

Referral Response - Major Developments - Engineer

Application Number:	DA20/0167
Referral Officer	Jake Hausfeld
Referral Unit	Major Developments - Engineer
Date of referral	13 April 2021
Land to be developed (Address):	Lot 10 DP 1162271 614 - 632 High Street PENRITH NSW 2750
Proposed Development:	Construction of Part Seven (7) Storey & Part 46 Storey Mixed Use Development including Four (4) Storey Podium containing Basement Parking, Retail Premises & Car Parking, Office Premises, Serviced Apartments with 35 Suites, 272 Residential Apartments & Associated Site Works

Recommendation

Not supported

Detailed assessment

I have reviewed the application and the following plans against the Development Engineering Referral Checklist attached:

Drawing/Ref No.	Revision	Date	Description	Prepared By
Project No. 20190239 SW100 to SW500	B	23/03/2021	Stormwater Concept Design Plans	SGC Consulting Engineers
Project No. 20190239	A	23/03/2021	WSUD Strategy Report	SGC Consulting Engineers
Project No. 20190239		22/03/2021	Email Response to Engineering Comments	SGC Consulting Engineers

Please note that since my last referral, only the stormwater engineering plans have been updated (along with provision of a WSUD Strategy Report). I have updated the my comments below accordingly. I have also made some amendments to the pre-existing comments within other sections, such as noting the requirement for compliance with Council's Penrith CBD Public Domain Technical Manual.

The proposed application is unsatisfactory. Prior to further assessment by Development Engineering the following matters must be addressed by the applicant:

Stormwater Concept Design Plan Comments:

- The cover sheet of the engineering plans notes that the HGL analysis is "not in use". Is there any reason that this stormwater sheet was not provided to support the application? A revised HGL analysis is required to support the development given that a greater portion of the site now drains to newly proposed kerb inlet pit and stormwater line along the High Street frontage.
- The depth of the proposed OSD tank has been reduced to as low as 500mm at some places within the

tank. Council's Stormwater Drainage for Building Developments Specification requires a minimum tank depth of 900mm (clause 4.3.7 d)). Should a reduced tank depth not in accordance with this specification be required to service the site, adequate details are to be included in the maintenance schedule provided within the WSUD Strategy Report demonstrating how the OSD tank will be maintained given this reduced depth.

Appropriate grate spacing should be demonstrated on the engineering plans to facilitate this maintenance.

- Parts of the OSD tank appear to lie underneath the proposed building, which is not supported in accordance with clause 4.3.7 a) of Council's Stormwater Drainage for Building Developments Specification. The OSD tank must lie wholly outside the extent of any building slab or habitable floor level.
- Further minor amendments need to be made to the OSD design so that it is compliant with Council's Stormwater Drainage for Building Developments Specification. The orifice is to be calculated in accordance with clause 4.3.3 of this specification (for the current design, this gives an orifice 160mm in diameter). I also note that an orifice diameter in excess of 150mm would require a 6mm thick orifice plate. The adopted site storage rate for the OSD tank has been calculated from table 8 of this specification in accordance with the requirements for multi unit housing. The rate for residential flat buildings should be adopted for the site (331m³/ha as opposed to 290m³/ha). Please amend the OSD design in accordance with these comments.
- The OSD system is also to be benched to the invert of the orifice plate in accordance with standard drawing SD3001. The proposed sump and relief drain within the tank is to be removed.
- As noted in the provided pre-lodgement meeting notes (PL20/0003) for the proposed development, a shelter in place strategy in the PMF mainstream flooding event is not supported as an alternative to evacuation. An evacuation strategy is required to be developed in consultation with the SES for the potential occurrence of this event. It is noted from recent correspondence that a response to this comment is still being prepared.

Roadworks/Public Domain Works:

- Further civil details of all public domain works as outlined within PL20/0003 are required. All road frontages are to be designed in accordance with Council's Penrith CBD Public Domain Technical Manual.
- The civil works plan layout needs to be clarified at the Union Lane and proposed new road intersection, as two different kerb overlays appear to be shown on this drawing.
- The engineering plans for the required roadworks shall include all relevant details of the new through road between High Street and Union Road and the extension of Union Lane, while remaining consistent with the approved design for the adjoining development along High Street (DA18/0264).

