Traffic Engineering Report

Proposed Townhouse Development

10 Honeyeater Circuit, Oxley

On behalf of Honeycombes Property Group

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Revision Record

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Contents

Table Index

Figure Index

1 Introduction

1.1 Background

TTM Consulting has been engaged by Honeycombes Property Group to prepare a traffic engineering report investigating a proposed Townhouse and Community Centre Development. It is understood that a Development Application will be lodged with Economic Development Queensland (EDQ).

The greater site is known as the Oxley Priority Development Area. A masterplan consisting of mixed-use developments (including residential dwelling lots, aged care, childcare) was approved by EDQ in December 2020 (EDQ Approval no: DEV2020/1099).

This masterplan allows for the staging and development of the Oxley Priority Development Area into three separate precincts:

- Precinct 1 – Environmental Protection
- Precinct 2 – Drainage Reserve/Public Recreation Park
- Precinct 3 – Neighbourhood/Lifestyle and Care

The above precincts have been divided into several stages, each developing separate portions of the greater site. This report relates to a portion of Stage 1C, which is to be a Townhouse and Community Centre Development. A copy of the development plans is included as Appendix A.

1.2 Scope

This report investigates the transport aspects associated with the proposed development. The scope of the transport aspects investigated includes:

- Reviewing the prevailing traffic and transport conditions surrounding the site.
- Identifying the parking supply required to cater to development demands.
- Assessing the parking layout to provide efficient and safe internal circulation and manoeuvring.
- Assessing the access configuration to provide efficient and safe manoeuvring between the site and the public road network for cars, service vehicles, cyclists and pedestrians.
- Identifying the service vehicle needs for the site.
- Assessing the internal service vehicle layouts to provide efficiency and safety for on-site service vehicle operation.
- Reviewing access to a suitable level of public and active transport provisions.
- Identification of likely traffic volumes and traffic distribution from the development.

- Identification of likely traffic impacts of development on the surrounding road network.

To assess the proposed transport arrangements, the development plans have been assessed against the following guidelines and planning documents:

- BCC's Planning Scheme 2014, specifically:
  - Transport, Access, Parking and Servicing Code 'TAPS' Code
  - Transport, Access, Parking and Servicing Planning Scheme Policy 'TAPS PSP'
  - Local Government Infrastructure Plan
- EDQ's Development Scheme for 'Oxley Priority Development Area'
- Australian Standards for Parking Facilities, specifically:
  - Part 1: Off-street car parking (AS2890.1:2004)
  - Part 2: Off-street commercial vehicle facilities (AS2890.2:2019)
  - Part 3: Bicycle parking (AS2890.3:2015)
  - Part 6: Off-street parking for people with disabilities (AS2890.6:2009)
- Austroads 'Guide to Traffic Management'.

1.3 Site Location

The site is situated to the north of Seventeen Mile Rocks Road, as depicted in Figure 1.1 and Figure 1.2 overleaf. The property is designated as Lot 302 on SP326512 and features road frontage to Whipbird Place to the south. Currently, the subject site is vacant.

Construction has commenced on Stage 1A (residential development) within the greater site. Additionally, construction has begun on a portion of the Stage 1C site (Residential Aged Care Facility), located immediately west of the subject site. Several planned internal roads for the greater masterplan site have already been constructed, including Whipbird Place, which will provide access to the proposed development.

There are two vehicle access points for the greater site, including:

- Songbird Street Access, located at the eastern end of the Seventeen Mile Rocks Road service road
- Cliveden Avenue Access, west of Blackheath Road (construction vehicles only)

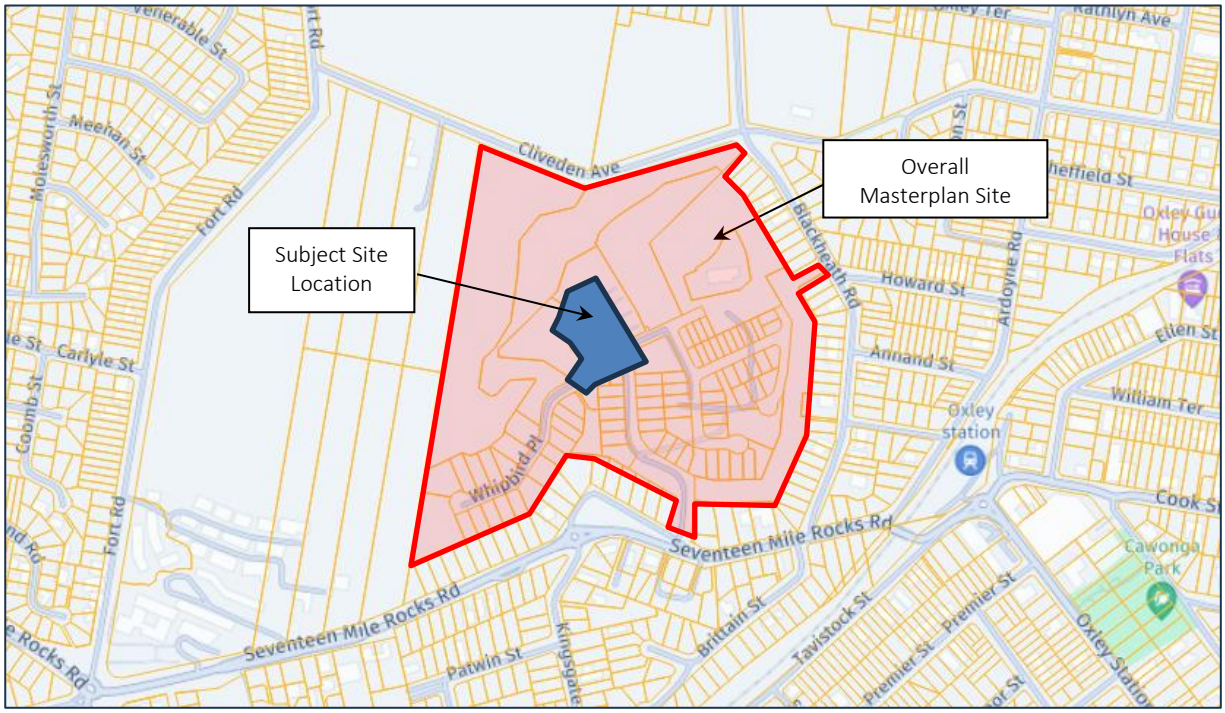


Figure 1.1 - Site location (Source: Nearmap)

Figure 1.2 - Site Area (Source: Nearmap)

1.4 Development Profile

This application pertains to Stage 1C, which has been designated as a 'future retirement living precinct' within the approved masterplan. It is noted that in 2021, EDQ approved an application for a Residential Aged Care Facility (152 beds) on a portion of the Stage 1C site (DEV2021/1234).

The current development scheme, which is the focus of this application, proposes a Change of Use to include 34 townhouse units and a Community Centre (consisting of a community space and a café) on the remaining portion of the Stage 1C site. The details of the proposed development are summarized in Table 1-1.

Table 1-1: Proposed Development

Proposed Development	Extent
Multiple Dwelling (Townhouse): • 3-Bedroom	 34 dwellings
Community Centre Food and Drink Outlet (Café)	126m^2 GFA 35m^2 GFA

1.5 Parking

The development proposal includes a total of 91 parking spaces inclusive of residential, residential visitor and community centre parking.

Further details on the parking arrangements can be found in Section 3.

1.6 Access

Access to the site will be provided via a 6.5m wide priority-controlled crossover (Type B2), allowing all movements onto the Whipbird Place.

Further details in relation to the proposed access provisions are included in Section 4..

2 Existing Transport Infrastructure

2.1 The Road Network

All existing roads in the immediate vicinity of the site are administered by BCC. The hierarchy and characteristics of the roads in the immediate vicinity of the site are shown below in Table 2-1. All other roads in the local area are classified as 'Neighbourhood Roads'.

Table 2-1: Local Road Hierarchy

Road	Speed Limit	Lanes	Classification
Whipbird Place	*50kph	2 (undivided)	Neighbourhood Road
Songbird Street	*50kph	2 (undivided)	Neighbourhood Road
Seventeen Mile Rocks Road	60kph	2 (undivided, plus parking)	Suburban Road
Oxley Station Road	60kph	2 (undivided, plus parking)	District Road
Cook Street	60kph	2 (undivided, plus parking)	District Road

*Default speed limit on unsigned roads in built-up areas.

