34 George Street, Reservoir

Transport Impact Assessment

230357TIA001E-F.docx

28 November 2025

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one*mile****grid*** *operates from Wurundjeri Woiworung Country of the Kulin nation. We acknowledge and extend our appreciation to the Wurundjeri People, the Traditional Owners of the land. We pay our respects to leaders and Elders past, present and emerging for they hold the memories, the traditions, the culture, and the hopes of all Wurundjeri Peoples.*

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1 INTRODUCTION

onemile**grid** has been requested by YS Housing Ltd to undertake a Transport Impact Assessment of the proposed residential development at 34 George Street, Reservoir.

onemile**grid** has previously prepared a Transport Impact Assessment (230357TIA001D-F-All) which was submitted to Council in response to referral comments following, which was updated from the report submitted with the initial town planning application. Subsequently, the design has been amended, and this updated report has been prepared to address the changes.

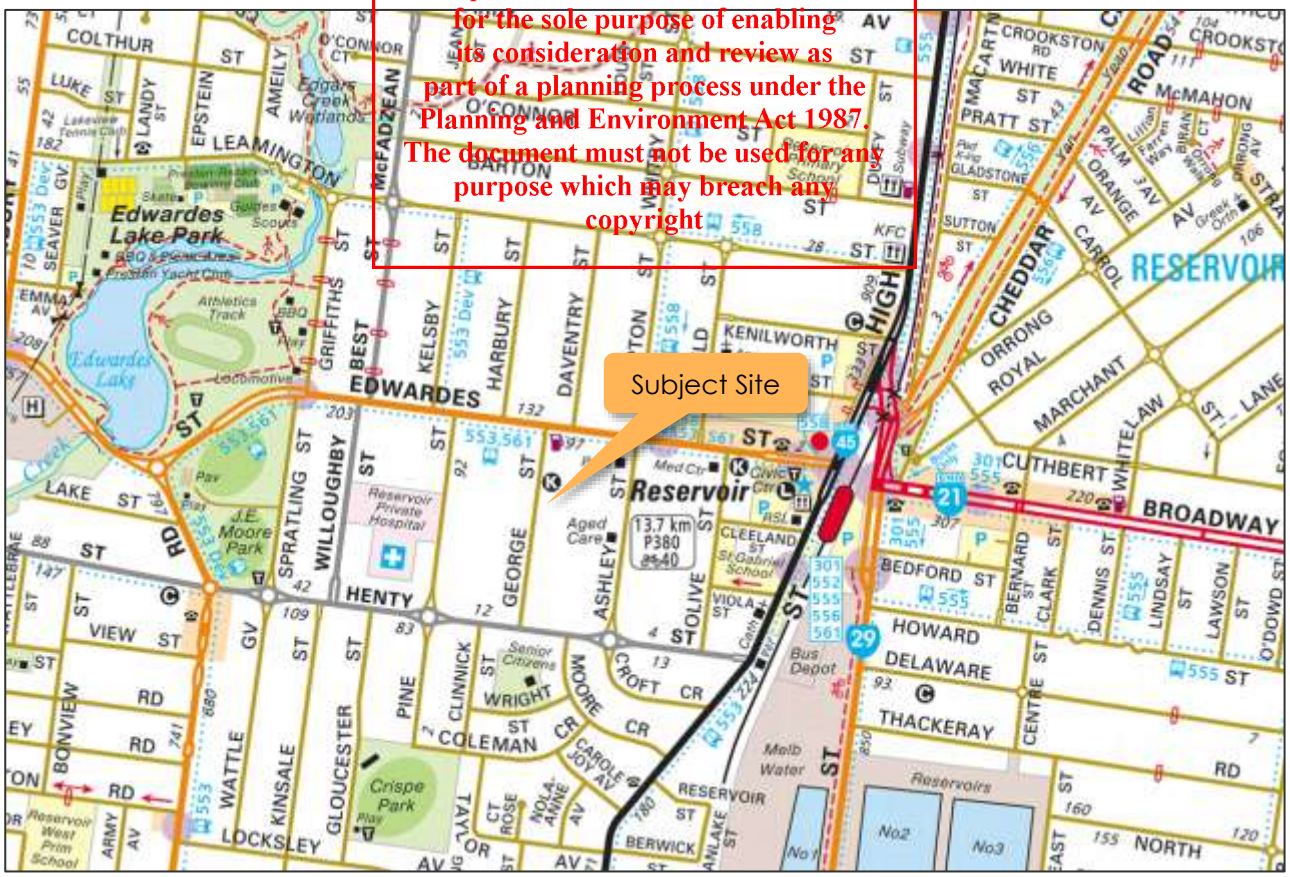
As part of this assessment the subject site has been inspected with due consideration of the development proposal, parking data has been sourced and relevant background reports have been reviewed.

2 EXISTING CONDITIONS

2.1 Site Location

The subject site is located at 34 George Street, Reservoir, as shown in Figure 1. The site is rectangular in shape, with a frontage to George Street of approximately 40m.

Figure 1 Site Location



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The site is currently occupied by church serviced by an on-site car park.

Vehicle access to the site is currently provided via a single width crossover to George Street, located approximately centrally within the site frontage.

Land use in the immediate vicinity of the site is residential in nature, and includes a number of multi-unit lots.

An aerial view of the subject site is provided in Figure 2.

Figure 2 Site Context (15 October 2025)

Copyright Nearmap

2.2 Planning Zones and Overlays

It is shown in Figure 3 that the site is located within a General Residential Zone (GRZ2). The site is also subject to a Development Contributions Plan Overlay (DCPO1) and a Heritage Overlay (HO264).

Figure 3 Planning Scheme Zones

2.3 Road Network

2.3.1 George Street

George Street is a local road generally aligned north-south, running between Edwardes Street in the north, and Henty Street in the south. George Street provides a carriageway approximately 7.5m wide, accommodating two-way traffic. Unrestricted kerbside parking is provided on both sides of the road.

The default 50km/h speed limit applies to George Street in the vicinity of the site.

The cross-section of George Street at the frontage of the site is shown in Figure 4.

Figure 4 George Street, looking each direction from the site frontage

2.4 Sustainable Transport

2.4.1 Public Transport

The full public transport provision in the vicinity of the site is shown in Figure 5, and detailed in Table 1 with walking distance from the site shown in brackets. It is shown that the site has excellent public transport accessibility, with a wide variety of transport modes and services servicing the immediate vicinity of the site. Of note, Reservoir Railway Station is located approximately 10 minutes' walking distance from the site, providing residents and visitors with convenient public transport access.

Figure 5 Public Transport Provision

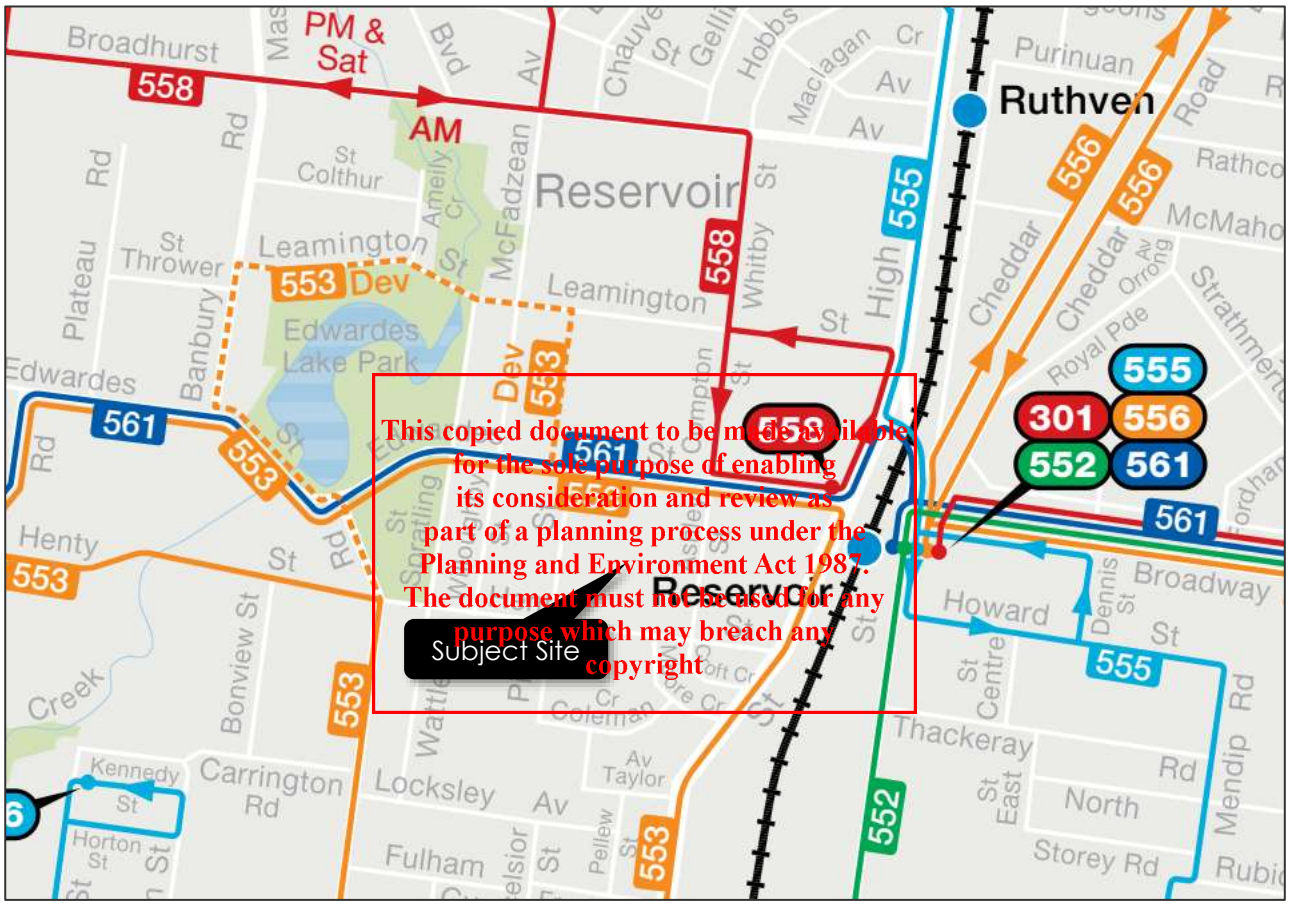


Table 1 Public Transport Provision

Mode	Route No.	Route Description	Nearest Stop/Station
Train		Mernda Line	Reservoir Station (700m)
Bus	301	Reservoir Station - La Trobe University (Bundoora Campus)	Reservoir Station / High St (750m)
	552	North East Reservoir - Northcote Plaza via High Street	
	553	Preston - West Preston via Reservoir	Edwardes St / Compton St (250m)
	555	Epping - Northland via Lalor & Thomastown & Reservoir	Reservoir Station / High St (750m)
	556	Epping Plaza SC - Northland SC via Keon Park	
	558	Reservoir via North West Reservoir	Edwardes St / Compton St (250m)
	561	Macleod - Pascoe Vale via La Trobe University	

