considered to be only minor and will not adversely impact on the adjoining residence to the north and east.*
- *The proposal seeks a variation to the building height of: (i) 250mm above the height plane to the parapet of the upper level; and (ii) 1000mm above the height plane to the top of the lift overrun.*
- *The existing dwelling will be demolished and the new six (6) storey residential flat building constructed with generous setbacks to the west with the existing laneway along the northern and eastern boundary providing separation to the adjoining developments. The bulk of the proposed structure will be hidden from street view by the existing four storey building façade at #20 Station Lane located at the entry to the laneway. From the west as viewed near #115 Station Street, the proposed building is hidden from view by the existing four storey brick flat building and large trees adjacent to the drainage reserve and Penrith War Memorial Swimming Pool.*
- *It is considered that the design (with the small height variation) ensures that the building height represents a reasonable transition between the existing three and four storey built form which dates from the 1970's and 1980's to the current five storey outcomes anticipated in the Penrith Local Environmental Plan 2010 (ie: 18m = 6 storeys @ 3m per level). In fact, the proposed residential building represents a considerable improvement to the dated architectural quality of the current streetscape.*
- *Further, the height variation will not have any significant additional visual impact on the adjoining property to the west, north and east nor create any significant additional loss in privacy due to its positioning at the end of the laneway with generous setbacks from the west and existing separation from the laneway frontage. The variation will have no significant impact on the areas of private open space within the development.*
- *The height variation is considered to be reasonable when considered within the context of the overall streetscape with its primary frontage to Station Lane and the intent of the Penrith Local Environmental Plan 2010.*
- *strict compliance with the Height of Buildings development standard is considered to be unreasonable in this particular case as the proposed variation simply seeks to*
  optimise the site outcomes and improve the residential standard of the site and the surrounding precinct and respond to the density and height standards in the Penrith LEP 2010.
- *It also proposes a high quality residential interface with the Station Lane frontage in line with the Penrith Local Environmental Plan 2010. It will ensure a more viable development and higher standard of residential yield compared to that which would otherwise be provided should strict adherence to the LEP standard be applied. The proposal is an efficient use of the land which delivers social, economic and environmental benefits to the local community.*
- *It should be noted that the subject site has particular circumstances in relation to the location of the site which has triggered the specific design response. The site is landlocked at the end of Station Lane and surrounded by three and four storey older style residential flats. By accommodating the height variation results in a more efficient and orderly use of the land and will produce a better outcome than would otherwise be the case if strict adherence to the standard were observed. In relation to this clause, it is considered that the objection to the Height of Buildings standard is well founded.*
- *It is considered that the proposal satisfies the public interest test as it is consistent with both the*

objectives of the standard and for development within the zone.

- *It is considered that the proposed residential flat development will deliver a better planning outcome than one that strictly complies with the current 18 metre height limit for the following reasons:-*
  (i) strict compliance would not be responsive to the intent of the Penrith Local Environmental Plan 2010 which anticipates a six (6) storey built form;
  (ii) strict compliance would not be responsive to the intent of the Penrith Development Control Plan;
  (iii) strict compliance would restrict building height and subsequent floor space outcomes to the extent that the alternative would be an underutilization of the site
  in an area within the Penrith residential precinct that seeks residential development outcomes; and
  (iv) strict compliance would not meet the desired future character of the precinct.

It has been determined that the request failed to show that there is adequate planning grounds to approve the variation. Recent case law in the Land and Environment Court (Four5Two v Ashfield Council) highlights the need for a development that is varying the standard to show that it provides no unacceptable impact and compliant with the standards objective.

The objective of Clause 4.1A is:

(1) The objective of this clause is to achieve planned residential density in certain zones.

The objectives of Clause 4.3 are:

(1) The objectives of this clause are as follows:

(a) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality,

(b) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes,

(c) to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance,

(d) to nominate heights that will provide a high quality urban form for all buildings and a transition in built form and land use intensity.

The objective of Clause 4.1A could still be met by consolidation of the subject site with the adjoining land, however this has not occurred and it is premature to allow a variation without this occurring. Given the surrounding development and age of those buildings and form, it is unlikely that the full potential of an R4 zone will be achieved in this immediate area and as such the objective may not be easily achievable in this instance.

The objectives of Clause 4.3 are closely tied with SEPP 65 principles and the ADG, which are not being met by this proposal. The form of the building is not compatible with the existing and desired character of the immediate locality and amenity impacts such as privacy and visual impact cannot be avoided by the introduction of a 6 storey building adjoining 3-4 storey buildings, notwithstanding the additional impacts from the extra height from the variation to the height limit. The urban design of the building has also been considered to be inappropriate, with no transition to the existing buildings and limited opportunity to utilise landscaping to assist.

Having regard to the existing surrounding building sizes being 3-4 storeys, the provision of a much larger building being 6 storeys will be a stark contrast and as such should comply fully with the height controls to minimize amenity and visual impacts. Further, the size of the lot has resulted in a tight development in terms of the basement design, minimal room for landscaping or setbacks to all boundaries, no clear pathway network throughout the site for the residents and limited urban design of the building, essentially due to lot size and width being inadequate. The interface to adjoining buildings with a zero setback, need for amalgamation, in conjunction with the amenity impacts such as overlooking and overshadowing, does not warrant the variation of the minimum lot size or height control in this instance. The immediate area is unlikely to be redeveloped to 6 storeys given that the surrounding residential buildings comprise numerous owners. As such, the desired future character in the foreseeable future is likely to remain in its current

form. This further reiterates that the proposed 6 storey built form is not in keeping with the current or likely future character.

As indicated at the pre-lodgement stage, the discussions and negotiations regarding the inclusion of the closed road portion (Lot 18) need to occur before building design and owner's consent provided to allow the development to occur over both lots. In doing so, it is considered that the issue of minimum lot size and width inadequacy would be removed and the design can be carefully and holistically considered which is likely to result in a development which is also compliant in terms of height. It is not considered that a constrained site is a sufficient enough reason to vary the key planning controls such as minimum site area for this form of development and the height limit.

Clause 5.9 Preservation of trees or vegetation

An arborist report was submitted as part of the application and determined the 13 trees have low retention values and recommends all trees be removed. Council's Tree Management Officer reviewed the proposal and does not object to the proposed removal, subject to adequate compensatory planting.

Clause 7.2 Flood planning

The flood level to be adopted for the site is RL 27.5m AHD. This flood level has been considered against the flood level previously adopted by Council, the submitted flood report and photographic evidence of inundation of the site. However, the architectural plans show a finished floor level of RL 27.6m and yet a minimum RL 28.0m AHD is required, with basement entry levels at RL 27.8m AHD. Subsequently, the architectural plans would need to be amended and yet the raised floor level cannot be supported on planning grounds as it will further affect the proposed height variation which is not supported due to overbearing and amenity impacts.

Clause 7.4 Sustainable development

Clause 7.4 of the PLEP 2010 requires the consent authority to have regard to the principles of sustainable development as they relate to the development based on a "whole of building" approach and requires the consent authority to consider each of the following:

(a) conserving energy and reducing carbon dioxide emissions,
(b) embodied energy in materials and building processes,
(c) building design and orientation,
(d) passive solar design and day lighting,
(e) natural ventilation,
(f) energy efficiency and conservation,
(g) water conservation and water reuse,
(h) waste minimisation and recycling,
(i) reduction of vehicle dependence,
(j) potential for adaptive reuse.

The development proposal is not considered to comply with the clause having regard to the substantial amount of built form on the site and limited opportunity for landscaping surrounding the building. As the development is seeking the rely on an additional parcel for access (lot 18), a holistic review of both allotments as part of the overall design is likely to result in additional opportunities for improved landscaping, water measures and pedestrian connectivity. However, the application in its current form is not considered to satisfy this clause.

Clause 7.7 Servicing

The site is currently serviced and proposed development is capable of being serviced by way of extension of services. However, further investigations and negotiations are considered necessary by the applicant in order to resolve all servicing and access requirements in order to fully understand the constraints and design a building around these requirements. The proposal in its current form relies on vehicular access to the basement, waste collection truck movements and turning and pedestrian access to the main entry all occurring over Lot 18, without owner's consent being provided or the site incorporated into the development site, which is unacceptable.

Section 79C(1)(a)(iii) The provisions of any development control plan

Development Control Plan 2014

Provision	Compliance
C1 Site Planning and Design Principles	Does not comply - see Appendix - Development Control Plan Compliance
C2 Vegetation Management	Complies
C3 Water Management	Does not comply - see Appendix - Development Control Plan Compliance
C4 Land Management	Complies
C5 Waste Management	Does not comply - see Appendix - Development Control Plan Compliance
C6 Landscape Design	Does not comply - see Appendix - Development Control Plan Compliance
C7 Culture and Heritage	Complies
C8 Public Domain	Does not comply - see Appendix - Development Control Plan Compliance
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	N/A
C13 Infrastructure and Services	Complies
D2.1 Single Dwellings	N/A
D2.2. Dual Occupancies	N/A
D2.3 Secondary Dwellings	N/A
D2.4 Multi Dwelling Housing	N/A
D2.5 Residential Flat Buildings	Does not comply - see Appendix - Development Control Plan Compliance
D2.6 Non Residential Developments	N/A

Section 79C(1)(a)(iv) The provisions of the regulations

Part 8, Division 2, Clause 143

In accordance with Clause 143 of the Regulations, an assessment of the fire protection and structural capacity of the proposed building is necessary. The application was referred to Council's Building Surveyors for assessment with no objections raised and it is assessed that the development as proposed may be capable of complying with the applicable provisions of the Building Code of Australia, subject to standard conditions of consent.

As the development application is recommended for refusal with regard to other matters, no such conditions are recommended.

Section 79C(1)(b)The likely impacts of the development

Likely impacts of the proposed development as identified throughout the assessment process include the following:

Streetscape Impacts and Landscaping

The proposal has been assessed to be unacceptable with regard to streetscape impacts. Whilst there is no direct street frontage, the site and the proposed 6 storey building is highly visible from Station Lane (public portion) and further from Union Road and the public area to the south. The proposal does not adequately address the street frontage as it utilises a zero setback to the eastern boundary and is not considered to be sympathetic to the existing or future desired character of the area. The building is also considered to be inadequately landscaped. The location of service areas and basement entry on the ground floor is also highly visible which will detract from the proposed buildings presentation.

Traffic and Car Parking

The proposal is considered to have a negative and unacceptable impact of the availability of on-street car parking, in that the development does not allow for Council's waste trucks to enter and leave the site in a forward direction for the purposes of waste collection. There is also likely to be a reliance on on-street car parking spaces which are already in high demand. Refer to the appendix of this report for further discussion.

Character, Bulk and Scale & Privacy Impacts

The proposal will result in negative and unacceptable impacts related to bulk and scale. The proposed flat building will have negative overbearing, over shadowing and privacy impacts on neighbouring sites. The height being 6 storeys and insufficient levels of landscaping will also contribute to the prominence of the building in relation to its surrounds.

Tree Management

The arborist has determined that the trees on the subject site have low retention values and recommends all trees be removed. However, it is considered that the proposed replacement trees are inadequate and have a potential to reach only 7 to 8 metres and will be dwarfed by the 19m Building. It is considered more appropriate that any landscape plan include some taller growing species that should not be located near the boundary. This further reinforces the need for further areas of planting around the building on all sides and the deficiencies with the current scheme.

Section 79C(1)(c)The suitability of the site for the development

The site is not suitable for the following reasons:

- Although the development for the purposes of residential flat buildings is permissible within the R4 High Density Residential zone, the scale of the proposed development design is not compatible with or sympathetic to the context of the site.
- It is not demonstrated that the development is representative of the future desired character of the area;
- It is not demonstrated by the submitted plans that the site can adequately manage waste storage or collection in an acceptable or compliant manner;
- It is not demonstrated that the development has suitable or legal access arrangements in place to the site for vehicles or pedestrians; and
- The selected site is unable to accommodate the development as proposed within an acceptable building envelope or as envisaged by the applicable controls for the site.
- The subject lot does not meet the minimum lot requirements for a residential flat building and the proposed built form is not considered and appropriate design solution.

Section 79C(1)(d) Any Submissions

Community Consultation

In accordance with Clause 4.4 of Appendix F4 of Penrith Development Control Plan 2010, the proposed development was notified to nearby and adjoining residents and exhibited and advertised between 14 September 2018 and 28 September 2018. Council has received eleven (11) submissions from the adjoining owners (including two separate submissions from the one person), in response.

The following matters were raised in the submission received and has formed part of the assessment.

Issue Raised	Comment
Parking problems already and insufficient parking proposed. No visitor parking proposed. Limited on-street parking already being utilised.	Car parking is provided in excess of the requirements and includes visitor parking.
Station Lane very tight and already congested (mainly after 6pm). Two cars cannot pass. Access problems. Will impact on existing residents already using Station Lane and it is their only entry/exit. Union Rd experiences heavy traffic. Development close to intersection with additional traffic will make it harder for existing residents to enter / exit.	The Local Traffic Committee is reviewing these concerns separately to this DA. Access to the site is via Station Lane and any future development will continue the same. However, the current proposal is considered excessive in size and will contribute to the congestion beyond a reasonably expected timeframe.
Waste truck won't be able to turn around.	This issue has been identified as part of the assessment and the application is recommended for refusal.
No room for deliveries to the site e.g. removalist, fast food, taxi.	This issue has been identified as part of the assessment and the application is recommended for refusal.
What will be given back to the community if the developer acquires this land (Lot 18).	The negotiations for purchase of the land occur separately to the DA process and it is considered they should be finalised before lodgement. In doing so, Council's Property Section undertakes valuations and the appropriate price for the land determined. Consequently, Council then has the opportunity to allocate funds for projects.
Developer should fix Station Lane which is falling apart as part of this development, including kerb and gutter.	Should the application be recommended for approval, works would likely be required within Station Lane. However, the application is recommended for refusal.
Construction traffic, noise and dust issues.	Should the application be recommended for approval, restrictions would have been imposed regarding construction activities. However, the application is recommended for refusal.
Bioretention basin is in Common Open Space.	This issue has been identified as part of the assessment and the application is recommended for refusal.
Overdevelopment, too many units. Out of character.	This issue has been identified as part of the assessment and the application is recommended for refusal.
Loss of natural daylight to units at 28A Union Rd and 30 Union Rd.	The full impact of solar access impacts are not certain as complete shadow diagrams were not provided.
Overshadowing.	This issue has been identified as part of the assessment and the application is recommended for refusal.
Lack of infrastructure for extra people.	This issue has been identified as part of the assessment and the application is recommended for refusal.
Safety issues from extra cars.	The proposal cannot accommodate all required parking within the basement due to maneuverability issues.
Recent tree removal by Council makes this proposal visible. Wants replacement tree.	This issue is separate to the DA assessment. However the assessment did identify the need for additional landscaping around the building to assist with screening for adjoining properties.
Height not in keeping with 3-4 storeys surrounding. 6 storeys too imposing.	This issue has been identified as part of the assessment and the application is recommended for refusal.
Overlooking, privacy and light loss.	This issue has been identified as part of the assessment and the application is recommended for refusal.

Ramifications from earthworks for basement and vibrations, including damage to existing buildings. Some buildings already undergone treatment and risk to their structural integrity. Will the developer's insurance cover this damage? Damage to stormwater channel.	Should the application be recommended for approval, conditions would likely be required regarding dilapidation reports and geotechnical reports associated with the excavation. However, the application is recommended for refusal.
Notification should have included residents of 28A Union Rd.	Council records indicate that 28A Union Rd was notified.
Site unsuitable for basement parking due to flooding. Channel overflows many times into existing units.	Council's Engineer has requested minimum floor levels of habitable areas in order to address flooding issues.
Land too small to support a building of this size and on a battle-axe.	The request to vary the minimum lot size and height limit is not being supported by Council in the assessment of the DA.
No Parking restrictions along western side of lane in unnecessary.	This issue is to be dealt with by the Local Traffic Committee, separately to this DA.

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
Landscape Architect	Not supported
Environmental - Environmental management	No objections - subject to conditions
Environmental - Waterways	Not supported, however conditions provided
Waste Services	Not supported
Traffic Engineer	Not supported
Community Safety Officer	No objections - subject to conditions
Tree Management Officer	Not supported, however conditions provided

Section 79C(1)(e)The public interest

The proposed development has been assessed to be contrary to the primary aims, objectives and controls of the applicable planning instruments and will result in negative and unacceptable impacts in the locality and as such, support of the proposal would not be in the public interest.

Section 94 - Developer Contributions Plans

The following development contributions plans apply to the development proposal:

- Cultural Facilities Section 94 Development Contributions Plan, adopted 5 May 2003;
- Penrith City District Open Space Facilities Development Contributions Plan, adopted 17 December 2007; and
- Penrith City Local Open Space Section 94 Development Contribution Plan, adopted 25 June 2007.

As the development application is recommended for refusal, a condition related to development contributions payable, is not recommended or provided.

Conclusion

The development application has been assessed against the relevant environmental planning policies including State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development, Penrith Local Environmental Plan 2010 and Penrith Development Control Plan 2014. The development proposal does not satisfy the primary aims, objectives and provisions of these policies and is found to be contrary to the primary design criteria and design guidance statement of the Apartment Design Guide.

The proposal will have a negative impact on the surrounding character of the area owing to the proposed bulk and scale, limited opportunities for landscaping around the building and unresolved issues relating to legal access to the site and purchase of the adjoining parcel of land. The accompanying 4.6 variation in relation to minimum lot size and building height are not considered to be well founded and are not supported in this instance.

It is for the above reasoning that support of the development application would not be in the public interest and would set an undesirable precedent given the level of non-compliance and related impacts. The application is recommended for refusal for the attached reasons.

Recommendation

1. That DA18/0860 for the demolition of all structures, tree removal and construction of a Demolition of Existing Structures & Construction of Six (6) Storey Residential Flat Building including 17 Apartments & Two (2) Levels of Basement Car Parkin at 1 Station Lane, Penrith be Refused for the following reasons; and
2. That those making submissions are notified of the determination.

CONDITIONS

Refusal

1 X Special 02 (Refusal under Section 4.15(1)(a)(i) of EP&A Act 1979)

The application is not satisfactory for the purpose of Section 4.15(1)(a)(i)of the Environmental Planning and Assessment Act 1979 as the proposal is inconsistent with the following provisions of Penrith Local Environmental Plan 2010 in that:

1. The proposal is inconsistent with the aims of the plan (Clause 1.2) in particular, those relating to Council's commitment to the provision of healthy, safe communities and environmental protection and enhancement. The application fails to demonstrate how the design meets the current and emerging needs of Penrith's communities and safeguards residential amenity.
2. The proposal is inconsistent with the zone objectives for the R4 High Density Residential zone, specifically:

(a) the proposal does not ensure that a high level of residential amenity is achieved and maintained; and

(b) the proposal does not represent or reflect the desire future character and dwelling densities of the area.

3. Clause 4.1A Minimum Lot Size is not satisfied.
4. Clause 4.3 Maximum Height of Buildings is not satisfied.
5. Clause 4.6 Exceptions to Development Standards is not satisfied.
6. Clause 7.4 Sustainable Development is not satisfied.
7. Clause 7.2 Flood Planning
8. Clause 7.7 Servicing is not satisfied.

2 X Special 03 (Refusal under Section 79C(1)(a)(i) of EPA Act 1979)

The application is not satisfactory for the purpose of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979 as the proposal is inconsistent with the following provisions of the State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development and the accompanying Apartment Design Guide in that:

(i) the proposal fails to demonstrate that the design is representative of the nine Design Quality Principles listed under Schedule 1; and
(ii) the proposal does not comply with the applicable provisions of the Apartment Design Guide including the objectives and design guidance statements in particular those related to:

(a) Communal open space provision
(b) Public Domain Interface (as they relate to CPTED)
(c) Deep soil zones
(d) Visual Privacy- Separation Distances
(e) Solar access
(f) Landscape design
(g) Facades
(h) Waste management

3 X Special 04 (Refusal under Section 79C(1)(a)(iii) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(a)(iii) of the Environmental Planning and Assessment Act 1979 as the proposal is inconsistent with the following provisions of Penrith Development Control Plan 2014:

(i) The proposal is not satisfactory having regard to the objectives and controls under Section D2 Residential Development - Residential Flat Buildings, specifically:

(a) Part D2.5 - Residential Flat Buildings,

(b) Part C1 Site Planning and Design Principles in particular context, amenity and streetscape character,

(c) Part C3 Water Management,

(d) Part C5 Waste Management,

(e) Part C6 Landscape Design,

(f) Part C8 Public Domain, and

(g) Part C10 Transport, Access and Parking in particular, service vehicle parking provision.

4 X Special 06 (Refusal under Section 79C(1)(a)(iv) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(a)(iv) of the Environmental Planning and Assessment Act as the proposed development was not accompanied by all of the information as required under Schedule 1 Forms of the Regulations including:

- Inadequate owner's consent has been provided relating to Lot 2B DP161921 and Lot 18 DP 1220719.

5 X Special 07 (Refusal under Section 79C(1)(b) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979 due to the negative impacts likely to result from the proposed development related to:

(i) streetscape and local character,
(ii) limited landscaping and deep soil zones,
(iii) traffic, access and car parking,
(iv) bulk, scale and overbearing,
(v) solar access and privacy,
(vi) waste management ,
(vii) amenity, safety and security, and
(viii) communal open space

6 X Special 08 (Refusal under Section 79C(1)(c) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(c) of the Environmental Planning and Assessment Act 1979 as the site is not suitable for the scale of the proposed development.

7 X Special 09A (Refusal under Section 4.15(1)(e) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(e) of the Environmental Planning and Assessment Act 1979 as the proposal is not in the public interest.

8 X Special 9 (Refusal under Section 79C(1)(d) of EPA Act 1979)
The application is not satisfactory for the purpose of Section 4.15(1)(d) of the Environmental Planning and Assessment Act 1979 due to matters raised in received submissions which include traffic and access impacts, flooding, overdevelopment, character, overshadowing impacts, privacy loss and impacts during and post construction including damage to adjoining buildings.

Appendix - Development Control Plan Compliance

Development Control Plan 2014

Part C - City-wide Controls

C1 Site Planning and Design Principles

In addition to the proposal being assessed as being not consistent with the height, general scale of adjacent buildings of a similar type and use, the presentation of the development to the street, including the zero front setback to the east and inability of the design to provide a meaningful and sustainable area for landscaping is not supported and is contrary to this Section of the DCP.

Section C1 of the DCP states that the building façade treatment shall promote a high architectural quality and adopt a façade treatment which defines, activates and enhances the public domain and street character. The DCP also states that façade design shall express important corners by giving visual prominence to parts of the façade and should add to articulation. It is acknowledged that the site has no street frontage, but due to the size and scale of the proposed building, it will be visible from the road and the public domain. In addition, the proposed façade treatments and materials and finishes do not assist to break up bulk or substantially add to the articulation of the building.

Submitted shadow diagrams do not take into consideration existing development around the site and in this respect a thorough assessment of the suitability of the bulk and scale of the development cannot be undertaken.

Clause 1.2.5 relates to the principles of Crime Prevention Through Environmental Design (CPTED). The proposal is not acceptable having regard to this section of the DCP with areas for concealment provided especially to the ground floor lobby area. The entry is concealed within the building due to the zero setback and the lift doors do not face the lobby at the ground floor which will create safety concerns.

C3 Water Management

Inadequate information has been submitted with the development application to allow a proper assessment of the proposal with respect to compliance with the requirements of Council's WSUD Policy with respect to the inclusion of Lot 18, which is necessary for access to the site.

C5 Waste Management.

The development proposal does not comply with the requirements of the DCP in terms of waste management. It is also noted that the proposed waste storage facility relies on access over Lot 18, which is not part of this application noting also that no owner's consent has been provided.

C6 Landscape Design

The development proposal is inconsistent with the provisions of this section of the DCP in that:

(a) Landscaping along the frontage (eastern side) of the site is limited and is not representative of the desired future character of the area. Landscaping design does not enhance the amenity of the site or streetscape and is not adequately co-located with deep soil. Insufficient areas around the perimeter of the site or within the deep soil area are provided for canopy tree planting.
(b) Proposed landscaping does not assist in moderating the bulk or scale of the development and does not positively contribute to the amenity of the site or mitigate against the negative impacts of overlooking or overbearing.
(c) The proposed landscaping does not assist in screening utility / waste areas.
(d) Deep soil shown on the architects plans does not take into consideration the location of the drainage basin and the planting achieved in that area being predominantly groundcovers.

C8 Public Domain

The proposal will be highly visible from the public domain to the south and as discussed within this report is not considered to provide for a built form presentation.

C10 Transport, Access and Parking

The ADG requires a reduced parking rate as the site is within 800m of a railway station. 10 resident spaces and 3 visitor spaces are required, and 14 spaces in total are provided, including 2 accessible spaces satisfying the requirement. However, the shared zone between the 2 accessible spaces is proposed to also be used as a turning bay which does not comply with Australian Standard 289.6. The space is to be vacant for ease of access in/out of accessible vehicles. A separate turning bay is therefore required and has not been provided with the current design.

In addition, as the basements are accessed via a car lift, this is not likely to be attractive to visitors and they will likely choose to park elsewhere along the existing road network. There is limited opportunity given that the site does not have direct road frontage and there area already a large number of units utilising Station Lane and experiencing parking issues. Council's Development Engineer's have requested that the lane be widened to 2 way traffic and the Local Traffic Committee has recently endorsed a proposal to implement "No Parking" restrictions along the western side of the Lane. The basement levels are accessed via a car lift to manufacturers details and associated traffic signal system and a 'waiting bay' is provided on each basement level. However, access is not available for waste collection vehicles.

Swept paths are provided in the traffic report demonstrating that B85 vehicles have tight but acceptable manoeuvring in the basement, provided another vehicle is not occupying the 'waiting bay'. This is not considered a practical solution with the possibility that this may occur.

The development does not provide for a service space for the benefit of future occupants which is not supported given the circumstances of the site and constraints.

D2 Residential Development

The proposal has been assessed against the applicable provisions of the chapter and is found to be unacceptable. Particular clauses are discussed below:

Landscaped Area
The proposal is contrary to the controls of the clause in that the proposal does not provide effective landscape screening between the subject building and neighbouring dwellings and does not incorporate a high quality landscaped to all setbacks, in particular to the east, north or south. The building and setbacks are not contextually sympathetic and is dominated by hardstand areas, basement and waste infrastructure access and insufficient deep soil is provided to allow for canopy tree planting due to the detention basin.

Front and Rear Setbacks
Whilst there is no clear front setback, there is a front elevation of the building, which has utilised a zero setback which is not usual for the surrounding development. The DCP states that setbacks are to reflect the character of established garden suburbs and provide for development of flora and fauna corridors. The proposal does not comply with the DCP requirement with the resulting effect along the eastern edge and onto the adjoining Lot 18 (if incorporated) being predominantly hardstand with no landscape design. Little area is provided for substantial landscaping which may contribute to streetscape amenity.

Visual and Acoustic Privacy
The development does not demonstrate that negative privacy and overbearing impacts will not result, related to the built form and balconies up to boundaries. It is not demonstrated that the design responds appropriately to the small site size.

Building Design
The development does not incorporate sufficient architectural articulation or façade variation to adequately address the bulk and scale of the building. The building design results in overbearing and privacy impacts for existing adjoining buildings. The building is not affectively landscaped. Common open space and deep soil planting is restricted due to the detention basin.

The entry is located deep into the site and is via the eastern side boundary, with the issue of vehicular and pedestrian access over Lot 18 still unresolved and this area not adequately designed due to this uncertainty. The entry way is narrow and limited opportunity is provided for social interaction. Safety and security impacts related to its design are also discussed elsewhere in this report.

Garden Design
The setbacks do not include sufficient landscaping to soften the building or contribute to streetscape or amenity. The proposal does not comply with this Clause in that the development does not contribute to a canopy of interlocking trees and shrubs and does not provide gardens appropriate for the established neighbourhood character.

Paving Design
The proposed streetscape presentation does not provide for an attractive 'address' or minimise widths of driveway and hardstands along the frontage of the site, or in this instance through Lot 18.

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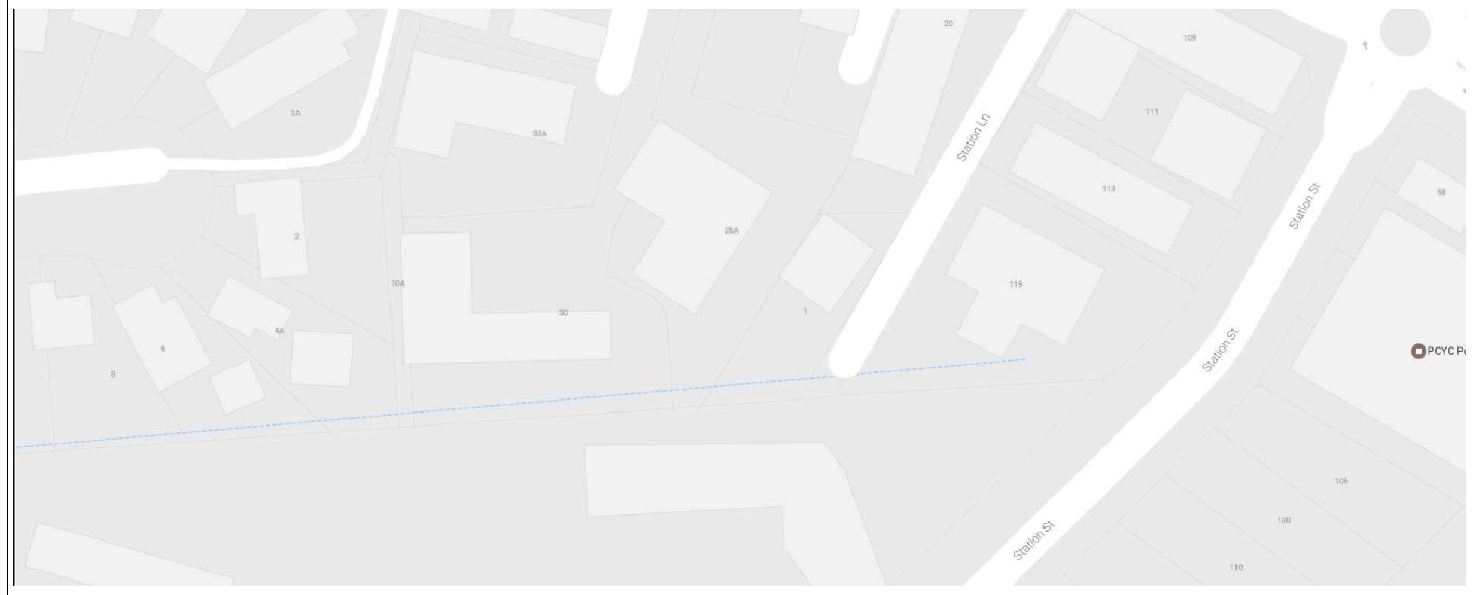

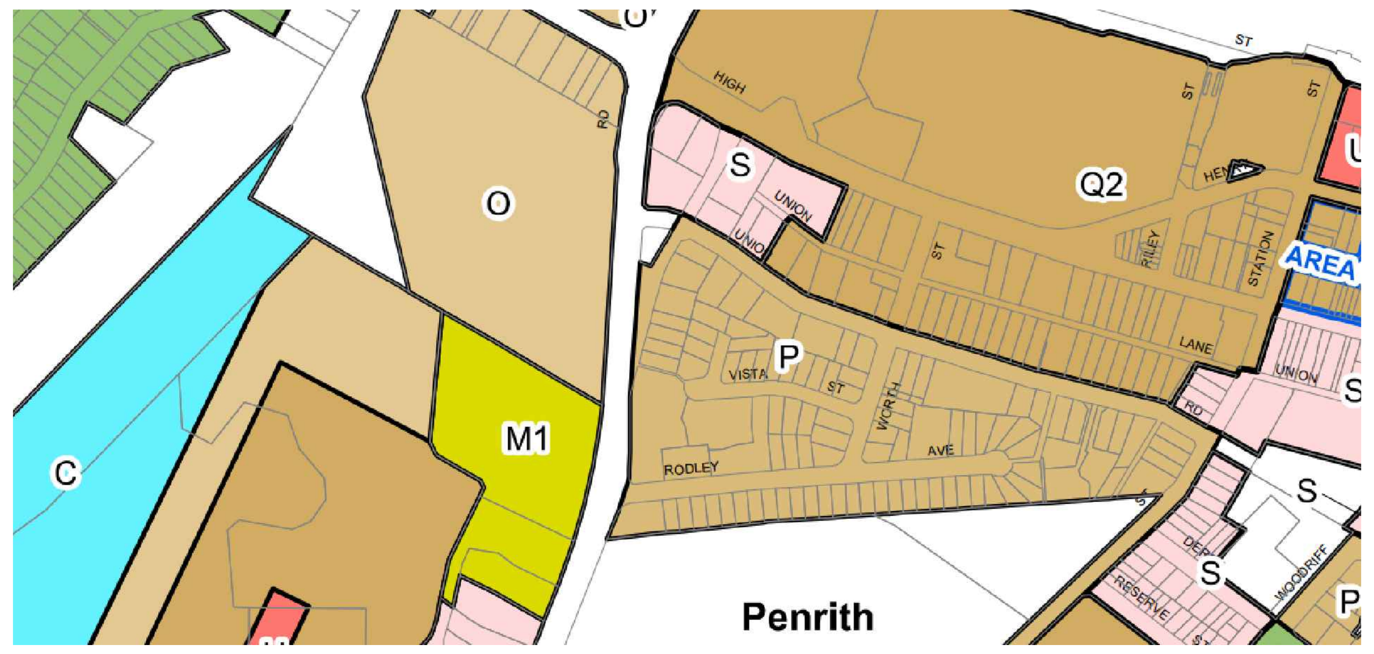

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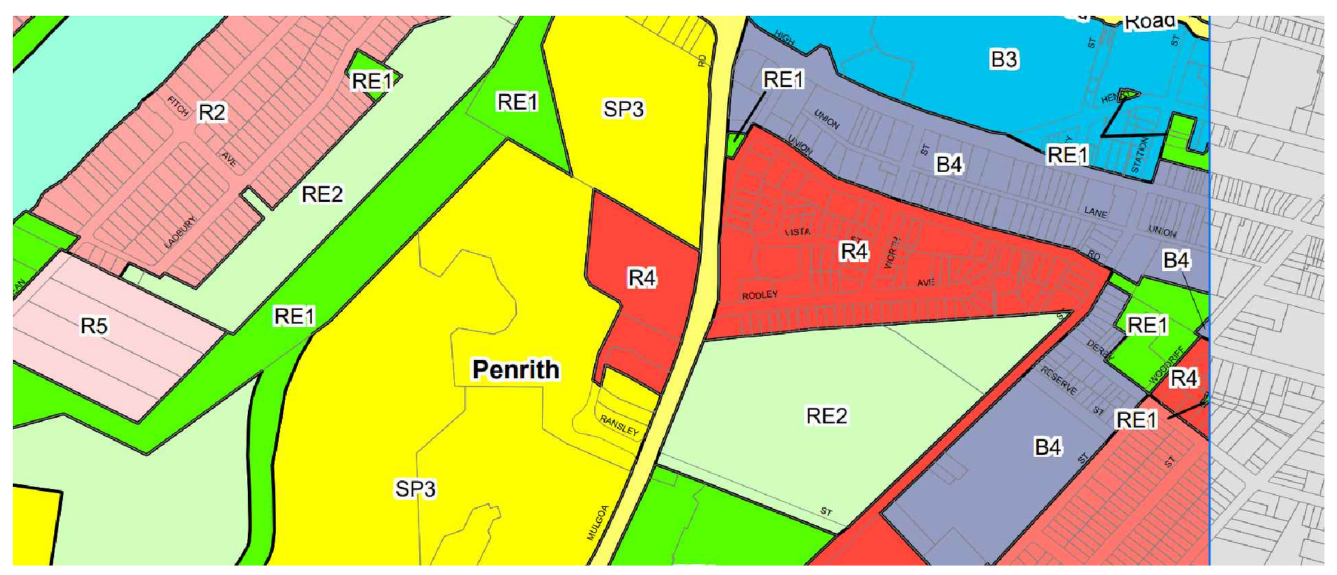