All road intersections in the local area are priority-controlled (either roundabouts or T-junctions) except for the intersection of Seventeen Mile Rocks Road / Duporth Road / Ormond Road, which is signal-controlled. There are no restrictions on turning movements at the surrounding intersections, with the exception of the Seventeen Mile Rocks Road / Ardoyne Road intersection, where right turns out of Ardoyne Road are prohibited from 7-9 am and 4-7 pm, Monday to Friday.

2.2 Road Planning and Staging

Primary access to the greater site is facilitated by an extension of the existing service road, Songbird Street, from Seventeen Mile Rocks Road. The majority of the internal road network, as outlined in the approved masterplan, has been constructed, with the exception of a small segment in the eastern section of Whipbird Place. It is anticipated that this extension will be completed as the site undergoes further development.

TTM has reviewed the Council LGIP planning maps to identify potential road plans in the vicinity of the site. It is understood that there are no works in the vicinity of the site which will impact upon or be impacted by the proposed development.

2.3 Public Transport and Pedestrian Facilities

Train

Oxley train station, on the Ipswich line, is located approximately 500m east of the subject site. Services operate from Nambour, Caboolture, Kippa-Ring and Bowen Hills to Springfield Central, Ipswich and Rosewood. Services typically operate every 10 to 15 minutes daily.

Buses

The nearest on-street bus stop to the site is located on Seventeen Mile Rocks Road, approximately 300m south of the subject site. This bus stop is serviced by routes 106, 467 and 468 which provide a connection to Oxley train station, Indooroopilly Interchange and Brisbane City with services typically operating every 20 minutes during the peak periods and hourly during the off-peak.

Cyclists

Dedicated on-road cycle lanes are located on Seventeen Mile Rocks Road on approach to, and west of, the Kingsgate Street roundabout. The Stage 1C connection to this cycle network is via the newly formed internal road network (Whipbird Place and Songbird Street). Figure 2.1 shows the bicycle network in the vicinity to the subject site.

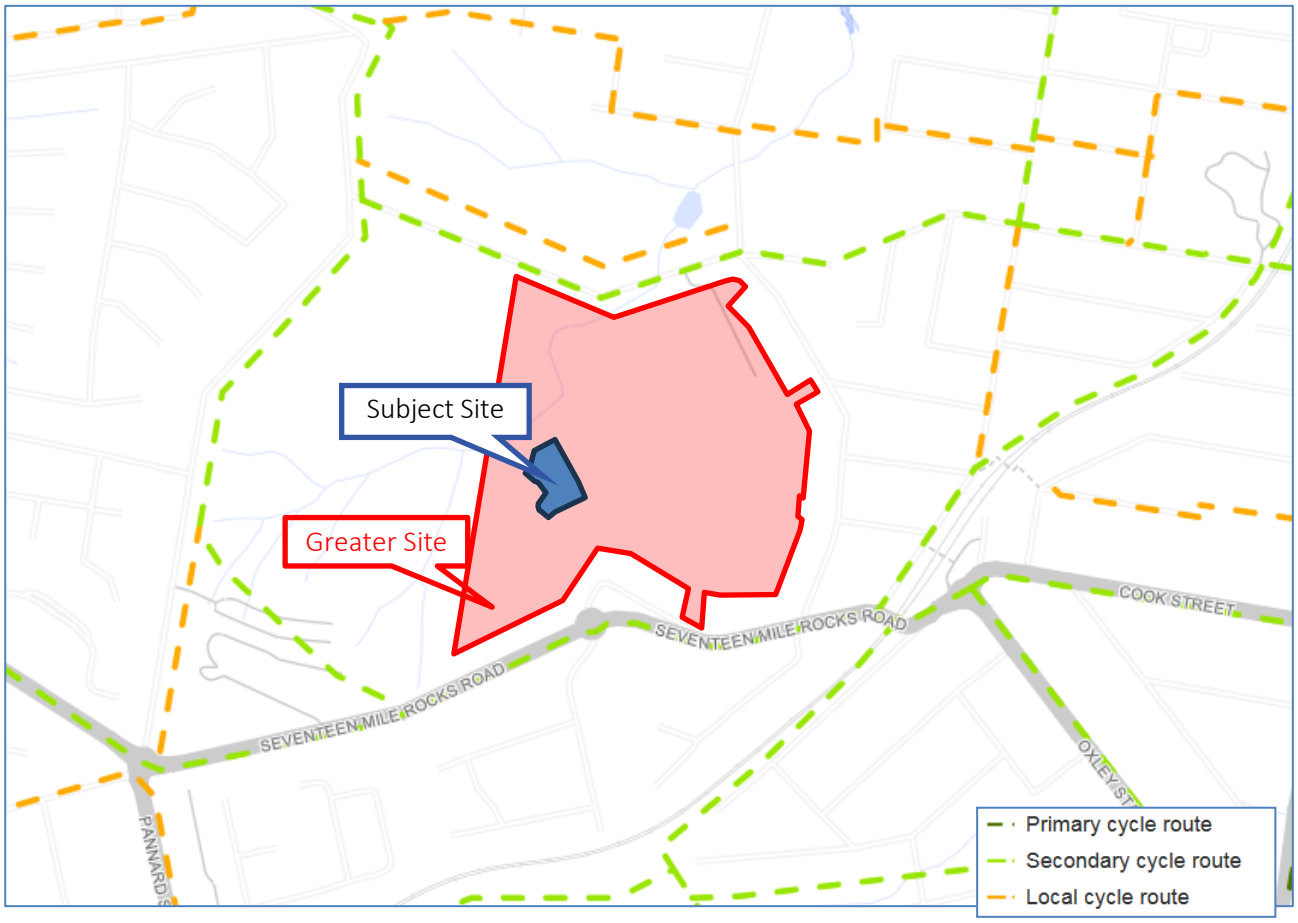


Figure 2.1: Cycle Facilities (Source: BCC City plan Mapping)

Pedestrians

Formal pedestrian footpaths are located on Whipbird Place, Songbird Street, both sides of Seventeen Mile Rocks Road and the western side of Blackheath Street. The nearest formal pedestrian crossing of Seventeen Mile Rocks Road is located at the roundabout intersection with Kingsgate Street, in the form of a refuge island on the western side of the roundabout.

3 Car Parking Arrangements

3.1 Council Parking Supply

EDQ's Development Scheme for 'Oxley Priority Development Area' requires parking to be provided in accordance with the Brisbane City Plan.

Performance Outcome 13 of the Transport, Access, Parking and Servicing Code requires provision of on-site car parking to accommodate the design peak parking demand without any overflow of the car parking to an adjacent premises or adjacent street. The associated Acceptable Outcome AO13 refers to the car parking rates nominated in the Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP).

Performance Outcome 14 requires the number of parking spaces to meet the combined design peak parking demand and allow for the temporal sharing of parking spaces for uses with different peak parking demands. The associated Acceptable Outcome AO14.1 requires the provision of parking spaces equalling the sum of the maximum design peak parking demand for the individual uses at any point in time.

BCC's 'TAPS PSP' parking supply requirement for this type of development are identified in Table 3-1.

Table 3-1: BCC City Plan Acceptable Outcome Parking Supply Requirement (TAPS PSP)

Land Use	Council Requirement	Extent	Requirement	Provision
Multiple Dwelling	2 spaces per 3-bedroom dwelling 0.25 spaces per dwelling for visitor parking	34 dwellings	68 spaces 9 spaces	68 spaces 9 spaces *1 wash bay
Community Centre • Community Use • Food and Drink Outlet • *Sub-total*	 10 spaces per 100m² GFA 12 spaces per 100m² GFA	 126m² GFA 35m² GFA *161m² GFA*	 12.6 spaces 4.2 spaces *17 spaces*	 14 spaces
Total			94 spaces	91 spaces

*Car wash not included in overall parking provision

The parking provision proposed for the Multiple Dwelling component of the development meets the minimum requirements outlined in the TAPS PSP (complies with Acceptable Outcome 13) and is therefore satisfactory.

For the Community Centre, there is a shortfall of three (3) parking spaces in relation to the TAPS PSP requirement. However, it is noted that this acceptable solution, or aggregate, requirement (17 spaces) does not account for likely varying peak demands associated with the two use areas (café and community use) which are identified in the following section.

