

Traffix Group

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Traffic Engineering Assessment

Proposed Residential Development
27-31 Plunkett Street, Bellfield

Prepared for
Ferencz Baranyay Architects Pty Ltd

March 2024

G33824R-01C

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Our Reference: G33824R-01C

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1. Introduction

Traffic Group has been engaged by Ferencz Baranyay Architects Pty Ltd to undertake a traffic engineering assessment for a proposed residential development at 27-31 Plunkett Street, Bellfield.

2. Proposal

The proposal is for a residential development for Homes Victoria on the site as set out in the following table. A copy of the development plans prepared by Ferencz Baranyay Architects Pty Ltd (dated 04th March, 2024) are attached at Appendix A.

Table 1: Development Summary

Characteristics	Description		
Uses	No.	Car Parking	Notes
<u>Dwellings:</u> One-bedroom Apartment Two-bedroom Apartment Three-bedroom Apartment Residential Visitors	15 8 2 25	15	0.6 space/dwelling
Car Parking Provision		15 car spaces	Provided via an at-grade carpark, located at the northern section of the site
Bicycle Parking Provision		26 bicycle spaces	18 spaces within a secure bicycle store and 8 visitor spaces within the front setback of the building.
Other	Notes		
Vehicle Access	A 5.8m wide double-width crossover located at the north-eastern corner of the site to Plunkett Street.		
Changes to on-street parking	6 unrestricted car space along Plunkett Street (No change)		
Loading Provision	Loading activities will be minor and infrequent, and can be accommodated on-street adjacent to the site.		
Waste Collection	On-site collection via a private contractor using a 6.4m long, 2.1m high rear loading waste collection vehicle.		

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3. Existing Conditions

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3.1. Subject Site

The subject site is 27-31 Plunkett Street, Bellfield. The table below summarises the key characteristics of the subject site.

Table 2: Subject Site Description

Characteristic	Description
Address	27-31 Plunkett Street, Bellfield
Area	1,807m ²
Frontages (Approximate)	49m along the site’s eastern boundary to Plunkett Street
Zoning	General Residential Zone - Schedule 1 (GRZ1)
Overlay	Development Contributions Plan Overlay – Schedule 1 (DCPO1)
Current use of site	Vacant land
Car parking and loading provision	N/A
Vehicle access	A double-width crossover at the site’s approximate midpoint, and a double-width crossover shared between with No. 25, to the site’s south.
On-street parking along site frontage	6 unrestricted car spaces along Plunkett Street.

A locality plan, aerial photograph, photograph of the site frontage, and land use zoning map is provided at Figure 1 to Figure 4.

Significant nearby land uses include:

- **Bell Street Mall**, located approximately 300m walking distance north of the site,
- **Aldi Heidelberg West**, located approximately 400m walking distance north-west of the site,
- **Ford Park**, located approximately 800m walking distance south-west of the site, and
- **Heidelberg Repatriation Hospital**, located approximately 1.0km east of the site.

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Traffic Engineering Assessment

27-31 Plunkett Street, Bellfield

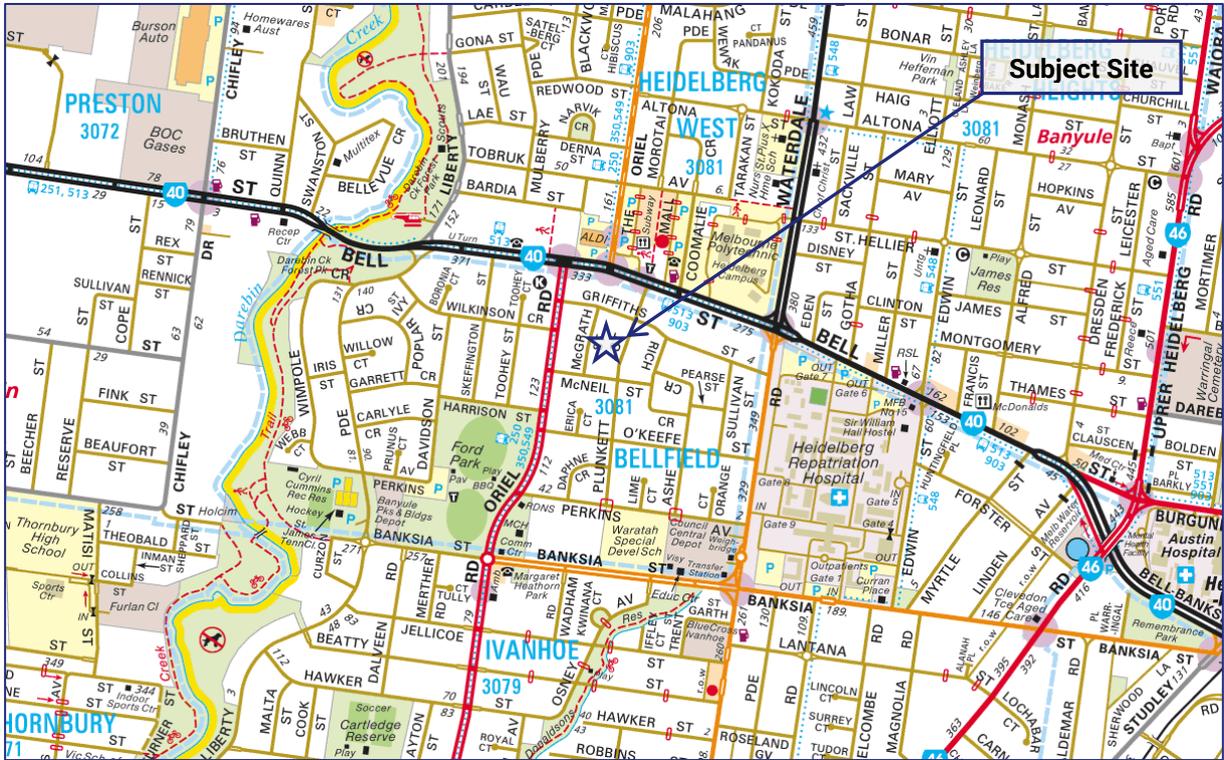


Figure 1: Locality Plan (Source: Melway)



Figure 2: Aerial Photograph (Source: Nearmap)



Figure 3: Photograph of Site Frontage (view north-west from Plunkett Street)

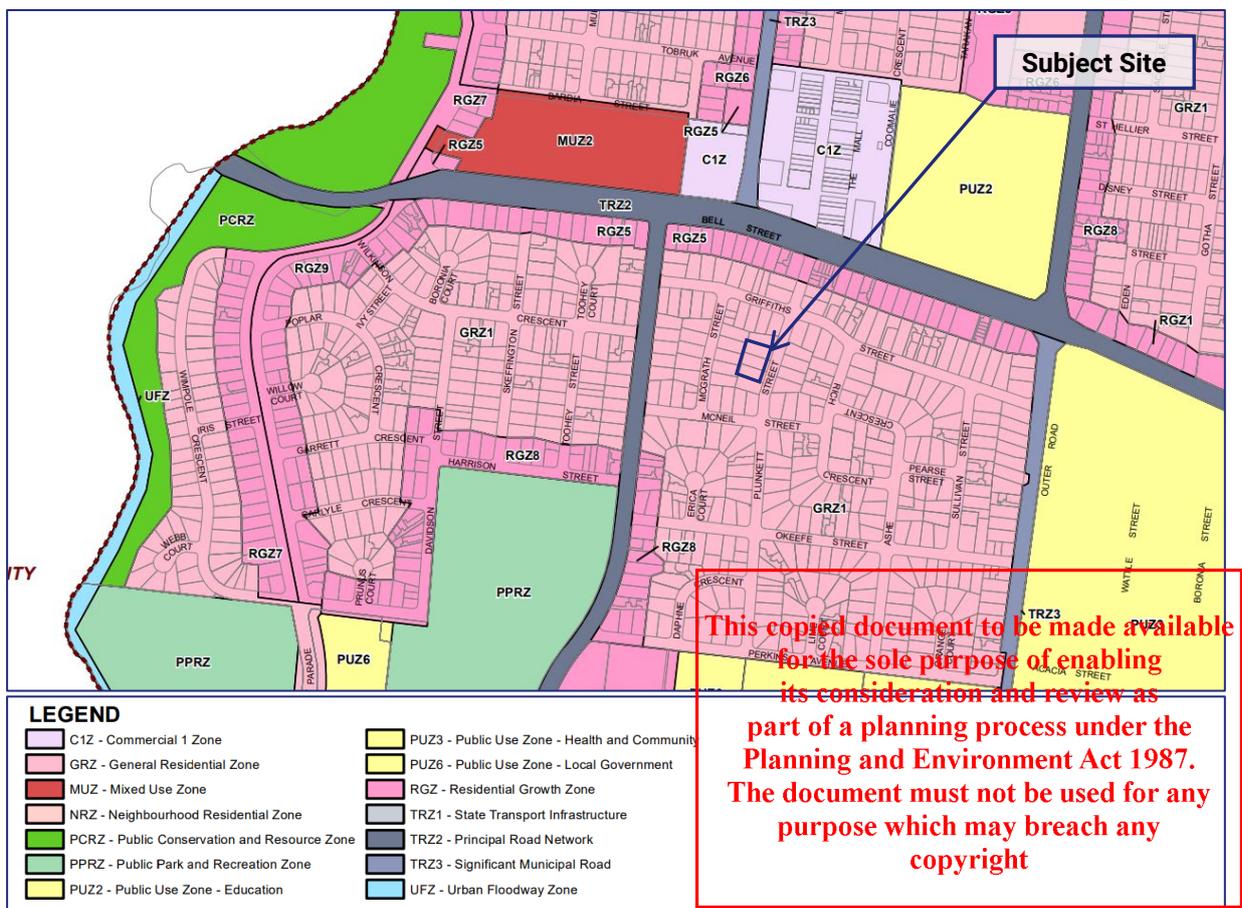


Figure 4: Land Use Zoning Map (Source: Planning Schemes Online)

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3.2. Transport Network

3.2.1. Road Network

Plunkett Street is a 'Level 2'¹ road managed by the Banyule City Council, which is classified to have a primary function of carrying local traffic and providing access to private properties. It is generally aligned in a north-south direction between Bell Street in the north and Perkins Avenue in the south.