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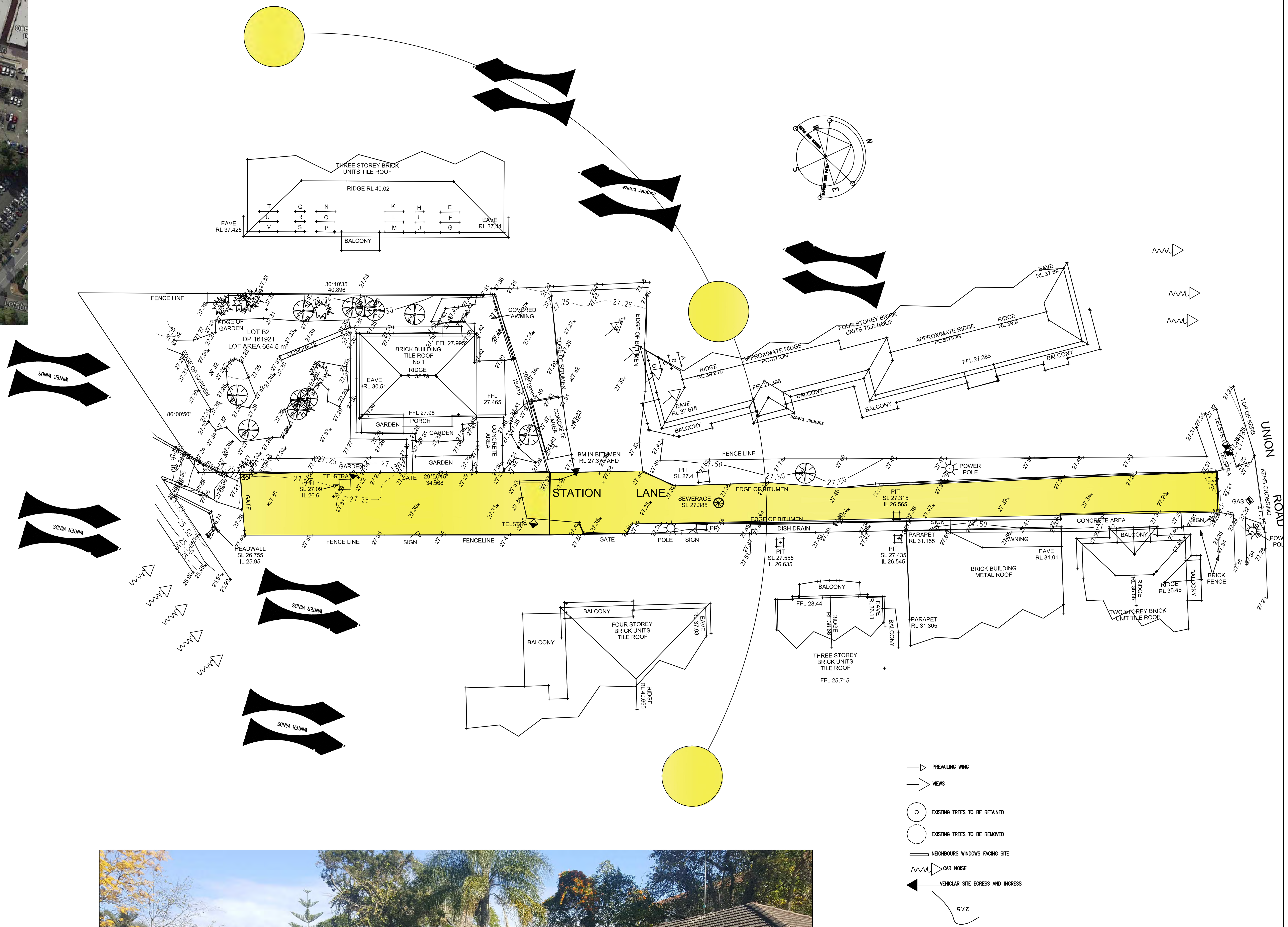

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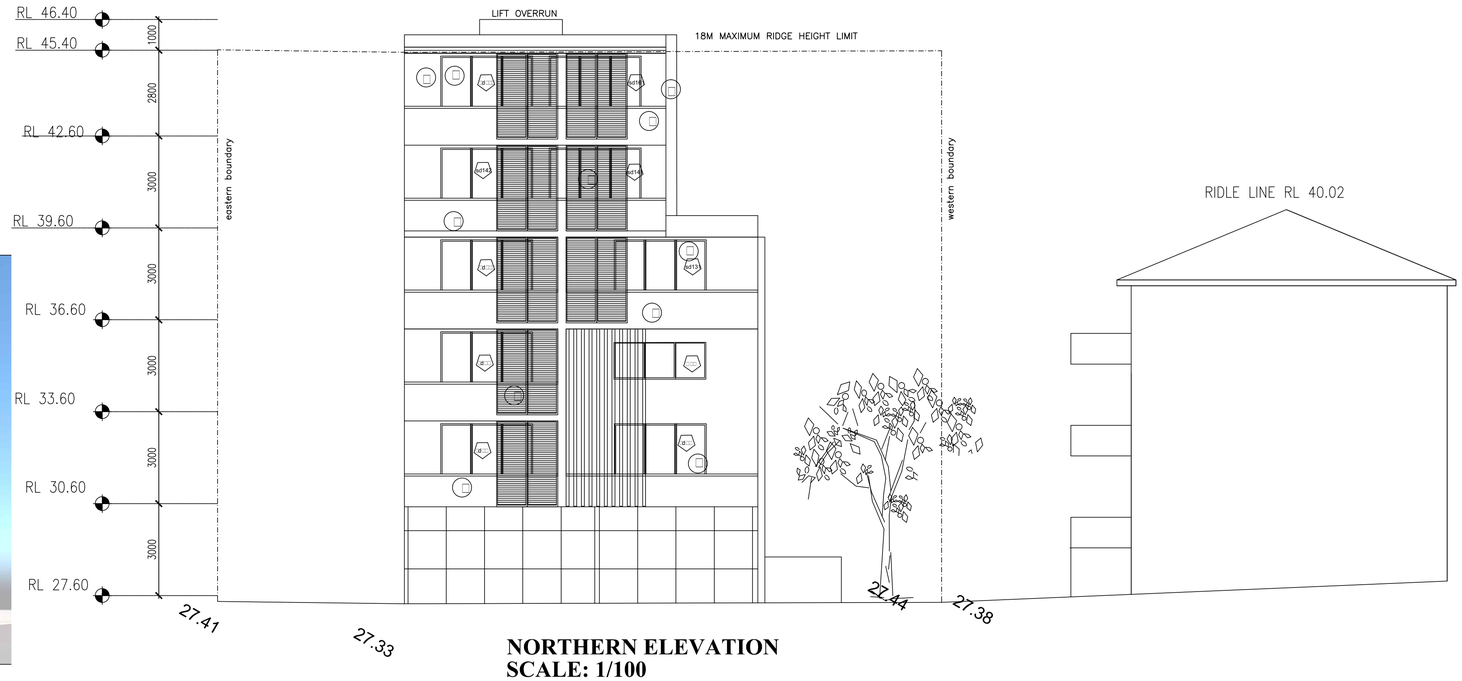

NORTHERN ELEVATION
SCALE: 1/100

A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in:
the openable portion of the window must be protected with :
1— A device to restrict the window opening or
2— A screen with secure fitting
A device or screen required must not permit a 125mm sphere to pass through the window or screen and resist an outward horizontal action 250N against the
— window restrained by a device or
— screen protecting the opening
— have a child resistant release mechanism if the screen or device is able to be removed unlocked or overridden.
A barrier with a height not less than 865mm above the floor is required to an openable window
— in addition to window protection when a child resistant screen release mechanism is required
— for openable windows 4m or more above the surface beneath if the window is not covered by
A barrier covered must not
— permit a 125mm sphere to pass through
— have any horizontal bar near horizontal elements between 150mm and 760mm above the floor that facilitate climbing

WESTERN ELEVATION
SCALE: 1/100

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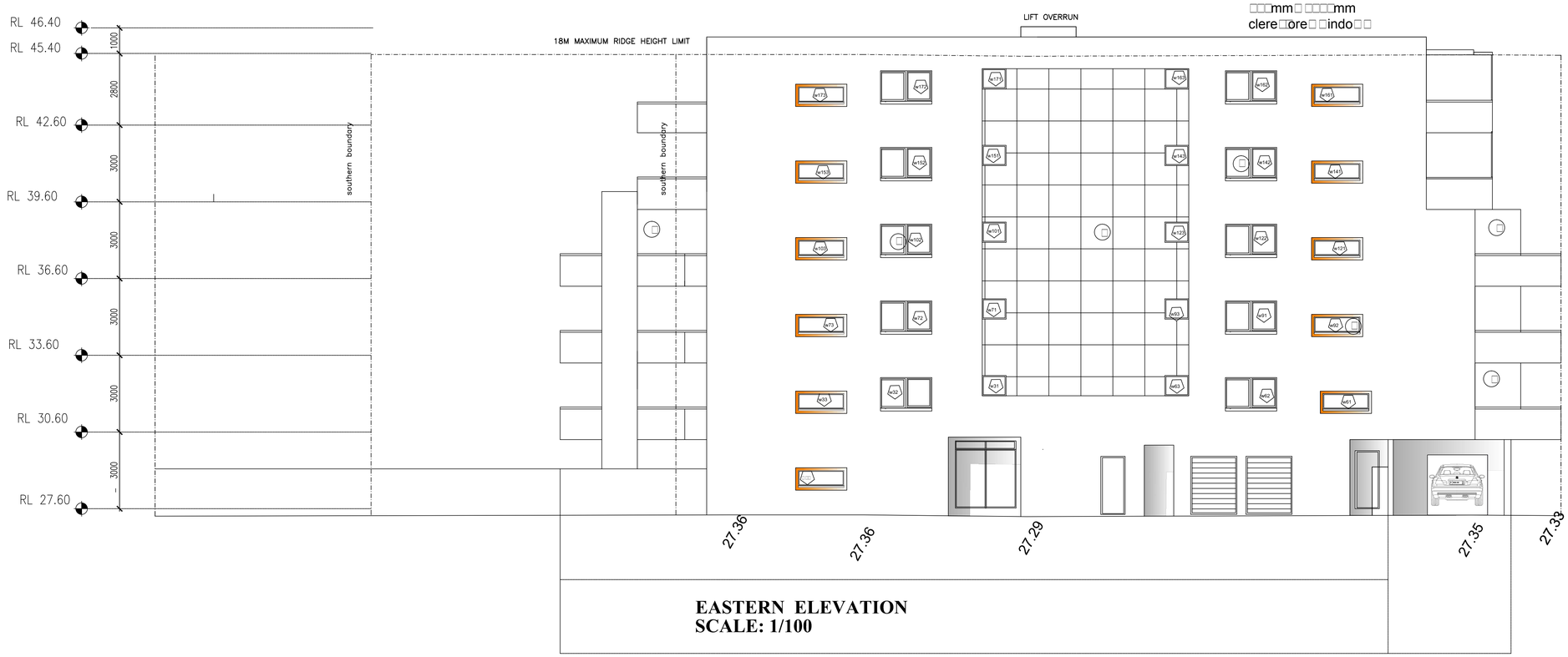
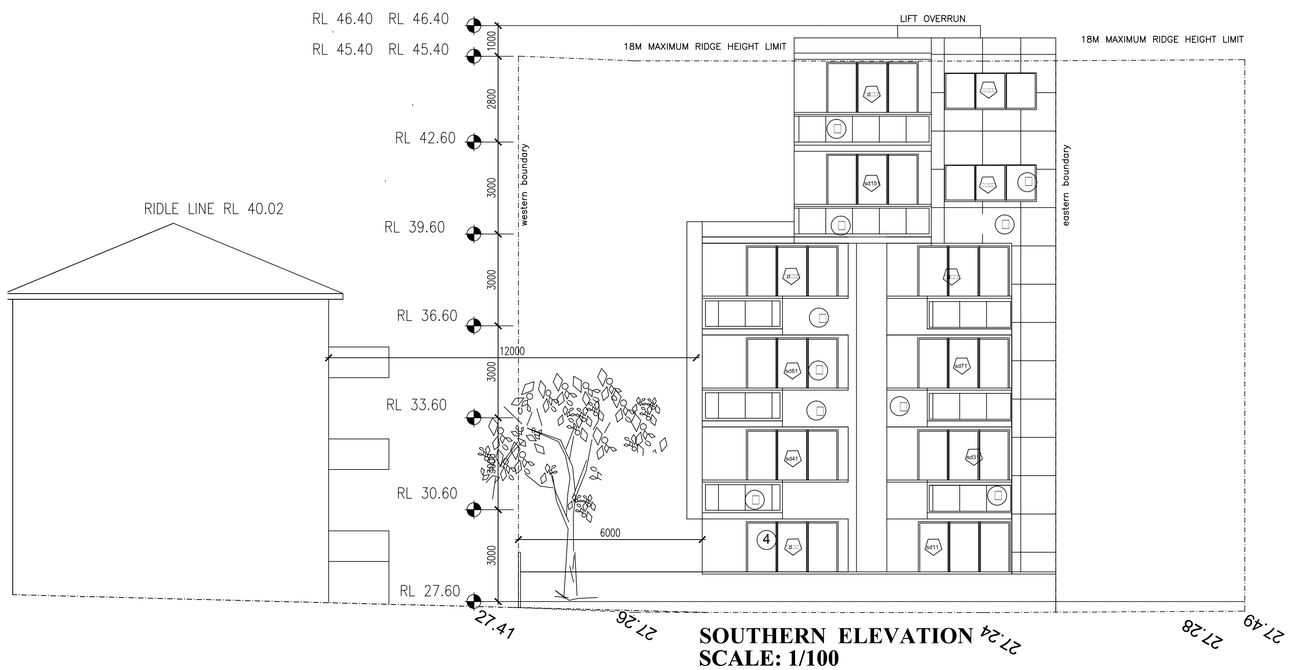


EASTERN ELEVATION
SCALE: 1/100



SOUTHERN ELEVATION
SCALE: 1/100

A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in:
the openable portion of the window must be protected with :
1– A device to restrict the window opening or
2– A screen with secure fitting
A device or screen required must not permit a 125mm sphere to pass through the window or screen and resist an outward horizontal action 250N against the
– window restrained by a device or
– screen protecting the opening
– have a child resistant release mechanism if the screen or device is able to be removed unlocked or overridden.
A barrier with a height not less than 865mm above the floor is required to an openable window
– in addition to window protection when a child resistant screen release mechanism is required
– for openable windows 4m or more above the surface beneath if the window is not covered by
A barrier covered must not
– permit a 125mm sphere to pass through
– have any horizontal bar near horizontal elements between 150mm and 760mm above the floor that facilitate climbing

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DEVELOPMENT APPLICATION ISSUE

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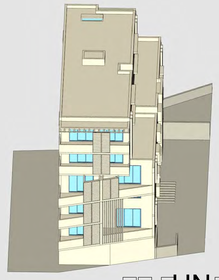

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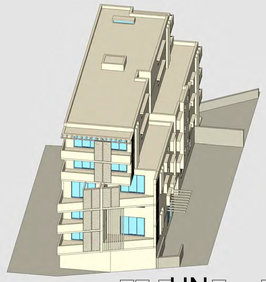

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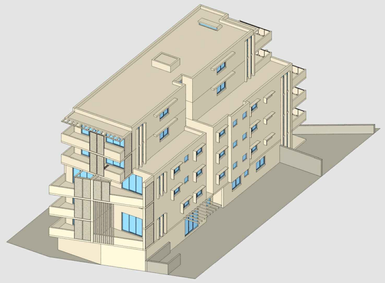

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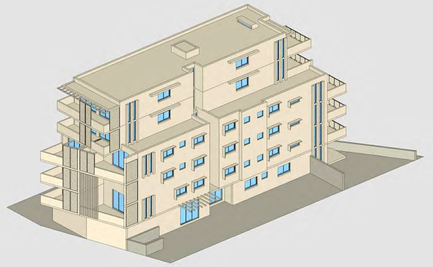

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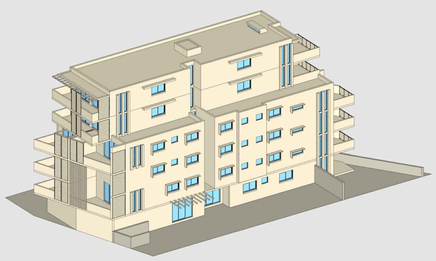

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MEMBER THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

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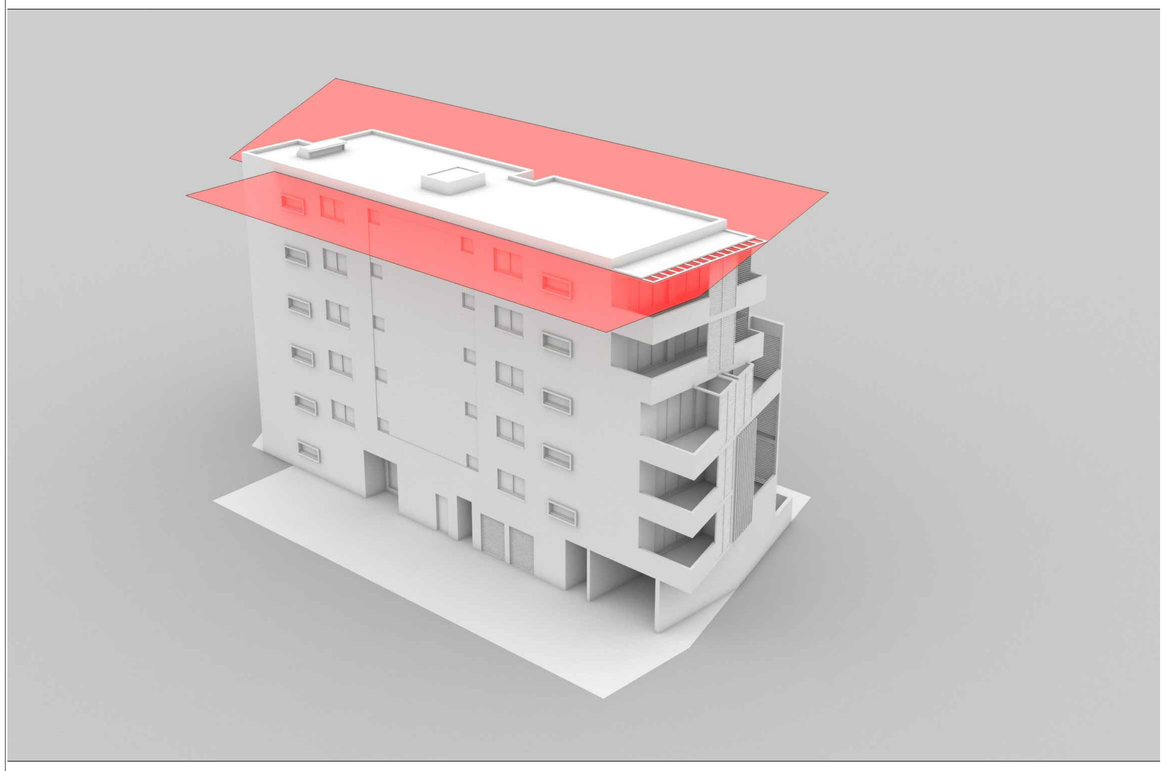

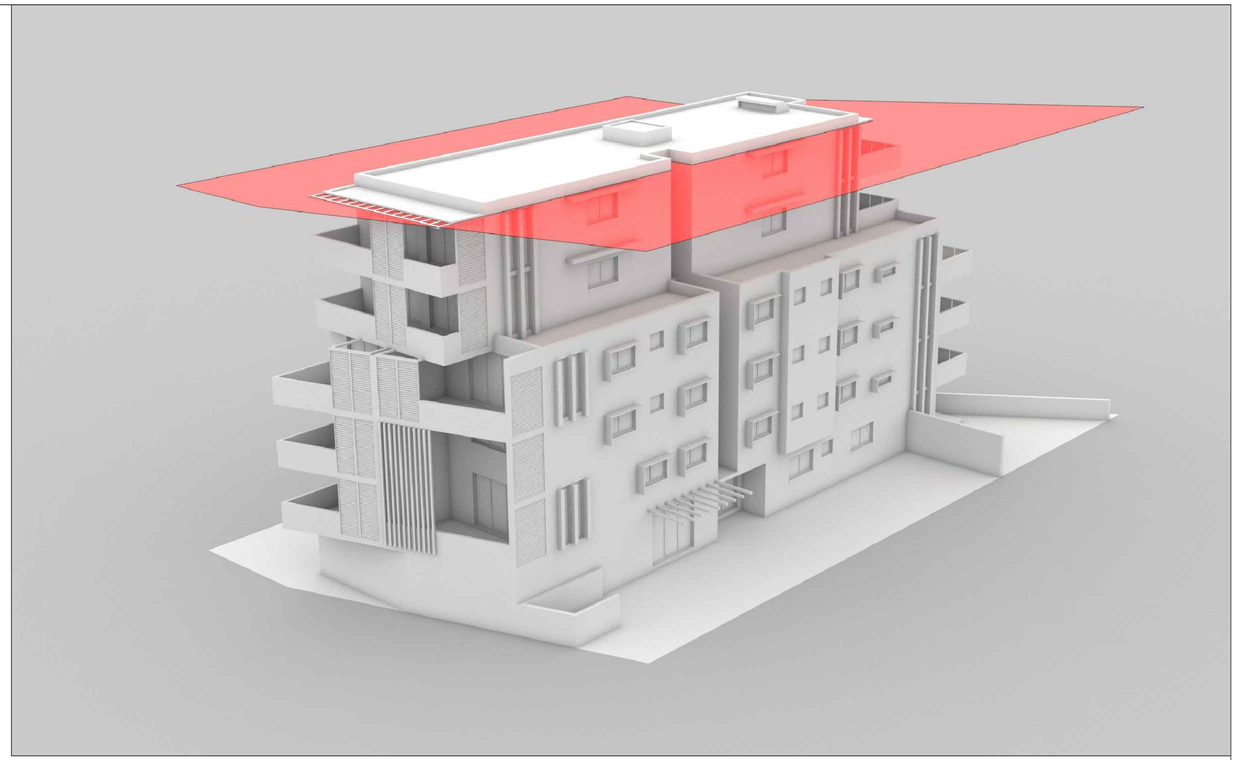

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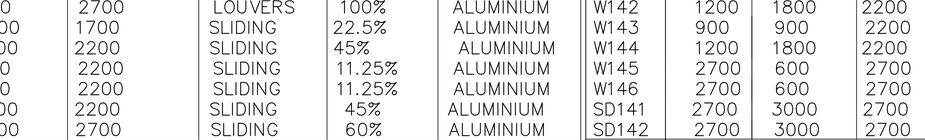
POWDERCOATED ALUMINIUM FRAME WINDOWS & DOORS SCHEDULE

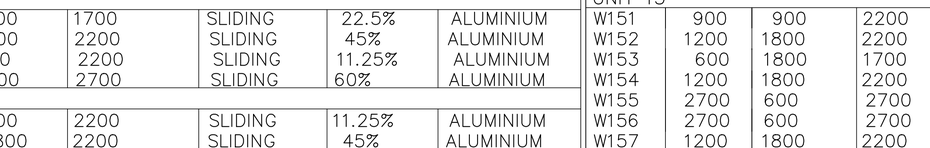
	Height	Width	Head Height	Window Style	Openability	Frame material
UNIT 1						
W11	600	1800	1700	sliding	13.8%	Aluminium
SD11	2700	3000	2700	sliding	60%	aluminium
UNIT 2						
W21	2700	600	2700	louvres	100%	aluminium
W22	2700	600	2700	louvres	100%	aluminiuM
W23	1200	1800	2200	sliding	45%	aluminium
W24	900	900	2200	sliding	11.25%	aluminium
W25	1200	1800	2200	sliding	45%	aluminium
SD22	2700	3000	2700	sliding	60%	aluminium
UNIT 3						
W31	900	900	2200	sliding	11.25%	aluminium
W32	1200	1800	2200	sliding	45%	aluminium
W33	600	1800	1700	sliding	22.5%	aluminium
SD31	2700	30000	2700	sliding	60%	aluminium
UNIT 4						
W41	2700	600	2700	louvres	100%	aluminium
W42	2700	600	2700	louvres	100%	aluminium
W43	600	1800	1700	sliding	22.5%	aluminium
W44	1200	1800	2200	sliding	45%	aluminium
W45	900	900	2200	sliding	11.25%	aluminium
W46	900	900	2200	sliding	11.25%	aluminium
W47	1200	1800	2200	sliding	45%	aluminium
SD41	2700	3000	2700	sliding	60%	aluminium
UNIT 5						
W51	1200	1200	2200	sliding	30%	aluminium
W52	600	1800	1700	sliding	22.5%	aluminium
W53	2700	600	2700	louvres	100%	aluminium
W54	2700	600	2700	louvres	100%	aluminium
W55	1200	1800	2200	sliding	45%	aluminium
W56	1200	1800	2200	sliding	45%	aluminium
W57	1200	1200	2200	sliding	30%	aluminium
W58	1200	1800	2200	sliding	45%	aluminium
SD51	2700	3000	2700	sliding	60%	aluminium
UNIT 6						
W61	600	1800	1700	sliding	22.5%	aluminium
W62	1200	1800	2200	sliding	45%	aluminium
W63	900	900	2200	sliding	11.25%	aluminium
SD61	2700	3000	2700	sliding	60%	aluminium
UNIT 7						
W71	900	900	2200	sliding	11.25%	aluminium
W72	1200	1800	2200	sliding	45%	aluminium
W73	600	1800	1700	sliding	22.5%	aluminium
SD71	2700	3000	2700	sliding	60%	aluminium

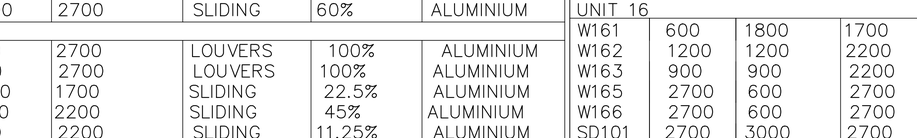
	Height	Width	Head Height	Window Style	Openability	frame Material
UNIT 8						
W81	2700	600	2700	LOUVERS	100%	ALUMINIUM
W82	2700	600	2700	LOUVERS	100%	ALUMINIUM
W83	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W84	1200	1800	2200	SLIDING	45%	ALUMINIUM
W85	900	900	2200	SLIDING	11.25%	ALUMINIUM
W86	900	900	2200	SLIDING	11.25%	ALUMINIUM
W87	1200	1800	2200	SLIDING	45%	ALUMINIUM
SD81	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 9						
W91	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W92	1200	1800	2200	SLIDING	45%	ALUMINIUM
W93	900	900	2200	SLIDING	11.25%	ALUMINIUM
SD91	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 10						
W101	900	900	2200	SLIDING	11.25%	ALUMINIUM
W102	1200	1800	2200	SLIDING	45%	ALUMINIUM
W103	600	1800	1700	SLIDING	22.5%	ALUMINIUM
SD101	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 11						
W111	2700	600	2700	LOUVERS	100%	ALUMINIUM
W112	2700	600	2700	LOUVERS	100%	ALUMINIUM
W113	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W114	1200	1800	2200	SLIDING	45%	ALUMINIUM
W115	900	900	2200	SLIDING	11.25%	ALUMINIUM
W116	900	900	2200	SLIDING	11.25%	ALUMINIUM
W117	1200	1800	2200	SLIDING	45%	ALUMINIUM
SD111	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 12						
W121	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W122	1200	1800	2200	SLIDING	45%	ALUMINIUM
W123	900	900	2200	SLIDING	11.25%	ALUMINIUM
SD121	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 13						
W131	2700	600	2700	LOUVERS	100%	ALUMINIUM
W132	2700	600	2700	LOUVERS	100%	ALUMINIUM
W133	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W134	900	900	2200	SLIDING	11.25%	ALUMINIUM
W135	1200	1800	2200	SLIDING	45%	ALUMINIUM
SD131	2700	3000	2700	SLIDING	60%	ALUMINIUM

	Height	Width	Head Height	Window Style	Openability	Frame Material
UNIT 14						
W141	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W142	1200	1800	2200	SLIDING	45%	ALUMINIUM
W143	900	900	2200	SLIDING	11.25%	ALUMINIUM
W144	1200	1800	2200	SLIDING	45%	ALUMINIUM
W145	2700	600	2700	LOUVERS	100%	ALUMINIUM
W146	2700	600	2700	LOUVERS	100%	ALUMINUM
SD141	2700	3000	2700	SLIDING	60%	ALUMINIUM
SD142	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 15						
W151	900	900	2200	SLIDING	11.25%	ALUMINIUM
W152	1200	1800	2200	SLIDING	45%	ALUMINIUM
W153	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W154	1200	1800	2200	SLIDING	45%	ALUMINIUM
W155	2700	600	2700	LOUVERS	100%	ALUMINIUM
W156	2700	600	2700	LOUVERS	100%	ALUMINIUM
W157	1200	1800	2200	SLIDING	45%	ALUMINIUM
SD151	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 16						
W161	600	1800	1700	SLIDING	22.5%	ALUMINUIM
W162	1200	1200	2200	SLIDING	30%	ALUMINIUM
W163	900	900	2200	SLIDING	45%	ALUMINIUM
W165	2700	600	2700	LOUVERS	100%	ALUMINIUM
W166	2700	600	2700	LOUVERS	100%	ALUMINIUM
SD101	2700	3000	2700	SLIDING	60%	ALUMINIUM
SD162	2700	3000	2700	SLIDING	60%	ALUMINIUM
UNIT 17						
W171	900	900	2200	SLIDING	11.25%	ALUMINIUM
W172	1200	1800	2200	SLIDING	45%	ALUMINIUM
W173	600	1800	1700	SLIDING	22.5%	ALUMINIUM
W174	1200	1800	2200	SLIDING	45%	ALUMINIUM
W175	2700	600	2700	LOUVERS	100%	ALUMINIUM
W176	2700	600	2700	LOUVERS	100%	ALUMINIUM
SD171	2700	3000	2700	SLIDING	60%	ALUMINIUM
LOBBY						
WL1	1200	1500	2200	SLIDING	37.5%	ALUMINIUM
WL2	1200	1500	2200	SLIDING	37.5%	ALUMINIUM
WL3	1200	1500	2200	SLIDING	37.5%	ALUMINIUM
WL4	1200	1500	2200	SLIDING	37.5%	ALUMINIUM
WL5	1200	1500	2200	SLIDING	37.5%	ALUMINIUM
SDL1	2700	3000	2700	SLIDING	60%	ALUMINIUM
SDL2	2700	3000	2700	SLIDING	60%	ALUMINIUM

A window opening must be provided with protection if the floor below the window is 2m or more above the surface beneath in:
the openable portion of the window must be protected with :
1– A device to restrict the window opening or
2– A screen with secure fitting
A device or screen required must not permit a 125mm sphere to pass through the window or screen and resist an outward horizontal action 250N against the
– window restrained by a device or
– screen protecting the opening
– have a child resistant release mechanism if the screen or device is able to be removed unlocked or overridden.
A barrier with a height not less than 865mm above the floor is required to an openable window
– in addition to window protection when a child resistant screen release mechanism is required
– for openable windows 4m or more above the surface beneath if the window is not covered by A barrier covered must not
– permit a 125mm sphere to pass through
– have any horizontal bar near horizontal elements between 150mm and 760mm above the floor that facilitate climbing







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G□N□R□L NOT□S

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DEVELOPMENT APPLICATION ISSUE

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THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

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DEVELOPMENT APPLICATION ISSUE

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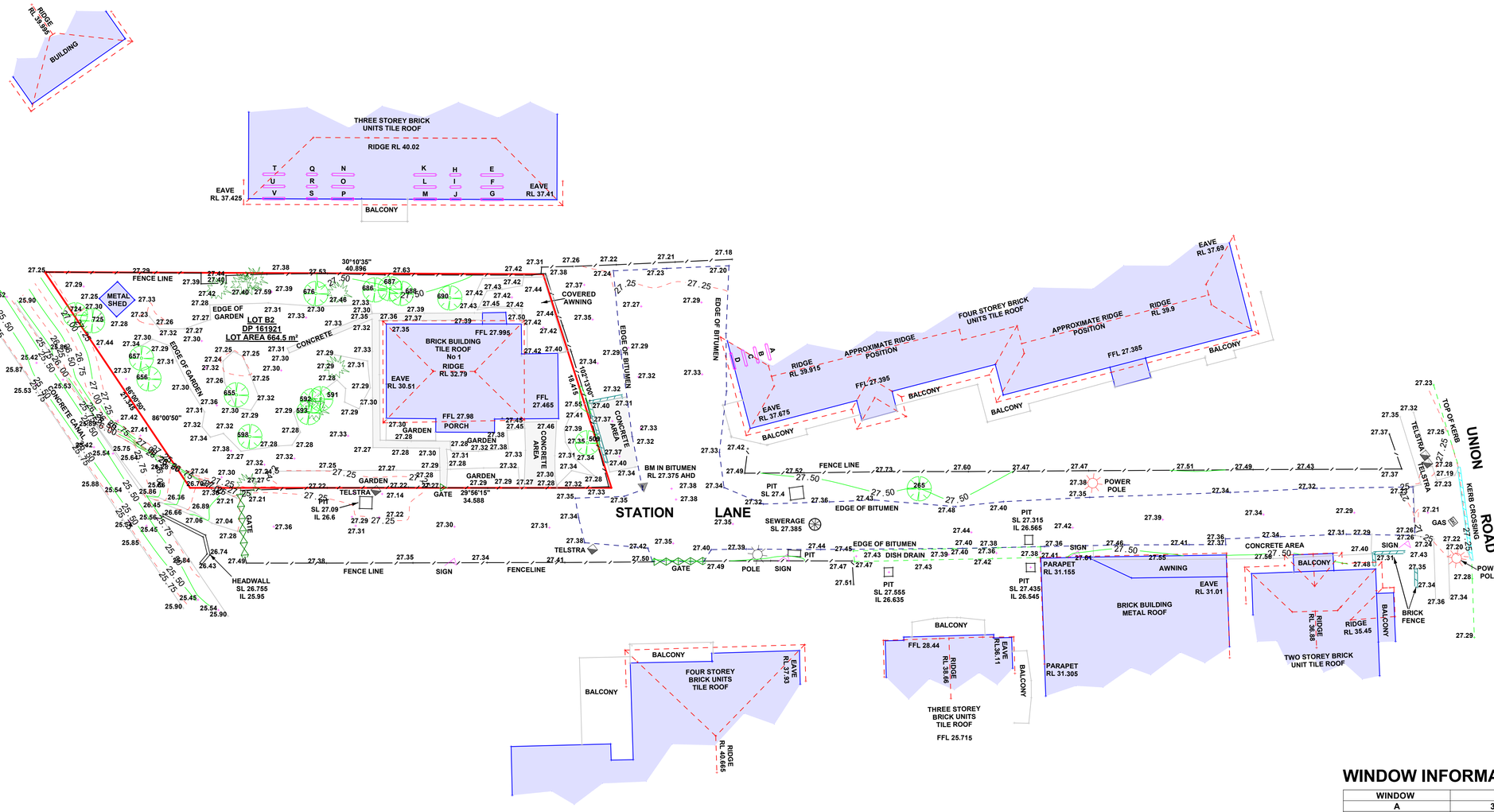
M.G.A

ALL BEARINGS ARE TO M.G.A.
AS PER DP 1220719



TREE INFORMATION TABEL

Point	Code	GIRTH	APPROX HEIGHT	SPREAD RADUIS
265	TREE	2.0	16.0	10.0
509	TREE	0.5	10.0	5.0
591	TREE	0.4	7.0	3.0
592	TREE	0.3	5.0	1.0
593	TREE	0.3	5.0	1.0
598	TREE	0.6	12.0	5.0
655	TREE	0.4	10.0	4.0
656	TREE	0.6	12.0	8.0
657	TREE	0.6	6.0	6.0
676	TREE	0.5	9.0	5.0
686	TREE	0.3	10.0	2.0
687	TREE	0.3	6.0	4.0
688	TREE	0.6	12.0	6.0
690	TREE	0.6	12.0	6.0
724	TREE	0.6	10.0	6.0
725	TREE	0.3	6.0	4.0

WINDOW INFORMATION TABLE

WINDOW	TOP	SILL
A	37.675	36.175
B	35.035	33.56
C	32.395	30.925
D	29.74	28.265
E	37.395	36.05
F	34.745	33.395
G	31.975	30.66
H	37.385	36.66
I	34.745	33.985
J	31.98	31.245
K	37.395	36.065
L	34.745	33.395
M	31.975	30.65
N	37.415	36.085
O	34.760	33.425
P	31.975	30.675
Q	37.42	36.7
R	34.765	34.010
S	31.995	31.305
T	37.415	36.07
U	34.735	33.425
V	32.005	30.655

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 :96228	**PLOT DATE :11/07/2017**
CLIENT :STATION LANE	**DATE OF SURVEY : 29-6-2017**
LOCATION :PENRITH	**DATUM: AHD SSM 56974**
SCALE : 1:200 A1 SHEET	**DRAWN BY:RHYSE.SMITH**

DETAIL SURVEY
LOT B2
IN DP 161921

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

JOHN LOWE AND ASSOCIATES PTY LTD
CONSULTING LAND AND ENGINEERING SURVEYORS

LIVERPOOL
81 ELIZABETH DRIVE, LIVERPOOL
PHONE : 9602-4582, 9602-4010 FAX 9602-8324
PO BOX 465 LIVERPOOL NSW 2170
john@jlsurveys.com.au

A.B.N. 76 071 037 959

TAHMOOR
LYREBIRD RD, PHEASANTS NEST
PHONE : 4684-3227 FAX 4684-3228
PO BOX 42 TAHMOORL NSW 2573
candice@jlsurveys.com.au

STORMWATER CONCEPT PLAN
AT 1 STATION LANE,
PENRITH NSW

NOTE RE. SERVICES

APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN ON LONGITUDINAL SECTION.
EXACT LOCATIONS & DEPTHS TO BE ACURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORTIES BEFORE COMMENCEMENT OF ANY WORKS

GENERAL NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH COUNCIL'S DCP AND TO COUNCIL'S SATISFACTION.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER AND COUNCIL ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
11. ALL PIT GRATES ON SITE MUST BE HINGED WITH J-BOLT LOCKDOWN SYSTEM.
12. PITS DEEPER THAN 1m REQUIRE STEP IRONS IN A STAGGERED MANNER. THE DEPTH OF ANY PIT IN EXCESS OF 2m SHALL BE STRUCTURALLY DESIGNED AND CERTIFIED BY A STRUCTURAL ENGINEER AND SUBMITTED TO COUNCIL FOR APPROVAL.
13. PROVIDE GRATED DRAIN IN ALL OPEN AREAS TO THE SKY INCLUDING STAIRS AND CONNECT TO NEAREST STORMWATER SYSTEM.
14. PROVIDE EMERGENCY SPITTERS TO ALL BALCONIES.
15. PROVIDE AGG PIPE IN ALL LANDSCAPE AREA AND CONNECT TO THE STORMWATER DRAINAGE SYSTEM.
16. PROVIDE AGG PIPE BEHIND THE RETAINING WALL AND CONNECT TO THE STORMWATER DRAINAGE SYSTEM
17. TOP OF KERB AND INVERT OF GUTTER LEVELS ARE TO BE CHECKED ON SITE PRIOR CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF LEVEL VARIES FROM DESIGN DRAWINGS.
18. ALL RETAINING WALL FOR ABOVE GROUND OSD/ BIO-RETENTION BASIN TO BE FULLY CONSTRUCTED WITHIN THE PROPERTY BOUNDARY.