3.1.1 Community Centre Estimated Peak Parking Demands

The community centre building includes a café (approximately 35m^2 GFA) and a community use space having two meeting rooms and amenities (toilets) intended to be used for small community group meetings, small events including educational classes and workshops, arts and cultural meetings, and small social gatherings.

The two meeting rooms have usable floor areas of approximately 40m^2 and 18m^2 with the person capacities being approximately 18 and 8 people respectively.

It is considered unlikely that both meeting rooms would be used to their respective capacities at the same time typically. However, it is reasonable to expect that both rooms may be used to their full capacity for social gatherings where the whole community use space is used (i.e. 26 people). These occasional events are most likely to occur on weekend evenings where the full community centre parking supply (14 spaces) is available. Under such occasional circumstances / events it is reasonable to expect an average car occupancy of at least 2.5 persons per car which would equate to a parking demand of 11 cars.

The typical day-to-day operations of the community centre, including the community use space and café, has been considered in terms of likely peak parking demands that account for the temporal demand variations of each use.

Table 3-2 below details the estimated temporal variation in parking demands for each use. The information presented in Table 3-2 is based on Google 'popular timing data' for existing community centres and cafés in the local area. The 'assumed peak demands' shown in column two are the 100% demand for each use, based on BCC requirements.

Table 3-2 - Temporal Variation of Each Use's Parking Demands

Use	Assumed Peak Demand		Weekday					Weekend				
			6-9am	9am-12pm	12-3pm	3-6pm	>6pm	6-9am	9am-12pm	12-3pm	3-6pm	>6pm
Community Centre	13 cars	% Peak Demand	80%	60%	70%	90%	100%	60%	30%	80%	60%	100%
		No. Cars	11	8	9	12	13	8	4	11	8	13
Cafe	5 cars	% Peak Demand	40%	60%	30%	20%	0%	70%	100%	50%	25%	0%
		No. Cars	2	3	2	1	0	4	5	3	2	0
Total Demand (cars)			**13**	**11**	**11**	**13**	**13**	**12**	**9**	**14**	**10**	**13**

As shown in Table 3-2, the two uses experience different peak times. The community centre reaches its peak demand after 6:00 PM on weekdays and weekends, while cafés experience peak demand between 9:00 AM and 12:00 PM on both weekdays and weekends. The maximum estimated demand for both uses is 14 cars. Given that the development proposes 14 parking spaces for these combined uses, the parking provisions are deemed appropriate.

3.2 Car Park Layout

EDQ's Development Scheme for 'Oxley Priority Development Area' refers to BCC's 'TAPS PSP' for the car parking design requirements.

Table 3-3 identifies the characteristics of the proposed parking area with respect to the BCC's 'TAPS PSP' requirements. The last column identifies the compliance of each design aspect. Where compliance with the Council is not achieved, further information is provided below.

Table 3-3: Parking Design Requirements

Design Aspect	Minimum Council Standard	Proposed Provision	Compliance
Parking Space Length:			
• Visitor Bay	5.4m (min)	5.4m	Compliant
• Enclosed Garages			
– Single	6.0m (min)	6.0m	Compliant
– Double	6.0m (min)	6.0m	Compliant
• Parallel Bay (Normal)	6.0m (min)	6.3m	Compliant
• Parallel Bay (Open End)	5.4m (min)	5.4m	Compliant
• Parallel Bay (Obstructed)	6.3m (min)	6.3m	Compliant
• PWD Bay	5.4m (min)	5.4m	Compliant
Parking Space Width:			
• Visitor Bay	2.6m (min)	2.5m (min)	Performance solution
• Enclosed Garages			
– Single	3.0m (min) +2.4m door opening	3.2m +2.6m door opening	Compliant
– Double	5.3m (min) +4.8m door opening	5.3m +5.0m door opening	Compliant
• Parallel Bay	2.4m (min)	2.4m	Compliant
• PWD Bay	2.4m (min)	2.4m	Compliant
Aisle Width:			
– Parking aisle	6.2m	6.2m	Compliant
– Circulation aisle	6.5m	6.1m	Performance Solution
Parking envelope clearance – space adjacent to wall	Space 0.3m clear of wall	Space 0.3m clear of wall	Compliant
Maximum Gradient:			
– PWD parking	1:40 (2.5%)	1:40 (2.5%)	Compliant
– Parking bay	1:15 (6.7%)	1:15 (6.7%)	Compliant
– Parking aisle	1:20 (5.0%)	1:20 (5.0%)	Compliant
Height Clearance			
– General Min.	2.3m	2.3m (within garages)	Compliant
– PWD bay	2.5	Clear overhead	Compliant
Parking Aisle Extension	2m beyond last bay	2m beyond last bay	Compliant

The proposed car parking layout generally complies with BCC requirements; however, the following items are resolved with alternative solutions.

Visitor Parking Bay Widths (Community Centre)

All 90-degree visitor bays associated with the residential development (townhouses) are designed with a width of 2.6m. The visitor bays in the Community Centre car park are designed with a width of 2.5m. Although these dimensions are narrower than those specified under the TAPS PSP guidelines, they comply with AS2890.1:2004 for User Class 2 and are therefore considered appropriate. Additionally, as demonstrated in TTM drawing number 24BRT0043-07 Revision A (**Appendix B**) the design layout, including parking space width, is adequate to accommodate the manoeuvring of the design vehicle (B85 vehicle).

Circulation Aisle

The TAPS PSP recommends that circulation roads should be 6.5m wide. The internal road is proposed with a width of 6.1m between kerbs. This is compliant with AS2890.1:2004, which requires a minimum of 5.5m between kerbs plus 0.3m clearance to walls and is therefore considered appropriate from a traffic engineering perspective.

Additionally, swept path analyses conducted by TTM (refer to drawing numbers 24BRT0043-01 and 24BRT0043-02, and 24BRT0043-07 in **Appendix B**) demonstrate that the 6.1m circulation road can accommodate the largest design vehicle (Large Rigid Vehicle (LRV)) as well as the Council's Refuse Collection Vehicles (RCV), including adequate car passing opportunities.

Overall, the parking layout can be deemed fit-for-purpose and acceptable from a traffic engineering perspective.

3.3 Internal Circulation Road Visibility

Sight distance around all 90-degrees bends, and the two internal intersections, satisfy the requirements of Council's TAPS PSP. However, in the interest of maximising visibility and safety high-visibility convex safety mirrors are proposed at key locations as shown in the updated architectural plan.

3.4 Internal Pedestrian / Vehicle Interaction

In addition to the two proposed speed humps on the internal north-south circulation roadway the entire on-site vehicular movement areas are to be signed as 10kph Shared Zone. These measures are appropriate and effective to maximise the safety of the interaction between pedestrians and vehicles.

4 Site Access Arrangements

It is proposed that vehicular access will be achieved via a single all-movements 6.5m, Type B2 crossover to Whipbird Place. The proposed design characteristics of the access are specified in Table 4-1.

Table 4-1: Typical Driveway Requirements

Design Aspect	Council Requirement	Proposed Provision	Compliance
Distance from a minor intersection	10m (min)	More than 10m	Compliant
Distance from another driveway	3m (min)	More than 3m	Compliant
Sight Distance - 50kph	Desirable – 90m Minimum - 70m	90m to the east 70m to the west	Compliant
Design Type	B2	B2	Compliant
Crossover Width	7m (based on LRV design vehicle)	6.5m	Performance Solution
Minimum Queuing Provisions	4 vehicles	4 vehicles (24m)	Compliant
Grade within first 6m	1:20	1:20	Compliant
Sight Splays	5m x 2m on both sides of driveway	5m x 2m on both sides of driveway	Compliant

The proposed access arrangements generally comply with BCC requirements, however the following issues are resolved with alternative solutions or further information.

Sight Distance

The sight distance to the east of the access, measuring 90m, complies with the Council's standard minimum requirements. To the west, the sight distance is 70m, which is below the standard minimum but adheres to the Council's absolute minimum standards as specified in Table 7 of the TAPS PSP. This reduced sight distance to the west is attributed to a series of bends along this section of Whipbird Place, which are anticipated to result in vehicles traveling at speeds below 50 kph. Consequently, the sight distances currently achieved to the east and west of the proposed access are considered acceptable.