In the vicinity of the site, Plunkett Street provides an approximately 6.9m wide undivided carriageway², providing a single traffic lane in each direction with kerbside parking on both sides.

On-street parking on Plunkett Street is typically unrestricted.

The intersection of Plunkett Street and Bell Street forms a T-intersection, with a left-in/left-out arrangement to Plunkett Street due to the divided carriageway of Bell Street.

The default urban speed limit of 50km/h applies to Plunkett Street.

Photographs depicting Plunkett Street are presented in Figure 5 and Figure 6.



Figure 5: Plunkett Street – view north



Figure 6: Plunkett Street – view south

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¹ As referenced in Banyule City Council Road Register 2021-2025, updated 10th August, 2023.
² Due to carriageway width, if parking occurs on both sides simultaneously, this leaves one lane for two-way traffic flow.

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3.2.2. Car Parking Conditions

Traffix Group completed an inventory of on-street parking during the site inspection on Wednesday 13th December, 2023 at 10am.

The purpose of the inventory was to ascertain the supply and management of car parking in the area, not to assess the demand for car parking. As set out at Section 4.1, the development satisfies its statutory requirements. Accordingly, the availability of on-street car parking is not a strong consideration for this proposal.

The detailed parking inventory is presented at Appendix C.

The survey area is presented in the figure below, which comprises an area of approximately 200m around the subject site.

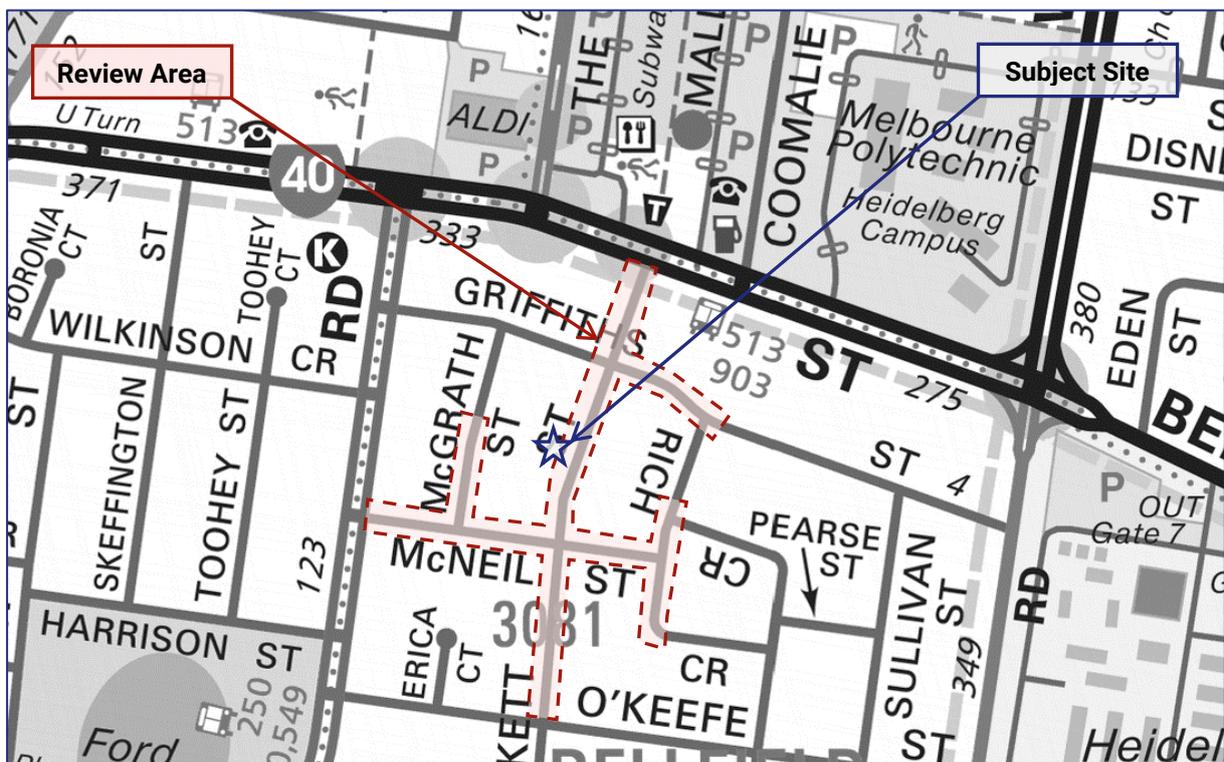


Figure 7: Parking Inventory Area (Source: Melway)

The key findings of the inventory were:

- There are 186 on-street car spaces within approximately 200m of the subject site.
- Car parking within the review area was typically unrestricted.
- Overall demand for on-street parking was low during the time of inventory, with a total of 154 vacant spaces observed (17% parking occupancy).

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3.3. Alternative Transport Modes

3.3.1. Public Transport

The site is located within the Principal Public Transport Network (PPTN) Area. Accordingly, the site has access to several public transport services, with multiple bus services available. A summary of services is provided at Table 3.

The available public transport services within proximity of the site are shown in Figure 8.

Table 3: Summary of Public Transport Services

Service	Between	Via
Bell Street – Approximately 220m walking distance north of the site		
Bus Route 513	Eltham & Glenroy	Lower Plenty
Bus Route 514	Eltham & Glenroy	Greensborough
Oriel Road – Approximately 350m walking distance north-west of the site		
Bus Route 250	Melbourne CBD (Queen Street) & La Trobe University	Ivanhoe, Northcote & Carlton
Bus Route 350	Melbourne CBD & La Trobe University	Eastern Freeway
Bus Route 549	Ivanhoe & Northland	Oriel Road
Bell Street – Approximately 450m walking distance north-east of the site		
Bus Route 903 (SMARTBUS)	Altona & Mordialloc	Chadstone, Box Hill, Doncaster, Heidelberg & Coburg

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Traffic Engineering Assessment

27-31 Plunkett Street, Bellfield

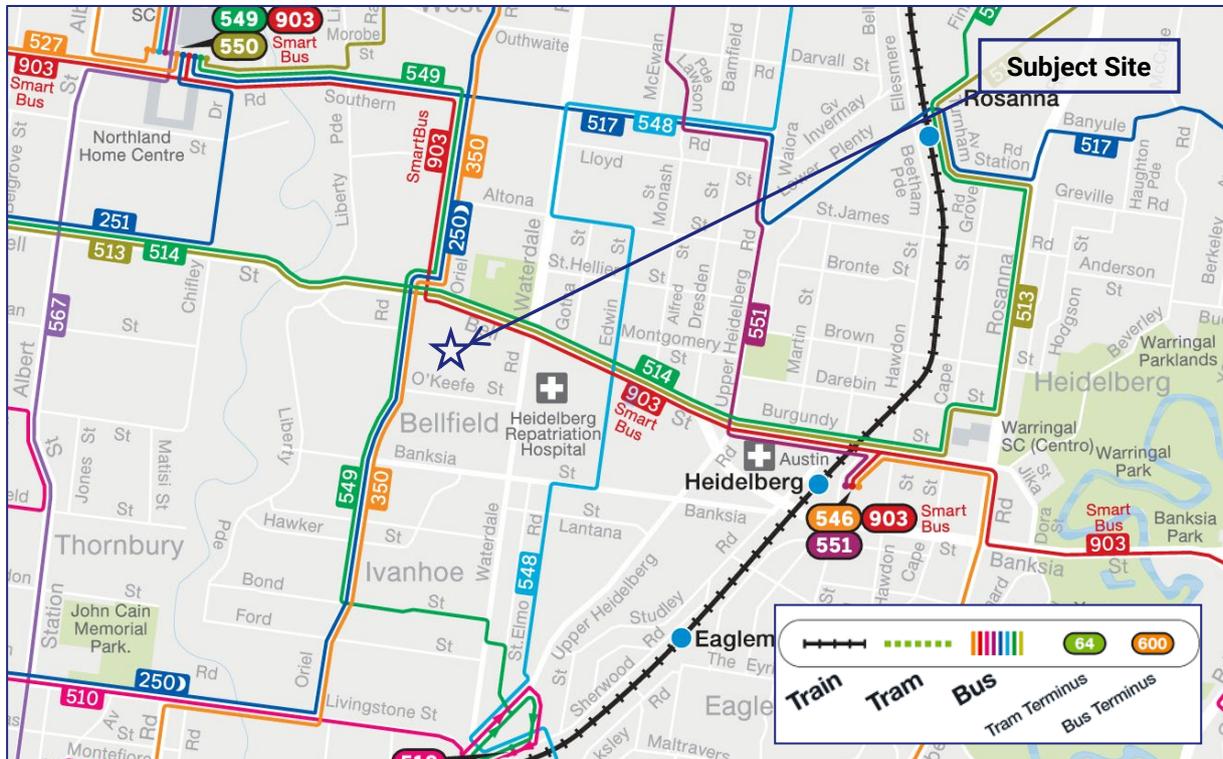


Figure 8: Public Transport Map (Source: PTV)

