Affordable Housing Development (Boarding House)
77 – 79 Waldron Road, Chester Hill

Traffic Report

Revision 1
8 October 2018

InRoads Group
www.inroadsgroup.com.au
PO Box 596 | Potts Point NSW 1335
02 8035 3417
ABN: 25 608 559 897
ACN: 608 559 897

Contents

Appendices

1.0 Introduction

InRoads Group was engaged to undertake a Traffic Impact Assessment of a proposed Affordable Housing (Boarding House) Development comprising 50 rooms and one (1) ground floor retail tenancy of 39m^2, to be located on the site at 77 – 79 Waldron Road, Chester Hill.

The site is located in the City of Canterbury Bankstown Local Government Area, and the proposal has been assessed considering the relevant controls.

This report provides relevant site context, describes the proposal, and documents the results and findings of our investigations addressing the following key traffic design elements and issues:

- Vehicular site access arrangements;
- On-site car and motorcycle parking provision;
- Bicycle parking provisions;
- Parking layout and design;
- Vehicle servicing and refuse collection arrangements; and
- The traffic impacts anticipated as a result of the proposal.

2.0 Context

2.1 Subject Site

The subject site is located at 77 – 79 Waldron Road, Chester Hill, on the southern side of Waldron Road and immediately to the north of the T3 Bankstown rail line, approximately 100m to the west of Hector Street. It comprises two (2) titles including Lot 62 on DP23866 (77 Waldron Road) and Lot 63 on DP23866 (79 Waldron Road), and is approximately 1,269m^2 in area.

The site is currently occupied by two dwelling houses (one on each lot), each of which is accessed via a driveway adjacent to the respective eastern site boundaries.

Figure 2.1a and **Figure 2.1b** below show the location of the subject site, and the site itself.

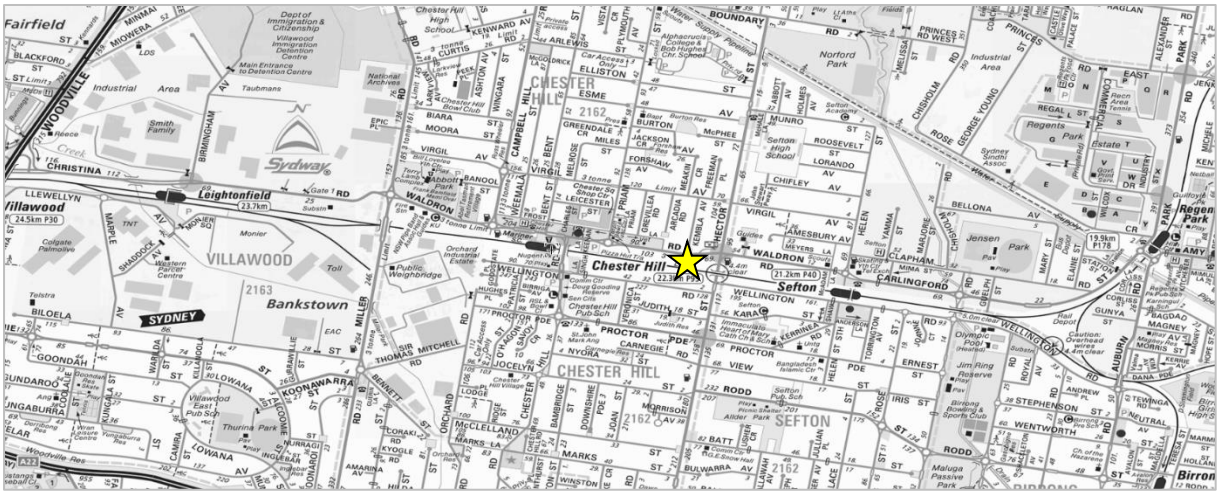

Figure 2.1a: Site Location

Figure 2.1b: Subject Site **Source: Nearmap**

2.2 Adjacent Road Network

The subject site has frontage to Waldron Road to the north. Waldron Road is a Collector Road which runs in an east-west direction through Chester Hill Village Centre and connecting to Sefton Small Village Centre to the east.

Waldron Road has a two-lane, two-way undivided cross-section (see **Figure 2a** and **Figure 2b** below), with a pavement width of approximately 12.5m. Pedestrian footpaths are provided along both sides of the road, and Waldron Road has a posted speed limit of 50km/hr along the frontage of the site.

Kerbside parking is generally permitted on Waldron Road clear of intersections, bus stops and property access driveways in accordance with New South Wales Road Rules. This parking is time-restricted to the west of the site closer to the commercial properties within the Chester Hill Village Centre, however is generally unrestricted in proximity to the subject site.

Figure 2.2a: Waldron Road, looking eastbound

Figure 2.2b: Waldron Road, looking westbound

2.3 Public Transport

The proposed development on the subject site will benefit from extremely convenient access to existing public transport services. It is located approximately midway between Chester Hill rail station (which is to the west of the site) and Sefton Rail Station (which is to the east of the site), and is a convenient 6 – 8 minute (i.e. approximately 500m - 600m) walk to each of these stations, which are on the T3 Bankstown rail line and are serviced by frequent train services connecting from Liverpool to Central Station, and the City Circle route.

Figure 2.3a: Proximity to Rail Stations

In addition to being in extremely close and convenient proximity to rail services, the site is located within proximity to existing bus stops on Waldron Road, Hector Street, and Priam Street, which are serviced by a number of bus services as shown in **Figure 2.3b** below.

Figure 2.3b: Bus Routes in Proximity to Site (Source: Transport for NSW)

The bus routes which travel in proximity to the site include:

- Route 911 (Bankstown to Auburn via Bass Hill Plaza and Chester Hill), which travels along Waldron Road directly past the subject site, stopping on Hector Street (near Waldron Road) and at the Chester Hill Rail Station to the west of the site;
- Route 916 (Chester Hill to Guildford via Old Guildford), which stops on Priam Street near Waldron Road and at Chester Hill Rail Station;
- Route S2 (Sefton to Granville via Chester Hill and South Granville), which stops on Priam Street near Waldron Road and at Chester Hill Rail Station;
- Route S4 (Chester Hill to Fairfield - via Villawood), which stops at Chester Hill Rail Station; and
- Route M91 (Hurstville to Parramatta METROBUS via Padstow, Bankstown and Chester Hill, which stops on Priam Street near Waldron Road and at Chester Hill Rail Station; and
- N50 (Liverpool to City Town Hall), which stops at Chester Hill Rail Station.

Overall, the proposed development will therefore benefit from extremely convenient access to existing public transport services, and is within walking distance of several key destinations and services.

3.0 Proposal

This development application seeks approval for a four-storey Affordable Rental Housing development comprising a total of 50 boarding rooms, and one (1) ground floor retail tenancy of 39m^2 GFA. Architectural plans of the proposed development are included as **Appendix A**, with an extract of the ground floor plan provided for reference as **Figure 3** below.

Parking for 27 cars and 10 motorcycles is proposed on the ground level and within a single basement level, and these parking spaces will be accessed via a driveway on Waldron Road adjacent to the eastern site boundary.

The key traffic elements as shown in the architectural plans have been developed based upon the requirements and recommendations outlined in the relevant standards, policies, and guidelines, including:

- The State Environmental Planning Policy (Affordable Rental Housing) 2009;
- Australian Standard AS2890.1:2004 - Parking facilities Part 1: Off-street car parking
- Australian Standard AS2890.3:2015 - Parking facilities Part 3: Bicycle parking
- Australian Standard AS2890.6:2009 - Parking facilities Part 6: Off-street parking for people with disabilities; and
- The Bankstown Development Control Plan (DCP) 2015.

The relevant provisions of the above documents are discussed in the following sections.

Figure 3: Extract from Ground Floor Plan

3.1 Vehicular Site Access

As shown in the plans included as **Appendix A**, vehicular access to the proposed development is via a two-way driveway onto Waldron Road adjacent to the eastern site boundary. The proposed entry / exit driveway is approximately 6.6m wide, exceeding the minimum requirement stipulated in Clause 4.4 of Council's DCP Part B5 – Parking (i.e. 5.5m), as well as AS2890.1 (i.e. 6.0m minimum for a Category 2 driveway).

In accordance with Clause 4.10 of Council's DCP (Part B5 – Parking), the design of the crossover is to be in accordance the Bankstown Development Engineering Standards. It is anticipated that this could reasonably be addressed in response to a suitable condition of the consent, at detailed design stage.

Approximately 6m vehicle queue storage is proposed at the entry driveway, between the property boundary and the security gate. This meets the minimum requirement stipulated in Clause 4.6 of Council's DCP Part B5 – Parking, to accommodate a single passenger vehicle. The proposed queuing area between the vehicular control point and the property boundary will therefore be sufficient to allow a free influx of traffic which will not adversely affect traffic or pedestrian flow in the frontage road, in accordance with Clause 4.7 of Council's DCP (Part B5 – Parking).

Given the horizontal and vertical alignment of Waldron Road in proximity to the site as shown in **Figure 3.1a** and **Figure 3.1b** below, sight distances from the exit driveway towards opposing traffic would be essentially unrestricted, and therefore meet the requirements of AS2890.1, subject to appropriate maintenance of landscaping within the road verge.

Figure 3.1a: Sightline from driveway location to east

Figure 3.1b: Sightline from driveway location to west

In order to ensure visibility between an exiting vehicle and a pedestrian approaching the driveway on the Waldron Road footpath, in accordance with Figure 3.3 in AS2890.1, a 2.5m (deep) and 2.0m (wide) pedestrian sight splay is required adjacent to the exit side of the driveway. Any obstructions in this area (including landscaping) should not exceed 600mm above the pavement level. It is anticipated that this requirement could reasonably be addressed at detailed design stage, in response to a suitable condition of the consent.

The access driveway leads to a short section of single-lane, two-way circulation aisle connecting to the car parking area. Given the nature and scale of the proposed development, the traffic generation will be very low, i.e. in the order of 4 - 6 vehicle trips in the peak hours (two-way volume), as discussed in Section 4.0. Accordingly, and given the length of the single-lane, two-way circulation aisle (i.e. approximately 12m), the probability of a vehicle arriving to enter the site when another vehicle is exiting is extremely low.

