STANBURY
TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

PARKING & TRAFFIC IMPACT ASSESSMENT

PROPOSED MIXED USE DEVELOPMENT
15A & 15B MOSELEY STREET AND 25, 27, 29 & 31 DONALD STREET
CARLINGFORD

PREPARED FOR CAPTAG INVESTMENTS PTY. LTD.
OUR REF: 23-104-REP-6

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TABLE OF CONTENTS

1. INTRODUCTION 4

1.1 SCOPE OF ASSESSMENT 4
1.2 REFERENCE DOCUMENTS 5
1.3 SITE DETAILS 6
1.3.1 Site Location 6
1.3.2 Site Description 7
1.3.3 Existing Site Use 7
1.3.4 Approved Development 8
1.3.5 Surrounding Uses 8

2. PROPOSED DEVELOPMENT 9

2.1 BUILT FORM 9
2.1.1 Child Care Centre 9
2.1.2 Residential Apartments 10

3. SITE ACCESS & INTERNAL CIRCULATION 12

3.1 ACCESS ARRANGEMENTS 12
3.1.1 Donald Street Vehicular Access 12
3.1.1.1 Driveway Design 12
3.1.1.2 Sight Distance Assessment 12
3.1.2 Moseley Street Vehicular Access (Stage 2) 14
3.1.2.1 Driveway Design 14
3.1.2.2 Proximity of Driveway to Public Road Junction 15
3.1.3 External Pedestrian Access 15
3.2 PASSENGER VEHICLE PARKING PROVISION 16
3.2.1 Residential Apartments 16
3.2.2 Child Care Centre 18
3.3 INTERNAL CIRCULATION AND MANOEUVRABILITY 21
3.3.1 Residential Basement Parking Layout 21
3.3.2 Child Care Centre Basement Parking Layout 23
3.3.2 Access Roadway / Ramp Grades 24
3.3.3 Bicycle Parking Design 24
3.3.4 Motorcycle Parking Design 24
3.4 INTERNAL PEDESTRIAN CIRCULATION 25
3.5 SITE SERVICING 25
3.6 CHILD CARE PLANNING GUIDELINE COMPLIANCE 25

4. EXISTING TRAFFIC CONDITIONS 28

4.1 SURROUNDING ROAD NETWORK 28
4.2 EXISTING TRAFFIC VOLUMES 30
4.2.1 Junction of Moseley Street and Tanderra Avenue 30
4.2.2 Junction of Post Office Street and Donald Street 31
4.3 EXISTING ROAD NETWORK OPERATION 32
4.3.1 Intersection Performance 32
4.4 SUSTAINABLE TRANSPORT 35
4.4.1 Buses 35
4.4.2 Light Rail 35
4.4.3 Pedestrians / Cyclists 35

5. PROJECTED TRAFFIC CONDITIONS 36

5.1 TRAFFIC GENERATION 36
5.1.1 Approved Site Uses 36
5.1.2 Proposed Site Uses – Stage 1 36
5.1.3 Proposed Site Uses – Stage 2 37
5.1.4 Proposed Ultimate Development 37
5.2 SUMMARY OF TRIP GENERATION, ASSIGNMENT AND DISTRIBUTION 37
5.3 PROJECTED TRAFFIC VOLUMES 38
5.4 TRAFFIC IMPACTS 40
5.4.1 Intersection Performance 40
5.4.2 Surrounding Road Network 41
5.5 TRANSPORT IMPACTS 42
5.6 CUMULATIVE IMPACTS 42

6. CONCLUSION 45

6.1 RECOMMENDED MITIGATION MEASURES 45

APPENDICES

1. **Architectural Plans**
2. **Swept Path Plans**
3. **Sight Distance Assessment at Site Driveway**
4. **Traffic Survey Details**
5. **SIDRA Output (Existing Conditions)**
6. **SIDRA Output (Project Conditions)**

1. INTRODUCTION

1.1 Scope of Assessment

Stanbury Traffic Planning has been commissioned by Captag Investments Pty. Ltd. to prepare a Parking & Traffic Impact Assessment to accompany a State Significant Development Application (SSDA-83870463) to be lodged with Department of Planning, Housing and Infrastructure. The State Significant Development Application seeks consent for the demolition of existing structures and the construction of a mixed-use development within 15A & 15B Moseley Street and 25, 27, 29 & 31 Donald Street, Carlingford (hereafter referred to as the 'subject site').

The mixed-use development is proposed to provide the following:

- Residential apartments, consisting of 136 dwellings, as follows:
  - 106 market dwellings; and
  - 30 affordable dwellings.

- A child care centre, capable of accommodating up to 76 children.

The mixed-use development is proposed to be serviced by two separate parking areas servicing the residential and child care centre components of the development, providing a cumulative total of 209 off-street car parking spaces.

Vehicular connectively between the parking area servicing the residential component of the development and Donald Street is proposed via a combined ingress / egress driveway situated within the south-western corner of the site.

Vehicular connectivity between the parking area servicing the child care centre component of the development and Moseley Street is proposed via a combined ingress / egress driveway situated within the north-western corner of the site.

The aim of this assessment is to investigate and report upon the potential parking and traffic consequences of the State Significant Development Application and to recommend appropriate ameliorative measures where required. This report provides the following scope of assessment:

- Section 1 provides a summary of the site location, details, existing and surrounding land-uses;

- Section 2 describes the proposed development;

- Section 3 assesses the adequacy of the proposed site access arrangements, internal circulation and servicing arrangements with reference to relevant Council, Transport for New South Wales (TfNSW) and Australian Standard specifications;

- Section 4 assesses the existing traffic, parking and transport conditions surrounding and servicing the subject development site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure; and

- Section 5 estimates the projected traffic generating ability of the proposed development and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner.

The report has been prepared pursuant to State Environment Planning Policy (Transport & Infrastructure) 2021.

1.2 Reference Documents

Reference is made to the following documents throughout this report:

- TfNSW's *Guide to Transport Impact Assessment*;

- Australian Standard for *Parking Facilities Part 1: Off-Street Car Parking* (AS2890.1:2004);

- Australian Standard for *Parking Facilities Part 3: Bicycle Parking* (AS2890.3:2015);

- Australian Standard for *Parking Facilities Part 6: Off-Street Parking for People with Disabilities* (AS2890.6:2022);

- NSW Government's *Children (Education and Care Services) Supplementary Provisions Regulation 2012*;

- NSW Government's *State Environmental Planning Policy (Educational Establishment and Child Care Facilities) 2017*;

- NSW Government's *Child Care Planning Guideline*; and

- NSW Government's *State Environmental Planning Policy (Housing) 2021*; and

- Parramatta City Council's *Parramatta Development Control Plan 2023 (PDCP 2023).*

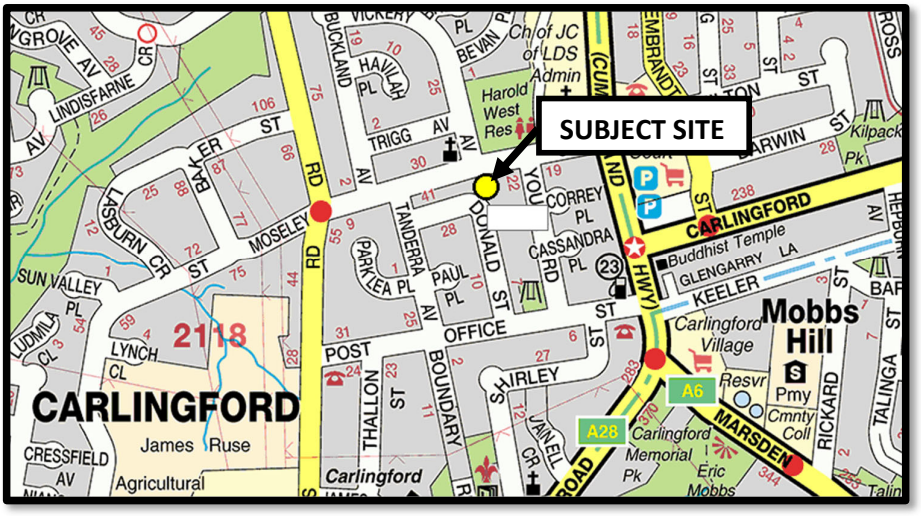
Architectural plans have been prepared by Capio Property Group and should be read in conjunction with this report, reduced scale copies of a selection of which are included as **Appendix 1** for reference.

1.3 Site Details

1.3.1 Site Location

The subject site is located on the southern side of Moseley Street, approximately 40m to the west of Young Road and opposite Vickery Avenue, Carlingford. The subject site also provides a site frontage to Donald Street located approximately 115m to the east of Tanderra Avenue, Carlingford. The site location is illustrated below and overleaf within a local and aerial context by **Figure 1** and **Figure 2**, respectively.

FIGURE 1
SITE LOCATION WITHIN A LOCAL CONTEXT



Source: UBD Australian City Streets – Version 8

FIGURE 2
SITE LOCATION WITHIN AN AERIAL CONTEXT

Source: Nearmap (image date: 20/1/2025)

1.3.2 Site Description

The subject site provides a real property description of Lots 32 – 35 of DP 536982, Lot 2 and Lot 5 of DP 35555 and a street address of 15A and 15B Moseley Street, and 25, 27, 29 and 31 Donald Street, respectively. Collectively, the lots form an irregular shaped parcel of land providing approximate frontages of 79m and 62m to Moseley Street and Donald Street, respectively, resulting in a total site area in the order of 5,948m^2.

1.3.3 Existing Site Use

The subject site previously contained a total of four detached dwellings situated within 15A and 15B Moseley Street and 29 and 31 Donald Street, with each allotment containing one dwelling. Demolition of the dwellings on 15A and 15B Moseley Street, 25, 27 and 29 Donald Street has been completed.

15A and 15B Moseley Street are connected with Moseley Street via a single shared combined ingress / egress driveway situated on the shared boundary between both allotments.

29 and 31 Donald Street is connected to Donald Street via a combined ingress / egress driveway situated in the south-eastern corner of both allotments.

15A and 15B Moseley Street, 25, 27 and 29 Donald Street are currently vacant.