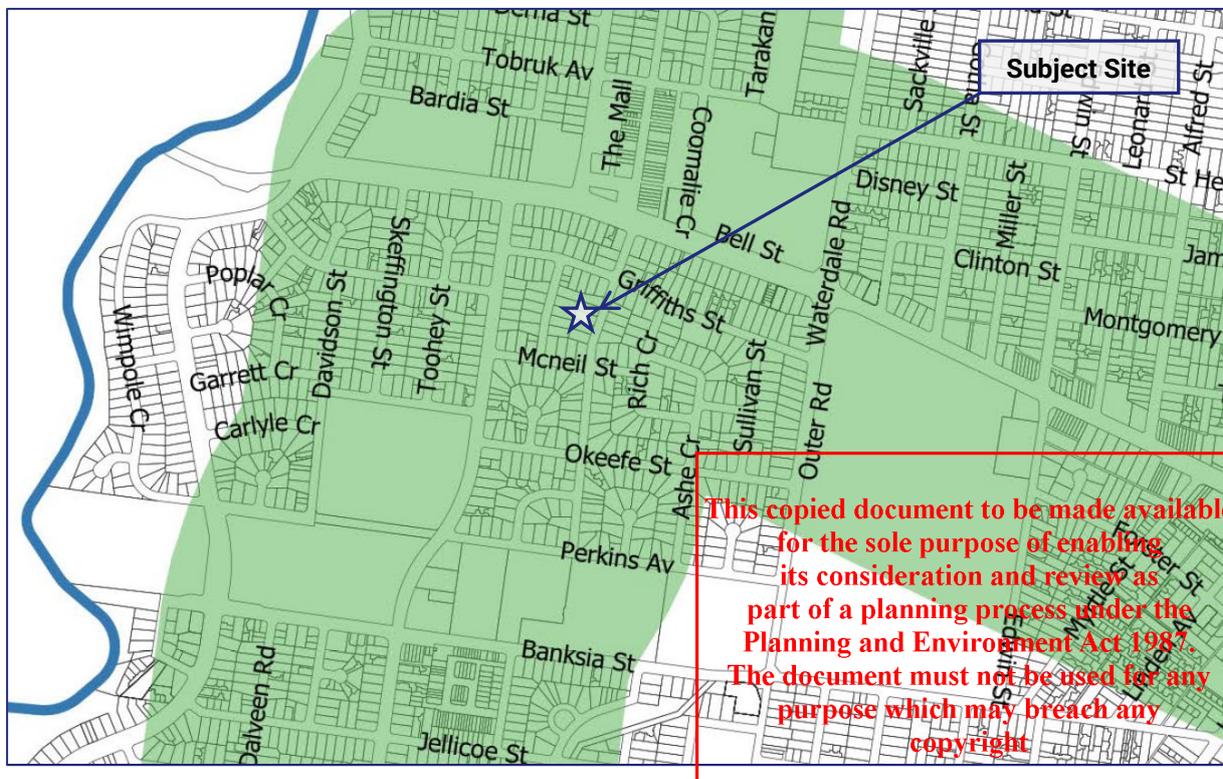


Figure 9: Principal Public Transport Network Area (Source: Planning Schemes Online)

3.3.2. Bicycle Infrastructure

The site is well served by bicycle infrastructure with off-road trails, on-road bicycle lanes, and informal bicycle routes surrounding the site, as shown in the excerpt from the City of Banyule as shown in Figure 10.

Oriel Road provides dedicated bicycle lanes on both sides, whereas Banksia Street and Waterdale Road both provide informal bicycle routes, which connect to nearby off-road trails. These trails include off-road paths within Darebin Creek Trail.

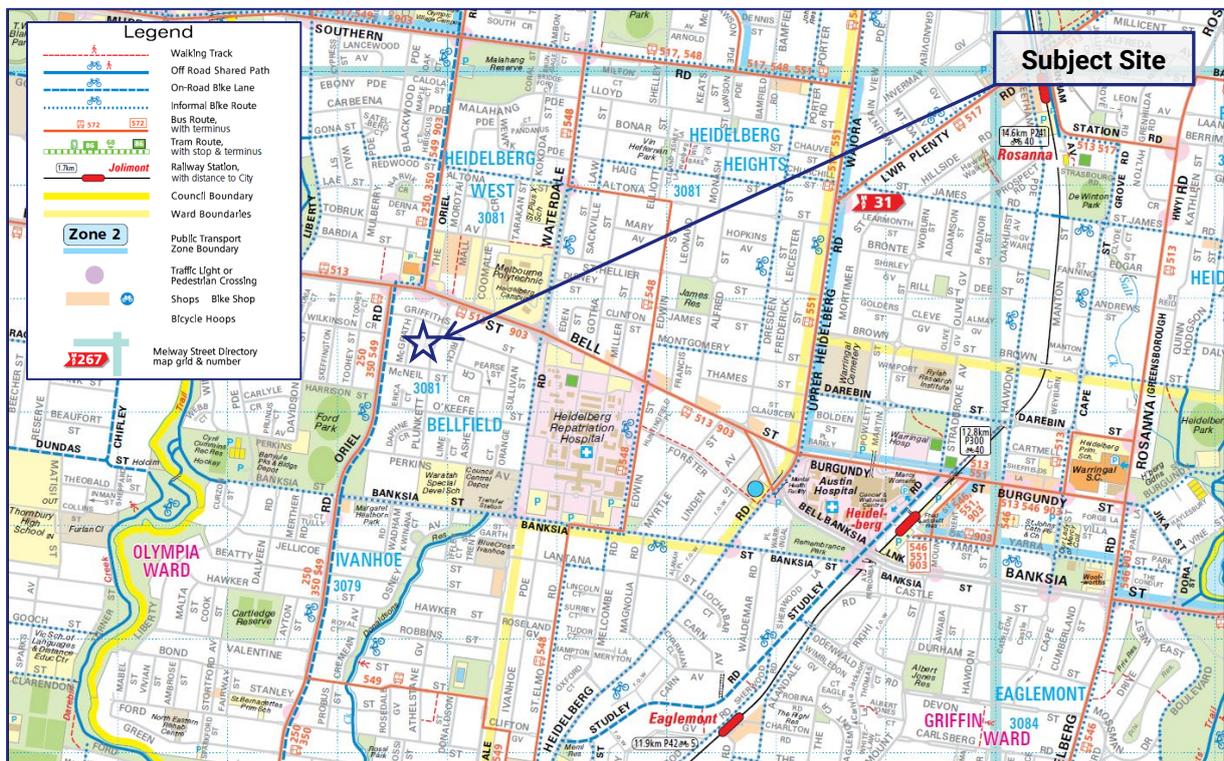


Figure 10: City of Banyule Council TravelSmart Map (Source: Banyule City Council)

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3.3.3. Walking

The site has a 'walk score' of 78 out of 100 by the Walk Score website and is classified as 'Very Walkable', meaning 'most errands can be accomplished on foot with many everyday services located within walking distance of the site. Figure 11 below indicates the area that is within a 20-minute walk of the site.

The following significant uses are within this 20-minute walk:

- Bell Street Mall
- Aldi Heidelberg West
- Ford Park
- Melbourne Polytechnic (Heidelberg Campus)
- Cyril Cummins Reserve
- Heidelberg Repatriation Hospital
- St Pius X Primary School

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The land uses detailed above demonstrate that there is a high level of everyday land uses in close proximity to the site, which would reduce the dependence on vehicular travel within this area.