Crossover Width

The TAPS PSP driveway requirements (7.0m Type B2) is dictated by the provisions for service vehicle access. It is recognised, however, that car park traffic will generate the dominant traffic movement at the driveway. The proposed plans show a 6.5m driveway, which is consistent with the TAPS PSP requirements for car park traffic movements (minimum 6.0m required). Regarding access for service vehicles, swept path analysis has been conducted to show that this slightly reduced width will still allow appropriate access for the necessary design service vehicles.

As detailed in TTM Drawing 24BRT0043-01 and 24BRT0043-07 included in **Appendix B**, the proposed 6.5m driveway is sufficient to accommodate service vehicle demands including:

- Occasional access (forward-in/forward-out) movements for a Large Rigid Vehicle (LRV).

- Regular access (forward in/forward-out) movements for vehicles up to the size of a Refuse Collection Vehicle (RCV).
- Simultaneous entry / exit movements for the design car (B85 vehicle).

5 Service Vehicle Arrangements

EDQ's Development Scheme for 'Oxley Priority Development Area' refers to BCC's 'TAPS PSP' for the servicing area requirements.

To assess the required number of service bays for the development, TTM has referred to the BCC requirements for service vehicles. Other service vehicle provisions are generally in accordance with AS2890.2.

5.1 Council Requirements

For the proposed uses, BCC requires the following:

Multiple Dwelling:

- Regular access for a Refuse Collection Vehicle (RCV)
- Occasional access for a Large Rigid Vehicle (LRV)

Food and Drink Development:

- Regular and occasional access for a Refuse Collection Vehicle (RCV)
- 1 x service bay for a Small Rigid Vehicle (SRV)

Community Use:

- Regular access for a Refuse Collection Vehicle (RCV)
- Occasional access a Articulated Vehicle (AV)

5.2 Estimated Service Vehicle Traffic Generation

Service vehicle movements are expected to be infrequent with respect to the development. Refuse collection by side-loading RCV expected on a weekly basis (refuse & recycling) and furniture removal vehicle access will be occasionally.

5.3 Proposed Service Vehicle Arrangements and Their Adequacy

Table 20 of the TAPS PSP defines an LRV as a 12.5m Heavy Rigid Vehicle (HRV), in accordance with AS 2890.2. As demonstrated in TTM's Drawing 24BRT0043-01 included in **Appendix B**, a 12.5m HRV can safely manoeuvre through the proposed development via the internal access road in both clockwise and counter-clockwise directions. It is anticipated that, on the rare occasions when a HRV is on-site, it will park on the internal road to service the individual townhouses. The road width is sufficient to allow a car to pass a parked HRV.

Kerbside collection will be conducted by a 10.3m side loading RCV. As demonstrated in TTM Drawing 24BRT0043-02, included in Appendix B, the RCV can circulate through the development in both directions. The swept path analysis indicates that the RCV can execute a 3-point turnaround at the internal T-intersection after servicing one side of the internal road, allowing it to then circulate the alternate side of the road. For the townhouses located on the two stub roads, which are inaccessible to the RCV (i.e., 4B, 5B, 6C, 18D, and 19D), bins will be transferred to constructed bin pads on the main circulation road.

Given the scale of the proposed community use, occasional access for an AV, as indicated in the TAPS PSP, is considered excessive. It is anticipated that service vehicles associated with this use will likely be no larger than an SRV or VAN. Although no dedicated loading bay provisions are included within the community use car park, it is envisioned that these vehicles can be accommodated within the visitor parking bays (for VANs) or within the main parking aisle hard stand area. It is reasonable to arrange deliveries requiring an SRV to take place outside of community centre activities, thus avoiding any impact on visitor parking.

Overall, TTM considers the service vehicle arrangements to be suitable of the proposed development.

6 Active Transport

6.1 Public Transport

Public transport provisions within the vicinity are deemed to be at an acceptable level for the development. This includes the following provisions:

- Less than 300m walking distance to local bus stops servicing bus routes around the Oxley area.
- Approximately 500m walking distance to the Oxley Train Station, servicing trains on the Ipswich and Caboolture lines and providing a connection to the Brisbane CBD.

TTM consider the high availability of public transportation provisions in the vicinity of the site will satisfy the site's requirements for such facilities.

6.2 Pedestrian and Cyclist Facilities

The bicycle parking supply requirements for the proposed development land uses have been determined in line with Table 21 of the TAPS Policy. The bicycle parking requirements are summarised in Table 6.1.

Table 6.1: TAPS PSP Bicycle Parking Supply Requirement

Land Use / Component	TAPS PSP Requirement	Extent	Requirement	Provision
Multiple Dwelling (Residents)	1 space per unit	34 units	34 spaces	34 spaces
Multiple Dwelling (Visitors)	1 space per 4 units	34 units	9 spaces	10 spaces
Total			**43 spaces**	**44 spaces**

The development plan currently indicates 34 bicycle spaces located within the enclosed garages for residents.

It is noted that the TAPS PSP does not specify bicycle parking rates for Community Use or Food and Drink Outlet. However, 10 bicycle parking spaces are provided at the community centre. Practically, it is anticipated that these spaces will be shared between visitors to the townhouses and those utilising the community centre.

The proposed bicycle parking provisions are compliant with the Council requirements and are therefore appropriate to support the development.

Pedestrian/cyclist access to the site will be provided via two access points – one located adjacent to the driveway and the other at the southern road stub. Formal pedestrian footpaths are located on the greater masterplan site and surrounding road network.

7 Traffic Impact Assessment

7.1 Development Yields

Table 7-1 below summarises the initially identified development uses and yields used in the initial traffic impact assessment (masterplan), as well as the current uses and yields.

Table 7-1 - Estimated Development Traffic Generation – Initial Masterplan

Land Use	Initial Development	Current Development
Detached Dwellings	80 dwellings	87 dwellings
Retirement Living Dwellings	150 dwellings	-
Multiple Dwellings	-	34 dwellings
Residential Aged Care Facility	-	150 beds
Child Care Centre	70 children	70 children

7.2 Development Traffic Generation

Table 7-2 and Table 7-3 below summarises the estimated daily and peak hour traffic generation of the initially identified development and the current development schemes respectively. Table 7-4 overleaf summarises the change in development traffic generation between the two masterplan scenarios.

Table 7-2 - Development Yields Comparison Summary

Use	Yield		Daily (24-hr)				AM Peak Hour						PM Peak Hour					
									IN		OUT				IN		OUT	
	Qty	Units	Rate	VPD	IN	OUT	Rate	VPH	%	VPH	%	VPH	Rate	VPH	%	VPH	%	VPH
Detached Dwellings	80	dwellings	9	720	360	360	0.85	68	20%	14	80%	54	0.85	68	70%	48	30%	20
Retirement Living	150	dwellings	2.5	375	188	188	0.3	45	30%	14	70%	32	0.2	30	70%	21	30%	9
Child Care	70	children	7.5	525	263	263	0.8	56	55%	31	45%	25	0.7	49	45%	22	55%	27
Total				**1620**	**810**	**810**		**169**		**58**		**111**		**147**		**91**		**56**

Table 7-3 - Estimated Development Traffic Generation - Current Masterplan

Use	Yield		Daily (24-hr)				AM Peak Hour						PM Peak Hour					
									IN		OUT				IN		OUT	
	Qty	Units	Rate	VPD	IN	OUT	Rate	VPH	%	VPH	%	VPH	Rate	VPH	%	VPH	%	VPH
Detached Dwellings	87	dwellings	9	783	392	392	0.85	74	20%	15	80%	59	0.85	74	70%	52	30%	22
Multiple Dwellings	34	dwellings	6.5	221	111	111	0.65	22	20%	4	80%	18	0.65	22	70%	15	30%	7
RACF	150	beds	2.37	356	178	178	0.12	18	71%	13	29%	5	0.17	26	44%	11	56%	14
Child Care	70	children	7.5	525	263	263	0.8	56	55%	31	45%	25	0.7	49	45%	22	55%	27
Total				**1885**	**942**	**942**		**170**		**63**		**107**		**171**		**101**		**70**

Table 7-4 - Comparison of Estimated Development Traffic Generation

Scenario	Daily (24-hr)			AM Peak Hour			PM Peak Hour		
	Total	IN	OUT	Total	IN	OUT	Total	IN	OUT
Original TIA	1620	810	810	169	58	111	147	91	56
Current / Updated	1885	942	942	170	63	107	171	101	70
Change	**265**	**132**	**132**	**1**	**5**	**-4**	**24**	**10**	**14**

Regarding the Community Use and Café, the traffic generation associated with these uses is likely to be negligible. The Community Use will primarily operate outside of peak traffic times, namely in the evenings and on weekends. The café is likely to attract customers mostly from within the residential development and the greater site. It is worth noting that the generation rate applied to the multiple dwelling component of the development is considered conservative. Therefore, any small amount of traffic associated with the café originating from outside the greater site can be reasonably absorbed within this rate.