DEPTH TO INVERT OF OUTLET		MINIMUM INTERNAL DIMENSIONS (mm)		
		RECTANGULAR		CIRCULAR
		WIDTH	LENGTH	DIAMETER
	≤600	450	450	600
>600	≤900	600	600	900
>900	≤1200	600	900	1000
>1200		900	900	1000

NOTE:
-ALL WALLS FORMING THE BIO-RETENTION BASIN SHALL BE CONSTRUCTED WHOLLY WITHIN THE PROPERTY BOUNDARIES OF THE SITE BEING DEVELOPED.

- LANDSCAPE AREAS WITHIN THE STORAGE AREAS ARE MULCHED WITH DECORATIVE ROCK MULCH. (I.E. NON FLOATABLE)

DRAWING SCHEDULE

DRAWING No.	DRAWING TITLE
DOO	COVER SHEET, LEGEND & DRAWING SCHEDULE
DO1	BASEMENT STORMWATER DRAINAGE PLAN
DO2	BASEMENT STORMWATER DRAINAGE DETAILS
DO3	GROUND FLOOR STORMWATER DRAINAGE PLAN
DO4	GROUND FLOOR STORMWATER DRAINAGE DETAILS
DO5	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS
DO6	MUSIC RESULTS AND DETAILS
DO7	MUSIC LINK REPORT

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
T.K.	TOP OF KERB
RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
–––	STORMWATER DRAINAGE PIPE
–•–	DOWNPIPE TO RAINWATER TANK
•DP	100Ø DOWN PIPE (U.N.O.)
• VD	VERTICAL DROP PIPE
• VR	VERTICAL RISER
• IO	INSPECTION OPENING
	MASONRY RETAINING WALL
⚬ FW	FLOOR WASTE 300Ø
⚬ RWO	RAINWATER OUTLET 150Ø
⚬ DDO	DISH DRAIN OUTLET 100Ø
	GRATED INLET PIT
	GRATED DRAIN
	OVERLAND FLOW PATH
SP	SPREADER
ES	EMERGENCY SPITTER

ABBREVIATIONS

CL	CLEARANCE
DIA	DIAMETER
DDO	DISH DRAIN OUTLET
DP	DOWNPIPE
Ex.	EXISTING
FFL	FINISHED FLOOR LEVEL
GL	GROUND LEVEL
GMS	GALVANISED MILD STEEL
GSIP	GRADED SURFACE INLET PIT
GTD	GRATED TRENCH DRAIN
HL	HIGH LEVEL
IL	INVERT LEVEL
JP	JUNCTION PIT
KIP	KERB INLET PIT
IO	INSPECTION OPENING
LL	LOW LEVEL
O/F	OVERFLOW
PVC	POLYVINYLCHLORIDE
SL	SURFACE LEVEL
STW	STORMWATER
S/S	STAINLESS STELL
U/S	UNDER SIDE

NOTES: DRAINAGE LINES

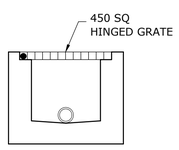
DRAINAGE LINES SHOWN continuous ––––––
TO COLLECT SURFACE WATER

DRAINAGE LINES SHOWN DASHED —— RWT ——
TO COLLECT ROOF WATER ONLY TO RAINWATER TANK

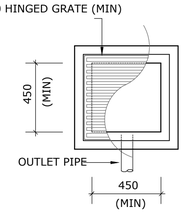
DP : 100Ø DOWN PIPE U.N.O.
––––––– : STORMWATER PIPE @1% MIN. U.N.O.
REFER TO AS 3500 PART 3 TABLE 7.2
P1 : 100Ø UPVC PIPE AT 1.0% MIN. GRADE
P2 : 150Ø UPVC PIPE AT 1.0% MIN. GRADE
P3 : 225Ø UPVC PIPE AT 0.5% MIN. GRADE
P4 : 300Ø UPVC PIPE AT 0.4% MIN. GRADE
P5 : 375Ø UPVC PIPE AT 0.4% MIN. GRADE
P6 : 450Ø RCP PIPE AT 0.4% MIN. GRADE

✳ NEW LEVEL
┼ EXISTING LEVEL

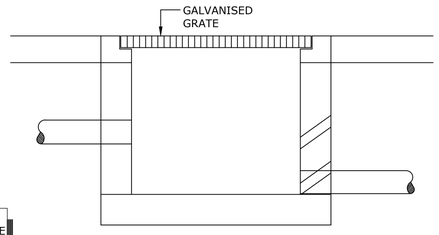
PROVIDE 150mm GAP UNDER THE FENCE AND IF BLOCK WALL PROVIDED, THEN PROVIDE OPENING FOR EMERGENCY OVERFLOW.



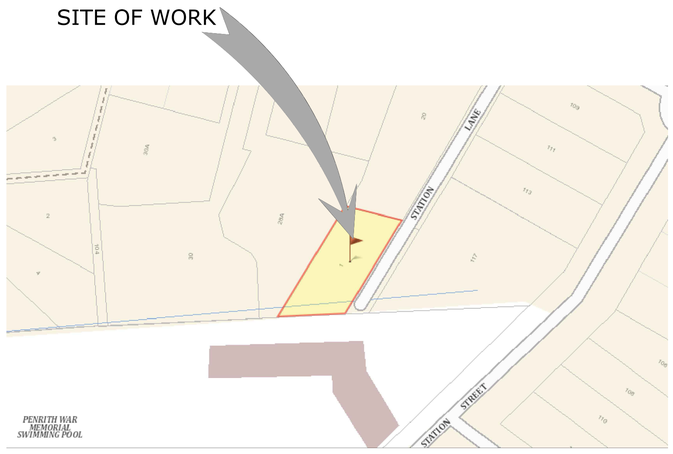
TYPICAL PIT SECTION
N.T.S.



STANDARD PIT
N.T.S.



TYPICAL PIT DETAIL
NTS



N
LOCALITY SKETCH
NOT TO SCALE

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE
A	FOR D.A. APPROVAL	N.L.	J.P.	08-08-18					

ARCHITECT
ANTOINE J. SAOUMA
Architect 7412
NSW BOARD OF ARCHITECTS
INSTITUTE OF ARCHITECTS

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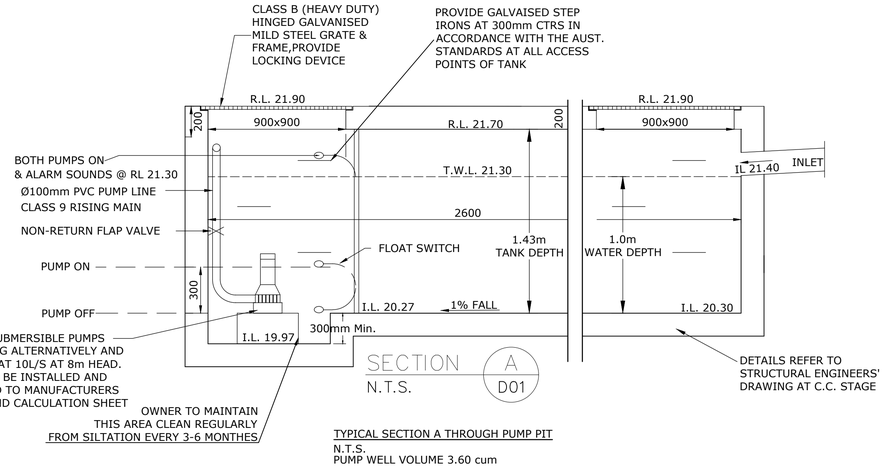
MOBILE: 0404 142 063 EMAIL: info@lceng.com.au

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
PENRITH NSW

CONSENT AUTHORITY:
PENRITH CITY COUNCIL

SHEET SUBJECT
COVER SHEET, LEGEND AND DRAWING SCHEDULE

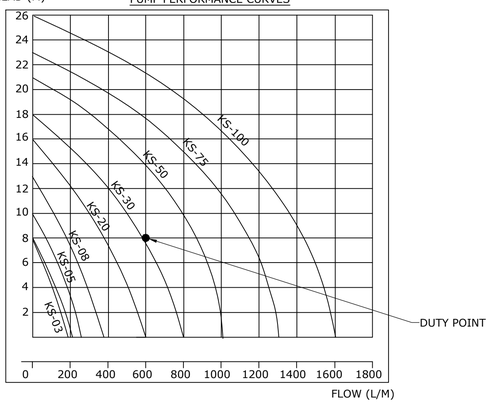
PROJECT	1 STATION LANE, PENRITH NSW		
DATE	AUG 18	DRAWN J.P.	DESIGNED N.L. / CHECKED N.L.
SCALE @ A1	N.T.S.	JOB No	18NL148
AUTHORISED	NERMEIN LOKA	DWG No	D00
REV	A		

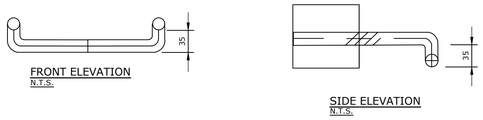


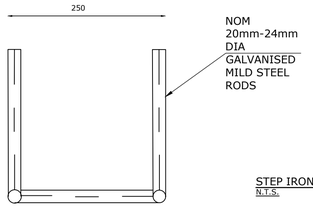
TYPICAL SECTION A THROUGH PUMP PIT
N.T.S.
PUMP WELL VOLUME 3.60 cum

HEAD (M)

PUMP PERFORMANCE CURVES

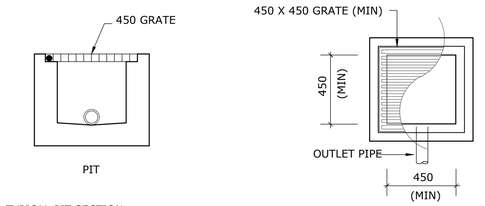






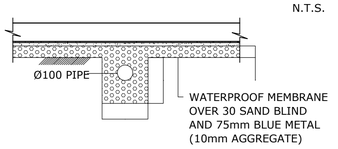
STEP IRON DETAILS
N.T.S.

NOTE: INSTALL WHERE PITS ARE DEEPER THAN 1000mm



TYPICAL PIT SECTION
N.T.S.

STANDARD PIT
N.T.S.



TYPICAL SECTION THROUGH SUBSOIL HARD PIPE
N.T.S.

PUMP SPECIFICATIONS

STANDARD PUMP-OUT NOTES

THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -

1. THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE EQUAL OPERATION LOAD & PUMP LIFE.
2. A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
3. A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
4. A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING & ACTIVATE THE ALARM.
5. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT & A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

PUMP WELL DETAILS

SUMP SIZE AND PUMP SIZE BASE ON 100 YEAR 2 HR STORM
INTENSITY IS 44.40 mm/hr, AREA DRAINING TOWARDS SUMP IS 0 m2
MINIMUM STORAGE TO BE PROVIDED = 2400x1500x1000 = 3,600 L
USE KS 30 OR EQUIVALENT DUAL PUMPS TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO ACT ALTERNATIVELY AT 10L/s AT 8m HEAD

RECOMMENDED PUMP

Type	Output		Outlet		Rated		Maximum		Weigh	Dimension		
					Head Capacity		Head	Capacity				
	HP	kW	mm	Inch	M	LPM	M	LPM	Kg	L(mm)	W(mm)	H(mm)
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305
KS-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359
KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	375
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425
KS-20	2	1.5	80	3"	10	300	16	600	31	278	182	475
KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530
KS-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610

NOTE RE. SERVICES

APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN ON LONGITUDINAL SECTION. EXACT LOCATIONS & DEPTHS TO BE ACCURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORTIES BEFORE COMMENCEMENT OF ANY WORKS

DIAL 1100 BEFORE YOU DIG

NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3.2:1998 AND COUNCIL SPECIFICATIONS.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES

HEIGHT 150mm

WIDTH 200mm

COLOURS:

"DANGER" AND BACKGROUND	WHITE
ELLIPTICAL AREA	RED
RECTANGLE CONTAINING ELIPSE	BLACK
OTHER LETTERING AND BORDER	BLACK

MATERIALS POLYPROPYLENE

CONFINED SPACE WARNING SIGN
N.T.S.

WARNING

PUMP OUT SYSTEM FAILURE IN BASEMENT WHEN LIGHT IS FLASHING AND SIREN SOUNDING

BASEMENT PUMP OUT FAILURE WARNING SIGN

NOTE:-

1- SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION WHERE VEHICLES ENTER THE BASEMENT.

COLOURS :; -

WARNING - RED
BORDER AND OTHER COLOURING - BLACK

NOTE: A SUITABLE ALARM SYSTEM POSITIONED AT ENTRANCE OF BASEMENT CARPARK TO PROVIDE A FLOOD WARNING IN CASE OF PUMP FAILURE (TO COUNCILS SPEC). AS SHOWN ABOVE.

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE
A	FOR D.A. APPROVAL	N.L.	J.P.	08-08-18					

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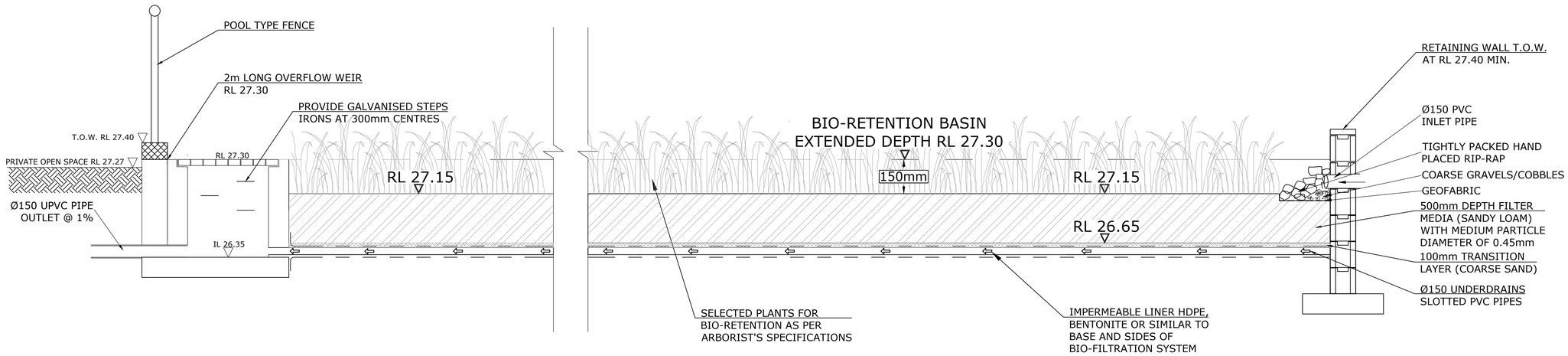
PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
PENRITH NSW

CONSENT AUTHORITY:
PENRITH CITY COUNCIL

SHEET SUBJECT
BASEMENT STORMWATER DRAINAGE DETAILS

PROJECT	1 STATION LANE, PENRITH NSW		
DATE AUG 17	DRAWN J.P.	DESIGNED N.L.	CHECKED N.L.
SCALE @ A1 N.T.S.		JOB No 18NL148	
AUTHORISED NERMEIN LOKA		DWG No D02	REV A

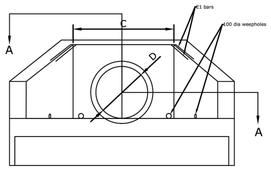


TYPICAL SECTION THROUGH BIO-RETENTION/FITLER MEDIA

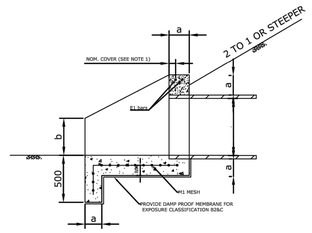
NOTE RE. SERVICES

APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN ON LONGITUDINAL SECTION. EXACT LOCATIONS & DEPTHS TO BE ACCURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORTIES BEFORE COMMENCEMENT OF ANY WORKS

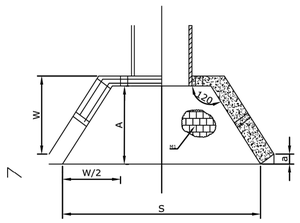
DIAL 1100 BEFORE YOU DIG



ELEVATION



LONGITUDINAL SECTION



PLAN SECTION A-A

DIMENSIONS	D	Nominal pipe diameter		(mm)	300	375	450	525	600	750	900
	A	Apron depth		(mm)	270	415	590	735	900	1210	1540
	C	Headwall length		(mm)	770	850	940	1020	1100		1450
	S	Apron width		(mm)	1080	1330	1620	1870	2140	2670	3230
	W	Wingwall length		(mm)	310	480	680	850	1040	1400	1780
	a			(mm)	150	150	150	150	150	150	150
	b			(mm)	300	300	300	300	400	400	400
QUANTITIES IN 2 HEADWALLS		E1 BAR 12mm dia	L1	(mm)	885	965	1055	1135	1215	1385	1565
			L2	(mm)	200	200	200	200	600	600	600
			NO. req		4	4	4	4	4	4	4
		M1 MESH	Length	(mm)	5140	5460	5820	6140	9660	10340	11060
			Mark	(mm)	F81	F81	F81	F81	F81	F81	F81
			L1	(mm)	1260	1510	1800	2050	2320	2850	3410
			L2	(mm)	610	755	930	1075	1240	1550	1880
			L3	(mm)	175	260	360	445	540	720	910
			NO. Req		2	2	2	2	2	2	2
		Steel Reinforcement		(kg)	16.1	21.3	28.5	35.4	46.7	65.9	89.9
		Wingwall length		(m3)	0.53	0.71	0.94	1.18	1.49	2.12	2.89

NOTES:
1. Concrete strength grades shown are for exposure classification A2. Refer to AS3600-1994, section 4 for concrete strength grade and cover to reinforcement for other exposure classification.
2. WEEPHOLES are to be provided at 1800 ctrs max.out let only.
3. STEEL : All bars to be Grade 400 Y to AS1302-1991
4. MESH : Laps shall be made so that the two outer most wires of one fabric over lap the two outer most wires of the sheet being lapped.

REFERENCED DOCUMENTS:
AS 1302-1991 Steel Reinforcing Bars for Concrete.
AS 1304-1991 Welded Wire Reinforcing Fabric for Concrete.
AS 3600-1994 Concrete Structures
RTA ZA Model Specification Part R11 - Stormwater Drainage.

All dimension are in millimeters unless otherwise stated. [First Issued: June 1998]

AMENDMENT DETAILS	DATE
Notes : R5 changed to R11	sEPT 2000

Roads and Traffic Authority NSW

CONCRETE HEADWALLS SINGLE CELL 300 mm TO 900 mm DIA. WITH CONCRETE ARON (2 TO 1 OR STEEPER

SCALE	NO. OF SHEETS	SHEET NO.
N.T.S.	1	1

MD.R11.A02.A.1

NOTE:
MAINTENANCE SERVICE MUST BE CARRIED OUT BY THE DEVELOPMENT OWNER FOR THE BIO-RETENTION BASIN EVERY 3 MONTHS OR AFTER ANY MAJOR STORM EVENT.

HEIGHT 400MM

WIDTH 300MM

ABOVE GROUND OSD BASIN WARNING SIGN

NTS

COLOURS:

TRIANGLE AND "WARNING"	RED
WATER	BLUE
FIGURE AND OTHER LETTERING	BLACK
MATERIALS	POLYPROPYLENE

PROVIDE OSD SIGN ADJACENT TO THE ON-SITE DETENTION SYSTEM IN A CLEAR AND VISIBLE POSITION IN ACCORDANCE WITH THE UPPER PARRAMATTA RIVER CATCHMENT TRUST REQUIREMENTS

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

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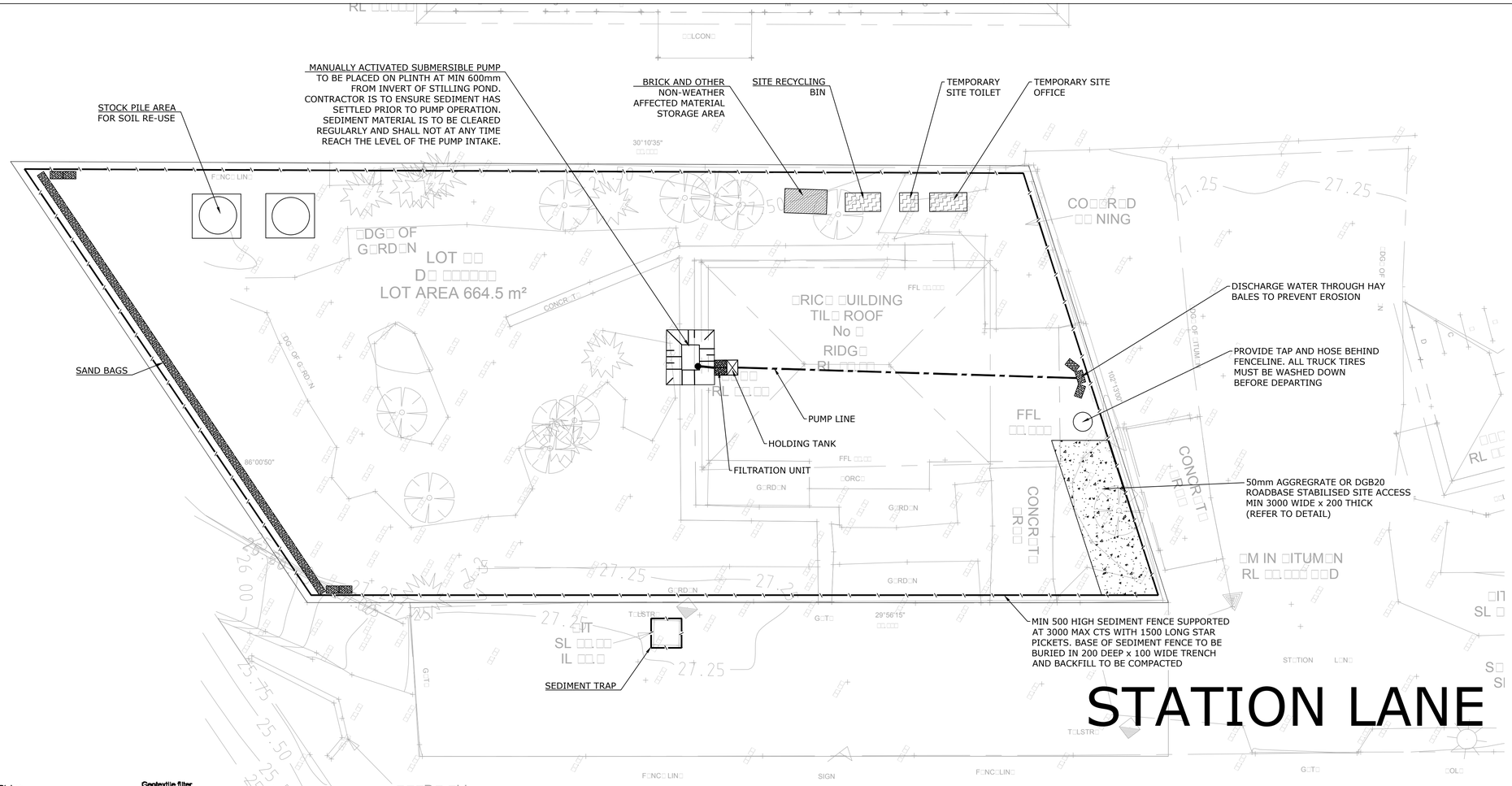
PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
PENRITH NSW

CONSENT AUTHORITY:
PENRITH CITY COUNCIL

SHEET SUBJECT
SITE STORMWATER DRAINAGE DETAILS

PROJECT	1 STATION LANE, PENRITH NSW		
DATE	DRAWN	DESIGNED	CHECKED
AUG 18	J.P.	N.L.	N.L.
SCALE @ A1		JOB No	
N.T.S.		18NL148	
AUTHORISED	DWG No		REV
NERMEIN LOKA	D04		A



EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
3. ALL TRESS ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXPECT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS, ETC.
4. STABILISE/REVEGATATE ALL DISTURBED AREAS PROGRESSIVELY WHERE PRACTICAL.
5. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER.
6. ADDITIONAL VEHICLES MUST PARK ON ROAD AND NOT FOOTPATH. PUBLIC FOOTPATH ADJACENT TO SITE MUST NOT BE OBSTRUCTED AND MUST BE SAFE FOR PEDESTRIAN ACCESS.
14. ENSURE FENCE IS KEYED AT BOTH ENDS INTO GROUND, WITH BASE TURNED UPSLOPE.
15. WHERE SEDIMENT FENCE IS NEAR STREET, ERECT FENCE WITHIN DEVELOPMENT SIDE OF TURF FILTER STRIPS AND PROPERTY BOUNDARY.
16. SEDIMENT FENCE FILTER CLOTH TO BE FASTENED SECURELY TO WIRE FENCE WITH TIES SPACED EVERY 600MM.OVERLAP ADJOINING FILTER CLOTH BY 150MM AND FOLDING OVER.
17. DIVERT UPSLOPE WATER AROUND WORK SITE AND STABILISE CHANNELS.
18. LAY KERB-SIDE TURF FILTER STRIP TO TRAP EXCESS SEDIMENT.
19. CONTAMINATED WATER WITH SEDIMENT FROM A SEDIMENT BASIN OR EXCAVATION PIT IS TO BE FLOCCULATED/ FILTERED TO LOWER SUSPENDED SOIL LOAD TO LESS THAN 50 MILLIGRAMS PER LITRE.
20. SOIL, SAND AND GRAVEL ARE NOT TO BE STOCKPILED ON ROADWAYS OR IN DRAINAGE AREAS.
21. WASH AREA MUST BE SLIGHTLY DEPRESSED TO COLLECT WASTE MATERIAL.
22. APPLY DUST CONTROL MEASURES TO REDUCE SURFACE AND AIRBORNE MOVEMENT OF SEDIMENT
23. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.

SYMBOLS

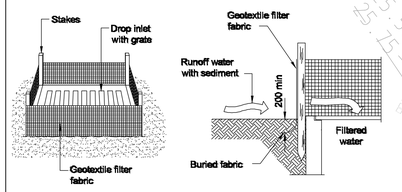
- EXISTING CONTOURS
- SILT FENCE
- WIRE MESH FENCE
- STABILISED SITE ACCESS
- Ø50 PUMP LINE

NOTES: SOIL & WATER MANAGEMENT

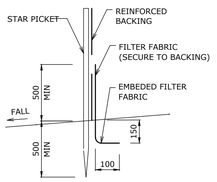
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED, MAINTAINED AND LOGGED DAILY BY SITE MANAGER.
2. MINIMISE DISTURBED AREAS.
3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
4. NO MATERIAL TO BE STORED ON FOOTPATH.
5. STOCKPILE LASTING LONGER THAN 40 DAYS MUST BE COVERED.
6. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
7. ROADS AND FOOTPATH TO BE SWEPT DAILY.
8. ENSURE NEIGHBOURING PROPERTY IS NOT FLOODED.
9. IF YOU DO NOT COMPLY, YOU MAY BE LIABLE TO A $1500 FINE.

NOTE:
ALL EXISTING BUILDINGS TO BE DEMOLISHED ON SITE.
ALL EXISTING PITS TO BE COVERED DURING DEMOLITION

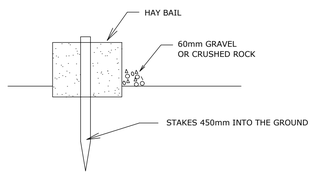
EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:100



Sediment Trap for Drop Inlet (Geotextile Filter Fabric)
NTS

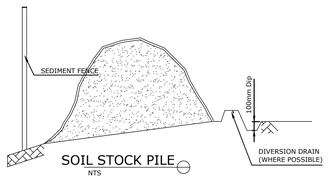


SILT FENCE DETAIL

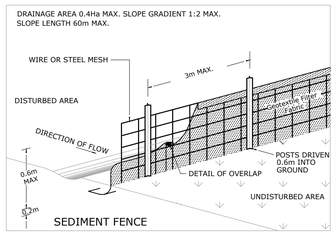


HAY BAIL DETAIL

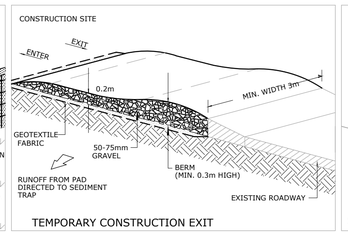
TO BE USED AS REQUIRED



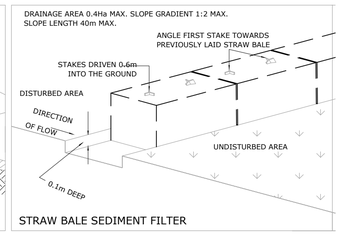
SOIL STOCK PILE
NTS



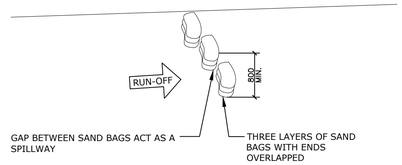
SEDIMENT FENCE



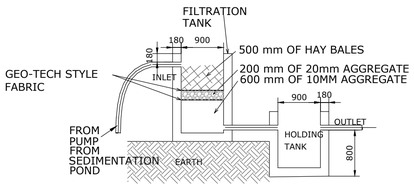
TEMPORARY CONSTRUCTION EXIT



STRAW BALE SEDIMENT FILTER



SANDBAG TRAP
NTS



TYPICAL DETAIL OF FILTRATION UNIT
NTS

NOTE: HAY TO BE CHANGED EVERY DAY
GEO-TECH, SAND, AND BLUE METAL, TO BE CHANGED WEEKLY

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

No	AMENDMENT	ENG	DRAFT	DATE
A	FOR D.A. APPROVAL	N.L.	J.P.	08-08-18

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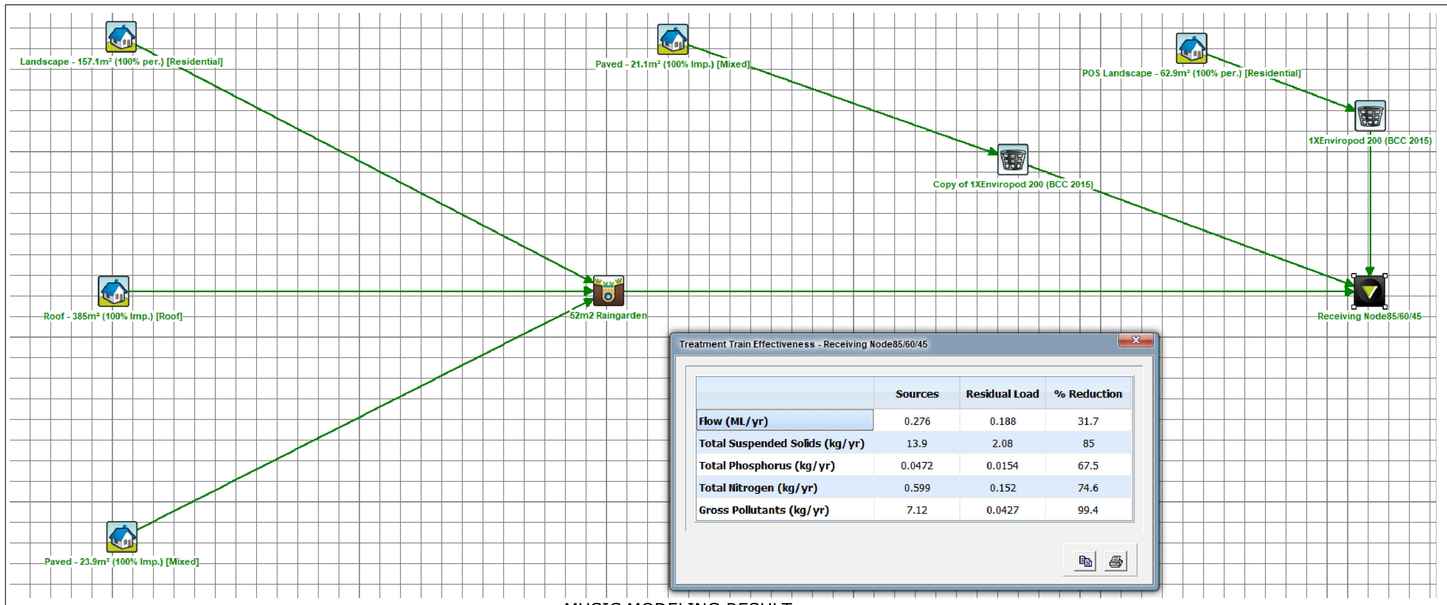
PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
PENRITH NSW

CONSENT AUTHORITY:
PENRITH CITY COUNCIL

N

SHEET SUBJECT
EROSION AND SEDIMENT CONTROL PLAN AND DETAILS

PROJECT	1 STATION LANE, PENRITH NSW		
DATE	AUG 18	DRAWN	J.P.
DESIGNED	N.L.	CHECKED	N.L.
SCALE @ A1	AS SHOWN	JOB No	18NL148
AUTHORISED	NERMEIN LOKA	DWG No	D05
REV	A		



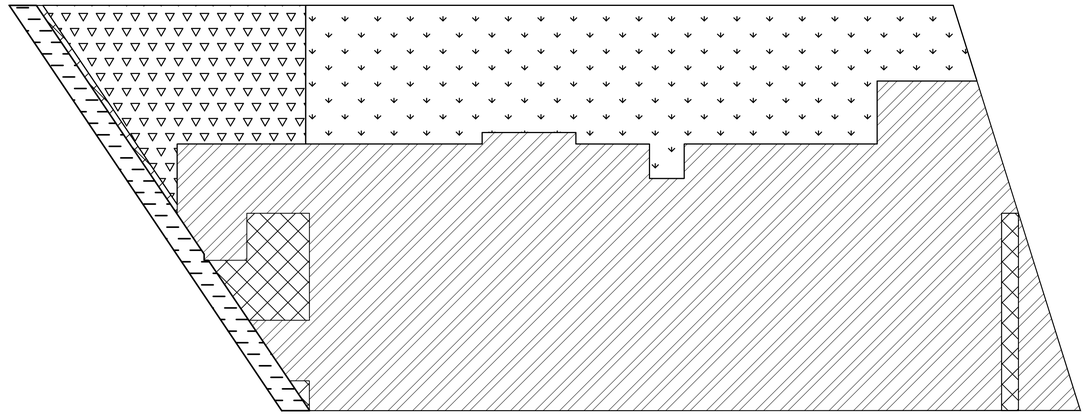
Treatment Train Effectiveness - Receiving Node85/60/45

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.276	0.188	31.7
Total Suspended Solids (kg/yr)	13.9	2.08	85
Total Phosphorus (kg/yr)	0.0472	0.0154	67.5
Total Nitrogen (kg/yr)	0.599	0.152	74.6
Gross Pollutants (kg/yr)	7.12	0.0427	99.4

MUSIC MODELING RESULT

SUMMARY:

THE PROPOSED STORMWATER QUALITY TREATMENT SYSTEM COMPRISES OF 56m² BIO-RETENTION BASIN AREA, 55m² FILTER MEDIA AREA 500mm THICKNESS AND THREE ENVIROPODS SERIES 200 FILTERS TO REMOVE DIFFERENT SOURCE POLLUTANTS. IT IS OUR OPINION THAT IF THESE MEASURES ARE IMPLEMENTED, THE PROPOSED DEVELOPMENT WILL COMPLY WITH THE INTENT OF PENRITH CITY COUNCIL REQUIREMENT. IN ADDITION, THE PROPOSED STORMWATER QUALITY TREATMENT TRAIN SHALL BE MAINTAINED AND SERVICES BY THE OWNERS OF THE PROPOSED DEVELOPMENT AT NO COST TO COUNCIL.