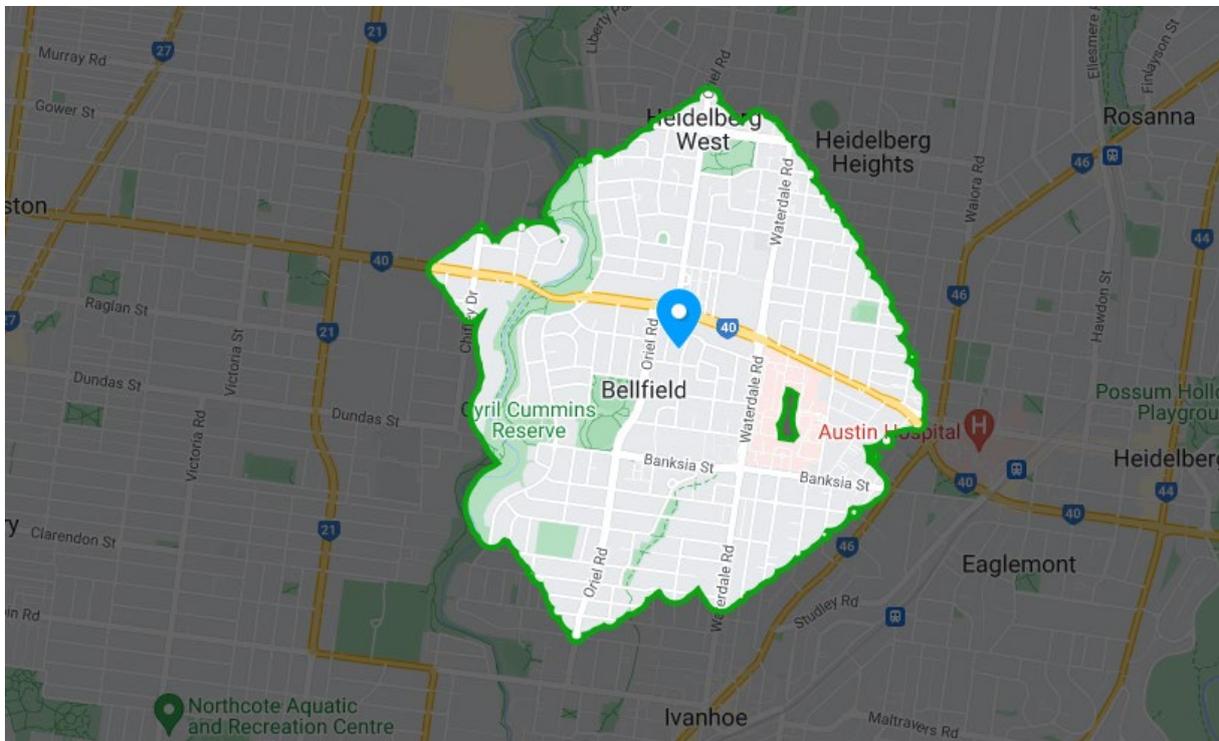


Figure 11: Map of 20-minute walking distance (Source: Walkscore)

4. Traffic Engineering Assessment

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4.1. Statutory Car Parking Assessment

The proposed development falls under the land-use category of 'dwelling' under Clause 73.03 of the Planning Scheme. The application is being made under Clause 53.23 of the Planning Scheme (Significant Residential Development with Affordable Housing). No specific car parking rates apply under this clause and as such, the car parking requirement set out under Clause 52.06 apply to the proposed development.

The purpose of Clause 52.06 is:

- *To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To support sustainable transport alternatives to the motor car.*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

The statutory parking requirements are set out at Clause 52.06-5 of the Planning Scheme. Clause 52.06-5 states:

Column A applies unless Column B applies.

Column B applies if:

- *any part of the land is identified as being within the Principal Public Transport Network Area as shown on the Principal Public Transport Network Area Maps (State Government of Victoria, 2018); or*
- *a schedule to the Parking Overlay or another provision of the planning scheme specifies that Column B applies.*

Given the site is located with the PPTN, the Column B rates apply.

The statutory car parking assessment of the development is set out in Table 4 below.

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Table 4: Statutory Car Parking Assessment – Column B of Clause 52.06-5

Use	Size / No.	Statutory Parking Rate (Column B)	Parking Requirement	Parking Provision	Shortfall / Surplus
One-bed dwelling	15	1 space per one/two-bedroom dwelling	15	15	- 12
Two-bed dwelling	8		8		
Three-bed dwelling	2	2 spaces per three or more bedroom dwelling	4		
Residential visitors	25	None required	N/A	0	0
TOTAL			27	15	- 12

The development generates a car parking requirement for 27 car spaces. The development proposes 15 car spaces, and accordingly a reduction in car parking is sought under Clause 52.06-7 of the Planning Scheme for 12 spaces.

Disabled Parking

Clause 52.06-9 states that:

The car parking requirement specified in Table 1 includes disabled car parking spaces. The proportion of spaces to be allocated as disabled spaces must be in accordance with Australian Standard AS2890.6-2009 (disabled) and the Building Code of Australia.

Disabled car parking is not required for residential developments under the Planning Scheme or the National Construction Code (NCC). Nevertheless, one DDA compliant car space is provided.

4.1.1. Reducing the Requirement for Car Parking

Clause 52.06-7 allows for the statutory car parking requirement to be reduced (including to zero). An application to reduce (including reduce to zero) the number of car spaces required under Clause 52.06-5 or in a schedule to the Parking Overlay must be accompanied by a Car Parking Demand Assessment.

Clause 52.06-7 sets out that a Car Parking Demand Assessment must have regard to the following key factors:

- The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.
- The variation of car parking demand likely to be generated by the proposed use over time.
- The short-stay and long-stay car parking demand likely to be generated by the proposed use.

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- *The availability of public transport in the locality of the land.*
- *The convenience of pedestrian and cyclist access to the land.*
- *The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.*
- *The anticipated car ownership rates of likely or proposed visitors to or proposed occupants (residents or employees) of the land.*
- *Any empirical assessment or case study.*

Planning Practice Note 22 (August, 2023) specifies that the provisions for reducing the car parking requirement draw a distinction between the assessment of likely demand for car parking spaces (the Car Parking Demand Assessment), and whether it is appropriate to allow the supply of fewer spaces than assessed by the Car Parking Demand Assessment. These are two separate considerations, one technical while the other is more strategic. Different factors are taken into account in each consideration.

Accordingly, the applicant must satisfy the responsible authority that the provision of car parking is appropriate on the basis of a two-step process, which has regard to:

- *Likely demand for car parking spaces.*
- *Whether it is appropriate to allow fewer spaces to be provided than the number likely to be generated by the site.*

An assessment of the appropriateness of reducing the car parking provision below the statutory requirement is set out below.

4.1.2. Car Parking Demand Assessment

The car parking requirements set out at Clause 52.06-5 are generally appropriate as a starting point for planning for standard dwellings and apartments. However in this case, the application is for social housing dwellings on the site.

Social housing type dwellings typically attract a lower demand for car parking and a more applicable car parking rate to be applied to these apartments would be the rate specified under Clause 53.20 of the Planning Scheme.

Clause 53.20 of the Planning Scheme sets out the following in relation to car parking:

A minimum 0.6 car spaces should be provided to each dwelling. Car spaces may be covered or uncovered.

If in calculating the number of car parking spaces the result is not a whole number, the required number of car parking spaces is to be rounded down to the nearest whole number greater than 1.

The rate of 0.6 car spaces per dwelling specified under Clause 53.20 of the Planning Scheme recognises the lesser demand for car parking from these types of dwellings and strikes a balance between the cost of construction and car parking provision. The purpose of this clause of the Planning Scheme is:

To facilitate the development of well-designed social housing and affordable housing to meet existing and future needs.

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To increase the social housing and affordable housing stock in Victoria.

To ensure the development of housing by or on behalf of the Chief Executive Officer, Homes Victoria does not unreasonably impact on the amenity of adjoining dwellings or small second dwellings.

Applying the rate of 0.6 car spaces per dwelling to the proposed 25 dwellings results in a car parking demand for 15 car spaces. As 15 car spaces are provided on the site, we are satisfied that the demand for car parking would be met on the site with no car parking overflow generated.

Accordingly, we are satisfied that the provision of car parking of 15 car spaces is appropriate in the planning for this development comprising of 25 apartments.

4.2. Bicycle Parking Provision

Clause 52.34 of the Planning Scheme specifies bicycle parking requirements for new developments. The purpose of Clause 52.34 is to:

- *To encourage cycling as a mode of transport.*
- *To provide secure, accessible and convenient bicycle parking spaces and associated shower and change facilities.*

There is no requirement to provide bicycle parking for residential developments under 4-storeys in size under Clause 52.34.

Given that the development will only be three-storeys high, no bicycle parking is required under Clause 52.34.

Nonetheless, a total of 26 bicycle parking spaces have been provided for the site, including:

- 9 x two-tier horizontal bicycle racks (18 spaces), within a dedicated bicycle store, and
- 4 x floor-mounted horizontal bicycle hoops (8 spaces) within the front setback of the building at approximately the midpoint of the site's frontage.

Accordingly, we consider these arrangements appropriate.

4.3. Review of Carpark Layout and Vehicle Access Arrangements

Traffic Group has provided design advice to the project architect to achieve a satisfactory carpark layout. The proposed parking layout has been assessed under the following guidelines:

- Clause 52.06-9 of the Planning Scheme,
- Clause 55.03-9 & 10 of the planning Scheme, and
- AS2890.1-2004 – Part 1: Off-Street Car Parking (where relevant)

An assessment against the relevant design standards of the Planning Scheme and Australian Standards (where relevant) is provided in the table below.