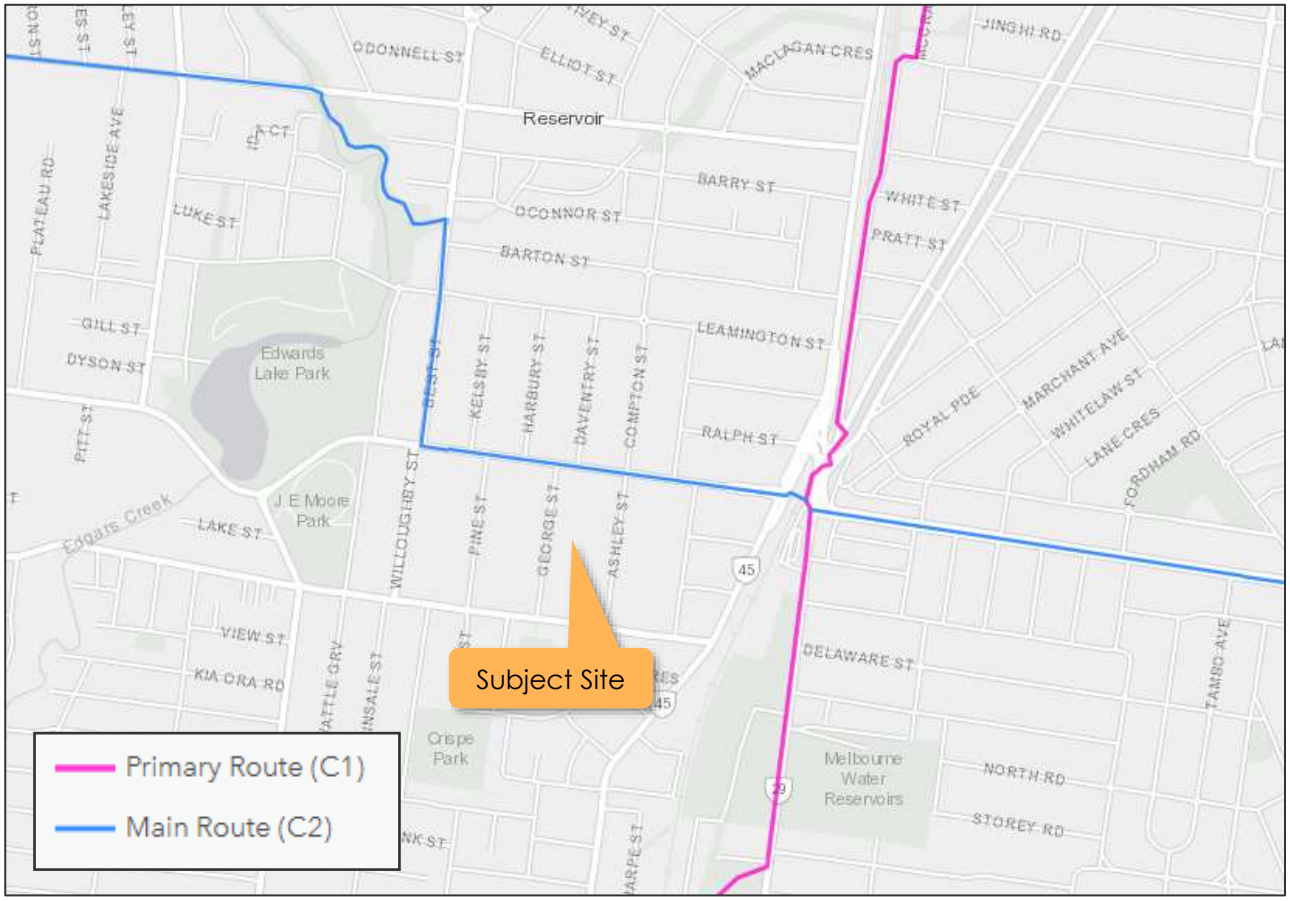
2.4.2 Bicycle Connections

On-road bicycle lanes are currently provided along Edwardes Street, with an off-road shared path generally running along the railway line east of the site. These provide further connection to a wider bicycle network and excellent bicycle access for the subject site.

Notably, Edwardes Street is identified as a "Strategic Cycling Corridor", recognised as an important route for cycling for transport, providing an important linking function between the Central City, National Employment and Innovations Clusters, Metropolitan Activity Centres and other destinations of metropolitan and regional significance.

The SCCs in the vicinity of the site are shown in Figure 6.

Figure 6 Strategic Cycling Corridors

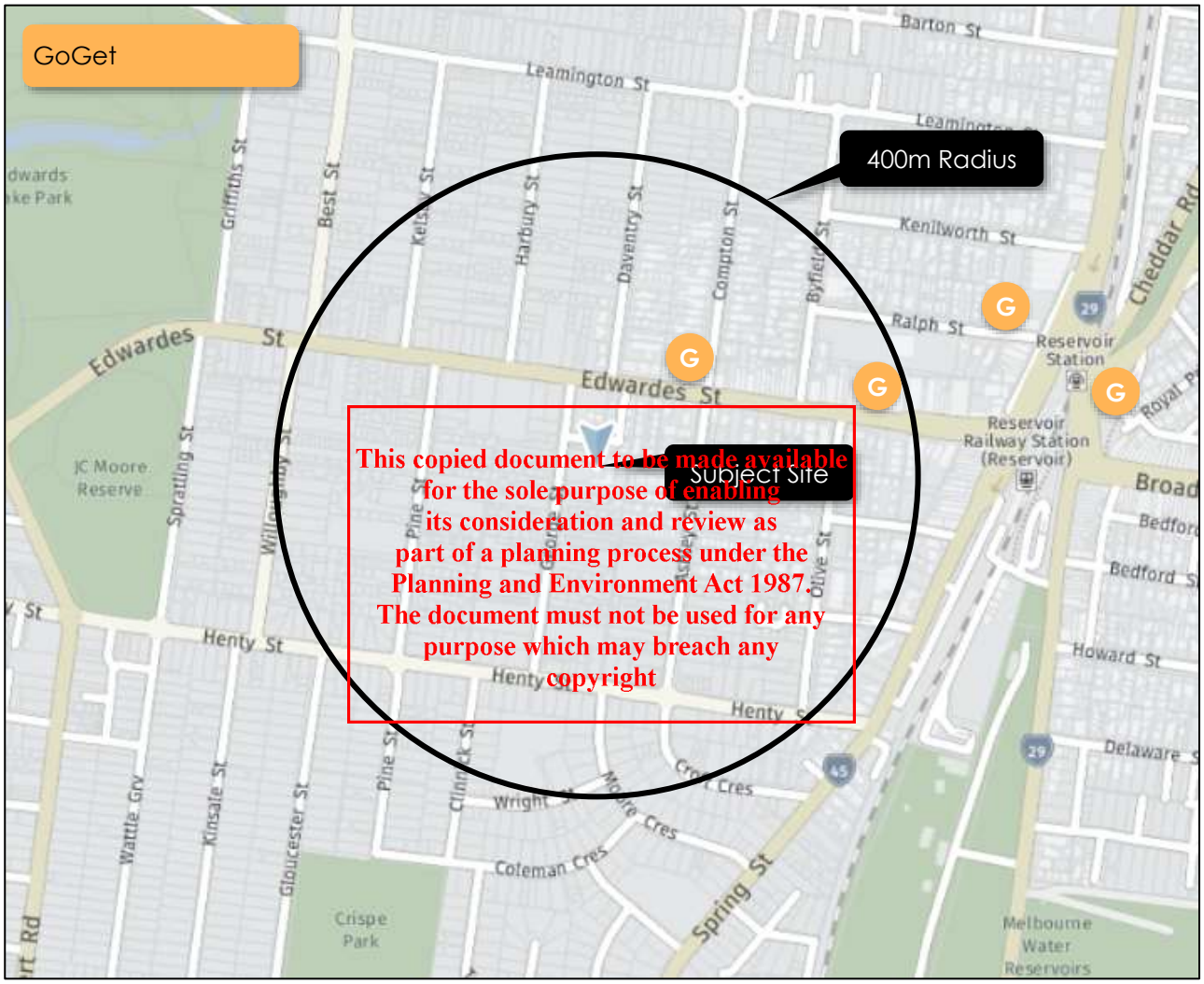


2.4.3 Share Cars

Car sharing is becoming increasingly popular within highly populated areas for both employees and residents, where parking is restrictive and expensive. Car sharing operates similar to a car rental company, except users join as members and are charged on an hourly rate rather than a daily.

The location of the share cars within close proximity of the site are shown in Figure 7.

Figure 7 Share Car Locations



2.4.4 Walkability

Walkability is a measure of how friendly an area is to walking. Walkability has many health, environmental, and economic benefits. Factors influencing walkability include the presence or absence and quality of footpaths or other pedestrian rights-of-way, traffic and road conditions, land use patterns, building accessibility, and safety.

The site has a Walk Score rating of 82/100 and is very walkable, with most errands able to be accomplished on foot.