On the basis of the above, provision for two-way flow is not required in this instance. This is supported by Section 3.2.2 of Australian Standard AS2890.1, which states that:

> *"Where the circulation roadway leading from a Category 1 access driveway is 30 m or longer, or sight distance from one end to the other is restricted, and the frontage road is an arterial or sub-arterial road, both the access driveway and the circulation roadway for at least the first 6 m from the property boundary shall be a minimum of 5.5 m wide. In other cases subject to consideration of traffic volumes on a case-by-case basis, lesser widths, down to a minimum of 3.0 m at a domestic property, may be provided. As a guide, 30 or more movements in a peak hour (in and out combined) would usually require provision for two vehicles to pass on the driveway, i.e. a minimum width of 5.5 m…"*

The above provision recognises that in certain circumstances (where volumes are low) provision for two-way traffic flow is not required. Notwithstanding this, the proposed access arrangements do provide a minimum 5.5m wide driveway for at least the first 6m inside the property boundary (i.e. accommodating two-way flow at the driveway), exceeding the AS2890.1 requirements.

In the unlikely event that a vehicular arrival and departure occur concurrently, there is adequate space internally to allow an exiting car to pass an entering vehicle positioned in the area annotated 'waiting bay' in the plans included as **Appendix A.**

Overall, the site access arrangements are considered to be acceptable in principle and in accordance with AS2890.1 requirements (subject to minor refinement at detailed design stage of the centre island / swipecard reader / boomgate detail to ensure that drivers are able to reach the swipecard reader from their vehicle).

3.2 Car Parking Provision

The State Environmental Planning Policy (Affordable Rental Housing) 2009 stipulates the following provision for Boarding Houses:

> *(2) A consent authority must not refuse consent to development to which this Division applies on any of the following grounds:*
>
> *….*
>
> *(e) parking*
>
> *if:*
>
> *(i) in the case of development in an accessible area—at least 0.2 parking spaces are provided for each boarding room, and*
>
> *(ii) in the case of development not in an accessible area—at least 0.4 parking spaces are provided for each boarding room, and*
>
> *(iii) in the case of development not carried out by or on behalf of a social housing provider—at least 0.5 parking spaces are provided for each boarding room, and*

(iv) in the case of any development—not more than 1 parking space is provided for each person employed in connection with the development and who is resident on site,

The State Environmental Planning Policy (Affordable Rental Housing) 2009 defines an accessible area as land that is within:

(a) 800 metres walking distance of a public entrance to a railway station or a wharf from which a Sydney Ferries ferry service operates, or

(b) 400 metres walking distance of a public entrance to a light rail station or, in the case of a light rail station with no entrance, 400 metres walking distance of a platform of the light rail station, or

(c) 400 metres walking distance of a bus stop used by a regular bus service (within the meaning of the Passenger Transport Act 1990) that has at least one bus per hour servicing the bus stop between 06.00 and 21.00 each day from Monday to Friday (both days inclusive) and between 08.00 and 18.00 on each Saturday and Sunday.

As discussed in Section 2.3, the subject site is located approximately midway between Chester Hill rail station (which is to the west of the site) and Sefton Rail Station (which is to the east of the site), and is a convenient 6 – 8 minute (i.e. approximately 500m - 600m) walk to each of these stations. As such, the site is within an accessible area as defined in the State Environmental Planning Policy (Affordable Rental Housing) 2009, and the lower parking rate (i.e. 0.2 parking spaces per room) is considered to be appropriate on these grounds.

Notwithstanding the above, given the development is not to be carried out by or on behalf of a social housing provider, the applicable parking rates under the SEPP are as follows:

- a minimum of 0.5 parking spaces for each boarding room, plus
- not more than 1 parking space for each person employed in connection with the development and who is resident on site.

As previously discussed, the proposed development comprises 50 studio apartments (boarding rooms), and will have an on-site building manager. The minimum parking requirement for the Boarding House component of the development is therefore 26 car parking spaces.

In regard to the retail component of the development (one (1) tenancy with a GFA of 39m^2), it is understood that this tenancy would be defined as a "Neighbourhood shop". Noting that the development is within the Chester Hill Village Centre, Council's DCP suggests a parking rate of 1 car space per 40m^2 of gross floor area for Shops (Development of less than 4,000m^2 gross floor area).

The parking requirement for the retail component of the development is therefore one (1) parking space.

In summary, the overall parking requirements are therefore as follows:

- 25 parking spaces for the boarding rooms
- 1 parking space for the building manager
- 1 parking spaces for the retail component
- **27 parking spaces total**

As shown in the ground floor and basement plans included in **Appendix A**, the proposed development provides a total of 27 car parking spaces, including one (1) accessible parking space. The proposed level of car parking provision therefore meets the recommendations made in the State Environmental Planning Policy (Affordable Rental Housing) 2009 for the boarding house component, and those made in Council's DCP for the retail component of the development.

3.3 Motorcycle Parking

Clause 30 in the State Environmental Planning Policy (Affordable Rental Housing) 2009 recommends that at least one motorcycle parking space be provided for every 5 boarding rooms. Applying this rate to the 50 rooms proposed suggests that 10 motorcycle parking spaces be provided.

As shown in the ground floor plan included in **Appendix A**, 10 motorcycle parking spaces are proposed on the ground floor of the development. The proposal therefore meets the SEPP requirements in this regard.

3.4 Bicycle Parking

Clause 30 in the State Environmental Planning Policy (Affordable Rental Housing) 2009 recommends that at least one bicycle parking space be provided for every 5 boarding rooms. Applying this rate to the 50 rooms proposed suggests that 10 bicycle parking spaces be provided.

As shown in the ground floor plan included in **Appendix A**, a total of 10 bicycle parking spaces are proposed, including:

- six (6) on the ground level, in three (3) double-sided parking rails positioned in the area connecting from the car parking area to the building foyer; and
- four (4) on the basement car park level at the eastern end of the car park, at wall-mounted horizontal parking rails.

The proposal therefore meets the SEPP requirements in this regard.

3.5 Parking Layout and Geometric Design

The site layout as shown in the site plans included in **Appendix A** has been designed in accordance with the requirements of the relevant Australian Standards (AS2890.1, AS2890.3 and AS2890.6) and Council's DCP, as summarised following:

- As previously discussed, the vehicular access arrangements involve a two-way driveway onto Waldron Road adjacent to the eastern site boundary. The proposed entry / exit driveway is approximately 6.6m wide, exceeding the minimum clearance requirement stipulated in Clause 4.4 of Council's DCP Part B5 – Parking (i.e. 5.5m), as well as AS2890.1 (i.e. 6.0m minimum for a Category 2 driveway).
- Approximately 6m vehicle queue storage is proposed at the entry driveway, between the property boundary and the security gate. This meets the minimum requirement stipulated in Clause 4.6 of Council's DCP Part B5 – Parking, to accommodate a single passenger vehicle. The proposed queuing area between the vehicular control point and the property boundary will therefore be sufficient to allow a free influx of traffic which will not adversely affect traffic or pedestrian flow in the frontage road, in accordance with Clause 4.7 of Council's DCP (Part B5 – Parking).
- The access driveway leads to a short section of single-lane, two-way circulation aisle connecting to the car parking area. This arrangement in supportable from a traffic engineering perspective on a number of

grounds as discussed in Section 3.1. In the unlikely event that a vehicular arrival and departure occur concurrently, there is adequate space internally to allow an exiting car to pass an entering vehicle positioned in the area annotated 'waiting bay'.

- The standard parking spaces on the site are 2.4m wide (minimum) and 5.4m long with a 5.8m wide parking aisle, as required under the provisions of AS2890.1 for User Class 1 (low turnover) car parking.
- Motorcycle parking spaces are 1.2m wide and 2.5m long, as required under Clause 2.4.7 of AS2890.1.
- The parking space for people with disabilities is 2.4m wide and 5.4m long with a 2.4m wide adjacent shared area, as required under the provisions of AS2890.6.
- Columns and walls adjacent to parking spaces are positioned in accordance with the requirements of AS2890.1 and Councils DCP (Part B5 – Parking, Appendix 6) to accommodate the necessary manoeuvres to/from the parking spaces, as well as pedestrian access to/from vehicles.
- Terminated aisle extensions exceeding the 1m required under the provisions of AS2890.1 are provided.
- The ramp providing access to the basement car parking area is 3.4m wide (plus clearances), which exceeds the minimum requirement stipulated in Clause 2.5.2 of AS2890.1, which is 3.0m. As shown in the vehicle tracking diagrams included as **Appendix B**, the proposed ramp configuration would comfortably accommodate the manoeuvring of a B99 design vehicle, as defined in AS2890.1.
- The gradient of the ramp from the ground level to the basement parking area is 1:4 (25%), as permitted under Clause 2.5.3 of AS2890.1 given that the ramp is a straight ramp which is less than 20m in length, within a private car park. The ramp gradient is also in accordance with Clause 4.8 of Council's DCP (Part B5 – Parking). Ramp transitions are proposed at 1:8 (12.5%) in accordance with Clause 2.5.2 of AS2890.1, to prevent vehicle underside scraping.
- The bicycle parking provisions meet AS2890.3 design requirements, with parking space envelopes of 1800mm by 500mm allowed for adjacent to floor-mounted (double-sided) and wall-mounted rails.
- Manoeuvring to/from critical parking spaces has been assessed, with the results (included as **Appendix C**) demonstrating satisfactory manoeuvring by a B85 passenger vehicle to/from these parking spaces subject to landscaping being kept clear of vehicle manoeuvring areas.

Overall, the car parking layout is efficient and legible, and designed generally in accordance with the requirements of the relevant Australian Standards and/or Council's DCP.

3.6 Servicing and Refuse Collection

Given the nature of the proposed development, the demand for service vehicles would be limited. With the exception of the occasional delivery vehicle or tradesperson (who could park on-street, consistent with the arrangements at most smaller residential / mixed-use developments), the only servicing requirement would be regular refuse collection.

Kerbside bin collection is proposed for both the residential and retail components of the development, with bins being transferred to Waldron Road from the proposed bin store area on the ground floor at collection time.

It is noted that Clause 5.3 in Council's DCP (Part B5 – Parking) suggests that off-street provision for delivery/service vehicles is only required where the commercial/retail gross floor area of a building exceeds 500m^2. Given the retail GFA proposed is 39m^2, no off-street provision for delivery/service vehicles is required.

Overall, the proposed servicing / refuse collection arrangements are considered to be appropriate given the nature and scale of the development, and in accordance with the recommendations made in Council's DCP.

4.0 Traffic Impact Assessment

The RMS Technical Direction TDT 2013/04a (Guide to Traffic Generating Developments, Updated traffic surveys) provides traffic generation rates for various land uses, including residential developments. The rates suggested for high density residential flat dwellings are:

- AM peak (1 hour): 0.15 vehicle trips per car space
- PM peak (1 hour): 0.12 vehicle trips per car space

Applying the above trip generation rates to the proposed on-site parking yield of 37 spaces (including 27 car spaces and 10 motorcycle spaces) suggests a site traffic generation of 4 - 6 vehicle trips, or one (1) vehicle trip per 10 – 15 minutes in the critical peak hours. This level of traffic generation is clearly very low, and would be well within the range of typical fluctuations in traffic volumes on the surrounding road network.