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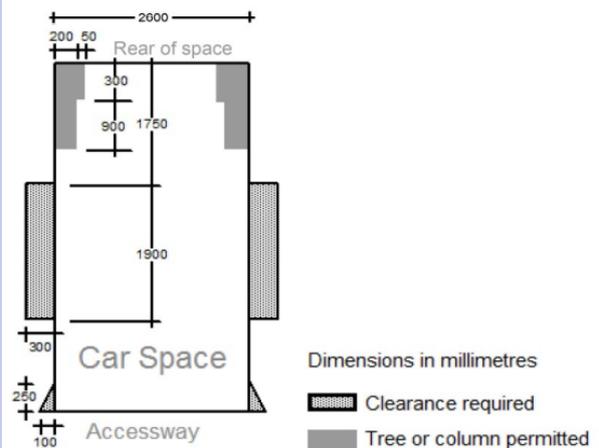
Table 5: Carpark Layout and Access Assessment

Requirement	Assessment	Design Response
Clause 55.03-9 – Standard B14		
The width of accessways or car spaces that front existing streets should not exceed: <ul style="list-style-type: none"> • 33 per cent of the street frontage, or • if the width of the street frontage is less than 20 metres, 40 per cent of the street frontage. 	✓	The crossover comprises approximately 33% of the site's frontage.
No more than one single-width crossover should be provided for each dwelling fronting a street.	✓	Only one double-width crossover provided at the north-eastern corner of the site.
The location of crossovers should maximise the retention of on-street car parking spaces.	✓	There are no changes to the on-street car parking spaces post-development.
The number of access points to a road in a Transport Zone 2 or a Transport Zone 3 should be minimised.	✓	Access point is not to roads in a Transport Zone 2 or a Transport Zone 3.
Developments must provide for access for service, emergency and delivery vehicles.	✓	Emergency and service vehicle access available to Plunkett Street along the site's frontage.
Clause 55.03-10 – Standard B15		
Car parking facilities should: <ul style="list-style-type: none"> • Be reasonably close and convenient to dwellings. • Be secure. • Be secure and well ventilated if enclosed. 	✓	Complies. The on-site carpark is secured via a roller door, and is located at the northern section of the residential development, accessible via the internal lobby.
Shared accessways or car parks of other dwellings and residential buildings should be located at least 1.5m from the windows of habitable rooms. This setback may be reduced to 1m where there is a fence at least 1.5m high or where window sills are at least 1.4m above the accessway.		Complies

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Requirement	Assessment	Design Response
Clause 52.06-9 – Design Standard 1 (Accessways)		
Must be at least 3m wide	✓	Accessways are greater than 3m in width.
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2m wide.	○	B99 design car can navigate all bends. Objective achieved.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forwards direction with one manoeuvre.	✓	Complies.
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8m.	✓	Complies. A minimum headroom clearance of 2.3m is maintained throughout the carpark.
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	✓	Complies.
Provide a passing area at the entrance at least 6.1m wide and 7m long if the accessway serves ten or more car parking spaces and is either more than 50m long or connects to a road in a Transport Zone 2 or Transport Zone 3.	✓	Complies.
Have a corner splay or area at least 50% clear of visual obstructions extending at least 2m along the frontage road from the edge of an exit lane and 2.5m along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	✓	Complies. Pedestrian sight triangles are provided along both sides of the carpark accessway.

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Requirement	Assessment	Design Response																													
Clause 52.06-9 – Design Standard 2 (Car Parking Spaces)																															
<p>Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 under Clause 53.20-6.9.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #333; color: white;"> <th>Angle of car spaces to accessway</th> <th>Accessway width</th> <th>Car park width</th> <th>Car park length</th> </tr> </thead> <tbody> <tr> <td>Parallel</td> <td>3.6 m</td> <td>2.3 m</td> <td>6.7 m</td> </tr> <tr> <td>45°</td> <td>3.5 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td>60°</td> <td>4.9 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td rowspan="4">90°</td> <td>6.4 m</td> <td>2.6 m</td> <td>4.9 m</td> </tr> <tr> <td>5.8 m</td> <td>2.8 m</td> <td>4.9 m</td> </tr> <tr> <td>5.2 m</td> <td>3.0 m</td> <td>4.9 m</td> </tr> <tr> <td>4.8 m</td> <td>3.2 m</td> <td>4.9 m</td> </tr> </tbody> </table> <p><small>Note to Table 2: Some dimensions in Table 2 vary from those shown in the Australian Standard AS2890.1-2004 (off street). The dimensions shown in Table 2 allocate more space to aisle widths and less to marked spaces to provide improved operation and access. The dimensions in Table 2 are to be used in preference to the Australian Standard AS2890.1-2004 (off street) except for disabled spaces which must achieve Australian Standard AS2890.6-2009 (disabled).</small></p>	Angle of car spaces to accessway	Accessway width	Car park width	Car park length	Parallel	3.6 m	2.3 m	6.7 m	45°	3.5 m	2.6 m	4.9 m	60°	4.9 m	2.6 m	4.9 m	90°	6.4 m	2.6 m	4.9 m	5.8 m	2.8 m	4.9 m	5.2 m	3.0 m	4.9 m	4.8 m	3.2 m	4.9 m	✓	Complies.
Angle of car spaces to accessway	Accessway width	Car park width	Car park length																												
Parallel	3.6 m	2.3 m	6.7 m																												
45°	3.5 m	2.6 m	4.9 m																												
60°	4.9 m	2.6 m	4.9 m																												
90°	6.4 m	2.6 m	4.9 m																												
	5.8 m	2.8 m	4.9 m																												
	5.2 m	3.0 m	4.9 m																												
	4.8 m	3.2 m	4.9 m																												
<p>A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1, other than:</p> <ul style="list-style-type: none"> • A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1. • A structure, which may project into the space if it is at least 2.1 metres above the space. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Diagram 1 Clearance to car parking spaces</p>  <p style="font-size: small;">Dimensions in millimetres</p> <p style="font-size: small;"> Clearance required Tree or column permitted </p> </div>	✓	Complies.																													
<p>Car spaces in garages/carports must be at least 6m long and 3.5m wide for a single space and 5.5m wide for a double space measured inside the garage/carport.</p>	N/A	No garages/carports provided.																													

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Requirement	Assessment	Design Response													
Where parking spaces are provided in tandem (one space behind the other) an additional 500mm in length must be provided between each space.	N/A	No tandem car spaces provided.													
Disabled car parking spaces must be designed in accordance with AS2890.6-2009 and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 0.5m. A minimum headroom of 2.5m is to be provided above the disabled car space in accordance with AS2890.6-2009.	N/A	No disabled spaces provided.													
Clause 52.06-9 – Design Standard 3 (Gradients)															
Accessway grades must not be steeper than 1:10 (10 per cent) within 5 metres of the frontage to ensure safety for pedestrians and vehicles. The design must have regard to the wheelbase of the vehicle being designed for; pedestrian and vehicular traffic volumes; the nature of the car park; and the slope and configuration of the vehicle crossover at the site frontage. This does not apply to accessways serving three dwellings or less.	✓	The site is generally flat.													
Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 and be designed for vehicles travelling in a forward direction.	N/A	Complies.													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #1a3d54; color: white;">Type of car park</th> <th style="background-color: #1a3d54; color: white;">Length of ramp</th> <th style="background-color: #1a3d54; color: white;">Maximum grade</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="background-color: #1a3d54; color: white;">Public car parks</td> <td>20 metres or less</td> <td>1:5 (20%)</td> </tr> <tr> <td>longer than 20 metres</td> <td>1:6 (16.7%)</td> </tr> <tr> <td rowspan="2" style="background-color: #1a3d54; color: white;">Private or residential car parks</td> <td>20 metres or less</td> <td>1:4 (25%)</td> </tr> <tr> <td>longer than 20 metres</td> <td>1:5 (20%)</td> </tr> </tbody> </table>	Type of car park	Length of ramp	Maximum grade	Public car parks	20 metres or less	1:5 (20%)	longer than 20 metres	1:6 (16.7%)	Private or residential car parks	20 metres or less	1:4 (25%)	longer than 20 metres	1:5 (20%)		
Type of car park	Length of ramp	Maximum grade													
Public car parks	20 metres or less	1:5 (20%)													
	longer than 20 metres	1:6 (16.7%)													
Private or residential car parks	20 metres or less	1:4 (25%)													
	longer than 20 metres	1:5 (20%)													
Where the difference in grade between two sections of ramp or floor is greater than 1:8 (12.5 per cent) for a summit grade change, or greater than 1:6.7 (15 per cent) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming.	✓	Complies.													
Plans must include an assessment of grade changes of greater than 1:5.6 (18 per cent) or less than 3 metres apart for clearances, to the satisfaction of the responsible authority	✓	Complies.													

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Requirement	Assessment	Design Response
Clause 52.06-9 – Design Standard 4 (Mechanical Parking)		
At least 25 per cent of the mechanical car parking spaces can accommodate a vehicle height of at least 1.8 metres.	✓	No mechanical parking provided.
Car parking spaces that require the operation of the system are not allocated to visitors unless used in a valet parking situation.	✓	
The design and operation is to the satisfaction of the responsible authority.	✓	
Clause 52.06-9 – Design Standard 5 (Urban Design)		
Ground level car parking, garage doors and accessways must not visually dominate public space.	N/A	These matters are more related to urban design, rather than specifically traffic engineering.
Car parking within buildings (including visible portions of partly submerged basements) must be screened or obscured where possible, including through the use of occupied tenancies, landscaping, architectural treatments and artworks.		
Design of car parks must take into account their use as entry points to the site.		
Design of new internal streets in developments must maximise on street parking opportunities.	N/A	No internal streets proposed.
Clause 52.06-9 – Design Standard 6 (Safety)		
Car parking must be well lit and clearly signed.	N/A	Car parking is all private for use by residents, and we are satisfied that signage is not strictly required. Sensor lights or similar, attached to the carpark columns would be adequate for a development of this scale.
The design of car parks must maximise natural surveillance and pedestrian visibility from adjacent buildings.		We are satisfied that the common access way naturally provides good sightlines.

