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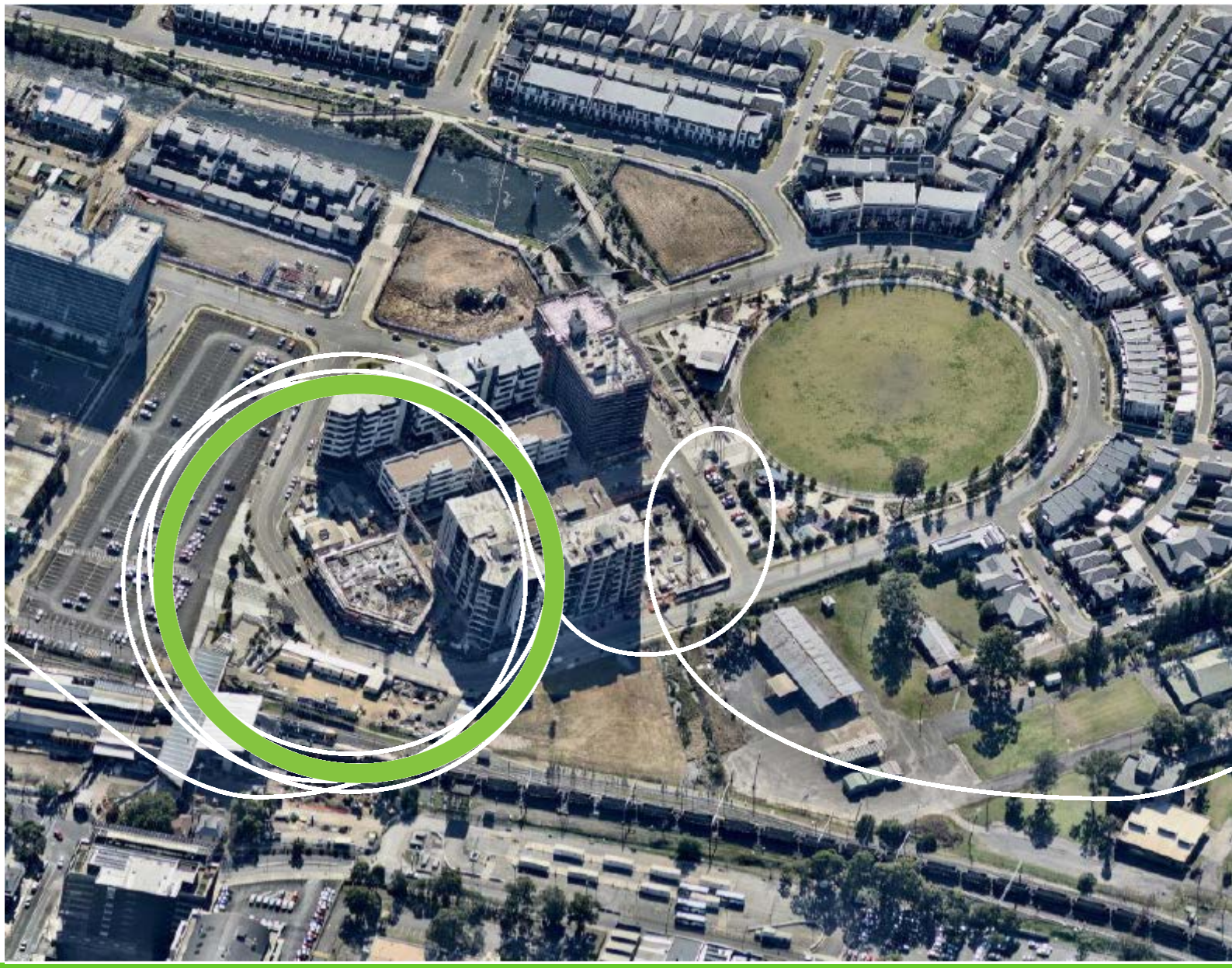

Lot 3008 - Thornton, North Penrith
Development Application
Transport Impact Assessment

Client //	St Hilliers Property Pty Ltd
Office //	NSW
Reference //	N140430
Date //	22/03/18

Lot 3008 - Thornton, North Penrith

Development Application

Transport Impact Assessment

Issue: B 22/03/18

Client: St Hilliers Property Pty Ltd
Reference: N140430
GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	20/03/18	Final	Ghizlane Chergaoui Ashish Modessa	Nicole Vukic	Nicole Vukic	Nicole Vukic
B	22/03/18	Final	Ghizlane Chergaoui	Ashish Modessa	Nicole Vukic	N.Vukic

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1. Introduction

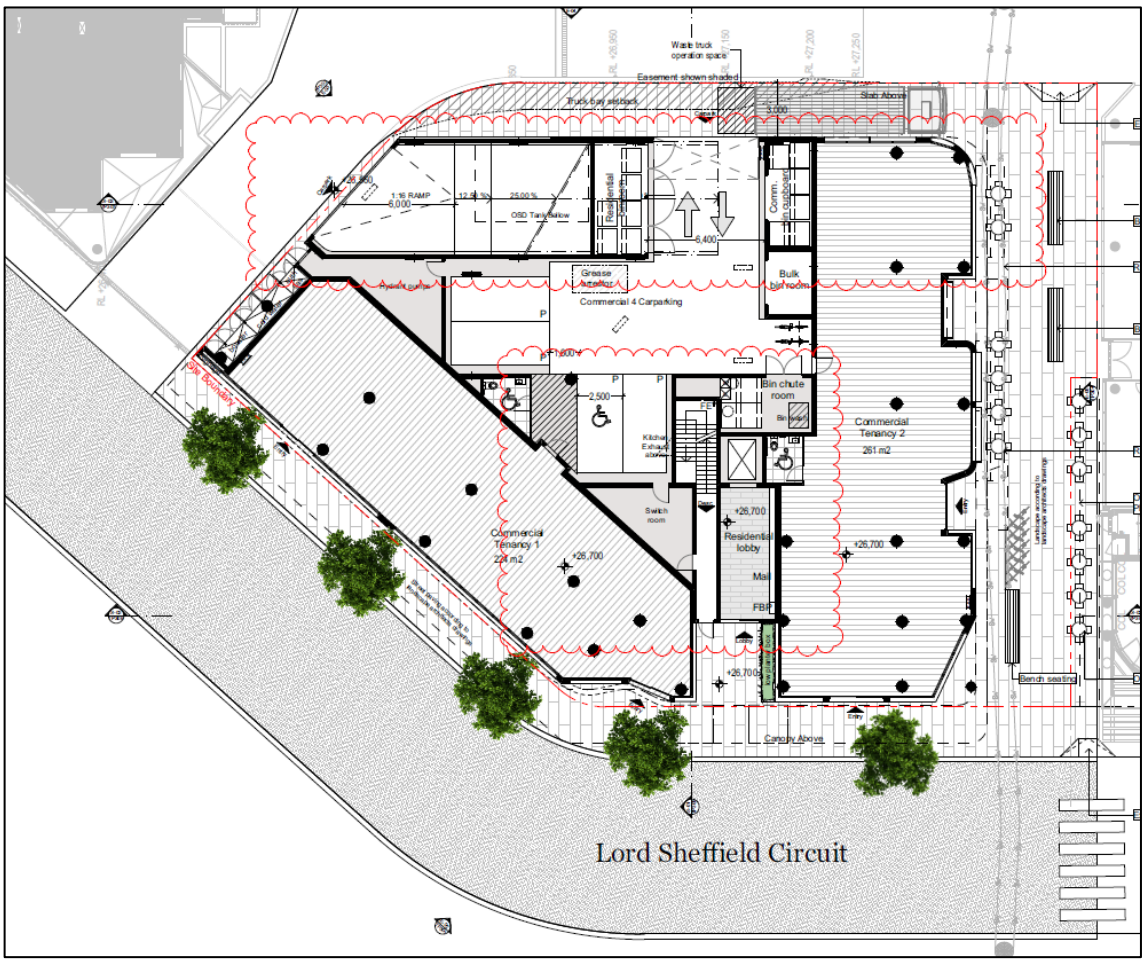
1.1 Background

A Development Application (DA) is to be lodged with Penrith City Council (Council) for a proposed mixed development on land known as Lot 3008 DP 1184498, 15 Engineers Place in North Penrith.

