

Our Reference: NSW211526

17 May 2022

Health Infrastructure
C/- CBRE
Level 21, 363 George Street
Sydney NSW 2000

Attention: Adrian Thompson

Dear Adrian

**Re: Nepean Hospital Redevelopment Project - Stage 2
SSDA Response Letter – Civil Works**

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This letter is to address and respond to key Civil Engineering items in the response to submissions for the Nepean Hospital Redevelopment Project – Stage 2 SSDA and specifically addresses Penrith City Councils comments.

Penrith City Council's major Civil comments to the SSDA design relate to the removal of existing Barber Ave on-street public parking and the proposed Hospital intersection configuration off Barber Avenue being a Y-shaped entry arrangement rather perpendicular, as shown in the image below.

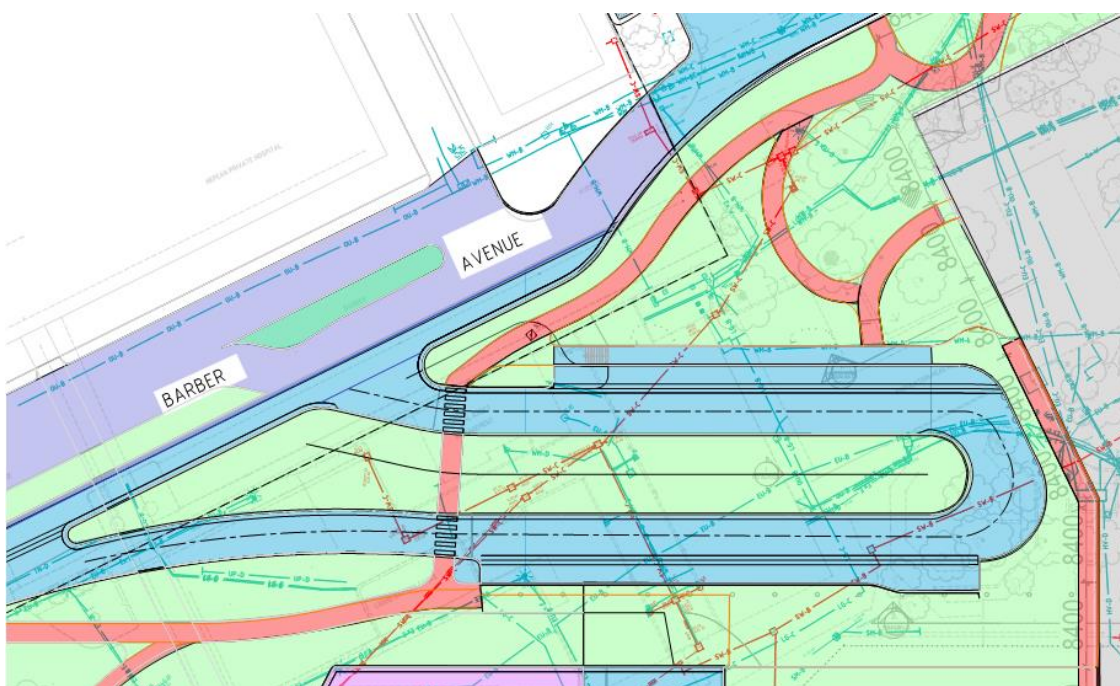
Further consultation and engagement have been held with Penrith City Council on 29/03/22 and 13/04/22 to discuss the proposed alterations to the SSDA design to address these comments.

The project team has proposed the below reconfiguration of the front entry layout as an outcome of these discussions. This revised layout is intended to provide perpendicular entry and exit points to Barber Avenue and reinstate 22 of the public on-street lost due to the development, as requested by Council, whilst reducing the impact on the amenity front entry amenity of the Hospital front entry drop off. Further information regarding the parking response can be found in the Traffic Engineering response letter completed by PTC.