3 DAREBIN TRANSPORT STRATEGY 2007-2027

The Darebin Transport Strategy for 2007-2027 was updated in 2022 and expanded on the previous Darebin Integrated Transport Plan.

The Strategy includes a number of aspirations for transport within the municipality, with the following 8 aspirations identified as keys:

1. To improve local and metropolitan accessibility
2. To increase the role of sustainable transport modes
3. To build new developments that reduce transport demands
4. To increase social inclusion for residents
5. To improve health and environmental outcomes
6. To improve community safety
7. To integrate quality urban design, economic development and access
8. To engage stakeholders through effective communication

Particularly relevant to new developments, the Strategy includes policies and actions to promote the use of sustainable transport modes (public transport, cycling and walking) and reduced reliance on private motor vehicles (cars).

The Strategic Transport Framework Plan from the Darebin Transport Strategy is replicated in Figure 8, demonstrating the following identifications for Edwardes Street nearby north of the site.

- Edwardes Street
  - Streets for people corridor (including key cycling corridor)
  - Strategic cycling corridor
  - Primary pedestrian route

Figure 8 Strategic Transport Framework Plan

4 DEVELOPMENT PROPOSAL

It is proposed to develop the subject site for the purposes of a residential development comprising 24 dwellings, including 14 x three-bedroom dwellings and 10 x two-bedroom dwellings. 5 dwellings are proposed to be provided with frontages to George Street, including a conversion of the existing church building on-site. Pedestrian access to these properties is proposed directly via the George Street footpath. Pedestrian access to the remaining dwellings is proposed to be provided via a footpath spanning the frontage of the remaining dwellings.

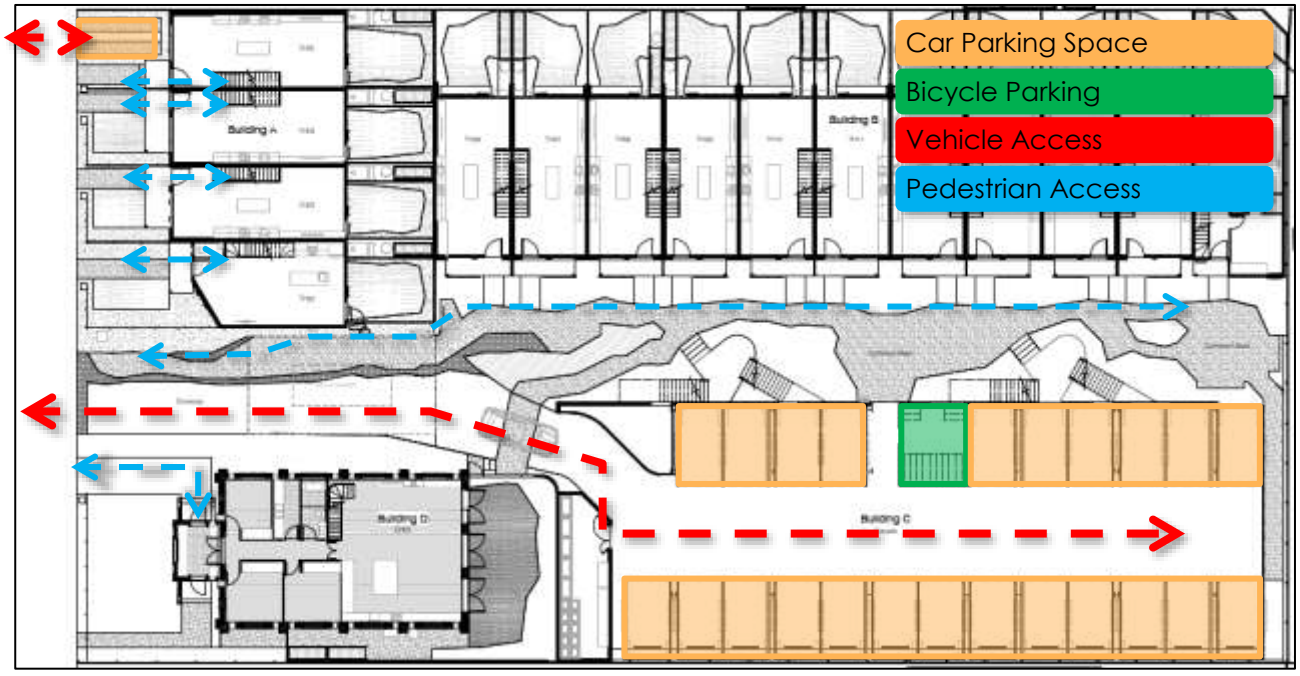
The northernmost lot fronting George Street is proposed with a single car space within the setback, accessed directly from George Street. The remaining lots are proposed to be serviced by a car park comprising 23 parking spaces.

Vehicle access to the northernmost lot is proposed via a single-width crossover to George Street. Vehicle access to the shared car park is proposed via a two-way crossover to George Street located approximately centrally within the site frontage.

A total of 24 bicycle parking spaces are proposed on-site including 22 spaces within a bike enclosure in the car parking area, and 2 visitor spaces. It is proposed that bicycle parking for the converted church and townhouse 2 can be accommodated within the rear open spaces for the lots as these are provided with access via the shared accessway.

The site layout and access are shown in Figure 9.

Figure 9 Site Layout and Access



5 DESIGN ASSESSMENT

5.1 Darebin Planning Scheme – Clause 52.06

onemile**grid** has undertaken an assessment of the car parking layout and access for the proposed development with due consideration of the Design Standards detailed within Clause 52.06-9 of the Planning Scheme. A review of those relevant Design Standards is provided in the following sections.

5.1.1 Design Standard 1: Accessways

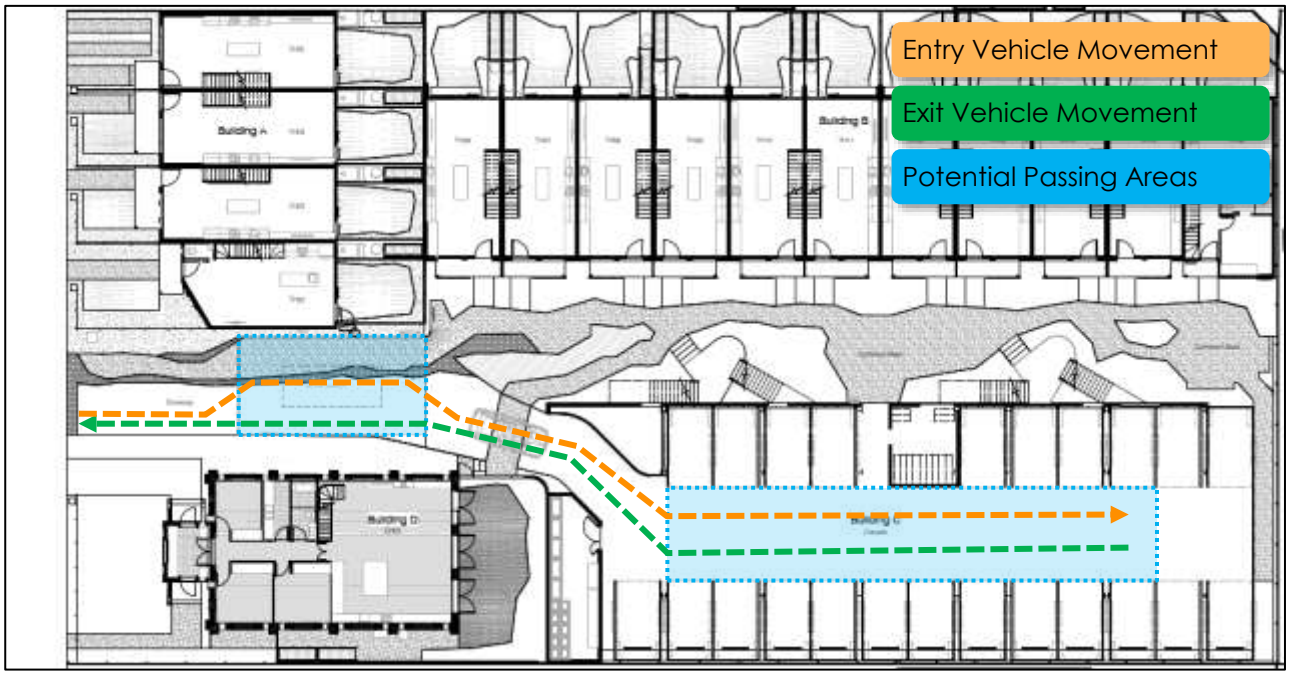
A summary of the assessment for Design Standard 1 is provided in Table 2.

Table 2 Clause 52.06-9 Design Assessment – Design Standard 1

Requirement	*Comments*
Be at least 3 metres wide.	Satisfied
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide.	See below
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre.	N/A – Private car park
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres.	Satisfied – A minimum height clearance of over 2.2m is achieved
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.	Satisfied
Provide a passing area at the entrance at least 5.5 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Transport Zone 2 or Transport Zone 3.	See below
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres 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.	Satisfied
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6 metres from the road carriageway.	N/A – Does not connect to a Transport Zone

Passing is available along the length of the accessway, either within the hardstand area (approximately 13m into the site) or within the access aisle for the parking spaces. The nominated passing areas are detailed in Figure 10.

Figure 10 Passing Areas



Swept paths have been prepared, and are provided within Appendix A demonstrating the following:

- A 99.8th percentile passenger vehicles (B99) propped within the accessway, and an 85th percentile passenger vehicle (B85) passing clear of the propped vehicle; and
- Entry and egress, and circulation of the site in connection with B99 vehicle.

The swept paths show the above movements can be performed with adequate clearances and no corrective manoeuvres required.

While it is acknowledged that passing is not provided at the entry in line with Table 2, considering the low traffic expected to be generated by the site discussed in Section 9, totalling up to 12 movements during each of the peak hours, it is expected that passing will be required infrequently, and the proposed arrangement is therefore considered satisfactory.

