

TRANSPORT IMPACT STATEMENT

55 Milton Street
Mount Hawthorn

December 2022

Rev A



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Appendix 1 - The layout of the proposed development

Appendix 2 - Vehicle Turning Circle Plans

1. Executive Summary

Site Context

- The project location is 55 Milton Street, Mount Hawthorn.
- The subject site is currently vacant.
- The proposed development is a residential building with 9 apartments.

Technical Findings

- The proposed development is expected to generate up to 60 vehicular trips per day and 7 vehicular trips in peak hours.
- According to the WAPC Guidelines, this is a low impact to the surrounding network.

Relationship with Policies

- The proposed development requires 12 parking bays according to the State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments (rounding up the calculated 11.25 bays – as per R-Codes guidelines). The proposed development shows 11 carparking bays.
- However, given the following points, KCTT believe that this is a sufficient provision:
 - The proposed development requires 2.25 (3) visitor bays. 2 bays will be provided.
 - WalkScore rate for public transport is – 59: Good Transit. Many nearby public transportation options.
 - In addition to the High Frequency Bus Route 990, the Glendalough Station is within 800m catchment from the proposed development – providing access to the Joondalup Line.
 - Additionally, Milton Street provides on-street parking options which can be used by the potential visitors.
 - KCTT believe that all parking requirements will be catered for with the 9 parking bays for the residents and 2 parking bays for the visitors.
- The proposed development will meet the requirement for 6 bicycle spaces.
- Category 1 Driveways longer than 30m and/or serving 30 vehicle trips per hour are required to be a minimum of 5.5m wide for the first 6m from the property boundary.
- The proposed driveway is approximately 28.5m long with traffic generation in peak hours up to 7 vehicle trips per hour. Therefore, the proposed 3m width for the entire driveway length is appropriate for the proposed development.
- Given there will be only 7 vehicle trips per hour in peak hours and that this is a development with a homogenous land use, KCTT believe that basic signage would be sufficient for traffic management within the site.
- The proposed development is a residential building, and in most cases, vehicles will drive in the same direction (going to work or coming from work). This means that vehicle meeting on the driveway in opposite directions would be a rare occurrence.
- Appendix 2 (S40 drawing) shows the proposed signage; inclusive of pavement signage and a traffic safety mirror.

Conclusion

- A residential building with 9 apartments is proposed at 55 Milton Street, Hawthorn.
- As stated above the additional traffic attracted to the subject site is expected to increase by a maximum of 60 vehicular trips per day and 7 vehicular trips in peak hours.
- Milton Street is classified as an Access Road as per MRWA classification with the maximum desirable volume of 3,000 vehicles per day. There are no publicly available traffic counts on Milton Street at the time of Rev A completion. Based on the road hierarchy and developments served by this road (as seen from the aerial imagery), KCTT believe that traffic on this section of Milton Street is not higher than 500 VPD. Therefore, with the added traffic from the subject site the street would remain well under the maximum desirable traffic volume for Access Roads.
- Other surrounding roads would absorb significantly less traffic than Milton Street, moreover, the traffic would be dispersed so that the impact can be considered negligible.
- In summary KCTT believe that the proposed development will not have a negative impact on the surrounding road network.

2. Transport Impact Statement

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2.1 Location

Street Number	55
Road Name	Milton Street
Suburb	Mount Hawthorn
Description of Site	The subject site is currently vacant. The proposed development is an apartment building with 9 apartments proposed.

2.2 Technical Literature Used

Local Government Authority	City of Vincent
Type of Development	Individual development - Residential
Are the R-Codes referenced?	YES
If <u>YES</u> , nominate which:	State Planning Policy 7.3 Residential Design Codes Volume 2 - Apartments (Gazetted on 24 May 2019)
Is the NSW RTA Guide to Traffic Generating Developments Version 2.2 October 2002 (referenced to determine trip generation / attraction rates for various land uses) referenced?	YES
Which WAPC Transport Impact Assessment Guideline should be referenced?	Volume 4 - Individual Developments
Are there applicable LGA schemes for this type of development?	YES
If <u>YES</u> , Nominate:	
Name and Number of Scheme	Local Planning Scheme No. 2
Are Austroads documents referenced?	YES

2.3 Land Uses

Are there any existing Land Uses NO

Proposed Land Uses

How many types of land uses are proposed? One (1)

Nominate land use type and yield Residential Building – 9 apartments

Are the proposed land uses complementary with the surrounding land-uses? YES

2.4 Local Road Network Information

How many roads front the subject site? One (1)

Name of Roads Fronting Subject Site / Road Classification and Description:

Road Name	Milton Street
Number of Lanes	two way, one lane (no linemarking), undivided
Road Reservation Width	20m
Road Pavement Width	7.2m
Classification	Access Road
Speed Limit	50kph or State Limit
Bus Route	NO

If YES Nominate Bus Routes

On-street parking YES

Name of Other Roads within 400m radius of site, or roads likely to take increased traffic due to the development.

Road Name	Brady Street
Number of Lanes	two way, one lane each direction, undivided
Road Reservation Width	20m
Road Pavement Width	13.5m (inclusive of 1.5m painted median)
Classification	Distributor A
Speed Limit	60kph
Bus Route	NO

If YES Nominate Bus Routes

On-street parking NO

2.5 Traffic Volumes

Road Name	Location of Traffic Count	Vehicles Per Day (VPD)	Vehicles per Peak Hour (VPH)				Heavy Vehicle %	Date of Traffic Count	If older than 3 years multiply with a growth rate (3% growth rate applied)
			AM Peak Time	AM Peak - Peak VPH	PM Peak Time	PM Peak - Peak VPH			
Mitchell Freeway	South of Hutton Street (SB)	69,670	06:15 –	5,764	12:00 –	4,218	N/A	2018/2019	78,414
	South of Hutton Street (NB)	70,171	11:30 –	4,382	14:45 –	6,100	N/A	2018/2019	78,978
Scarborough Beach Road	East of Bus/Taxi On-ramp	23,282	07:45 –	2,253	16:30 –	2,120	6.4%	2017/2018	26,990

*Note ** - These traffic counts have been obtained from the MRWA Traffic Map.

2.6 Vehicular Crash Information

Is Crash Data Available on Main Roads WA website? YES

If YES, nominate important survey locations:

Location 1 Milton Street (Between Jugan Street and Brady Street)

Period of crash data collection 01/01/2017 - 31/12/2021

Road Name	SLK	Road Hierarchy	Speed Limit	Crash Statistics			
				No of KSI Crashes	No of Medical Attention Crashes	No of PDO Major Crashes	No of PDO Minor Crashes
Milton Street	0.00 – 0.20	Access Road	50kph or State Limit	0	0	1	0
MR Type	Involving Overtaking	Involving Parking	Involving Animal	Involving Pedestrian	Entering / Leaving Driveway		Other / Unknown
Count	0	0	0	0	1		0
No of MVKT Travelled at Location			approximately *500 VPD * 365 * 5 years * 0.2 km = 0.18 MVKT				
KSI Crash Rate			0 KSI crashes / 0 MVKT = 0 KSI crashes/MVKT				
All Crash Rate			1 crashes / 0.11 MVKT = 5.55 crashes/MVKT				
Comparison with Crash Density and Crash Rate Statistics			As seen from the below table the local network crash rate average is 0.95 crashes per MVKT. This section of Milton Street has a significantly higher average than the local network average. However, this is only for a section of 200m with assumed traffic of only 500 VPD. There was one crash reported in a 5-year period and it was a Property Damage Only crash. Therefore, KCTT believe that this section of road is not a major safety concern. Furthermore, the proposed development will add only 7 vehicle trips per hour, which is a low impact on the surrounding network according to the WAPC Guidelines.				

*There are no publicly available traffic counts on Milton Street at the time of Rev A completion. Based on the road hierarchy and developments served by this road (as seen from the aerial imagery), KCTT believe that traffic on this section of Milton Street is not higher than 500 VPD.

The following tables shows crash rates and crash densities in Perth Metropolitan area on local roads for the period from 2017 to 2022, as obtained from Main Roads WA on the 31st May 2022 by email request:

Crash Density and Crash Rate on Metropolitan Local Roads Network only				
	All Crashes		Serious Injury Crashes (Fatal+Hospital)	
	Average Annual Crash Density (All Crashes/KM)	Average Annual Crash Rate (All Crashes/MVKT)	Average Annual Crash Density (Ser. Inj. Crashes/KM)	Average Annual Crash Rate (Ser. Inj. Crashes/MVKT)
Metro Local Roads - Midblock	2.51	0.95	0.12	0.05
Metro Local Roads - All	5.23	1.98	0.24	0.09

Note: Based on 5-years data for the period 2017 to 2021.

2.7 Vehicular Parking

Local Government

City of Vincent

Local Government Document Utilised

State Planning Policy 7.3 Residential Design Codes
 Volume 2 - Apartments (Gazetted on 24 May 2019)

Description of Parking Requirements in accordance with Scheme:

R-Codes:

Location A - within 800m walkable catchment of a train station:

- 1-bedroom dwellings - 0.75 bay per dwelling
- 2+ bedroom dwellings – 1 bay per dwelling
- Visitor: 1 bay per four dwellings up to 12 dwellings

Calculation of Parking

Land Use	Requirements	Yield	Total Parking
Residential Residents	Building - 1 bay per dwelling	9 units	9
Residential Visitors	Building - 1 bay per four dwellings up to 12 dwellings	(all 2-bedroom apartments)	2.25
Total Car Parking Requirement			11.25 = 12 (Rounding up to the next whole number as per R-Codes)
Total Volume of Parking Provided by Proponent			11

Justification

The proposed development requires 12 (rounded up from 11.25 as per R-Codes guidelines) parking bays according to the State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments. The proposed development shows 11 carparking bays.