Furthermore, considering the existing dwellings on the subject site (which are likely to generate 1 - 2 vehicle trips in the peak hours and would be removed in order to facilitate the delivery of the proposed development), the net impact of the proposal would be even lower.

In light of the above, the proposed development will be more than adequately catered for on the surrounding road network from a capacity perspective, with no impact upon traffic operations in the area.

No external roadworks are required to support the proposed development, and any impacts (however minor) would be mitigated by way of infrastructure charges payable as part of the development of the site.

5.0 Recommendation

In light of the information contained within this report, it is considered that the proposal is satisfactory from a traffic operations perspective, and it is recommended that the development application be approved from a traffic engineering perspective.

5.1 Qualifications

This report has been prepared by:

Anne Coutts
Director, InRoads Group
BE Civil, MIEAust, MAITPM

APPENDIX A

Architectural Plans

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A

C

AFFORDABLE HOUSING DEVELOPMENT

77-79 WALDRON ROAD

CHESTER HILL

April/2018

PREPARED FOR

AUSTCITI DEVELOPMENT PTY LTD

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 050 071 022
Nominated Registered Architect: Peter Israel (reg no. 5064)

77-79 WALDRON ROAD, CHESTER HILL

CANTERBURY-BANKSTOWN COUNCIL
ZONING = R4 HIGH DENSITY RESIDENTIAL
HEIGHT = 13M (COUNCIL LEP 2015)
FSR = 1:1 (COUNCIL LEP 2015)

AFFORDABLE RENTAL HOUSING SEPP
FSR = 1.5:1 (1:1 + 0.5:1 BONUS)

SITE AREA= 1,269 M2

MAX GFA = 1,904 M2

D

PROPOSED GFA = 1,825 M2
(FSR = 1.44:1)
50 BOARDING HOUSE TENANCIES AND 1 SHOP

LANDSCAPING CALCULATIONS

D

AFFORDABLE RENTAL HOUSING SEPP REQUIREMENTS		PROPOSED	
LANDSCAPED AREA - A MINIMUM 45% OF THE AREA BETWEEN THE BOARDING HOUSE AND THE PRIMARY FRONTAGE (AS PER DCP)	N/A	LANDSCAPING - 21% OF SITE AREA	271 m2
DEEP SOIL LANDSCAPING (SITE 1,269 M2 X 7% AS PER ADG)	89 m2	DEEP SOIL LANDSCAPING - 14%	172 m2
COMMUNAL OPEN SPACE	20 m2	COMMUNAL OPEN SPACE	77 m2
PRIVATE OPEN SPACE - BOARDING HOUSE MANAGER	8 m2	MIN. DIMENTION OF 3 METRES	11 m2

CARPARKING CALCULATIONS

TYPE	No OF TENANCIES	CAR PARKING RATES	CAR PARK SPACES REQUIRED	PARKING SPACES PROVIDED
BOARDING HOUSE	50	0.5 X ROOM (AS PER SEPP)	25	25
RETAIL	1	ONE CAR PARK X 40m2 (AS PER DCP)	1	1
BUILDING MANAGER	1	1 CAR PARK (AS PER SEPP)	1 (INCLUDED IN THE 25 ABOVE)	1
ACCESSIBLE	3	1 CAR PARK (AS PER AS)	1	1
BICYCLE	50	1 SPACE X 5 TENANCIES	10	10
MOTORCYCLE	50	1 SPACE X 5 TENANCIES	10	10
TOTAL CAR SPACES				**27**

D

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 050 071 022
Nominated Registered Architect: Peter Iaroel (reg no. 3064)

REV	DESCRIPTION	BY	DATE
A	DA SUBMISSION	AB	28.08.17
B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	RFI SUBMISSION TO COUNCIL	AB	30.04.18
D	RE-ISSUED TO COUNCIL	AB	04.10.18

CLIENT: AUSTCITI DEVELOPMENT PTY LTD

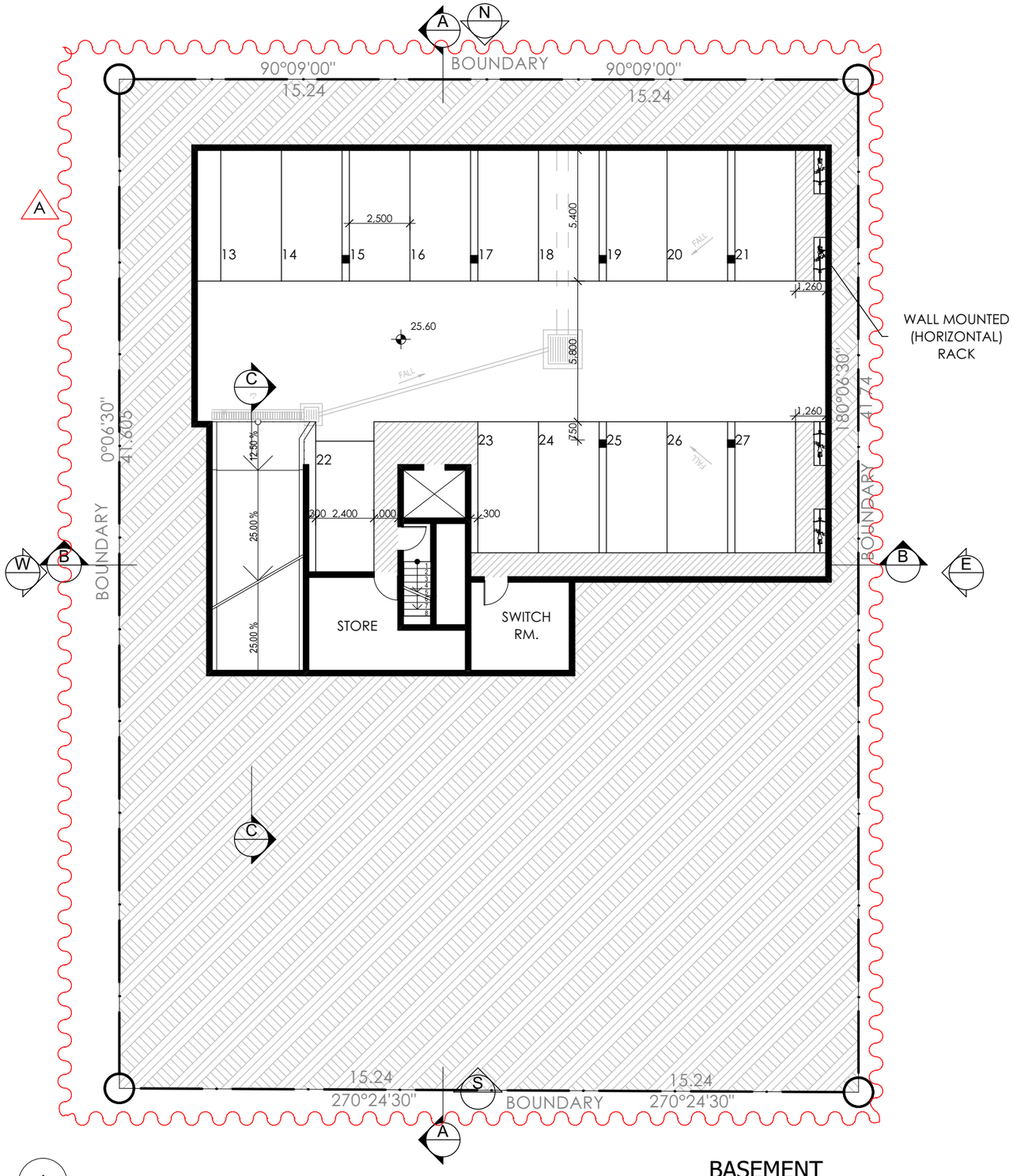
PROJECT TITLE: 77-79 WALDRON ROAD, CHESTER HILL

DRAWING TITLE: PROJECT OVERVIEW

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE:
PROJECT No: P394

DA stage. 02 dwg no. D revision



1 BASEMENT
1:200

28.12 EXISTING LEVELS

28.50 PROPOSED LEVELS

TREE TO BE REMOVED

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 053 071 022
Nominated Registered Architect: Peter Israel (reg.no. 3064)