1.3.4 Approved Development

Development consent was recently granted by Land and Environment Court for the demolition of existing site structures and construction of a mixed-use development at the subject site. The development was approved to provide two buildings up to four to six storeys in height comprising of:

- 91 residential apartments comprising of:
  - 18 one-bedroom affordable dwellings comprising of
    - 1 market dwelling; and
    - 17 affordable dwellings.
  - 60 two-bedroom dwellings comprising of
    - 55 market dwellings; and
    - 5 affordable dwellings.
  - 13 three-bedroom market dwellings; and
- Child care centre providing a capacity of up to 80 children.

Vehicular access between the development site and Donald Street was approved to be provided via a single 6.1m wide combined ingress / egress driveway situated in the south-western corner of the site.

1.3.5 Surrounding Uses

The subject site is surrounded by the following land-uses:

- The site is immediately adjoined to the south, east and west by detached dwellings, fronting and being serviced by Donald Street or Young Road;
- Detached dwellings occupy land to the south-west and opposite side of Donald Street;
- Harold West Reserve occupies land to the north-east on the north-eastern corner of Moseley Street and Vickery Avenue;
- St Paul's Anglican Parish Centre and Church is located to the north-west on the north-western corner of Moseley Street and Vickery Avenue;
- Carlingford Court is situated approximately 300m to the east of the site; and
- James Ruse Agricultural School is situated approximately 900m to the southeast of the site.

2. PROPOSED DEVELOPMENT

2.1 Built Form

The State Significant Development Application (SSDA-83870463) seeks consent for the demolition of the existing site structures and the staged construction of a mixed-use development containing the following:

Stage 1 – Building A

- 60 residential apartments comprising of:
    - 53 market housing apartments; comprised of:
        - 30 x two-bedroom apartments;
        - 14 x three-bedroom apartments; and
        - 9 x four-bedroom apartments.
    - 7 affordable housing one-bedroom apartments.

Stage 2 – Building B

- A child care centre capable of accommodating 76 children;
- 76 residential apartments comprised of:
    - 53 market housing apartments; comprised of:
        - 37 x two-bedroom apartments;
        - 8 x three-bedroom apartments; and
        - 8 x four-bedroom apartments.
    - 23 affordable housing residential apartments; comprised of:
        - 2 x one-bedroom apartments; and
        - 21 x two-bedroom apartments.

The proposed operation of the mixed-use development is summarised in the following sections.

2.1.1 Child Care Centre

2.1.1.1 General Description

The child care centre is proposed to be contained within level 1 of Building B above one level of parking contained within ground floor of Building B.

The child care centre is proposed to be serviced by 23 parking spaces situated within the parking area connecting with Moseley Street via a combined ingress / egress driveway situated in the north-western corner of the site.

Pedestrian access between the Building B and Moseley Street is proposed via a pathway located centrally along the Moseley Street site frontage and separate to the abovementioned vehicular access driveway.

2.1.1.2 Proposed Operation

The child care centre is proposed to accommodate up to 76 children as follows:

- 20 children aged between zero and two years of age;
- 18 children aged between two and three years of age; and
- 38 children aged between three and six years of age.

The centre is required to employ a minimum of 13 teaching staff in accordance with the current NSW Government's *Children (Education and Care Services) Supplementary Provisions Regulation 2012* requirements, as follows:

- Five staff associated with the children aged between zero and two years of age;
- Four staff associated with the children aged between two and three years of age; and
- Four staff associated with the children aged between three and six years of age.

The centre is proposed to operate between 7:00am and 6:00pm Monday to Friday.

2.1.2 Residential Apartments

The residential apartments comprise a total of 136 dwellings, made up of the following:

- 9 one-bedroom affordable dwellings;
- 88 two-bedroom dwellings comprising of
    - 67 market dwellings;
    - 21 affordable dwellings;
- 22 three-bedroom market dwellings; and
- 17 four-bedroom market dwellings.

The apartments are proposed to be contained within two multi-storey buildings located in the northern, southern and western portions of the site.

The residential component of the development is to be serviced by three levels of parking accommodating 186 passenger vehicle spaces, 117 bicycle spaces and 5 motorcycle spaces. Vehicular access between the parking areas and Donald Street is proposed via the previously presented combined ingress / egress driveway located within the south-western corner of the site.

Pedestrian connectivity is proposed via a pedestrian pathway connecting Building B to the southern Moseley Street footway and a pedestrian pathway connecting Building A to the eastern Donald Street footpath.

3. SITE ACCESS & INTERNAL CIRCULATION

3.1 Access Arrangements

3.1.1 Donald Street Vehicular Access

3.1.1.1 Driveway Design

Vehicular access between the development site and Donald Street is proposed to be provided via a single 6.1m wide combined ingress / egress driveway situated in the south-western corner of the site.

AS2890.1:2004 provides driveway design specifications based on the proposed primary land use, the functional order of the access road and the number of spaces the driveway is to serve. Tables 3.1 and 3.2 of AS2890.1:2004 specify that, at minimum, a Category 2 type driveway is required, providing a combined ingress / egress driveway width of between 6m and 9m based on the local (non-arterial) functional order of Donald Street, the residential land-use proposed and the ultimate passenger vehicle parking provision within the parking area between 101 and 300 spaces. The proposed 6.1m wide driveway therefore exceeds the minimum AS2890.1-2004 specifications and accordingly is considered to be satisfactory.

Swept path plans have been prepared in order to demonstrate the ability of passenger vehicles to enter and exit the site, copies of which are included as **Appendix 2**. These swept paths also indicate that all vehicles are able to enter and exit the site in a forward direction.

The safety and efficiency of access / egress movements are also proposed to be assisted by the following:

- The provision of a relatively level (less than 1:20) grade within the first 6m of the driveway inside the property boundary; and

- No obstructions to visibility adjacent to the egress (southern) side of the driveway facilitating appropriate sight distance between exiting motorists and potential pedestrians travelling along the eastern Donald Street footpath.

It is noted that the driveway in the south-western corner of the site is situated on the outside of a horizontal curve in Donald Street. Section 3.1.1.2 of this report assesses the extent of sight distance afforded between the proposed driveway location and motorists approaching within Donald Street.

3.1.1.2 Sight Distance Assessment

It is acknowledged that the provision of sight distance is a critical factor in the level of safety provided at any private development access driveway. Figure 3.2 of AS2890.1:2004 specifies minimum and desirable sight distance requirements for development driveways based on the frontage road speed of vehicles.

Figure 3.2 of AS2890.1:2004 indicates on a frontage road with speed limit of 50km/h, the minimum and desirable sight distance requirements between the driveway and approaching motorists to the east and west of the site within Donald Street are 45m and 69m, respectively.

The curve in the horizontal alignment of Donald Street to the west of the site somewhat limits the extent of sight distance between the proposed site access driveway location and approaching motorists from the south and west.

It is however noted that limited radius of the curve in the Donald Street alignment results in motorists being required to travel at a speed considerably less than 50km/h to safely negotiate the public road environment in the immediate vicinity of the subject site. In this regard, physical observations have indicated that motorists typically are required to travel at a speed of approximately 25km/h adjacent to the site boundary to Donald Street. It is accordingly considered reasonable that a reference speed of 25km/h be applied to traffic flow within Donald Street adjacent to the site when assessing an appropriate extent of sight distance.

Extrapolation of the desirable acceptable (stopping) sight distance provisions within AS2890.1:2004 results in a required sight distance of approximately 35m for a frontage road accommodating a motorist travel speed of 25km/h.

To illustrate the extent of sight distance provided between the site access driveway and approaching through traffic within Donald Street, a sight distance diagram has been formulated by this Practice, a copy of which is attached as **Appendix 3**. This diagram illustrates the following:

- A sight distance of at least 40m is provided between a motorist entering the site access driveway via a right turn movement and east/southbound through traffic in Donald Street;

- A sight distance of at least 50m is provided between a motorist exiting the site access driveway and approaching east/southbound through traffic within Donald Street; and

- A sight distance in excess of 100m is provided between a motorist exiting the site access driveway and approaching northbound through traffic within Donald Street.

The sight distance provided between motorists entering and exiting the proposed site access driveway therefore exceed the required sight distance for a frontage road accommodating a motorist travel speed of 25km/h in accordance with AS2890.1:2004.

Notwithstanding the above, the following measures may be considered to improve the safety of ingress and egress movements from the development:

- Installation of double barrier centre (BB) line marking along the centre of the Donald Street pavement on approach, through and departure the curve in the

roadway in conjunction with advanced advisory speed signage of 25km/h on approach to the curve;

- Trim vegetation within the western/southern Donald Street footway adjacent to 26 Donald Street (on the inside of the curve); and

- Restrict kerbside parking along both Donald Street kerb alignments in the immediate vicinity of the curve in the roadway which include:

    - 18m of 'No Stopping' restrictions which will result in the loss of three on-street parking spaces along the eastern Donald Street kerb alignment to the south of the development driveway; and

    - 12m of 'No Stopping' restrictions which will result in the loss of two on-street parking spaces along the western Donald Street kerb alignment adjacent to 24 and 26 Donald Street.

If considered necessary, the requirement for one or a combination of the above measures could reasonably be imposed as a condition of development consent.

3.1.2 Moseley Street Vehicular Access (Stage 2)

3.1.2.1 Driveway Design

Vehicular access between the child care centre component of the development and Moseley Street is proposed to be provided via a single 6.1m wide combined ingress / egress driveway situated in the north-western corner of the site.

Tables 3.1 and 3.2 of AS2890.1:2004 specify that, at minimum, a Category 1 type driveway is required, providing a combined ingress / egress driveway width of between 3m and 5.5m based on the local (non-arterial) functional order of Mosley Street, the child care centre land-use proposed and the passenger vehicle parking provision within the parking area of less than 25 spaces. The proposed 6.1m wide driveway therefore exceeds the minimum AS2890.1-2004 specifications and accordingly is considered to be satisfactory.

Swept path plans have been prepared in order to demonstrate the ability of passenger vehicles to enter and exit the site, copies of which are included as **Appendix 2**. These swept paths also indicate that all vehicles are able to enter and exit the site in a forward direction.