STORMWATER TREATMENT SUMMARY
SITE AREA = 662m²

"MUSIC" HAS BEEN USED FOR WATER QUALITY TREATMENT ANALYSIS IS PROVIDED STORMWATER360'S TREATMENT DESIGN FOR THE ABOVE MENTIONED SITE. THE CATCHMENT IN MUSIC IS MODELLED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES & PARAMETERS:

- MUSIC VERSION 6.3.0
- "PENRITH CITY COUNCIL WSUD TECHNICAL GUIDELINES", VERSION 1 (DEC 2013)
- SF CHAMBER NODE MODELED WITH 'K' VALUES SET TO 1
- RAINFALL STATION 67113 PENRITH LAKES AWS, 6 MINUTES TIME STEP FROM 1999 TO 2008
- PENRITH CITY COUNCIL SOURCE NODE(S) ULTILIZING MODIFIED % IMPERVIOUS AREA, RAINFALL THRESHOLD, SOIL PROPERTIES & POLLUTANT CONCENTRATIONS
- NO DRAINAGE ROUTING BETWEEN NODES.

THE SYSTEM HAS BEEN MODELED TO MEET THE PENRITH CITY COUNCIL WSUD TECHNICAL GUIDELINE TARGET

TSS: 85% REDUCTION
TP: 60% REDUCTION
TN: 45% REDUCTION

TREATMENT DEVICES:
1. 56m² BIO-RETENTION BASIN AREA.
2. 55m² MEDIA FILTER 500mm THICKNESS.
3. 3 x No. ENVIROPOD SERIES 200 FILTERS

PAVED AREA TO BIO-RETENTION AREA 23.90 m²

ROOF AREA TO BIO-RETENTION AREA 385 m²

LANDSCAPE AREA TO BIO-RETENTION AREA 157.10 m²

PAVED AREA BYPASS BIO-RETENTION CHAMBER 21.10 m²

LANDSCAPE ARE BYPASS BIO-RETENTION AREA 62.90 m²

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
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CONSENT AUTHORITY:
PENRITH CITY COUNCIL

SHEET SUBJECT
MUSIC RESULT AND DETIALS

PROJECT	1 STATION LANE, PENRITH NSW		
DATE	DRAWN	DESIGNED	CHECKED
AUG 18	J.P.	N.L.	N.L.
SCALE @ A1		JOB No	
NTS		18NL148	
AUTHORISED		DWG No	REV
NERMEIN LOKA		D06	A

PENRITH CITY COUNCIL

music*link*

MUSIC-*link* Report

Project Details		Company Details	
Project:	1 STATION LANE, PENRITH	**Company:**	LOKA CONSULTING ENGINEERS
Report Export Date:	08/08/2018	**Contact:**	LESLEY YE
Catchment Name:	1 Station Lane Penrith	**Address:**	14A/8 AVE OF THE AMERICAS, NEWINGTON, NSW, 2127
Catchment Area:	0.065ha	**Phone:**	02 8065 9689
Impervious Area*:	66.15%	**Email:**	CIVIL3@LCENG.COM.AU
Rainfall Station:	67113 PENRITH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1999 - 31/12/2008 11:54:00 PM		
Mean Annual Rainfall:	691mm		
Evapotranspiration:	1158mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.31		
Study Area:	Penrith		
Scenario:	Penrith Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Receiving Node85/60/45	**Reduction**	**Node Type**	**Number**	**Node Type**	**Number**
flow	31.7%	Bio Retention Node	1	Urban Source Node	5
TSS	85.4%	GPT Node	2		
TP	67.8%				
TN	74.6%				
GP	99.4%				

Comments

Bio-retention/Raingarden with 55m2 minimum surface area and filter media (500mm depth) to be provided.

2 no. Stormwater360 Enviropods are applied.

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
MUSIC-*link* now in MUSIC by eWater – leading software for modelling stormwater solutions

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Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Bio	52m2 Raingarden	Hi-flow bypass rate (cum/sec)	None	99	0.009
Bio	52m2 Raingarden	PET Scaling Factor	2.1	2.1	2.1
GPT	1XEnviropod 200 (BCC 2015)	Hi-flow bypass rate (cum/sec)	None	99	0.02
GPT	Copy of 1XEnviropod 200 (BCC 2015)	Hi-flow bypass rate (cum/sec)	None	99	0.02
Receiving	Receiving Node85/60/45	% Load Reduction	None	None	31.7
Receiving	Receiving Node85/60/45	GP % Load Reduction	90	None	99.4
Receiving	Receiving Node85/60/45	TN % Load Reduction	45	None	74.6
Receiving	Receiving Node85/60/45	TP % Load Reduction	60	None	67.8
Receiving	Receiving Node85/60/45	TSS % Load Reduction	85	None	85.4
Urban	Landscape - 157.1m² (100% per.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 157.1m² (100% per.)	Area Pervious (ha)	None	None	0.016
Urban	Landscape - 157.1m² (100% per.)	Total Area (ha)	None	None	0.016
Urban	Paved - 21.1m² (100% Imp.)	Area Impervious (ha)	None	None	0.002
Urban	Paved - 21.1m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Paved - 21.1m² (100% Imp.)	Total Area (ha)	None	None	0.002
Urban	Paved - 23.9m² (100% Imp.)	Area Impervious (ha)	None	None	0.002
Urban	Paved - 23.9m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Paved - 23.9m² (100% Imp.)	Total Area (ha)	None	None	0.002
Urban	POS Landscape - 62.9m² (100% per.)	Area Impervious (ha)	None	None	0
Urban	POS Landscape - 62.9m² (100% per.)	Area Pervious (ha)	None	None	0.006
Urban	POS Landscape - 62.9m² (100% per.)	Total Area (ha)	None	None	0.006
Urban	Roof - 385m² (100% Imp.)	Area Impervious (ha)	None	None	0.039
Urban	Roof - 385m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof - 385m² (100% Imp.)	Total Area (ha)	None	None	0.039

Only certain parameters are reported when they pass validation

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
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NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
MUSIC-*link* now in MUSIC by eWater – leading software for modelling stormwater solutions

NOT FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

No	AMENDMENT	ENG	DRAFT	DATE
A	FOR D.A. APPROVAL	N.L.	J.P.	08-08-18

ARCHITECT
ANTOINE J. SAOUMA
Architect 7412
NSW BOARD OF ARCHITECTS

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MOBILE: 0404 142 063 EMAIL: info@lceng.com.au

PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
1 STATION LANE,
PENRITH NSW

CONSENT AUTHORITY:
PENRITH CITY COUNCIL

SHEET SUBJECT
MUSIC LINK REPORT

PROJECT	1 STATION LANE, PENRITH NSW		
DATE: AUG 18	DRAWN: J.P.	DESIGNED: N.L.	CHECKED: N.L.
SCALE @ A1: NTS		JOB No: 18NL148	
AUTHORISED: NERMEIN LOKA		DWG No: D07	REV: A

Development Application
in accordance with the
Environmental Planning & Assessment Act 1979

Planning Report and Statement of Environmental Effects
for
Demolition of Existing Dwelling and Construction of New Residential Flat Building

Lot B2 in DP161921 and Lot 18 in DP122079
#1 Station Lane
Penrith

Station Lane Pty Limited ATF The Station Lane Trust
August 2018
Job Ref: 051 – 2017
Issue: 03-051/2017 (FINAL)

WALES & ASSOCIATES PTY. LTD.
Urban Design & Development Services
ACN No: 075 903 669 ABN No: 80 075 903 669

Document and Project Details	
Document Title:	Statement of Environmental Effects Demolition of Existing Dwelling and Construction of New Residential Flat Building Lot B2 in DP161921 and Lot 18 in DP122079 #1 Station Lane at Penrith
Author:	Matthew Wales
Project Manager:	Matthew Wales
Date of Issue:	20th August 2018
Job Reference:	#051-2017
Summary:	Development Report and Statement of Environmental Effects for Demolition of Existing Dwelling and Construction of New Residential Flat Building
Client Details	
Client:	Station Lane Pty Limited ATF The Station Lane Trust C/- Wales & Associates Pty Limited P.O. Box 150 Ettalong Beach
Contacts:	Matthew Wales C/- Wales & Associates Pty Limited P.O. Box 150 Ettalong Beach matthew@walesassociates.com.au

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Document Verification	
Checked by:	Issued by:
	
D. Wales	M. Wales

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**Development Report and Statement of Environmental Effects for
Demolition of Existing Dwelling and Construction of New Residential Flat Building
Lot B2 in DP161921 and Lot 18 in DP122079
#1 Station Lane at Penrith**

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	APPENDICES	
	Architectural Plans prepared by Antoine J. Saouma Architect	
	BASIX prepared by LOKA Consulting Engineers	
	Site Detail Survey prepared by John Lowe & Associates Pty Limited (Consulting Surveyors)	
	Landscape Plan prepared by Vision Dynamics (Landscape Architects)	
	Pre-development Tree Assessment Report prepared by Nada Kbar	
	Stormwater Concept Plan prepared by LOKA Consulting Engineers	
	Flood Study prepared by BMT WBM Pty Limited (Flooding Engineers)	
	Site Waste Management Plan prepared by Elephants Foot Recycling Solutions	
	Preliminary Site Investigation was prepared by Benviron Group (Geotechnical Engineers).	
	Access Review Report prepared by LOKA Consulting Engineers	
	Traffic Management Report prepared by LOKA Consulting Engineers	
	Carlift Details prepared by Hercules Carparking Solutions	
	Design Verification Statement prepared by Antoine J. Saouma Architect	
	SEPP 65 Design Review Statement prepared by Antoine J. Saouma Architect	
	Acoustic Report (Traffic and Environmental Noise) prepared Acoustic Vibration & Noise Pty Limited	
	QS Report prepared by Construction Consultants Pty Limited	

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LIST OF ABBREVIATIONS AND GLOSSARY	
Abbreviation	**Meaning**
ADG	Apartment Design Guide
AHD	Australian Height Datum
AS	Australian Standard
CC	Construction Certificate
CCTV	Closed Circuit Television
CPTED	Crime Prevention Through Environmental Design
Council	Penrith City Council
dB	Decibel, which is 10 times the logarithm (base 10) of the ratio of a given sound pressure to a reference pressure; used as a unit of sound
dB(A)	Frequency weighting filter used to measure 'A-weighted' sound pressure levels, which conforms approximately to the human ear response, as our hearing is less sensitive at very low and very high frequencies
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water NSW
EP&A Act	Environmental Planning & Assessment Act
EPI	Environmental Planning Instrument
ESD	Ecologically Sustainable Development
DoPI	Department of Planning & Infrastructure
Emission	The release of material into the surroundings (for example, gas, noise and water)
EP&A Act	Environmental Planning and Assessment Act 1979
GFA	Gross Floor Area
INP	Industrial Noise Policy
LEP	Local Environmental Plan
m^2	Square metre
m^3	Cubic metre
PCC	Penrith City Council
PDCP	Penrith Development Control Plan 2014
PLEP	Penrith Local Environmental Plan 2010
PP	Planning Proposal
REF	Review of Environmental Factors
REP	Regional Environment Plan
RMS	Roads & Maritime Service
ROW	Right-of-way
SEE	Statement of Environmental Effects
SEPP	State Environmental Planning Policy
SIA	Social Impact Assessment

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DEVELOPMENT REPORT AND STATEMENT OF ENVIRONMENTAL EFFECTS

in accordance with

PENRITH CITY COUNCIL DEVELOPMENT APPLICATION MATRIX

Date of Report: 20th August 2018

Applicant: George Ghossayn
Station Lane Pty Limited ATF The Station Lane Trust
C/- **WALES & ASSOCIATES**
P.O. Box 150
Ettalong Beach 2257

Client: George Ghossayn
Station Lane Pty Limited ATF The Station Lane Trust
C/- Wales & Associates Pty Limited
P.O. Box 150
Ettalong Beach 2257

Location: Lot B2 in DP161921
#1 Station Lane at Penrith

Subject of Report: **Demolition of Existing Dwelling and Construction of New Residential Flat Building**

Current Zoning: R4 – *High Density Residential* under the Penrith Local Environmental Plan 2010
(see ***Figure 1*** on following page)

Site Area: 664.5m²

Planning Instruments:

(i) Environmental Planning & Assessment Act 1979;
(ii) New South Wales (Australia) Local Government Amendment (Ecologically Sustainable Development) Act 1997;
(iii) Penrith Local Environmental Plan 2010;
(iv) SEPP 65 – Design Quality of Residential Apartment Development;
(v) and
(vi) SEPP (BASIX) 2004

Policy Documents:

(i) Apartment Design Guide (ADG) – NSW Department of Planning &Environment; and
(ii) Penrith Development Control Plan 2014

EXECUTIVE SUMMARY

This Statement of Environmental Effects has been prepared by Wales & Associates Pty Limited (WA) on behalf of Station Lane Pty Limited ATF The Station Lane Trust. It describes the site, its environs, the proposed development and provides an assessment of the proposal in terms of the matters for consideration under Section 4.15 – *Evaluation* of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979). It should be read in conjunction with the supporting information and **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** appended to this report.

The subject property falls within Penrith City Council local government area. In particular, the proposal has been considered against the relevant provisions of the Penrith Local Environmental Plan (PLEP) 2010.

The aim of the application is to gain approval for the demolition of the existing dwelling and construction of a new residential flat building.

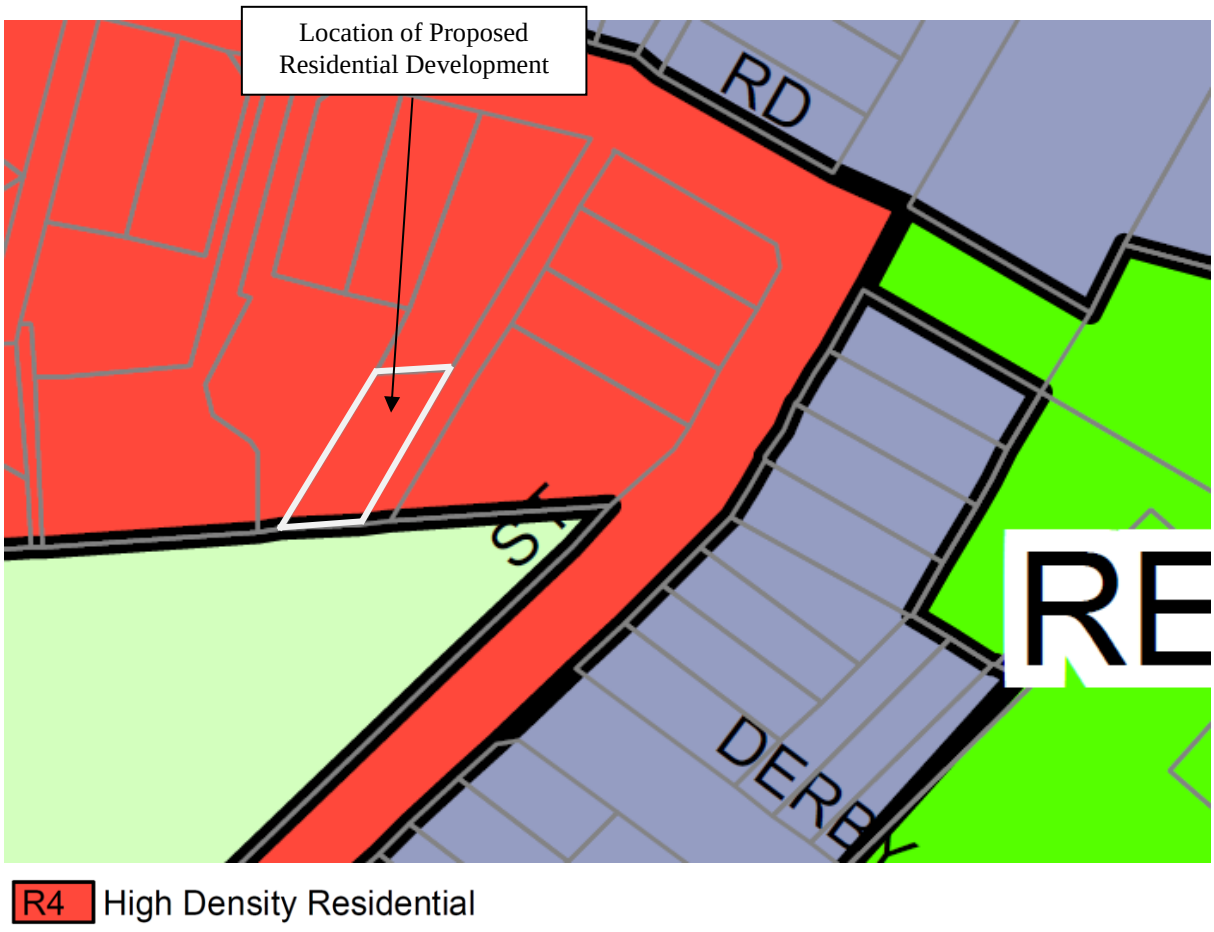

Figure 1
Extract from the Penrith Local Environmental Plan 2010 Zoning Plans LZN_006
(courtesy of the Penrith City Council through the NSW Legislation website)

1.0 THE PROPOSAL

The proposed development involves the demolition of the existing brick dwelling house on the site to facilitate the construction of a new six (6) storey residential apartment development. A total of seventeen (17) residential apartments are proposed in the new development as follows:-

1 bedroom apartments: 8
2 bedroom apartments: 8
3 bedroom apartments: 1

TOTAL APARTMENTS: 17

Off-street parking is proposed for a total of fourteen (14) cars in a new two-level basement parking area in accordance with the Apartment Design Guide requirements (objective 3J-1). Vehicular access to the car parking facilities is to be provided via a car lift entry/exit located in the north eastern corner of the proposed development with access via a proposed right-of-carriageway/land purchase over the adjoining Council owned Lot 18 in DP122079.

1.1 General

The following report is for proposed residential flat building prepared by ***Antoine J. Saouma Architect***. The proposal includes:-

(i) demolition of the existing single storey brick dwelling;
(ii) seventeen (17) residential apartments over six (6) levels;
(iii) off street parking for thirteen (13) vehicles;
(iv) outdoor terrace and communal areas/balconies; and
(v) single ingress/egress

The attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** show the proposed residential flat building, basement car parking, landscaping and site works described in this report.

1.2 Pre Application Meeting

A pre-application meeting was held with Penrith City Council on Wednesday 7th March 2018 at which time the proposed development was assessed by the Council and the following preliminary key issues raised:-

(i) permissibility in the R4 – High Density Zone;
(ii) minimum lot size under Clause 4.1A;
(iii) building height;
(iv) SEPP 65 provisions;
(v) ADG requirements;
(vi) SEPP 55 – Site Contamination;
(vii) Noise Impacts;
(viii) waste management;
(ix) communal open space;
(x) side setbacks;
(xi) building separation;

(xii) building entry;
(xiii) storage;
(xiv) downstream drainage;
(xv) on-site detention;
(xvi) provision for overland flow;
(xvii) preservation of significant trees and tree retention;
(xviii) requirement for Arborists Report;
(xix) extent of excavation;
(xx) street presentation/activation; and
(xxi) requirement for Traffic Impact Assessment

2.0 CONSISTENCY WITH PLANNING CONTROLS

2.1 Penrith Local Environmental Plan 2010

The Penrith Local Environmental Plan 2010 (as amended) is the principal planning instrument affecting land use within the City. The Local Environmental Plan (LEP) defines what purpose land may be used for. The plan consists of a written statement and a number of maps. The plan, although prepared by Council, is vetted by the State Government to ensure consistency with Environmental Planning and Assessment Act, 1979, State Environmental Planning Policies before being gazetted by the Minister for Planning and Infrastructure. The following ***Table 1*** details the level of compliance with the Penrith Local Environmental Plan 2010.

Table 1
Compliance with the Penrith Local Environmental Plan 2010

Clause	Compliance
Clause 2.7 – Demolition	YES
Clause 4.1A – Minimum Lot Size	NO – Clause 4.6 variation
Clause 4.3 – Height of Buildings	NO – Clause 4.6 variation
Clause 4.4 – Floor Space Ratio	YES
Clause 4.6 – Exceptions to Development Standards	YES
Clause 5.10 – Heritage Conservation	YES
Clause 7.1 – Earthworks	YES
Clause 7.2 – Flood Planning	YES

2.1.1 *Zoning*

The property is current zoned R4 – *High Density Residential* under the Penrith Local Environmental Plan 2010. The **objectives** of Zone R4 are:-

(i) to provide for the housing needs of the community within a high density residential environment;
(ii) to provide a variety of housing types within a high density residential environment;
(iii) to enable other land uses that provide facilities or services to meet the day to day needs of residents;
(iv) to ensure that a high level of residential amenity is achieved and maintained;
(v) to encourage the provision of affordable housing; and
(vi) to ensure that development reflects the desired future character and dwelling densities of the area.

The following application **meets the objectives** of zone in that:-

(i) provides for the housing needs of the community within a high density residential environment through the construction of high quality residential units that has been designed to conform with the natural attributes of the site; and
(ii) provides for a variety of housing types with varying unit sizes and configurations within a high density residential environment;
(iii) the design ensures that a high level of residential amenity is achieved and maintained through appropriate setbacks and building articulation; and
(iv) the proposal ensures that the development reflects the desired future character and dwelling densities of the area

Therefore, the proposed residential flat building **COMPLIES** with the **objectives** of the zone.

2.1.2 *Demolition*

Clause 2.7 – *Demolition requires development consent* requires that the demolition of a building or work may be carried out only with development consent.

It should be noted that if the demolition of a building or work is identified in an applicable environmental planning instrument, such as this Plan or *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, as exempt development, the Act enables it to be carried out without development consent.

This application includes the demolition of the existing residential dwellings on the site (see ***Figure 2***).

Figure 2
Street View showing existing single storey brick dwelling at #1 Station Lane
(photograph courtesy of Antoine J. Saouma Architect)

2.1.3 *Minimum Lot Size for Residential Flat Buildings*

Clause 4.1A – *Minimum lot sizes for dual occupancies, multi dwelling housing and residential flat buildings* addresses issues relating site development density in relation to site size. The objective of this clause is to achieve planned residential density in certain zones including R4 – High Density Residential.

Development consent may be granted to development on a lot in a zone shown in Column 2 of the Table to this clause for a purpose shown in Column 1 of the Table opposite that zone, if the area of the lot is equal to or greater than the area specified for that purpose and shown in Column 3 of the Table. In this instance, the relevant standard is:-

Column 1	**Column 2**	**Column 3**
Residential flat building	Zone R4 High Density Residential	800 square metres for a standard lot

The proposed residential building does not fully comply with the provisions under Clause 4.1A with the subject site having an area of 664.5m². The development standard requires an area of 800m². This represents a departure of 17% from the standard. Council's attention is drawn to previous discussions in relation to the purchase/acquisition of the adjoining Council owned land to the south east known as Lot 18 in DP122079 which has an area of 198.3m² (see ***Figure 3***).

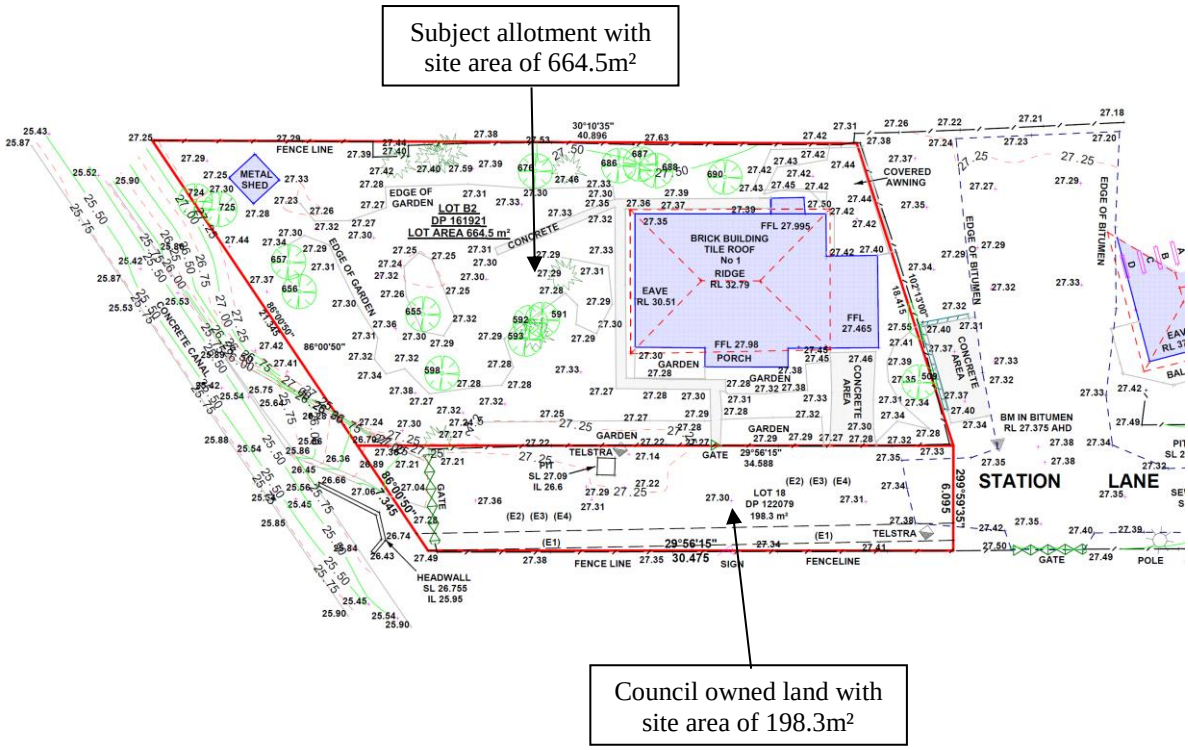

Figure 3
Site Survey Plan showing adjoining Council owned land
(image courtesy of John Lowe & Associates Pty Limited)

It is intended to formalise purchase negotiations with Penrith City Council for the consolidation of the two parcels of land and creation of appropriate easements and rights-of-access over the land to accommodate services and access to Council's drainage channel at the southern end of Station Lane.

The consolidation of the two allotments would give a total land area of 862.8m² which would result in the proposed development meeting the requirements of Clause 4.1A.

2.1.4 *Height of Buildings*

Clause 4.3 – *Height of Buildings* addresses issues associated with the maximum building height as measured from the natural ground level. The **objectives** of this clause are as follows:-

(i) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of the locality;
(ii) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development and to public areas, including parks, streets and lanes;
(iii) to minimise the adverse impact of development on heritage items, heritage conservation areas and areas of scenic or visual importance; and
(iv) to nominate heights that will provide a high quality urban form for all buildings and a transition in built form and land use intensity.

The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

In relation to the provisions under the Penrith Local Environmental Plan 2010, building height compliance is dealt with under Section 11.6 – *Building Height*.

The subject lands are designated P and currently have a maximum height of 18.0 metres under the Penrith Local Environmental Plan 2010 as shown in ***Figure 4***.

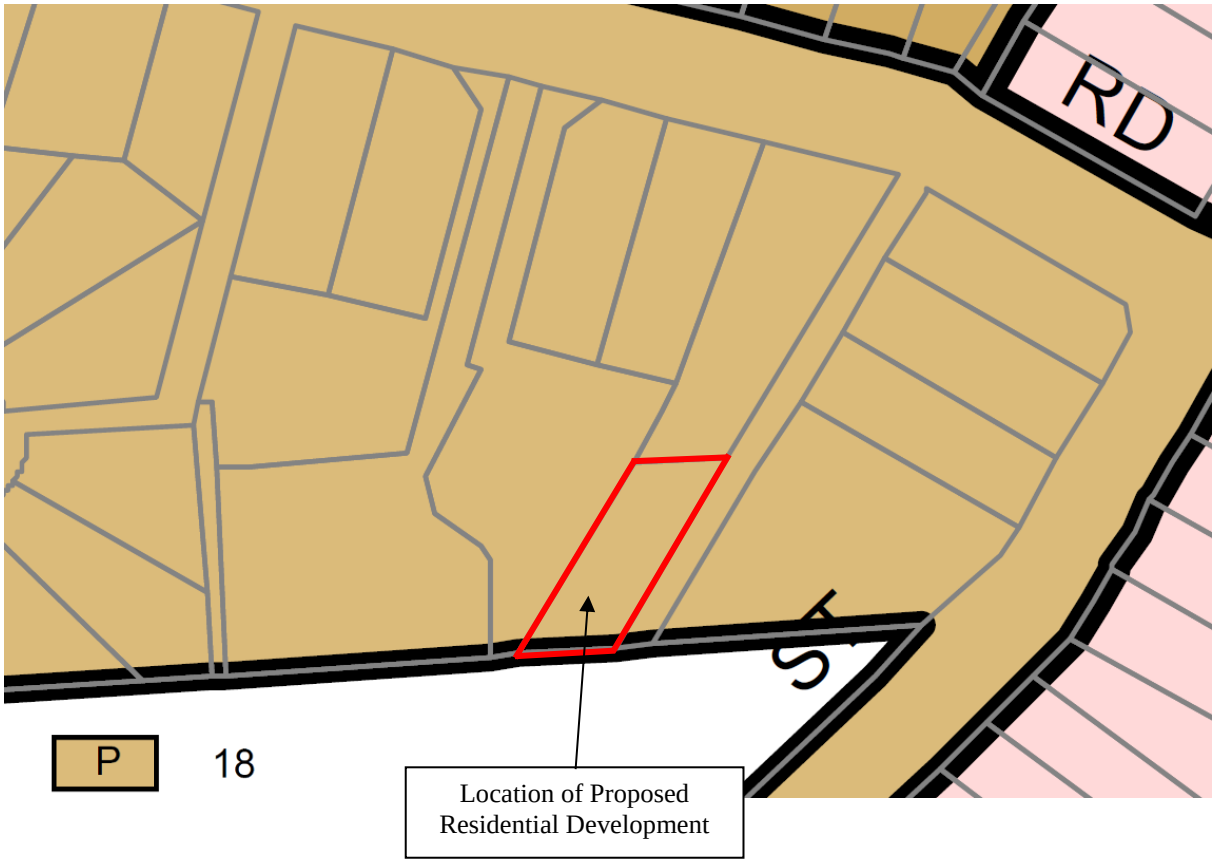

Figure 4
Extract from the Penrith Local Environmental Plan 2010 HOB_006
(courtesy of the Penrith City Council through the NSW Legislation website)

The height of the proposed residential flat building is shown on the attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect***. The proposed residential building does not fully comply with the provisions under Clause 4.3 with the roof parapet (250mm above the height plane) and lift overrun (1 metre above the height plane) encroaching outside the 18.0 metre height plane as shown ***Figure 5***.