As indicated in Table 7-4, the current masterplan development scheme results in a higher daily traffic demand than those of the initial masterplan development scenario. The AM peak hour results in one (1) additional vph, while the PM peak period results in an additional 24 vph.

Overall, the net traffic increase resulting from the proposed development is unlikely to significantly impact the operational performance of the local road network and therefore does not warrant a detailed traffic impact assessment.

8 Summary and Conclusions

8.1 Development Summary

This development application relates to Stage 1C of the masterplan site. The development scheme proposes to construct a 34 townhouses and community centre, inclusive of community space and a café.

8.2 Car Parking Arrangements

The development proposal includes 91 parking spaces. 68 spaces and nine (9) spaces are provided for residents and residential visitors respectively. 14 parking spaces are allocated for the community use. The overall parking provisions for the proposed development is considered fit for purpose.

The design of the car parking areas and is generally consistent with the requirements of the TAPS PSP.

8.3 Service Vehicle Arrangements

The proposed access and internal road layout is designed to accommodate the prescribed occasional and regular design vehicle for this type of development. Kerbside refuse collection will be facilitated by a side-loading RCV, and occasional servicing for an LRV can be effectively managed through the internal road network.

Overall, the proposed service vehicle arrangements are considered adequate to meet the needs of the proposed development.

8.4 Active Transport

The current public transport infrastructure and proposed site provisions for pedestrian facilities are considered adequate for development.

On-site bicycle parking provisions are provided in accordance with Council rates.

8.5 Impact on Surrounding Road Network

The proposed development is estimated to generate approximately one (1) additional vph during the AM peak period and an additional 24 vph compared to the original masterplan assessment. This projected increase in traffic generation is not anticipated to significantly impact the existing road network. Consequently, no impact mitigating road works are required.

8.6 Conclusion

Based on the assessment contained within this report, TTM sees no traffic engineering reason why the relevant approvals should not be granted.

Appendix A Proposed Site Plan

1 SITE PLAN - GROUND FLOOR - DEEP PLANTING
1 : 250

NOTES:
REFER REFERENCED DRAWINGS BELOW FOR THE RELEVANT CONSULTANT INFORMATION FOR CIVIL INFRASTRUCTURE, LOT BOUNDARIES, LANDSCAPE DETAILS, LEVELS AND FALLS.
VERIFY ALL REFERENCED INFORMATION ON THIS PLAN WITH THE RELEVANT CONSULTANT DRAWINGS AND NOTIFY OF NEW INFORMATION MADE AVAILABLE OR OF ANY DISCREPANCIES.

REFERENCED DRAWINGS:

LANDPARTNERS- BUILT ENVIRONMENT CONSULTANTS
DETAIL SURVEY
PLAN REFERENCE BRSS8271-000-3-1

CIVIL- HURLEY CONSULTING ENGINEERS
CONCEPT BULK EARTHWORKS LAYOUT PLAN
PLAN REFERENCE C24004A-SK-C100 REVISION B

RPS GROUP
SITE MASTERPLAN
PLAN REFERENCE 004868 OXLEY RESIDENTIAL VERSION C

ABBREVIATIONS

CODE	DESCRIPTION
LRB	LETTER BOX

LEGEND

CONVEX SAFETY MIRROR AND DIRECTIONAL ARROW

Arqus DESIGN

Integrated perspective

Arqus Design Pty Ltd
ABN 68 135 616 303

Level 2 15 Malt Street
Fortitude Valley Qld 4006
PO Box 2455
New Farm Qld 4005

Registration:
Nominated Architect: Scott Peabody
QLD: 2644
NSW: 9038
VIC: 800111 (Arqus Design 600035)

mail@arqusdesign.com.au
www.arqusdesign.com.au

Phone 07 3358 0888
Fax 07 3358 0899

Arqus Design acknowledges the Traditional Owners of Country on which we live, work and design and pay our respects to their Elders, past and present.

NOTES

Contractors are to verify all dimensions on site before commencing any work or producing shop drawings.

Detail applicable to the scale of the drawing published.

DATE	REVISION	ISSUE
29/05/24	FOR INFORMATION	A
30/05/24	FOR INFORMATION	B
04/07/24	FOR INFORMATION	C
18/07/24	SITE PLAN- UPDATE	D
19/07/24	PRELIMINARY DA PACKAGE	E
23/07/24	PRELIMINARY DA PACKAGE-UPDATED	F
31/07/24	SITE PLAN-UPDATE	G
20/08/24	SITE PLAN- UPDATE	H
21/08/24	PRELIMINARY DA PACKAGE	I
23/08/24	DA PACKAGE	J
26/09/24	COMMUNAL OPEN SPACE AMENDMENT	K
14/10/24	FOR INFORMATION	L