REV	DESCRIPTION	BY	DATE
A	ISSUED TO COUNCIL	AB	04.10.18

CLIENT:
AUSTCITI DEVELOPMENT PTY LTD

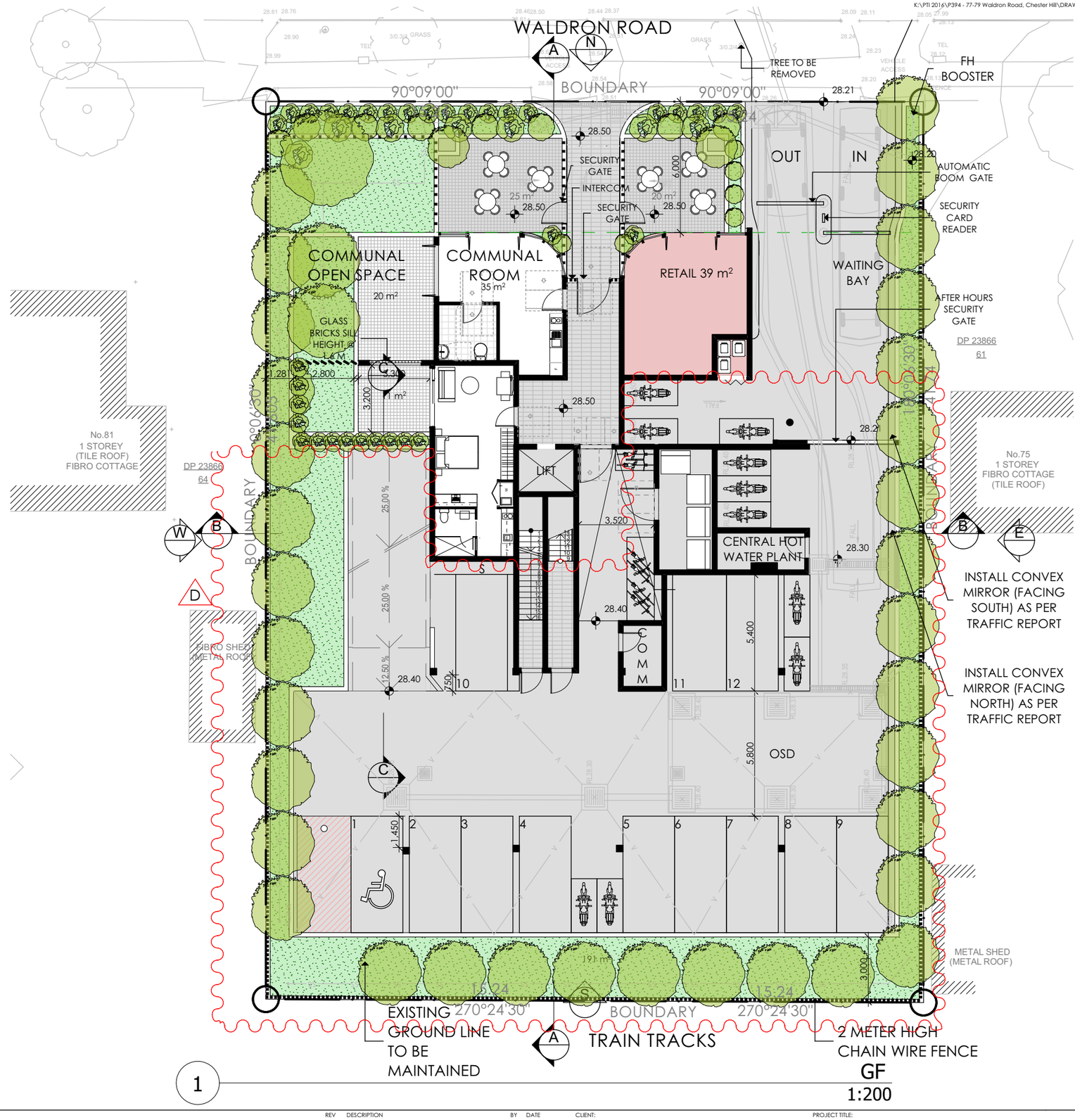
PROJECT TITLE:
77-79 WALDRON ROAD, CHESTER HILL

DRAWING TITLE:
BASEMENT FLOOR PLAN

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 04 dwg no. A revision



28.12 EXISTING LEVELS

28.50 PROPOSED LEVELS

TREE TO BE REMOVED

REV	DESCRIPTION	BY	DATE
A	DA SUBMISSION	AB	28.08.17
B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	RFI SUBMISSION TO COUNCIL	AB	30.04.18
D	RE-ISSUED TO COUNCIL	AB	04.10.18

CLIENT: AUSTCITI DEVELOPMENT PTY LTD

PROJECT TITLE: 77-79 WALDRON ROAD, CHESTER HILL

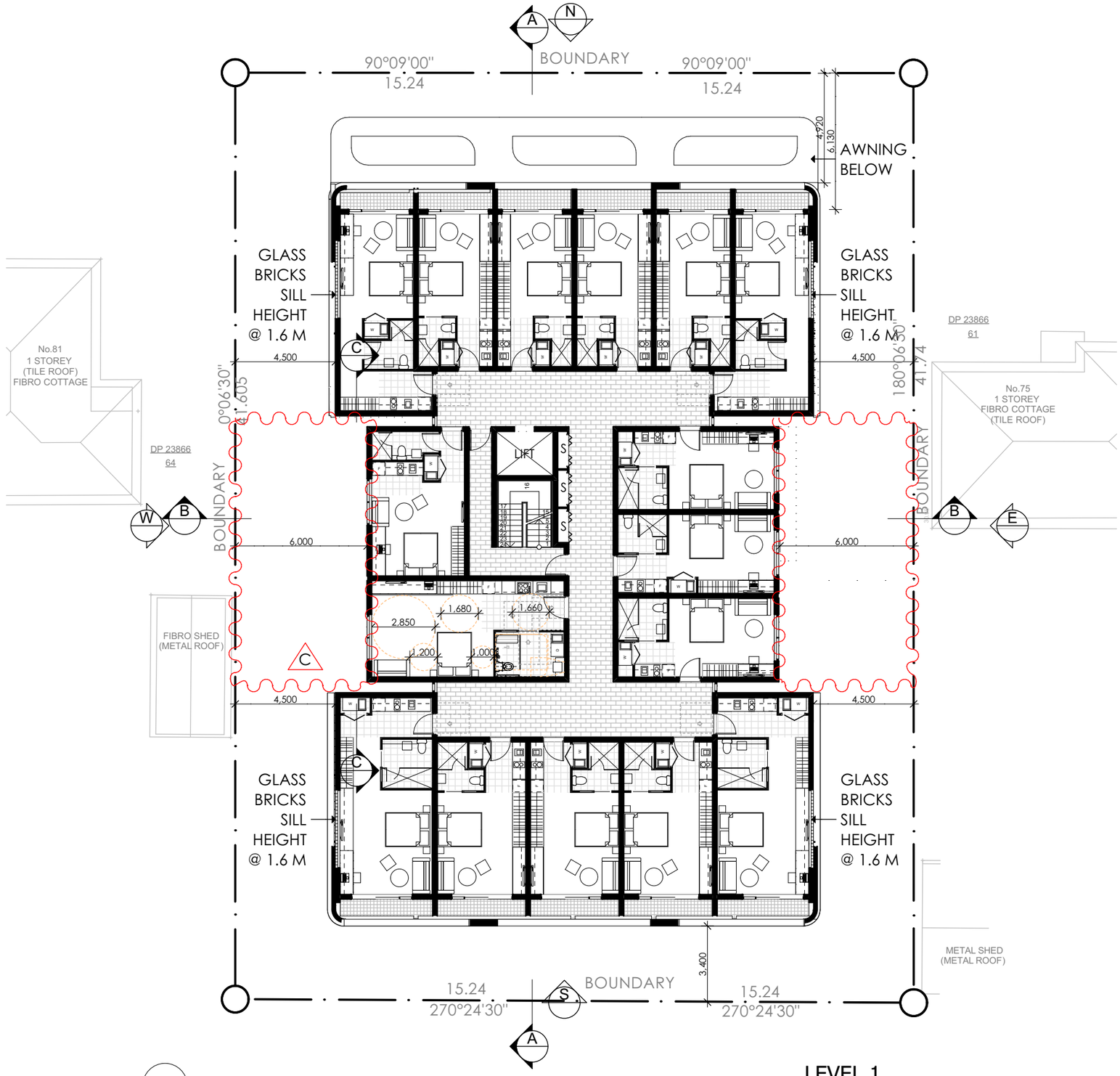
DRAWING TITLE: GROUND FLOOR PLAN

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 05 dwg no. D revision

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 050 071 022
Nominated Registered Architect: Peter Iacobelli (reg.no. 5064)



1 LEVEL 1
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REV	DESCRIPTION	BY	DATE
A	DA SUBMISSION	AB	28.08.17
B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	RFI SUBMISSION TO COUNCIL	AB	30.04.18

CLIENT: AUSTCITI DEVELOPMENT PTY LTD

PROJECT TITLE: 77-79 WALDRON ROAD, CHESTER HILL

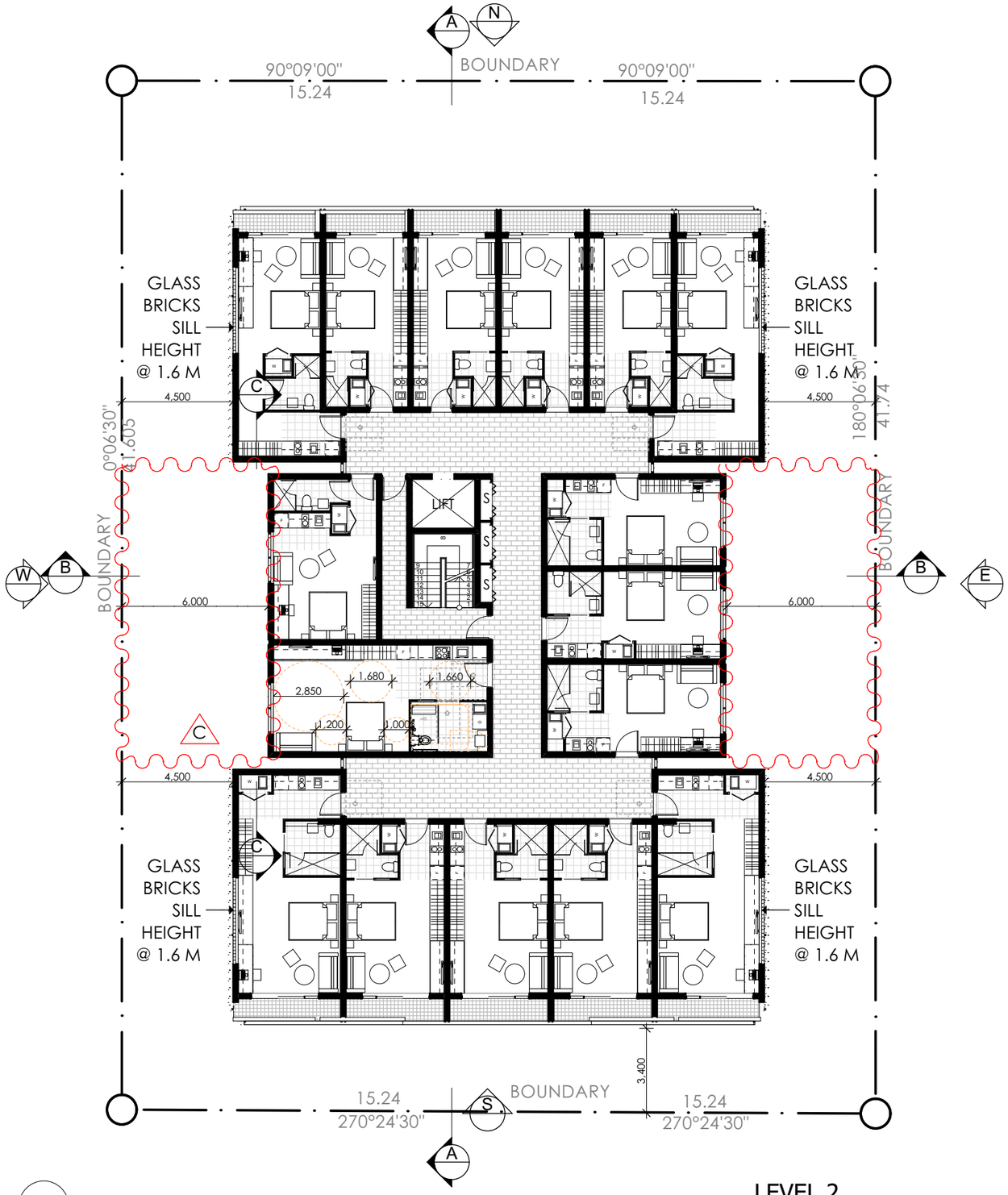
DRAWING TITLE: LEVEL 1 FLOOR PLAN

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 06 dwg no. C revision

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 059 071 022
Nominated Registered Architect: Peter Iacoel (reg no. 5064)