+

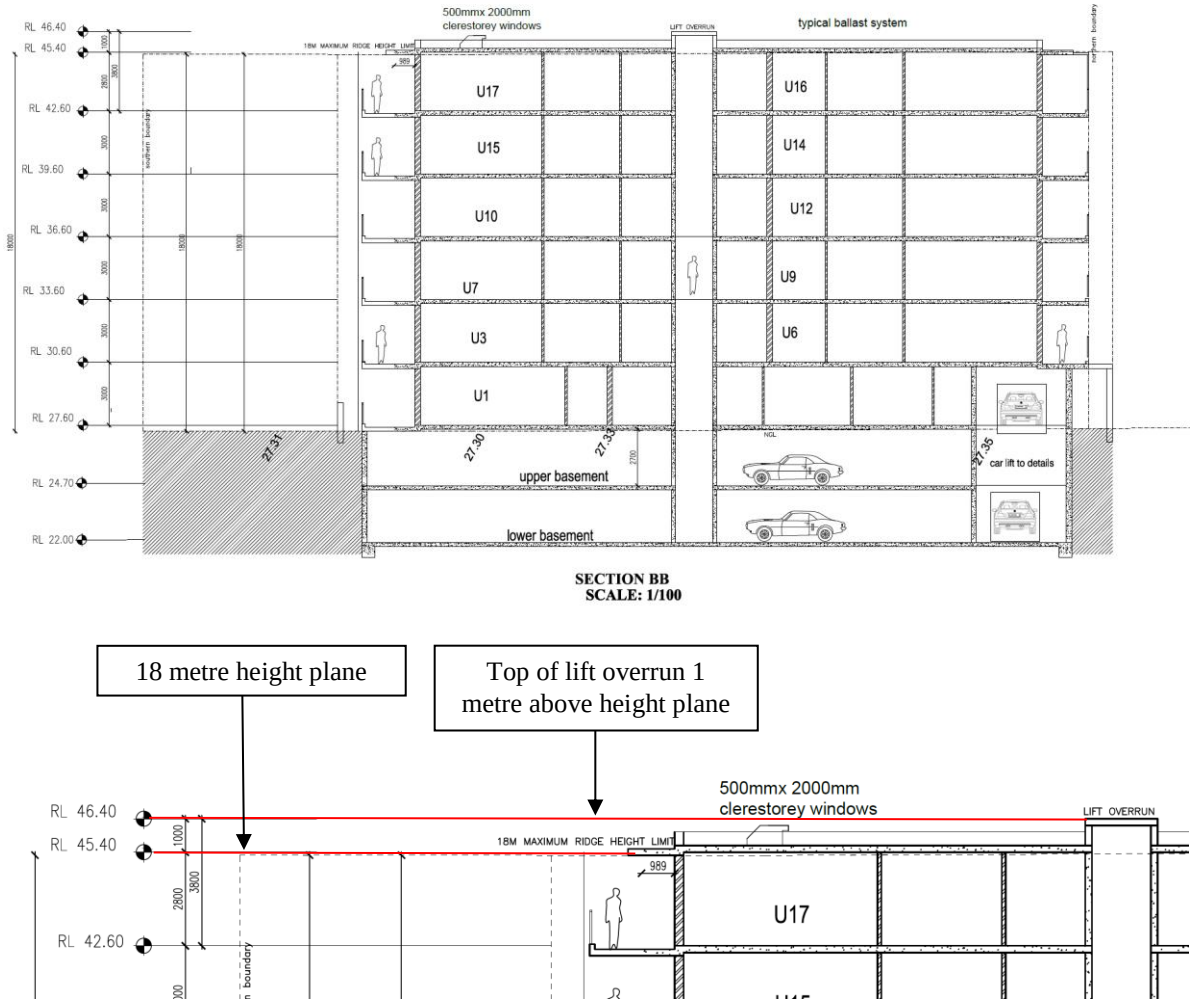

Figure 5
Extract from architectural plans showing variation above the 18.0m height plane
(images courtesy of Antoine J. Saouma Architect)

The variation is considered to be only minor. The encroachment is shown in ***Figure 6*** in context with the overall bulk and scale of the proposed residential flat building with the height plane shown in red and the area in exceedance shown white (ie: degree of exceedance 500mm to 1000mm).

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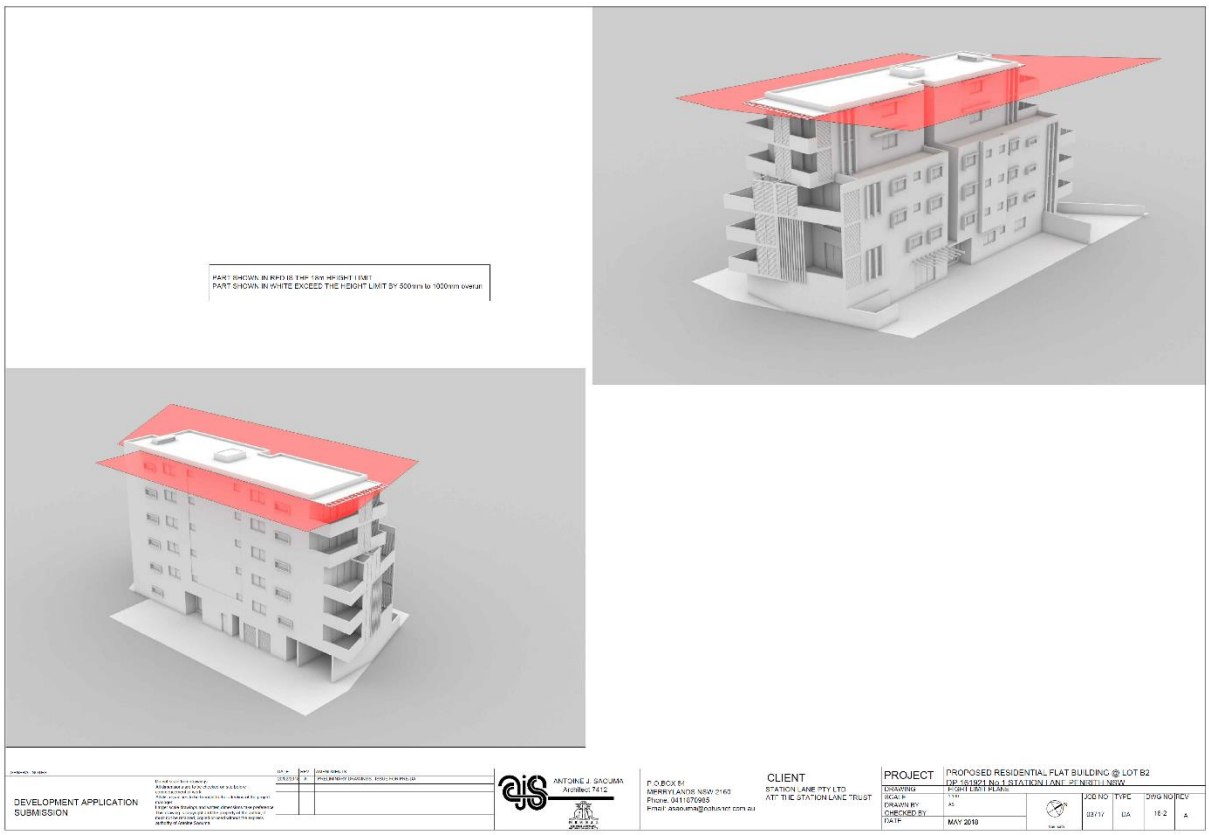

Figure 6
Extract from architectural plans showing variation above the 18.0m height plane
(images courtesy of Antoine J. Saouma Architect)

The following assessment is provided in relation to the variation to the 18.0 metre height limit under Clause 4.6 – *Exemption to Development Standard* under the Penrith Local Environmental Plan 2010.

Introduction

Reference is made to the requirement for a variation request under Clause 4.6 – *Exemption to Development Standard* under the Penrith Local Environmental Plan 2010 in relation to the 18.0 metre height standard and the departure from this standard where a portion of the roof parapet and lift overrun protrude above the height plane. The departure from the standard is considered to be only minor and will not adversely impact on the adjoining residence to the north and east.

As required by this clause, a written request for an exception to the required maximum 18.0 metre height is now made. It is noted that in order for Council to support the variation to the development standard pursuant to Clause 4.6 the provisions of the clause and specifically sub-clause (4) need to be met.

Clause 4.6

Clause 4.6 – *Exceptions to development standards* under the Penrith Local Environmental Plan 2010 states:-

4.6 Exceptions to development standards

(1) The objectives of this clause are as follows:
(a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,
(b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.
(2) Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.
(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:
(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and
(b) that there are sufficient environmental planning grounds to justify contravening the development standard.
(4) Development consent must not be granted for development that contravenes a development standard unless:
(a) the consent authority is satisfied that;
(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and
(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and
(b) the concurrence of the Secretary has been obtained.
(5) In deciding whether to grant concurrence, the Secretary must consider:
(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and
(b) the public benefit of maintaining the development standard, and
(c) any other matters required to be taken into consideration by the Secretary before granting concurrence.

Development Standard to be Varied

It is proposed to vary the standard set out under Clause 4.3 – *Height of Buildings* of the Penrith Local Environmental Plan 2010 which deals with those issues relating to the maximum permissible building height.
Clause 4.3 states:-

4.3 Height of buildings

(1) The objectives of this clause are as follows:
(a) to permit a height of buildings that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.
(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

The subject lands are designated P and currently have a maximum height of 18.0 metres under the Penrith Local Environmental Plan 2010 as shown in ***Figure 4***.

Extent of the Variation to the Development Standard

The proposal seeks a variation to the building height of:-

(i) 250mm above the height plane to the parapet of the upper level; and
(ii) 1000mm above the height plane to the top of the lift overrun

These two encroachments are higher than the maximum permissible building height under the Penrith Local Environmental Plan 2010. The extent of the variation to the height controls is shown in ***Figure 5*** and ***Figure 6***.

Objectives of the Standard

The **objectives** of Clause 4.3 of the Penrith Local Environmental Plan 2010 is to permit a height of buildings that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

The subject site is currently zoned Zone R4 – *High Density Residential* under the Penrith Local Environmental Plan 2010. The **objectives** of the zone are:-

(i) to provide for the housing needs of the community within a high density residential environment;
(ii) to provide a variety of housing types within a high density residential environment;
(iii) to enable other land uses that provide facilities or services to meet the day to day needs of residents;
(iv) to ensure that a high level of residential amenity is achieved and maintained;
(v) to encourage the provision of affordable housing; and
(vi) to ensure that development reflects the desired future character and dwelling densities of the area.

Assessment

Under the Penrith Local Environmental Plan 2010, the height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

Subclause (2) of the Penrith Local Environmental Plan 2010 states:-

"*The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map*"

This is to ensure that the height of buildings is compatible with that of adjoining development and the overall streetscape and to minimise the impact of overshadowing, visual impact, and loss of privacy on adjoining properties and open space areas.

In this instance, the site is generally level and is located at the rear of Station Lane with the existing medium density three and four storey flat buildings to the west, north and east. There is no residential development to the south as the site overlooks Councils War Memorial Swimming Pool complex.

The existing dwelling will be demolished and the new six (6) storey residential flat building constructed with generous setbacks to the west with the existing laneway along the northern and eastern boundary providing separation to the adjoining developments. The bulk of the proposed structure will be hidden from street view by the existing four storey building façade at #20 Station Lane located at the entry to the laneway (see ***Figure 7***).

Figure 7
Street View showing four storey development at #20 Station Lane to the north of the subject site
(image courtesy of Google Earth Pro)

From the west as viewed near #115 Station Street, the proposed building is hidden from view by the existing four storey brick flat building and large trees adjacent to the drainage reserve and Penrith War Memorial Swimming Pool (see ***Figure 8***).

It is considered that the design (with the small height variation) ensures that the building height represents a reasonable transition between the existing three and four storey built form which dates from the 1970's and 1980's to the current five storey outcomes anticipated in the Penrith Local Environmental Plan 2010 (ie: 18m = 6 storeys @ 3m per level). In fact, the proposed residential building represents a considerable improvement to the dated architectural quality of the current streetscape.

+

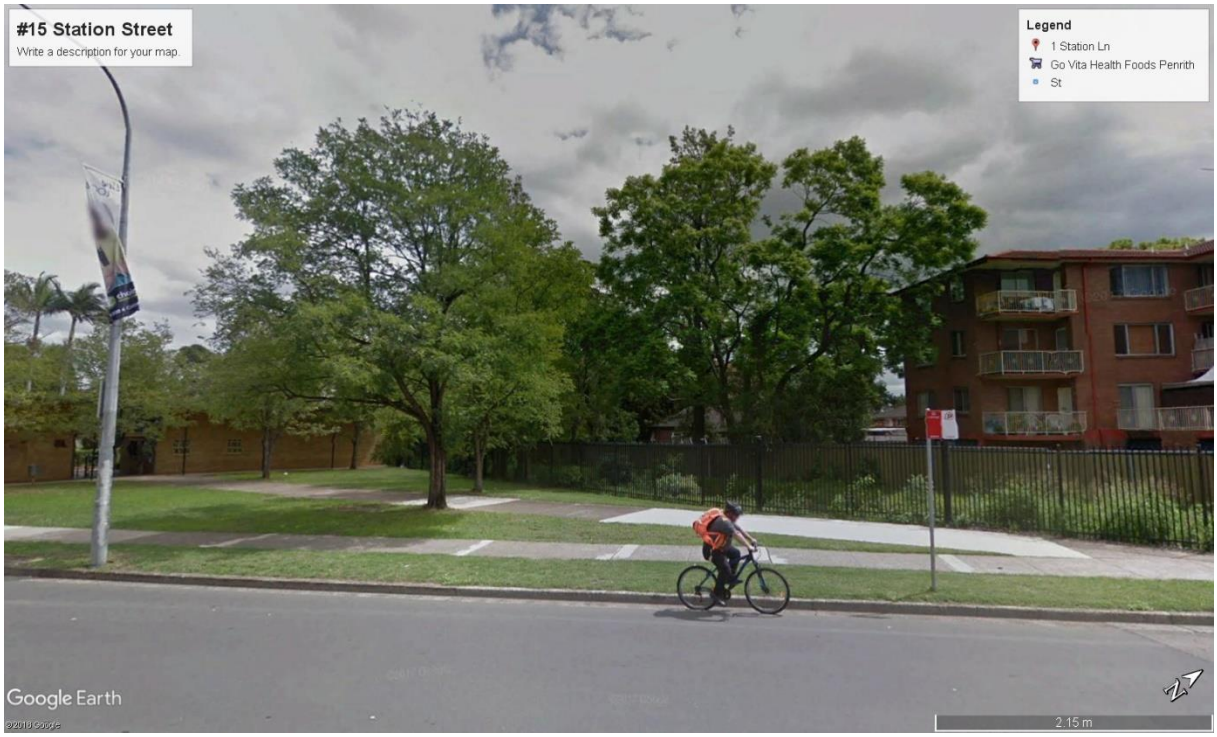

Figure 8
Street View showing four storey development at #115 Station Street to the south west of the subject site
(image courtesy of Google Earth Pro)

Further, the height variation will not have any significant additional visual impact on the adjoining property to the west, north and east nor create any significant additional loss in privacy due to its positioning at the end of the laneway with generous setbacks from the west and existing separation from the laneway frontage. The variation will have no significant impact on the areas of private open space within the development.

Consequently, a variation is sought to the Height of Buildings development standard under the provisions set out in Clause 4.6 – *Exceptions to development standards* of the Hornsby Local Environmental Plan 2013.

The **objectives** of this clause are as follows:-

(i) to provide an appropriate degree of flexibility in applying certain development standards to particular development; and
(ii) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

The architect for the project, ***Antoine J. Saouma Architect***, has designed the proposed residential flat development in such a manner as to:-

(i) produce a high quality residential development that provides a high level of articulation and effective and efficient floor space;
(ii) optimize the development outcomes for the site whilst being mindful of bulk and scale; and

(iii) improve yields and development viability in line with both Council's and the public expectations for the precinct

The height variation is considered to be reasonable when considered within the context of the overall streetscape with its primary frontage to Station Lane (see ***Figure 9***) and the intent of the Penrith Local Environmental Plan 2010.

Figure 9
Building Mass Perspective
(image provided by Antoine J. Saouma Architects)

In relation to the *Underlying Objectives of the Standard* of Clause 4.3 – *Height of Buildings*, the proposed development and the variation to the Height of Buildings standard meets the underlying objectives by:-

(i) ensuring the height of the proposed building is compatible with that of adjoining development under construction to the south and east and the overall streetscape;
(ii) minimise the impact of overshadowing, visual impact, and loss of privacy on adjoining properties and open space areas.

In relation to Section 5(a)(i)(ii) – *Objects* of the Environmental Planning &Assessment Act, the variation to the development standard will not hinder the obtainment of the objectives.

Under Section 5(a)(i)(ii), the objects of this Act are:-

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land

The variation to the Height of Buildings requirement will not hinder the proper management and development of the Penrith residential catchment. The proposal will in fact improve the social and economic welfare of the local community and create a better environment by substantially improving the livability and amenity of the locality by improving the architectural standard of the Station Street, Union Street and Station Lane frontages and the provision of high quality residential space.

The proposal will improve the architectural standard of the locality and compliment other development in the precinct. Further, the variation to the Height of Buildings requirement will not hinder the promotion and co-ordination of the orderly and economic use and the development of the land. In fact, the proposal ensures the highest and best use of the subject site by formalizing the trend to higher quality residential flat buildings utilising the natural features of the land and activating the street frontages (ie: Station Lane).

(i) Clause 4.6(3)(a) – *Unreasonable and Unnecessary*

In relation to the question as to whether compliance with the development standard unreasonable or unnecessary in the circumstances (Clause 4.6 Sub-clause (3)(a)), it is the applicants view that strict compliance with the Height of Buildings development standard is considered to be unreasonable in this particular case as the proposed variation simply seeks to optimise the site outcomes and improve the residential standard of the site and the surrounding precinct and respond to the density and height standards in the Penrith LEP 2010.

It also proposes a high quality residential interface with the Station Lane frontage in line with the Penrith Local Environmental Plan 2010. It will ensure a more viable development and higher standard of residential yield compared to that which would otherwise be provided should strict adherence to the LEP standard be applied. The proposal is an efficient use of the land which delivers social, economic and environmental benefits to the local community.

The variation will not adversely affect the amenity of the immediate locality or compromise the objectives of Clause 4.3 of the Penrith Local Environmental Plan 2010 (PLEP 2010) or Section 5(a)(i)(ii) of the EP&A Act.

In relation to this clause, it is considered that the objection to the Height of Buildings standard is well founded and that based on the details provided above, strict adherence to the development standard would appear to be unreasonable and unnecessary in the circumstances of this development application. Therefore, Council's favourable consideration of the application under the provisions of Clause 4.6(3)(a) is sought.

(ii) Clause 4.6(3)(b) – *Environmental Planning Grounds*

With regards to the question as to whether there are sufficient environmental planning grounds to justify contravening the development standard, it should be noted that the subject site has particular circumstances in relation to the location of the site which has triggered the specific design response. The site is landlocked at the end of Station Lane and surrounded by three and four storey older style residential flats.

By accommodating the height variation results in a more efficient and orderly use of the land and will produce a better outcome than would otherwise be the case if strict adherence to the standard were observed. In relation to this clause, it is considered that the objection to the Height of Buildings standard is well founded.

(iii) Clause 4.6(4)(a)(ii) – *Public Interest*

In relation to the question as to whether the proposed development would be in the public interest, it is considered that the proposal is consistent with both the objectives of the standard and for development within the zone.

In relation to Clause 4.3 – *Height of Buildings* of the Hornsby Local Environmental Plan 2013, this standard deals with those issues relating to the maximum permissible building height. The **objectives** of this clause are to permit a height of buildings that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

In relation to the *Underlying Objectives of the Standard* of Clause 4.3 – *Height of Buildings*, the proposed development and the variation to the Height of Buildings standard meets the underlying objectives by:-

(i) ensuring the height of the proposed building is represents a reasonable height transition with adjoining development to the west, north and east and the overall streetscape;
(ii) minimising the impact of overshadowing, visual impact, and loss of privacy on adjoining properties and open space areas.

With regard to the objectives for development within the zone, the subject site is currently zoned Zone R4 – *High Density Residential* under the Penrith Local Environmental Plan 2010 with an expectation that five (5) storey buildings would be anticipated.

The **objectives** of the zone are:-

(i) to provide for the housing needs of the community within a high density residential environment;
(ii) to provide a variety of housing types within a high density residential environment; and
(iii) to enable other land uses that provide facilities or services to meet the day to day needs of residents.

The proposed development **meets the objectives** of the zone in that:-

(i) it provides for the housing needs of the community within a high density residential environment that is currently in transition; and

(ii) it provides a variety of housing types within a high density residential environment

Therefore, it is considered that the proposal satisfies the public interest test as it is consistent with both the objectives of the standard and for development within the zone. In relation to this clause, it is considered that the objection to the Height of Buildings standard is well founded.

Conclusion

Based on the above assessment, the attached architectural plans and the submitted supporting documents, it is considered that the proposed residential flat development will deliver a better planning outcome than one that strictly complies with the current 18 metre height limit for the following reasons:-

(i) strict compliance would not be responsive to the intent of the Penrith Local Environmental Plan 2010 which anticipates a six (6) storey built form;
(ii) strict compliance would not be responsive to the intent of the Penrith Development Control Plan;
(iii) strict compliance would restrict building height and subsequent floor space outcomes to the extent that the alternative would be an underutilization of the site in an area within the Penrith residential precinct that seeks residential development outcomes; and
(iv) strict compliance would not meet the desired future character of the precinct

It is considered that the objection to the Height of Buildings standard is well founded and that based on the details provided above, strict adherence to the development standard would appear to be unreasonable and unnecessary in the circumstances of this development application. Therefore, Council's favourable consideration of the application under the provisions of Clause 4.6 is sought.

2.1.5 *Floor Space Ratio/Site Coverage*

Clause 4.4 – *Floor Space Ratio* of the Penrith Environmental Plan 2010 deals with the issues relating to gross floor area and its relationship to the site area.

The **objectives** of this clause are to permit development of a bulk and scale that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

The subject lands do not have a designated floor space ratio (ie: the mapping is uncoloured) under the Hornsby Local Environmental Plan 2013 as shown in ***Figure 10***.

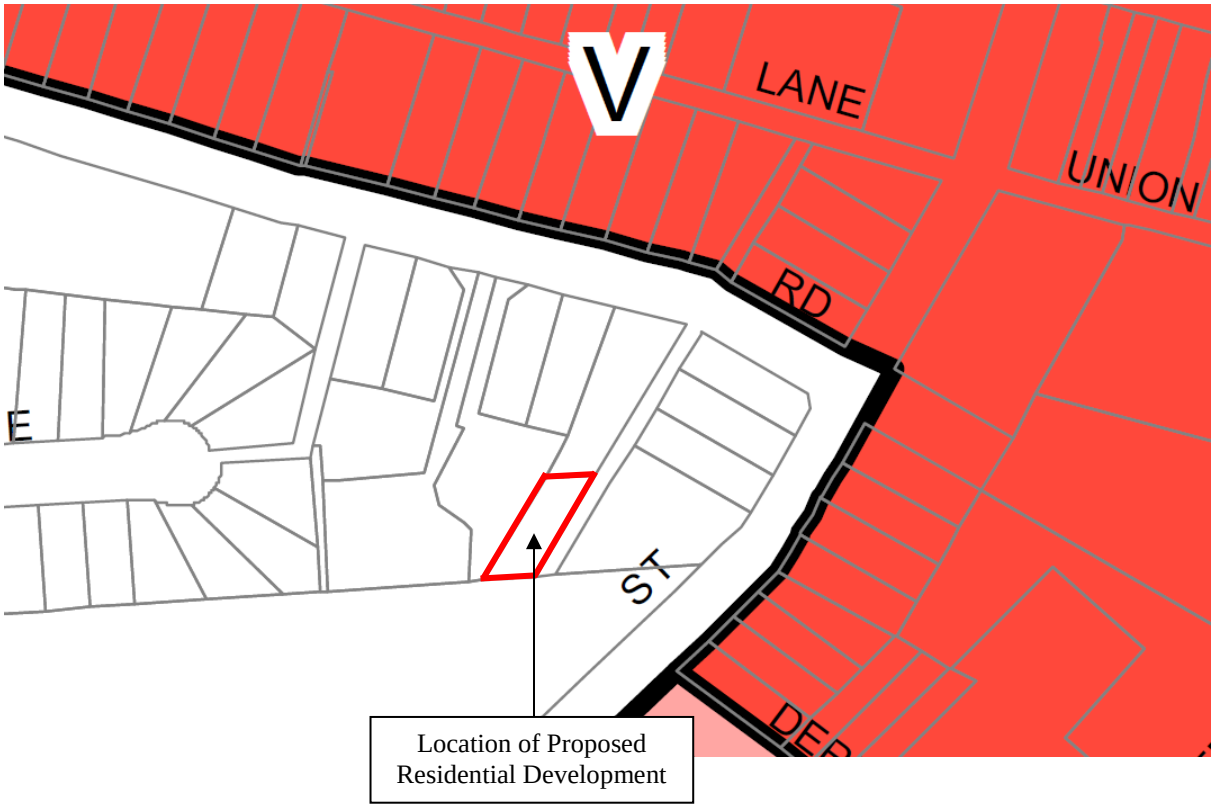

Figure 10
Extract from the Penrith Local Environmental Plan 2010 FSR_006
(courtesy of the Penrith City Council through the NSW legislation website)

The subject site has an area of 664.5m² with the adjoining Council owned Lot 18 having an area of 198.3m². It is intended to formalise the acquisition/purchase of Lot 18 in DP122079 and consolidate the allotment with the subject site.

As there are no FSR controls applicable in the Penrith LEP 2010, density is controlled by the height and setback provisions under:-

(i) the Penrith Local Environmental Plan 2010;
(ii) Chapter C1 – *Site Planning and Design Principles* of the Penrith Development Control Plan 2014 together with the height controls in the LEP; and
(iii) The Apartment Design Guide (ADG) and SEPP 65 – *Design Quality of Residential Apartment Development*

In this instance, the building form is six (6) storeys (with some minor variance) and is well articulated such that the nominated setbacks incorporate adequate landscaping, open space and separation between buildings.

The proposed development therefore **COMPLIES** with Clause 4.4 – *Floor Space Ratio* of the Penrith Local Environmental Plan 2010, the Penrith DCP 2014 provisions and *Apartment Design Guide* (ADG). Each of the provisions is discussed (where relevant) in the body of this report.

The relevant site statistics including the floor space ratio (FSR) are shown in ***Figure 11***. The floor space ratio for the proposed development in relation to the site area of Lot B2 only is **1.65 to 1** which is considerably less than the adjoining floor space ratio controls (ie: 3 to 1) on the north side of Union Road.

PROPOSED 17 UNITS @ No 1 STATION LANE PENRITH
COMPRISING 1X3 bedrooms + 8X2 bedrooms + 8x1 bedrooms

STORAGE AREAS			UNITS AREAS & LAYOUT						
UNIT	Basement	unit space	cross flow	orientation	unit areas	balconies	layout	single orientation	adaptable
GROUND FLOOR									
U 1	2.0m³	4.0m3		south east	40m²	9m²	1 bed studio		
U 2	3.5m³	5.0m3		south west	75m2	66m2	2 beds		
FIRST FLOOR									
U 3	2.0m³	3.0m3		south east	63.5m2	9m2	1 bed		
U 4	4.4m³	4.0m3		south west	87m2	14m2	2 beds		
U5	4.5m³	5.0m3		north west	112.5m2	18m2	3 beds		
U6	2m³	4.0m3		north east	60m2	13m2	1 bed		
SECOND FLOOR									
U7	2m³	4.0m3		south east	63.5m2	9m2	1 bed		
U8	4.0m³	3.0m3		south west	87m2	14m2	2 beds		
U9	2m³	4.5m3		north east	60m2	13m2	1 bed		
THIRD FLOOR									
U10	2.0m³	5.0m3		south east	63.5m2	9m2	1 bed		
U11	4.0m³	5.0m3		south west	87m2	14sqm	2 beds		
U12	2m³	4.0m3		north east	60m2	13m2	1 bed		
U13	2m³	4.0m3		north west	60m2	18m2	1 bed		
FOURTH FLOOR									
U14	3.5m³	3.0m3		north west	86m2	22m2	2 beds		
U15	4.0m³	4.4m3		south west	93m2	18m2	2 beds		
FIFTH FLOOR									
U16	4.5m³	5.0m3		north west	86m2	22m2	2 beds		
U17	4.0m³	5.0m3		south west	93m2	18m2	2 beds		

SITE AREA	664.5
TOTAL	919m²
FSR	919+177.2 hallways = 1096.2sqm = 1.649/1
CROSS VENTILATION 17 UNITS OUT OF 17 = 100%	
3 HOURS SUN 21 st JUNE = 17 UNITS = 100%	
TOTAL COMMUNAL OPEN SPACE = 25% OF THE SITE AREA = 166sqm	
TOTAL DEEP SOIL = 231sqm = 34%	
ADAPTABLE UNITS = 2	
UNIT MIX = 1X3 BEDS = 5%	
8X1 BED = 47%	
8X2 BEDS = 47%	

Figure 11
Extract from Architectural Plans - Site Statistics
(courtesy of Antoine J. Saouma Architects)

2.1.6 *Heritage Conservation*

Clause 5.10 – *Heritage conservation* addresses issues relating to Heritage items (if any) which are listed and described in Schedule 5 of the Penrith LEP 2010. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5. The objectives of this clause are as follows:-

(i) to conserve the environmental heritage of Penrith;
(ii) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views;
(iii) to conserve archaeological sites; and
(iv) to conserve Aboriginal objects and Aboriginal places of heritage significance.

There are no heritage items affecting the site or in close proximity to the proposed development as shown in ***Figure 12***.

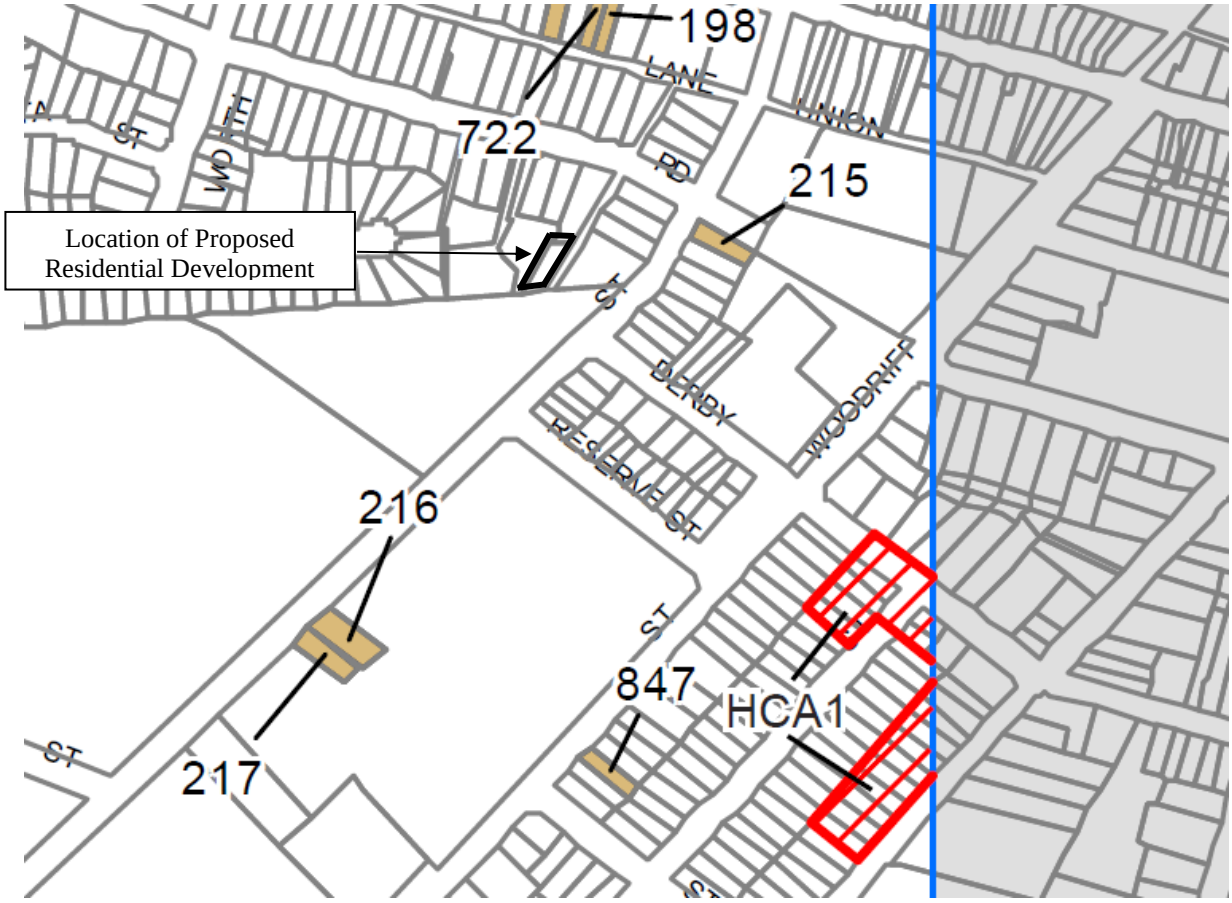

Figure 12
Extract from the Penrith Local Environmental Plan 2010 HER_006
(courtesy of the Penrith City Council through the NSW legislation website)

2.1.7 *Earthworks*

Clause 7.1 – *Earthworks* of the Penrith Local Environmental Plan 2010 deals with issues associated with the impact of excavation and earthworks.

The **objective** of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters:-

(i) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development;
(ii) the effect of the development on the likely future use or redevelopment of the land;
(iii) the quality of the fill or the soil to be excavated, or both;
(iv) the effect of the development on the existing and likely amenity of adjoining properties;
(v) the source of any fill material and the destination of any excavated material;
(vi) the likelihood of disturbing relics;
(vii) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area; and
(viii) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

The attached **Preliminary Site Investigation** was prepared by ***Benviron Group*** (Geotechnical Engineers). The purpose of the investigation was to obtain geotechnical information on subsurface conditions as a basis for comments and recommendations on excavation, groundwater, retention and footings.

Based on the results of Preliminary Site Investigation, it is considered that the risks to human health and the environment associated with soil and groundwater contamination at the site are low in the context of the proposed use of the site. The site is ***suitable*** for the proposed development, subject to the following recommendations:-

(i) any soil requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014); and
(ii) an Asbestos Clearance Certificate is recommended to be completed once all existing buildings are structures have been demolished.

If during any potential site works any significant unexpected occurrence is identified, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

In relation to the site excavation, it is recommended that prior to the start of excavation, dilapidation surveys be completed on adjoining structures located within a horizontal distance from the excavation perimeter of at least twice the excavation depth.

The dilapidation surveys should comprise detailed inspections of the adjoining buildings, both externally and internally, with all defects rigorously described, i.e. defect location, defect type, crack width, crack length, etc. The respective owners of the adjoining properties should be asked to confirm that the dilapidation reports represent a fair record of actual conditions. All excavated material will need to be classified for disposal before being removed from site.

2.1.8 *Flood Planning*

Clause 7.2 – Flood planning addresses issues associated with development that occurs on land below the flood planning level or identified as "Flood planning land" on the Clause Application Map (see ***Figure 13***).

The **objectives** of this clause are as follows:-

(i) to minimise the flood risk to life and property associated with the use of the land,
(ii) to limit uses to those compatible with flow conveyance function and flood hazard,
(iii) to manage uses to be compatible with flood risks,
(iv) to enable safe and effective evacuation of land,
(v) to ensure the existing flood regime and flow conveyance capacity is not compromised,
(vi) to avoid detrimental effects on the environment that would cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or waterways.

Figure 13
Extract from the Penrith Local Environmental Plan 2010 FLD_006
(courtesy of the Penrith City Council through the NSW legislation website)

Whilst the subject lands are not identified on the Flood Planning Land Map, Council has advised during the pre-application process that the site is affected by local overland flow flooding in a 1% AEP Storm. The site has been identified as being located adjacent to a floodway/channel. Although Council had issued flood levels on the 3rd July 2017 with a flood level of 27.10m AHD, the site has recently been affected by overland flows in January 2016 inundating the entire site as a result of the existing channel over topping. A detailed assessment of the possible overland flows affecting the property in the form of an Overland Flow Flood Report therefore needed to be prepared by a suitably qualified flooding engineering as part of the development application process.

The attached **Flood Study** prepared by ***BMT WBM Pty Limited*** (Consulting Engineers) addresses the issues raised by Council. The purpose of the report is to provide commentary around the design flood levels for the site in accordance with the requirements of the Penrith Local Environment Plan (LEP) 2010 Section 7.2 and the Penrith Development Control Plan (DCP) 2014 Chapter 3.5. The flood study for the site includes the analysis of the January 2016 rainfall event which reportedly inundated the site.

Based on the information contained within the pre-DA meeting minutes (ref: *PRE DA MEETING PL180012 1 Station Lane Penrith.pdf*), the peak 1% AEP flood level and FPL for the site identified by Council is 27.10 m AHD and 27.6 m AHD respectively.

Whilst BMT could not replicate this level exactly (-0.2 m difference in simulated 1% AEP levels) using the TUFLOW model provided (refer Section 2.2), BMT did not identify any significant issues that would result in the simulation of inappropriate design flood levels.

With regard to the inundation of the site as a result of the January 2016, the assessment identified the following:-

(i) the January 2016 rainfall event was approximately equivalent to a 2% AEP event (based on a comparison with the design rainfall hyetographs applied to Council's model as RoG);
(ii) the inundation of the site can be attributed to a combination of mainstream inundation from the open channel to the south of the site and overland flow originating from Union Street to the north of the site;
(iii) the study site was inundated to a depth of <20 cm;
(iv) Peak flood levels in the channel were potentially elevated due to a downstream structure blockage resulting in the overtopping of the channel bank; and
(v) Councils model would likely show the site as inundated by shallow floodwaters during the 1% AEP event but this inundation is removed via filtering of shallow depths <0.15 m.