The proposed development, shown in Figure 1.1, has frontages to Lord Sheffield Circuit to the west, and is a nine-storey mixed use development, with retail/ commercial on the ground floor, car parking across the first three levels and residential apartments above.

St Hilliers Property commissioned GTA Consultants (GTA) to undertake a transport impact assessment for the proposed development.

Figure 1.1: Development site – Ground level



Basemap source: DKO Architects, Drawing No. TP200 Revision C, dated 19 March 2018

1.2 Purpose of this report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

i Existing traffic and parking conditions surrounding the site
ii Suitability of the proposed parking in terms of supply (quantum) and layout
iii Service vehicle requirements
iv Pedestrian and bicycle requirements
v The traffic generating characteristics of the proposed development
vi Suitability of the proposed access arrangements for the site
vii The transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- An inspection of the site and its surrounds
- Penrith City Councill Development Control Plan (DCP) 2014
- State Environmental Planning Policy No 65 (SEPP 65) – Design of Residential Apartment Development
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- plans for the proposed development prepared by DKO Architects, Project Number 11749, Revision B, dated 5 March 2018
- Other documents and data as referenced in this report.

2. Existing conditions

The subject site is located within the broader North Penrith precinct and forms part of the Thornton development.

The site has frontages to Lord Sheffield Circuit to the west. The surrounding land uses are predominantly residential apartment uses, with a Quest Hotel adjoining to the south. The western railway line corridor is south of the site with Penrith Railway Station located less than 100 metres away.

An indicative layout of the subject site and its surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject site and its environs

Basemap source: Nearmap, accessed 31/01/2017

2.1 Road network

Lord Sheffield Circuit functions as a two-way local road with one travel lane, one parking lane and one bicycle lane in each direction. Restricted kerbside parking is generally permitted on both sides of the road.

Thornton Drive and Sydney Smith Drive connect Lord Sheffield Circuit to the arterial road network, being Castlereagh Road (State Road 630) and Coreen Avenue (Regional Road 7289), respectively.

Figure 2.2: Lord Sheffield Circuit (looking north)

Figure 2.3: Lord Sheffield Circuit (looking south)

A laneway is located along the eastern frontage of the site that connects to Lord Sheffield Circuit via a two-way driveway crossover to the north and exit-only driveway crossover to the south, as shown in Figure 2.4 and Figure 2.5 respectively. The laneway is two-way for approximately 20 metres before becoming one-way southbound.

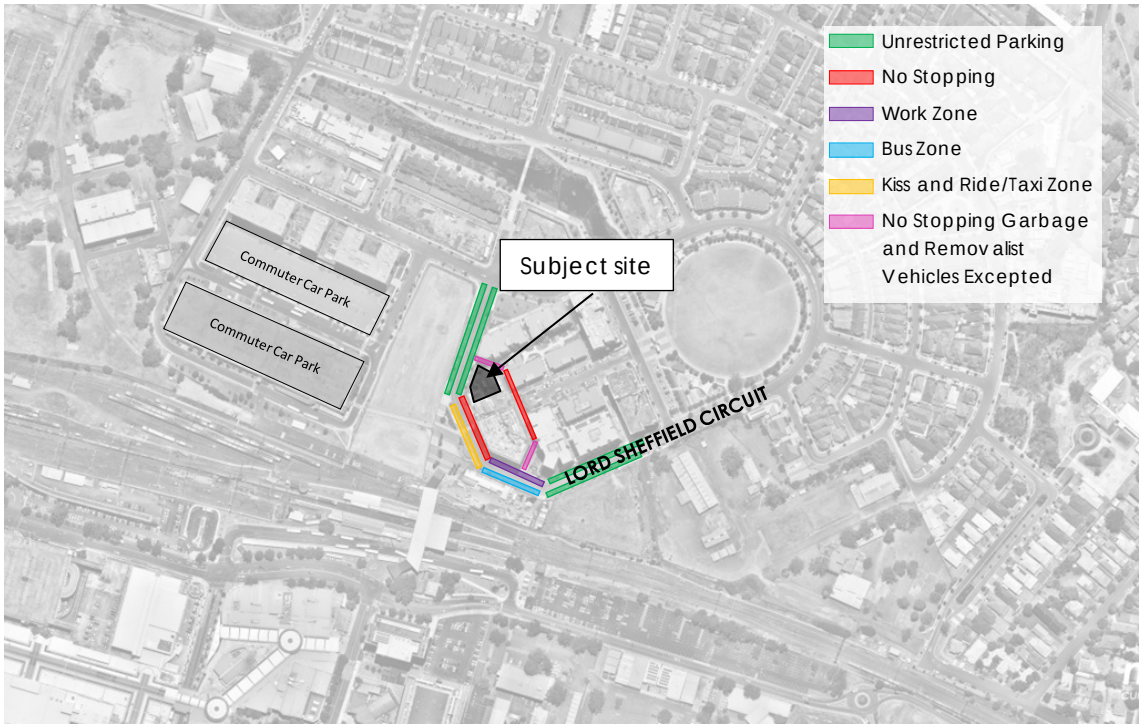
Figure 2.4: Laneway – Northern access (two-way)

Figure 2.5: Laneway – Southern access (exit-only)

2.2 Car parking

On-street car parking near the site is predominantly unrestricted, with kerbside parking adjacent to the site occupied by a construction work zone. On the western side of Lord Sheffield Circuit there is a Bus Zone and Kiss and Ride/ Taxi Zone along the railway station plaza. These restrictions are shown in Figure 2.6.

Figure 2.6: Car parking restrictions



Base source: Nearmap

In addition to on-street car parking, there is a 1,000-space commuter car park located approximately 120 metres to the west of the site, providing opportunity for visitors to the proposed development to utilise the facility on weekend evenings and weekends (i.e. outside of commuter periods).

2.3 Public transport

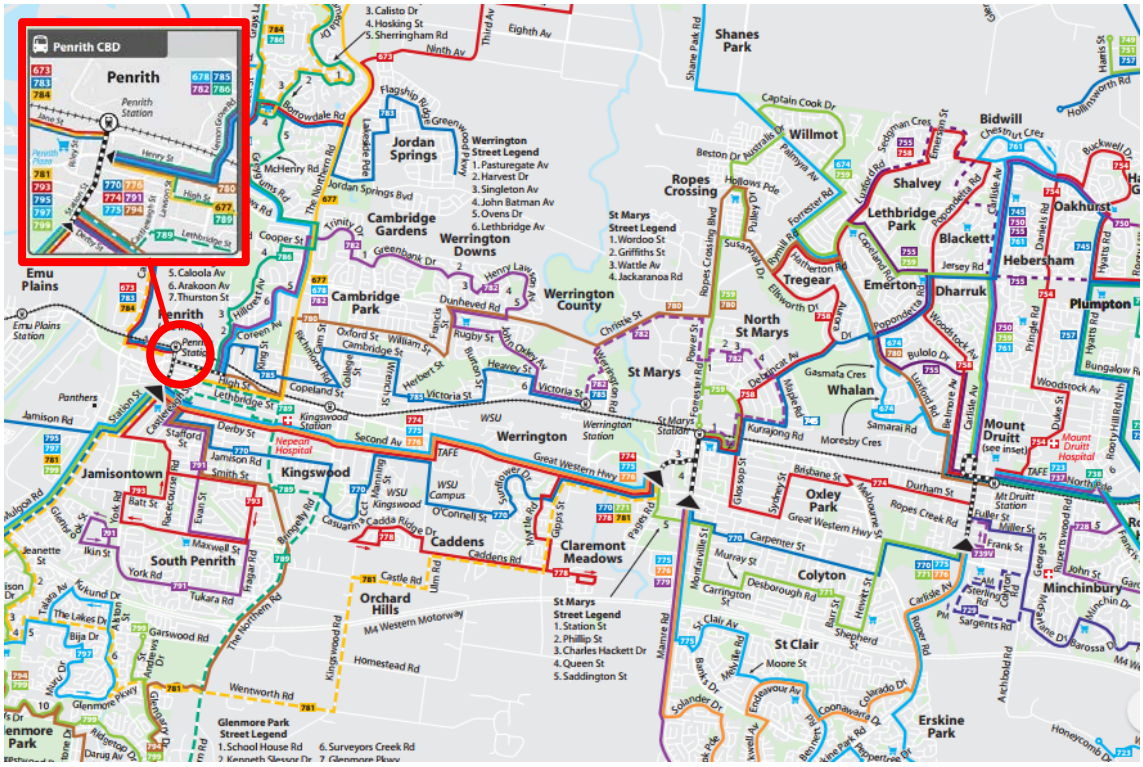
The site is well serviced by high frequency public transport services and is located immediately north of Penrith Railway Station and Bus Interchange.