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LEVEL 2
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B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	RFI SUBMISSION TO COUNCIL	AB	30.04.18

CLIENT:
AUSTCITI DEVELOPMENT PTY LTD

PROJECT TITLE:
77-79 WALDRON ROAD, CHESTER HILL

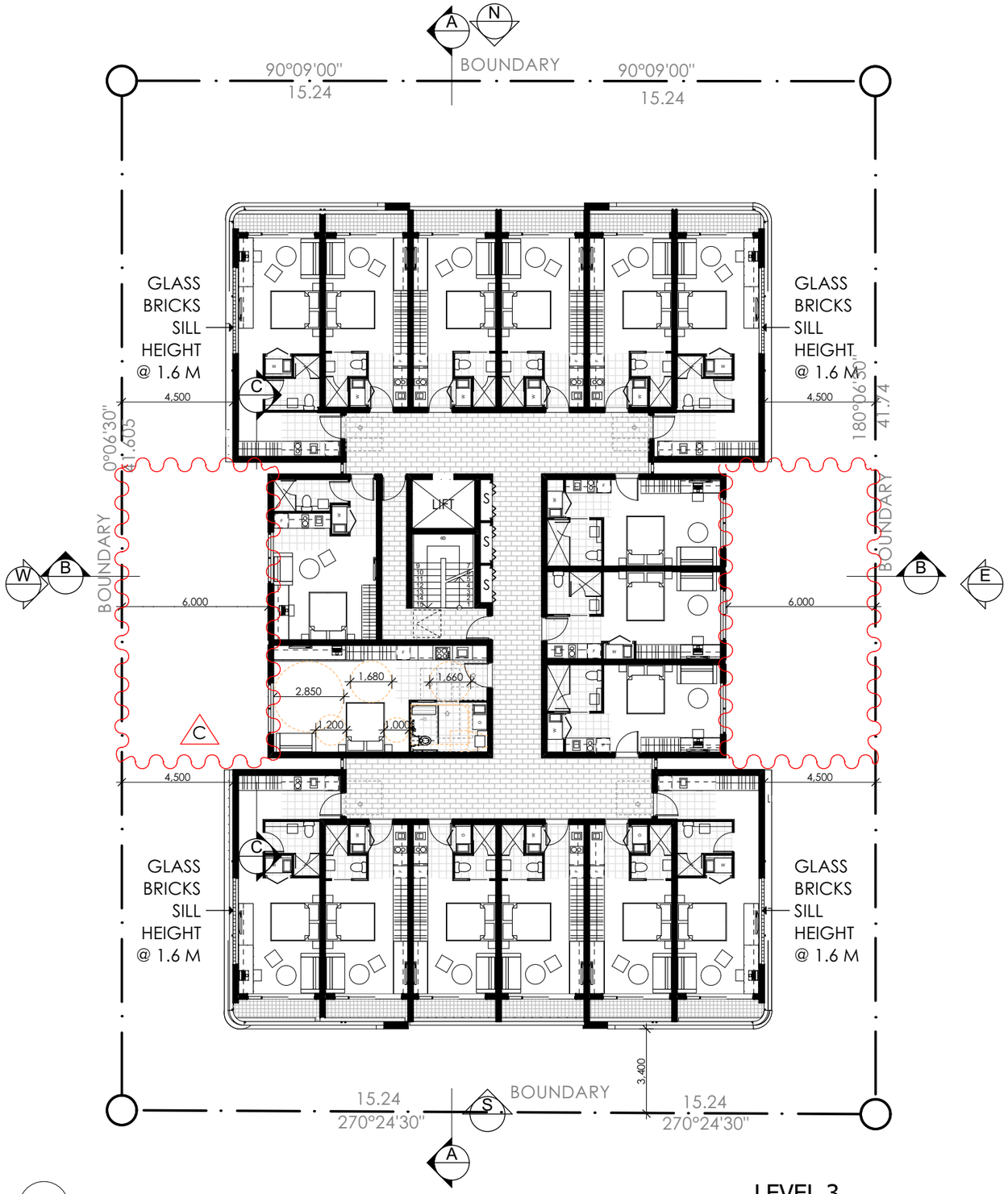
DRAWING TITLE:
LEVEL 2 FLOOR PLAN

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 07 dwg no. C revision

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 059 071 022
Nominated Registered Architect: Peter Iacoel (reg no. 5064)



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LEVEL 3
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B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	RFI SUBMISSION TO COUNCIL	AB	30.04.18

CLIENT:
AUSTCITI DEVELOPMENT PTY LTD

PROJECT TITLE:
77-79 WALDRON ROAD, CHESTER HILL

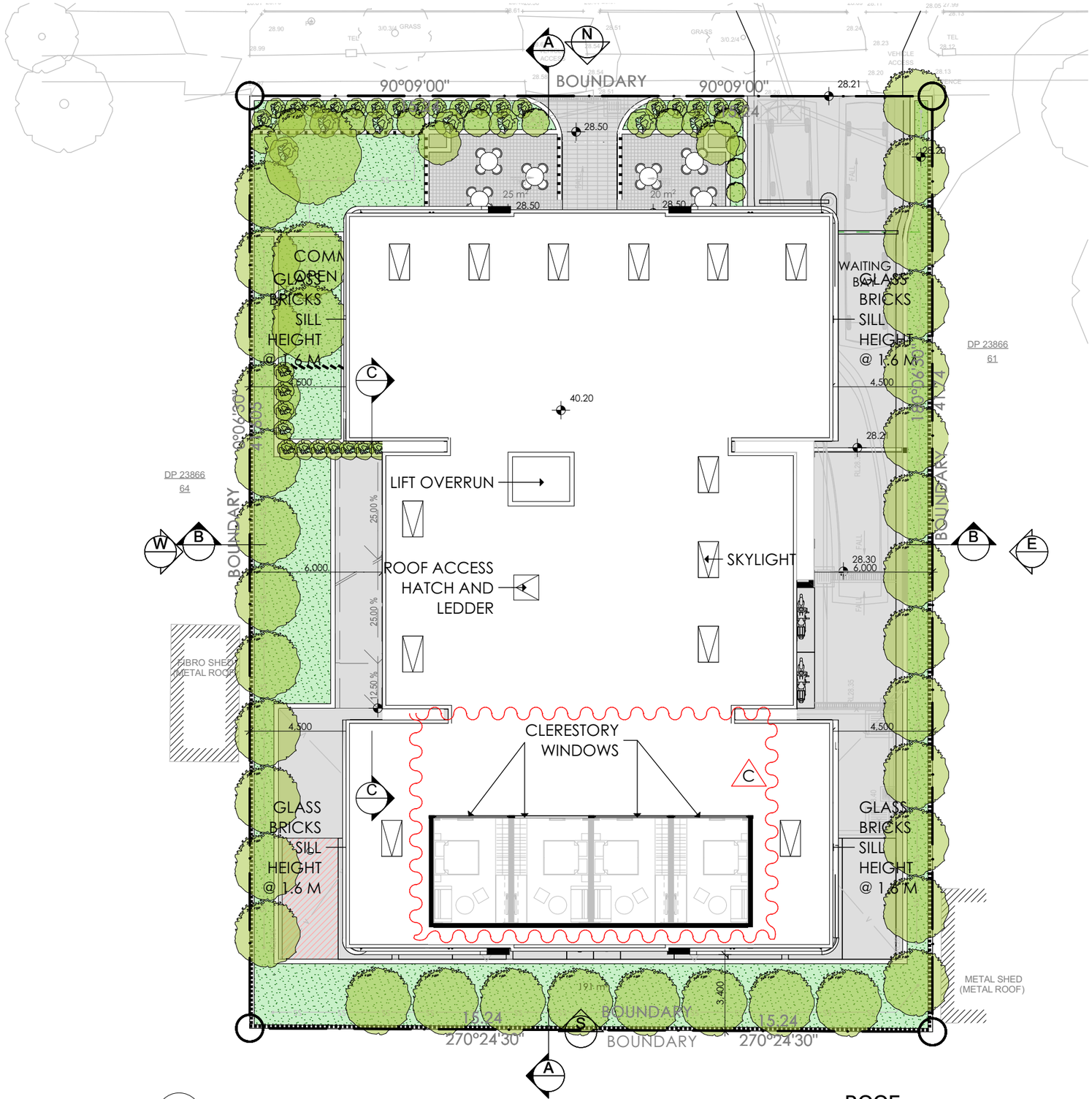
DRAWING TITLE:
LEVEL 3 FLOOR PLAN

NORTH POINT:

DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 08 dwg no. C revision

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 059 071 022
Nominated Registered Architect: Peter Iacoel (reg no. 5064)



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ROOF
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REV	DESCRIPTION	BY	DATE
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B	DA RE-SUBMISSION TO COUNCIL	AB	28.02.18
C	CLERESTORY WINDOWS ADDED	AB	18.05.18

CLIENT:
AUSTCITI DEVELOPMENT PTY LTD

PROJECT TITLE:
77-79 WALDRON ROAD, CHESTER HILL

DRAWING TITLE:
ROOF

NORTH POINT:

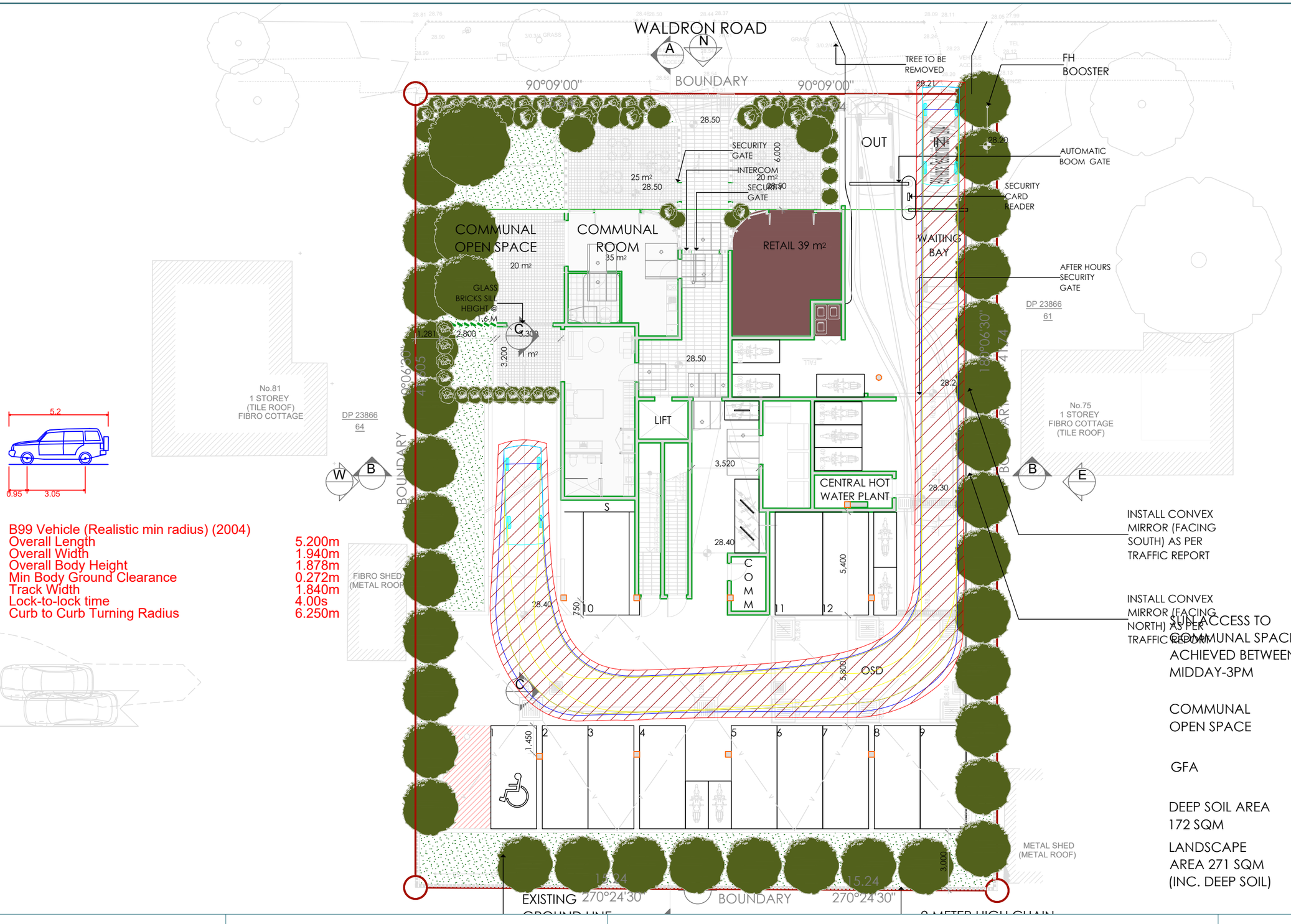
DRAWN BY: AB
CHECKED BY: PI
SCALE: 1:200
PROJECT No: P394

DA stage. 09 dwg no. C revision

Project Tourism International Architecture Pty Ltd
Level 10, 263 Clarence Street Sydney NSW 2000
T +61 2 9283 0860 www.ptigroup.com.au ABN 90 059 071 022
Nominated Registered Architect: Peter Iarovi (reg no. 3064)

APPENDIX B

Vehicle Tracking Diagram
B99 Passenger Vehicle - Circulation



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

INROADS:GROUP

drawing prepared by

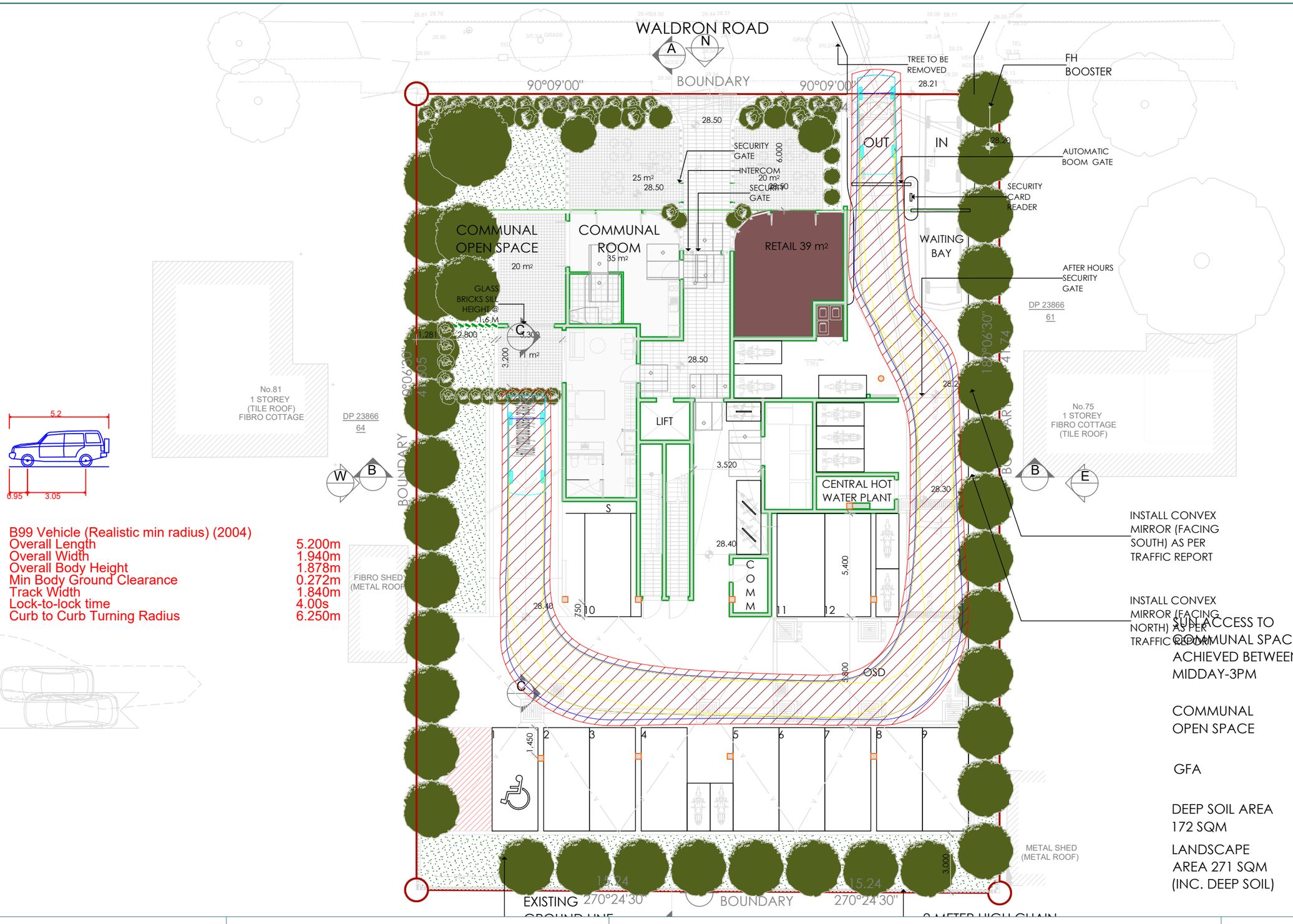
InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project: 77 - 79 Waldron Road, Chester Hill

drawing title: Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
16-054	DWG01	A	08/10/2018	1:200 @ A3

FOR INFORMATION ONLY - NOT FOR CONSTRUCTION



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
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Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill
drawing title	Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
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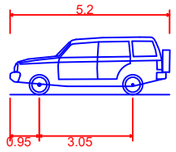

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Track Width	1.840m
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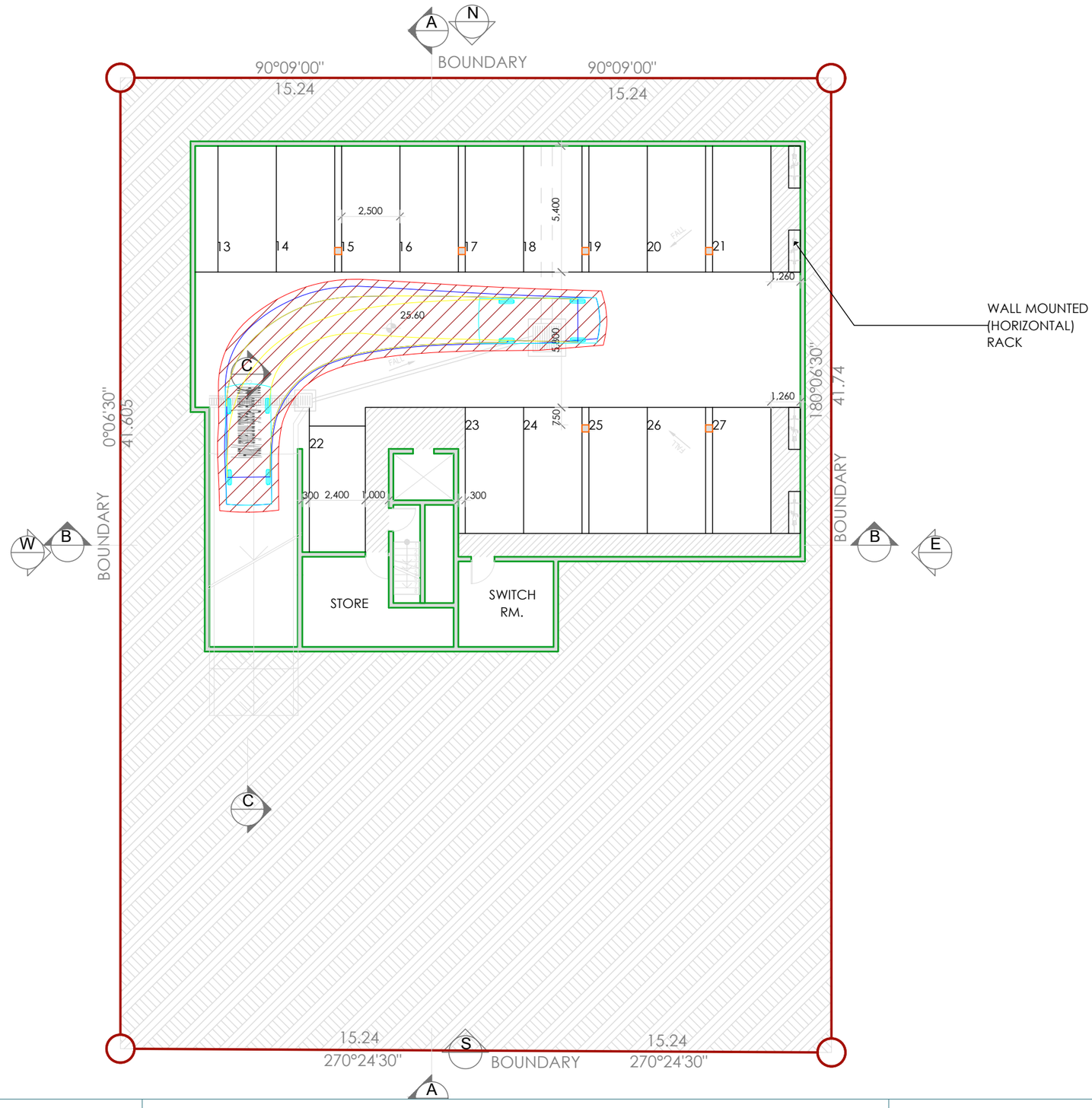
Curb to Curb Turning Radius	6.250m



WALL MOUNTED (HORIZONTAL) RACK

INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill
drawing title	Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
16-054	DWG03	A	08/10/2018	1:200 @ A3

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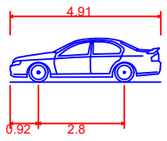
Vehicle swept path diagrams prepared using computer generated turning path software and associated drawing platforms. Vehicle data based upon relevant Australian Standards (*AS/NZS 2890.1-2004 Parking facilities - Off-street car parking*, and/or *AS 2890.2-2002 Parking facilities - Off-street commercial vehicle facilities*). These standards make allowance for a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.