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Requirement	Assessment	Design Response
Pedestrian access to car parking areas from the street must be convenient.	✓	The carpark is accessible via a dedicated pedestrian door connecting to the footpath along Plunkett Street.
Pedestrian routes through car parking areas and building entries and other destination points must be clearly marked and separated from traffic in high activity parking areas.	✓	Given that only 15 car spaces are served by the shared accessway. We are satisfied that separated pedestrian lanes are not required for this low level of traffic.
Clause 52.06-9 – Design Standard 7 (Landscaping)		
The layout of car parking areas must provide for water sensitive urban design treatment and landscaping.	N/A	These requirements are not strictly related to traffic engineering matters.
Landscaping and trees must be planted to provide shade and shelter, soften the appearance of ground level car parking and aid in the clear identification of pedestrian paths.		
Ground level car parking spaces must include trees planted with flush grilles. Spacing of trees must be determined having regard to the expected size of the selected species at maturity.		

4.4. Loading and Waste Collection Arrangements

Clause 65.01 of the Planning Scheme states that the Responsible Authority must consider a number of matters as appropriate including:

- *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*

4.4.1. Loading

Loading requirements for the dwellings will be minimal (typically limited to removalist activities utilising vans and other smaller trucks). These loading activities can be undertaken either on-street along the site's frontage, or within the on-site carpark if appropriate.

Accordingly, we are satisfied that the loading arrangements are appropriate.

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4.4.2. Waste Collection

Traffix Group has prepared a Waste Management Plan (GRP33824R-02A(WMP)), which sets out that waste collection is to be undertaken within the on-site carpark via a private contractor using a 6.4m long, 2.1m high mini rear loading vehicle.

Accordingly, we satisfied that the waste collection arrangements are acceptable from a traffic engineering perspective.

4.5. Traffic Impacts

The proposed development is conservatively expected to generate traffic movements at a rate of 5 vehicle trip ends per dwelling with a car spaces per day. Typically, 10% of the daily traffic generation can be expected to occur in the commuter peak hours.

Traffic generation associated with visitors is included within the rates adopted for dwellings. In practice, visitor movements occur outside of the commuter peak hours.

A total of 75 trips per day or 8 vehicle trips per peak hour (i.e., 1 movement every 7-8 minutes) is not significant in the context of Plunkett Street, or the surrounding road network.

Based on the above, we are satisfied that the level of traffic likely to be generated by the proposed development can be easily accommodated by the surrounding road network and intersections and will not have a discernible impact on Plunkett Street.

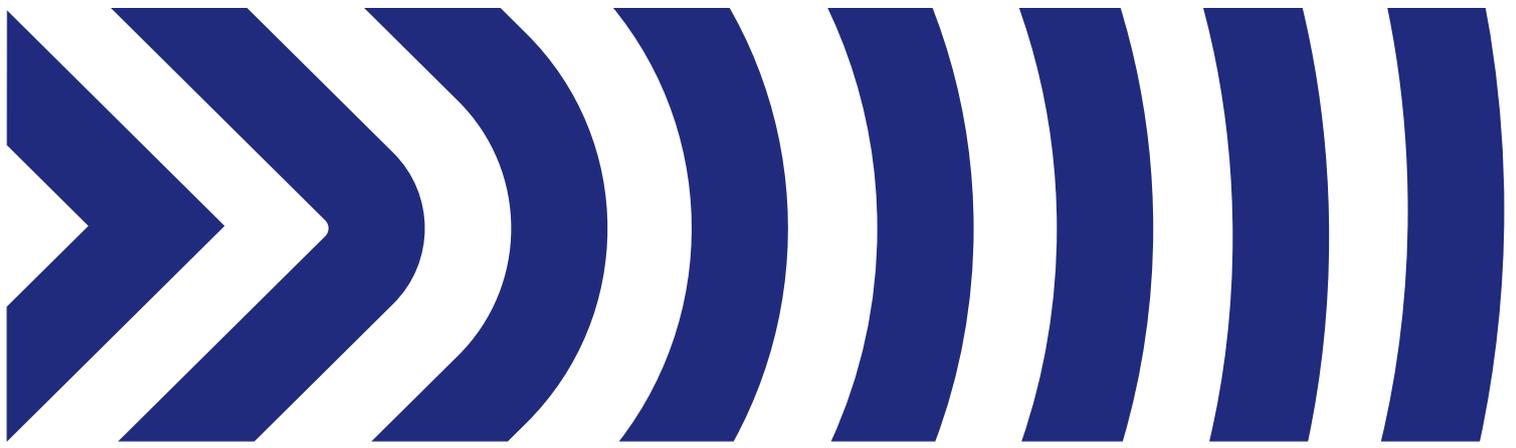
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5. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed residential development at 27-31 Plunkett Street, Bellfield, we are of the opinion that:

- a) the proposed development has a statutory car parking requirement of 27 car spaces under Clause 52.06-5 of the Planning Scheme,
- b) the provision of 15 car spaces on the site results in a reduction of 12 car spaces being sought by the application under Clause 52.06-7 of the Planning Scheme,
- c) the provision of 15 car spaces at a rate of 0.6 car spaces per dwelling, consistent with Clause 53.20-6.9 is appropriate for the provision of car parking for a social housing development in this location, and no parking overflow will result,
- d) the proposed parking layout and vehicle access arrangements accord with the requirements of the Planning Scheme, Australian Standards (where relevant) and current practice,
- e) no bicycle parking is required under Clause 52.34 of the Planning Scheme. Nonetheless, a total of 26 bicycle spaces have been provided on the site,
- f) a dedicated loading bay is not warranted for a small-scale residential development, and loading can occur along the site's frontage,
- g) waste collection will be undertaken on-site with a 6.4m long, 2.1m high mini rear loading vehicle, and these arrangements are acceptable,
- h) the level of traffic generated by the proposal can be accommodated without any adverse impacts to the operation of the local road network, and
- i) there are no traffic engineering reasons why a planning permit for the proposed residential development at 27-31 Plunkett Street, Bellfield should be refused, subject to appropriate conditions.

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Appendix A

Development Plans

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PLAN**

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**STREET
PLUNKETT**

- LEGEND**
- existing tree to be retained
 - existing tree to be removed
 - proposed tree - refer to landscape plan
 - concrete pavers
 - concrete paving
 - landscaped area
 - metal deck roof
 - integrated multibank letterbox
 - clothesline - wall hung fold down
 - EV charging station - wall mounted

- FENCE, BALUSTRADE AND SCREEN LEGEND**
- FE01 - New 1.5m high front fence - brick pillars (FM01) with vertical metal slats @ 45° (FM07).
 - FE02 - New 1.5m high masonry brick wall (FM01).
 - FE03 - New 2.1m high timber paling fence.
 - FE04 - New 2.4m high timber paling fence.
 - FE04a - New 2.4m high timber paling fence with 450mm high concrete sleeper retaining wall at base.
 - BAL01 - Metal slat balustrade (FM03) to achieve 1.0m high above FFL with metal solar/privacy shroud extending 500mm around balcony opening.
 - SCR01 - Powdercoated metal privacy screen to 1.7m above FFL. Finish - Matt Anthracite
 - SCR02 - Powdercoated metal privacy screen to 1.7m above FFL. Finish - Manor Red
 - SCR03 - Powdercoated metal roof plant screen to 1.8m high. Finish - Dover White
 - SCR04 - Powdercoated metal privacy shroud (FM05) extending 500mm past balcony opening.

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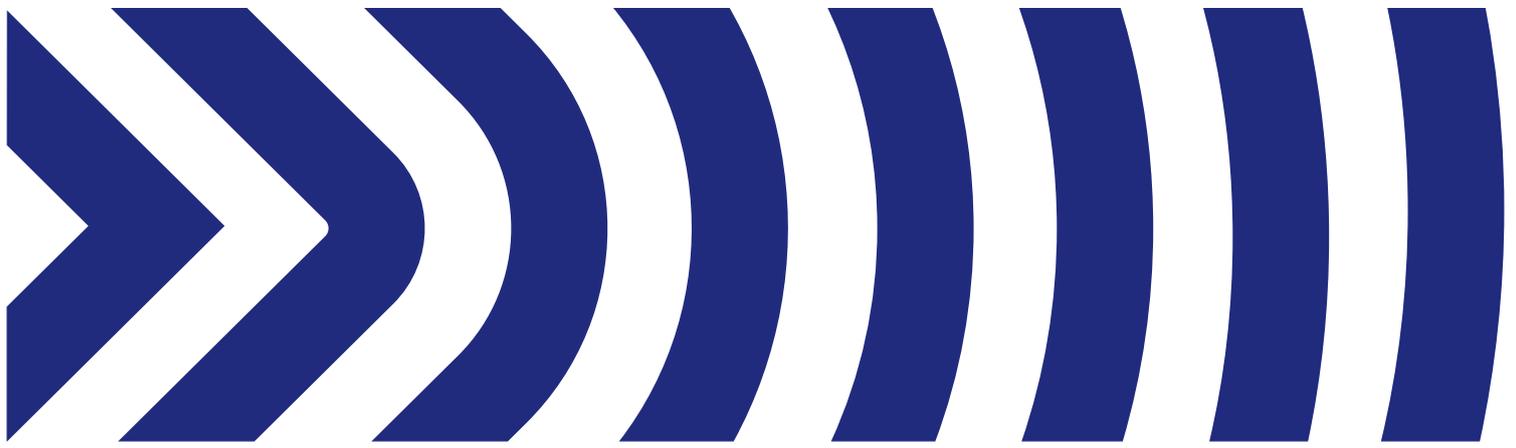
TP SUBMISSION	04.03.2024	A
TP SUBMISSION	29.02.2024	-
N° TITLE	DATE REV	