The Penrith Railway Station currently services two rail lines, being:

- T1 Western Line: Between Lithgow and Central via Penrith
- Blue Mountains Line: Between Bathurst and Central via Penrith.

In addition, several bus services operate at the Penrith Bus Interchange providing connectivity between the site (and train station) and surrounding suburbs. It is understood there are a total of 23 local bus routes provided at the interchange and that these services typically operate at 30 or 60-minute frequencies during the peak and off-peak periods respectively. Additionally, several school bus services are available for local schools south and west of Penrith. The local bus network is shown in Figure 2.7.

Figure 2.7: Bus network



Source: http://www.busways.com.au/sites/default/files/network_maps/R1TimetableNetworkMap280517.pdf, accessed 19/01/18

2.4 Pedestrian infrastructure

Pedestrian pathways are provided on existing and new internal roadways within the Thornton development. 1.5-metre-wide paths are provided on both sides of Lord Sheffield Circuit connecting the site to the Smiths Paddock and other residential dwellings to the east.

A marked pedestrian crossing is provided on Lord Sheffield Circuit adjacent to the site, providing a safe crossing location to access the railway station plaza and pedestrian overbridge to the Penrith Railway Station and Bus Interchange. This overbridge, and abutting wide pedestrian pathway adjacent to the site, provides excellent access to the available public transport services.

2.5 Bicycle infrastructure

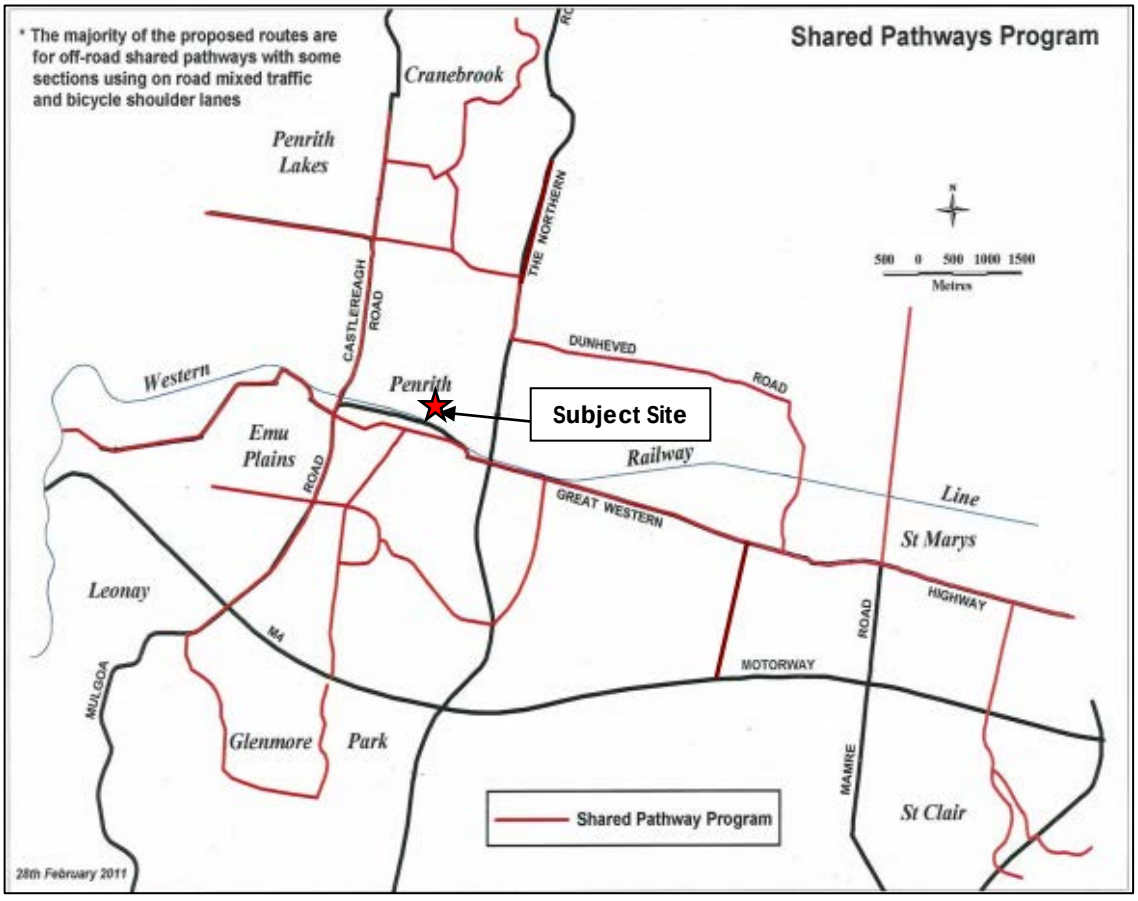
Well established bicycle infrastructure is in the surroundings of the site. Approximately one-metre-wide bicycle lanes are located on both sides of Lord Sheffield Circuit and are shown Figure 2.8.

Figure 2.8: Bicycle lanes along Lord Sheffield Circuit

Council has proposed new bicycle paths as part of the Penrith Accessible Trails Hierarchy Strategy (PATHS) to provide quality public infrastructure and promote sustainable personal mobility choices. The proposed key routes provide major north-south and east-west connections along key transport and open space corridors.

Council's proposed priority routes for the shared pathways network around the site is illustrated in Figure 2.9.

Figure 2.9: Existing and proposed bicycle network around the site



Source: Penrith City Council, https://www.penrithcity.nsw.gov.au/Documents/Building-and-Development/PATHS-Strategy/, visited 15 December 2017

3. Development proposal

3.1 Land uses

The proposal includes the construction of a nine-storey mixed-use development including 48 residential apartments with ancillary car parking facilities extending over three levels, and ground floor retail/ commercial uses occupying a total of 535 square metres GFA. A breakdown of the proposed uses is provided in Table 3.1.

Table 3.1: Development schedule

Land Uses		No of Units/ Size	Total
Residential	1-bedroom	12	48 Units
	2-bedroom	36	
Non-residential	Retail/commercial	535 m^2 GFA	535 m^2 GFA

3.2 Vehicle access

Access to the development is proposed via the laneway located adjacent to the site to/ from Lord Sheffield Circuit.

The laneway allows entry and exit to the residential parking from the northern access point, with vehicles using the commercial parking or on-street loading bay required to depart via the exit-only access point at the southern end of the laneway.