Internal Parking and Maneuvering Assessment:

- A minimum 6m entry and 4 to 6m exit for private vehicles (with a 1 to 3 metre separation between driveways) is required for the development in accordance with table 3.2 of AS2890.1 due to the number of parking spaces servicing the development (338), as per the category taken from table 3.1 of AS2890.1 (category 3 access facility). No justification has been provided within the revised submission for this non-compliance with the Australian Standard.
- An adequate number of accessible spaces have now been provided for the development in accordance with the requirements of the BCA, which have been designed to the requirements of AS2890.6. However, it is noted that the 3.8m wide parking spaces denoted as adaptable are not supported as accessible parking spaces, as they do not satisfy the design requirements of AS2890.6. Please remove the notation on these spaces showing these parking spots to be accessible. Should the developer wish to have more accessible parking for the development, these spaces must be designed in compliance with the requirements of AS2890.6.
- The parking spaces provided for the serviced apartments should be a minimum of 2.5m wide in accordance with AS2890.1, which recommends user class 2 dimensions for hotel/motel type use parking. No justification has been provided within the revised submission for this non-compliance with the Australian Standards.
- I concur with the comments provided within the traffic engineering referral, which note of a clash between the entry/exit lanes of private vehicles and the manoeuvring of a service vehicle accessing the loading bay. A review of the ground floor layout for this development should be undertaken, particularly while also taking into consideration point 1 of this section of comments (driveway width).

Additional Notes to Planner:

- The site falls under the provisions of '*Development Assessment Guidelines: An adaptive response to flood risk management for residential development in the Penrith CBD*'. This document notes that a further 4,050 dwellings can be accommodated under the current capabilities of the SES. From the implementation of these guidelines, has PCC been tracking the increase in residential dwellings in the CBD (including proposals)? This will determine what provisions for evacuation in a flooding event need to be put in place for the development.
- I note that SCG Engineering have requested a response from Council in their response letter regarding to the provision of footpath fronting Union Lane. Upon further consideration (and subject to your assessment), Development Engineering is of the opinion that a public footpath would not be required along this frontage of the property, as the development is proposing a paved area internal to the site that would be accessible to the public for pedestrian travel if required. Furthermore, the land dedications on the opposite side of the road for road widening have created scope for a footpath to be constructed along the opposite side of Union Lane in future which would act as the pedestrian link for Union Lane. If land was dedicated to Council from the subject site and footpath was constructed, this would not tie in with the existing development adjoining the site.
- As noted within PL20/0003, the development cannot be serviced adequately without full construction of the proposed new road. A majority of this road lies on land owned by the TOGA development. If an agreement between the two parties cannot be met for the delivery of this road, a condition of consent could potentially be provided preventing release of the Occupation Certificate for the proposed development until the through road is full constructed and dedicated to Council, subject to your assessment. I note that this road has been conditioned to be provided under DA18/0264.
- It is noted in the DCP that only 60% of parking required for commercial/retail floor spaces needs to be provided within the development and that the other 40% can be provided external to the site. However, it is unclear where this 40% external to the site can be provided for the development. The applicant may need to provide some form of external parking study to demonstrate that these parking rates can be achieved external to the site or alternatively all required parking may need to be provide on-site.
- It is noted that stacked spaces are proposed for all spaces dedicated to commercial use. Penrith DCP requires a maximum allocation of 10% of spaces to stacked parking under this use. If this is allowable, a plan of management may be required to be developed for operation of these stacked spaces. No justification has been provided within the revised submission for the non-compliance with this control in Penrith City Council's DCP.

REFERRAL CHECKLIST

	YES	NO	Not Applicable
Pre-lodgement advice has been reviewed	x		
Proclaim has been checked for property affectations	x		
Exponare been checked for property affectations	x		
Is the site affected by mainstream flooding?		x	
Additional Comments: - PL20/0003 has been reviewed as part of this assessment. - Although the site is not affected by mainstream flooding in the 100 year event, as a major development it is required to present an evacuation strategy for the PMF event. This has been nominated to be evacuation within the building to floor levels higher than the PMF via staircase. This strategy will not be supported as per the pre-lodgement comments. Applicant is aware that an additional response is required. - It is also noted that being a development within the Penrith CBD, the site falls under the provisions of ' <i>Development Assessment Guidelines: An adaptive response to flood risk management for residential development in the Penrith CBD</i> '. A note has been provided above to the planner to determine what stage of development the Penrith CBD is in at its current state, as this document notes that a further 4050 dwellings can be accommodated under the current capabilities of the SES.			
Is the site affected by local flooding?	x		
If Yes, then			