The safety and efficiency of access / egress movements are also proposed to be assisted by the following:

- The provision of a relatively level (less than 1:20) grade within the first 6m of the driveway inside the property boundary;

- The reasonably consistent horizontal and vertical alignment of Moseley Street in the immediate vicinity of the subject site facilitates appropriate sight distance between the driveway and approaching public road traffic flow, commensurate with the low travel speeds of vehicles adjacent to the site; and

- No obstructions to visibility adjacent to the egress (western) side of the driveway facilitating appropriate sight distance between exiting motorists and potential pedestrians travelling along the southern Moseley Street footpath.

Notwithstanding the above assessment, it is acknowledged that the driveway is situated in reasonably close proximity to the existing junction of Moseley Street and Vickery Avenue. Section 3.1.2.2 of this report assesses the potential for the proposed driveway to influence the adjacent public road intersection.

3.1.2.2 Proximity of Driveway to Public Road Junction

The driveway servicing the child care centre component of the development is proposed to be situated on the southern side of Moseley Street, approximately 3m to the east of the western site boundary. Whilst such a driveway position, being approximately 5m to the west of the southern prolongation of the western Vickery Avenue property alignment, represents a minor technical variation from Clause 3.2.3(a) of AS2890.1:2004, the provided arrangement is considered to be appropriate for the following reasons:

- The wide western footway within Vickery Avenue results in an approximately 9m off-set between the western Vickery Avenue kerb alignment and the proposed driveway location, thereby complying with the intent of AS2890.1:2004 to situate private driveways clear of the influence of public road intersections; and

- The proposal involves the removal of an existing driveway connecting with Moseley Street directly opposite Vickery Avenue, thereby eliminating turning movements to / from the site directly adjacent to the public road intersection.

Notwithstanding the above, the following measures may be considered to improve the safety of ingress and egress movements from the development:

- The installation of double barrier (BB line marking within Moseley Street on approach to and departure from Vickery Avenue); or

- The installation of painted or raised channelisation islands within Moseley Street on approach to and departure from Vickery Avenue.

The above measures are envisaged to provide appropriately delineation / channelisation of the Moseley Street approaches to its junction with Vickery Avenue, in conjunction with assisting in separating turning movements to / from the development driveway from the adjacent public road junction. The requirement for one or a combination of the above measures could reasonably be imposed as a condition of development consent.

3.1.3 External Pedestrian Access

Pedestrian access to the development is proposed via:

- A pedestrian path connecting Building B with the southern Moseley Street footway; and

- A pedestrian path connecting Building A with the eastern Donald Street footpath.

3.2 Passenger Vehicle Parking Provision

3.2.1 Residential Apartments

3.2.1.1 Car Parking Provision

The residential component of the mixed-use development is proposed to be serviced by a total of 186 off-street passenger vehicle parking spaces provided as follows:

Market dwellings resident spaces	138 (including 13 accessible)
Affordable housing resident spaces	26 (including 8 accessible)
Visitor spaces	22 (including 1 visitor / carwash bay and 2 accessible)
Total	**186 spaces**

3.2.1.2 Car Parking Requirements

State Environmental Planning Policy (Housing) 2021, hereafter referred to as "the Housing SEPP" provides state wide relevant parking requirements for in fill affordable housing. Clause 19(2)(e) and Clause 19(2)(f) of the Housing SEPP states the following with respect to car parking:

18. Non-discretionary development standards – the Act, s 4.15

(2) The following are non-discretionary development standards in relation to the carrying out of development to which this Division applies -

(e) the following number of parking spaces for dwellings used for affordable housing –
(i) for each dwelling containing 1 bedroom – at least 0.4 parking spaces,
(ii) for each dwelling containing 2 bedrooms – at least 0.5 parking spaces,
(iii) for each dwelling containing at least 3 bedrooms – at least 1 parking space,

(f) the following number of parking spaces for dwellings not used for affordable housing –
(i) for each dwelling containing 1 bedroom – at least 0.5 parking spaces,
(ii) for each dwelling containing 2 bedrooms – at least 1 parking space,
(iii) for each dwelling containing at least 3 bedrooms – at least 1.5 parking spaces,

The Housing SEPP does not provide specific requirements for residential visitors.

Table 1 overleaf identifies the off-street parking required to satisfy The Housing SEPP.

TABLE 1 MINIMUM OFF-STREET PARKING RATES HOUSING SEPP			
Measure	**Rate**	**No.**	**Spaces Required**
AFFORDABLE HOUSING			
1-bedroom	0.4 space per dwelling	9	3.6
2-bedroom	0.5 space per dwelling	21	10.5
		Total	14.1 (adopt 15)
MARKET HOUSING			
2-bedroom	1 space per dwelling	67	67
3-bedroom	1.5 spaces per dwelling	22	33
4-bedroom	1.5 spaces per dwelling	17	25.5
		Total	125.5 (adopt 126)

Table 1 indicates that the proposed development requires a minimum of 141 off-street resident parking spaces, comprising of 126 market and 15 affordable spaces in accordance with The Housing SEPP.

The proposed parking provision of 164 off-street parking spaces, comprising of 138 market parking spaces and 26 affordable parking spaces complies with the requirements of The Housing SEPP, and is therefore considered satisfactory.

The development is proposed to provide the ability to equip all resident parking spaces with electric vehicle charging capabilities. PDCP 2023 requires that all residential parking spaces be 'EV Ready' which requires the provision of a backbone cable tray and a dedicated spare circuit within an EV Distribution Board enabling future installation of a smart EV charger and cabling to the EV Distribution Board.

The proposed electric vehicle charging facilities are therefore considered to be satisfactory.

3.2.1.3 Visitor Car Parking

The development is to provide 22 residential visitor parking spaces.

The Housing SEPP is silent with respect to the requirement or otherwise for visitor parking. For the purposes of this assessment, visitor parking provision has been assessed with respect to the market residential dwellings in accordance with PDCP 2023.

PDCP 2023 provides the following requirements for visitor parking for residential flat buildings:

0.2 space per dwelling for visitor parking

On the basis of 106 market residential dwellings, PDCP 2023 requires 21.2 (adopt 22) visitor parking spaces.

The proposed provision of 22 residential visitor parking spaces complies with PDCP 2023 and is therefore considered satisfactory.

3.2.1.4 Bicycle Parking

The residential component of the development is to provide 117 bicycle parking spaces comprising of 105 resident bicycle spaces and 11 visitor bicycle spaces.

The Housing SEPP is silent with respect to bicycle parking. For the purposes of this assessment, bicycle parking provision has been assessed with respect to the market residential dwellings in accordance with PDCP 2023.

PDCP 2023 provides the following requirements for bicycle parking for residential developments:

1 space per dwelling for residents
1 space per 10 dwellings for visitors

On the basis of 106 market residential dwellings, PDCP 2023 requires 106 resident bicycle spaces and 10.6 (adopt 11) visitor bicycle spaces.

The proposed provision of 117 bicycle spaces, comprising of 106 resident bicycle spaces and 11 visitor bicycle spaces therefore complies with the minimum requirements of PDCP 2023, and is therefore considered satisfactory.

3.2.1.5 Motorcycle Parking

The residential apartments component of the development is to provide five motorcycle parking spaces within the basement parking area.

The Housing SEPP is silent with respect to bicycle parking. For the purposes of this assessment, reference is made to PDCP 2023 which provides a minimum parking requirement for on-site residential motorcycle parking of one motorcycle space for every 50 car parking spaces.

Application of the abovementioned motorcycle parking rate results in a minimum parking requirement of four motorcycle parking spaces.

The motorcycle parking provision of five motorcycle spaces therefore exceeds the minimum parking requirement of PDCP 2023 and accordingly, is considered satisfactory.

3.2.2 Child Care Centre

3.2.2.1 Parramatta City Council's Parramatta Development Control Plan 2023

PDCP 2023 specifies that parking should be provided with the following minimum vehicular parking rates for child care centres:

1 space per 4 children

3.2.2.2 Passenger Vehicle Parking Allocation

The child care centre is proposed to be serviced by a total of 23 on-site passenger vehicle parking spaces which are proposed to be allocated as follows:

- 13 staff parking spaces; and
- 10 visitor / parent / guardian parking spaces (including one disabled space).

NSW Government's *Child Care Planning Guideline* specifies that parking should be provided in accordance with PDCP 2023.

Application of the previously presented PDCP 2023 parking requirements to the proposed child care centre population of 76 children results in a minimum passenger vehicle parking requirement of 19 parking spaces. The proposed parking provision of 23 spaces exceeds the relevant requirements of PDCP 2023 and is therefore considered satisfactory.

Notwithstanding the above, the following sub-sections of this report provide discussion with respect to the proposed allocation of the parking provision to staff and visitors / parents / guardians associated with children set-down / pick-up with respect to the expected operational requirements of the centre.

3.2.2.3 Staff Parking

It has been presented that the child care centre is understood to be required to accommodate up to 13 staff on-site at any one time. The provision of 13 parking spaces, representing one space per staff member, is considered to be satisfactory.

3.2.2.4 Parent / Guardian Parking

To undertake an assessment of the suitability of the proposed visitor parking provision of 10 spaces, reference is made to the TfNSW's *Guide to Transport Impact Assessment*. This publication referenced operational surveys of a range of child care centres which indicate that the average length of stay of parents / guardians when setting-down / picking-up children at child care centres is 8.2 minutes. On the basis of all children being set-down and picked-up with an even distribution over a period of two hours (say, 7:00am – 9:00am and 4:00pm – 6:00pm), the arrival rate of parents / guardians will be one parent / guardian every 1.6 minutes (120 minutes / 76 children).

The above length of stay and arrival rate results in an average of 5.2 (8.2/1.6) parents / guardians being on-site at any time during the peak set-down / pick-up periods. The average parent / guardian parking demand during peak pick-up / set-down periods is therefore projected to be between five and six spaces.

However, it should be noted that the above analysis represents an absolute worst-case scenario for the following reasons:

- It assumes that all parents / guardians will drive their children to and from the centre, when the TfNSW's survey suggest 93% of children are driven to and from centres;

- It assumes a zero-sibling rate, when our experience suggests a sibling rate of at least 10% commonly prevails;

- It assumes a 100% attendance rate, when our experiences suggest a maximum of 90% is more likely; and

- It assumes that all children will be set-down and picked-up within a two-hour period, when children can be set-down / picked-up at any time during the operational hours.