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**TOWN PLANNING
NOT FOR CONSTRUCTION**

27-31 PLUNKETT ST, BELLFIELD
TP.07
Ground Floor Plan

SCALE	1:100 @A1
DATE	04/03/2024
DRAWN BY	FBA
PROJET	23009
REVISION	A



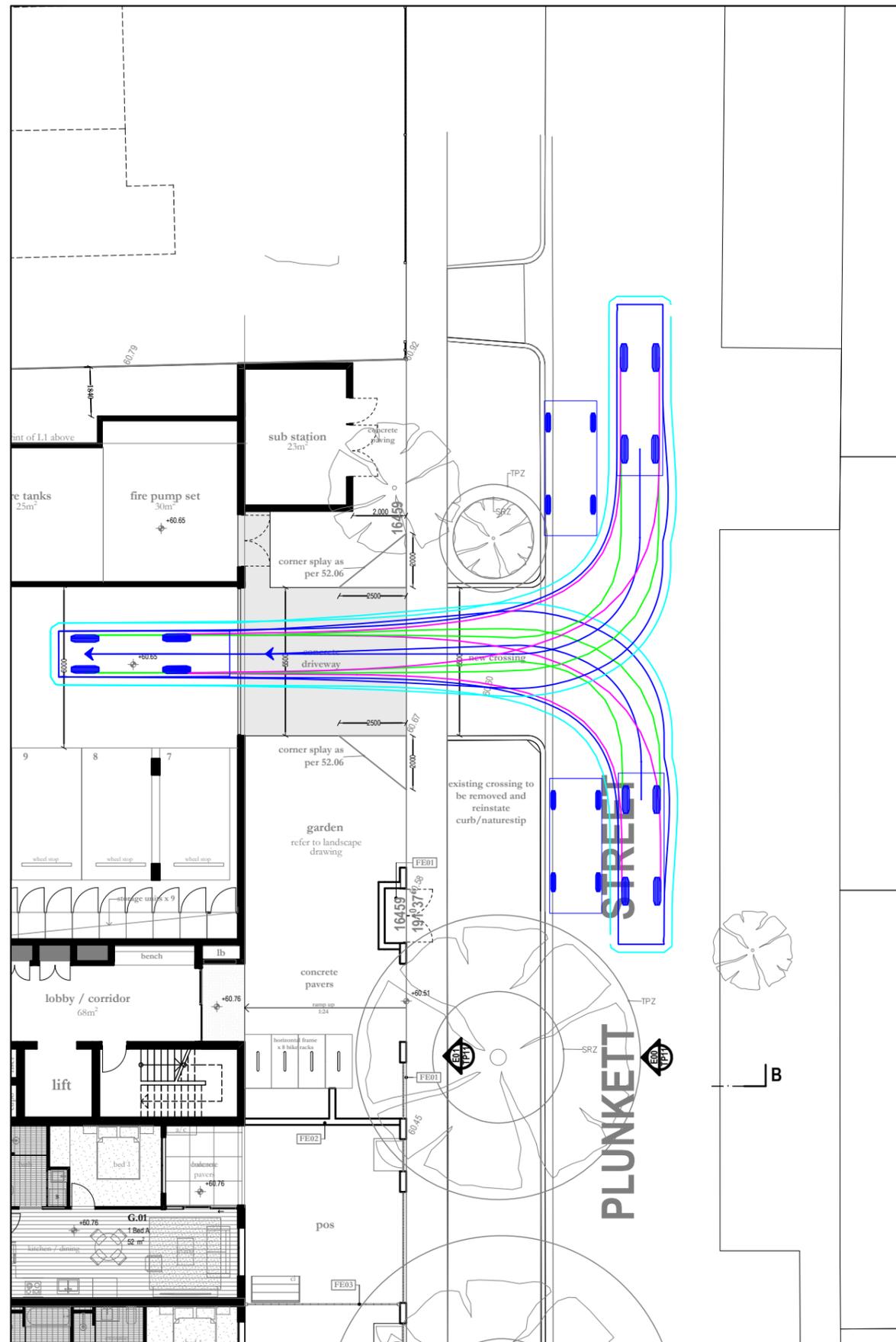
Appendix B

Swept Path Diagrams

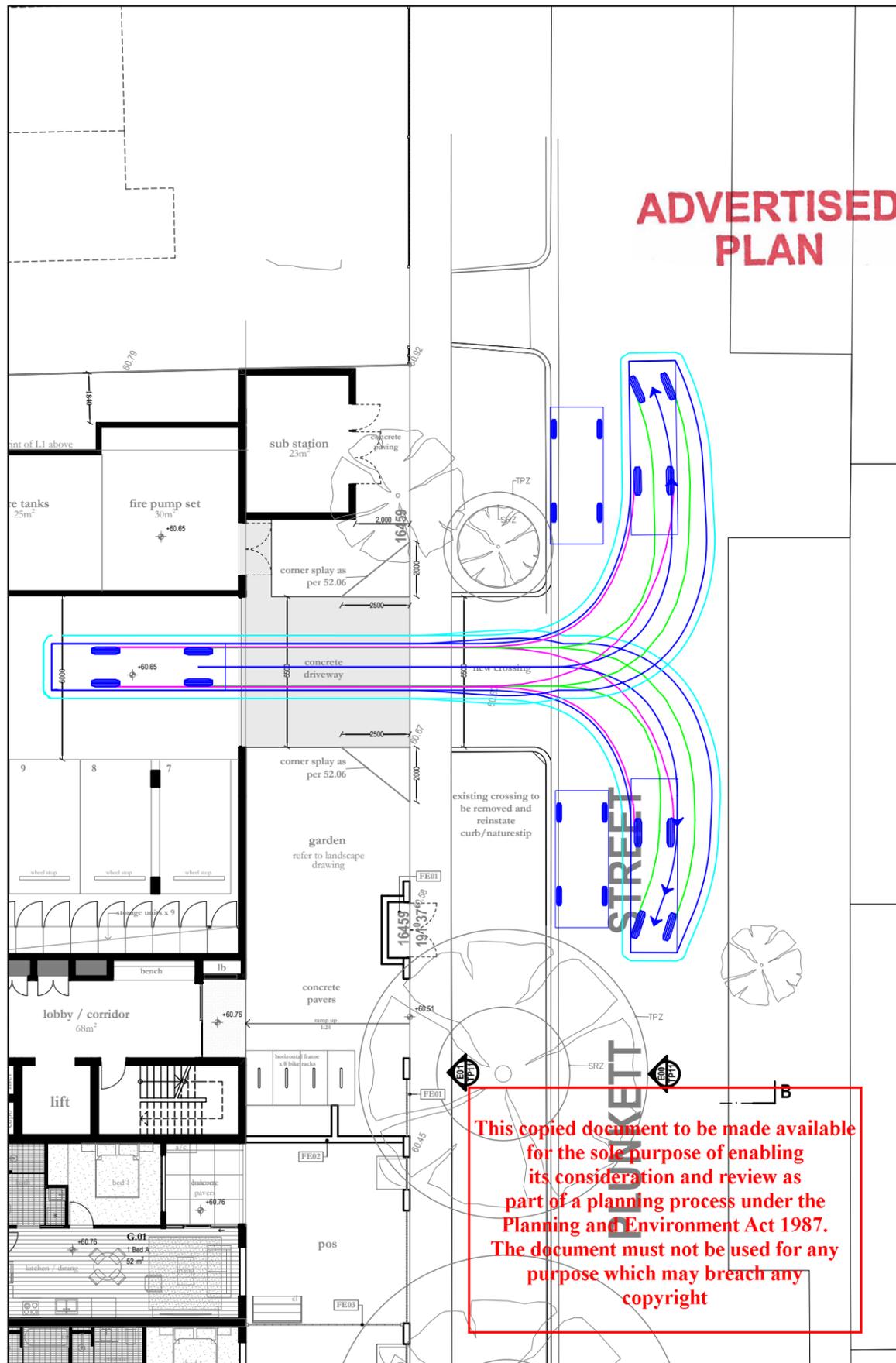
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PLAN**

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SITE ACCESS - 6.4m WASTE COLLECTION VEHICLE - INGRESS



SITE ACCESS - 6.4m WASTE COLLECTION VEHICLE - EGRESS



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VEHICLE PROFILE

VEHICLE USED IN SIMULATION

Waste Wise Mini (Hino 300)

Width	: 1.7m
Front Track	: 1.4m
Rear Track	: 1.44m
Kerb to Kerb Radius	: 12.4m

LEGEND

REAR WHEELS	VEHICLE BODY
FRONT WHEELS	BODY CLEARANCE

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REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	20/02/2024	TOWN PLANNING	K. EWE	M. WOOLLARD
B	05/03/2024	UPDATED PLANS	K. EWE	M. WOOLLARD