Are proposed/ existing levels to AHD?	x		
Has an overland flow report been submitted?	x		
Is the proposal consistent with LEP and DCP provisions (same as mainstream flooding)?	x		
Is the proposal compliant with Council's draft Overland Flow Policy?	x		
Is the proposal outside the floodway?	x		
Is the flood risk associated with the development acceptable (access, hazard & evacuation)?	x		
Additional Comments:			
- As per PL20/0003, the 100 year flood level affecting the site is 27.1m AHD. All habitable floor levels proposed on the ground flood have been set with a FFL of 27.6m AHD, 500mm above the 100 year flood level as required. Crests of the proposed driveways are also above this FPL. - Crest levels of 27.55 for the internal driveway have been provided, giving in excess of 300mm clearance to the flood level.			
Has a Stormwater Concept plan been provided?	x		
If Yes, then			
Does the proposal have a legal drainage connection?	x		
Is the stormwater concept plan consistent with LEP and DCP provisions (water quantity and quality)?	x		
Is the proposal consistent with Council's draft stormwater policy?		x	
Can the site drain by gravity?	x		
For sites requiring OSD does the site storage and PSD comply? Is the OSD system within a common area accessible from the street?		x	
Is the stormwater concept plan compatible with landscaping and architectural plans?	x		
Additional Comments:			
- Comments provided above regarding required revisions to the OSD design. - It is noted that the OSD tank lies within a private pedestrian path for the site. While undesirable, there does not appear to be an alternative solution for the site. Heel proof grates can be proposed atop the OSD tank.			
Carparking, Access and Manoeuvring details have been provided?	x		
If Yes, then			
Has a traffic report or statement been provided?	x		
Is RMS concurrence required (traffic generating developments and access from classified roads)	x		
Has the Traffic Section provided comments?		x	
Has the proposal's impact on the surrounding road network been considered?	x		
Does the proposal comply with the DCP controls?	x		
Is the proposal compliant with AS 2890.1/2/6 ie garages, aisle and handle widths, gradients, turning paths, ramps etc?		x	
Is adequate sight distance available?	x		
Have service and emergency vehicles been provided for?	x		

Additional Comments:

- Parking rates for the development has been calculated in accordance with RMS guideline for traffic generating developments where applicable. Penrith DCP rates for car washing/service bays and other amenity spaces have also been taken into consideration. The calculations for the number of spaces to be provided are correct and this count has been achieved within the design.

- It is noted that the DCP requirement is that only 60% of parking required for the commercial/retail floor spaces is required to be provided within the development. The other 40% can be provided external to the site. However, it is unclear where this 40% external to the site can be provided for the development.

- Accessible parking spaces have now been provided in accordance with the requirements of A2890.6. However, the plans still denote the adaptable spaces as accessible, which do not comply with this standard.

- The parking spaces provided for the serviced apartments should be minimum 2.5m wide in accordance with AS2890.1, which recommends user class 2 dimensions for hotel/motel parking.

- A minimum 6m entry and 4 to 6m exit for private vehicles is required for the development in accordance with AS2890.1 due to the number of parking spaces servicing the development. Consistency across all plans showing this dual driveway layout is required, the provided landscape, civil and stormwater plans all do not show this proposed dual driveway configuration.

- It is noted that stacked spaces are proposed for all spaces dedicated to commercial use. Penrith DCP requires a maximum allocation of 10% of spaces to stacked parking under this use. If the planner allows this, a plan of management may be required to be developed for operation of these stacked spaces.

- Swept paths provided for movements of MRV/HRV vehicles show reverse maneuvers into the private vehicle travel lane

Are proposed earthworks and site levels satisfactory?	x		
If Yes, then			
Has a geotechnical report been provided for the earthworks including salinity, contamination, acid sulphate soils and material source?	x		
Are existing and proposed levels clearly indicated?	x		
Is the scale of earthworks appropriate?	x		
Have suitable controls pertaining to retaining walls been applied?			x
Is the proposed change in levels satisfactory with respect to impacts on flooding?			x

Additional Comments:

- Whole development is proposed above ground so there will be no basement walls to block the flow of groundwater, which is estimated to be around 5.5m below ground level as per the provided groundwater investigation.

- No retaining walls/fill proposed. Levels are consistent with those pre-existing so there will be no impacts to flood behaviour.

- The geotechnical report recommends that a meeting be held after the initial structural design to confirm that the intentions of the report have been correctly interpreted.

Is the proposal for subdivision?		x	
- Land to be dedicated to Council as road reserve.			

Does the proposal require External Works?	x		
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If Yes , then			
Has the condition of the road frontage, including all infrastructure, been assessed?	x		
Is road and/or drainage construction required?	x		
Are service lead in works required?		x	
Additional Comments: - Part of the subject lot as well as part of the lot from the adjoining TOGA development are required to dedicate land to Council for the formation and delivery of the link road between High Street and Union Road. It is also required that Union Lane is extended to meet this new link road. The requirement for these works is specified under Penrith DCP Part E11 - Penrith City Centre (Cl. 11.7.1.1 - Precinct 1). - All services should be pre-existing for the site. - It is noted from PL20/0003 that a refurbishment of the road reserve fronting the development along Union Lane is to be undertaken as part of the development. - New public domain works (Penrith CBD Public Domain Technical Manual) for all road frontages to the development (High St & new link Rd)			