However, given the following points, KCTT believe that this is a sufficient provision:

- The proposed development requires 2.25 (3) visitor bays. 2 bays will be provided
- WalkScore rate for public transport is – 59: Good Transit. Many nearby public transportation options.
- In addition to the High Frequency Bus Route 990, the Glendalough Station providing access to Joondalup Line is within 800m catchment from the proposed development.
- Additionally, Milton Street provides on-street parking options which can be used by the potential visitors.

KCTT believe that all parking requirements will be catered for with the 9 parking bays for the residents and 2 parking bays for the visitors.

Have Vehicle Swept Paths been checked for Parking? YES

If YES, provide description of performance:

KCTT have checked the navigability of the proposed parking area with the B99 passenger vehicle (5.2m).

No navigability issues have been found. All parking bays will be navigable.

Please refer to the swept path analysis plans enclosed in Appendix 2 for clarity.

2.8 Compliance with AS2890.1:2004 and AS2890.6

Number of Parking Bays on-site 11

Are Austroads documents referenced? YES

If YES, Nominate:

- Australian/New Zealand Standard, Parking facilities, Part 1: Off-street car parking - Originated as AS 2890.1—1986.

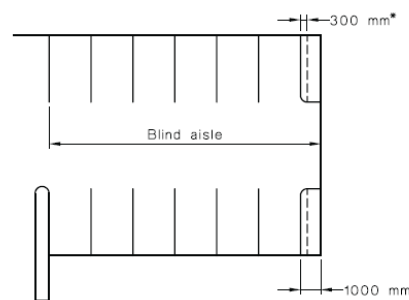
Proposed development User Class User Class 1A (Residential, domestic and employee parking)

AS2890.1:2004 Off-street car parking AS2890.6 Off-street parking for people with disabilities						
Parking Bay Type	Parking Bay Length		Parking Bay Width		Aisle Width	
	Required	Proposed	Required	Proposed	Required	Proposed
All bays at 90° (User Class 1A)	5.4m	5.4m	2.4m	2.4m	5.8m	5.8m

Name the other requirements in the AS2890.1:2004 document.

‘At blind aisles, the aisle shall be extended a minimum of 1 m beyond the last parking space, as shown in Figure 2.3, and the last parking space widened by at least 300 mm if it is bounded by a wall or fence.

In car parks open to the public, the maximum length of a blind aisle shall be equal to the width of six 90 degree spaces plus 1 m, unless provision is made for cars to turn around at the end and drive out forwards.’



*Additional widening required if there is a wall or fence at the side of the last space, see Clause 2.4.1(b)(ii).

DIMENSIONS IN MILLIMETRES

FIGURE 2.3 BLIND AISLE EXTENSION

KCTT comment:

Blind aisle

Not extended by a minimum of 1 m. However, swept path analysis has shown that all parking bays will be navigable by the large B99 passenger vehicle as the circulation aisle is widened in this section.

2.9 Bicycle Parking

Local Government City of Vincent
 Reference Document Utilised State Planning Policy 7.3 Residential Design Codes
 Volume 2 - Apartments (Gazetted on 24 May 2019)

Description of Parking Requirements in accordance with Scheme:

R-Codes:

- Resident – 0.5 space per dwelling
- Visitor – 1 space per 10 dwellings

Parking Requirement in accordance with regulatory documents

Land Use	Requirements	Yield	Total Parking
Residential Residents	Building - Resident – 0.5 space per dwelling		4.5
		9 apartments	
Residential Visitors	Building - Visitor – 1 space per 10 dwellings		1
Total Volume of Bicycle Parking Required			6
Total Volume of Bicycle Parking Provided by Proponent			6

Justification

The proposed development will meet the requirement for 6 bicycle bays.

2.10 ACROD Parking

Class of Building Class 2
 Does this building class require specific provision of ACROD Parking? NO
 Reference Document Utilised Building Code of Australia
 Description of Parking Requirements:
 N/A

Justification

The proposed development does not provide any accessible units.

2.11 Delivery and Service Vehicles

Guideline Document used as reference

NSW RTA Guide to Traffic Generating Developments

Requirements

Residential flat buildings (< 200 flats or home Units) - 1 space per 50 flats or home units plus 1 space per 1,000 m2 of public area set aside for bar, tavern, lounge and restaurant

Parking Requirement in accordance with regulatory documents

Land Use	Minimum Requirements	Yield	Total Parking
Residential Building	<i>1 space per 50 flats or home units plus 1 space per 1,000 m2 of public area set aside for bar, tavern, lounge and restaurant</i>	9	1
Total Volume of Service and Delivery Parking Required			1
Total Volume of Service and Delivery Parking Provided by Proponent			N/A

Justification

The proposed development will be included in the standard waste collection practice from the road verge. The waste vehicle is not expected to enter the development.

2.12 Calculation of Development Generated / Attracted Trips

What are the likely hours of operation?	Not applicable for residential land uses
What are the likely peak hours of operation?	07:30 - 08:30 in the AM peak; and 17:00 - 18:00 in the PM peak
Do the development generated peaks coincide with existing road network peaks?	YES
If YES, Which:	Partially both peak times
Guideline Document Used	NSW RTA Guide to Traffic Generating Developments
Rates from above document:	Residential

The NSW RTA Guide to Traffic Generating Developments suggests developments of this type in Sydney tend to generate between 4 and 5 vehicular trips per dwelling for medium to high density developments. In Perth, the Department of Planning and Infrastructure conducted a series of studies in the late 1990's / early 2000's which showed that higher density dwellings tended to average closer to 5.5 vehicle trips per day. These studies assumed that anywhere between 50% and 70% of commuters were travelling to work by car as a driver.

KCTT propose to use an average VPD 6.7 vehicular trips per day per residential unit.

Land Use Type	Rate above	Yield	Daily Traffic Generation	Peak Hour Traffic Generation	
				AM	PM
Residential	6.7 vehicular trips per unit per day; 0.8 vehicular trips per unit per peak hour;	9 units	60 VPD	7 VPH	7 VPH
Total:			60 VPD	7 VPH	7 VPH

Does the site have existing trip generation / attraction?	NO
What is the total impact of the new proposed development?	The proposed development is expected to generate up to 60 vehicular trips per day and 7 vehicular trips in peak hours. According to the WAPC Guidelines, this is a low impact to the surrounding network.

2.13 Traffic Flow Distribution

How many routes are available for access / egress to the site? Two (2)

Route 1 / Movement 1

Provide details for Route No 1 To/from the west via Milton Street
 Percentage of Vehicular Movements via Route No 1 25% [15 VPD; AM 2 VPH; PM 2 VPH]

Route 2 / Movement 2

Provide details for Route No 2 To/from the east via Milton Street
 Percentage of Vehicular Movements via Route No 2 75% [45 VPD; AM 5 VPH; PM 5 VPH]

2.14 Vehicle Crossover Requirements

Are vehicle crossovers required onto existing road networks? YES

How many existing crossovers? None

How many proposed crossovers? Crossover 1 – Full movement crossover from/to Milton Street

Justification

According to AS/NZS 2890.1:2004 Parking facilities Part 1: Off-street car parking the user class of the access point is: User Class 1A - Residential, domestic and employee Proposed development plans indicate a total of 11 parking bays and 1 crossover.

This crossover serves less than 25 parking bays from a local road, making it a "Category 1 driveway"

TABLE 3.1

SELECTION OF ACCESS FACILITY CATEGORY

Class of parking facility (see Table 1.1)	Frontage road type	Access facility category				
		Number of parking spaces (Note 1)				
		<25	25 to 100	101 to 300	301 to 600	>600
1,1A	Arterial	1	2	3	4	5
	Local	1	1	2	3	4
2	Arterial	2	2	3	4	5
	Local	1	2	3	4	4
3,3A	Arterial	2	3	4	4	5
	Local	1	2	3	4	4

NOTES:

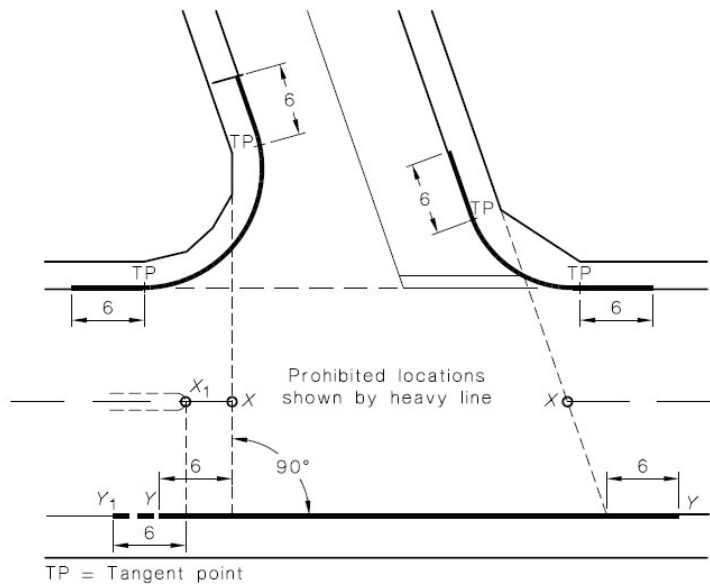
- 1 When a car park has multiple access points, each access should be designed for the number of parking spaces effectively served by that access.
- 2 This Table does not imply that certain types of development are necessarily suitable for location on any particular frontage road type. In particular, access to arterial roads should be limited as far as practicable, and in some circumstances it may be preferable to allow left-turn-only movements into and out of the access driveway.