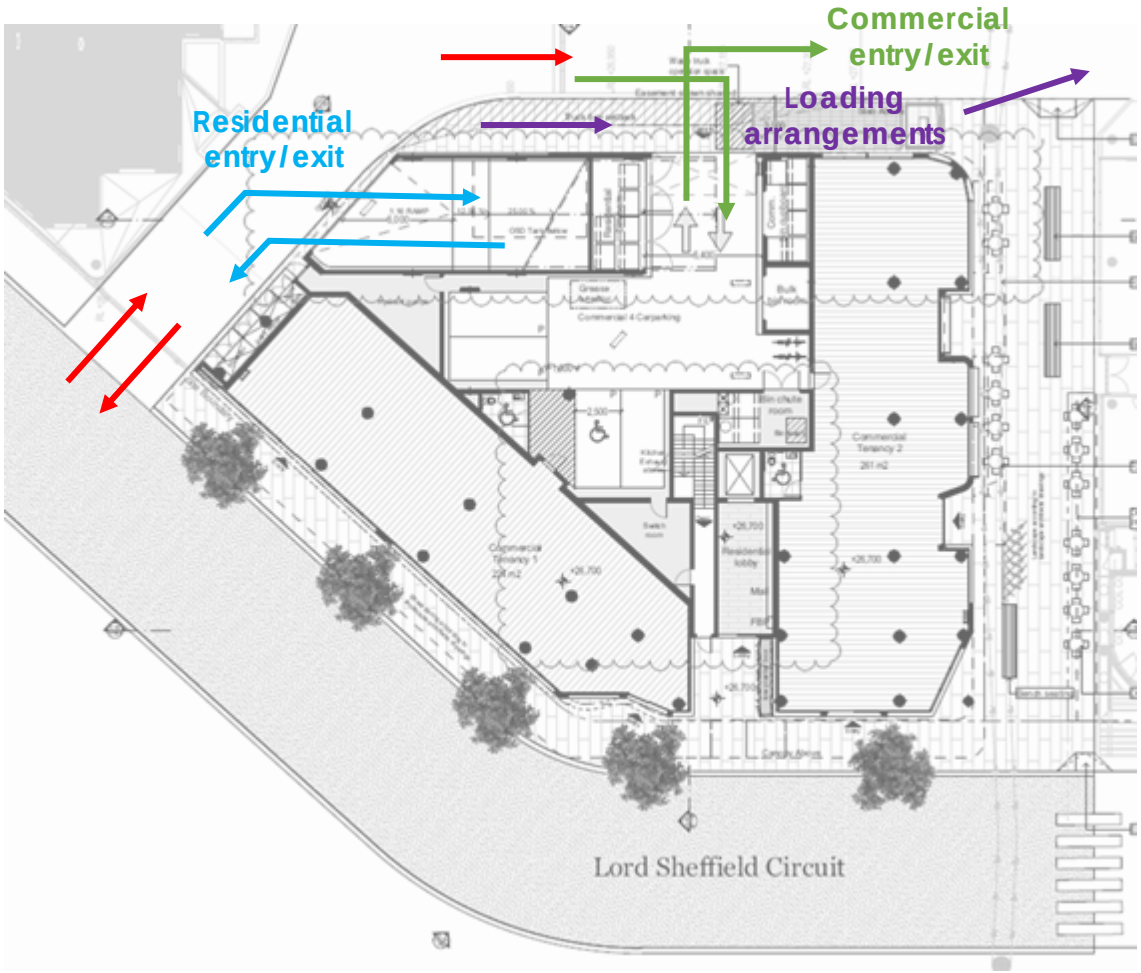
The circulation arrangements from Lord Sheffield Circuit to the on-site parking facilities are shown in Figure 3.1, and described as follows:

- Residential driveway (shown in blue) – provides access to first and second level residential car parking.
- Loading arrangements (shown in purple) – indented loading and waste collection area that allows forward entry and exit from the loading bay.
- Retail/ Commercial driveway (shown in green) – provides access to the ground level commercial car parking.

The loading bay has been indented into the site to maintain a three-metre wide travel lane in the event that waste collection vehicles were to occupy both the loading bay on-site and the loading bay for the building opposite concurrently. As such, the width of the road at this location has been widened to nine metres, accommodating service bays on both sides and a travel lane (three metres wide each).

The suitability of the proposed access arrangements is discussed in Section 4 of this report.

Figure 3.1: Location of the proposed site access



Source: DKO Architects, Drawing No. TP200 Revision C, dated 19 March 2018

3.3 Car parking

The proposed development would provide a total of 65 car parking spaces. The breakdown of car parking spaces is as follows:

- 48 residential spaces
- 7 non-residential spaces for commercial/ retail uses
- 10 additional spaces for the adjacent Quest development.

A condition of consent on the adjacent Quest serviced apartments development requires 10 spaces to be located within the proposed development car park. The spaces have been accommodated within the above-ground car park facility along with the residential parking.

The suitability of the car parking provision and layout is discussed in Section 4 of this report.

3.4 Loading facilities

An indented loading bay is proposed on the ground floor at the northern end of the site. This loading bay will be able to accommodate vehicles up to and including a 12.5-metre Heavy Rigid Vehicle (HRV).

The loading bay is three metres wide and would be primarily utilised for waste collection, with bin storage located directly to the south of the loading bay. This loading bay would also be utilised by the retail/ commercial uses, with such activities for the residential apartments to occur using on-street parking on Lord Sheffield Circuit.

The suitability of the proposed loading arrangements is discussed in Section 4 of this report.

4. Parking and loading

4.1 Car parking requirements

Requirements

The car parking requirements for different development types are set out in DCP 2014 - Part E11 Penrith – Part B North Penrith and are noted as being maximum rates.

A summary of the car parking requirements for the proposed development using the maximum DCP car parking rates is provided in Table 4.1.

Table 4.1: DCP car parking requirements

Description	Parking breakdown	No. of apartments/ Size	DCP parking rate	Maximum DCP parking requirement
Residential flat buildings	1 and 2 bedrooms	48	1 space per unit	48
	Visitor parking	-	On-street	-
Sub-total				**48 spaces**
Non-residential	Retail/commercial	535 m^2 GFA	1 space per 50 m^2 GFA	11
Total				**59 spaces**

In addition to the requirements set out in Table 4.1, 10 spaces must be provided for the adjacent Quest development, therefore the proposal requires a maximum of 69 parking spaces.

Adequacy of parking supply

The proposed provision of 65 car spaces including seven retail/ commercial spaces and 10 spaces for the Quest development is less than the maximum car parking requirements in Council's DCP 2014 and is therefore appropriate for the proposal. Five accessible spaces have been included in this provision, with one space located on the ground floor level and four spaces within Level 1.

4.2 Bicycle parking

Requirements

Bicycle parking provisions are not specifically outlined in the Penrith DCP, with this document instead deferring to the requirements of the *Planning Guidelines for Walking and Cycling* (NSW Government, 2004).

An assessment of the bicycle parking requirements against the rates outlined in the Guidelines is presented in Table 4.2 and indicates that the proposal should provide in the order of 16 resident/ staff bicycle parking spaces and seven customer/visitor bicycle parking spaces.

Table 4.2: Bicycle parking requirement

Use	Size	Rate		Requirement	
		Resident/Staff	Customer/Visitor	Resident/Staff	Customer/Visitor
Residential	48 apartments	20-30% of number of units	5-10% of number of units	10-15 spaces	3-5 spaces
Retail	535 m² GFA 15 employees [2]	3-5% of number of staff	5-10% of number of staff	0-1 spaces	1-2 spaces
Total				**10-16 spaces**	**4-7 spaces**

[1] Based on a density of one employee per 35 sqm of gross floor area

Adequacy of bicycle parking

With regard to the requirements of the *Planning Guidelines for Walking and Cycling* (NSW Government 2004), it is recommended that bicycle racks for at least six bicycles are provided in the public domain for use by customers and residential visitors. In addition, it is recommended that secure facilities are provided for residents, within allocated storage cages, with retail/ commercial staff provided with at least one space for each tenancy.

4.3 Site layout review

The car park and loading bay layout has been reviewed against the requirements of the DCP and the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004, AS2890.2:2002 and AS/NZS2890.6:2009). This assessment included a review of the following:

- bay and aisle width
- adjacent structures
- turnaround facilities
- circulation roads and ramps
- ramp grades
- height clearances
- parking for persons with disabilities.