The above analysis, indicating an instantaneous parent / guardian parking demand of up to six spaces has however been retained to account for variations in average demand associated with short term peak influxes of parents / guardians during set-down / pick-up periods. In consideration of this and the above discussion, the proposed parent / guardian parking allocation of 10 spaces is readily capable of accommodating peak operational demand.

3.2.2.5 Disabled Parking

PDCP 2023 also specifies that disabled parking should be provided at a rate of one space per 10 car spaces. A total passenger vehicle parking provision of 23 spaces therefore results in a disabled parking requirement of 2.3 spaces, rounded up to three parking spaces.

The required provision of three disabled spaces within a total visitor parking provision of 10 spaces represents 30% of the total visitor parking provision. Such a percentage of disabled parking is considered to be excessive and will undesirably increase the propensity of site users undesirably parking on-street. The proposed provision of one disabled parking space is considered to be satisfactory, given the limited scale of the development.

3.2.2.6 Neighbourhood Parking Policy

The previous analysis concludes that the on-site parking provision allocated to the child care centre is appropriate in accordance with the locally sensitive parking requirements and the projected operational characteristics of the site. In this regard, it is not expected that the child care centre component of the development will result in any unreasonable impacts on surrounding amenity.

Notwithstanding the above, it is desirable that the child care centre formulate and implement a Neighbourhood Parking Policy, which provides a series of operational initiatives with the objective of minimising the potential impacts of the development on the adjoining public parking infrastructure and thus the surrounding residential amenity. This Policy should include, but not be limited to, the following:

- Staff members who drive to the site are to occupy designated on-site staff parking spaces, in preference to parking on-street;

- Parent / visitors who drive to the site are to occupy designated on-site visitor parking spaces, in preference to parking on-street; and

- In the unlikely event that all on-site parking spaces allocated to the child care centre are occupied, parking is to occur within Moseley Street directly adjacent to the site to ensure no unreasonable impacts on adjacent development parking amenity.

The Neighbourhood Parking Policy should be provided to all staff and parents / guardians at the time of employment and enrollment, respectively.

If considered necessary, the requirement for a Neighbourhood Parking Policy could reasonably be imposed by Council as a condition of development consent.

3.2.2.7 Travel Plan

It is acknowledged that PDCP 2023 specifies that development proposals that meet the following criteria must prepare a Travel Plan:

- Residential development containing more than 50 dwellings; or

- Development with a gross floor space of 5,000m² and above or 50 or more employees.

It should be acknowledged that a Travel Plan was not required for the approved development on the subject site, despite one being triggered by PDCP 2023. Notwithstanding this, if considered necessary, the requirement for a Travel Plan could reasonably be imposed by Council as a condition of development consent.

3.3 Internal Circulation and Manoeuvrability

3.3.1 Residential Basement Parking Layout

Passenger vehicles upon entry to the site from Donald Street, will travel in a forward direction from the driveway and connecting roadway running along the southern and eastern site boundaries to access basement floor parking area servicing the residential dwellings. The residential basement parking area is proposed to provide a series of 90-degree angled parking rows, being serviced by adjacent parking / circulation aisles forming an extension of or intersecting with the access roadway / ramp. Secondary ramps are provided from basement floor parking area to upper basement floor parking area and ground floor parking area which provides additional residential parking spaces.

The residential parking areas have been designed in accordance with the minimum requirements of AS2890.1:2004, AS2890.3:2015 and AS2890.6:2022, providing the following minimum dimensions:

- Standard residential parking space width = 2.4m;

- Disabled parking space width = 2.4m (plus adjoining 2.4m wide shared area);
- Vehicle parking space length = 5.4m;
- Minimum vehicular parking aisle width = 5.8m;
- Minimum two-way roadway = 5.5m.
- Minimum clearance = 2.2m; and
- Minimum clearance above disabled vehicle parking space = 2.5m.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004 and AS2890.6:2022 specifications.

In order to demonstrate the internal passenger vehicle manoeuvrability within the basement parking area, this Practice has prepared a number of swept path plans which are included as **Appendix 2**. The turning paths provided on the plans have been generated using Autoturn software and derived from B99 and B85 vehicle specifications provided within AS2890.1:2004.

Section B4.4 of AS2890.1:2004 states the following with regard to the use of templates to assess vehicle manoeuvring:

'Constant radius swept turning paths, based on the design vehicle's minimum turning circle are not suitable for determining the aisle width needed for manoeuvring into and out of parking spaces. Drivers can manoeuvre vehicles within smaller spaces than swept turning paths would suggest.'

It would therefore appear that whilst the turning paths provided within AS2890.1:2004 can be utilised to provide a 'general indication' of the suitability or otherwise of internal parking and manoeuvring areas, vehicles can generally manoeuvre more efficiently than the paths indicate. Notwithstanding this, the swept path plans illustrate that passenger vehicles can manoeuvre throughout and enter and exit the most difficult passenger vehicle parking spaces within the parking area.

It is further acknowledged that the basement parking areas contains a total of 31 parking spaces provided in a tandem arrangement. These spaces are proposed to be specifically allocated to single residential dwellings in order to ensure no unreasonable impacts on visitor manoeuvring / circulation occurs with respect to parking space accessibility and is considered satisfactory.

The proposed residential basement parking area layout as it relates to passenger vehicle manoeuvrability is therefore considered to be satisfactory.

3.3.2 Child Care Centre Basement Parking Layout

Passenger vehicles upon entry to the site from Mosley Street, will travel in a forward direction from the driveway and connecting roadway / ramp to access parking area servicing the child care centre parking area. The child care centre parking area is proposed to provide a series of 90-degree angled parking rows, being serviced by adjacent parking / circulation aisles forming an extension of or intersecting with the access roadway / ramp.

The child care centre parking areas have been designed in accordance with the minimum requirements of AS2890.1:2004, AS2890.3:2015 and AS2890.6:2022, providing the following minimum dimensions:

- Child care centre staff vehicle parking space width = 2.4m;
- Child care centre visitor vehicle parking space width = 2.6m;
- Disabled parking space width = 2.4m (plus adjoining 2.4m wide shared area);
- Vehicle parking space length = 5.4m;
- Minimum vehicular parking aisle width = 5.8m;
- Minimum two-way roadway = 5.5m.
- Minimum clearance = 2.2m; and
- Minimum clearance above disabled vehicle parking space = 2.5m.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004 and AS2890.6:2022 specifications.

In order to demonstrate the internal passenger vehicle manoeuvrability within the basement parking area, this Practice has prepared a number of swept path plans which are included as **Appendix 2**. The swept path plans illustrate that passenger vehicles can manoeuvre throughout and enter and exit the most difficult passenger vehicle parking spaces within the child care centre parking area.

It is acknowledged that the child care centre parking area forms two dead-end parking aisles. The alignment of the circulation aisles allows for motorists to undertake a three-point turn within the central portion of the parking area and exit the site in a forward direction in the unlikely event that all internal parking spaces are occupied. Such internal turnaround movements are demonstrated by the swept path plans contained within **Appendix 2**.

It is further acknowledged that the child care centre parking area contains a total of five parking spaces provided in a tandem arrangement. These spaces are proposed to be specifically allocated to staff in order to ensure no unreasonable

impacts on visitor manoeuvring / circulation occurs with respect to parking space accessibility, and is considered satisfactory.

The proposed child care centre parking area layout as it relates to passenger vehicle manoeuvrability is therefore considered to be satisfactory.

3.3.2 Access Roadway / Ramp Grades

The basement access ramps provided within both the residential and child care centre parking areas have been designed to provide the following grade and clearance requirements in accordance with AS2890.1:2004:

- Maximum grade = 1:4;
- Maximum grade within 6m of property boundary (as an upgrade for exiting traffic) = 1:20;
- Maximum grade within 6m of property boundary (as a downgrade for exiting traffic) = 1:15;
- Maximum change in grade = 1:8;
- Minimum length of transitional grade = 2m; and
- Minimum clearance = 2.2m.

The access ramp grades and clearance are accordingly considered to be satisfactory.

3.3.3 Bicycle Parking Design

Bicycle parking is proposed to be contained within the residential parking area through the provision of horizontal bicycle rails and vertically hung staggered bicycle racks. These bicycle rails and racks provide the following minimum dimensions suitably according with AS2890.3:2015:

- Horizontal rail length = 1.8m;
- Vertically hung staggered rack length = 1.2m
- Rack spacing = 0.5m; and
- Adjoining manoeuvring aisle and access path = 1.5m.

3.3.4 Motorcycle Parking Design

Motorcycle parking is proposed to be contained within the residential parking area. The motorcycle parking spaces provide the following minimum dimensions suitably according with AS2890.1:2004:

- Motorcycle space length = 2.5m; and
- Motorcycle space width = 1.2m.

3.4 Internal Pedestrian Circulation

Pedestrian access between Building A and the eastern Donald Street footpath is proposed via a pedestrian pathway located separately and to the north of the vehicular access driveway. This pedestrian walkway provides connectivity to the entrance lobby of Building A.

Pedestrian access between Building B and the southern Moseley Street footway is proposed via a pedestrian pathway, located separately and to the vehicular access driveway. This pedestrian walkway provides connectivity to the entrance lobby of Building B.

Further to this access, pedestrian connectivity between the child care centre parking area and the building is proposed via pedestrian pathways provided adjacent to visitor parking spaces that provide pedestrian access to the building, clear of vehicular circulation areas.

3.5 Site Servicing

The development is likely to necessitate regular servicing with respect to the collection of refuse. Refuse is proposed to be contained within bins accommodated within three waste storage areas situated in the south-western, north-eastern and northern western corners of the lower basement floor parking area, respectively. The bins stored in waste storage area are to be wheeled to the eastern Donald Street and southern Moseley Street kerb for collection, in a similar manner to the adjoining residential developments.

Minor deliveries associated with the child care centre operation are expected to be undertaken by vans and utilities. Such servicing activities are proposed to be accommodated within single visitor passenger vehicle parking spaces located within the child care centre parking level. These activities are to be undertaken between 10:00am and 2:00pm, thereby being outside of the peak child set-down / pick-up periods of the centre.