Therefore, the following requirements from AS/NZS 2890.1:2004 Parking facilities Part 1: Off-street car parking apply:

*“(a) **Driveway Categories 1 and 2:** At unsignalized intersections of sub-arterial, collector or local streets with each other or with an arterial road, access driveways in Categories 1 and 2 (see Table 3.1) shall not be located in the sections of kerb shown by heavy lines in Figure 3.1. **This requirement shall not apply to accesses to domestic driveways in the kerb section opposite the entering road at any intersection including signalized intersections.** Furthermore, it shall not apply to any access driveway serving a property which would otherwise be denied access due to the physical impossibility of meeting the requirement.*

At signalized intersections, the minimum distance from the intersection, measured from the property boundary along both legs, shall be increased as necessary to locate access driveways beyond the influence of normal queue lengths at the intersections. If this is not practicable, it may be necessary to provide-

- (i) an arrangement which confines traffic to turning left when either entering or leaving the car park;*
- (ii) a signalized driveway with signals coordinated with the intersection signals; or*
- (iii) other traffic management means of providing for safe and efficient operation of the driveway."*



NOTES:

- 1 Accesses to domestic driveways are excluded from the prohibition in respect of the kerb section marked Y-Y (see Clause 3.2.3(a)).
- 2 The points marked X_1 and X are respectively at the median end on a divided road and at the intersection of the main road centre-line and the extensions of the side road property lines shown as dotted lines, on an undivided road. On a divided road, dimension Y-Y extends to Point Y_1 .

DIMENSIONS IN METRES

FIGURE 3.1 PROHIBITED LOCATIONS OF ACCESS DRIVEWAYS

Nominate the width of the crossover and the driveway 3m

Does the width of the crossover comply with the standards? YES

How many existing crossovers? None

Category 1 Driveways longer than 30m and/or serving 30 vehicle trips per hour are required to be a minimum of 5.5m wide for the first 6m from the property boundary.

The proposed driveway is approximately 28.5m long with traffic generation in peak hours up to 7 vehicle trips per hour. Therefore, the proposed 3m width for the entire driveway length is appropriate for the proposed development.

2.15 Traffic Management

Describe the traffic management techniques to be implemented within the subject site.

The proposed crossover and driveway are 3m wide. Only vehicles from one direction at a time would be able to use the driveway.

Given there will be only 7 vehicle trips per hour in peak hours and that this is a development with a homogenous land use, KCTT believe that basic signage would be sufficient for traffic management within the site.

The proposed development is a residential building, and in most cases, vehicles will drive in the same direction (going to work or coming from work). This means that vehicle meeting on the driveway in opposite directions would be a rare occurrence.

Appendix 2 (S40 drawing) shows the proposed signage (inclusive of pavement signage and traffic mirrors).

2.16 Public Transport Accessibility

How many bus routes are within 400 metres of the subject site?

Three (3)

How many rail routes are within 800 metres of the subject site?

One (1)

Bus / Rail Route	Description	Peak Frequency	Off-Peak Frequency
406	Stirling Station - Glendalough Station via Balcatta	10 minutes	60 minutes
414	Glendalough Station - Edith Cowan University Mount Lawley via Walcott Street	20 minutes	No Saturday, Sunday & Public Holiday services
990	Perth - Scarborough Beach Bus Station via Glendalough Station	5 minutes	30 minutes
Joondalup Line	Elizabeth Quay – Butler	5 minutes	30 minutes

Walk Score Rating for Accessibility to Public Transport

59 | Good Transit. Many nearby public transportation options.

2.17 Pedestrian Infrastructure

Describe existing local pedestrian infrastructure within a 400m radius of the site:

Classification	Road Name
"Principal Shared Path"	Mitchell Freeway
"Other Shared Path (Shared by Pedestrians and Cyclists)"	Brady Street; Bonnievale Street
Does the site have existing pedestrian facilities	YES
Does the site propose to improve pedestrian facilities?	NO
What is the Walk Score Rating?	
61	Somewhat Walkable. Some errands can be accomplished on foot.

2.18 Cyclist Infrastructure

Are there any PBN Routes within an 800m radius of the subject site? YES

If YES, describe:

Classification	Road Name
"Principal Shared Path"	Mitchell Freeway
"High Quality Shared Path"	
"Other Shared Path (Shared by Pedestrians and Cyclists)"	Brady Street; Bonnievale Street; Powis Street
"Good Road Riding Environment"	Tasman Street; Leeder Street; Blackford Street
"Perth Bicycle Network - Continuous Signed Routes"	NE2 – Tyler Street; Egina Street; Federation Street
"Bicycle Lanes or Sealed Shoulder Either Side"	Scarborough Beach Road

Are there any PBN Routes within a 400m radius of the subject site? YES

If YES, describe:

Classification	Road Name
"Principal Shared Path"	Mitchell Freeway
"Other Shared Path (Shared by Pedestrians and Cyclists)"	Brady Street; Bonnievale Street
"Good Road Riding Environment"	Tasman Street; Leeder Street;
Does the site have existing cyclist facilities?	YES
Does the site propose to improve cyclist facilities?	YES

If YES, describe the measures proposed.

6 bicycle bays will be proposed.

2.19 Site-Specific Issues and Proposed Remedial Measures

How many site-specific issues need to be discussed?

One (1)

Site-Specific Issue No 1

Compliance with AS2890.1:2004

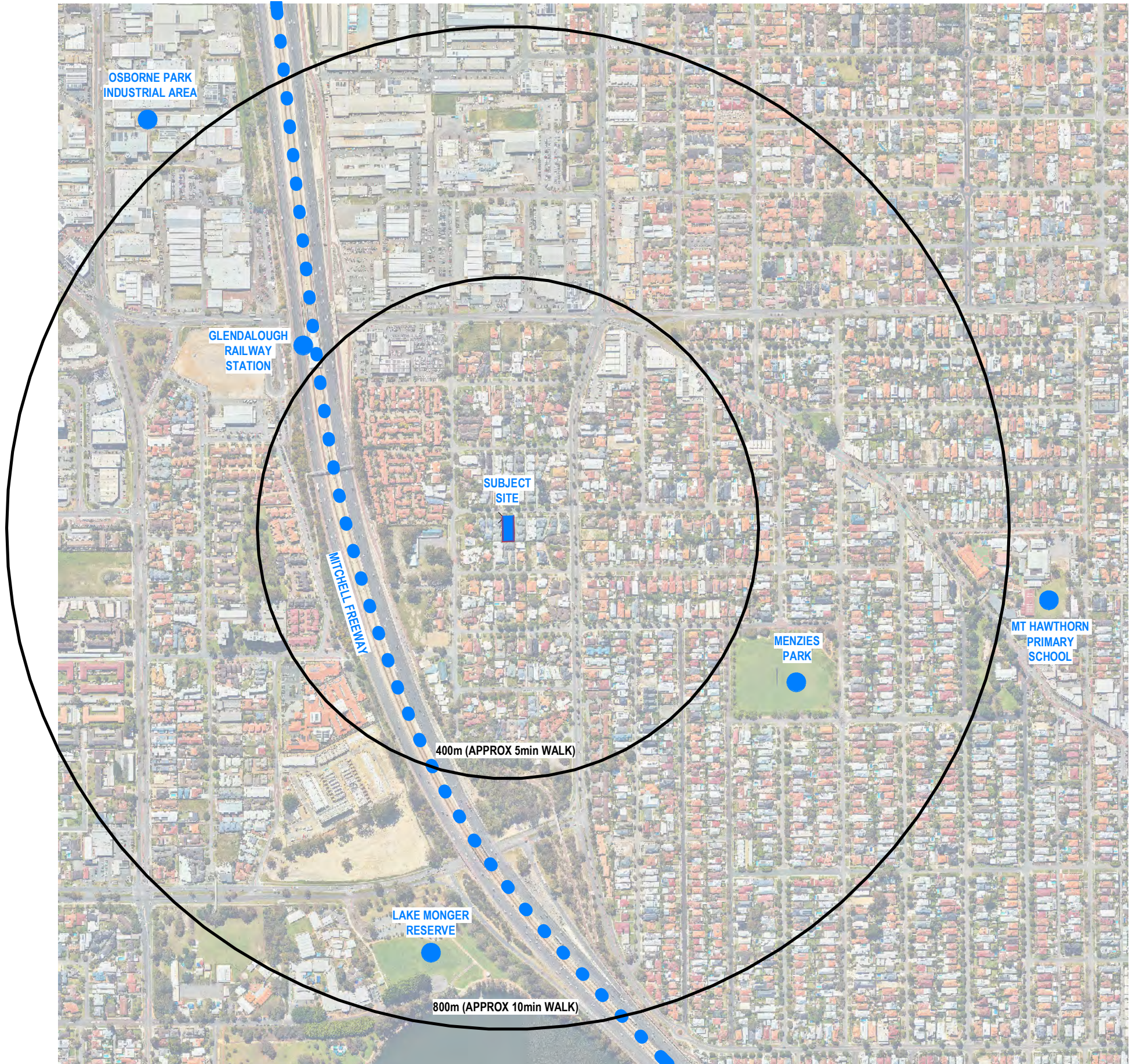
Remedial Measure / Response

The blind aisle is not lengthened by at least 1m. However, the proposed parking area will be navigable by the B99 vehicle as the last two bays will be positioned below other bays increasing the manoeuvring space, and there is a turning bay proposed enabling for reversing from this bay.