5.1.2 Design Standard 2: Car Parking Spaces

Within the car park, all car spaces on-site are proposed with a minimum width of 2.8m, length of 4.9m and are accessed from aisles of no less than 5.8m. Spaces adjacent to walls have been suitably widened in accordance with Design Standard 2 of the Planning Scheme. Columns have been located outside of the required parking space clearance envelope areas.

The car space provided for townhouse 5 will provide a length of 5.4m, and a width of 2.6m, accessed from George Street, in accordance with the Planning Scheme.

Swept paths have been prepared, and are provided within Appendix A demonstrating appropriate access to the end and critical spaces with an 85th percentile passenger vehicle (B85).

5.2 Waste Collection

It is proposed to provide communal bin room, with the bins collected by a private contractor. The contractor will utilise a 6.4 m rear-lift waste collection vehicle (mini-loader) for collecting bins.

A swept path assessment has been prepared demonstrating access to the site for the nominated mini-loader collection vehicle, and is included in Appendix A. The swept path assessment shows the design vehicle reversing into the site from George Street, to then exit in a forward direction. The proposed waste vehicle access arrangement is considered suitable in this instance, having regard to the following:

- The reverse entry movement to the site avoids the need to create a turning space within the site (at the loss of parking or landscaping) and allows the truck to exit in a forward direction;
- The straight section of George Street facilitates strong sightlines for vehicles and pedestrians to the vehicle access movements;
- George Street is considered a relatively local street with minimal traffic volumes;
- The site is flat, avoiding the truck needing to navigate steeper grades and therefore allowing travelling at low speeds;
- The access to the site includes adequate space for the truck movements and provision of sight lines;
- The waste truck movements are only nominated for 1 movement per waste stream per week, and are therefore considered to be occasional access manoeuvres; and
- The waste trucks are typically fitted with a flashing light which can be utilised to raise awareness of access movements.

Refer to the Waste Management Plan for further information.

5.3 Bicycle Parking

Bicycle parking is proposed to be provided in a mixture of vertically mounted bicycle racks, on-ground bicycle hoops, and two tiered bicycle racks.

It is proposed to provide vertically mounted and staggered bicycle racks. The individual bicycle racks are separated by 0.4 m, which provides a separation of 0.8 m between bicycles at the same level, in excess of the Planning Scheme requirements, and in accordance with typical advice from Bicycle Network Victoria.

The bicycle hoops have been designed in accordance with the Australian Standards; specifically, they are provided with an envelope 1.8 m long and 0.5 m wide per space, with a 1.5 m access aisle.

The two-tiered bicycle racks are vertically staggered, and provide dimensions in accordance with manufacturer specifications. The individual bicycle racks are separated by 0.4 m, which provides a separation of 0.8 m between bicycles at the same level, in excess of the Planning Scheme requirements. The spaces are provided with a length of 1.8 m in accordance with the manufacturer specification, and a 2.04 m access aisle, in excess of the Australian Standard requirements. Additionally, a minimum height clearance of 2.4 m is provided above the spaces in accordance with the manufacturer specification.

In addition, 11 of the 24 bicycle parking spaces proposed have been provided as on-ground hoops exceeding the Australian Standard requirement for 20% of spaces being provided on-ground.

6 LOADING

Clause 65 (Decision Guidelines) of the Darebin Planning Scheme identifies that "*Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*"

As a residential development, loading facilities will generally only be required for occasional removalist vehicles, which may utilise the existing on-street parking along George Street, or the on-site car park for smaller vehicles.

As noted above, allowance is made for the waste collection vehicle to reverse into the site for bin collections.

The provision for loading is therefore considered appropriate for the proposed use.

7 BICYCLE PARKING

Clause 52.34 of the Darebin Planning Scheme does not specify bicycle parking provision requirements for residential development with less than 4 storeys. Regardless, it is proposed to provide a total of 22 bicycle parking spaces within the at-grade car park, and 2 spaces for visitors along the shared accessway. Additionally, it is proposed that bicycle parking for the converted church and townhouse 2 can be accommodated within the rear open spaces for the lots as these are provided with access via the shared accessway.

8 CAR PARKING

8.1 Statutory Car Parking Requirements

The car parking requirements for the subject site are identified in Clause 52.06 of the Darebin Planning Scheme, which specifies the following requirements for the different components of the proposed development.

Table 3 Clause 52.06 – Car Parking Requirements

Use	*No/Area*	*Rate*	*Car Parking Measure*	*Total*
Dwelling	10	1	to each one or two bedroom dwelling, plus	10
	14	2	to each three or more bedroom dwelling (with studies or studios that are separate rooms counted as bedrooms), plus	28
	24	1	for visitors to every 5 dwellings for developments of 5 or more dwellings	4
Total				**42**

Based on the above calculations, a total of 42 parking spaces are required for the proposed development.

It is proposed to provide a total of 24 car parking spaces to service the proposed development, including 1 space for townhouse 5 (a three bedroom dwelling) and a pool of 23 parking spaces to be allocated to the remaining 23 dwellings. This equates to a shortfall of 18 spaces compared to the Planning Scheme requirements.

Clause 52.06-7 of the Darebin Planning Scheme indicates that an application to reduce (including reduce to zero) the requirement for car spaces must be accompanied by a Car Parking Demand Assessment. The Assessment must assess the car parking demand likely to be generated by the proposed development, having consideration to:

- 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.
- 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 occupants (residents or employees) of the land.
- Any empirical assessment or case study.

Practice Note 22 (June 2015) specifies that the provisions for reducing car parking requirements draw a distinction between the assessment of the likely demand for 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:

- The car parking demand likely to be generated by the use; and
- Whether it is appropriate to allow fewer spaces to be provided than the likely demands generated.

An assessment of the likely parking demands and the appropriateness of reducing the car parking provision below them is set out below.

8.2 Car Parking Demand Assessment

Car ownership data from the 2021 Census for the City of Darebin was sourced from the Australian Bureau of Statistics (ABS).

For development types similar to that proposed, the data is outlined in Table 4.

Table 4 2021 Census Car Ownership – City of Darebin

Dwelling Type	No. of Bedrooms	Average Car Ownership	% Dwellings with 1 vehicle or less
Flat, unit or apartment	2	1.02 vehicles	79.9%
	3	1.48 vehicles	53.7%

The ABS data clearly indicates that there is a market for dwellings that do not provide, and therefore do not attract the price premium associated with a second car parking space. Given the site's location with respect to public transport services and other services, it is expected that dwellings within the subject site would be particularly appealing to potential owners/tenants who do not have the need to park a vehicle at their place of residence.

Furthermore, it should be recognised that resident parking demands are, in part, dependent on car parking provisions, insofar as an owner/tenant with the need to park a vehicle is unlikely to occupy a dwelling that does not provide parking.

The average car ownership rates reflecting existing parking demands however are based on historically high parking provisions and reduced public transport usage resulting from COVID-19, and are not considered to be reflective of current market trends for new residential developments with access to alternative transport modes.

Rather, reduced parking rates should be provided to align with current car parking trends, and encourage reduced reliance on private motor vehicles in favour of more sustainable transport modes.

In light of the above, it is considered appropriate to provide car parking at a reduced rate of approximately 25% compared to the average car ownership rates for existing townhouses in Darebin. The anticipated demand based on these rates is calculated in Table 5, noting that the north-west dwelling with a separate parking space is excluded.

Table 5 Resident Anticipated Parking Demand (excludes north-west dwelling)

No of Bedrooms	No Dwellings	Recommended Parking Rate	Car Parking Demand
2	10	0.77	7.7
3	13	1.12	14.56
Total			**22.3**

The above parking demand assessment identifies that within an unconstrained situation, the proposed development may be expected to generate a demand for up to 22 parking spaces.

8.3 Anticipated Parking Demand

Based on the above, it is anticipated the 23 dwellings proposed to utilise the shared car park may typically generate a demand for approximately 22 parking spaces.

It is proposed to provide a total of 23 car parking spaces to service these units, which is in accordance with the anticipated parking demand outlined above.

It is however acknowledged that the site could generate an intermittent demand for on-street parking, particularly for visitors to the site. Accordingly, a review of the car parking provision has been undertaken below.

8.4 Review of Car Parking Provision

8.4.1 Impact of Parking Supply on Traffic Congestion

A previous VCAT decision (Ronge v Moreland CC [2017] VCAT 550 (9 May 2017)) highlighted the value of reduced car parking provision with regard to traffic congestion, identifying the potential adverse impact of providing parking to comply with Clause 52.06, as below:

http://www.austlii.edu.au/au/cases/vic/VCAT/2017/550.html

"Our roads are already congested and will be unimaginably so if a 'business-as-usual' approach is accepted through until 2050. The stark reality is that the way people move around Melbourne will have to radically change, particularly in suburbs so well served by different modes of public transport and where cycling and walking are practical alternatives to car based travel.

A car parking demand assessment is called for by Clause 52.06-6 [now Clause 52.06-7] *when there is an intention to provide less car parking than that required by Clause 52.06-5.*
However, discussion around existing patterns of car parking is considered to be of marginal value given the strong policy imperatives about relying less on motor vehicles and more on public transport, walking and cycling. Census data from 2011 or 2016 is simply a snapshot in time, a base point, but such data should not be given much weight in determining what number of car spaces should be provided in future, for dwellings with different bedroom numbers.

Policy tells us the future must be different.

Oversupplying parking, whether or not to comply with Clause 52.06, has the real potential to undermine the encouragement being given to reduce car based travel in favour of public transport, walking and cycling."

"One of the significant benefits of providing less car parking is a lower volume of vehicle movements and hence a reduced increase in traffic movements . . ."

8.4.2 Darebin Parking Strategy Review

Council commissioned a Darebin Parking Strategy Strategic Review which considered all facets of car parking within the municipality. The review, prepared in July 2018, was an extensive document which included a review of existing parking patterns with relevant comparisons to other municipalities (including data collection), undertook a literature review to contemplate parking advances in Victoria and internationally, and considered the impact of future conditions (i.e., paid parking strategies, car sharing and future technology including automated travel).