3.6 Child Care Planning Guideline Compliance

Tables 2, **3** and **4** in the following pages, with reference to the information contained within this report, describe the compliance of the proposed development with respect to Considerations 35, 36 and 37 of NSWs' *Child Care Planning Guideline*.

TABLE 2 CHILD CARE PLANNING GUIDELINE – CONSIDERATIONS 35	
Consideration 35. The following design solutions may be incorporated into a development to help provide a safe pedestrian environment:	
Consideration requirements	**Response / Section of Report**
● *Separate pedestrian access from the car park to the facility*	As shown in **Appendix 1**, pedestrian access is provided to the facility via a pedestrian pathway within the visitor parking spaces within child care centre parking area which leads to the building entrance, separate to the vehicular circulation area.
● *Defined pedestrian crossings included within large car parking area*	A pedestrian crossing is not proposed within the car parking area.
● *Separate pedestrian and vehicle entries from the street for parents, children and visitors*	As shown in **Appendix 1**, separated pedestrian access is provided to the facility, located separate to the vehicular access driveway, connecting to the southern Moseley Street footway.
● *Pedestrian paths that enable two prams to pass each other*	A minimum 1.0m wide pedestrian walkway is provided between each visitor parking space and the pedestrian entrance to the building. Research and experience suggest that the average pram width is approximately 500mm. Therefore, in most instances the 1.0m wide pedestrian path will safely accommodate the passing of two prams. However, when this is not possible it is considered that courtesy conditions will prevail and there are localised areas of path widening allowing parents / visitors to negotiate the pedestrian walkways within the parking area safely and efficiently.
● *Delivery and loading areas located away from the main pedestrian access to the building and in clearly designated, separate facilities*	Section 3.5 describes that deliveries and loading is to occur from within visitor parking spaces and area. Deliveries are to occur outside of peak set-down / pick-up hours therefore not impacting pedestrian movements.
● *Minimise number of locations where pedestrians and vehicles cross each other*	Section 3.4 describes an internal pedestrian circulation system that minimises pedestrian and vehicle crossing each other.
● *In commercial or industrial zones and mixed-use developments the path of travel from the car parking to the centre entrance physically separated from any truck circulation or parking area*	As shown in **Appendix 1**, pedestrian access is provided to the facility via pedestrian pathways within the visitor parking spaces within the child care centre parking area which leads to the building entrance, separate to the vehicular circulation area.
● *Vehicles can enter and leave the site in a forward direction*	As shown in the swept path assessment in **Appendix 2**, all vehicles are capable of entering and exiting the site in a forward direction and are to do so at all times.
● *Clear sightlines are maintained for drivers to child pedestrians, particularly at crossing locations*	Section 3.1.1.2 states that an appropriate extent of sight distance is provided between motorists enter and exiting the site and adjacent road users.

TABLE 3 CHILD CARE PLANNING GUIDELINE – CONSIDERATION 36	
Consideration 36. Mixed use developments should include:	
Consideration requirements	**Response / Section of Report**
● *Driveway access, manoeuvring areas and parking area for the facility that are separate to parking and manoeuvring areas used by trucks*	Servicing is proposed to occur from the visitor parking area. It is understood that an operational management plan will be formulated which includes site specific operational management initiatives to ensure that the abovementioned servicing activities do not result in any unreasonable impacts on the overall level of safety and efficiency of the experience of centre users. The requirement for the operational management plan could reasonably be imposed by Council as a condition of consent.
● *Drop off and pick up zones that are exclusively available for use during the facility's operating hours with spaces clearly marked accordingly, close to the main entrance and preferably at the same floor level. Alternatively, direct access should avoid crossing driveways or manoeuvring areas used by vehicles accessing other parts of the site*	All drop off and pick up spaces are located on ground level are marked on the plans as close to the building entrance as possible.
● *Parking that is separate from other uses, located and grouped together and conveniently located near the entrance or access point to the facility*	As above, all visitor and staff spaces are grouped together in separate parking areas. This arrangement is considered satisfactory.

TABLE 4 CHILD CARE PLANNING GUIDELINE – CONSIDERATION 37	
Consideration 37. Car parking design should:	
Consideration requirements	**Response / Section of Report**
● *Include a child safe fence to separate car parking area from the building entrance and play areas*	As shown on the development plans in **Appendix 1**, parking is contained within dedicated areas, adequately separated from child activity areas.
● *Provide clearly marked accessible parking as close as possible to the primary entrance to the building in accordance with appropriate Australian Standards*	As shown on the development plans in **Appendix 1**, one accessible parking space is proposed within the child care centre parking area in the immediate vicinity of the building entry.
● *Include wheelchair and pram accessible parking*	As shown on the development plans in **Appendix 1**, one accessible parking space is proposed within the child care centre parking area in the immediate vicinity of the building entry. All other visitor spaces are capable of being used by parents with prams.

4. EXISTING TRAFFIC CONDITIONS

4.1 Surrounding Road Network

The following provides a description of the local road network surrounding the subject site:

- **Moseley Street** performs a local access road function under the care and control of Parramatta Council providing an east-west alignment between Pennant Hills Road in the east and Baker Street in the west.

  Moseley Street provides a variable pavement width between 10m and 12m adjacent to the site, facilitating a single lane of travel in each direction in conjunction with unrestricted parallel parking along both kerb alignments.

  Traffic flow within Moseley Street is governed by a local area speed limit of 50km/h. Moseley Street is restricted by a 3-tonne load limit.

  To the east of the site, Moseley Street forms a T-junction with Pennant Hills Road operating under 'Give-Way' signage control with Pennant Hills Road performing the priority route.

  To the west of the site, Moseley Street forms a cross intersection with Jenkins Road and Baker Street operating under traffic signal control.

  Moseley Street forms a series of T-junctions with Buckland Avenue, Tanderra Avenue, Vickery Avenue and Young Road operating under major / minor priority control with Moseley Street performing the priority route in each instance.

- **Donald Street** performs a local access road function under the care and control of Parramatta Council providing a north-west / south-east alignment between Tanderra Avenue in the north-west and Post Office Street in the south-east.

  Donald Street provides an approximate pavement width of 10m adjacent to the site, primarily facilitating a single lane of travel in each direction in conjunction with unrestricted parallel parking along both kerb alignments.

  Traffic flow within Donald Street is governed by a local area speed limit of 50km/h.

  To the west of the site, Donald Street forms a T-junction with Tanderra Avenue operating under major / minor priority control with Tanderra Avenue performing the priority route.

  To the south of the site, Donald Street forms a T-junction with Post Office Street operating under major / minor priority control with Post Office Street performing the priority route.

- **Tanderra Avenue** performs a local access road function under the care and control of Parramatta Council providing a north-south alignment between Moseley Street in the north and Post Office Street in the south.

  Tanderra Avenue provides an approximate pavement width of 9.5m adjacent to the site, primarily facilitating a single lane of travel in each direction in conjunction with unrestricted parallel parking along both kerb alignments.

  Traffic flow within Tanderra Avenue is governed by a local area speed limit of 50km/h.

  Tanderra Avenue forms a T-junction with Post Office Street operating under major / minor priority control with Post Office Street performing the priority route.

- **Post Office Street** performs a local access road function under the care and control of Parramatta Council providing an east-west alignment between Pennant Hills Road in the east and Jenkins Road in the west.

  Post Office Street provides an approximate pavement width of 9.5m, primarily facilitating a single lane of travel in each direction in conjunction with primarily unrestricted parallel parking along both kerb alignments. Notwithstanding this, 'No Parking' and 'No Stopping' parking restrictions apply along the northern kerb alignment on approach to Pennant Hills Road.

  Traffic flow within Post Office Street is governed by a local area speed limit of 50km/h.

  Post Office Street forms a T-junction with the northbound Pennant Hills Road travel lanes operating under major / minor priority control with the northbound Pennant Hills Road travel lanes performing the priority route. A central median prohibits right turn movements from Post Office Street to the southbound Cumberland Highway Road travel lanes.

  Post Office Street forms a T-junction with Jenkins Road operating under 'Stop' signage control with Jenkins Road performing the priority route. Right turn movements from Post Office Street to Jenkins Road are prohibited between 3:30pm – 6:30pm on weekdays.

- **Jenkins Road** performs a Regional Road function under the care and control of Parramatta Council providing a north-south alignment between North Rock Road in the north and Pennant Hills Road in the south, intersecting with both under traffic signal control.

  Jenkins Road provides an approximate pavement width of 12.5m, facilitating a combination of one and two through travel in each direction, with some localised parallel parking.

  Traffic flow within Jenkins Road is governed by a sign posted speed limit of 50km/h. Jenkins Road is restricted by a 3-tonne load limit.

- **Pennant Hills Road** performs a State Road function under the care and control of TfNSW, forming part of the Cumberland Highway route providing a north-east / south-west connection between Normanhurst in the north-west and North Parramatta in the south-west.

  In the vicinity of the site, Pennant Hills Road primarily provides a four-lane carriageway facilitating two lanes of travel in both directions separated by a central median. Clearway restrictions apply along both kerb alignments between 6am – 7pm from Monday to Friday and 8am – 8pm on weekends and public holidays. 'No Parking' restrictions apply along the eastern kerb alignment at all other times. A bus lane is provided along the eastern kerb alignment.

  Traffic flow within Pennant Hills Road is governed by a sign posted speed limit of 60km/h.

4.2 Existing Traffic Volumes

4.2.1 Junction of Moseley Street and Tanderra Avenue

Traffic demand surveys were commissioned by this Practice at the junction of Moseley Street and Tanderra Avenue in order to accurately ascertain existing traffic demands within the immediate precinct.

Surveys were undertaken between 7:00am – 9:00am and 4:00pm – 6:00pm on Tuesday the 18th of July 2023.

Figure 3 overleaf provides a summary of the surveyed peak hour intervals of traffic flows at the subject intersection including a morning peak hour which has been identified as 8:00am — 9:00am (AM Peak) and 4:45pm – 5:45pm (PM Peak), whilst full details are contained within **Appendix 4**.