KCTT believe that Appendix 2 clearly shows that the proposed parking area and parking bays are navigable by the B99 passenger vehicle.

Appendix 1

The Layout of the Proposed Development



PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
SITE ANALYSIS

DEVELOPMENT APPROVAL

SCALE
1 : 7000 (A3)
0 1 2 3 4 5 6 M



PROJECT No.
21.17

DRAWING No.
A0-10

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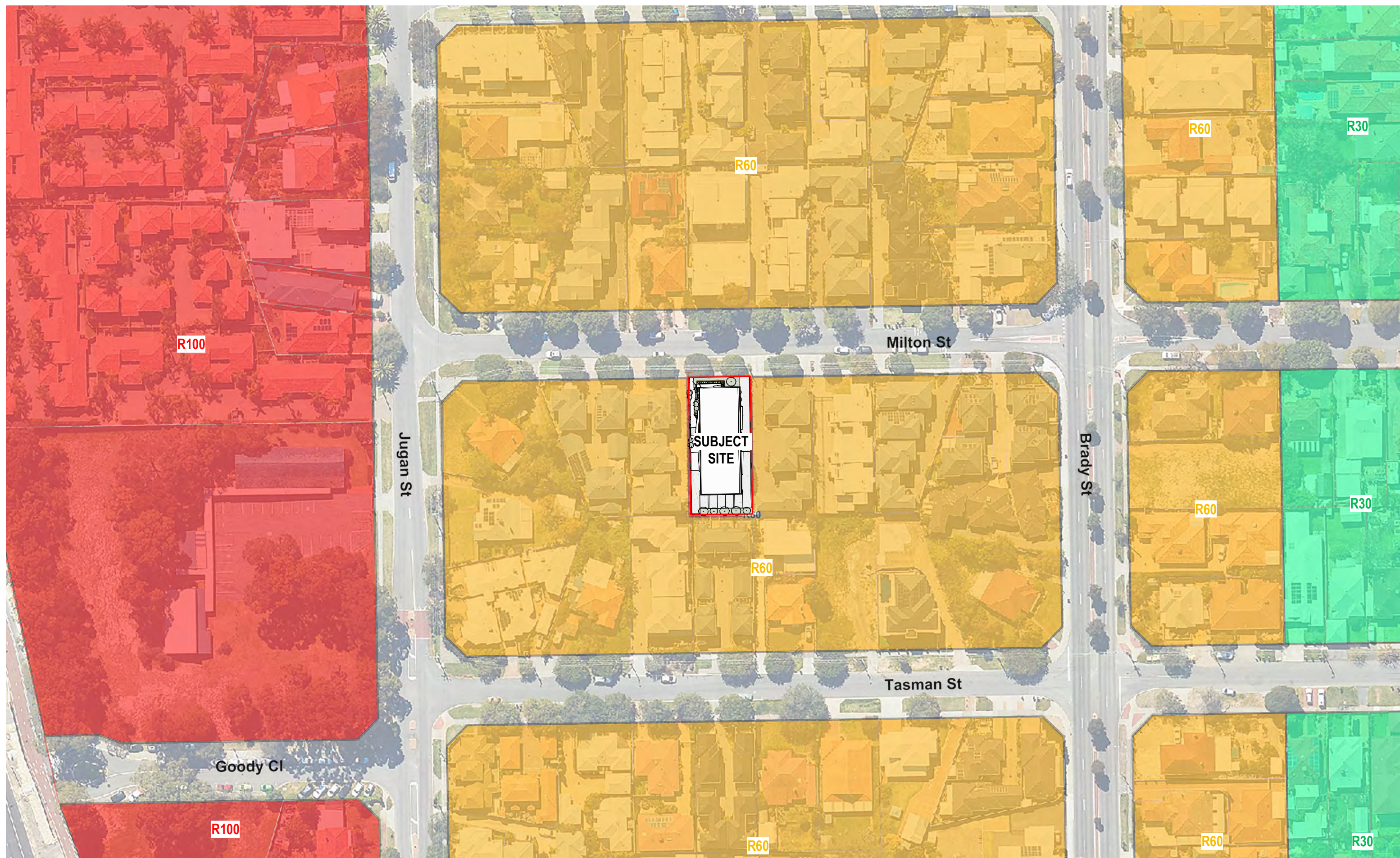
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07.10.2022 C ISSUE FOR DA
05.10.2022 B ISSUE FOR DA
29.04.2022 A ISSUE FOR REVIEW

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PROJECT NAME

SOCIAL HOUSING

55 MILTON STREET, MOUNT HAWTHORN

CLIENT

DEPARTMENT OF COMMUNITIES

DRAWING NAME

ZONING MAP

DEVELOPMENT APPROVAL

SCALE

1 : 1000 (A3)



PROJECT No.

21.17

DRAWING No.

A0-20

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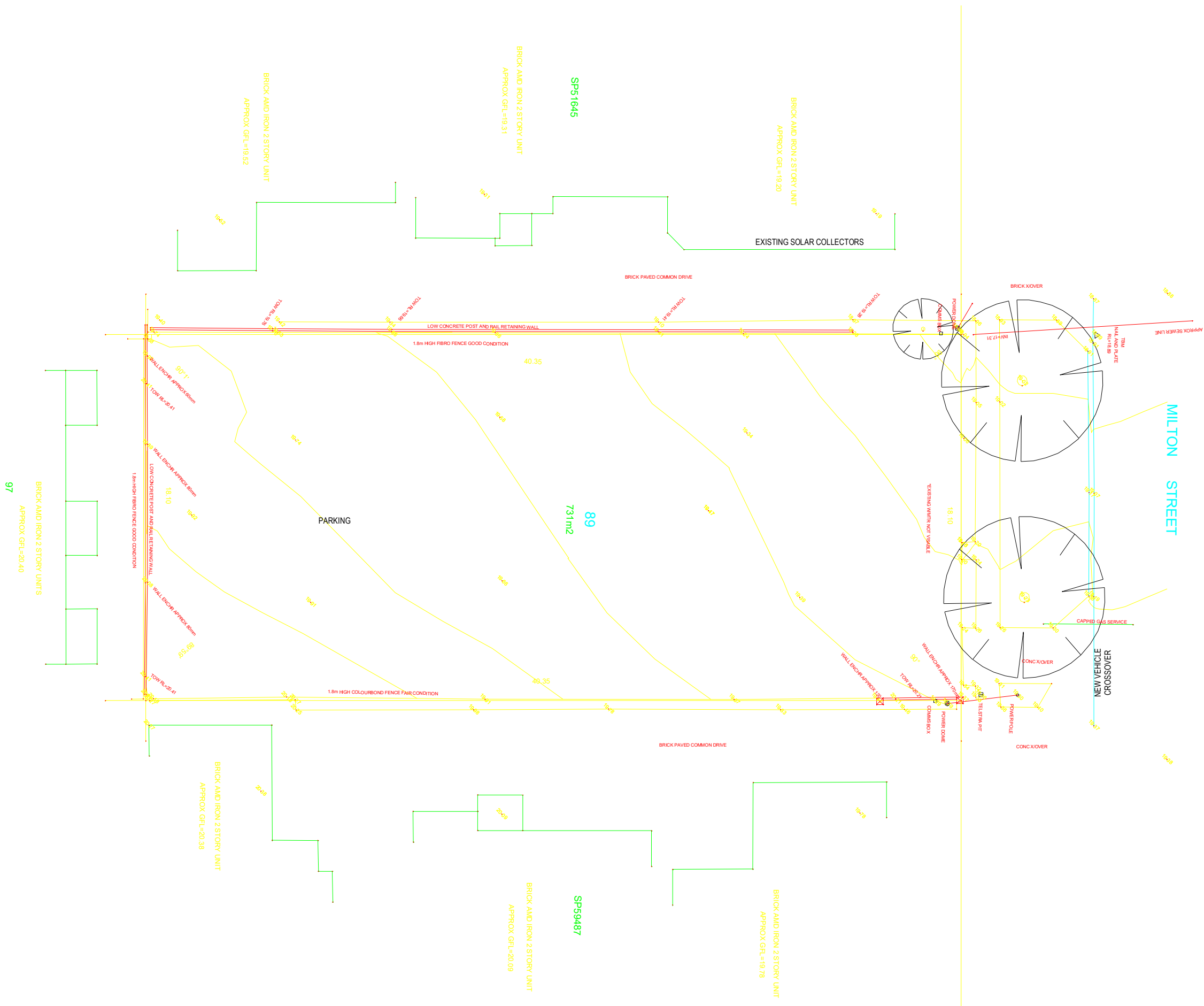
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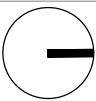
PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
FEATURE SURVEY