The review and associated recommendations centred around the Council's Policy direction of a strong focus towards sustainability and active transport. Of note, the policy documents encourage the uptake of walking, cycling, and public transport to alleviate congestion and improve road safety. Of note Council acknowledge that "the existing level of car use is not viable with the population growth expected for Darebin and northern Melbourne generally."

Significantly, the review acknowledges that the default position of providing minimum parking requirements undermines alternative transport, adds to housing costs and promotes inefficient use of land. These are in addition to the need to reduce car use, to respond to climate, congestion, road safety and population health issues.

In terms of data sourced from in and around Melbourne, the review points out that across inner Melbourne, on average 40% of car parking spaces in apartment buildings are unoccupied which highlights that the default minimum provisions are resulting in an oversupply of car parking which as noted above is against the policy trend to reduce parking which in turn reduces traffic and promotes the use of sustainable transport outcomes.

In light of the above, the proposed provision of reduced car parking on-site supports the Council policy direction and furthermore is in alignment with the outcomes of the Darebin Parking Strategy Strategic Review.

8.4.3 Darebin Transport Strategy 2007-2027

The Darebin Transport Strategy 2007-2027 includes a number of objectives for promoting sustainable transport modes within the municipality and also includes an aspiration for 'building new development that reduce transport demands'. The proposed parking reduction, with the increased bicycle parking provision, therefore aligns with this aspiration.

8.4.4 Alternative Modes of Transport

As indicated in Section 2.4.1, the site has excellent access to Public Transport, with numerous train and bus services in the immediate vicinity. The provision of excellent public transport ensures that residents will have good access to alternate transportation modes.

On-street bicycle lanes and nearby shared paths ensure that residents who choose to travel by bicycle will have excellent access to bicycle facilities. Each unit will be allocated with a bicycle parking space.

The provision of share cars available in close proximity to the site ensures that residents will have access to hire one if required.

8.4.5 On-Street Car Parking

To determine parking availability in the area, Trans Traffic Survey were engaged to collect parking surveys in the vicinity of the site between 4pm-9pm on Wednesday 24 May 2023, and 10am-6pm Saturday 27 May 2023.

The surveyed parking areas are shown below in Figure 11. It is noted that both sides of the road were surveyed in all cases. All parking within the surveyed area was unrestricted.

Figure 11 Parking Survey Locations

The results are summarised in Figure 12 and Figure 13 below with the full results included as an attachment to this letter.

Figure 12 Parking Survey Profile – Wednesday

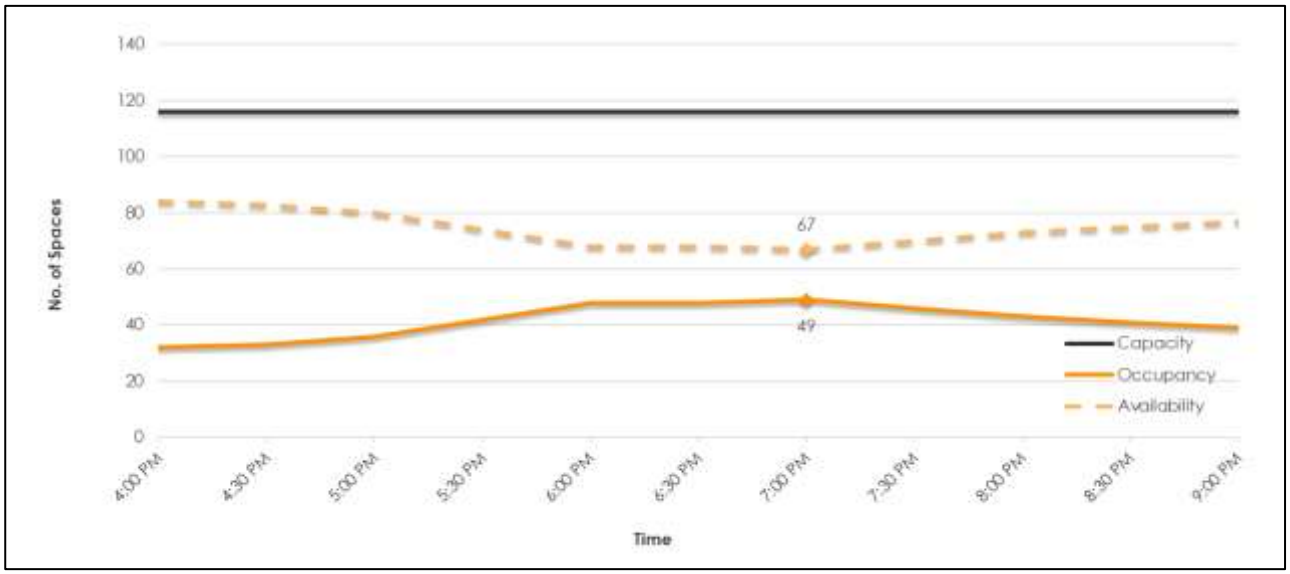
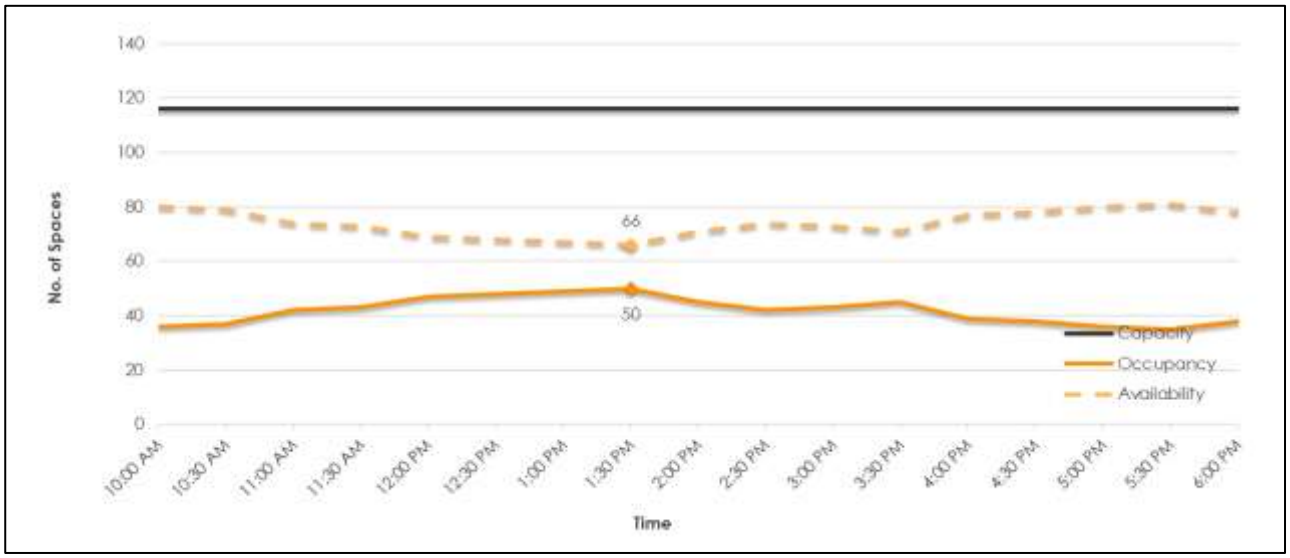


Figure 13 Parking Survey Profile – Saturday



On Wednesday, peak occupancy occurred at 7pm, at which time 49 of 116 spaces were occupied, leaving a minimum of 70 spaces available.

On Saturday, peak occupancy occurred at 1:30pm, at which time, 50 of 116 spaces were occupied, leaving a minimum of 66 spaces available.

The availability described above is more than sufficient to accommodate parking demands generated by visitors to the site.

8.4.6 Adequacy of Proposed Car Parking Provision

It is proposed to provide a pool of 23 parking spaces to be allocated to the 23 dwellings proposed without dedicated parking, and 1 space to the dwelling with a dedicated car space.

Based on the preceding review, the proposed car parking provision is considered appropriate, noting the following:

- 2021 Census data identifies that a market exists for 3-bedroom apartments with 1 parking space and 2-bedroom apartments without a parking space;
- Reduced car parking provision assists with the desired reduction in private vehicle usage, therefore minimising traffic impacts in the vicinity;
- The provision of 1 parking space for most dwellings provides dwellings with a price point which is more accessible for future owners;
- The proposed development includes bicycle parking in excess of the Planning Scheme requirements;
- Darebin policy supports reduced reliance on private vehicles;
- A review of aerial photography identified generally low utilisation of on-street car parking resources;
- The site has excellent access to sustainable transport modes with numerous train and bus services in the immediate vicinity and access to formal and informal cycling routes; and
- The site is in close proximity to a number of share cars, ensuring residents will have opportunity to hire a vehicle if required.

9 TRAFFIC

Surveys undertaken by other traffic engineering firms at residential dwellings have shown that the daily traffic generation rates vary depending on the size, location and type of the dwelling, the parking provision and proximity to local facilities and public transport.

Medium to high density dwelling in inner areas generate traffic with rates between 3.0 and 6.0 movements per dwelling. Considering the location of the subject site and moreover the excellent access to public transport, it is expected that generation rates will be towards the lower end of the range. For the purposes of this assessment a daily rate of in the order of 5 movements per day per dwelling will be adopted with 10% occurring during the peak hours.

Application of the above rates indicates that the 24 dwellings will generate 120 movements per day, inclusive of 12 vehicle movements during the morning and afternoon peak hours.

This level of traffic is very low in traffic engineering terms and equates to an average of 1 movement per 5 minutes during the peak hours, and as such is not expected to have a noticeable impact on the operation of the surrounding road network.

10 CONCLUSIONS

It is proposed to develop the subject site for the purposes of 24 dwellings, including 10 x 2-bedroom dwelling and 14 x 3-bedroom dwellings. Considering the analysis presented above, it is concluded that:

- The proposed car parking and access design is considered appropriate;
- The proposed development doesn't generate a requirement for bicycle parking however provision is made for 24 bicycle parking spaces, which is considered appropriate;
- The proposed development generates a shortfall of 18 on-site car parking space compared to Planning Scheme requirements (associated with a shortfall of 12 for residents and no provision for visitor parking);
- The proposed reduced car parking provision is considered appropriate, noting:
  - Council support for reduced reliance on private vehicles;
  - The site has good access to public transport modes and bicycle facilities; and
  - The dwellings proposed with reduced parking will likely attract residents who do not require parking over that provided.
- There are no traffic engineering reasons which would preclude a permit from being issued for this proposal.