The observed flood inundation of the site for the January 2016 event exceeds Council's 1% AEP design flood levels based on the existing flood modelling. The BMT review of the existing model did not identify any significant issues that would suggest an underestimation of the design flood conditions. The discrepancy between the observed January 2016 and design 1% AEP flood conditions may be attributable to blockage conditions in the local drainage network (particularly the Mulgoa Road culvert) and potentially higher catchment rainfall than recorded at the gauge for the event.

Accordingly, Council's existing flood modelling is considered appropriate for the site providing for an FPL of 27.6 m AHD for the proposed development at the site.

2.2 State Environmental Planning Policy No. 65 – Design Quality of Residential Apartments

The Apartment Design Guide provides consistent planning and design standards for apartments across the State. It provides design criteria and general guidance about how development proposals can achieve the nine design quality principles identified in SEPP 65 *(State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development).*

This Policy aims to improve the design quality of residential apartment development in New South Wales. It 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. Schedule 1 of the policy sets out the nine (9) design quality principles.

The attached **Design Verification Statement/SEPP65 Report** prepared by ***Antoine J. Saouma Architect*** addresses the design quality principles.

2.3 Penrith Development Control Plan 2014 (PDCP)

The proposal has been considered against the relevant provisions of the Penrith Local Environmental Plan (HLEP) 2013 and the Penrith Development Control Plan 2014 (PDCP) which provides detailed guidance on how development may occur. Development Control Plans (DCPs) are documents that supplement the provisions of Local Environmental Plans (LEPs) with more detailed planning and design guidelines.

The Penrith Development Control Plan 2014 (Penrith DCP 2014) has been prepared to support all planning instruments applying to the Penrith Local Government Area (LGA), including the Penrith LEP 2010. It represents a consolidation of all previous DCPs which applied to the City so that a single, City-wide DCP applies to the LGA. In addition, the DCP includes two new sections to guide development in the Penrith Health and Education Precinct and the Riverlink Precinct.

The Penrith DCP 2014 was adopted by Council on the 23rd March 2015 and came into effect on the 17th April 2015.

The following ***Table 2*** details the level of compliance with the Penrith Development Control Plan 2014.

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Table 2
Compliance with the Hornsby Development Control Plan 2013

Part/Clause	Compliance
Part C1 – Site Planning and Design Principles	
Clause 1.1 – Site Planning	YES
Clause 1.2 – Design Principles	YES
Part C3 – Water Management	
Clause 3.1 – Water Cycle	YES
Clause 3.2 – Catchment Management	YES
Clause 3.3 – Watercourses	YES
Clause 3.4 – Groundwater	YES
Clause 3.5 – Flood Planning	YES
Clause 3.6 – Stormwater Management	YES
Clause 3.7 – Water Retention	YES
Clause 3.8 – Rainwater/Storage Tanks	YES
Part C5 – Waste Management	YES
Part C6 – Landscape Design	YES
Part C10 – Transport, Access and Parking	YES
Part C12 – Noise and Vibration	YES

3.0 PROPERTY DETAILS

The property is known as Lot B2 in DP161921 #1 Station Lane in Penrith. The land is currently occupied by a single storey residential dwelling and contains areas of both introduced and native vegetation (see ***Figure 14***).

Figure 14
Photograph showing the existing dwelling and surrounding vegetation

The existing site features are shown on the attached ***Site Survey Plan*** (see ***Figure 15***) prepared by **John Lowe & Associates Pty Limited** (Consulting Surveyors) and the ***Architectural Plans*** (ie: Site Plan) prepared by ***Antoine J. Saouma Architect***. The survey plans show the subject lands being Lot B2 and the adjoining Council owned property being Lot 18 in DP122079 which is the subject of acquisition/purchase discussions.

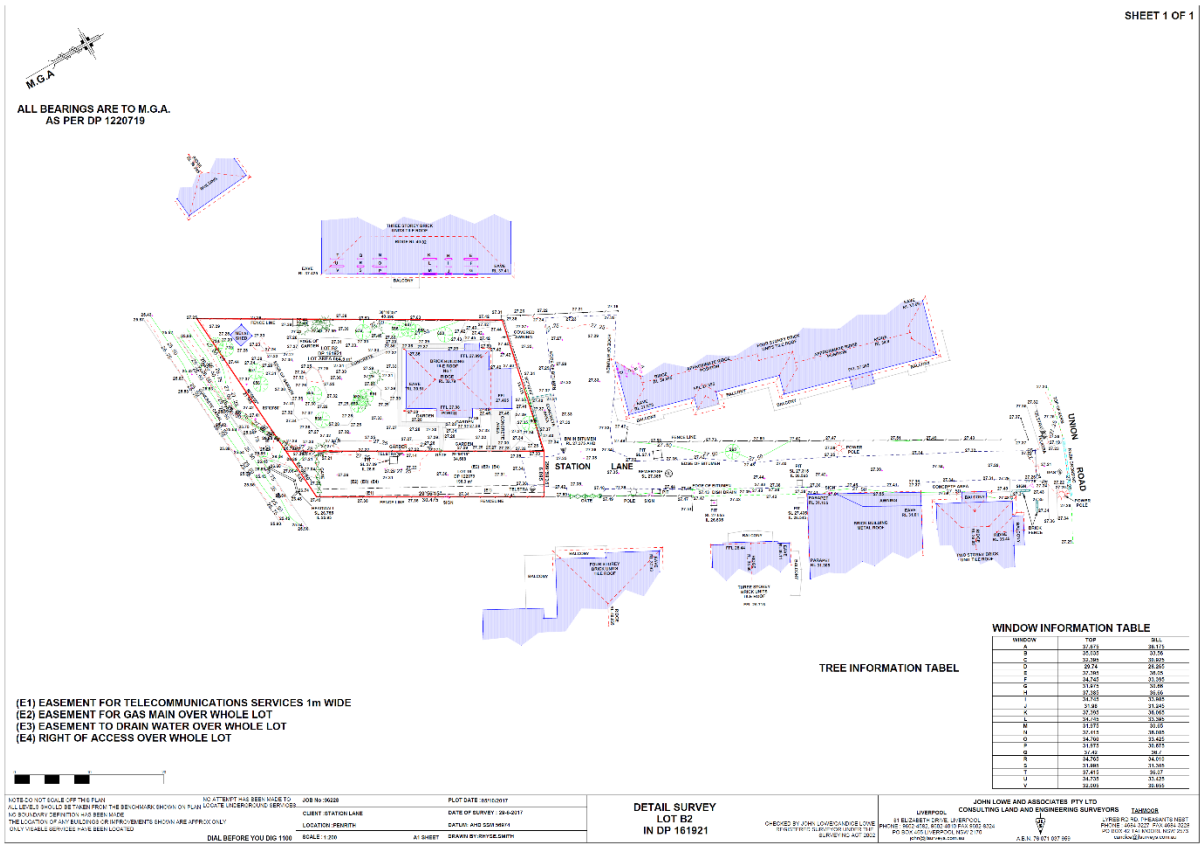

Figure 15
Detail Survey
(plan courtesy of John Lowe & Associates Pty Limited)

4.0 EASEMENTS/RIGHTS-OR-WAY

The property is not affected by any known easements or rights-of-way.

5.0 EXISTING BUILDINGS AND IMPROVEMENTS

The property is currently occupied by an existing single storey brick residential dwelling with tile roof as shown in ***Figure 14***.

The property is accessed from Station Lane which is bitumen sealed with a full range of services as shown in ***Figure 16***. The property is serviced with a full range of utilities including power, water, sewer and telecommunications.

Figure 16
Street view looking south down Station Lane from Union Road
(image courtesy of Google Earth Pro)

6.0 LANDSCAPING

6.1 Existing Vegetation

The property is occupied by a single storey dwelling and garage with thirteen (13) trees and suburban gardens as described in the attached **Pre-development Tree Assessment Report** prepared by ***Nada Kbar***.

The existing thirteen (13) trees are mix of exotic and native Australian species, none of which have any special significance in regards to heritage/environment values as indicated in the Penrith Local Environment Plan 2010 (LEP).

The site is in a neglected state. The existing trees have been left unattended for a prolonged period of time allowing many invasive species to establish and grow. The majority of trees on the subject site have had lack of maintenance over in recent years. This has resulted in the presence of many structural and major defects with some trees being invaded by climbing Cactus (*Epiphyllum hookeri*) and Flame vine (*Pyrostegia venusta*).

Regardless of their location in relation to the proposed development, amongst the thirteen trees that have been identified on the site plan, only two (2) trees are considered healthy and in a good condition (T1 & T7). All other trees are either dead or in a declining state. All trees on the site are identified for removal based on their current condition.

6.2 Proposed Landscaping

The application for the proposed residential flat building and site access will include:-

(i) the removal of the existing trees as described in the **Pre-development Tree Assessment Report** prepared by ***Nada Kbar***;
(ii) formal plantings adjacent to and surrounding the proposed residential flat building; and
(iii) formal landscaping within the ground level communal area on the western side of the subject site which include the proposed rain garden and bio-retention basin

Details are shown on the attached **Landscape Concept Plan** prepared by ***Vision Dynamics*** (Landscape Architects).

7.0 CONTOUR LEVELS

The attached **Site Survey Plan** prepared by ***John Lowe & Associates Pty Limited*** (Consulting Surveyors) shows the existing spot levels and contours over the subject area and are tied to Australian Height Datum. The land is generally level with contours ranging around RL27.3m AHD. The site fronts Station Lane and the Council owned land known as Lot 18 in DP122079. The southern boundary is bounded by Council existing open drainage channel.

8.0 STORMWATER DRAINAGE

8.1 Existing Stormwater Drainage

The site is currently occupied by a single storey brick dwelling with tile roof and garage which discharges via a series of gutters, pits and pipelines all roof water to Council's drainage channel on the southern boundary.

8.2 Proposed Stormwater Details

The attached **Concept Stormwater Management Plan** drawings prepared by ***LOKA Consulting Engineers*** details the method of stormwater disposal for the proposed residential development. The plan have been prepared in accordance with Part C3 – *Water Management* of the Penrith Development Control Plan 2014. The plans include:-

(i) lower basement stormwater control details;
(ii) upper basement stormwater control details;
(iii) basement pump/pit details;
(iv) ground floor/communal area stormwater details;
(v) bio-retention details;
(vi) erosion and sedimentation controls; and
(vii) MUSIC modeling

The attached plans are accompanied by the attached **Flood Study** prepared by ***BMT WBM Pty Limited*** (Consulting Engineers) which addresses the issues raised by Council with regards to stormwater flows in January 2016 inundating the entire site as a result of the existing channel over topping.

The purpose of the report is to provide commentary around the design flood levels for the site in accordance with the requirements of the Penrith Local Environment Plan (LEP) 2010 Section 7.2 and the Penrith Development Control Plan (DCP) 2014 Chapter 3.5. The flood study for the site includes the analysis of the January 2016 rainfall event which reportedly inundated the site.

Final engineering details will be provided at Construction Certificate stage subject to appropriate consent conditions.

9.0 WATERWAYS/WATERCOURSES

There are no existing waterways and watercourses over the property. However, due to the site being located in a small valley, an overland flow study is required to assess the existing overland flow regime and what measures (if any) are required to be adopted by the development to ensure no detrimental effects to neighbouring properties occurs.

10.0 FLOODING

10.1 General

Planning issues associated with site flooding are addressed in Section 2.1.7 - *Flood Planning.* Whilst the subject lands are not identified on the Flood Planning Land Map, Council has advised during the pre-application process that the site is affected by local overland flow flooding in a 1% AEP Storm. The site has been identified as being located adjacent to a floodway/channel. Although Council had issued flood levels on the 3rd July 2017 with a flood level of 27.10m AHD, the site has recently been affected by overland flows in January 2016 inundating the entire site as a result of the existing channel over topping. A detailed assessment of the possible overland flows affecting the property in the form of an Overland Flow Flood Report therefore needed to be prepared by a suitably qualified flooding engineering as part of the development application process.

The attached **Flood Study** prepared by ***BMT WBM Pty Limited*** (Consulting Engineers) addresses the issues raised by Council. The purpose of the report is to provide commentary around the design flood levels for the site in accordance with the requirements of the Penrith Local Environment Plan (LEP) 2010 Section 7.2 and the Penrith Development Control Plan (DCP) 2014 Chapter 3.5. The flood study for the site includes the analysis of the January 2016 rainfall event which reportedly inundated the site.

Based on the information contained within the pre-DA meeting minutes (ref: *PRE DA MEETING PL180012 1 Station Lane Penrith.pdf*), the peak 1% AEP flood level and FPL for the site identified by Council is 27.10 m AHD and 27.6 m AHD respectively. Whilst BMT could not replicate this level exactly (-0.2 m difference in simulated 1% AEP levels) using the TUFLOW model provided (refer Section 2.2), BMT did not identify any significant issues that would result in the simulation of inappropriate design flood levels. With regard to the inundation of the site as a result of the January 2016, the assessment identified the following:-

(i) the January 2016 rainfall event was approximately equivalent to a 2% AEP event (based on a comparison with the design rainfall hyetographs applied to Council's model as RoG);

(ii) the inundation of the site can be attributed to a combination of mainstream inundation from the open channel to the south of the site and overland flow originating from Union Street to the north of the site;
(iii) the study site was inundated to a depth of <20 cm;
(iv) Peak flood levels in the channel were potentially elevated due to a downstream structure blockage resulting in the overtopping of the channel bank; and
(v) Councils model would likely show the site as inundated by shallow floodwaters during the 1% AEP event but this inundation is removed via filtering of shallow depths <0.15 m.

The observed flood inundation of the site for the January 2016 event exceeds Council's 1% AEP design flood levels based on the existing flood modelling. The BMT review of the existing model did not identify any significant issues that would suggest an underestimation of the design flood conditions. The discrepancy between the observed January 2016 and design 1% AEP flood conditions may be attributable to blockage conditions in the local drainage network (particularly the Mulgoa Road culvert) and potentially higher catchment rainfall than recorded at the gauge for the event.

Accordingly, Council's existing flood modelling is considered appropriate for the site providing for an FPL of 27.6 m AHD for the proposed development at the site.

10.2 Proposed Mitigation Measures

No flood mitigation measures are proposed as the subject lands are not affected by the 1% AEP Flood Event.

10.3 Climate Change and Sea Level Rise

In relation to climate change and sea level rise, these effects will be felt through:-

(i) increased in intensity and frequency of storms, storm surges and coastal flooding;
(ii) increased salinity of rivers, bays and coastal aquifers resulting from saline intrusion;
(iii) increased coastal erosion;
(iv) inundation of low lying coastal communities and critical infrastructure;
(v) loss of important mangroves and other wetlands; and
(vi) impacts on marine ecosystems

There is a general lack of knowledge on the specifics of climate change and the likely impact it will have on the proposed commercial development. Government action may mitigate the impact of climate change and the question of sea level rise may be able to be addressed through the construction of containment works or through Council's policies that may be developed over time. In the absence of any detailed information, it is considered that such affects will have minimal impact on the proposed development.

11.0 CONSTRUCTION DETAILS

The design and location of proposed residential flat building is controlled by:-

(i) SEPP 65 – Design Quality of Residential Apartment Development
(ii) NSW Planning Apartment Design Guide; and
(iii) the Penrith Development Control Plan 2014 under Part C1 – *Site Planning and Design Principles*.

Where applicable, this report addresses each of the relevant SEPP provisions and DCP standards.

11.1 New Building Location/Design

The **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** show the location of the proposed residential flat building, private open space areas and communal areas and vehicle access arrangements. The proposed residential flat building has been orientated north/south to align with and address the street alignment, as well as maximise north and west facing frontages maximising solar access. The attached **Design Verification Statement/SEPP65 Report** prepared by ***Antoine J. Saouma Architect*** addresses the design quality principles.

11.2 Building Setbacks

The proposed building setbacks are shown on the **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** and are generally consistent with provision outlined in the Apartment Design Guide (ADG).

11.2.1 *Front Setback*

The required front building setbacks are prescribed in the Apartment Design Guide (ADG) Workbook under Section 2G – *Building Setbacks*.

Under the ADG, street setbacks establish the alignment of buildings along the street frontage and spatially define the width of the street. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain. In a centre, the street setback or building line may be set at the property boundary defining the street corridor with a continuous built edge. In a suburban context, the street setback may accommodate front gardens, contributing to the landscape setting of buildings and the street. Street setbacks provide space for building entries, ground floor apartment courtyards and entries, landscape areas and deep soil zones.

11.2.2 *Side and Rear Setbacks*

The required side and rear building setbacks are prescribed in the Apartment Design Guide (ADG) Workbook under Section 2H – *Side and Rear Setbacks*.

Under the ADG, side and rear setbacks govern the distance of a building from the side and rear site boundaries and are related to the height of the building. They are important tools for achieving amenity for new development and buildings on adjacent sites. Setbacks vary according to the building's context and type.

Larger setbacks can be expected in suburban contexts in comparison to higher density urban settings. Setbacks provide transition between different land uses and building typologies. Side and rear setbacks can also be used to create useable land for common open space, tree planting and landscaping.

11.3 Construction Details

The proposed external finishes are shown in ***Figure 17***.

COLOUR SCHEDULE

1. BRICK FACE : BORAL ESCURA SMOOTH FACE PEARL GREY
2. RENDER AND PAINT WALLS : Dulux white Duck W A216 Weather shield (low sheen)
3. WALL LINING : ALUIMINIUM COPMPOSITE ALUCOBOND METALLIC COPPER
4. WINDOW FRAMES & PERGOLAS: Anotel natural matt 89119 Powdercoated Aluminmium Dulux
5. CONCRETE DRIVEWAY : Ironstone Berger Jet Dry
6. RENDER AND PAINT WALLS : Dulux timeless Grey W GR 23 Weather shield (low sheen)
7. SUNSHADES / LOUVRES : METALLIC COPPER
8. UNDERSIDE of balconies Ceilings : Dulux white Duck W A216 Weather Shield (low sheen)
9. BALCONIES : Frameless glass : pilkington optifloat grey

Figure 17
Extract from Architectural Plans – External Finishes
(image courtesy of Antoine J. Saouma Architects)

The **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** show the proposed residential flat building and site works described in this report.

11.4 Elevations and Sections

The **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** show the proposed elevations for the residential flat building.

11.5 Floor Areas and Density/Site Coverage

Density and Site Coverage are dealt with under Section 2.1.4 – *Floor Space Ratio/Site Coverage*

Clause 4.4 – *Floor Space Ratio* of the Penrith Environmental Plan 2010 deals with the issues relating to gross floor area and its relationship to the site area.

The **objectives** of this clause are to permit development of a bulk and scale that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

The subject lands do not have a designated floor space ratio (ie: the mapping is uncoloured) under the Penrith Local Environmental Plan 2010 as shown in ***Figure 10***.

The subject site has an area of 664.5m² with the adjoining Council owned Lot 18 having an area of 198.3m². It is intended to formalise the acquisition/purchase of Lot 18 in DP122079 and consolidate the allotment with the subject site.

As there are no FSR controls applicable in the Penrith LEP 2010, density is controlled by the height and setback provisions under:-

(iv) the Penrith Local Environmental Plan 2010;
(v) Chapter C1 – *Site Planning and Design Principles* of the Penrith Development Control Plan 2014 together with the height controls in the LEP; and
(vi) The Apartment Design Guide (ADG) and SEPP 65 – *Design Quality of Residential Apartment Development*

In this instance, the building form is six (6) storeys (with some minor variance) and is well articulated such that the nominated setbacks incorporate adequate landscaping, open space and separation between buildings.

The proposed development therefore **COMPLIES** with Clause 4.4 – *Floor Space Ratio* of the Penrith Local Environmental Plan 2010, the Penrith DCP 2014 provisions and *Apartment Design Guide* (ADG). Each of the provisions is discussed (where relevant) in the body of this report.

The relevant site statistics including the floor space ratio (FSR) are shown in ***Figure 11***. The floor space ratio for the proposed development in relation to the site area of Lot B2 only is **1.65 to 1** which is considerably less than the adjoining floor space ratio controls (ie: 3 to 1) on the north side of Union Road.

11.6 Building Height

Building height is dealt with under Section 2.1.3 – *Height of Buildings*.

Clause 4.3 – *Height of Buildings* deals with issues relating to building height and the impact on built form and amenity. The objectives of this clause are to permit a height of buildings that is appropriate for the site constraints, development potential and infrastructure capacity of the locality.

The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

The subject lands are designated P and currently have a maximum height of 18 metres under the Penrith Local Environmental Plan 2010 as shown in ***Figure 4***.

The height of the proposed residential flat building is shown on the attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect***. The proposed residential building does not fully comply with the provisions under Clause 4.3 with the roof parapet (250mm above the height plane) and lift overrun (1 metre above the height plane) encroaching outside the 18.0 metre height plane as shown ***Figure 5***.

The building elevations are shown on Sheets 11 to 12 in the Architectural Plans. As can be seen from the elevations, the building generally presents as a six (6) story façade to Station Lane with generous setbacks to the west.

11.7 Accessibility Assessment

The attached **Access Review Report** has been prepared ***LOKA Consulting Engineers*** to identify the extent of compliance achieved by the architectural documentation against the relevant provisions of the Australian Standard AS4299 (1995) – Adaptable Housing.

The proposed development will comprise of six (6) levels of residential floors and two (2) levels of car parking. The report has been prepared so as to provide the consent authority with an Adaptable Housing analysis to assist in the determination of the application. LOKA Consulting Engineers have concluded that the proposed building is capable of achieving compliance with the requirements of the Australian Standard AS4299 (1995) – Adaptable Housing and relevant adopted standards without undue modification to the design or appearance of the building.

12.0 TRAFFIC MANAGEMENT

The attached **Traffic Management Report** prepared by ***LOKA Consulting Engineers*** assesses the traffic and parking implications of the development proposal.

12.1 Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site include:-

(i) a 50 km/h SPEED LIMIT which applies to Union Road;
(ii) a 50 km/h SPEED LIMIT which applies to Station Lane;

(iii) TRAFFIC SIGNALS in Union Road where it intersects with Worth Street, with all turning movements permitted; and
(iv) a ROUNDABOUT in Union Road where it intersects with Station Street

The subject site fronts Station Lane which is bitumen sealed with a full range of services (see ***Figure 18***). The existing dwelling has access off Station Lane which services the existing garage. All access points will be removed and replaced by a single ingress/egress car lift to service the proposed basement car park as shown on the attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect***.

Figure 18
Street View showing existing road infrastructure
(image courtesy of Google Earth Pro)

12.2 Proposed Parking Provisions

The attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect*** show the proposed ingress/egress point off Station Lane which services the proposed basement parking area with a capacity of fourteen (14) car parking spaces including:-

(i) ten (10) resident spaces including two (2) space for people with disabilities; and
(ii) four (4) visitor spaces

An assessment is made between the off-street car parking requirements for residential flat buildings outlined in the Penrith DCP 2014 and also the RMS *Guidelines* to determine the *comparative* requirement.

The relevant car parking rates outlined in the RMS *Guidelines* are reproduced below:-

RMS Guidelines – High Density Residential Flat Buildings
0.6 spaces per 1 bedroom unit
0.9 spaces per 2 bedroom unit
1.4 spaces per 3 bedroom unit
1 space per 5 units for visitor parking

Accordingly, the minimum off-street car parking requirement applicable under the RMS *Guidelines* to the proposed development is 17 spaces, comprising 14 residential spaces and 3 visitor spaces.

The relevant car parking rates outlined in the Penrith DCP 2010 (Chapter C10 – *Transport Access and Parking*) are reproduced below:-

Penrith DCP Guidelines – Residential Flat Buildings

1 space per 1 or 2 bedrooms
2 spaces per 3 or more bedrooms
1 space per 40 units for service vehicles
In addition, visitor parking is to be provided for developments that have 5 or more dwellings: 1 space per every 5 dwellings, or part thereof.

Accordingly, the minimum off-street car parking requirement applicable under the Penrith DCP *Guidelines* to the proposed development is 22 spaces, comprising 18 residential spaces and 4 visitor spaces.

The comparative requirements are set out below:

	Penrith DCP 2013	**RMS Guidelines**
Residents:	18 spaces	14 spaces
Visitors:	4 spaces	3 spaces
Total:	22 spaces	17 spaces

Lesser Car Parking Requirement: 17 spaces

The off-street parking requirements applicable to the development proposal are also specified in the *Apartment Design Guide* under objective 3J-1which makes provision for sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area. The minimum car parking requirement for residents and visitors is set out in the *Guide to Traffic Generating Developments* or the car parking requirements prescribed by the relevant council (whichever is less).

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In this instance, the *Apartment Design Guide* under objective 3J-1 prescribes the following rates shown in ***Table 3***:-

Land use	Measure	Minimum spaces required
Metropolitan Regional (CBD) Centres	1 bedroom	0.4/unit
	2 bedrooms	0.7/unit
	3 bedrooms	1.2/unit
	Visitor	1/7 units

Table 3-2 Off-street parking space rates from Apartment Design Guide

Table 3
Off-Street parking space rates from the Apartment Design Guide

The subject site is located within 800 metres of a railway station in the Sydney metropolitan area (i.e. 649 metres from Penrith Rail Station as shown in ***Figure 19***).

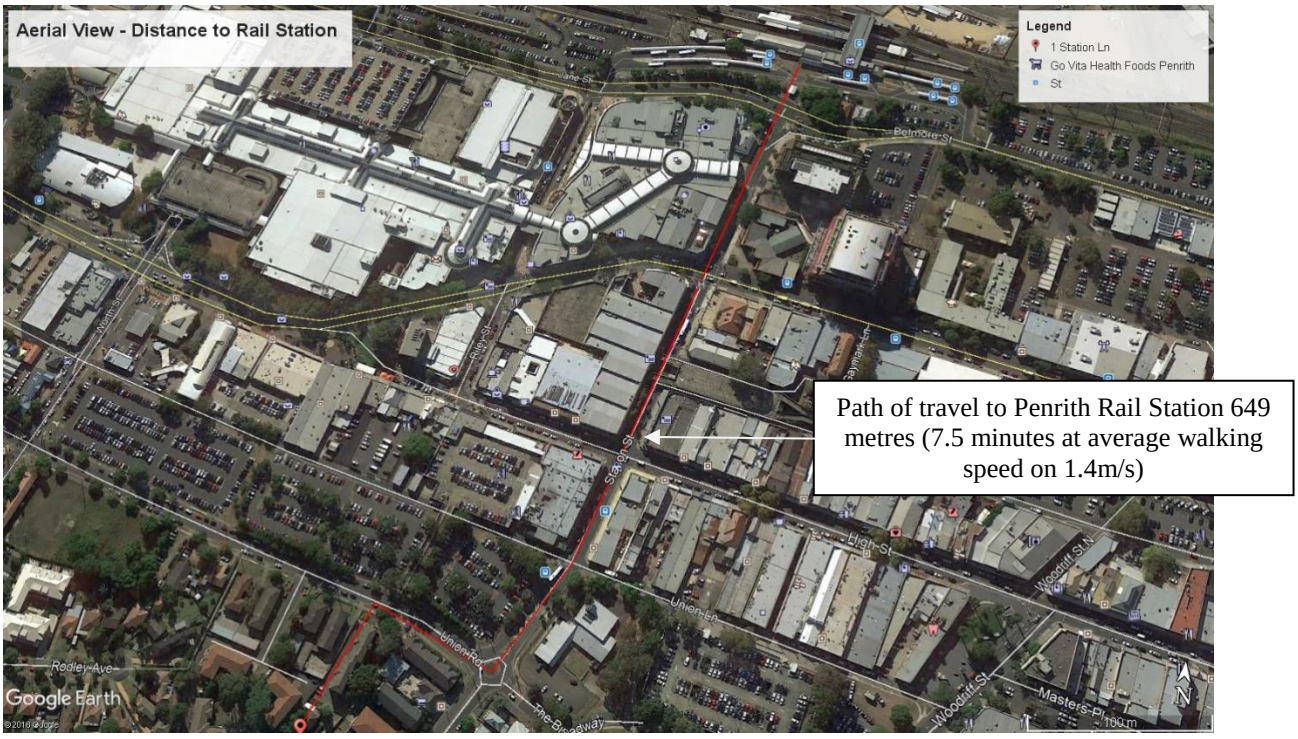

Figure 19
Aerial View showing distance to Penrith Rail Station (ie: 649 metres)
(image courtesy of Google Earth Pro)

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Therefore the development is subject to the parking requirements specified in the *State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (Amendment No 3), 2015* in the following terms:-

30 Standards that cannot be used to refuse development consent or modification of development consent

(1) If an application for the modification of a development consent or a development application for the carrying out of development to which this Policy applies satisfies the following design criteria, the consent authority must not refuse the application because of those matters:

a) if the car parking for the building will be equal to, or greater than, the recommended minimum amount of car parking specified in Part 3J of the Apartment Design Guide.

Reference is therefore made to the *Apartment Design Guide 2015, Section 3J – Bicycle and Car Parking* document which nominates the following car parking requirements:-

Objective 3J-1
Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas for development in the following locations:-

(i) on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or

(ii) *on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirements for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking* requirement prescribed by the relevant council, whichever is less.

The proposed development makes provision for a total of fourteen (14) off-street car parking spaces comprising ten (10) resident spaces and four (4) visitor spaces thereby satisfying the *Apartment Design Guide* and *SEPP 65* requirements.

The geometric design layout of the car parking facilities have been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1:2004* in respect of parking bay dimensions, aisle widths, ramp grades and widths and overhead clearances.

12.3 Traffic Movements

The traffic implications of the proposed development primarily concern the effects of the *additional* traffic flows generated as a result of the development and its impact on the operational performance of the adjacent road network. An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)* and the updated traffic generation rates in the recently published RMS *Technical Direction (TDT 2013/04a)* document.

The *TDT 2013/04a* document specifies that it replaces those sections of the RMS *Guidelines* indicated, and that it must be followed when RMS is undertaking trip generation and/or parking demand assessments. The RMS *Guidelines* and the updated *TDT 2013/04a* are based on extensive surveys of a wide range of land uses.

The subject site is identified as a medium density residential flat building (less than 20 units). The rate and corresponding peak hour vehicle trips are given in ***Table 4*** below.

Table 4
Peak Hour Vehicle Trips

Unit Type	Rate	Number of Proposed Units	Weekday Peak Hour Vehicle Trips
Up to 2 bedrooms	0.4 to 0.5 per dwelling	16	6.4 to 8.0
Three or more bedrooms	0.5 to 0.65 per dwelling	1	0.5 to 0.65
TOTAL			**Maximum 9**

Application of the above traffic generation rates to the seventeen (17) residential apartments of the development proposal yields a traffic generation potential of approximately 9 vph weekday peak hour vehicle trips

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the existing uses of the site, in order to determine the *nett increase (or decrease)* in traffic generation potential expected to occur as a consequence of the development proposal.

The *TDT 2013/04a* nominates the following traffic generation rates which are applicable to the existing single dwelling development on the site:-

Low Density Residential Dwellings
Daily vehicle trips = 9.0 per dwelling; and
Weekday peak hour vehicle trips = 0.85 per dwelling

Application of the above traffic generation rates to the existing single dwelling house on the site yields a traffic generation potential of approximately 1 vph during peak periods. The future trips should be discounted by the existing trips, which is shown in ***Table 5*** below as set out below:-

Table 5
Future Trips/Existing Trips

Traffic Generation Potential	Weekday peak hour vehicle trips
Future	9
Existing	1
Net	8

According to the table above, there will be net increase of 8 weekday peak hour vehicle trips in traffic generation potential for the proposed development. The projected increase in traffic activity as a consequence of the development proposal is considered *minimal*, consistent with the R4 zoning objective of the area, and will clearly not have any unacceptable traffic implications in terms of road network capacity, nor will any mitigation measures be required to ameliorate any impacts.

13.0 SITE WASTE MANAGEMENT

The Hornsby Development Control Plan 2013 Part 1 – *General* deals with issues related to site waste management under Clause 1C.2.3 – *Waste Management*. The desired outcomes of the policy are:-

(i) to maximises re-use and recycling of building materials;
(ii) to ensure waste storage and collection facilities that are designed to encourage recycling and are located and designed to be compatible with the streetscape, accessible, clean and safe for users and collectors.

It requires that a Waste Management Plan be prepared in accordance with Council guidelines and submitted with the development application, to address demolition and construction waste.

13.1 Garbage Collection Points

The proposed residential flat building will be serviced by Council's current waste services contractor. Bins will be stored within the proposed garage collection room on the ground level as shown in the attached Architectural Plans (Sheet 03).

13.2 Controls for Site Waste Management

An ***Operational Waste Management Plan*** is attached which details the waste generated and the method of disposal. The ***Operational Waste Management Plan*** has been undertaken in accordance with the requirements of Part C – *City Wide Controls* Section C5 – *Waste Management* of the Penrith Development Control Plan 2014.

14.0 EXTENT OF CUT/FILL

The proposed development involves 2,460 cubic metres of site excavation as shown on the **Architectural Plans** prepared by ***Antoine J. Saouma Architect***. It is expected that appropriate conditions of consent will be applied should approval be granted requiring the submission of final structural and engineering design plans. The extent of excavation is dealt with under Section 2.1.5 – *Earthworks*.

Clause 6.2 – *Earthworks* of the Penrith Local Environmental Plan 2010 deals with issues associated with the impact of excavation and earthworks. The **objective** of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

The attached **Preliminary Site Investigation** prepared by ***Benviron Group*** (Geotechnical Engineers) addresses the issues relating to sub-surface conditions.

15.0 EROSION AND SEDIMENTATION CONTROL

Preliminary erosion or sedimentation controls are shown on the attached **Stormwater Concept Plan** prepared by ***LOKA Consulting Engineers***.

Final details will be provided at Construction Certificate stage subject to appropriate conditions of consent and will be installed and maintained in accordance with Part C – *City Wide Controls* Section C4 – Land Management Clause 4.3 – *Erosion and Sedimentation* of the Penrith Development Control Plan 2014. Full engineering details will be provided in accordance with appropriate conditions of consent as required by Penrith City Council. Works will include the installation of sediment fences around the perimeter of the site area, stormwater inlet protection and diversion drains where necessary.

16.0 ROAD FORMATIONS

16.1 Existing Road Formation

The development fronts Station Lane which is bitumen sealed with a full range of services. Whilst the road reserve is a standard 6 metres wide, the existing road pavement is engineered for two way traffic movements as shown in ***Figure 20***.

Figure 20
Street View showing the road conditions at the entry to Station Lane
(image courtesy of Google Earth Pro)

16.2 Road Upgrading

No road upgrading is required as part of this application other than transitioning the proposed access driveway to the existing road pavement.

17.0 CLEARING

The proposed development will necessitate clearing of the existing thirteen (13) trees as described in the attached **Pre-development Tree Assessment Report** prepared by ***Nada Kbar***.

The existing thirteen (13) trees are mix of exotic and native Australian species, none of which have any special significance in regards to heritage/environment values as indicated in the Penrith Local Environment Plan 2010 (LEP).

The site is in a neglected state. The existing trees have been left unattended for a prolonged period of time allowing many invasive species to establish and grow. The majority of trees on the subject site have had lack of maintenance over in recent years. This has resulted in the presence of many structural and major defects with some trees being invaded by climbing Cactus (*Epiphyllum hookeri*) and Flame vine (*Pyrostegia venusta*).

Regardless of their location in relation to the proposed development, amongst the thirteen trees that have been identified on the site plan, only two (2) trees are considered healthy and in a good condition (T1 & T7). All other trees are either dead or in a declining state. All trees on the site are identified for removal based on their current condition.