DEVELOPMENT APPROVAL

SCALE
1 : 200 (A3)



PROJECT No.
21.17

DRAWING No.
A1-00

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05.10.2022

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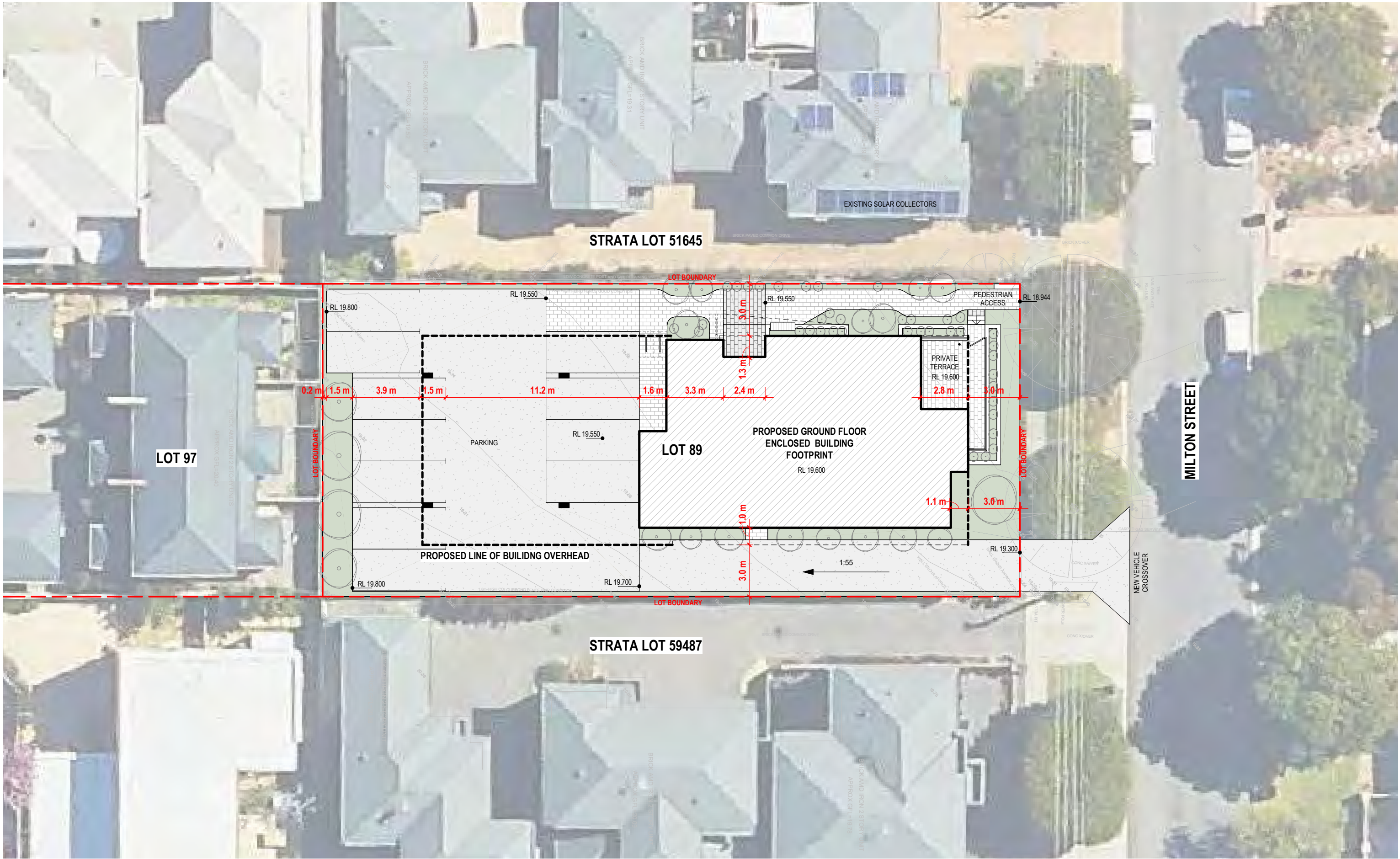
B
A

REV

ISSUE FOR DA
ISSUE FOR DA

DESCRIPTION

CHECKED



PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
SITE PLAN

DEVELOPMENT APPROVAL

SCALE
1 : 200 (A3)



PROJECT No.
21.17

DRAWING No.
A1-01

REV
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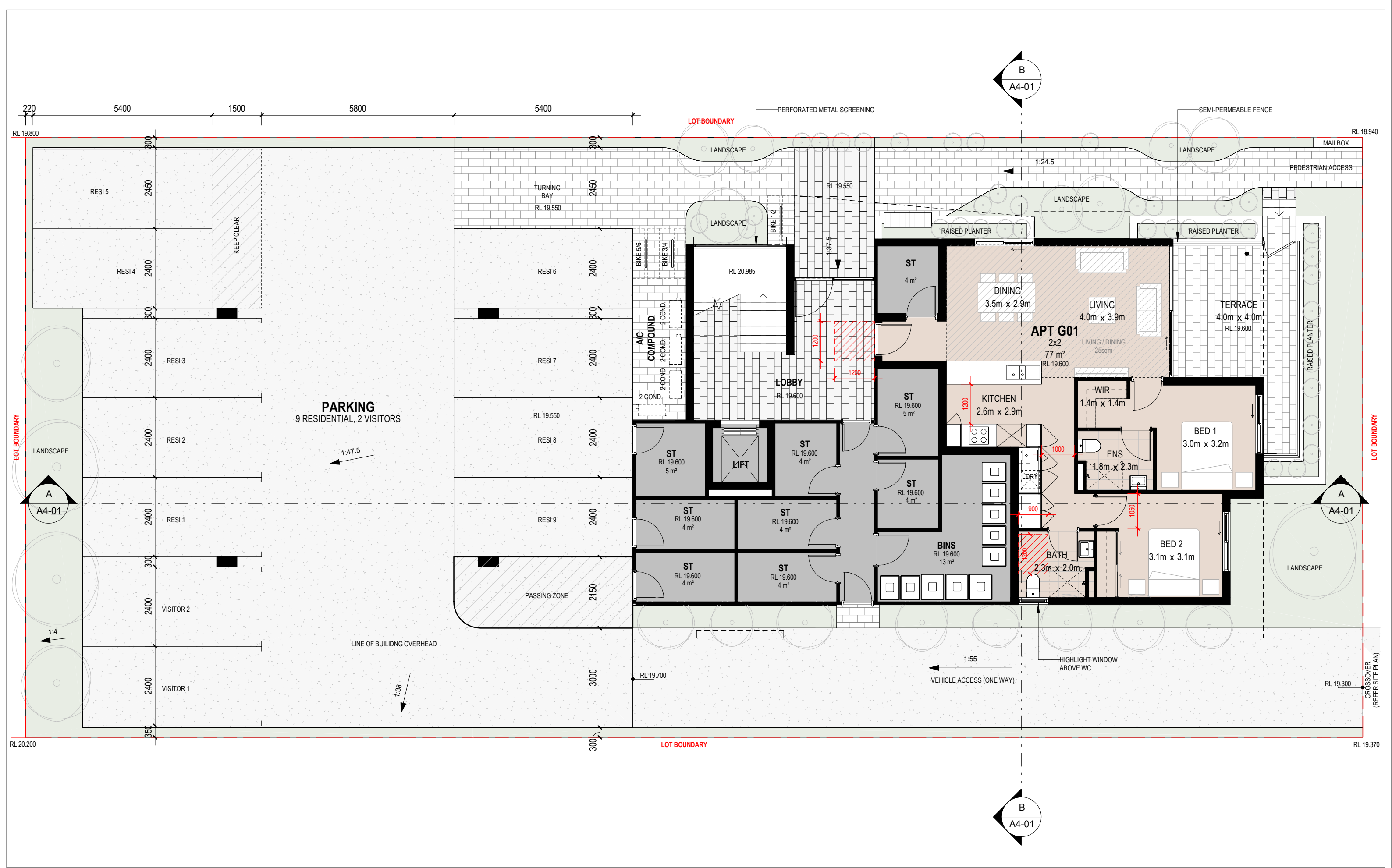
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AB

20.12.2022	I	COORDINATION ISSUE
07.10.2022	H	ISSUE FOR DA
05.10.2022	G	ISSUE FOR DA
14.09.2022	F	COORDINATION ISSUE
15.08.2022	E	ISSUE FOR REVIEW
29.04.2022	D	ISSUE FOR REVIEW
27.04.2022	C	PRELIMINARY ISSUE

DD/MM/YY REV DESCRIPTION

CHECKED



PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
GROUND FLOOR PLAN

DEVELOPMENT APPROVAL

SCALE
0 1 2 3 4 5 6 M

1 : 100 (A3)

PROJECT No.	DRAWING No.	REV
21.17	A2-01	I
DRAWN BY	AB	

20.12.2022	I	COORDINATION ISSUE
07.10.2022	H	ISSUE FOR DA
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29.04.2022	D	ISSUE FOR REVIEW
27.04.2022	C	PRELIMINARY ISSUE
DD/MM/YY	REV	DESCRIPTION
		CHECKED



PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
LEVEL 1 FLOOR PLAN

DEVELOPMENT APPROVAL

SCALE
1 : 100 (A3)



PROJECT No.