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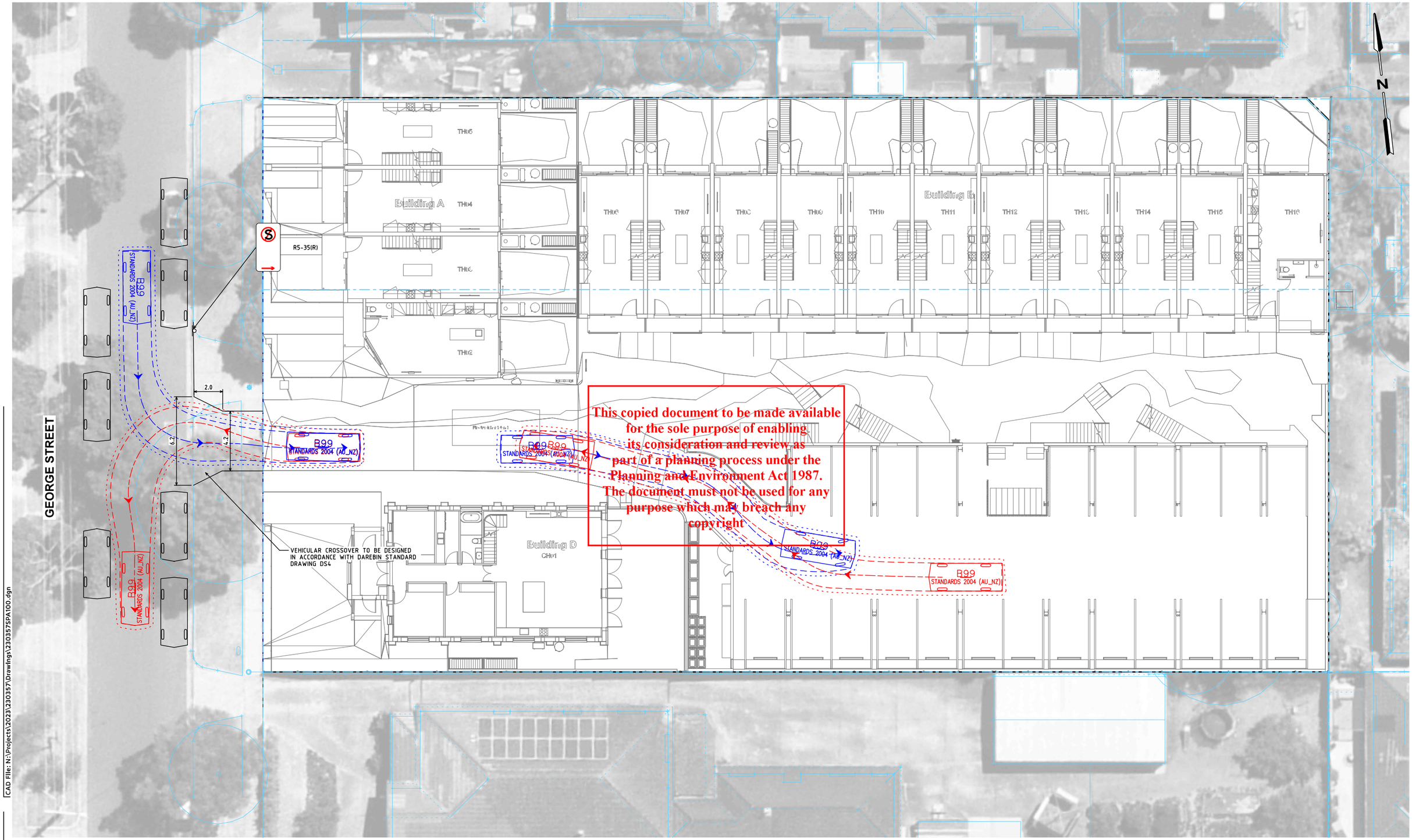
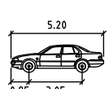
Appendix A Swept Path Diagrams



ADVERTISED PLAN

SWEPT PATH LEGEND

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

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Scale 1:250 @ A3 (0 1.25 2.5 5)

Drawing Title
34 GEORGE STREET, RESERVOIR
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA100	E

Date Plotted: 28-11-2025 11:11:13 AM

CAD File: N:\Projects\2023\230357\Drawings\230357SPA100.dgn

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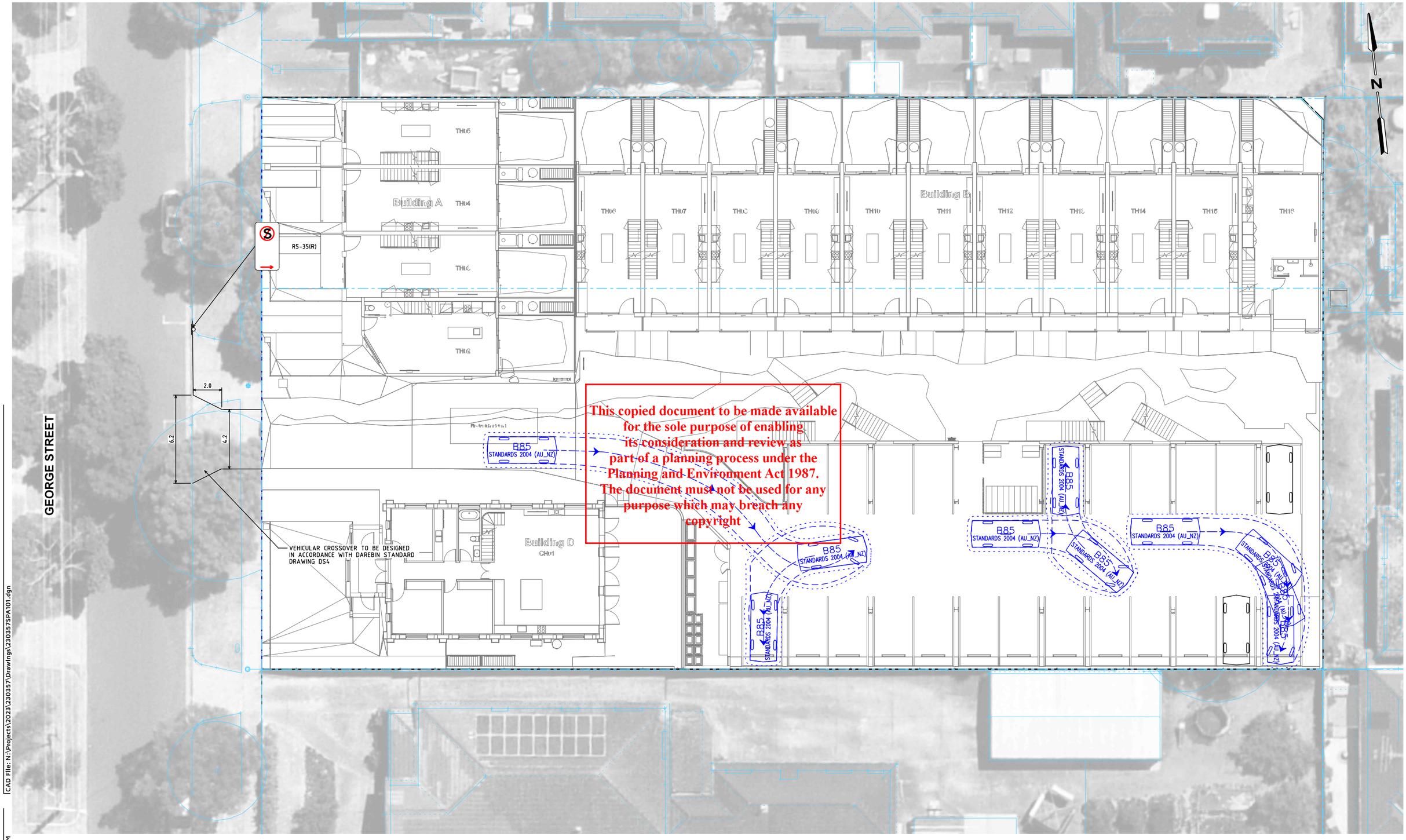
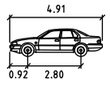
Aerial Photography
Aerial photography provided by Nearmap



ADVERTISED PLAN

SWEPT PATH LEGEND
- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

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Scale 1:250 @ A3 (0 1.25 2.5 5)

Drawing Title
34 GEORGE STREET, RESERVOIR
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA101	E