CLIENT

HONEYCOMBES PROPERTY GROUP

PROJECT

OXLEY RESIDENTIAL DEVELOPMENT

10 HONEYEATER CIRCUIT, OXLEY
LOT 302 ON SP326512

Country: Yugara & Yugarabul

DRAWING

SITE PLAN -GROUND FLOOR

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0069	SP	ZC	SP

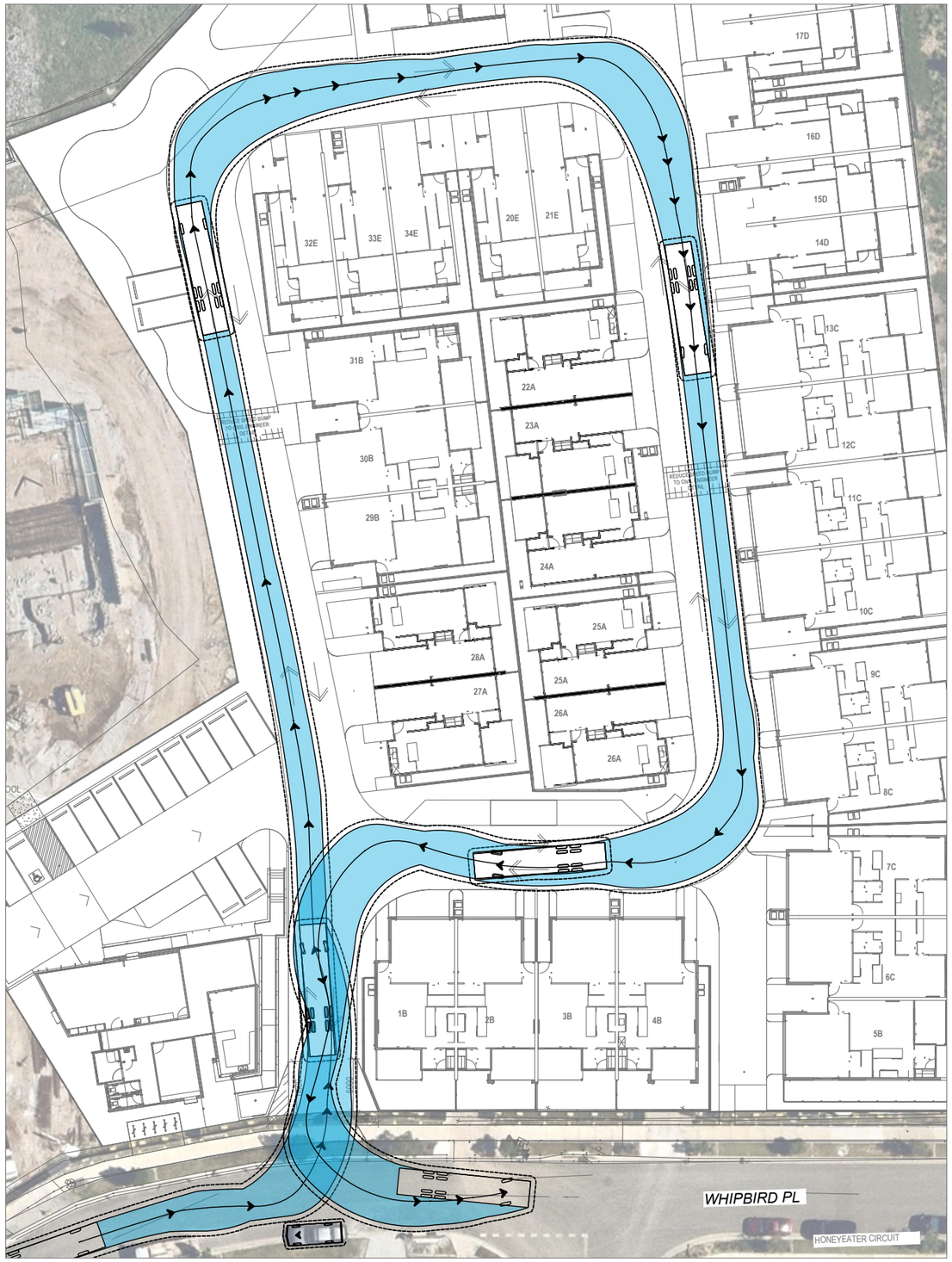
SCALE	DATE CREATED	NORTH
1 : 250 @A1 @A3	29/02/24	

DRAWING NUMBER	ISSUE
A1-1-01	L

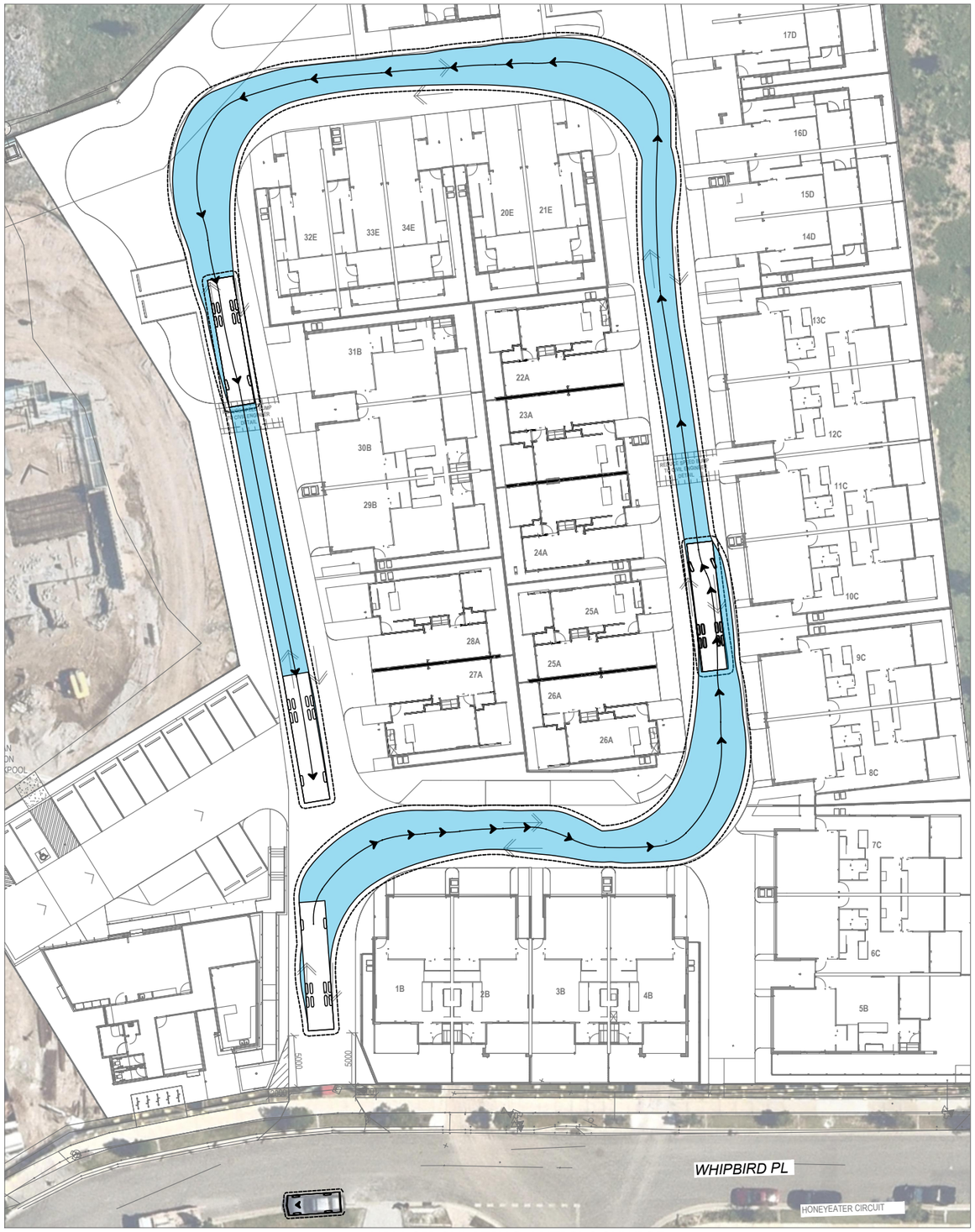
ISSUED FOR
14/10/2024 5:24:56 PM
DA PACKAGE

C:\Users\Grace.Sherwin\Documents\23-0069_Oxley Residential_SITE_Central_NEW_Grace.Sherwin.rvt

Appendix B Service Vehicle Swept Paths



HRV CIRCULATING CLOCKWISE



HRV CIRCULATING ANTICLOCKWISE

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	30-07-24	ORIGINAL ISSUE	AA	JH	DW
A	19-07-24	ORIGINAL ISSUE	AA	JH	DW