21.17

DRAWING No.

A2-02

REV

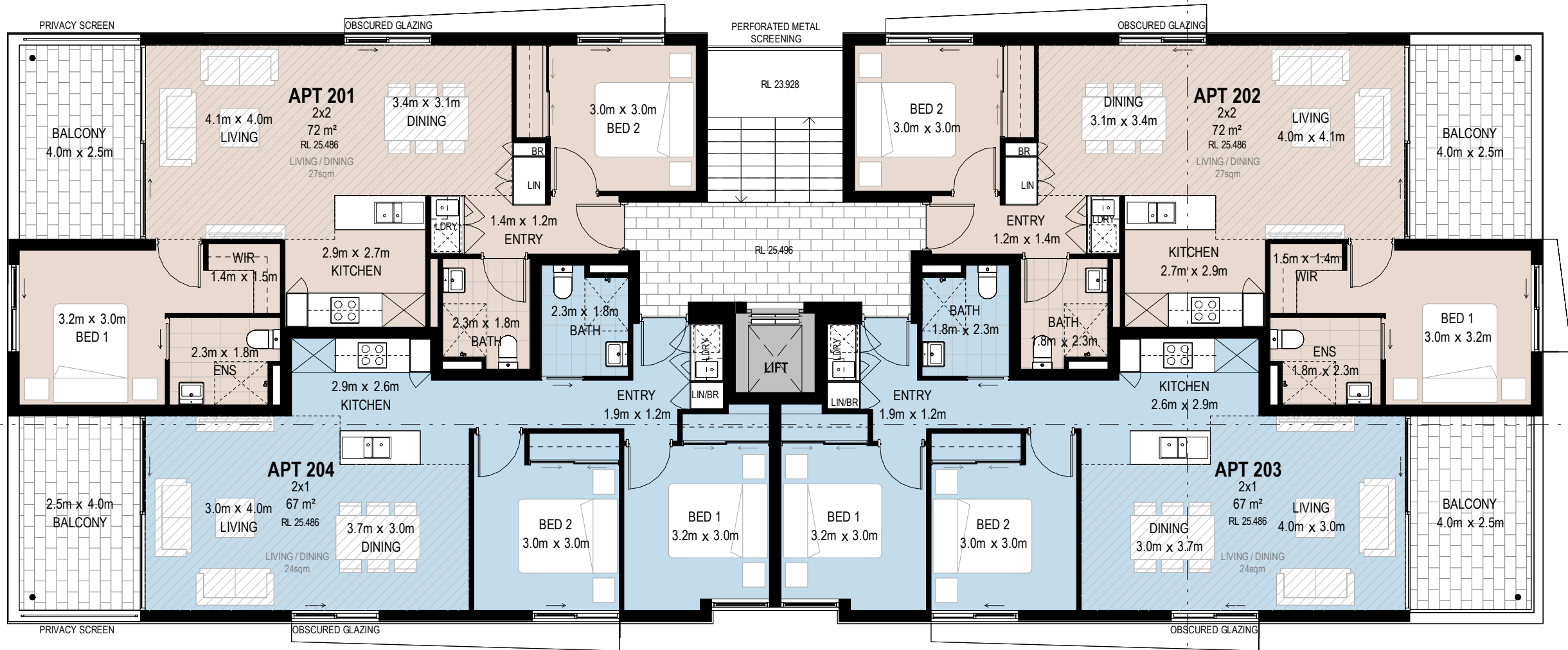
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AB

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29.04.2022	E	ISSUE FOR REVIEW
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26.04.2022	C	PRELIMINARY ISSUE
DD/MM/YY	REV	DESCRIPTION

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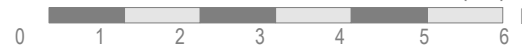
PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
LEVEL 2 FLOOR PLAN

DEVELOPMENT APPROVAL

SCALE
1 : 100 (A3)



PROJECT No.
21.17

DRAWING No.
A2-03

REV
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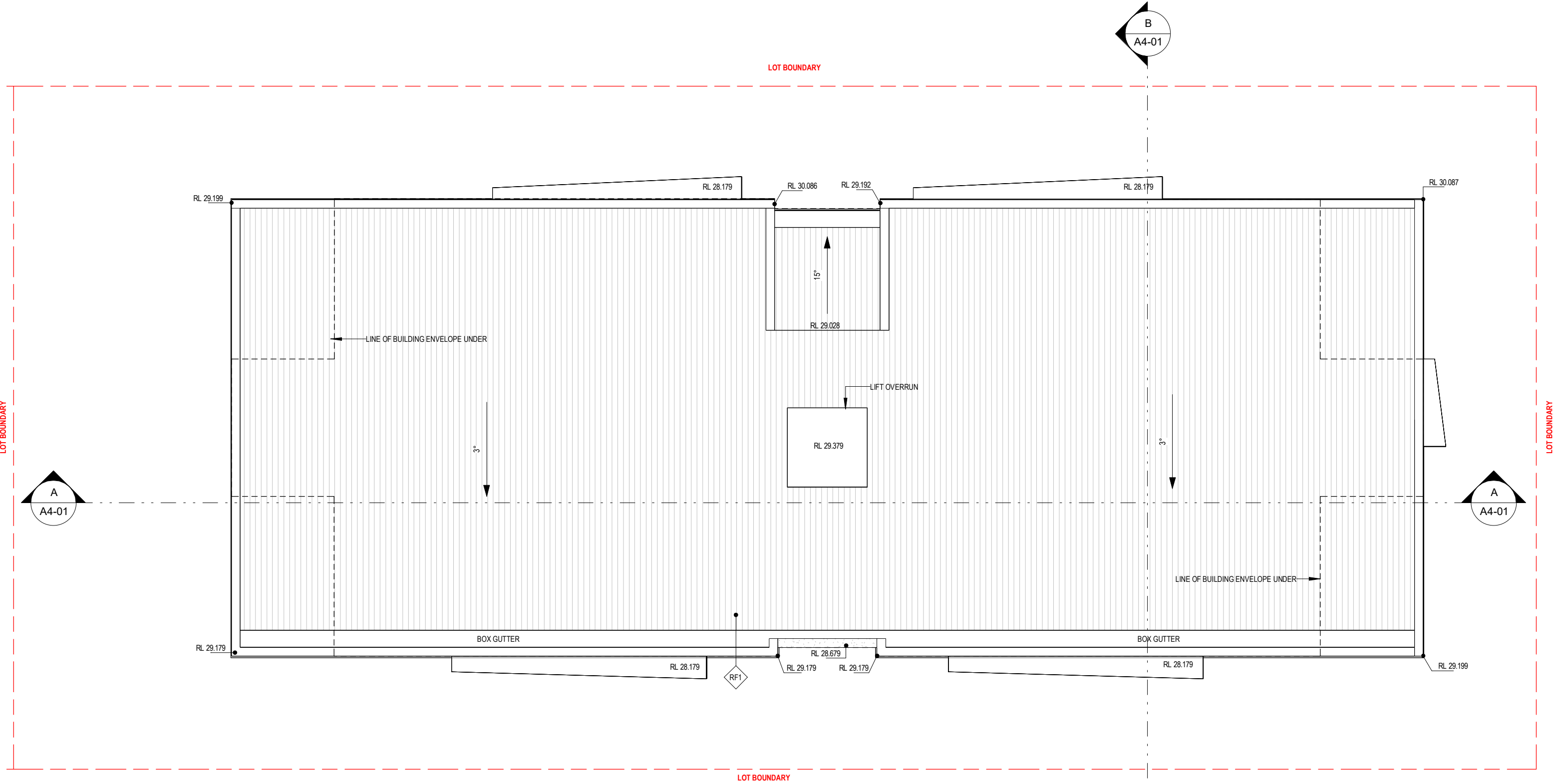
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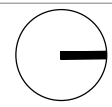
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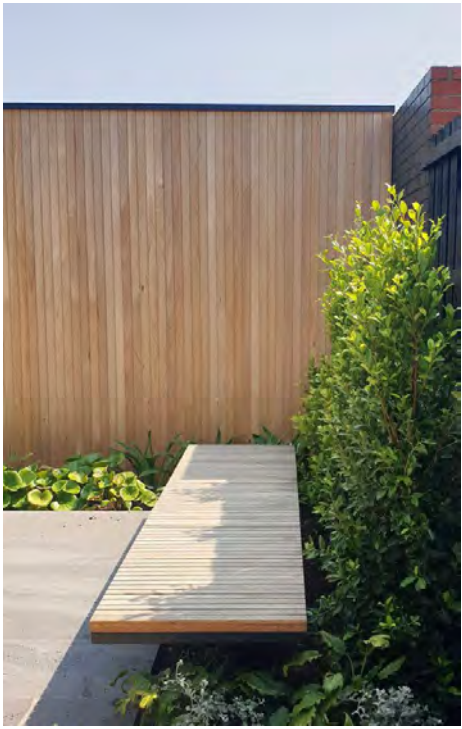
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14.09.2022	F	COORDINATION ISSUE
15.08.2022	E	ISSUE FOR REVIEW
29.04.2022	D	ISSUE FOR REVIEW
27.04.2022	C	PRELIMINARY ISSUE
26.04.2022	B	PRELIMINARY ISSUE