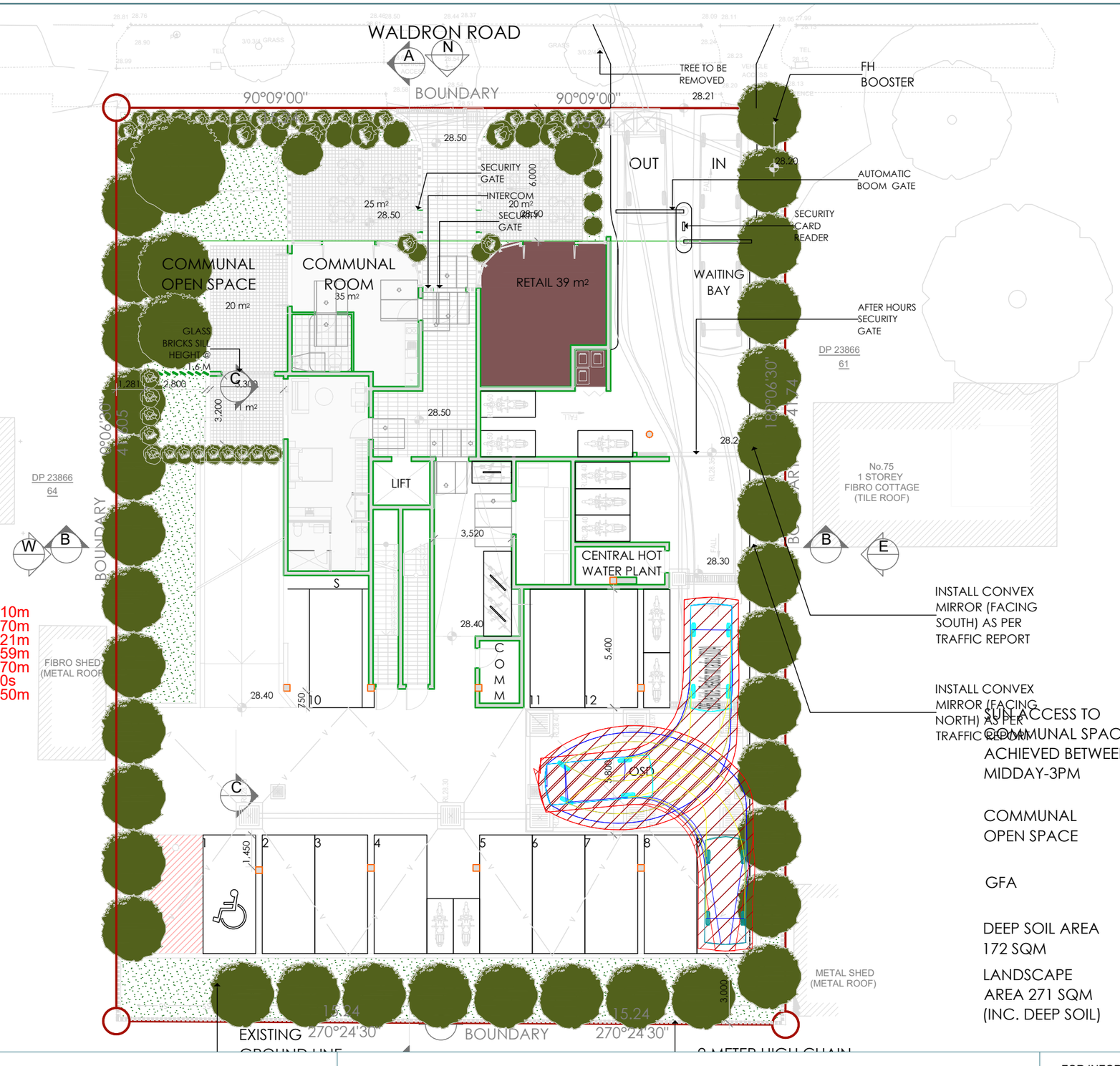
APPENDIX C

Vehicle Tracking Diagram
B85 Passenger Vehicle - Manoeuvring



B85 Vehicle (Realistic min radius) (2004)

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



INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill
drawing title	Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
16-054	DWG04	A	08/10/2018	1:200 @ A3

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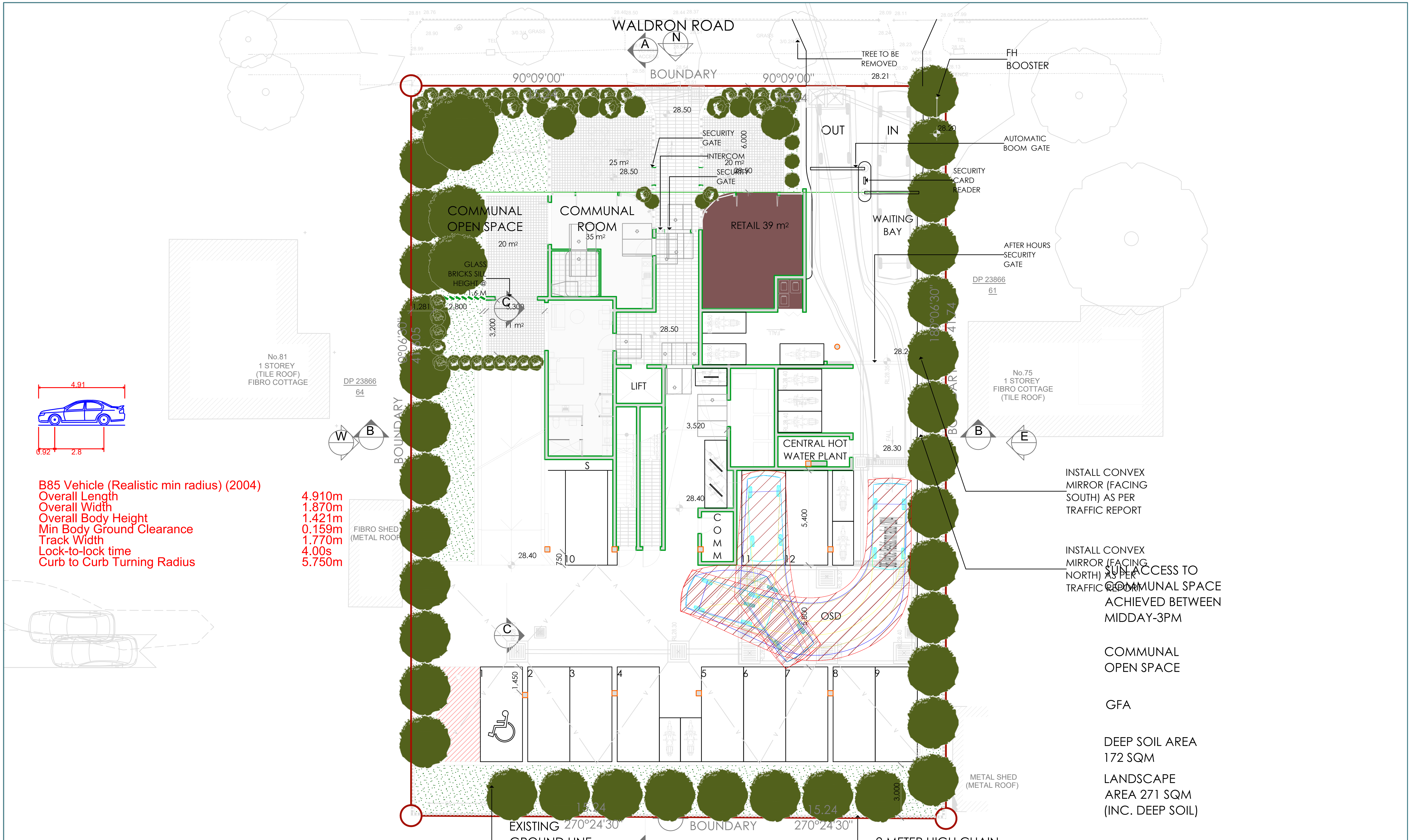

INROADS GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill			
drawing title	Vehicle Tracking Analyses			
project no.	drawing no.	revision	date	scale
16-054	DWG05	A	08/10/2018	1:200 @ A3