Overall, the site access arrangements and car park layout have generally been designed in accordance with the relevant guidelines, with key commentary as follows:

- The access ramp and internal circulation within the above-ground residential car park would generally accommodate independent two-way traffic movements.
- It is recommended that a convex mirror be installed at the base of the residential car park ramp to improve visibility to approaching vehicles.
- Car spaces have been designed to be 2.4 metres wide and are designated for use by residential, retail/ commercial staff or Quest valet only (i.e. no general public access).
- A minimum height clearance of 2.2 metres will be maintained throughout the car park and along the access ramp (including at the transitions), in accordance with AS2890.1:2004.
- Ramps have generally been designed with grades in accordance with Australian Standard requirements. Specifically, the ramp to the residential car park has been designed with a maximum grade of 1:8, having also been designed with appropriate transitions to avoid vehicle scraping.
- The loading bay has been adequately designed to accommodate the largest truck requiring access to the site and allowing forward entry/ exit from the area.
- Bins will be transferred to the loading area from the nearby storage room, with appropriate travel path available.

It is proposed to use remote-controlled access to the car parking facilities, therefore it is recommended that Quest staff transfer guest vehicles to the 10 designated spaces within the car park. This also maintains appropriate security for residents within the development.

Based on the above assessment and the car park and loading layout review included in Appendix A, the proposed layout and access arrangements are expected to operate satisfactorily subject to the adoption of the recommendations detailed in Appendix A.

5. Traffic impact assessment

5.1 Traffic generation

Traffic generation estimates for the proposal have been sourced from the Guide to Traffic Generating Developments (Roads and Maritime Services, 2002) and Technical Direction 2013/04a (Roads and Maritime Services, TDT 2013/4a).

In estimating traffic generation for the proposal and having regard for the close proximity of Penrith Station, the following design traffic generation rates have been used:

- High residential dwelling (TDT 2013/4a)
  - 0.19 trips per unit (morning peak)
  - 0.15 trips per unit (evening peak).
- Retail/Commercial (TDT 2013/4a – office rate given staff parking only)
  - 0.85 trips per space (morning peak)
  - 0.64 trips per space (evening peak).

Given an additional 10 car parking spaces would be provided for Quest development, 10 additional trips are added to each of the morning and evening peaks for a worst-case assessment.

Based on the above, the expected traffic generation of the proposal is summarised in Table 5.1.

Table 5.1: Traffic generation estimates

Land Use	Size	Design Traffic Rate		Traffic Generation Estimate	
		AM Peak	PM Peak	AM Peak	PM Peak
Residential	48 units	0.19 trips per unit	0.15 trips per unit	10 trips	8 trips
Retail/ commercial	Seven car parking spaces	0.85 trips per space	0.64 trips per space	6 trips	5 trips
Sub-total				**16 trips**	**13 trips**
Quest Development	10 car parking spaces	1 trip per parking space	1 trip per parking space	10 trips	10 trips
Total				**26 trips**	**23 trips**

Table 5.1 indicates that the proposal is expected to generate up to 26 vehicle trips per hour.

5.2 Traffic impact

Having regard to the expected traffic generation of the proposal and noting the detailed traffic impact assessments that have previously been prepared for the Thornton Precinct, it is considered that the additional traffic generated by the proposal could not be expected to adversely impact on the surrounding network or result in operational and/or safety issues. For this reason, and consistent with pre-development application discussions with Council, no detailed analysis is deemed necessary in support of the proposal.

6. Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

i The development proposal includes 535 square metres GFA of retail/commercial area and 48 apartments.

ii The proposed 65 spaces, including 10 designated to Quest Development, is in accordance with Council's DCP 2014 maximum car parking requirements.

iii Car parking spaces are generally designed in accordance with Australian Standards, with minor design alterations recommended at the detailed design stage.

iv The loading bay has been designed such that a vehicle can enter and exit in a forward direction, as well as maintain a suitable travel lane width adjacent should a vehicle be servicing residential development opposite.

v It is recommended that parking for at least six bicycles is provided in the public domain for customers and visitors, with at least one secure bicycle parking space provided in the car park for each non-residential tenancy, accommodating retail/ commercial staff.

vi The proposed development is expected to generate up to 26 vehicle movements during any typical weekday peak hour.

vii There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development, as assessed by the previous Thornton Precinct studies.

Appendix A

Compliance Review and Swept Path Assessments

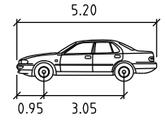
NOTES:
- MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
- A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
- A MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE DISABLED PARKING SPACES
- A MINIMUM HEIGHT CLEARANCE OF 4.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE SERVICE VEHICLE ACCESS ROADWAYS AND LOADING DOCKS
- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1-2004.

Lord Sheffield Circuit

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99 6.3mR

	metres
Width	: 1.94
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

Lord Sheffield Circuit

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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

DESIGNED C.AGUIRRE	DESIGN CHECK H.OBERMAIER
APPROVED BY -	DATE ISSUED 20 MARCH 2018

SCALE A3 — 0 2.5 5 — 1:250

CAD FILE NO. N140430-03-P3.dgn

LOT 3008 THORNTON, NORTH PENRITH

GROUND LEVEL
CARPARK COMPLIANCE REVIEW

DRAWING NO. N140430-03-01 SHEET 01 OF 05 ISSUE P3

NOTES:
- MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
- A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
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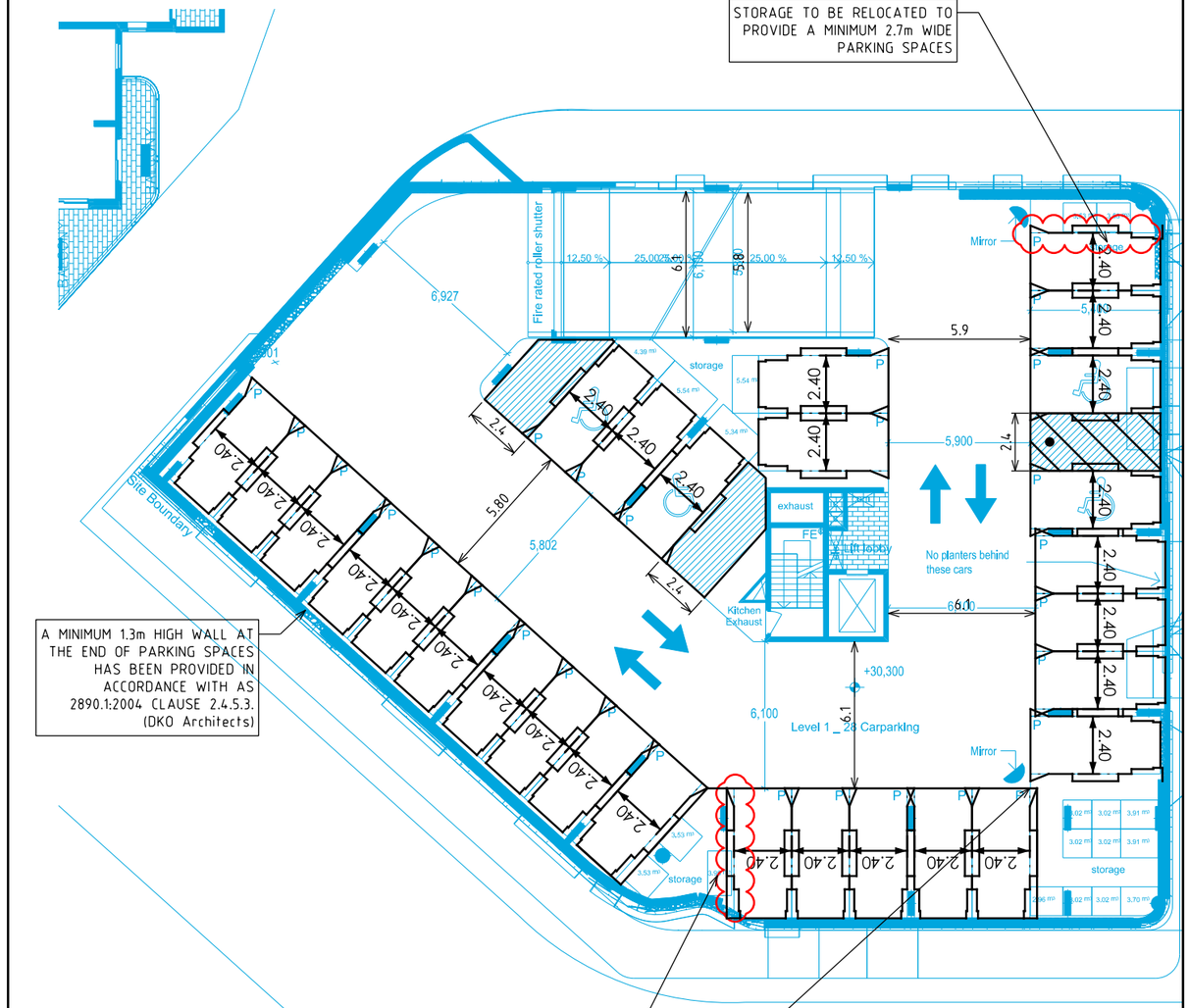
- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1-2004.