DD/MM/YY REV DESCRIPTION

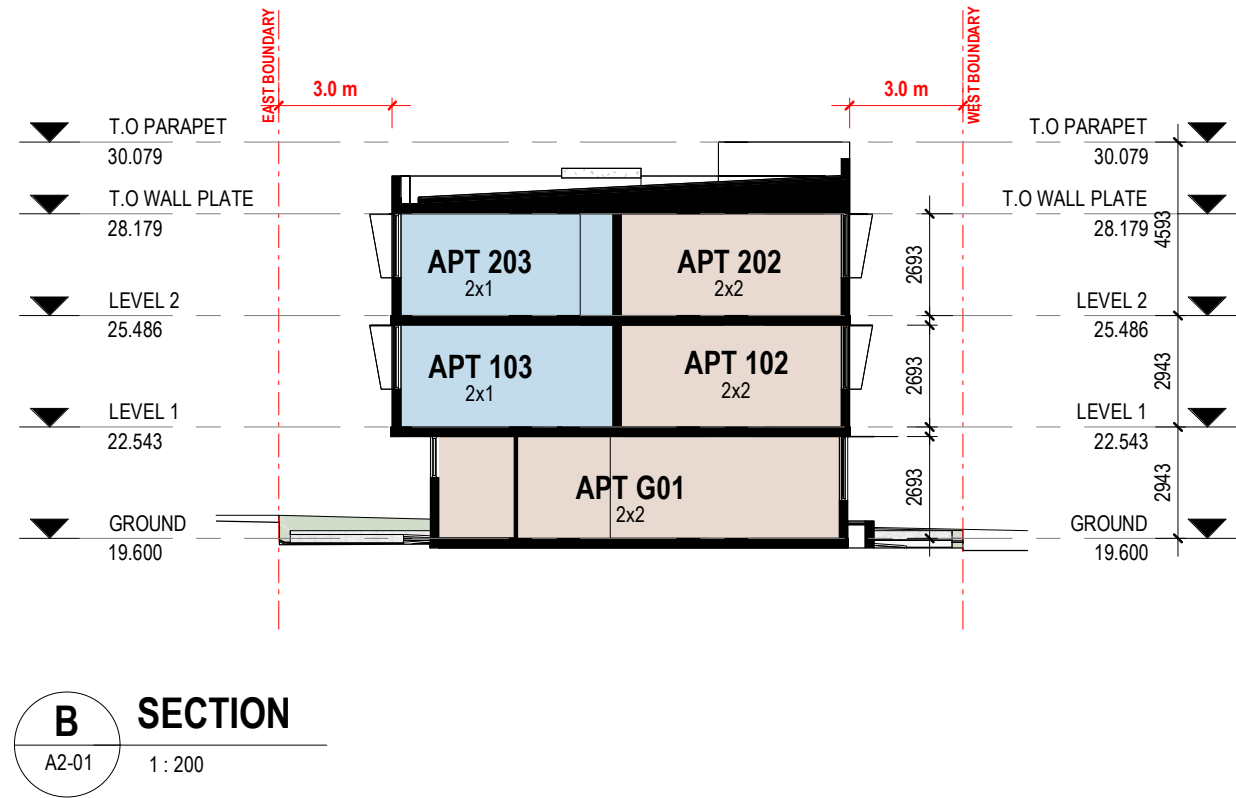
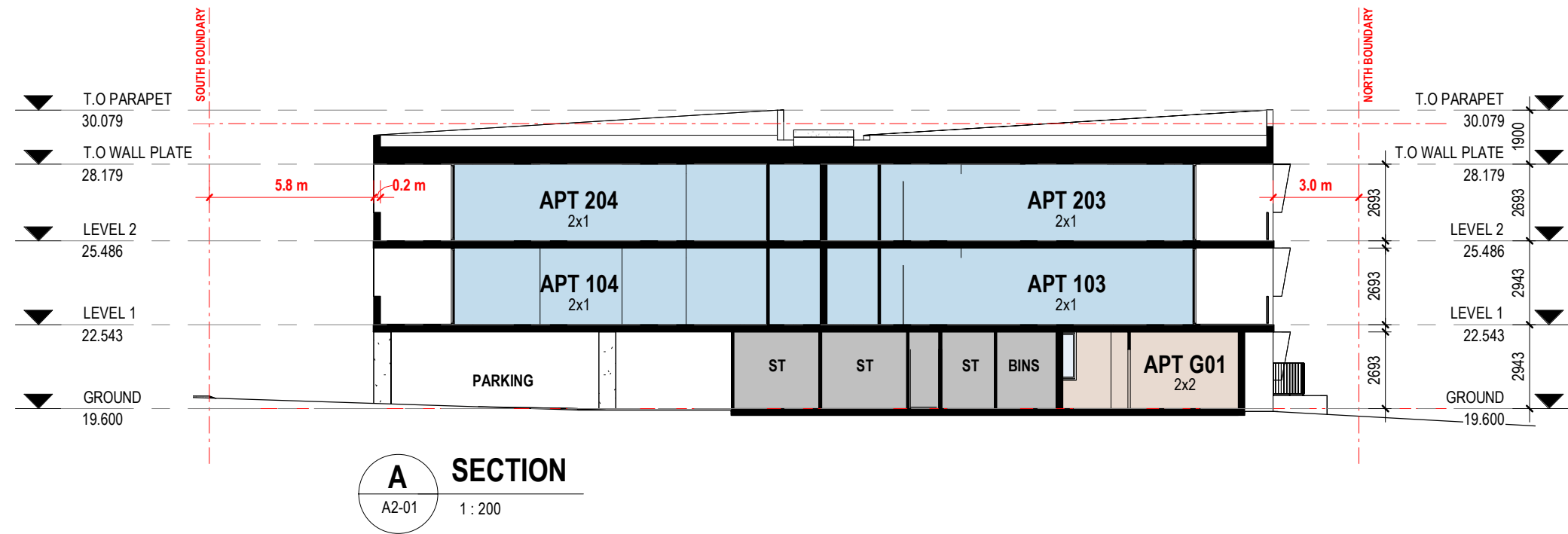
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	PROJECT NAME SOCIAL HOUSING 55 MILTON STREET, MOUNT HAWTHORN		DRAWING NAME ROOF PLAN		SCALE 1 : 100 (A3) M			07.10.2022 05.10.2022 14.09.2022 15.08.2022 29.04.2022	E D C B A	ISSUE FOR DA ISSUE FOR DA COORDINATION ISSUE ISSUE FOR REVIEW ISSUE FOR REVIEW		
	CLIENT DEPARTMENT OF COMMUNITIES		DEVELOPMENT APPROVAL		PROJECT No. 21.17	DRAWING No. A2-04						REV E
					DRAWN BY							AB
								DD/MM/YY	REV	DESCRIPTION	CHECKED BY	

MATERIAL SCHEDULE			MATERIAL SCHEDULE			MATERIAL SCHEDULE			MATERIAL SCHEDULE		
CODE	DESCRIPTION	IMAGE	CODE	DESCRIPTION	IMAGE	CODE	DESCRIPTION	IMAGE	CODE	DESCRIPTION	IMAGE
AL1	POWDER COATED ALUMINIUM BALUSTRADE (BLACK)		AL3	POWDER COATED ALUMINIUM PERFORATED PRIVACY SCREEN (BLACK)		RF1	CONCEALED METAL ROOF DECK		TM1	COMPOSITE TIMBER BENCH	
AL2	POWDER COATED ALUMINIUM WINDOW SHROUD (BLACK)		BR1	FACE BRICK WALL (CHARCOAL)		RN1	RENDER ON BRICKWORK (WHITE)		WN1	POWDERCOATED ALUMINIUM FRAMED WINDOW SUITE	
			C01	EXPRESSED CONCRETE SLAB EDGE (IN-SITU GRAY)		RN2	RENDER ON BRICKWORK (CHARCOAL)				
			C02	OFF-FORM CONCRETE COLUMN		ST1	PAINTED STEEL				

	PROJECT NAME	DRAWING NAME	SCALE (A3)  M										
	SOCIAL HOUSING 55 MILTON STREET, MOUNT HAWTHORN	MATERIAL PALETTE											
	CLIENT												
	DEPARTMENT OF COMMUNITIES	DEVELOPMENT APPROVAL	PROJECT No. 21.17	DRAWING No. A3-02	REV C	07.10.2022 05.10.2022 29.04.2022	C B A	ISSUE FOR DA ISSUE FOR DA ISSUE FOR REVIEW					
			DRAWN BY			AB	DD/MM/YY	REV	DESCRIPTION	CHECKED			



PROJECT NAME
SOCIAL HOUSING
55 MILTON STREET, MOUNT HAWTHORN

CLIENT
DEPARTMENT OF COMMUNITIES

DRAWING NAME
SECTIONS

DEVELOPMENT APPROVAL

SCALE
1 : 200 (A3)



PROJECT No.
21.17

DRAWING No.
A4-01

REV
B

DRAWN BY

AB

07.10.2022
05.10.2022

B
A

ISSUE FOR DA
ISSUE FOR DA

DD/MM/YY

REV

DESCRIPTION

CHECKED



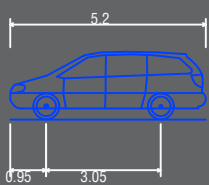
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	SOCIAL HOUSING 55 MILTON STREET, MOUNT HAWTHORN	ARTISTS IMPRESSION										
	CLIENT		PROJECT No.	DRAWING No.	REV							
	DEPARTMENT OF COMMUNITIES	DEVELOPMENT APPROVAL	21.17	A10-01	C							
				DRAWN BY						AB		