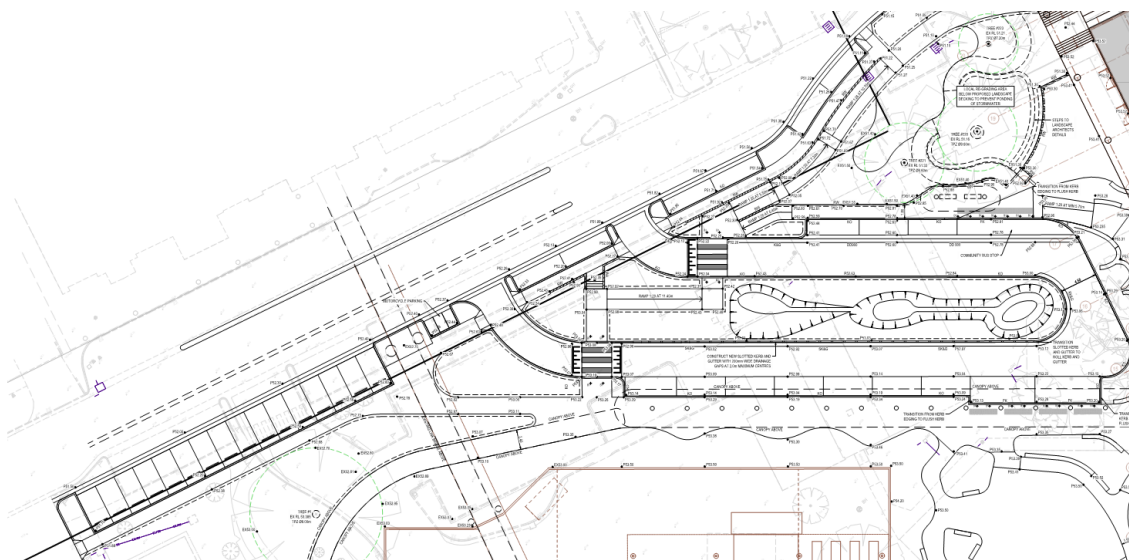
The civil design of Barber Avenue has significantly progressed since the initial SSDA submission with further detailed design undertaken. A full set of Civil design drawings was presented to Penrith Council during the recent consultation meetings, and will be provided for approval subject to the outcome of the planning process, which includes the requested information as noted in the response and list below;

- Details of all proposed road works, drainage works and landscape works within the road reserve area of Barber Avenue.
- Dimensions of lane widths, median widths, verge widths and footpath widths.
- Pipe sizes, pipe grades and invert levels.
- Details of overland flow paths
- Location and dimensions of all existing and proposed road reserve boundaries.
- Pavement details

- For future maintenance responsibilities, proposed physical delineation of where the public road becomes a private road is required.
- Proposed regulatory signs and linemarking details
- Vehicular turn paths for a 12.5m Heavy Rigid Vehicle for all turn movements at the intersection of Barber Avenue and Parker Street.
- Vehicular turn paths for all existing and proposed driveways off Barber Avenue to accommodate the largest truck that services the existing developments.
- Upgrade the verge area (public domain) for the frontage in Barber Avenue in accordance with Council's 'Kingswood Public Domain Manual'.



Design at initial SSDA Submission



Current Design after Council Consultation

The Barber Avenue public domain works and stormwater drainage has been designed in accordance with the following;

Civil Works

- Austroads: Guide to Road Design
- Austroads: Guide to Pavement Technology
- AS1428.1 Design for Access & Mobility
- AS2890.1 Parking Facilities: Off–street car parking
- AS2890.2 Parking Facilities: Off-street commercial vehicle facility
- AS2890.6 Parking Facilities: Off-street for people with disabilities
- AS3798 Guidelines on Earthworks for Commercial and Residential Developments
- Guide to Traffic Engineering Practice Parts 1 – 14 AUSTRROADS.
- Guide to the Geometric Design of Urban Roads – AUSTRROADS.
- Guide to Pavement Technology Parts 1 – 10 AUSTRROADS
- Relevant TfNSW Technical Directions and Guidelines.
- Penrith City Council Engineering Construction Specification for Civil Works

Drainage Design

- Australian Rainfall and Runoff (2019)
- AS3500.3 Plumbing and Drainage: Stormwater Drainage
- ARR Data Hub Rainfall Data – sourced from <https://data.arr-software.org/>
- Guide to Road Design, Part 5 Drainage Design - AUSTRROADS (2008).
- Managing Urban Stormwater: Soils and Construction, “The Blue Book” – 4th edition 2004.
- Penrith City Council Development Control Plan 2014 Part C3 – Water Management
- Penrith City Council Stormwater Drainage Guidelines for Building Developments

The development is proposing to upgrade and relocate the stormwater drainage system from the eastern end of Barber Avenue through to the existing drainage system in Stage 1, ultimately discharging into the stormwater system in Somerset Street. The pipe is currently in a drainage easement in favour of Council which will be adjusted to suit the final location of the proposed storm. It is proposed to maintain the ownership arrangements between the Hospital and Council that are currently in place.

Council has requested that water conservation measures in the form of 80% non-potable water use from rainwater harvesting be implemented for the Hospital in line with the WSUD technical guidelines. This is not proposed to be implemented by the development, as it will require the reuse of water through toilet flushing, which is not supported by HI due to infection control. Rainwater reuse is proposed on the site for landscaping irrigation and will be sized appropriately for this use.

We trust that this letter answers appropriately to the key Civil issues from the response to the SSSA submission.

Yours faithfully,

ACOR Consultants Pty Ltd

A handwritten signature in blue ink that reads 'Nathan Pearce'.

Nathan Pearce

Associate Senior Civil Engineer