18.0 PUBLIC UTILITIES AND SERVICES

The following information in relation to existing services and utilities was provided by Dial Before You Dig. Association of Australian Dial Before You Dig Services Ltd. does not maintain information regarding the location of underground assets. DBYD merely facilitates communication between the users of this service and Members/Participants. DBYD is not responsible for the accuracy of information received from users of this service, as to proposed excavation activity. There are also owners of underground assets which do not participate in the referral service operated by DBYD. Therefore, DBYD cannot make any representation or warranty as to the accuracy, reliability or completeness of the information contained in this notice. DBYD and its employees, agents and consultants shall have no liability (except insofar as liability under any statute cannot be excluded) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

All users of this service acknowledge that they have a duty of care to observe with regards to underground networks when digging or excavating. All services should be located by survey prior to the commencement of all works.

18.1 Sewer Services

The site is currently serviced from Sydney Water's existing 150mm diameter VC gravity sewer main which is located within the carriageway of Station Lane as shown in ***Figure 21***.

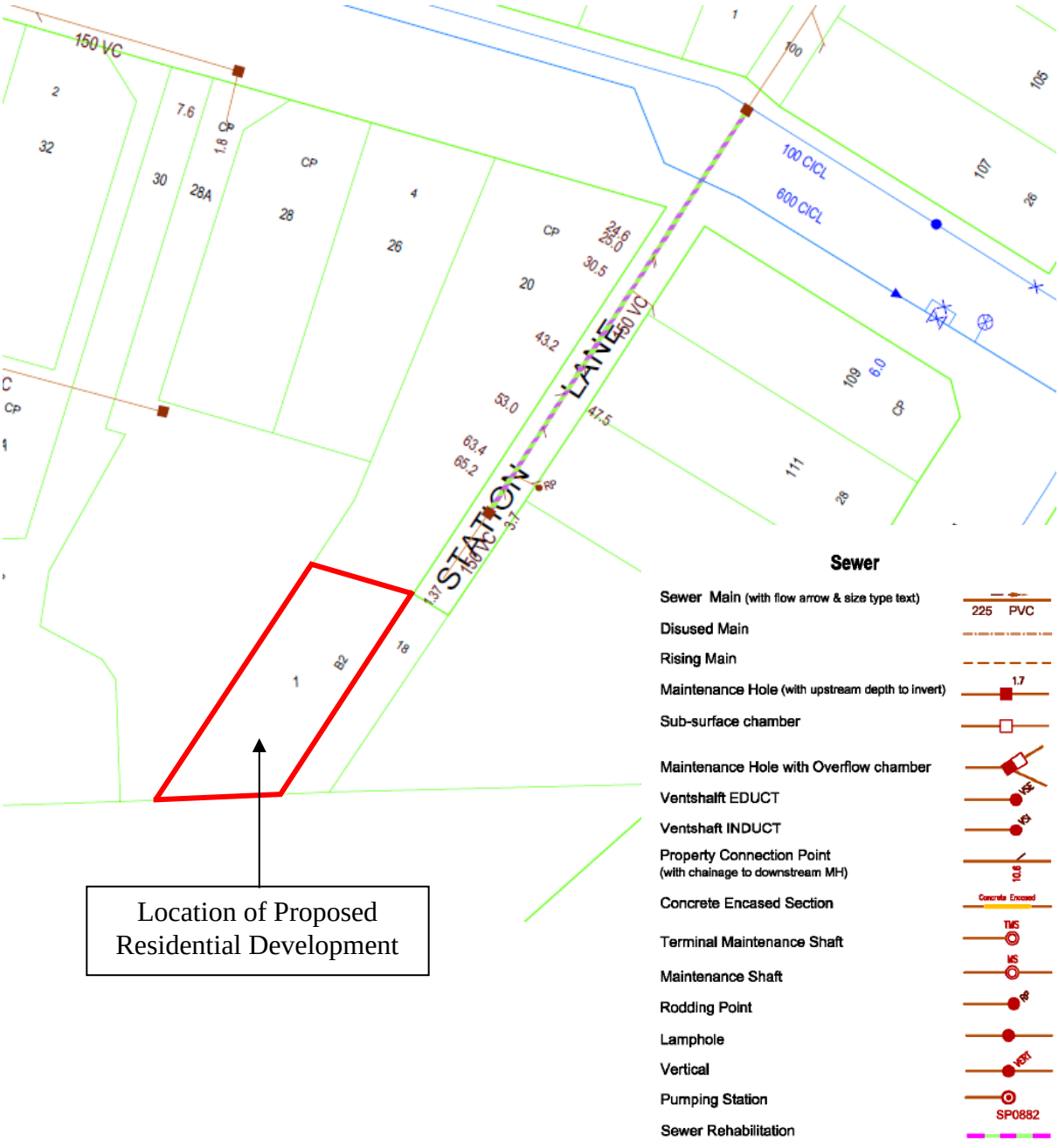

Figure 21
Extract from Sydney Waters Infrastructure Mapping
(image courtesy of Sydney Water through the Dial Before You Dig portal)

18.2 Water Reticulation

Sydney Water provides water supply from an existing 100mm diameter CICL water main located on the northern side of Union Street (see ***Figure 22***). The proposed residential flat building can connect to water authority's water supply system.

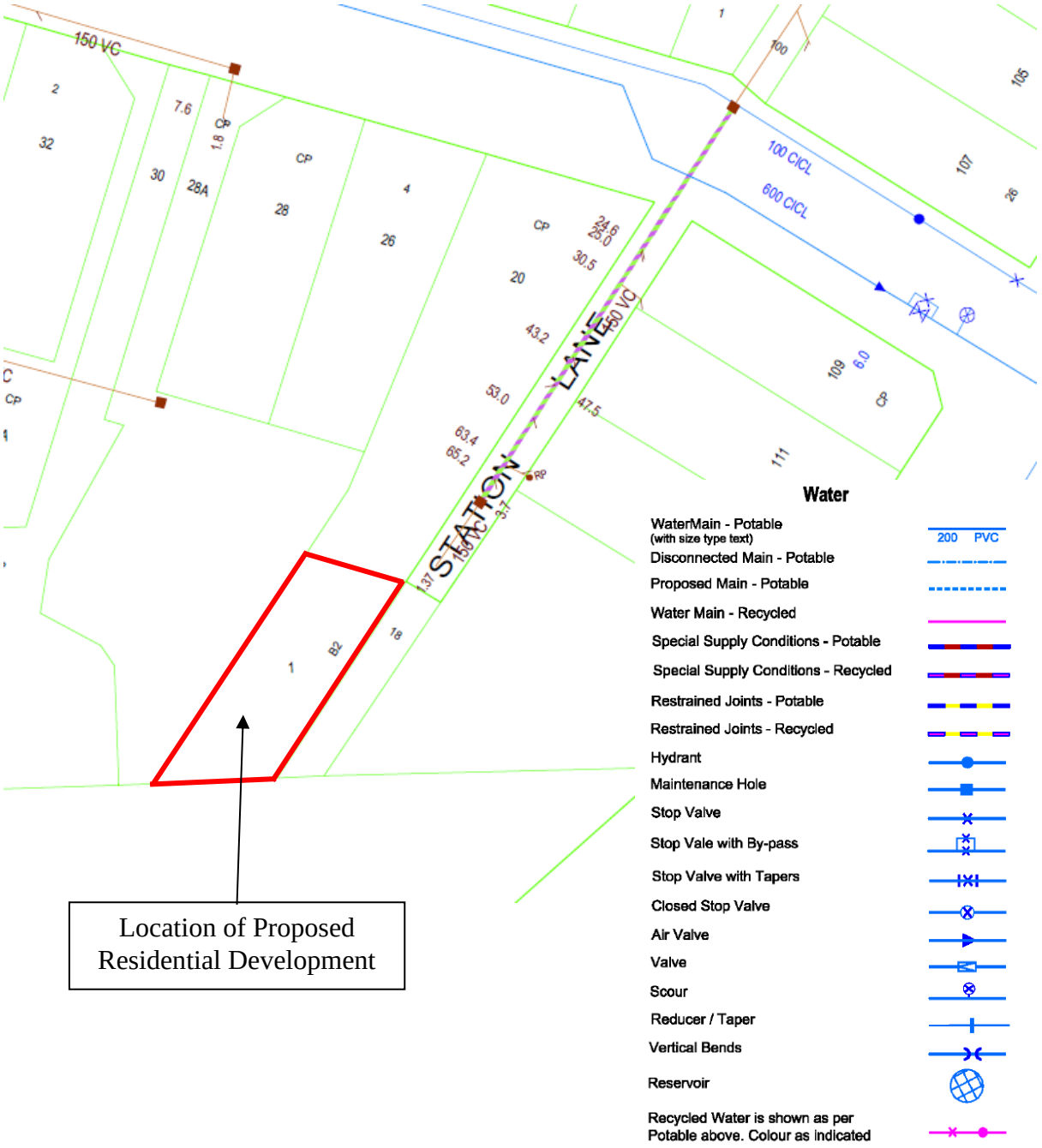

Figure 22
Extract from Sydney Waters Infrastructure Mapping
(image courtesy of Sydney Water through the Dial Before You Dig portal)

18.3 Power Supply

The site is serviced from existing Endeavour Energy underground power lines in Station Lane as shown in ***Figure 23***. The existing dwelling is currently connected to the local power grid. The proposed residential development can be connected to the power grid subject to application to Endeavour Energy.

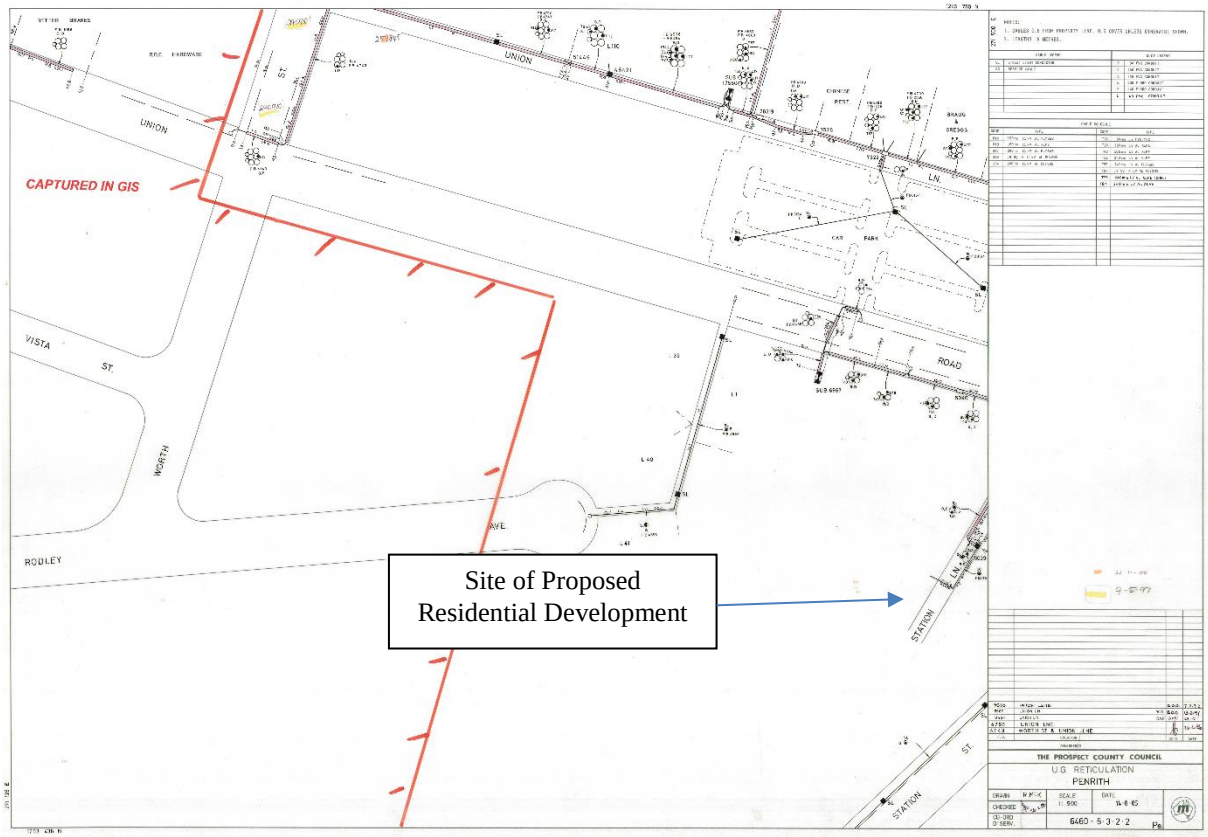

Figure 23
Extract from the Endeavour Energy's Infrastructure Mapping
(image courtesy of Endeavour Energy through the Dial Before You Dig portal)

18.4 Telecommunications

NBN Co. has underground telecommunications cables available in Station Lane as shown in ***Figure 24***. The existing dwelling is currently connected to the local telecommunications network. The proposed development will be able to access the existing services subject to application to NBN Co.

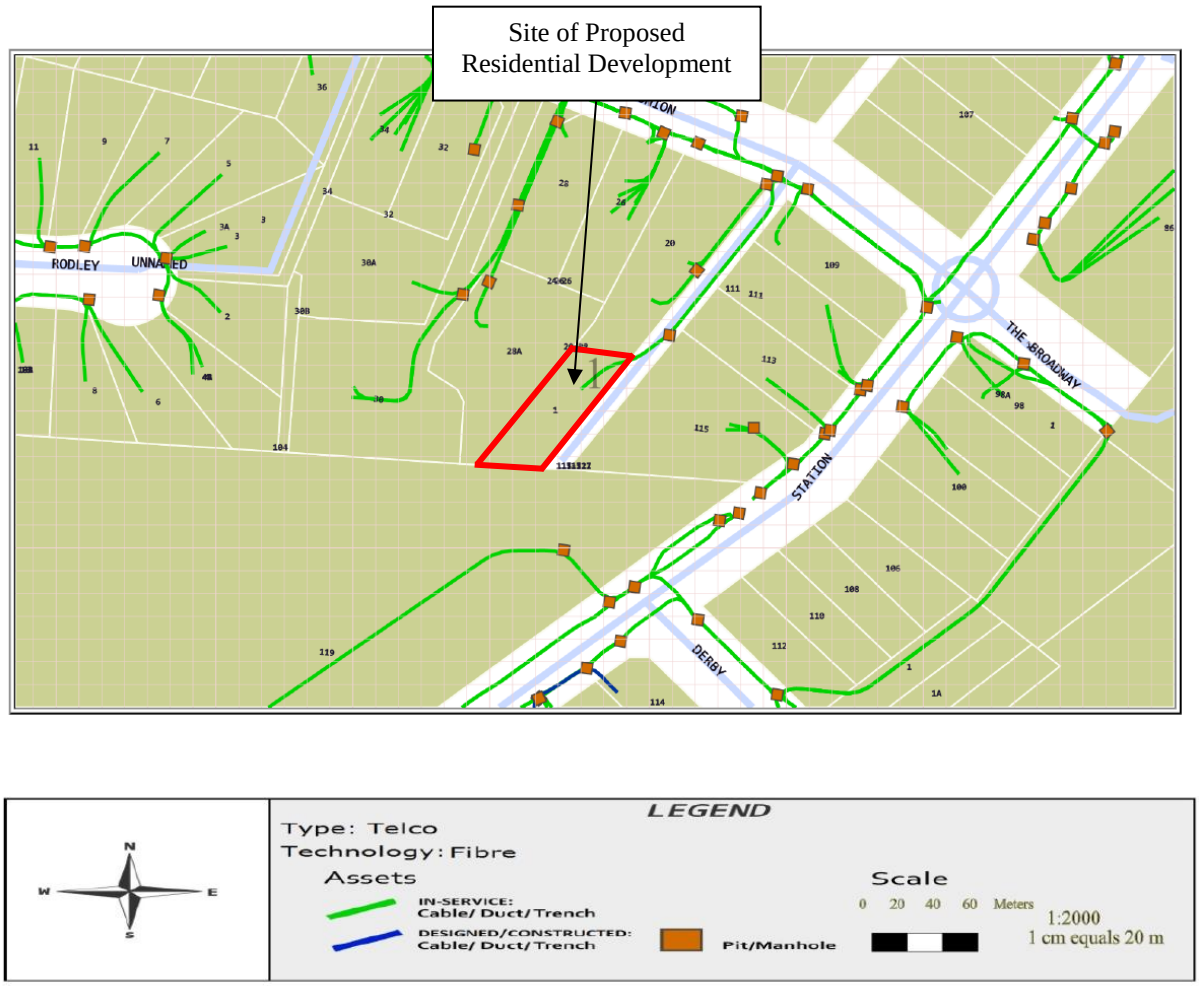

Figure 24
Extract from the NBN Co's Infrastructure Mapping
(image courtesy of NBN Co. through the Dial Before You Dig portal)

18.5 Gas Reticulation

Jemena currently has a 200mm 0.8-2.5 MBL high pressure gas mains in Station Lane and in the vicinity of the development site as shown in ***Figure 25***.

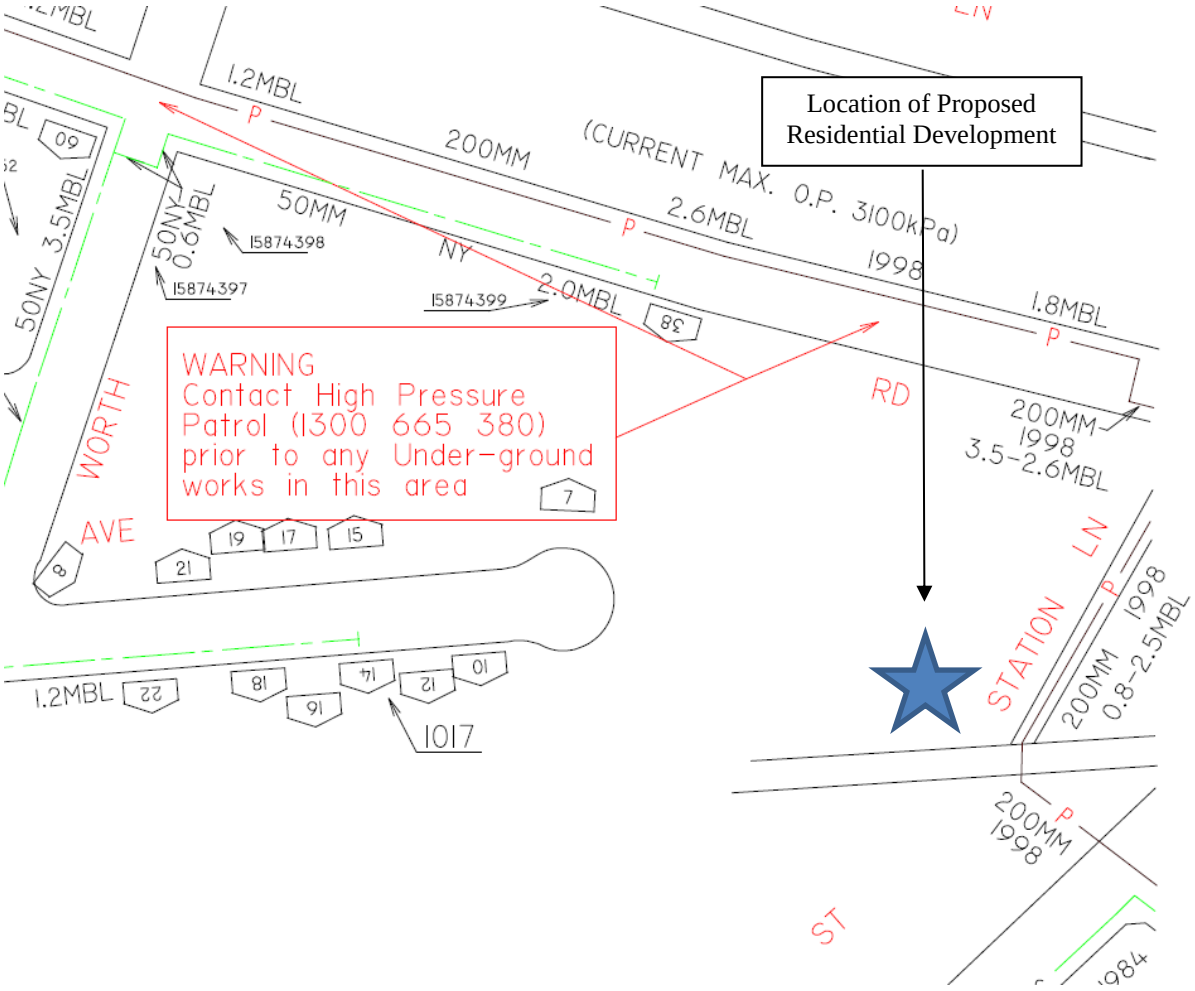

Figure 25
Extract from the Jemena Infrastructure Mapping
(image courtesy of Jemena through the Dial Before You Dig portal)

19.0 STATEMENT OF ENVIRONMENTAL EFFECTS:

The proposed residential flat building will have some effect on the local environment as will any high density residential development project. The following details highlight the measures proposed to reduce the potential effects of the development. All measures will be incorporated into the development so as to create an environmentally acceptable development proposal.

19.1 Flora Effects

The subject area of the residential development is already cleared of much of the original vegetation. Thirteen (13) remnant trees remain which will require removal as detailed in the attached **Pre-development Tree Assessment Report** prepared by ***Nada Kbar*** (see Section 17.0 – *Clearing*). However, extensive landscaping is proposed to offset tree loss as shown on the attached **Landscape Concept Plan** prepared by ***Vision Dynamics*** (Landscape Architects). The development will not adversely impact on any rare or endangered flora species. Nor will any wildlife corridors or habitat be affected as a result of the proposed works.

19.2 Fauna Effects

Most of the native vegetation, as described above, has been removed from the site. Therefore, the development will not adversely impact on any rare or endangered fauna species. Nor will any wildlife corridors or habitat be affected as a result of the proposed works. No significant natural fauna exists on the site.

19.3 Traffic Effects

As all the works are primarily within the property, the proposed application is not expected to adversely impact on traffic movements in Station Lane or Union Street nor adversely impact of local traffic circulation. See Section 12 – *Traffic Management* for further details. The attached **Traffic Management Report** prepared by ***LOKA Consulting Engineers*** assesses the traffic and parking implications of the development proposal.

Station Lane is a bitumen sealed laneway provided tow way traffic access. All existing infrastructure is contained within the Council's road reserve.

The projected increase in traffic activity as a consequence of the development proposal is *minimal*, consistent with the R4 zoning objective of the area, and will clearly not have any unacceptable traffic implications in terms of road network capacity, nor will any mitigation measures be required to ameliorate any impacts.

19.4 Noise Effects

The attached **Acoustic (Traffic & Environmental Noise) Report** prepared by ***Acoustic Vibration & Noise Pty Limited*** was undertaken to determine the building materials to be used and the construction methods to be adopted such that the proposed development is built to achieve acceptable internal noise levels as per Penrith City Council's requirements under Part C – *City Wide Controls* Section C12 – *Noise and Vibration* of the Penrith Development Control Plan 2014.

The proposed residential dwelling abuts existing residential dwellings and medium density housing to north and east of the site. The adjoining properties have varied setbacks with appropriate separation distances. As a result of the proposed construction works, some short term noise impacts will be experienced. However, such noise levels are not expected to cause any detrimental effects on the neighbourhood and once works are completed, background noise will return to current levels.

The Acoustic Report concludes that construction of the proposed residential development, if carried out as recommended in the plans and specifications and including the acoustic recommendations in the report, will meet the required noise reduction levels as required in:-

(i) Clause 102 of the State Environmental Planning Policy – (Infrastructure) 2007;
(ii) NSW Road Noise Policy;
(iii) Australian Standards AS 3671 "Traffic Noise Intrusion Building Siting and Construction";
(iv) AS 2107 "Acoustics – Recommended Design Sound Levels and Reverberation Times"; and
(v) Part C – *City Wide Controls* Section C12 – *Noise and Vibration* of the Penrith Development Control Plan 2014

19.5 Visual Amenity Effects

19.5.1 *General*

The demolition of the existing dwelling and construction of the proposed residential flat building will have some impact on the visual amenity of the property and the immediate precinct as significant works (including site clearing) will need to be undertaken to accommodate the development. This will be mitigated by a significant improvement of the streetscape through the high quality architectural design and external finishes (as shown on the attached **Architectural Plans** prepared by ***Antoine J. Saouma Architect***) together with substantial landscaping (as shown on the attached **Landscape Concept Plan**).

19.5.2 *Desired Character*

Consistent with the desired character, it is considered that the proposed residential flat building, access and site works complies with the desired character in that:-

(i) the proposal compliments the proposed developments currently under construction in the Penrith commercial precinct as is supported by active landscape management;
(ii) the proposal does not significantly impact on the natural qualities of surrounding medium density properties; and
(iii) the proposal is consistent with the requirements of the Apartment Design Guidelines

19.6 Air Quality Effects

In the short term, the potential effects on the air quality will be limited to those effects caused by the construction works emanating from emissions from construction machinery and motor vehicle exhausts associated with the building works.

Atmospheric pollutants caused by such emissions are not expected to have a significant effect on the surrounding area. When access alterations, site works and front fencing is completed, impacts on air quality caused by the operation of the development will not be appreciably greater than that currently experienced.

19.7 Erosion and Sedimentation Effects

Preliminary erosion or sedimentation controls are shown on the attached **Stormwater Concept Plan** prepared by ***LOKA Consulting Engineers***. Final details will be provided at Construction Certificate stage subject to appropriate conditions of consent and will be installed and maintained in accordance with Part C – *City Wide Controls* Section C4 – Land Management Clause 4.3 – *Erosion and Sedimentation* of the Penrith Development Control Plan 2014. Full engineering details will be provided in accordance with appropriate conditions of consent as required by Penrith City Council. Works will include the installation of sediment fences around the perimeter of the site area, stormwater inlet protection and diversion drains where necessary.

19.8 Socio-Economic Effects

The proposed residential flat building will have numerous positive socio-economic benefits including:-

(i) increasing the range and choice of housing accommodation within walking distance to the Penrith commercial centre, services and public transport;
(ii) the provision of a high quality residential flat building that will improve the standard of residential development close to Penrith Rail Station;
(iii) improving the amenity of the precinct and complement adjoining development to the north and east of the site; and
(iv) the provision of short term construction jobs

19.9 Crime Prevention Through Environmental Design

Crime Prevention Through Environmental Design (CPTED) is a crime prevention strategy that focuses on the planning, design and structure of cities and neighbourhoods. It includes the built environment, open space (including passive recreation space), pedestrian and transport corridors, conflicts of land use etc.

CPTED aims to reduce opportunities for crime by using design and place management principles that reduce the likelihood of essential crime 'ingredients' (ie: law, offender, victim or target, opportunity) from intersecting in time and space.

In practice this means that predatory offenders often make 'cost benefit assessment' of potential victims and locations before committing crime. CPTED aims to create the reality (or perception) that the costs of committing crime are greater than the likely benefits. This is achieved by creating environmental and social conditions that:

(i) maximise risk to offenders (increasing the likelihood of detection, challenge and apprehension);
(ii) maximise the effort required to commit crime (increasing the time, energy and resources required to commit crime);
(iii) minimise the actual and perceived benefits of crime (removing, minimising or concealing crime attractors and rewards); and
(iv) minimise excuse making opportunities (removing conditions that encourage / facilitate rationalisation of inappropriate behaviour).

CPTED employs four key strategies. These are:-

(i) territorial re-enforcement,
(ii) surveillance,
(iii) access control, and
(iv) space/activity management.

The following strategies are to be included in the development:-

Territorial Re-enforcement

The use of vegetation will assist in creating territorial reinforcement along the Smith Street property boundary.

The attached ***Landscape Masterplan*** ensures that:-

(i) vegetation does not inhibit a 'line of sight' into the development when looking into the development from outside;
(ii) heavy vegetation has been avoided at the entrance areas of the buildings so as not to provide concealment opportunities; and
(iii) lighting will be used at key entry points so as to assist in identifying the transition between public and private land

Surveillance

The proposed landscaping has been designed so as not inhibit natural surveillance (ie: block sight lines) nor provide concealment and entrapment opportunities. In selecting and maintaining the proposed vegetation, consideration has been given to the possibility of areas becoming entrapment sites in the future. Shrubs are not greater than 1 metre in height and the canopy of the tall street trees are to be higher than six (6) metres.

The residential flat building has been designed so as not inhibit natural surveillance (ie: block sight lines) nor provide concealment and entrapment opportunities. It has been designed taking into consideration:-

(i) the Australian and New Zealand Lighting Standard 1158.1 – *Pedestrian* which requires lighting engineers and designers to consider crime risk and fear when selecting lamps and lighting levels; and
(ii) vision and surveillance in the basement level car park area

Access controls

(i) all entry points (pedestrian and vehicle) are to be clearly signposted and identify the area as being private property; and
(ii) pedestrian access markings on site where car park crossings are located will be clearly indicated

Space / Activity Management

Directional signage is to be provided throughout the development. The signage is to be clear, legible and useful so as to aid way finding throughout the development (particularly around entry, car parking and administration areas).

Gardens, hard walls, fencing and perimeter landscaping is to be well maintained. Any evidence of anti-social behaviour (eg: graffiti, malicious damage, broken lights etc) is to be cleaned, fixed, made good and replaced within 24 hours. A Maintenance Plan is to be prepared for the site. The garbage bin areas are to be secured and kept clean at all times.

19.10 Geotechnical Effects/Site Excavation

The attached **Preliminary Site Investigation** was prepared by ***Benviron Group*** (Geotechnical Engineers). The purpose of the investigation was to obtain geotechnical information on subsurface conditions as a basis for comments and recommendations on excavation, groundwater, retention and footings.

Based on the results of Preliminary Site Investigation, it is considered that the risks to human health and the environment associated with soil and groundwater contamination at the site are low in the context of the proposed use of the site. The site is ***suitable*** for the proposed development, subject to the following recommendations:-

(iii) any soil requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014); and

(iv) an Asbestos Clearance Certificate is recommended to be completed once all existing buildings are structures have been demolished.

If during any potential site works any significant unexpected occurrence is identified, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

In relation to the site excavation, it is recommended that prior to the start of excavation, dilapidation surveys be completed on adjoining structures located within a horizontal distance from the excavation perimeter of at least twice the excavation depth.

The dilapidation surveys should comprise detailed inspections of the adjoining buildings, both externally and internally, with all defects rigorously described, i.e. defect location, defect type, crack width, crack length, etc. The respective owners of the adjoining properties should be asked to confirm that the dilapidation reports represent a fair record of actual conditions. All excavated material will need to be classified for disposal before being removed from site.

20.0 ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

It is prudent to take into consideration the principles of ecologically sustainable development in the management and development of the area. These comments are in accordance with the *New South Wales (Australia) Local Government Amendment (Ecologically Sustainable Development) Act 1997.*

Effective integration of economic and environmental considerations is recommended in decision making processes through the implementation of the following processes:-

(i) The Precautionary Principle – namely, if there are threats of serious or irreversible environmental damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The site is currently occupied by a single storey brick dwelling with numerous introduced and native trees together with typical suburban landscaping. The allotments to the north and east of the site have been cleared, modified and are currently being developed for medium density residential purposes. It is proposed to construct a new residential flat building, basement parking and associated site works and remove some of the existing native and introduced vegetation. There are no identified threats that would cause serious irreversible environmental damage nor any lack of scientific certainty in relation to the proposed development.

(ii) Inter-generational Equity – namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

The proposed residential flat building and associated site works is to be undertaken in accordance with all current engineering and environmental regulations and to a standard that the local environment is protected both during the construction process and rehabilitation of the site. The proposal will also create both short employment opportunities, improve the residential amenity of the precinct and provide high quality residential accommodation. Therefore, the health, diversity and productivity of the environment will not be affected by the proposed residential development and site works.

(iii) Conservation of Biological Diversity and Ecological Integrity – namely, that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

As the existing allotments and the allotments to the north and east of the site have been previously used for residential purposes, the lands have been significantly modified and degraded compared to its natural state. Therefore, the proposed residential flat building, access alterations and site works will have limited effect on the biodiversity or ecological integrity of the area. Some trees will require removal. However, it is not expected that the demolition of the existing dwelling, removal of the trees and the construction of the new residential flat building will adversely impact to any significant degree on the biological diversity of ecological integrity of the site.

21.0 CONCLUSION:

The proposed residential flat building is recommended to Penrith City Council on the basis that it:-

(i) is a permissible use within the current R4 – *High Density Residential* zone under the Penrith Local Environmental Plan 2010;
(i) is consistent with the objectives of the Penrith Local Environmental Plan 2010; and
(ii) is serviced by a range of public utilities

22.0 LIMITATIONS:

Wales & Associates Pty Limited (WA) has prepared this report for a project at #1 Station Lane in Penrith in accordance with instructions from the owner, Station Lane Pty Limited ATF The Station Lane Trust.

The report is provided for the exclusive use of Station Lane Pty Limited ATF The Station Lane Trust for this project only and for the purpose(s) described in the report. It should not be used for other projects or by a third party. In preparing this report WA has necessarily relied upon information provided by the client and/or their agents.

WA's advice is based upon the information supplied and encountered during this assessment. The accuracy of the advice provided by WA in this report may be limited by undisclosed information provided by other sub-consultants. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached notes and reports and should be kept in its entirety without separation of individual pages or sections. WA cannot be held responsible for interpretations or conclusions made by others unless they are supported by an express statement, interpretation, outcome or conclusion given in this report.

Please contact the undersigned for clarification of the above as necessary.

20th August 2018

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Matthew Wales
Director
Wales & Associates Pty Limited

Date

END

REFERENCES

The following documents were referenced:-

Planning Instruments:

(vii) Environmental Planning & Assessment Act 1979;
(viii) New South Wales (Australia) Local Government Amendment (Ecologically Sustainable Development) Act 1997;
(ix) Penrith Local Environmental Plan 2010;
(x) SEPP 65 – Design Quality of Residential Apartment Development;
(xi) and
(xii) SEPP (BASIX) 2004

Policy Documents:

(iii) Apartment Design Guide (ADG) – NSW Department of Planning &Environment; and
(iv) Penrith Development Control Plan 2014

ANTOINE J. SAOUMA
Architect 7412

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10/06/2018

DESIGN VERIFICATION STATEMENT

This statement has been prepared by Antoine J.Saouma registered architect No 7412 with the respect to:

The proposal is for Demolition of existing structures and erection of a 6 storey residential flat building development containing 51 units with associated car parking and landscaping

@ Lots B2 DP 161921
No 1 Station Lane Penrith NSW

In accordance with the requirements of State Environmental Planning Policy No 65, Design Quality of Residential Flat Building I verify that:

a) I directed the design of the proposed residential flat development at the above site.
b) That the design quality principles set out in part 2 of SEPP 65 , Design Quality of Residential Flat are achieved for the above Development.

ANTOINE J. SAOUMA
Architect 7412

Job No 03717 June 2018

ANTOINE J. SAOUMA
Architect 7412

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The design quality principles are achieved as described below

Principle 1 : Context and neighbourhood character

Good design responds and contribute 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. Responding to context involves identifying the desirable element of an area existing or future character.
Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neibourhood. Consideration of local context is important for all sites including sites in established areas, those undergoing change or identified for change.

The proposal is for a new residential development at the site described as Lots B2 DP 161921
No 1 Station Lane Penrith NSW and is considered to be appropriate. The area is in a state of undergoing transition with low density residential being developed and replaced with medium density residential development.
The proposal is consistent with the desired character of the locality and will not result in any unreasonable impacts on the surrounding properties.
The site is a landlocked site with no right of carriage way or access.
Correspondences with council authorities are underway for the acquisition of a part of the lane way
The development bulk and scale is offset by quality articulation and modulation so as to promote an aesthetically pleasing form when viewed from the street and surrounding properties.
Overall the proposal will nicely integrate into the existing context.

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. Good design also achieves an appropriate built form for a site and the buildings purpose in terms of building alignment, proportions, building types, articulation and the manipulation of building elements. 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 proposed design took into consideration the constraint of the site and design the building to present well to the surrounds.
The street is characterised by existing residential flat buildings 3 storeys and above.
The site is located at the southern side of Union Road.
It is approximately 100m away from the shopping area.
The site is bounded at the eastern side by lot 18 Station Lane, a residential flat building at the western side, station lane at the northern side. Council property at the southern side.
The proposal is a typical design response, with a basement parking and a 6 storey development. The proposal is well articulated and the flat roofing form promotes a well-balanced design.
The building is designed to promote excellent opportunities for passive surveillance over the public and the private domain.