Appendix 2

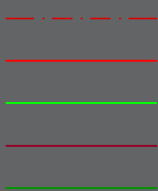
Vehicle Turning Circle Plan



Milton Street



Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m



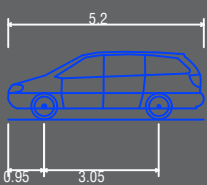
Lot boundary
Wheel Path (Forward Vehicle Motion)
Vehicle Chassis Envelope (Forward Vehicle Motion)
Wheel Path (Reverse Vehicle Motion)
Vehicle Chassis Envelope (Reverse Vehicle Motion)

LEGEND

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:	Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922 PH: 08 9441 2700 WEB: www.kctt.com.au	
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)			
			DRAWING NUMBER: KC01530.000_S20			
A	20-12-2022	ISSUED FOR REVIEW		N.M.		
NO	DATE	AMENDMENT				



Milton Street

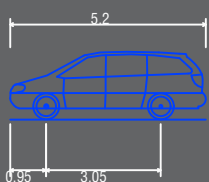


Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m

- Lot boundary
- Wheel Path (Forward Vehicle Motion)
- Vehicle Chassis Envelope (Forward Vehicle Motion)
- Wheel Path (Reverse Vehicle Motion)
- Vehicle Chassis Envelope (Reverse Vehicle Motion)

LEGEND

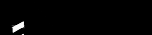
			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:	Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922 PH: 08 9441 2700 WEB: www.kctt.com.au	
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.		
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER: KC01530.000_S21			
NO	DATE	AMENDMENT				



Passenger vehicle (5.2 m)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.804m
Min Body Ground Clearance	0.295m
Track Width	1.840m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	6.300m

- Lot boundary
- Wheel Path (Forward Vehicle Motion)
- Vehicle Chassis Envelope (Forward Vehicle Motion)
- Wheel Path (Reverse Vehicle Motion)
- Vehicle Chassis Envelope (Reverse Vehicle Motion)

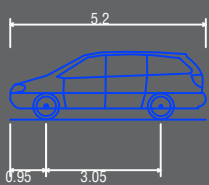
LEGEND

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:	Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922 PH: 08 9441 2700 WEB: www.kctt.com.au	
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.		
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER:			
NO	DATE	AMENDMENT	KC01530.000_S22			





Milton Street



Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m

- Lot boundary
- Wheel Path (Forward Vehicle Motion)
- Vehicle Chasis Envelope (Forward Vehicle Motion)
- Wheel Path (Reverse Vehicle Motion)
- Vehicle Chasis Envelope (Reverse Vehicle Motion)

LEGEND

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:	Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922 PH: 08 9441 2700 WEB: www.kctt.com.au
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.	
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER: KC01530.000_S23		
NO	DATE	AMENDMENT			







Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m

Lot boundary

Wheel Path (Forward Vehicle Motion)

Vehicle Chassis Envelope (Forward Vehicle Motion)

Wheel Path (Reverse Vehicle Motion)

Vehicle Chassis Envelope (Reverse Vehicle Motion)

LEGEND

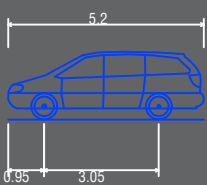
DRAWN BY:

Civil & Traffic Engineering Consultants
PO Box 1456 Scarborough WA 6922

N.M.

PH: 08 9441 2700
WEB: www.kctt.com.au

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	
			DRAWING NUMBER: KC01530.000_S24	
A	20-12-2022	ISSUED FOR REVIEW		
NO	DATE	AMENDMENT		



Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m

- Lot boundary
- Wheel Path (Forward Vehicle Motion)
- Vehicle Chassis Envelope (Forward Vehicle Motion)
- Wheel Path (Reverse Vehicle Motion)
- Vehicle Chassis Envelope (Reverse Vehicle Motion)

LEGEND

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:	Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922 PH: 08 9441 2700 WEB: www.kctt.com.au	
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.		
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER: KC01530.000_S25			
NO	DATE	AMENDMENT				



Passenger vehicle (5.2 m)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.804m
Min Body Ground Clearance 0.295m
Track Width 1.840m
Lock to Lock Time 4.00s
Kerb to Kerb Turning Radius 6.300m

Lot boundary

Wheel Path (Forward Vehicle Motion)

Vehicle Chasis Envelope (Forward Vehicle Motion)

Wheel Path (Reverse Vehicle Motion)

Vehicle Chasis Envelope (Reverse Vehicle Motion)

LEGEND

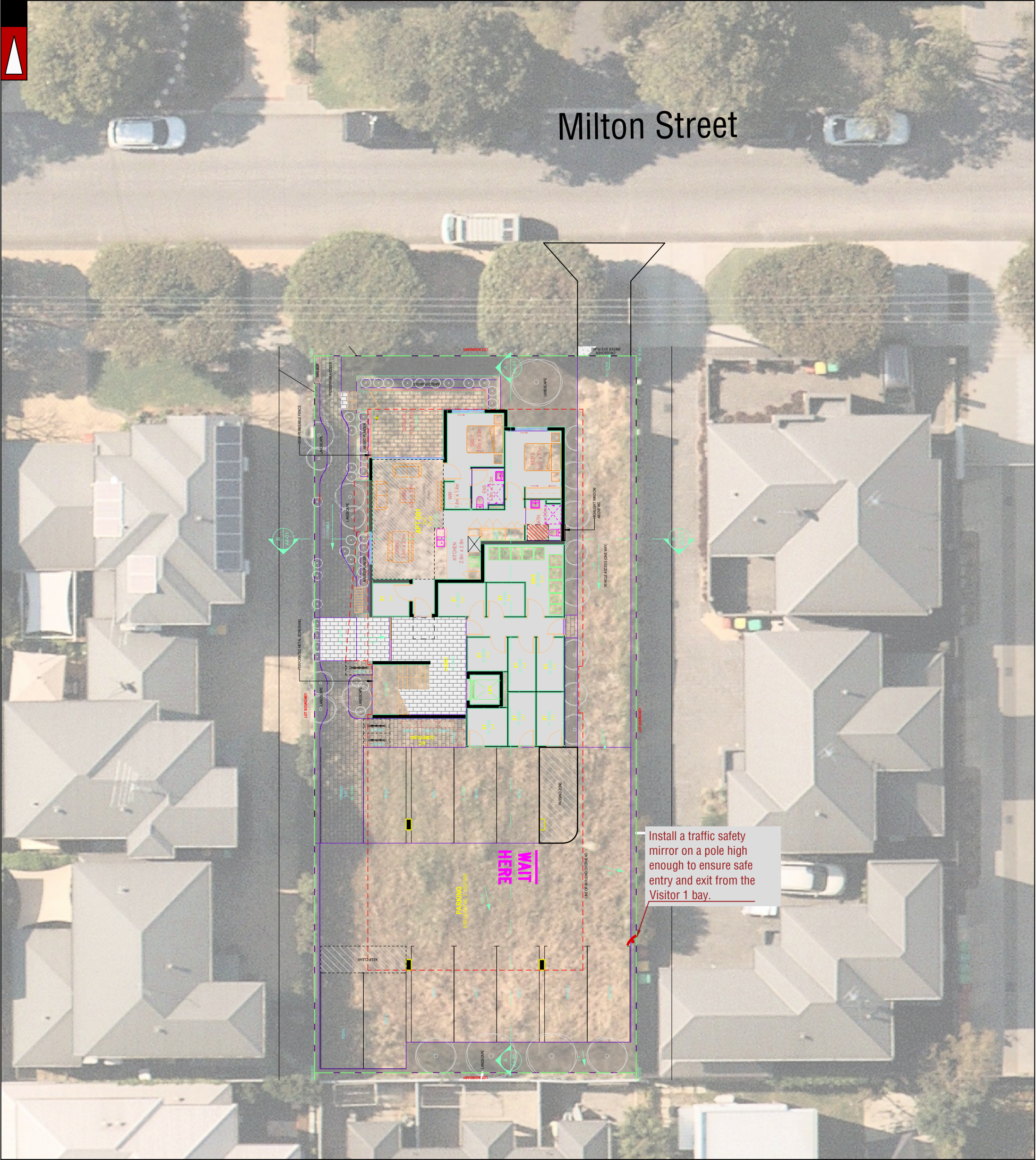
DRAWN BY:

Civil & Traffic Engineering Consultants
PO Box 1456 Scarborough WA 6922

N.M.

PH: 08 9441 2700
WEB: www.kctt.com.au

			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER: KC01530.000_S26	
NO	DATE	AMENDMENT		





Traffic safety mirror



Stop linemarking and waiting bay

LEGEND

DRAWN BY:

Civil & Traffic Engineering Consultants
PO Box 1456 Scarborough WA 6922

N.M.

PH: 08 9441 2700
WEB: www.kctt.com.au



			PROJECT: 55 Milton Street, Mount Hawthorn	DRAWN BY:
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	
A	20-12-2022	ISSUED FOR REVIEW	DRAWING NUMBER: KC01530.000_S40	
NO	DATE	AMENDMENT		