SCALE 0 5 10 15 20 25m

SCALE 1:500 AT ORIGINAL SIZE

NORTH

CLIENT

HONEYCOMBES DEVELOPMENTS TY LTD

TTM CONSULTING PTY LTD
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PROJECT
HONEYEATER CIRCUIT, OXLEY

DRAWING TITLE
OXLEY TOWNHOUSE DEVELOPMENT
12.50m HRV SWEPT PATH

PROJECT NUMBER	ORIGINAL SIZE
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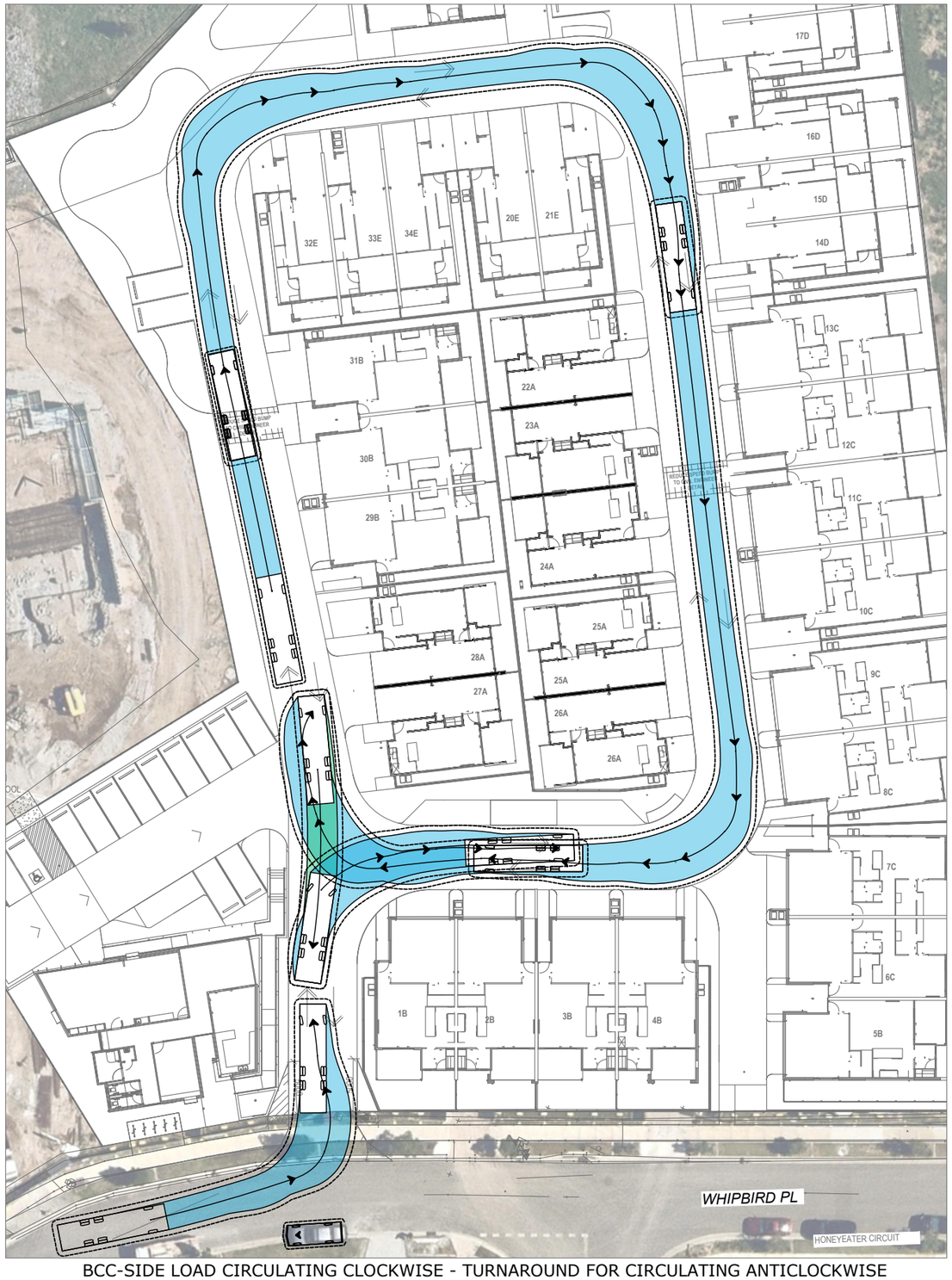
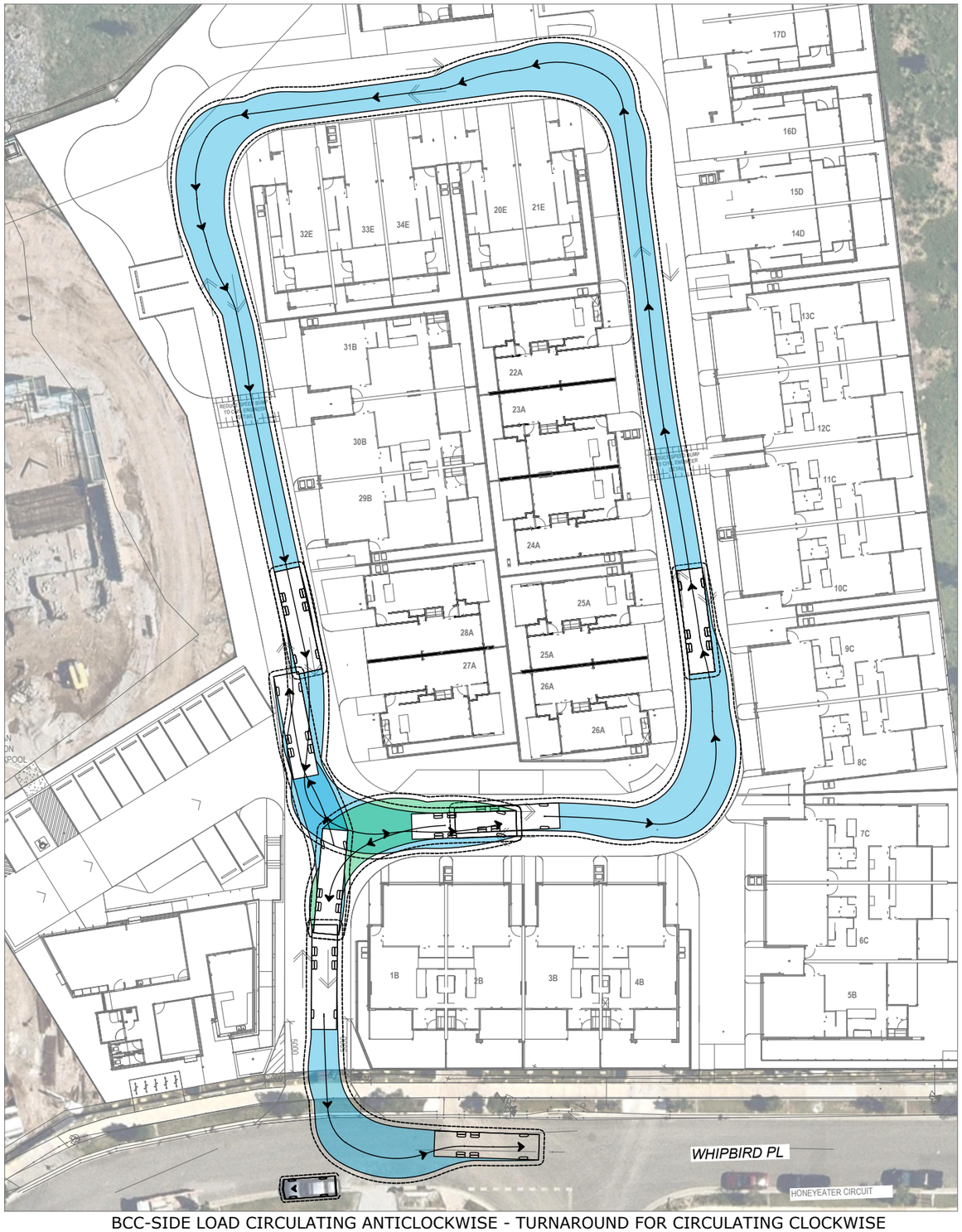
DRAWING NUMBER	REVISION
24BRT0043-01	B
DATE	SHEET
30 Jul 2024	1 OF 1



BCC-SIDE LOAD CIRCULATING CLOCKWISE - TURNAROUND FOR CIRCULATING ANTICLOCKWISE



BCC-SIDE LOAD CIRCULATING ANTICLOCKWISE - TURNAROUND FOR CIRCULATING CLOCKWISE

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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A	19-07-24	ORIGINAL ISSUE	AA	JH	DW