Date Plotted: 28-11-2025 11:11:44 AM

CAD File: N:\Projects\2023\230357\Drawings\230357SPA101.dgn

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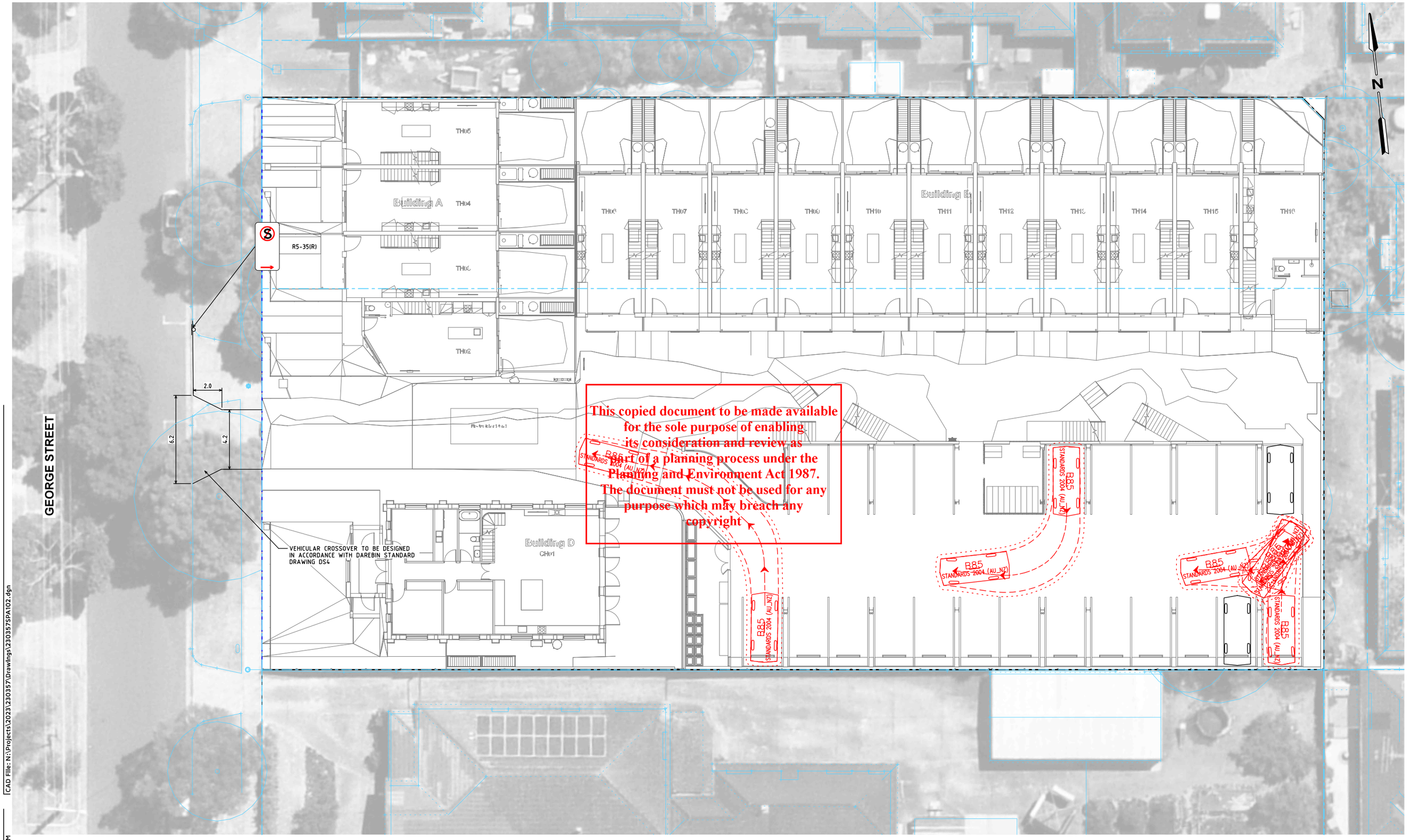
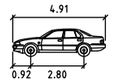
Aerial Photography
Aerial photography provided by Nearmap



ADVERTISED PLAN

CAD File: N:\Projects\2023\230357\Drawings\230357SPA102.dgn
Date Plotted: 28-11-2025 11:12:00 AM

SWEPT PATH LEGEND
- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

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Scale 1:250 @ A3 (0 1.25 2.5 5)

Drawing Title
34 GEORGE STREET, RESERVOIR
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA102	F

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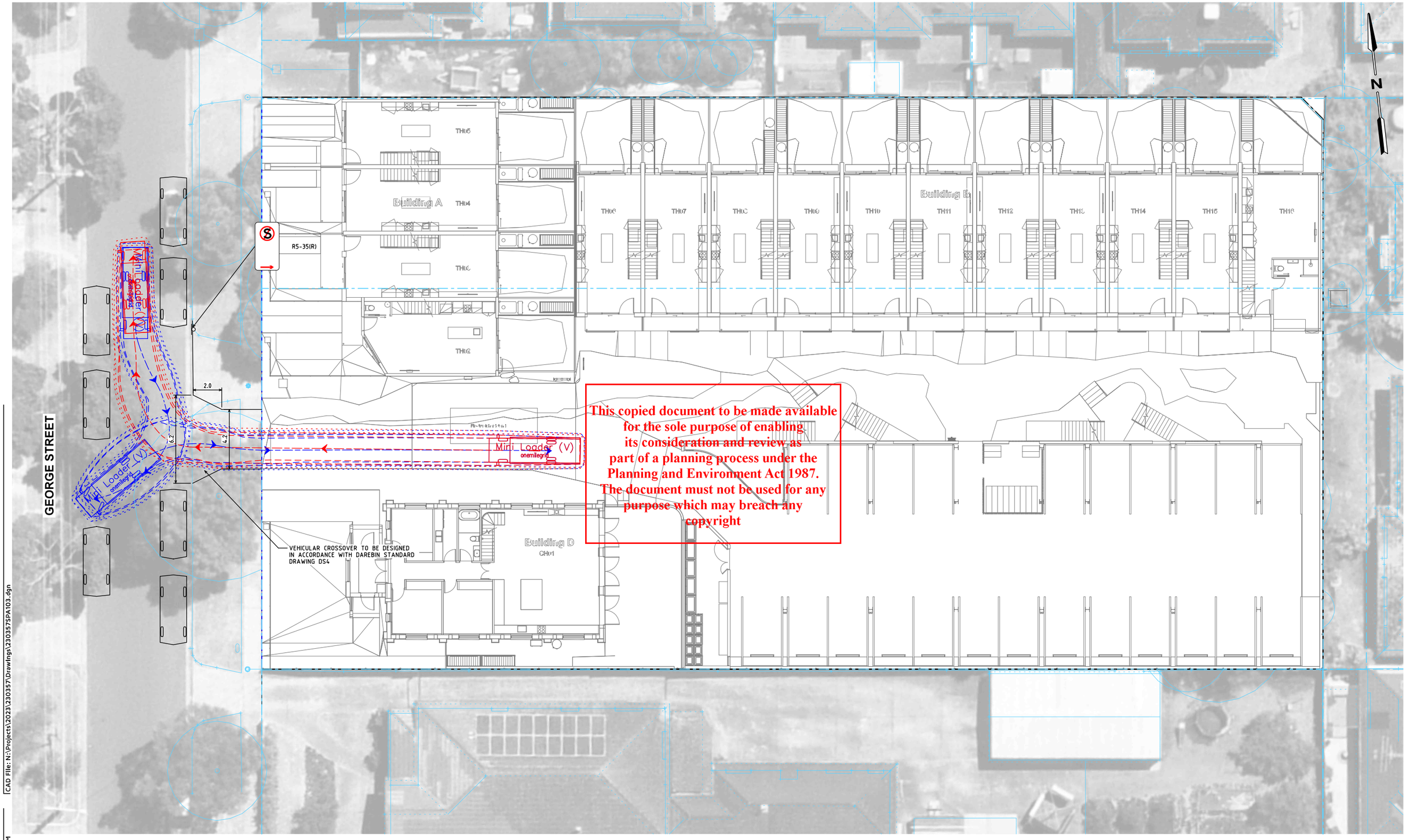
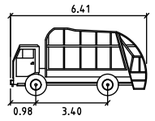
Aerial Photography
Aerial photography provided by Nearmap



ADVERTISED PLAN

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



WASTE MINI LOADER meters

Width	: 1.85
Track	: 1.85
Lock to Lock Time	: 4.0
Steering Angle	: 33.6

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Drawing Title
34 GEORGE STREET, RESERVOIR
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA103	D