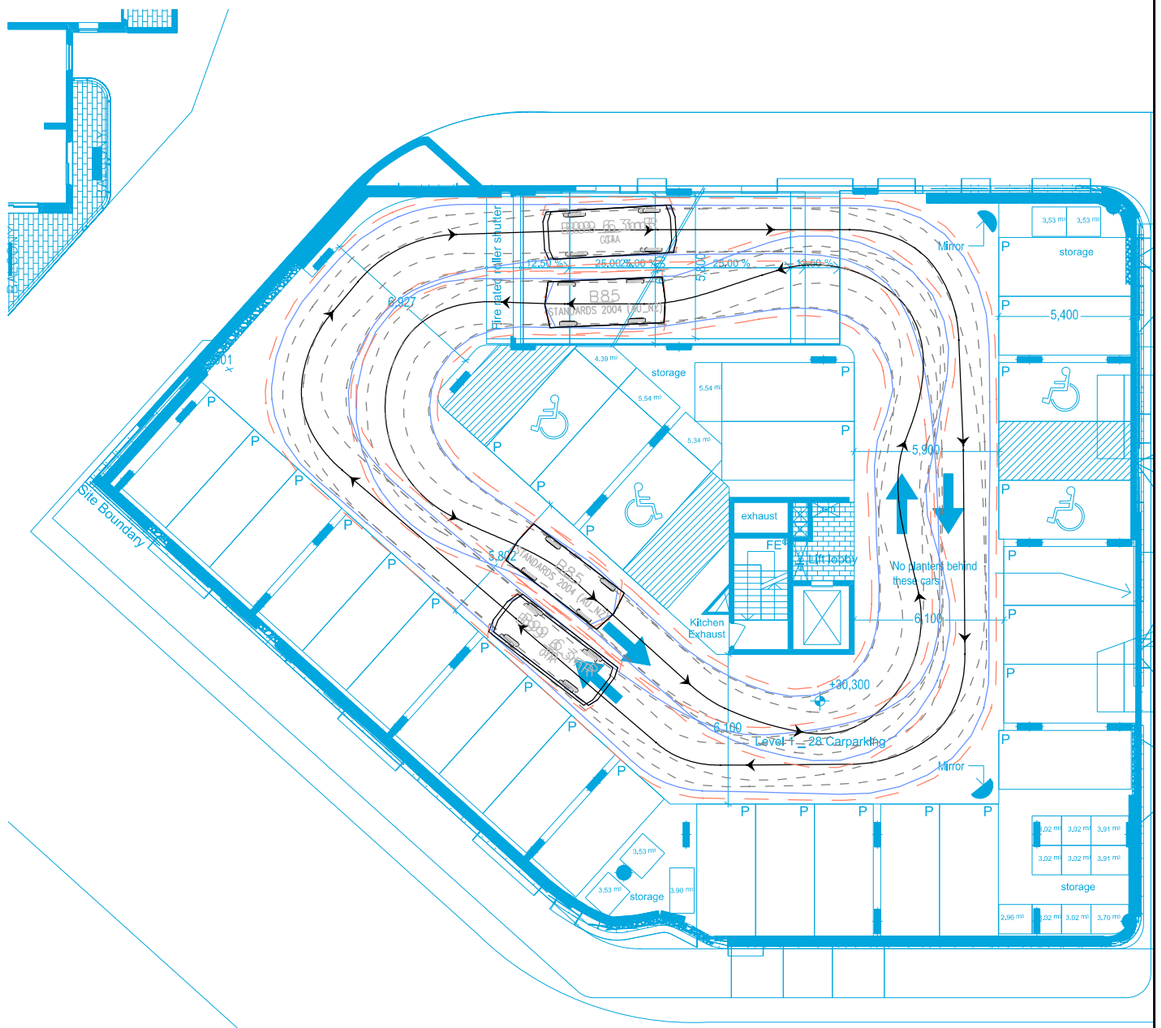
STORAGE TO BE RELOCATED TO PROVIDE A MINIMUM 2.7m WIDE PARKING SPACES

A MINIMUM 1.3m HIGH WALL AT THE END OF PARKING SPACES HAS BEEN PROVIDED IN ACCORDANCE WITH AS 2890.1:2004 CLAUSE 2.4.5.3. (DKO Architects)

STORAGE TO BE RELOCATED TO PROVIDE A MINIMUM 2.7m WIDE PARKING SPACES

ENSURE APPROPRIATE ACCESS TO STORAGE IS PROVIDED

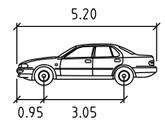




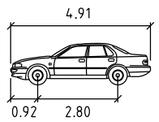
SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99 6.3mR	metres
Width	: 1.94
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0



B85	metres
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

PLOTTED BY : Heiko.Obermaier ON 20/03/2018 AT 5:12:49 PM

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Perth	08 6169 1000

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

DESIGNED C.AGUIRRE	DESIGN CHECK H.OBERMAIER
APPROVED BY -	DATE ISSUED 20 MARCH 2018
SCALE A3	0 2.5 5 1:250
CAD FILE NO. N140430-03-P3.dgn	