SCALE 0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

NORTH

CLIENT
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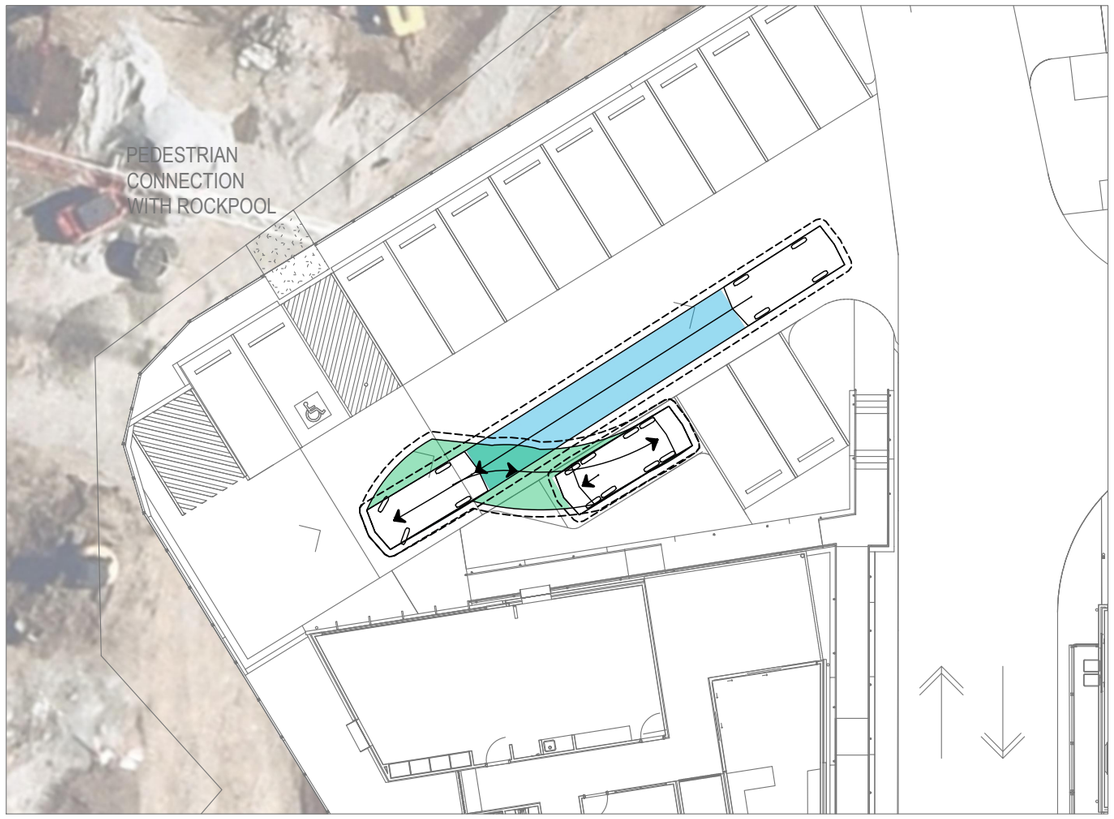
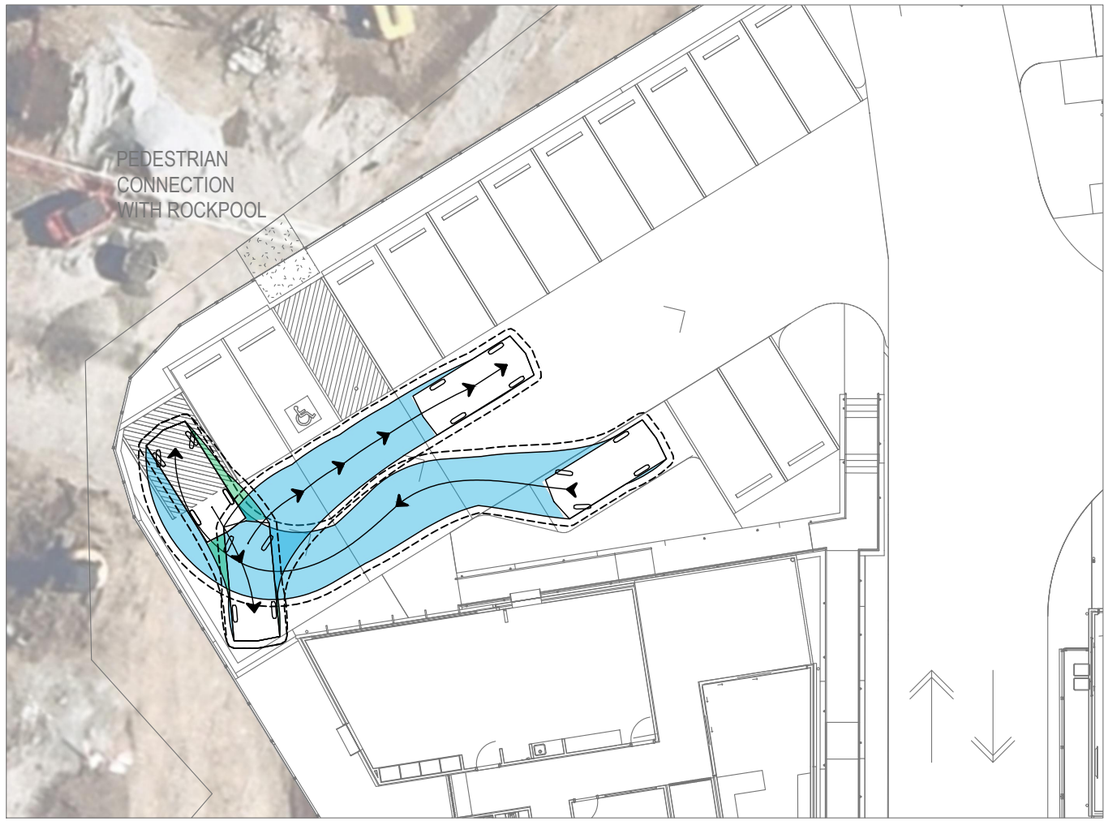
PROJECT
HONEYEATER CIRCUIT, OXLEY

DRAWING TITLE
OXLEY TOWNHOUSE DEVELOPMENT
10.30m BCC REFUSE VEHICLE SWEPT PATH

PROJECT NUMBER	ORIGINAL SIZE
24BRT0043	A3
DRAWING NUMBER	REVISION
24BRT0043-02	B
DATE	SHEET
30 Jul 2024	1 OF 1





REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
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A	19-07-24	ORIGINAL ISSUE	AA	JH	DW

SCALE 0 2.5 5 7.5 10 12.5m

SCALE 1:250 AT ORIGINAL SIZE

NORTH

CLIENT

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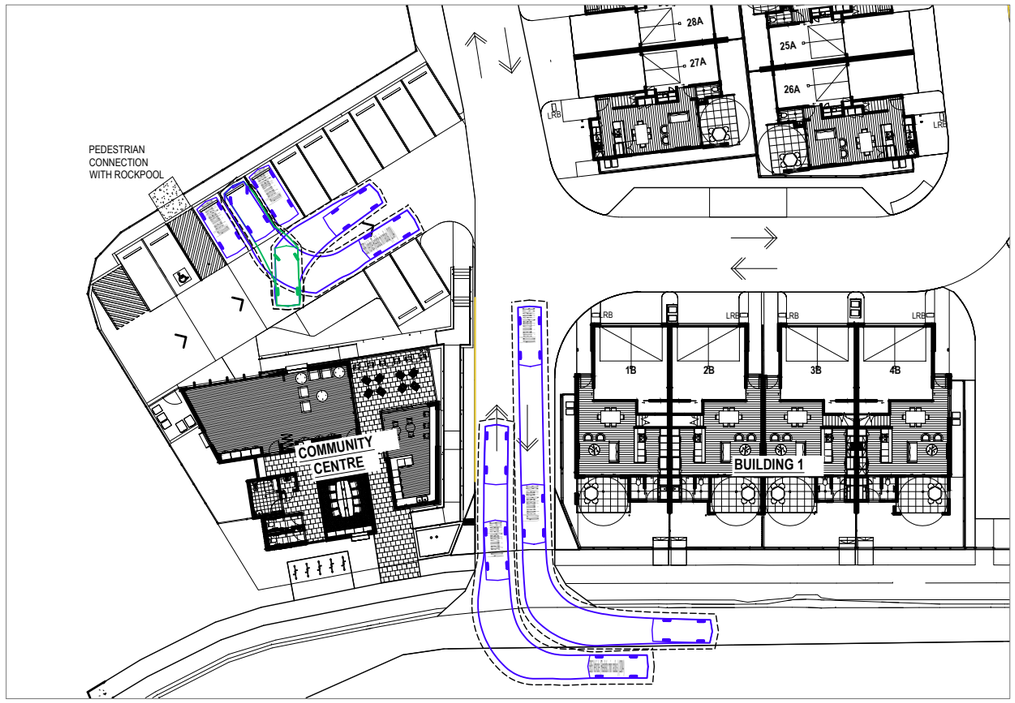
PROJECT
HONEYEATER CIRCUIT, OXLEY

DRAWING TITLE
OXLEY TOWNHOUSE DEVELOPMENT
COMMUNITY CENTRE CAR PARK OPTIONS - B85 SWEPT PATHS

PROJECT NUMBER	ORIGINAL SIZE
24BRT0043	A3
DRAWING NUMBER	REVISION
24BRT0043-03	B
DATE	SHEET
30 Jul 2024	1 OF 1

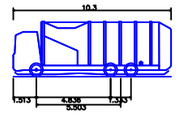
RCV PASSING CAR



CAR PASSING SITE ACCESS & PARKING MANOEUVRE

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m



BCC RCV (Side Lift)

Overall Length	10.300m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.150m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.500m

DIRECTOR

DAVID GRUMMITT RPEQ 19356

APPROVED 18 Oct 2024

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	18-10-24	FURTHER ISSUES SWEPT PATHS	DG	DG	DG

SCALE 0 5 10 15 20 25m

SCALE 1:500 AT ORIGINAL SIZE

NORTH

CLIENT

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PROJECT
HONEYEATER CIRCUIT, OXLEY - TOWNHOUSE DEVELOPMENT

DRAWING TITLE
VEHICLE SWEPT PATH ANALYSIS
10.3m REFUSE COLLECTION VEHICLE & DESIGN CAR VEHICLE

PROJECT NUMBER	24BRT0043
ORIGINAL SIZE	A3
DRAWING NUMBER	24BRT0043-07
REVISION	A
DATE	18 Oct 2024
SHEET	1 OF 1