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Aerial Photography
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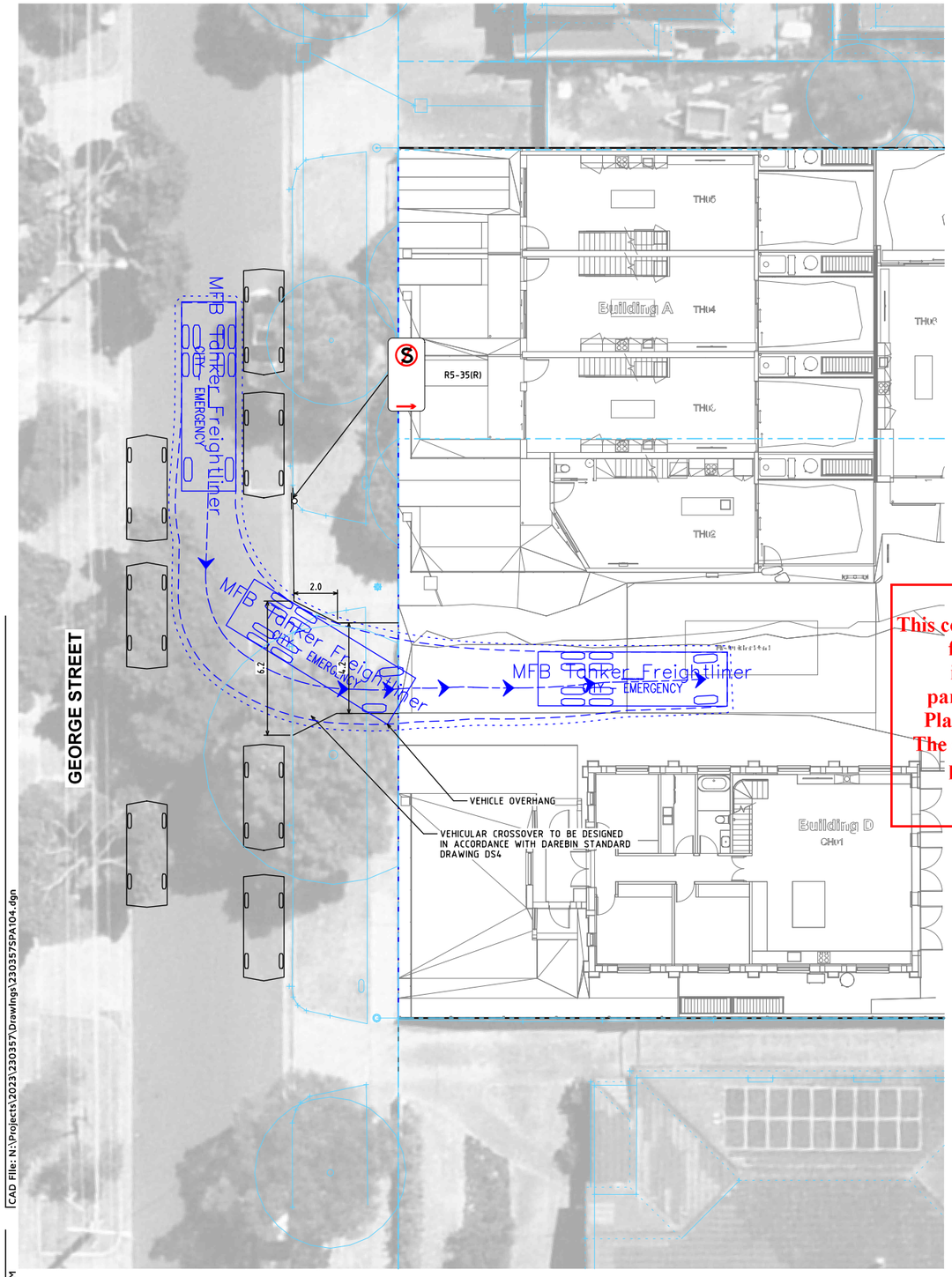
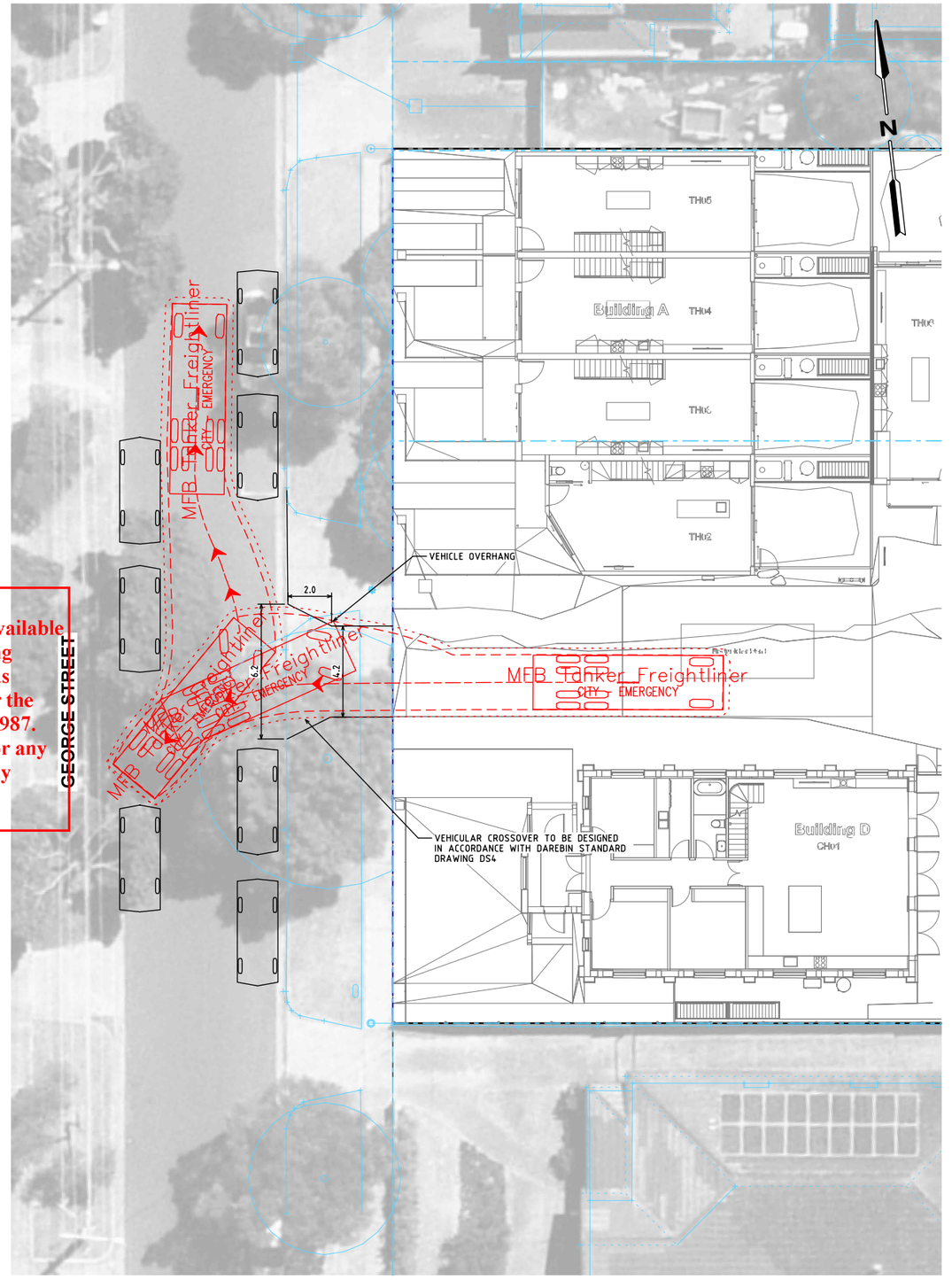
CAD File: N:\Projects\2023\230357\Drawings\230357SPA103.dgn
Date Plotted: 28-11-2025 11:12:14 AM

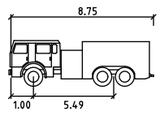




ADVERTISED PLAN

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



MFB Tanker Freightliner

	meters
Width	: 2.50
Track	: 2.45
Lock to Lock Time	: 6.0
Steering Angle	: 39.7

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Drawing Title
34 GEORGE STREET, RESERVOIR
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SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA104	C

Scale 1:250 @ A3 (0 1.25 2.5 5)

CAD File: N:\Projects\2023\230357\Drawings\230357SPA104.dgn
Date Plotted: 28-11-2025 11:12:27 AM

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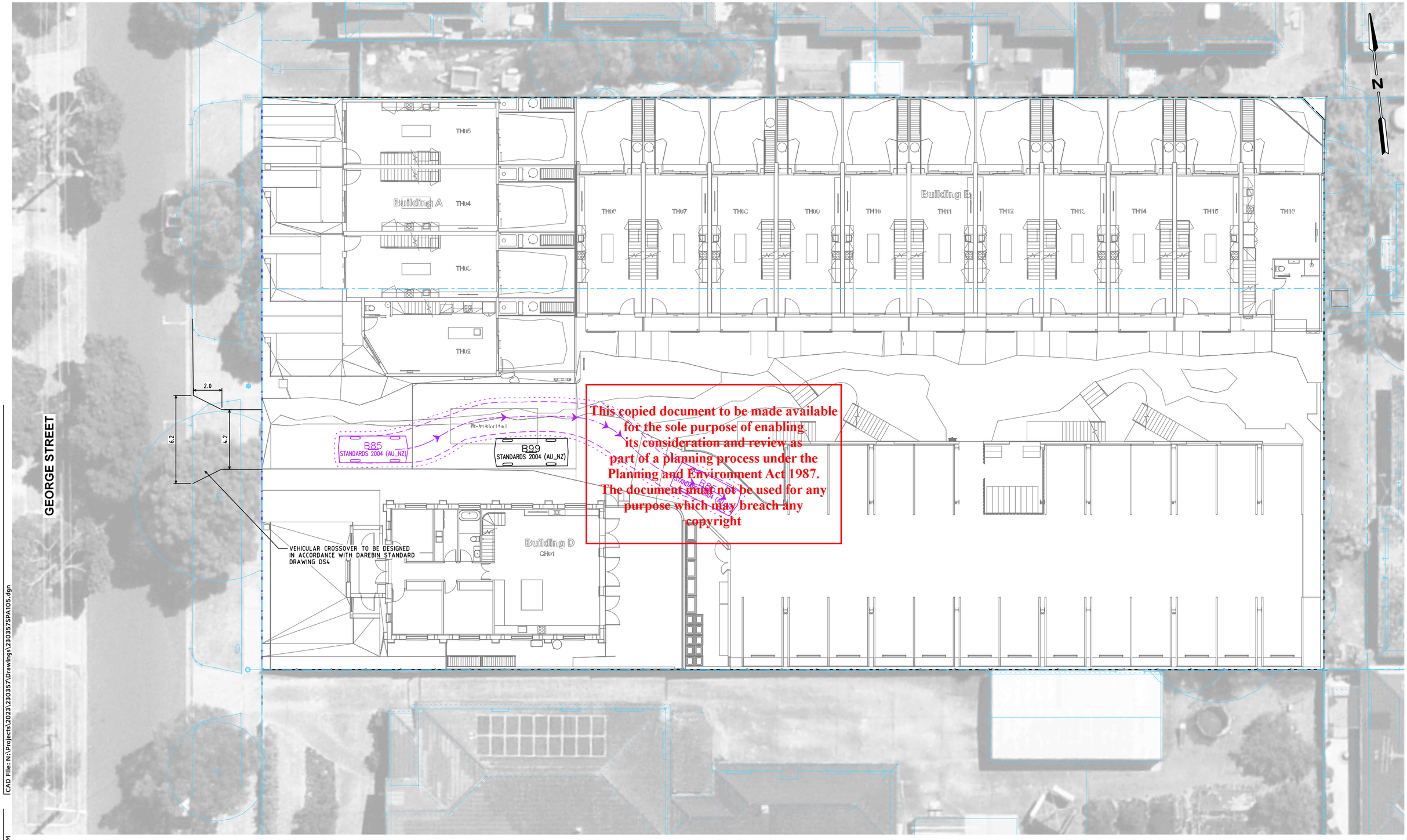
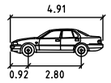


ADVERTISED PLAN

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



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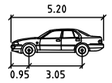
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

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Drawing Title
34 GEORGE STREET, RESERVOIR
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	LMH	18 F5

Project Number	Drawing Number	Revision
230357	SPA105	A

CAD File: N:\Projects\2023\230357\Drawings\230357SPA105.dgn
Date Plotted: 28-11-2025 11:12:42 AM

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