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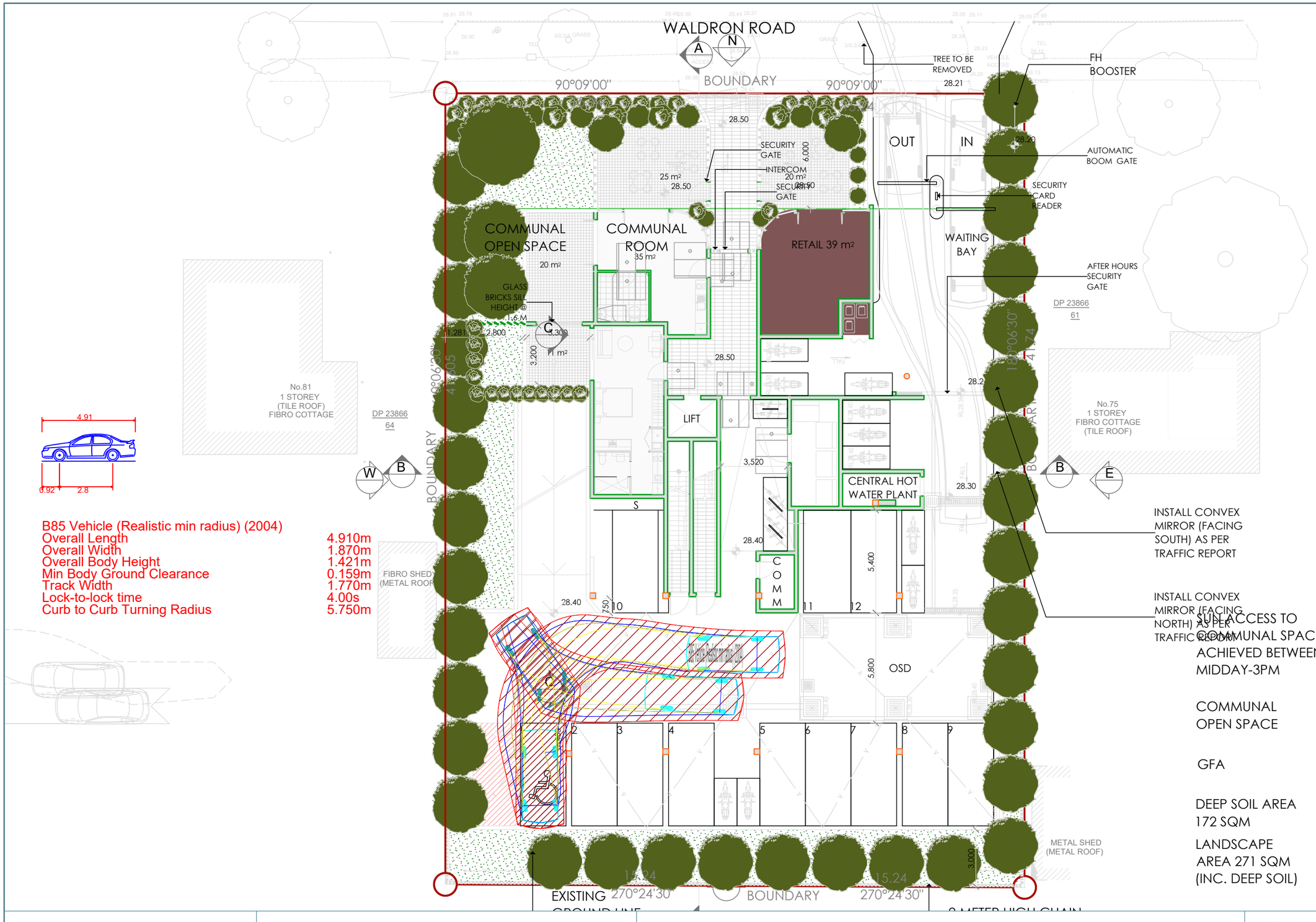

B85 Vehicle (Realistic min radius) (2004)

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

INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project: 77 - 79 Waldron Road, Chester Hill

drawing title: Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
16-054	DWG06	A	08/10/2018	1:200 @ A3

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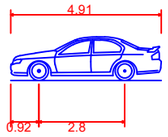
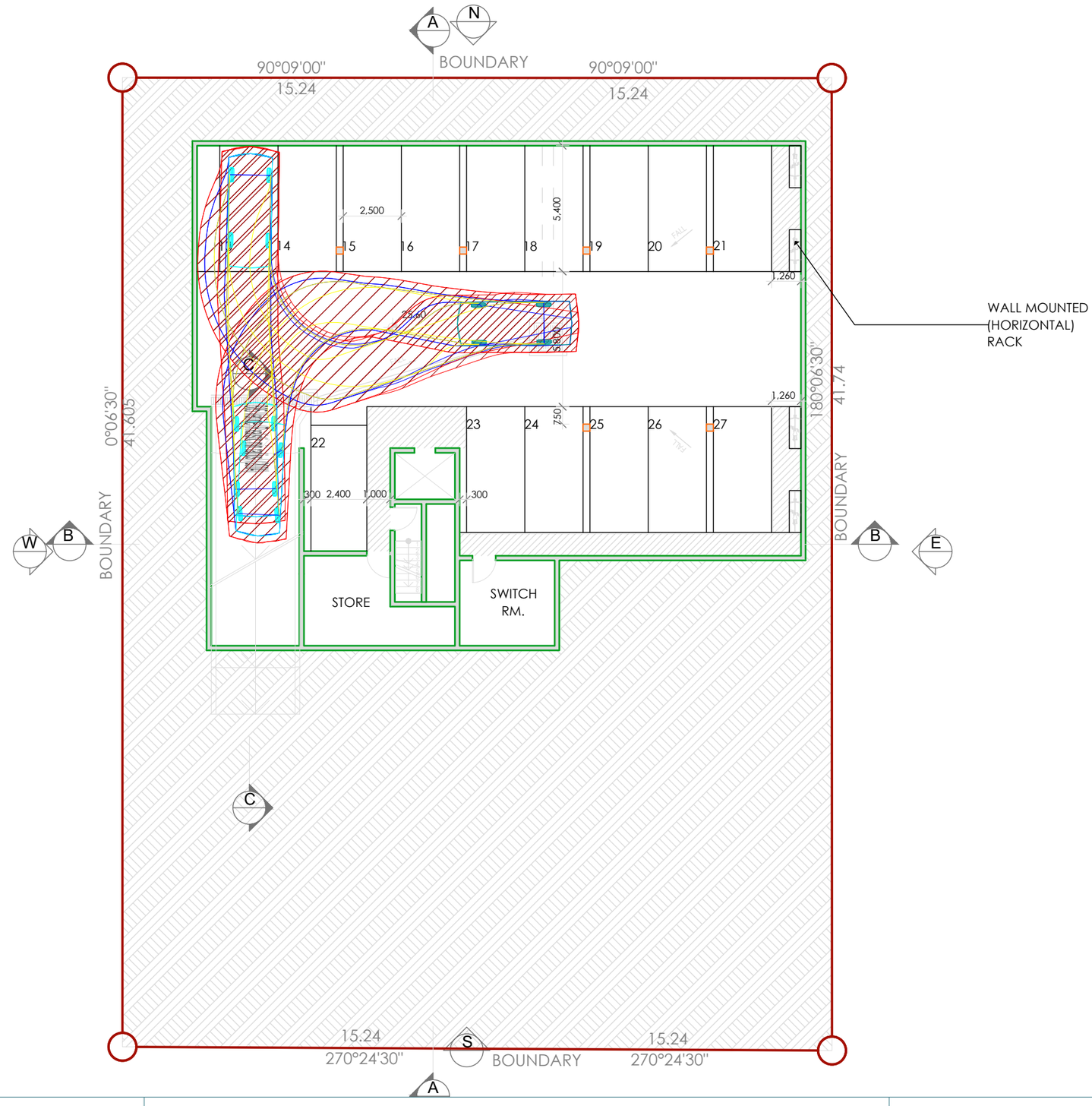


B85 Vehicle (Realistic min radius) (2004)

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



INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill
drawing title	Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
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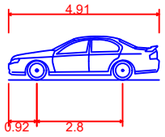

B85 Vehicle (Realistic min radius) (2004)

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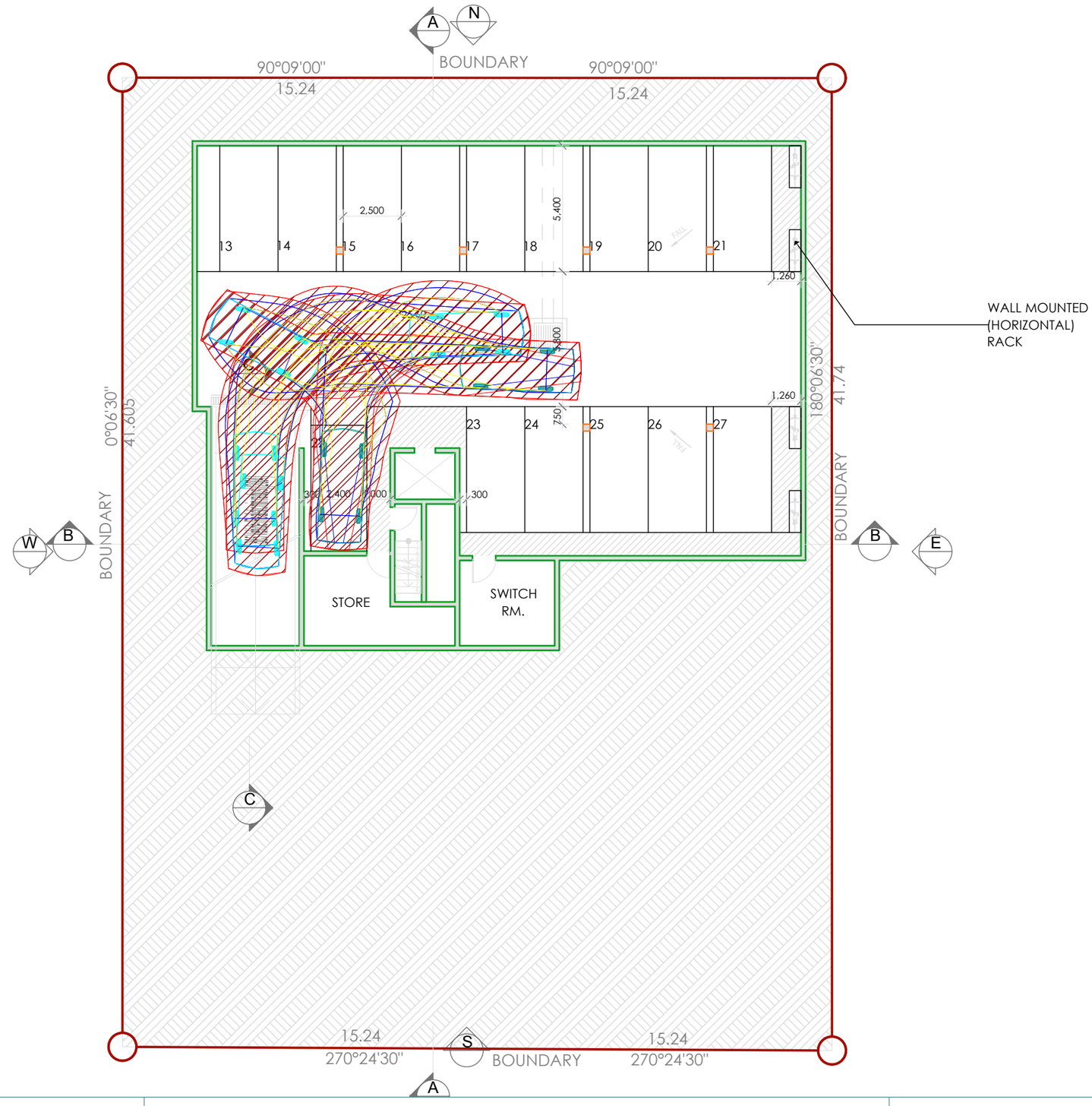
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m



INROADS:GROUP

drawing prepared by

InRoads Group
PO Box 596
Potts Point NSW 1335
ABN: 25 608 559 897

project	77 - 79 Waldron Road, Chester Hill
drawing title	Vehicle Tracking Analyses

project no.	drawing no.	revision	date	scale
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