FIGURE 3
EXISTING WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF MOSELEY STREET AND TANDERRA AVENUE

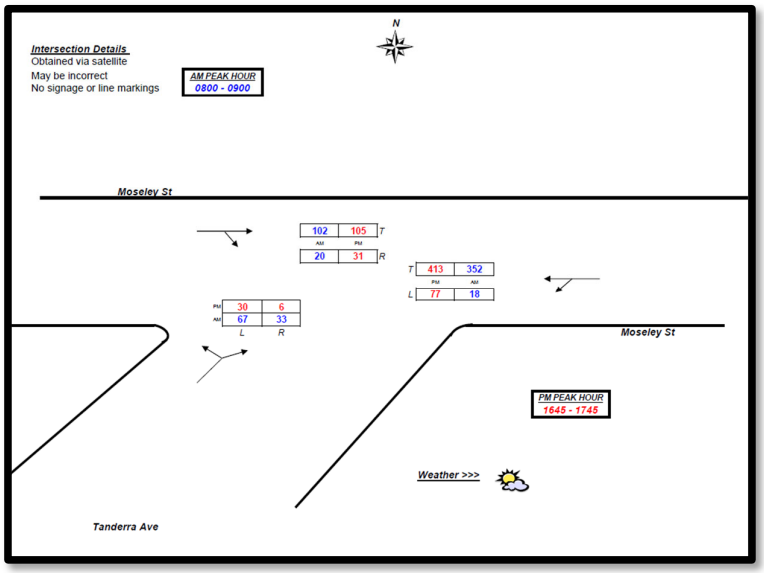


Figure 3 indicates the following:

- Moseley Street accommodates westbound traffic demands between 350 - 500 vehicles per hour during the weekday peak periods;
- Moseley Street accommodates eastbound traffic demands between approximately 100 – 150 vehicles per hour during the weekday peak periods; and
- Tanderra Avenue accommodates directional traffic demands approximately less than 100 vehicles per hour during weekday peak periods.

4.2.2 Junction of Post Office Street and Donald Street

Traffic demand surveys were commissioned by this Practice at the junction of Post Office Street and Donald Street in order to accurately ascertain existing traffic demands within the immediate precinct.

Surveys were undertaken between 7:00am – 9:00am and 4:00pm – 6:00pm on Tuesday the 18th of July 2023.

Figure 4 overleaf provides a summary of the surveyed peak hour intervals of traffic flows at the subject intersection including a morning peak hour which has been identified as 7:30am — 8:30am (AM Peak) and 5:00pm – 6:00pm (PM Peak), whilst full details are contained within **Appendix 4**.

FIGURE 4
EXISTING WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF POST OFFICE STREET AND DONALD STREET

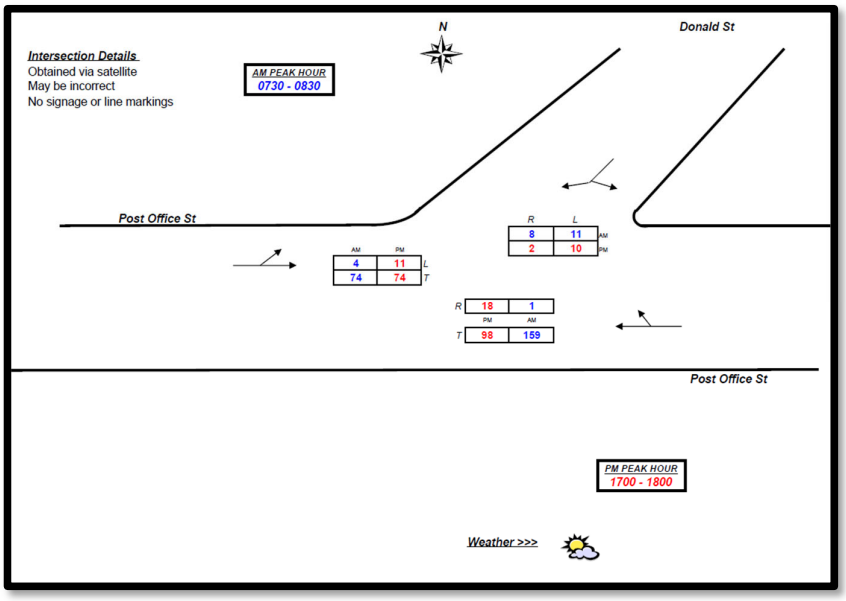


Figure 4 indicates the following:

- Post Office Street accommodates westbound traffic demands between 100 - 200 vehicles per hour during the weekday peak periods;
- Post Office Street accommodates eastbound traffic demands less than 100 vehicles per hour during the weekday peak periods; and
- Donald Street accommodates directional traffic demands approximately less than 30 vehicles per hour during weekday peak periods.

4.3 Existing Road Network Operation

4.3.1 Intersection Performance

The surveyed intersections have been analysed utilising the SIDRA computer intersection analysis program in order to objectively assess the operation of the nearby public road network.

SIDRA is a computerised traffic arrangement program which, when volume and geometrical configurations of an intersection are imputed, provides an objective assessment of the operation efficiency under varying types of control (i.e. signs, signal and roundabouts). Key indicators of SIDRA include level of service where results are placed on a continuum from A to F, with A providing the greatest intersection efficiency and therefore being the most desirable by TfNSW.

SIDRA uses detailed analytical traffic models coupled with an iterative approximation method to provide estimates of the abovementioned key indicators of capacity and performance statistics. Other key indicators provided by SIDRA are average vehicle delay, the number of stops per hour and the degree of saturation. Degree of saturation is the ratio of the arrival rate of vehicles to the capacity of the approach. Degree of saturation is a useful and professionally accepted measure of intersection performance.

SIDRA provides analysis of the operating conditions that can be compared to the performance criteria set out in **Table 5** below (being Transport for NSW method calculation of Level of Service).

TABLE 5
LEVEL OF SERVICE CRITERIA FOR PRIORITY AND PRIORITY CONTROLLED INTERSECTIONS

Level of Service	Average Delay per Vehicle (secs/veh)	Expected Delay
A	Less than 14	Little or no delay
B	15 to 28	Minimal delay and spare capacity
C	29 to 42	Satisfactory delays with spare capacity
D	43 to 56	Satisfactory but near capacity
E	57 to 70	At capacity, incidents will cause excessive delays
F	> 70	Extreme delay, unsatisfactory

The existing conditions have been modelled utilising the peak hour traffic volumes presented within **Figures 3** and **4.**

Table 6 provided overleaf provide a summary of the SIDRA output data whilst more detailed summaries are included as **Appendix 5**.

TABLE 6 SIDRA OUTPUT – EXISTING WEEKDAY PEAK HOUR PERFORMANCE		
JUNCTION OF MOSELEY STREET AND TANDERRA AVENUE		
	AM PEAK (8:00AM – 9:00AM)	**PM PEAK (4:45PM – 5:45PM)**
Tanderra Avenue Approach		
Average Vehicle Delay	7.9	8.5
Degree of Saturation	0.11	0.04
Level of Service	A	A
Moseley Street East Approach		
Average Vehicle Delay	5.6	5.6
Degree of Saturation	0.18	0.25
Level of Service	A	A
Moseley Street West Approach		
Average Vehicle Delay	6.9	7.6
Degree of Saturation	0.07	0.08
Level of Service	A	A
Total Intersection		
Average Vehicle Delay	7.9	8.5
Degree of Saturation	0.18	0.25
Level of Service	A	A
JUNCTION OF POST OFFICE STREET AND DONALD STREET		
	AM PEAK (7:30AM – 8:30AM)	**PM PEAK (5:00PM – 6:00PM)**
Post Office Street Approach		
Average Vehicle Delay	5.5	5.8
Degree of Saturation	0.08	0.06
Level of Service	A	A
Donald Street North Approach		
Average Vehicle Delay	6.4	6.2
Degree of Saturation	0.02	0.01
Level of Service	A	A
Post Office Street Approach		
Average Vehicle Delay	5.5	5.5
Degree of Saturation	0.04	0.04
Level of Service	A	A
Total Intersection		
Average Vehicle Delay	6.4	6.2
Degree of Saturation	0.08	0.06
Level of Service	A	A

Table 6 indicates the junction of Moseley Street / Tanderra Avenue and Post Office Street / Donald Street provide all movements between a level of service A during weekday peak period representing minimal delay and spare capacity.

4.4 Sustainable Transport

4.4.1 Buses

Busways operate the following bus services within the vicinity of the site:

- Route 513 between Carlingford to West Ryde via Dundas Valley, with the closest stop being within Pennant Hills Road 230m to the east of the site;
- Route 546 between Parramatta to Epping via Oatlands and North Rocks, with the closest stop being within Pennant Hills Road 230m to the east of the site;
- Route 625 between Pennant Hills to Parramatta, with the closest stop being within Pennant Hills Road 230m to the east of the site; and
- Route 630 between Blacktown to Epping via Baulkham Hills, with the closest stop being within Pennant Hills Road 230m to the east of the site.

The abovementioned bus routes provide a collective service frequency of 15 minutes during weekdays, weekends and public holidays.

4.4.2 Light Rail

Heavy rail services along the T6 Carlingford line closed in early 2020, having recently being replaced by Stage 1 of the new Parramatta Light Rail. Carlingford Light Rail station is situated on the previous Carlingford Heavy Rail site, approximately 700m south of the subject site.

The Parramatta Light Rail connects Carlingford to Parramatta and Westmead, with light rail services operating approximately every 7 minutes. From the major interchange at Parramatta, train services connect with lines servicing the greater Sydney metropolitan area and beyond.

4.4.3 Pedestrians / Cyclists

Pedestrians are provided with the following access and mobility infrastructure within the immediate vicinity of the subject site:

- A footpath is provided along both sides of Donald Street and Post Office Street;
- A footpath is provided along the northern side of Moseley Street;
- A footpath is provided along the western side of Tanderra Avenue; and
- An on-road cycleway is provided along eastern portion of the Jenkins Road pavement.

5. PROJECTED TRAFFIC CONDITIONS

5.1 Traffic Generation

Traffic generation rates for various land-uses have been established through extensive surveys undertaken throughout NSW and published within TfNSW's *Guide to Transport Impact Assessment*.