LOT 3008 THORNTON, NORTH PENRITH

BASEMENT LEVEL 01
CARPARK COMPLIANCE REVIEW

DRAWING NO. N140430-03-02 SHEET 02 OF 05 ISSUE P3

NOTES:
- MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
- A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
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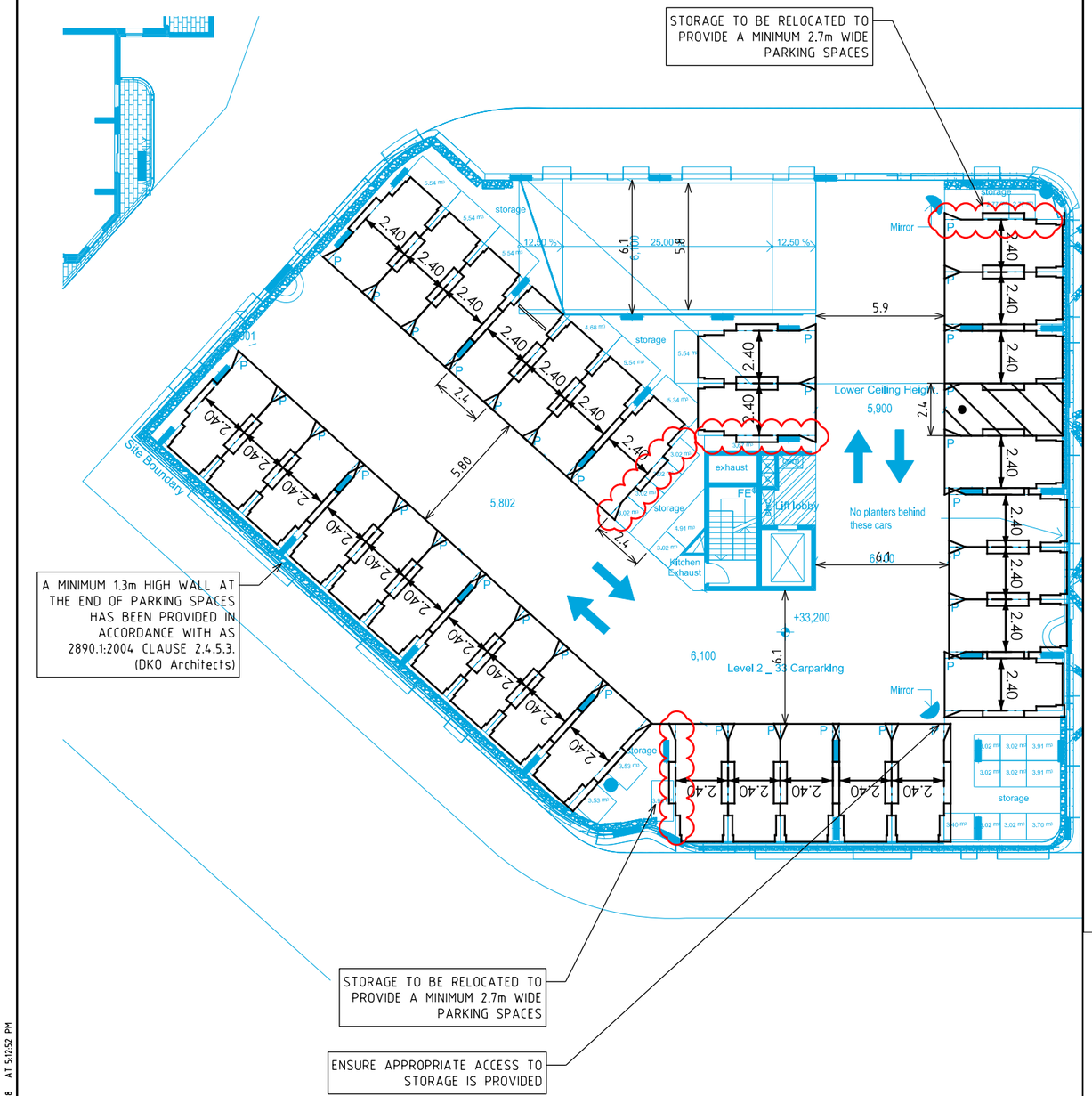
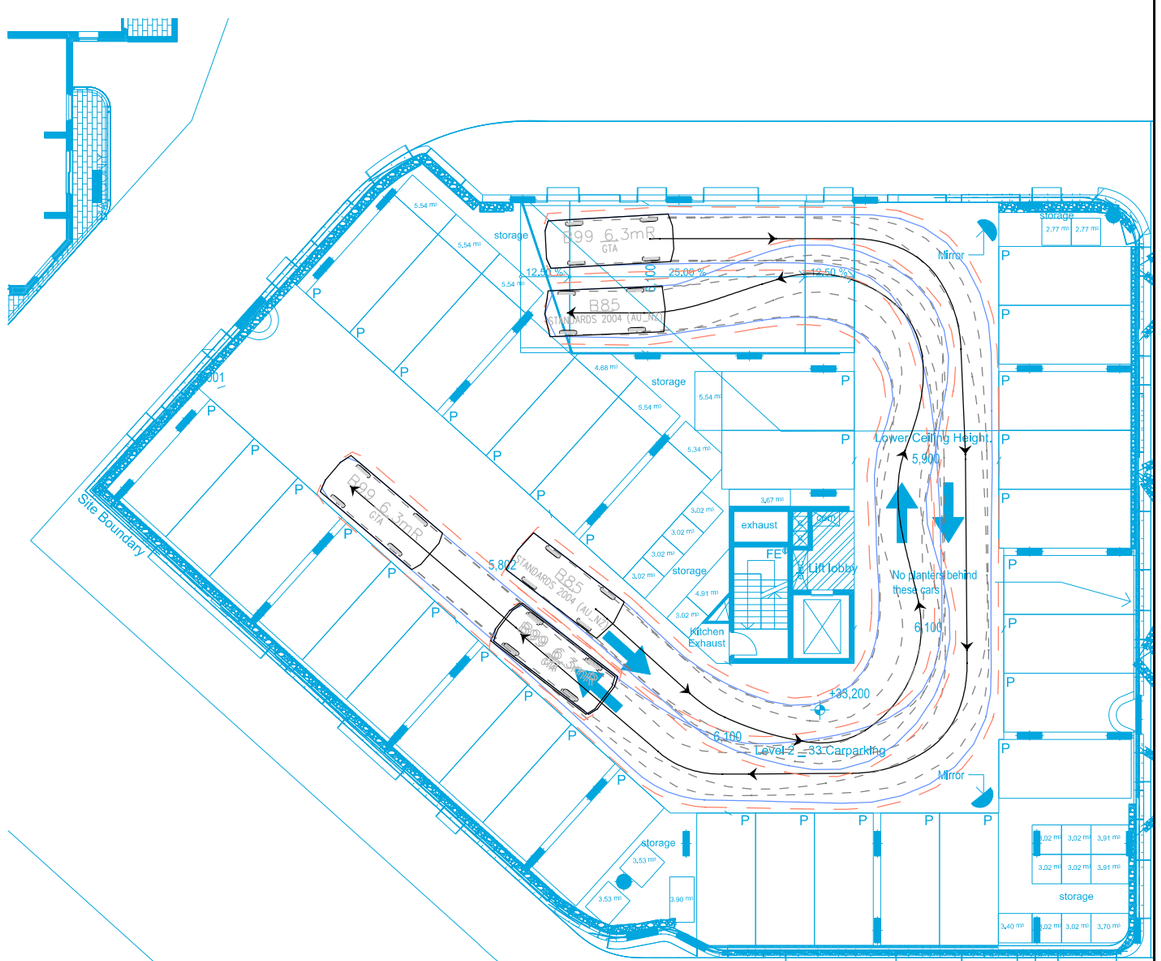
- A MINIMUM HEIGHT CLEARANCE OF 4.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE SERVICE VEHICLE ACCESS ROADWAYS AND LOADING DOCKS
- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1-2004.

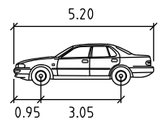




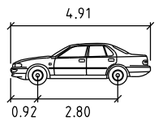
SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99 6.3mR	metres
Width	: 1.94
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0