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Principle 3 : Density

Good design achieves a high level of amenity for residents and each apartment resulting in a density appropriate for the site and its context. Appropriate densities are consistent with area existing off or projected population .appropriate densities can be sustained by existing or proposed infrastructure , public transport , access to jobs community facilities and the environment

The proposal complies with the maximum density which is permitted under Penrith City Council Local Environmental Plan 2010 .The density of dwellings and floor space yield proposed is considered appropriate for the site and its location. The area is in state of transition with higher demand for housing. The availability and capacity of local infrastructure, public transport and recreational opportunities supports the density of the proposal. The site is located close to bus stop on Union Road and Station Street.

Principle 4 : Sustainability

Good design combines positive environmental social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

The proposal provides good opportunities for solar access and cross ventilation.
Each unit floor plate is relatively small and cross ventilated while more than 70% of units receive 2 or more hours a day of direct solar access.
All units have a good size balconies with shade devices on the west and eastern façade.
Insulation will be installed in between units.
The proposal meets the NSW government BASIX requirements for water, energy and thermal efficiency.
The building will be provided with natural gas, dual flush toilet system.

Principle 5: landscape

A landscape design should :

- *Improve the amenity of open space*
- *Contribute to the streetscape character.*
- *Improve the energy efficiency and solar efficiency of the public domain.*
- *Contribute to the sites characteristics.*
- *Contribute to water and stormwater efficiency*
- *Provide a sufficient depth of soil for planting*

Minimise maintenance

The landscape plan proposes the planting of good landscaping species in accordance with council guidance DCP that directs applicants to provide appropriate species that will survive in this hot, dry climate.
The proposal has a significant amount of landscaped amenities .34% =231sqm of the site is deep soil planting.

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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 and resident's wellbeing. 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 degree of mobility.

The internal layout of the units maximise the opportunity for the balconies to be an extension of the living areas trough wide openings. A high level of privacy is ensured .living spaces and open spaces faces north east and west.
The units will access 2 hours of sun daily.
The apartment sizes comply with the ADG.
The privacy is well maintained with privacy louvre proposed on balconies and windows facing the neighbours.
Passive Surveillance is maximise on James and Vaughan street.

Principle 7 : Safety

Good design optimise safety and security within the development and the public domain. It provided for quality public spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive Surveillance of public and communal areas promote safety. A positive relationship between public and private spaces is achieved through clearly defined secure access and well-lit and visible areas that are easily maintained.

The development will be lit throughout with use of low level lighting facilities along pedestrian access points into the building from the street
The basement parking will be lit avoiding dark spots.
One clear entry is proposed to residents.
Car entry is secure and independent from pedestrian

Principle 8: housing diversity and social interaction

Good design achieves a mix of apartment design sizes providoi9ng housing choices for different demographics living needs and household budgets. Well-designed apartment respond to social context by providing housing and facilities to suit the existing and future social mix.

The proposal is for 17 units over 18m high
There is 8x1 bedroom units and 8x2 and 1x3 bedroom units including 2 adaptable units.
A central lobby with a vertical circulation will connect all levels.
The privacy is well addressed.

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. The visual appearance of well-designed apartment responds to the existing or future local context, particularly desirable elements and repetition of the street scape.

The building has been designed in a contemporary style in materials.
A variety of materials, textures are used to create a building with a consistent theme.
The development will provide a positive contribution to the streetscape

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The following guidelines must be read in conjunction with detailed text contained in the apartment design guide

Part 3 : siting the development	.
Objectives	**comment**
3A Site Analysis *Objective 3A-1* *Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relations to the surrounding context*	A site analysis accompany the application
Objective 3B -1 Orientation *Building types and layouts respond to the streetscape while optimising solar access within the development*	The proposed development defines the street by incorporating units with balconies and windows which overlook the street. The front landscaping and fences assist in defining the street and providing a delineation between the public and private domain. The building is designed to optimise solar access.
Objective 3B-2 *Overshadowing of neighbours properties is minimised during mid-winter*	Solar Access to living rooms and private open spaces of neighbors has been considered. The shadowing on the neighbors properties has been minimized in that the development complies with the height and a minimum of 6m setback.
Objective 3C-1 *Transition between private and public domain is achieved compromising safety and security*	Direct street entry is provided to the main building lobby subject to the approval of the right of carriage way
Objective 3C-2 *Amenity to the public domain is retained and enhanced*	Street access and pedestrian path are well defined. The mail boxes are easy to access from the street. Ramping for accessibility is minimized.

3D Communal and public open space *The communal open space has an area equal to 25% of the site.* *Development achieve a minimum of 50% direct sunlight to the principle usable part of the communal space for a minimum of 2 hours between 9am and 3pm mid-winter.* *The communal open space should have a minimum dimension of 3m.*	All ground floor units have a private open space of more than 35sqm. The communal open space is equivalent to 25% of the site area. 166sqm = 25% Private open space for units exceeds 15sqm and proposed balconies are greater than 10sqm. It receives a minimum of 2 hours sunlight for the 50%

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3E Deep soil

Deep soil zones to meet the following minimum requirements

Site area	Minimum dimension	Deep soil % of site
Less than 650sqm	-	7%
650sqm to 1500sqm	3m	
Above 1500sqm	6m	7%

The site is between 650 and 1500sqm
A minimum of 6m is provided
The total deep soil area proposed is equal with 6m width is 31sqm = 34%

3F Visual privacy

Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from building to the side and rear boundaries are as follows

Building height	Habitable rooms & balconies	Non habitable rooms
Up to 12m (4 storeys)	6m	3m
Up to 25 m (5-8storeys)	9m	4.5
Over 25m (9+storey)	12m	6m

Separation distances between buildings on the same site should combine required building separation depending on the type of room. Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.

A minimum 9m separation setback is provided between windows and n neighbours properties.
Fixed louvres privacy screens are provided for balconies and windows.
Landscape has been used to provide separation between the communal open space and the private spaces.
Balconies are proposed in front of living rooms to increase internal privacy.

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3G Pedestrians access and entries **Objective 3G-1** *Building entries and pedestrian access connects to and addresses the public domain* **Objective 3G-2** *Access , entries and pathways are accessible and easy to identify*	One main central entry is proposed to the building. Private entries to ground floor units to activate the street edge and address the public domain are provided allowing private open spaces to front units facing there street. Entries are clearly defined and identified. All entries are accessible
3H Vehicle access **Objective 3H-1** *Vehicle access points are designed and located to achieve safety , minimize conflicts between pedestrians and cars and create high quality streetscapes*	The car park entry is locate behind the building line and the access driveway is designed to be integrated with the building overall façade with a planter proposed over a part of it. The pedestrian and vehicle access do not intersect and are separate.
3J Bicycle and car parking **Objective 3J-** *For development in the following locations:* • *On sites that are within 800m of a railway station or light rail stop in the Sydney metropolitan area or* • *On land zoned and sites within 400m of land zoned B3 commercial core B4 mixed use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the guide to traffic generating developments or the car parking requirements prescribed by the relevant council whichever is less* *The car parking needs for a development must be provided off street*	The proposed car parking provision is based on the car parking rates in Penrith City Council Development Control Plan. 12x2beds + 3 x1bed + 2x3 beds x 2 +18/4 visitors = 17 car spaces 2 disable car space are proposed and 1 car wash bay. Secure undercover bicycle racks parking are provided in the ground floor. Common circulation areas are well lit. A visible and defined lobby is provided to lifts and stairs. The car park does not exceed 1m above NGL.
Part 4 designing the building **Objective** **4A Solar and daylight access** *To optimise the number of apartments receiving sunlight to habitable rooms primary windows and private open spaces* *70% of the living rooms and private open space in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter.*	**Comment** More than 70% of the proposed units receive more than 2 hours sun mid-winter between 9am and 3 pm. The proposed development incorporate shading devices such pergolas , balconies external louvre and planting

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A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm mid-winter. **4B Natural ventilation** *At least 60% of apartments are naturally cross ventilated overall depth of a cross over or cross through apartment does not exceed 18m measured glass line to glass line*	More than 60% of proposed apartments are cross ventilated.
4C Ceiling heights **Objective 4C-1** *Measured from finished floor level to finished ceiling level minimum ceiling heights are:* • *Habitable room 2.7m* • *Non habitable room 2.4m* • *2storey apartments 2.7m for main living area and 2.4 for 2nd floor where its area does not exceed 50% of the apartment area*	All habitable rooms in the building have a floor to ceiling height of at least 2.8m.
4D Apartment size and layout **Objective 4D-1** *Apartments are required to have the following minimum internal areas:* • *Studio 35sqm* • *1 bedroom 50sqm* • *2 bedroom 70sqm* • *3 bedroom 90sqm* *A fourth bedroom and further additional bedrooms increase the minimum internal area* *2 bedroom 70sqm by 12sqm each* *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.* *Master bedroom have a minimum area of 10sqm and other bedrooms 9sqm excluding ward robes*	All apartment sizes exceed or are equal to the minimum requirement. Refer to architectural floor plans. Every habitable room has an external window with a total minimum glass area of not less than 10%the floor area of the room.

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Bedrooms have a minimum dimension of 3m excluding wardrobe. *Living rooms or combined living /dining rooms have a minimum width of:* *3.6m for studio and 1 bedroom* *4m for 2 and 3 bedrooms* **Objective 4D-2** *Habitable room depths are limited to a maximum of 2.5x the ceiling height.* *In open plan layouts where the living dining and kitchen are combined the maximum habitable room depth is 8m from a window*	Where possible the depth of all habitable rooms are limited to 2.5m x the ceiling heights. In open plan kitchen living and dining are not more than 8m from a window The master bedroom and all other rooms area exceed 10sqm Living rooms width is 3.6m for 1 bedroom units and 4m for 2 bedroom units
4E Private open space and balconies **Objective 4E-1** *All apartments are required to have primary balconies as follows:* • *1 bedroom 8sqm 2mdepth* • *2 bedroom 10sqm 2m depth* • *3 bedroom 12sqm depth 2m* *The minimum depth to be counted as contributing to the balcony area is 1m* *For ground level apartment or on a podium a private open space is provided instead of a balcony. it must have a minimum area of 15sqm and a minimum depth of 3m.*	Primary balconies in the development meet the minimum required size and depth. The ground floor units private open space were proposed at the eastern side exceed 15sqm Primary open space and balconies within the proposal are located adjacent to living areas. The design and details of the balconies avoids opportunities for climbing and falls
4F Common circulation and spaces **Objective 4F-1** *The number of units accessible from a single core Corridor should be limited to eight.* *For building of 10 storeys and over the maximum number of apartments sharing a single lift if 40*	The proposed development provides natural light to each core and associated corridor Maximum of 4 units are accessed from a single level of the common circulation space
4G Storage **Objective 4G-1** *In addition to kitchen cupboards and bedroom wardrobes,* *provide accessible storage facilities at the following rates:* • *Studio apartments: 4m3* • *One bedroom apartments: 6m3*	Dedicated storage are provided for each unit in the basement and within the unit. Basement storage are secure and clearly allocated. Over bonnet storage are proposed in the basement areas 50% of the storage are located within the apartments.

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ASSESSEMENT /COMPLIANCE TABLE
SEPP 65 RESIDENTIAL FLAT DESIGN CODE

• *Two bedroom apartments: 8m3* • *Three plus bedroom apartments: 10m3* *At least 50% of the required storage is to be located within the apartment* **4H Acoustic privacy** **Objective 4H1** *Noise transfer is minimised through the siting of building and building layout*	Noisy areas in the building such as corridor are located above each other and quieter areas similar. The party wall will be insulated and treated as per the BCA
4J Noise and pollution **Objective 4J-1** *In noisy or hostile environment the impacts of external noise and pollution are minimised through siting and layout of buildings*	The proposed development is located in a quiet area not within a noisy or hostile environment
4K Apartment mix **Objective 4K-1** *A Range of apartment types and sizes is provided to cater for in different household types now and into the future*	A variety of apartment mix is provided. The proposal is for 8x2 bedroom units and 8x1 bedroom units + 1 x3 bedroom units
4L Ground floor apartments **Objective 4L-1** *Street frontage activity is maximized where ground floor apartments are located*	Ground floor open spaces facing units.
4M Facades **Objective 4M-1** *Building façade provide visual interest along the street while respecting the character of the local area.*	The proposed façade incorporate a varied composition achieved through the use of a material mix of textures and colours.
4N Roof design **Objective 4N-1** *Roof treatment are integrated into the building design and positively respond to the street.*	Service element have been properly integrated within the roof design
4O Landscape design **Objective 4O -1** *Landscape design is viable and sustainable*	A landscape plan prepared by a qualified landscape architect accompany this submission

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4P Planting on structures **Objective 4P-3** *Planting on structures contributes to the quality of communal and public open space*	The proposal includes planting on the podium and provides appropriate soil volume to facilitate plant growth.
4Q Universal design **Objective 4Q-1** *Development achieve a benchmark* **of** *20% of the total apartments incorporating the liveable housing guideline* *A variety of apartment with adaptable Design are provided*	The proposed development achieve a benchmark of 10% of the total units incorporating the liveable housing guideline. 2 units out of 18 are adaptable
4U Energy efficiency **Objective 4U-1** *Development incorporate passive environmental design* *Adequate natural ventilation minimise the need for mechanical ventilation*	Adequate natural light is provided to habitable rooms. Shading devices and roof overhang are proposed. The natural ventilation is optimised
4V Water management and conservation **Objective 4V-1** *Potable water use is minimized* *Urban storm water is treated on site before being discharged to receiving waters*	The development will incorporate water efficient fittings appliances
4W Waste management **Objective 4W-1** *Waste storage facilities are designed to minimise impacts on the streetscape , building entry and amenity of residents*	Adequate storage size for rubbish arte proposed as required by PCC DCP A waste management plan will accompany this submission.

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Job Number: **18NL148-T2** **Date:** **06th July, 2018**

Traffic Management Report for

1 Station Lane, Penrith, NSW

Prepared by

LOKA CONSULTING ENGINEERS PTY LTD

Nermein Loka

BSC, ME, MIE(AUST), CPEng, NPER, RPEQ

Senior Civil Engineer

Accredited Certifier

Director

Table of Contents

1. Introduction

Loka Consulting Engineers Pty Ltd has been engaged by Antoine J. Saouma Architect to provide a Traffic Management Plan for the site at 1 Station Lane, Penrith, NSW (refer to Figure 1-1 and Figure 1-2).

A Traffic Management Plan and Report is required for the proposed development to identify the impacts of the proposal on the local street network and mitigation measures required to ameliorate any impacts. This includes:

- A description of the site and details of the development proposal;
- A review of the road network in the vicinity of the site, and traffic conditions on that road network;
- A review of the geometric design features of the proposed car parking facilities for compliance with the relevant codes and standards; and
- An assessment of the adequacy and suitability of the quantum of off-street car parking provided on site.

Figure 1-1 Subject site (from SIX maps)

Figure 1-2 Site location (from SIX maps)

2. Proposed Development

The proposed development will facilitate the construction of a residential flat building with a site area of approximately 669 m^2.

The proposed development is bounded by

- Station Lane on the East,
- 28A Union Rd on the West,
- 20 Station Lane on the North, and
- Penrith War Memorial Swimming Pool on the South.

The development consists of 2 basement levels, 1 ground level and 5 upper level. Both basement levels will be used primarily for car parking with entry from Station Lane. A car lift is proposed to connect the ground floor and both basement levels.

2.1.Public Transportations

1. It takes 3 minutes walking (210m) from the site to Station St at Union Ln bus stop (refer to figure 2-1).
2. It takes 5 minutes walking (400m) from the site to Station St after Reserve Stat Marion St bus stop (refer to figure 2-2).

Table 2-1 shows the bus line name; routes and the time between two successive trips. Refer to Transport NSW for accurate details.

No.	Line Name	Route	Interval
1	690P	Springwood to Penrith	60 min
	770	Mount Druitt to Penrith via St Marys	30 min
	774	Mount Druitt to Penrith via Nepean Hospital	30 min
	775	Mount Druitt to Penrith via Erskine Park	30 min
	776	Mount Druitt to Penrith via St Clair	30 min
	781	St Marys to Penrith via Glenmore Park	Time varies
	791	Penrith to Jamisontown via South Penrith	30 min
	794	Glenmore Park to Penrith via The Northern Rd	30 min
	795	Warragamba to Penrith	Time varies
	799	Glenmore Park to Penrith via Regentville	60 min
2	688	Penrith to Emu Heights	30 min
	689	Penrith to Leonay	60 min
	691	Mount Riverview to Penrith	Time varies

7Table 2-1 Bus line, route, and time

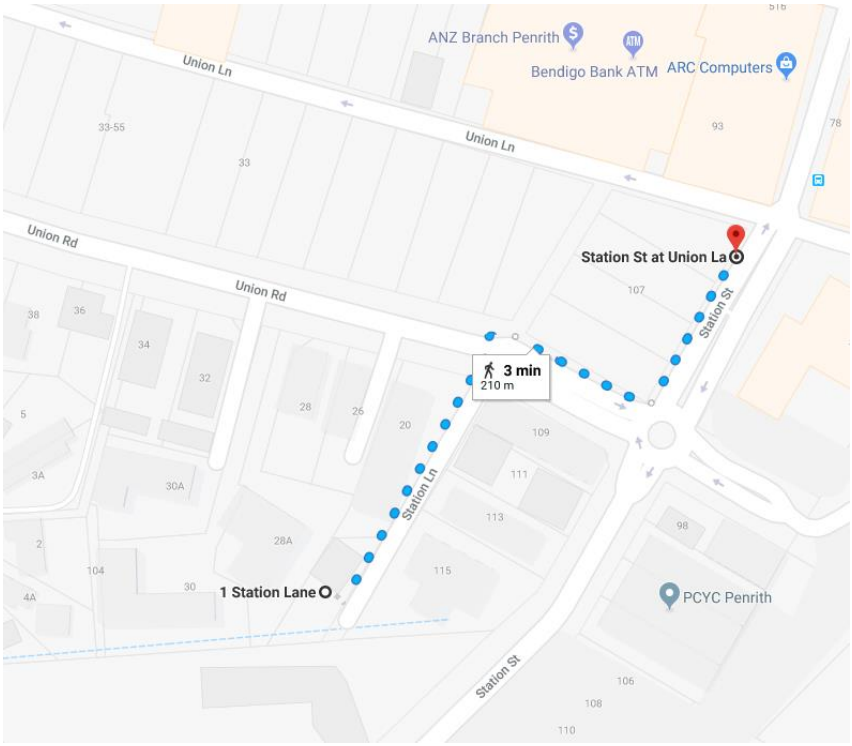

Figure 2-1 Site to bus stop (from Google maps)

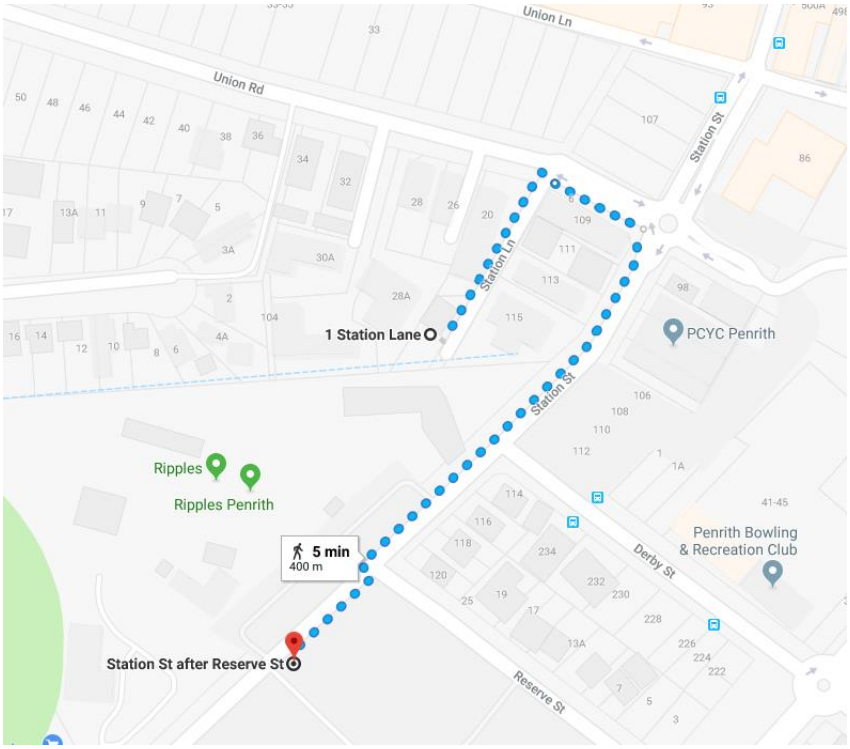

Figure 2-2 Site to train station (from Google maps)

3. Off Street Car Parking Provision

3.1. Car parking

According to the latest architectural plan, the development consists of 2 basement levels, 1 ground level and 5 upper level. Both basement levels will be used primarily for car parking with entry from Station Lane. A car lift is proposed to connect the ground floor and both basement levels.

Bedroom provision for the units is given in Table 3-1 below.

Level	1-bedroom unit	2-bedroom unit	3-bedroom unit	Total
Level 5	0	2	0	2
Level 4	0	2	0	2
Level 3	3	1	0	4
Level 2	2	1	1	4
Level 1	2	1	0	3
Ground	1	1	0	2
Total	**8**	**8**	**1**	**17**

Table 3-1 Bedroom provision

The proposed residential building is only 400m away from Penrith train station (refer to figure 2-2) according to time estimated by Google maps, it takes 5 minutes walking only.

according to Apartment Design Guide objective 3J-1 car parking is provided based to public transport on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less

Land use	Measure	Minimum spaces required
Metropolitan Regional (CBD) Centres	1 bedroom	0.4/unit
	2 bedrooms	0.7/unit
	3 bedrooms	1.2/unit
	Visitor	1/7 units

Table 3-2 Off-street parking space rates from Apartment Design Guide

Accordingly, the car parking spaces required for the proposed development is shown in Table 3-3.

Parking type	Unit type	No. of units	Rate	Parking required	Total
Residential	1 BED	8	0.4	3.2	10
	2 BEDS	8	0.7	5.6	
	3 BEDS	1	1.2	1.2	
Visitor	Units	17	1/7	2.4	3
MINIMUM PARKING					13

Table 3-3 Required minimum parking spaces from Apartment Design Guide

According to Penrith Development Control Plan (2014), the following minimum parking spaces shown in Table 3-4 must be provided for a residential flat building.

Land use	Parking type	Minimum spaces required
Residential Flat Buildings	**Residential**	1 space per 1 or 2 bedrooms 2 spaces per 3 or more bedrooms
	Visitor	In addition, visitor parking is to be provided for developments that have 5 or more dwellings: 1 space per 5 dwellings, or part thereof.
	Accessible	Accessible parking as per BCA & AS2890.6.
	Car wash bay	1 space for car washing for every 50 units, up to a maximum of 4 spaces per building.

	Service vehicles	1 space per 40 units for service vehicles.
	Bicycle	Bicycle parking as per "Planning Guidelines for Walking and Cycling" (NSW Government 2004) & AS2890.3.

Table 3-4 Off-street parking space rates from Penrith DCP

Required minimum car parking spaces is given in Table 3-5 below.

Parking type	1-bedroom unit (1 space/unit)	2-bedroom unit (1 space/unit)	3-bedroom unit (2 spaces/unit)	Required min. spaces
Unit	8	8	1	
Residential parking	8 x 1 = 8	8 x 1 = 8	1 x 2 = 2	18 spaces
Visitor parking	17 units x 1 space per 5 units = 3.4 spaces			4 spaces
Total				23

Table 3-5 Required minimum parking spaces from Penrith DCP

From Table 3-3 & 3-5, it can be seen that Guide to Traffic Generating Developments requires less parking than Penrith DCP

There are 13 parking spaces required. There are 14 parking spaces provided in total, 10 residential parking spaces, 4 visitor parking spaces.

The design complies with the requirement of Apartment Design Guide & Guide to Traffic Generating Developments requires.

Ground floor and basement architectural plan of the proposed development has been prepared by Antoine J. Saouma Architect and is attached in Appendix A.

3.2. Bicycle parking

According to Penrith DCP, bicycle parking is to be provided as per "Planning Guidelines for Walking and Cycling" (NSW Government 2004) & AS2890.3. Table 3-6 below assesses the requirement for bicycle parking.

Land use	Rate	Number of units	Required minimum space
RFB	20-30% of units for long term + 5-10% of units for short term	17	4 (LT) +1 (ST) = 5

Table 3-6 Required minimum bicycle parking

8 bicycle parking spaces are provided on ground floor inside the building.

The design complies with the requirement from Penrith DCP.

4. Car Park and Driveway Layout

4.1.Driveway and Ramp Design

The design of the driveway, internal roadways & ramps, and car parking spaces must comply with relevant Australian Standards; details are shown in the Basement architectural plan. Table 4-1 and Table 4-2 assess the compliance of the site to Australian Standard and Penrith Council DCP.

FEATURE	AS 2890.1:2004	Penrith Council DCP	Architectural Plan	Compliance
Driveway width	• 3.0 to 5.5 for Category 1. • 6.0 to 9.0 for Category 2.	To comply with AS2890.1	Class 1A parking facility Category 1 access facility 4.75m one-way Car lift proposed to connect ground floor and both basement levels.	The design is complied with AS 2890.1 and Penrith Council DCP
Headroom	2.2m min between the floor and an overhead obstruction. Headroom above each dedicated space and adjacent shared area should be a minimum of 2.5m.	To comply with AS2890.1	Headroom GF: 3.00m UB: 2.50m LB: 3.00m Ensure min 2.2m general and 2.5 above accessible parking space after considering slab thickness and services.	The design is complied with AS 2890.1 and Penrith Council DCP

Table 4-1 Driveway and ramp design

Ground floor and basement architectural plan of the proposed development has been prepared by Antoine J. Saouma Architect and is attached in Appendix A.

4.2.Dimensions of Parking Spaces

The design of the car parking spaces should be in compliance with AS 2890.1 and AS 2890.6.

FEATURE	AS/NZS 2890.1 & 2890.6	Penrith Council DCP	Architectural Plan	Compliance
Residential parking space	5.4m x 2.4m. Additional 300mm when adjacent a wall	To comply with AS2890.1	All parking spaces are 5.5m x 2.4m. With additional 300mm when subjected to obstacle with height more than 150mm	The design is complied with AS 2890.1 and Penrith Council DCP
Disabled parking	5.4m x 2.4m adjacent a 5.4m	To comply with	5.4m X 2.4m with a shared area of 5.4m X 2.4m	The design is complied with

space	x 2.4m shared zone	AS2890.6	With additional 300mm when subjected to obstacle with height more than 150mm	AS 2890.6 and Penrith Council DCP
Aisle Widths	5.8m minimum	To comply with AS2890.1	5.8m on both basements	The design is complied with AS 2890.1 and Penrith Council DCP
Blind aisle	1m extension beyond the last parking space	To comply with AS2890.1	<u>Lower basement</u> P13: 1.162m P14: 1m <u>Upper basement</u> P6: 1.14m P7: 1m	The design is complied with AS 2890.1 and Penrith Council DCP

Table 4-2 Dimensions of parking spaces

As required in AS 2890.1:2004, a triangular area with 2.5m (face to driveway) by 2.0m (face to street) will be kept clear of obstructions to visibility (Refer to Figure 4-1).

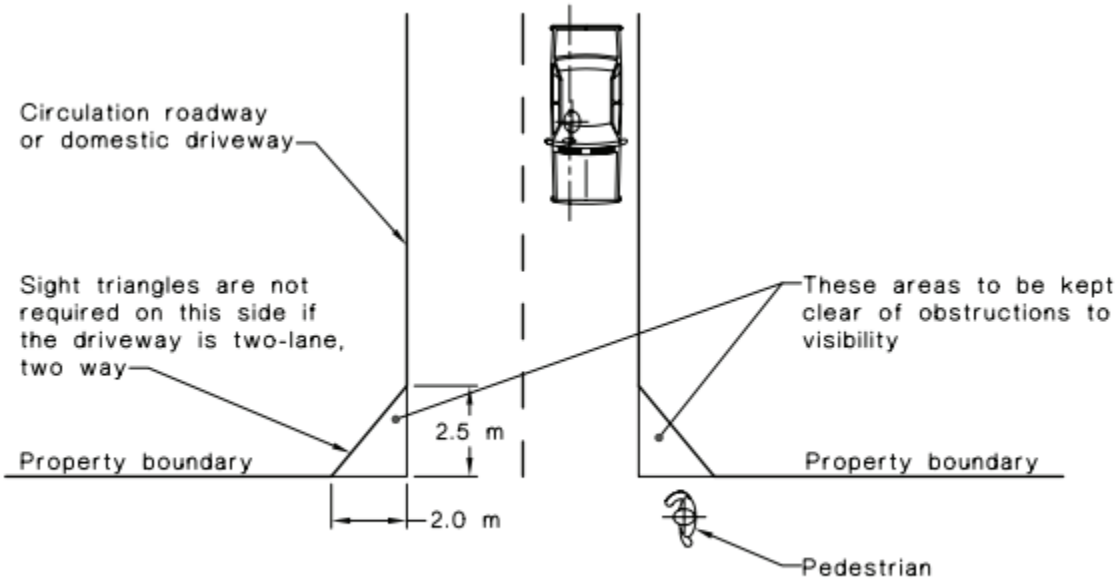

Figure 4-1 AS 2890.1:2004 requirement

In accordance with AS 2890.1:2004, sight triangle is hatched in red and shown in the following Figure 4-2.

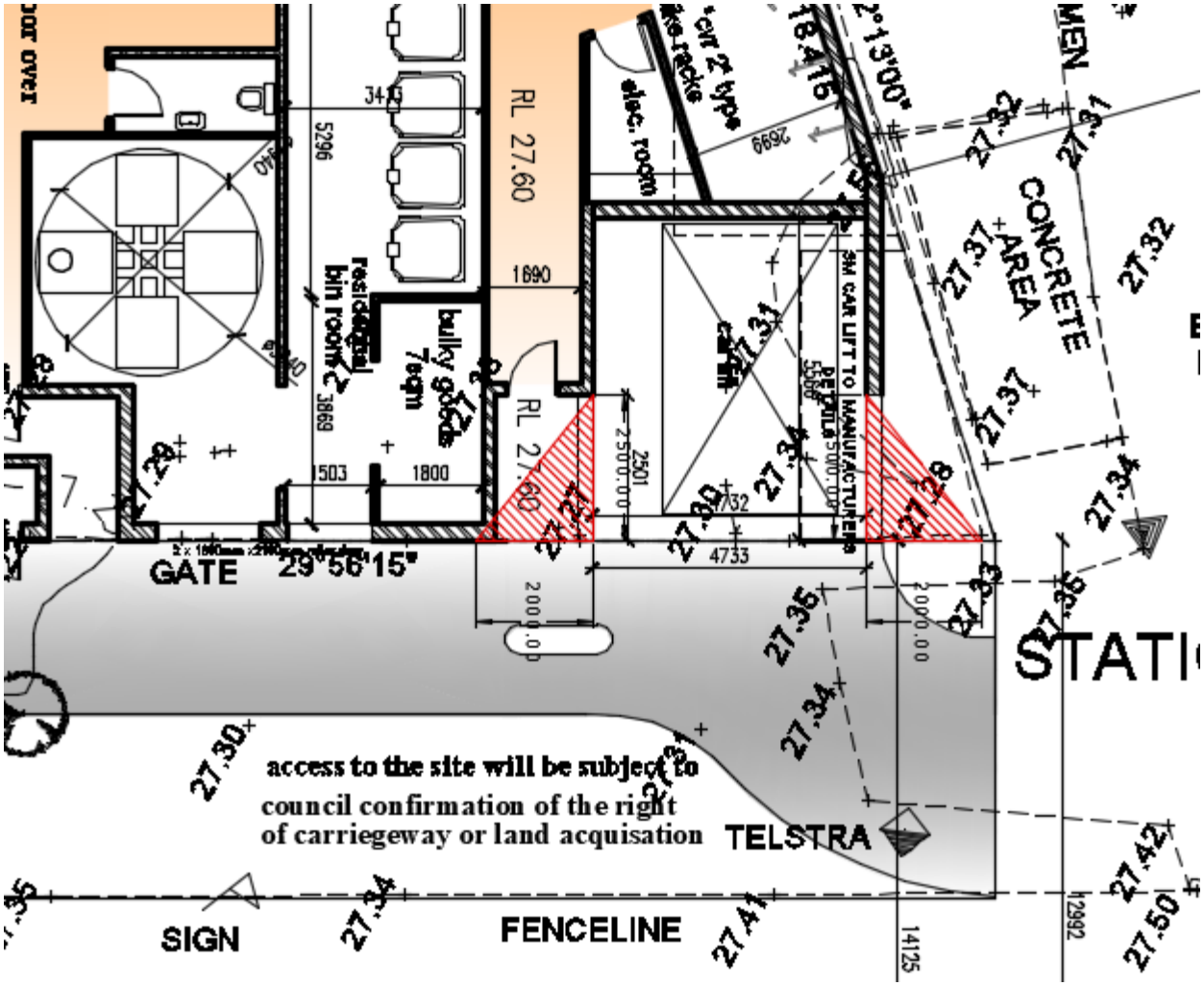

Figure 4-2 Sight triangle

The design complies with sight triangle requirement.

5. Traffic Generation

An indication of the traffic generation potential of the development proposal is provided in accordance with Roads and Maritime Services (RMS) publication 'Guide to Traffic Generating Developments 2002'.

RMS guidelines are based on an extensive survey of a wide range of land uses. The subject site is identified as a medium density residential flat building (less than 20 units). The rate and corresponding peak hour vehicle trips are given in Table 5-1 below.

Unit type	Rate	Number of proposed unit	Weekday peak hour vehicle trips
Up to two bedrooms	0.4-0.5 per dwelling	16	6.4-8.0

Three or more bedrooms	0.5-0.65 per dwelling	1	0.5-0.65
Total			Max. 9

The existing site contains one dwelling. Based on RMS guidelines, the existing site is identified as 1 dwelling. Hence, the following is expected:

- Daily vehicle trips = 9.0 per dwelling; and
- Weekday peak hour vehicle trips = 0.85 per dwelling.

For the existing site which is also a single dwelling house, there is a traffic generation potential of approximately 1 vehicle per hour during peak periods. The future trips should be discounted by the existing trips, which is shown in Table 5-2 below.

Traffic Generation Potential	Weekday peak hour vehicle trips
Future	9
Existing	1
Net	8

Table 5-2 Project net Increase in peak hour traffic generation potential

According to the table above, there will be net increase of 8 weekday peak hour vehicle trips in traffic generation potential for the proposed development.

6. Additional Requirement

A Traffic Signal System is proposed to manage traffic vehicles entering and exiting the basement car park for the proposed development to mitigate the impacts caused by the limited access driving width.

To ensure all vehicles enter and exit the site in a safe and efficient manner, a traffic signal system will be introduced to manage the vehicles for the proposed development. Refer to Signal system plan drawings ST01-ST02.

For vehicles entering the site

The default position of the lift will be at ground floor to prevent the queueing of vehicles at Station Lane, priority will be given to entering vehicles at the entrance of access driveway. The lift door will always be open when available to be used.

If the lift is being used, the door will be closed and there will be a red flashing light near the lift door notifying the incoming vehicles.

For vehicle leaving the site

On each basement level, a loop detector will be located at the waiting bays near the signal head to activate the signals and call the lift, convex mirror, red/green traffic light and corresponding sign will be proposed

7. Swept Path Analysis

To ensure all vehicles enter and exit the site in a forward direction, swept path analysis has been conducted in the Appendix B.

It is our opinion that the proposed car parking and driveway comply with Australia Standard.

APPENDIX **A**

Architectural Plan

APPENDIX **B**

Swept Path Analysis