27-31 PLUNKETT STREET, BELLFIELD
PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:
BASE INFORMATION FROM: "TP.07 Ground Floor Plan Rev A.dwg"
DRAWINGS BY: Ferencz Baranyay Architects, dated 04/03/2024

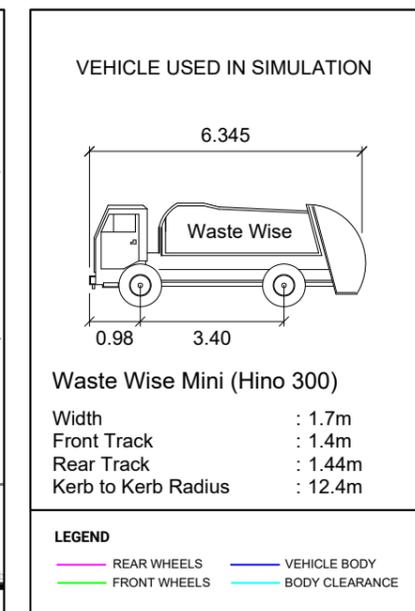
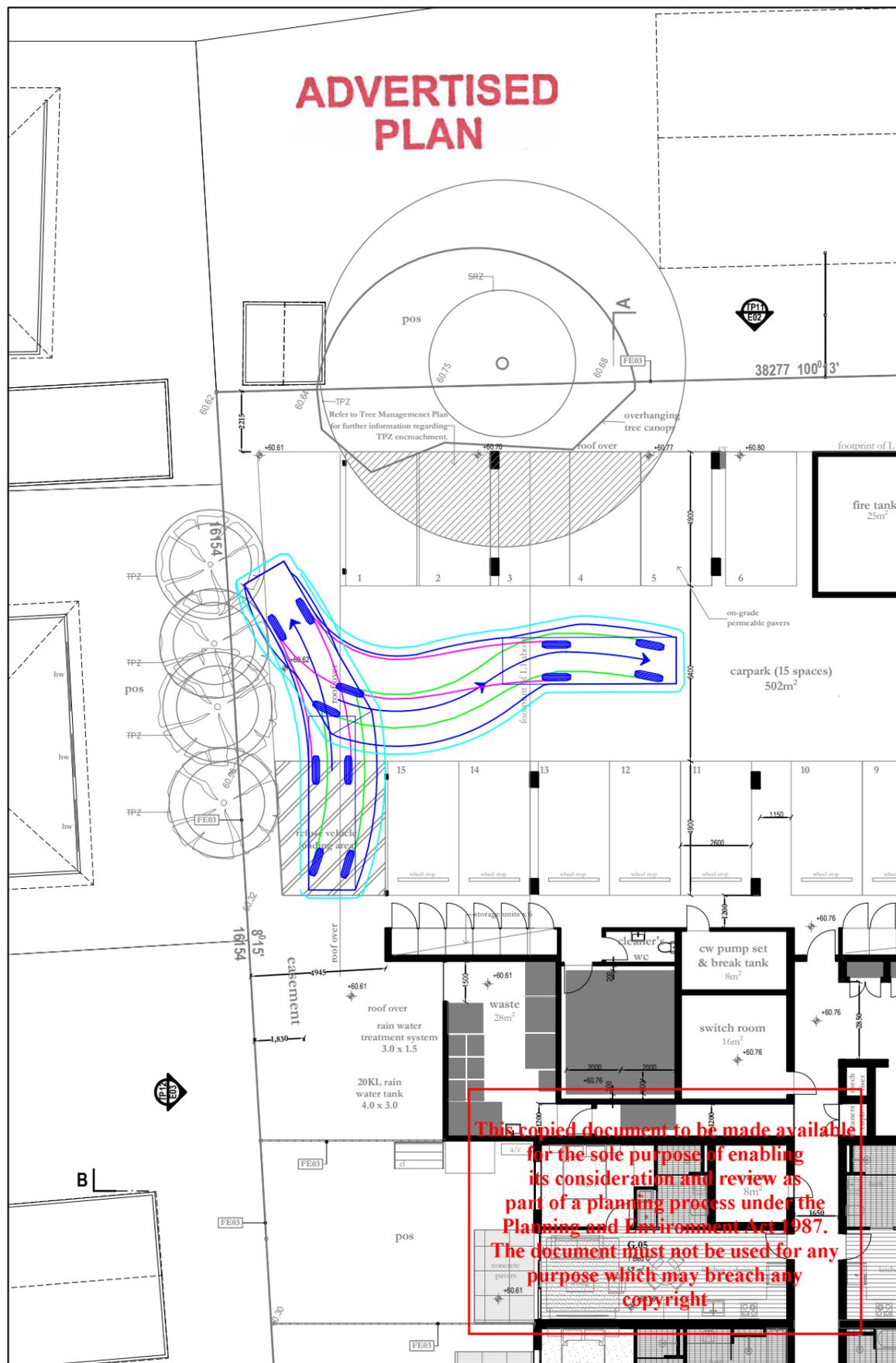
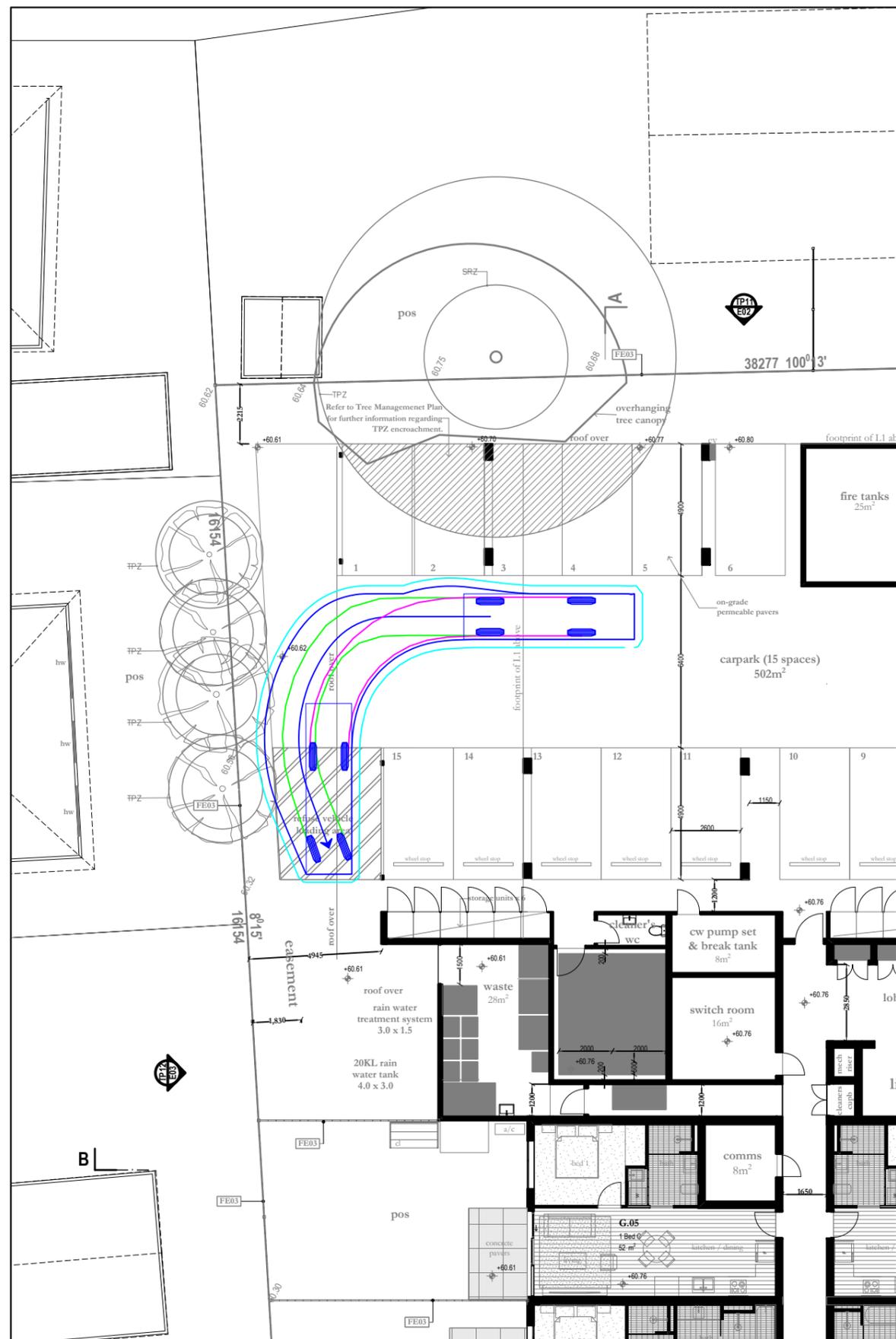
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Traffic Group

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REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	20/02/2024	TOWN PLANNING	K. EWE	M. WOOLLARD
B	05/03/2024	UPDATED PLANS	K. EWE	M. WOOLLARD

27-31 PLUNKETT STREET, BELLFIELD
 PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:
 BASE INFORMATION FROM: "TP.07 Ground Floor Plan Rev A.dwg"
 DRAWINGS BY: Ferencz Baranyay Architects, dated 04/03/2024

FILE NAME: G33824-01
SHEET NO.: 02



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