B85	metres
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

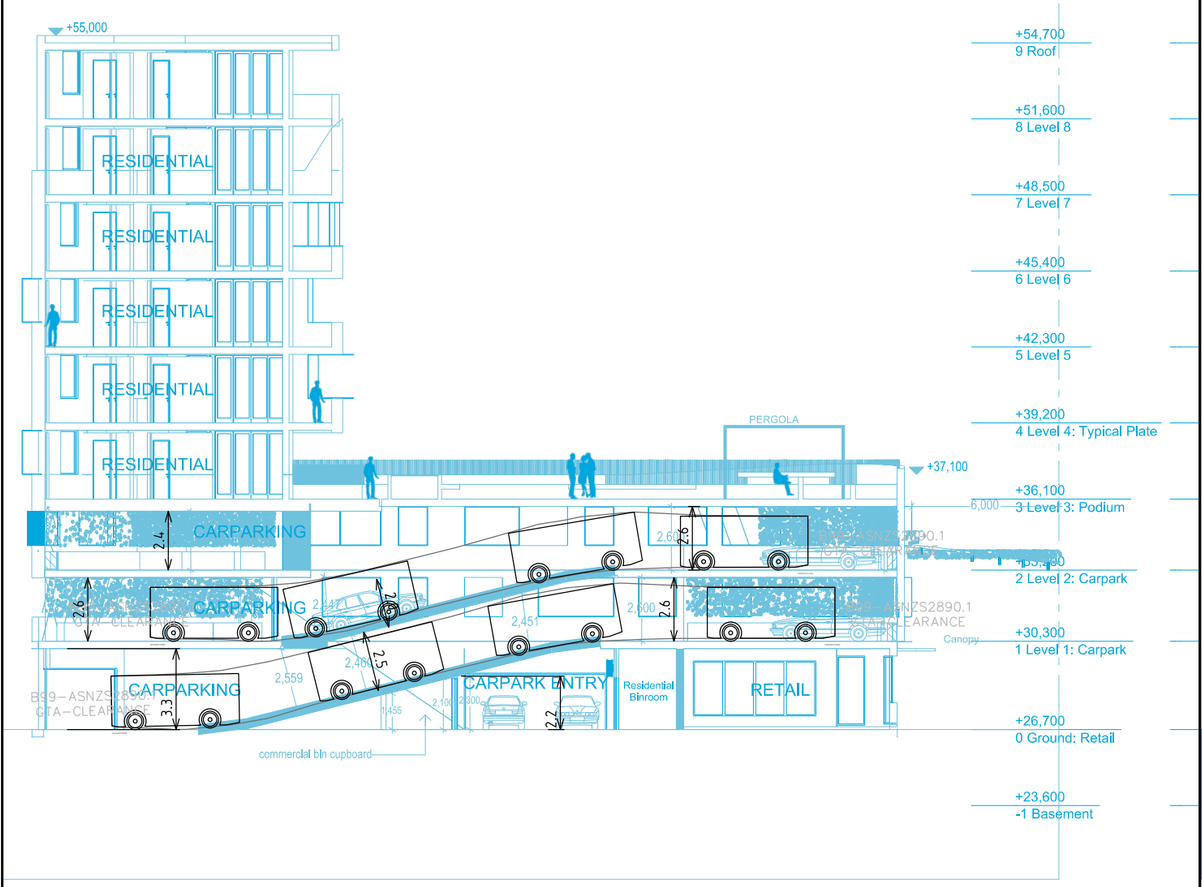
DESIGNED C.AGUIRRE
DESIGN CHECK H.OBERMAIER
APPROVED BY -
DATE ISSUED 20 MARCH 2018
SCALE A3 0 2.5 5 1:250
CAD FILE NO. N140430-03-P3.dgn

LOT 3008 THORNTON, NORTH PENRITH

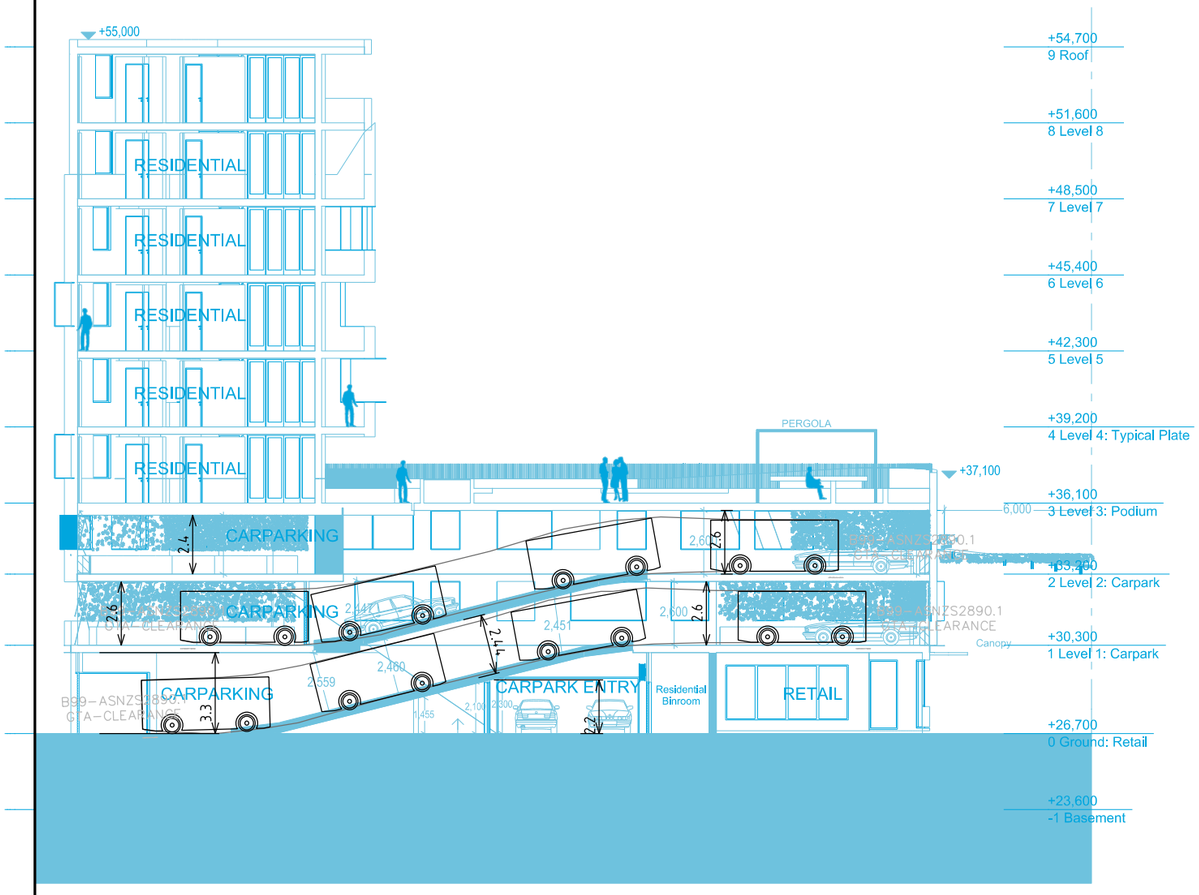
BASEMENT LEVEL 02
CARPARK COMPLIANCE REVIEW

DRAWING NO. N140430-03-03 SHEET 03 OF 05 ISSUE P3

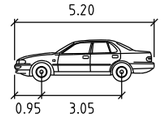
NOTES:
- MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
- A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
- A MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE DISABLED PARKING SPACES
- A MINIMUM HEIGHT CLEARANCE OF 4.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE SERVICE VEHICLE ACCESS ROADWAYS AND LOADING DOCKS
- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1-2004.



ENTRY



EXIT



B99 6.3mR metres

Width	: 1.94
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

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LOT 3008 THORNTON, NORTH PENRITH

VERTICAL CLEARANCE ASSESSMENT

DRAWING NO. N140430-03-04 SHEET 04 OF 05 ISSUE P3

B99 VEHICLE WIL BE ABLE TO PASS VEHICLES PARKED IN 3m WIDE 'TRUCK ZONES'

INDICATIVE ROADWAY CENTRELINE

LORD SHEFFIELD CIRCUIT

Lord Sheffield Circuit

Waste Truck
Custom

Waste Truck
Custom

B99 6.3mR
CTA

B99 6.3mR
CTA

B99 6.3mR
CTA

Easement shown shaded

Truck bay setback

Canopy Above

Hydrant pumps

Grease arrestor

Commercial 4 Carparking

Bulk bin room

Comm. bin cupboard

Residential bin room

OSD Tank Bellow

Bin chute room

Bin wash

Commercial Tenancy 2
261 m2

Commercial Tenancy 1
224 m2

Residential lobby

Mail

FBP

Switch room

Kitchen Exhaust above

Entry

Canopy Above

Site Boundary

Landscape according to landscape architects drawings

Sewer easy according to Sydney Water architects drawings

RL +26.950

RL +27.130

RL +27.200

RL +27.250

RL +26.560

RL +26.700

6,000

6,400

2,500

1,600

9.0

3.0

3,090

0.5

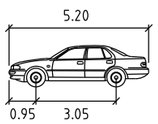
12.50 %

25.00 %

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99 6.3mR metres

Width	: 1.94
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

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PRELIMINARY PLAN
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CAD FILE NO. N140430-03-P3.dgn

LOT 3008 THORNTON, NORTH PENRITH

GROUND LEVEL
SWEPT PATH ASSESSMENT

DRAWING NO. N140430-03-05 SHEET 05 OF 05 ISSUE P3

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