TfNSW's *Guide to Transport Impact Assessment* specifies the following average weekday traffic generation rates for high density residential dwellings:

High Density Residential Flat Dwellings
0.19 trips per unit during the morning peak
0.15 trips per unit during the evening peak

For the purposes of this assessment and for reasons of simplicity, a traffic generation rate of 0.2 peak hour vehicle trip per dwelling has been applied.

Further, TfNSW's *Guide to Transport Impact Assessment* specifies the following traffic generation rates for child care centres:

0.81 vehicle trips per child during the morning commuter peak hour
0.8 vehicle trips per child during the evening commuter peak hour

For the purposes of this assessment and for reasons of simplicity, a traffic generation rate of 0.8 peak hour vehicle trip per child has been applied.

5.1.1 Approved Site Uses

Section 1.3.6 of this report presented that development consent was recently granted by Land and Environment Court for a mixed-use development within the subject site, comprising:

- 91 residential apartments; and
- A child care centre providing a capacity of up to 80 children.

Application of the abovementioned traffic generation rates to the approved development yield results in a weekday peak hour traffic generation of 82 vehicle trips.

5.1.2 Proposed Site Uses – Stage 1

Stage 1 of the subject development has previously been presented to comprise 60 residential dwellings.

Application of the abovementioned traffic generation rates to the proposed Stage 1 development results in a weekday peak hour traffic generation of 12 trips.

5.1.3 Proposed Site Uses – Stage 2

Stage 2 of the subject development has previously been presented to comprise 77 residential dwellings and a child care centre with a capacity of 76 children.

Application of the abovementioned traffic generation rates to the proposed Stage 2 development results in a weekday peak hour traffic generation of 77 trips.

5.1.4 Proposed Ultimate Development

The ultimate development (comprising both Stages 1 and 2) is assessed to generate a total of 89 vehicle trips during weekday commuter peak periods. This represents an increase of 7 additional vehicle trips over and above that previously assessed and approved.

5.2 Summary of Trip Generation, Assignment and Distribution

For the purposes of this assessment, the peak hour vehicle movements have been split between inbound and outbound movements during each peak period according to the following:

- Child care centre trips have been evenly split between inbound and outbound trips during weekday commuter peak periods;

- Residential trips have been assigned as follows:

  - The morning peak hour trips have been split between 20% inbound trips and 80% outbound movements; and
  - The afternoon peak hour trips have been split between 80% inbound movements and 20% outbound movements.

A summary of the traffic generation and the estimated inbound and outbound trips is provided in **Table 7** below.

TABLE 7
SUMMARY OF ESTIMATED DEVELOPMENT TRAFFIC GENERATION

Use	Size	AM Generation	AM In/Out	PM Generation	PM In/Out
STAGE 1					
Residential Apartments	60 dwellings	12	3/9	12	9/3
Total		**12**	**3/9**	**12**	**9/3**
STAGE 1 & 2					
Child Care Centre	76 Children	61	31/30	61	30/31
Residential Apartments	136 dwellings	28	6/22	28	22/6
Total		**89**	**37/52**	**89**	**52/37**

For the purposes of this assessment, it has been assumed that the ingress and egress trips have been assigned with a proportional distribution to the existing traffic volumes throughout the possible approaches to the site. Further, development generated traffic has been assigned as follows:

- 50% to / from the north via Moseley Street and Tanderra Avenue; and
- 50% to / from the south via Post Office Street and Donald Street.

5.3 Projected Traffic Volumes

The projected peak hour traffic volumes at the surveyed intersections have been formulated by adding the abovementioned traffic generation and trip assignment to the existing demands presented within **Figures 3** and **4**. **Figures 5** and **6** provided below and overleaf provide an estimation of the future traffic demands at the nearby public road intersection upon the completion of Stage 1. **Figures 7** and **8** provided below and overleaf provide an estimation of the future traffic demands at the nearby public road intersection upon the completion of Stage 2.

FIGURE 5
PROJECTED STAGE 1 WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF MOSELEY STREET AND TANDERRA AVENUE

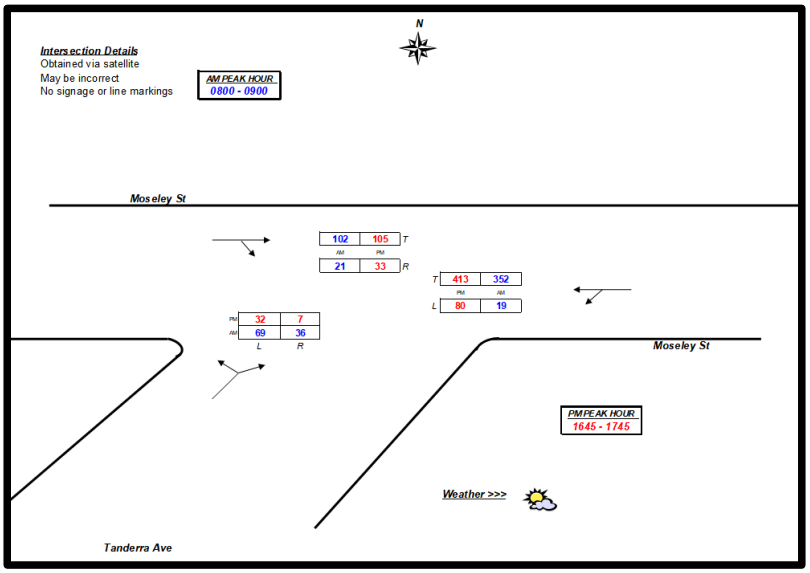


FIGURE 6
PROJECTED STAGE 1 WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF POST OFFICE STREET AND DONALD STREET

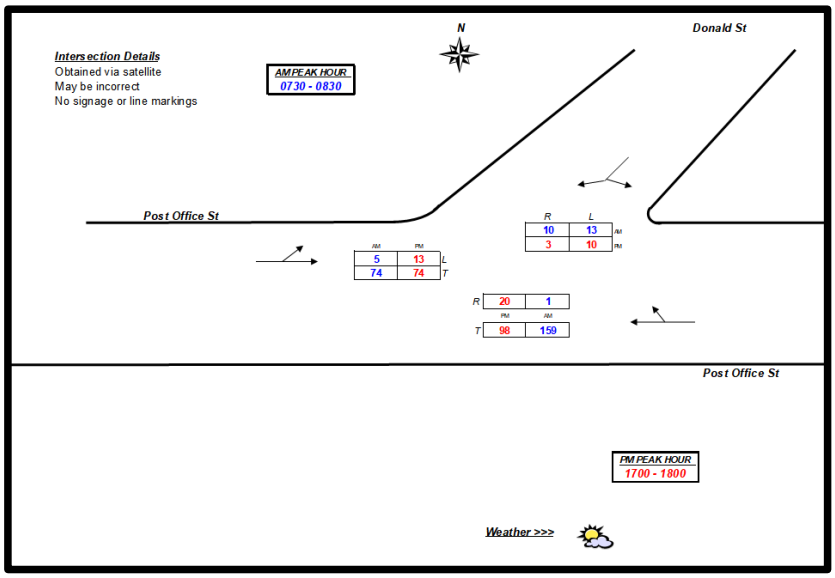


FIGURE 7
PROJECTED STAGE 1 & 2 WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF MOSELEY STREET AND TANDERRA AVENUE

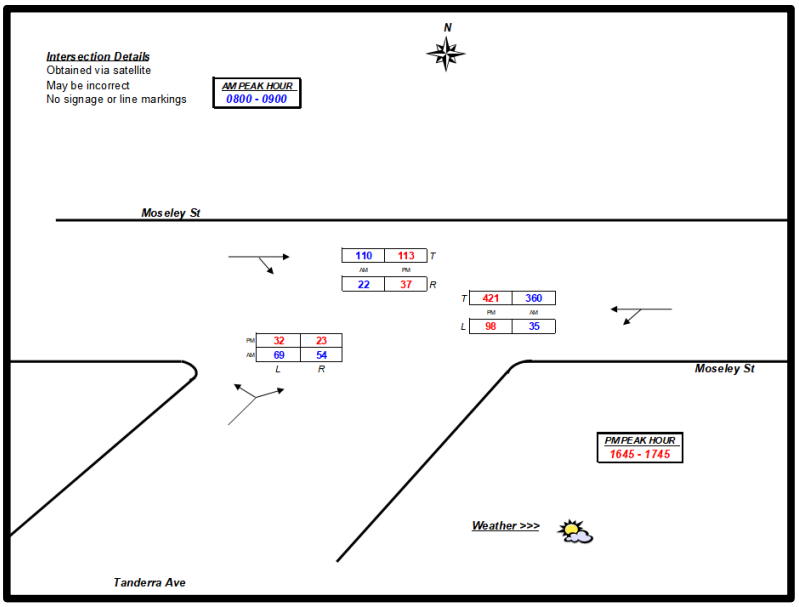
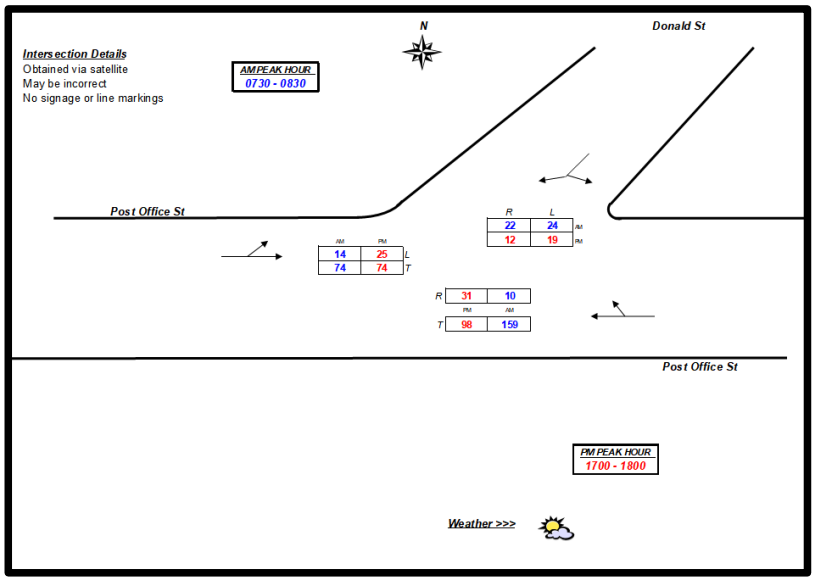


FIGURE 8
PROJECTED STAGE 1 & 2 WEEKDAY COMMUTER PEAK HOUR TRAFFIC VOLUMES
JUNCTION OF POST OFFICE STREET AND DONALD STREET



5.4 Traffic Impacts

5.4.1 Intersection Performance

The junctions have been modelled in order to estimate the likely impact on traffic safety and efficiency utilising the projected traffic volumes illustrated within **Figures 5** and **6**. A summary of the most pertinent results is indicated within **Table 8** overleaf whilst more detailed summaries are provided within **Appendix 6**.

TABLE 8
SIDRA OUTPUT – EXISTING AND PROJECTED WEEKDAY PEAK HOUR PERFORMANCE

	Existing		Projected (Stage 1)		Projected (Stage 1 & 2)	
	AM	PM	AM	PM	AM	PM
MOSELEY STREET AND TANDERRA AVENUE						
Tanderra Avenue Approach						
Average Vehicle Delay	7.9	8.5	8.3	8.5	8.6	8.8
Degree of Saturation	0.11	0.04	0.12	0.04	0.15	0.07
Level of Service	A	A	A	A	A	A
Moseley Street East Approach						
Average Vehicle Delay	5.6	5.6	5.6	5.6	5.6	5.6
Degree of Saturation	0.18	0.25	0.19	0.25	0.20	0.26
Level of Service	A	A	A	A	A	A
Moseley Street West Approach						
Average Vehicle Delay	6.9	7.6	7.2	7.7	7.3	7.9
Degree of Saturation	0.07	0.08	0.08	0.09	0.08	0.10
Level of Service	A	A	A	A	A	A
Total Intersection						
Average Vehicle Delay	7.9	8.5	8.3	8.5	8.6	8.8
Degree of Saturation	0.18	0.25	0.19	0.09	0.20	0.26
Level of Service	A	A	A	A	A	A
POST OFFICE STREET AND DONALD STREET						
Post Office Street Approach						
Average Vehicle Delay	5.5	5.8	5.6	5.9	5.8	5.9
Degree of Saturation	0.08	0.06	0.08	0.06	0.09	0.07
Level of Service	A	A	A	A	A	A
Donald Street North Approach						
Average Vehicle Delay	6.4	6.2	6.5	6.3	6.6	6.5
Degree of Saturation	0.02	0.01	0.02	0.01	0.04	0.03
Level of Service	A	A	A	A	A	A
Post Office Street Approach						
Average Vehicle Delay	5.5	5.5	5.6	5.6	5.6	5.6
Degree of Saturation	0.04	0.04	0.04	0.05	0.05	0.05
Level of Service	A	A	A	A	A	A
Total Intersection						
Average Vehicle Delay	6.4	6.2	6.5	6.3	6.6	6.5
Degree of Saturation	0.08	0.06	0.08	0.06	0.09	0.07
Level of Service	A	A	A	A	A	A

Table 8 indicates that the additional traffic generated by the proposed development during Stage 1 and Stage 2 is projected to result in minor increases in the average vehicle delay and the degree of saturation, however the intersections level of service is not projected to alter, remaining at a level of service from A during the weekday peak periods, representing good operation.

5.4.2 Surrounding Road Network

The proposed development has been projected to generate up to 89 peak hour movements comprising 37 inbound movements and 52 outbound movements during the morning peak hour and 52 inbound movements and 37 outbound movements during the evening peak hour. Such an extent of traffic, comprising approximately one additional vehicle movement every 40 seconds over and above that currently accommodated during weekday commuter peaks, is not projected to, in itself, result in any unreasonable impacts on the existing operational performance of the surrounding local road network. In this regard, the potential for impact of the development is assisted by the splitting of traffic demands between Donald Street and Moseley Street, with any one section of any particular road only being projected to accommodate up to 39 vehicles in any

given single hourly period, or approximately one vehicle movement every 90 seconds.

Further to the above, it is important to note that the proposed extent of traffic generation represents 7 additional vehicle trips over and above that previously assessed and approved for the subject site. Such an extent of additional traffic, representing one additional vehicle movement every eight to nine minutes over and above that previously assessed and approved, is unlikely to result in any measurable impacts on the previously assessed / approved road network operation.

5.5 Transport Impacts

It is acknowledged that PDCP 2023 requires all residential developments providing in excess of 50 dwellings to provide a Travel Plan. The intent of the Travel Plan is to provide site and development specific initiatives to encourage the use of sustainable transport modes, in preference to private motor vehicles. It is considered reasonable that the consent authority impose a condition of consent necessitating the preparation of this Plan prior to the Occupation Certificate.

With respect to the above, the subject site is located within reasonably close walking distance bus services operating along Pennant Hills Road in conjunction with light rail services at Carlingford Light Rail Station. It is accordingly expected that a portion of the future site visitors and staff will utilise the surrounding public transport infrastructure to access destinations throughout the Sydney metropolitan area. The capacity of the existing public transport system is however not envisaged to be measurably affected by any additional demand associated with the development, given its limited scale.

5.6 Cumulative Impacts

The site is located in close proximity to Pennant Hills Road and Carlingford Court. The area typically comprises of low to medium residential developments.

Approved and likely future developments which may be relevant in the cumulative impacts assessment of the proposal are summarised in **Table 9** overleaf.

TABLE 9 CUMULATIVE IMPACTS OF APPROVED AND LIKELY FUTURE DEVELOPMENTS WITHIN THE SITE		
Application No.	**Development Description**	**Current Status**
DEVELOPMENT APPLICATIONS		
DA/545/2024 263-281 Pennant Hills Road, Carlingford	Mixed-use development comprising 2 residential flat buildings (12 & 15 storeys) and a new library and community facility (to be dedicated to Council), basement and landscaping. This application is integrated development under Section 90(2) of the Water Management Act 2000. This application will be determined by the Sydney Central City Planning Panel.	Under Assessment
DA/555/2024 263-281 Pennant Hills Road, Carlingford	Addition of 16, 18 and 18 storeys respectively (additional 301 units) to Buildings A, B and C along Pennant Hills Road to the existing approved mixed use development consent DA/53/2022.	Approved
DA/53/2022/E 263-281 Pennant Hills Road, Carlingford	Section 4.56 modification to development consent DA/53/2022 granted by the NSW Land and Environment Court for a mixed-use development, seeking amendments to Building D, including amendments to structural and service elements, façade details, internal layout and an increase to on-site basement parking.	Under Assessment
DA/53/2022/F 263-281 Pennant Hills Road, Carlingford	Section 4.56 modification to development consent DA/53/2022 granted by the NSW Land and Environment Court for a mixed-use development, seeking amendments to ground floor of Building C to provide for a supermarket, increase in car parking space within the basement, and other internal, facade and structural adjustments to Buildings A, B C and G.	Under Assessment
DA/53/2022/G 263-281 Pennant Hills Road, Carlingford	Section 4.56 modification to development consent DA/53/2022 granted by the NSW Land and Environment Court for a mixed-use development, seeking amendment to Condition 141 to allow extended hours of construction work for a 6-month period.	Under Assessment
STATE SIGNIFICANT DEVELOPMENT APPLICATIONS		
SSD-84699461 241-245 Pennant Hills Road, Pennant Hills	A part 3, 14 and 18 storey mixed-use development with in-fill affordable housing. It will comprise 135 residential apartments, commercial uses and a childcare centre.	Prepare EIS
SSD-43065987 183 Pennant Hills Road and 57- 73 Felton Road, Carlingford	Upgrade including construction of three new buildings up to four storeys and student capacity of 1610 at Carlingford West Public School and construction of three new buildings, up to five storeys and student capacity of 2040 at Cumberland High School	Approved

The potential cumulative impacts of the project, where relevant are addressed in Section 6 of the Environmental Impact Statement in accordance with the DPHI Assessing Cumulative Impacts guidelines.

The cumulative traffic impacts during construction will be managed by the builders of the proposed development liaising with the respective builder of the surrounding developments to minimise impacts on the surrounding road network.

The cumulative traffic impacts resulting from the proposed development during operation are considered to be minor. As previously stated, the proposed development results in a traffic generation of seven vehicle movements over and above that which was previously assessed and approved, which is approximately one additional movement every 10 minutes. Such a level of additional traffic is considered to be a minor increase which does not warrant any further analysis of the cumulative traffic impacts of the surrounding developments.

6. CONCLUSION

This report assesses the potential parking and traffic implications associated with a proposed mixed-use development at 15A & 15B Moseley Street and 25, 27, 29 & 31 Donald Street, Carlingford. Based on this assessment, the following conclusions are now made:

- The proposed site access arrangements are projected to result in motorists being capable of entering and exiting the subject site in a safe and efficient manner;
- The proposed off-street parking provision if capable of according with the relevant minimum requirements of the Housing SEPP and PDCP 2023 and thereby indicating that there should not be any increased on-street parking demand as a result of the development;
- The internal passenger vehicle circulation arrangements are envisaged to provide for safe and efficient internal manoeuvring;
- The surrounding road network operates with a good level of service during peak periods;
- The subject development has been projected to generate up to 89 peak hour vehicle trips to and from the subject site, representing 7 trips over and above that previously assessed and approved;
- The surrounding road network is considered to be capable of accommodating the additional traffic projected to be generated by the subject development; and
- It is considered that the subject site provides an acceptable proximity and connectivity to nearby public transport infrastructure and services.

Based on the contents of this report, there are no parking or traffic related issues that should prevent approval of the subject application. This action is therefore recommended to Department of Planning, Housing and Infrastructure.

6.1 Recommended Mitigation Measures

The following mitigation measures are recommended as a part of the development:

- Installation of double barrier centre (BB) line marking along the centre of the Donald Street pavement on approach, through and departure the curve in the roadway in conjunction with advanced advisory speed signage of 25km/h on approach to the curve.
- Trim vegetation within the western/southern Donald Street footway adjacent to 26 Donald Street (on the inside of the curve).

- Restrict kerbside parking along both Donald Street kerb alignments in the immediate vicinity of the curve in the roadway which include:

  - 18m of 'No Stopping' restrictions which will result in the loss of three on-street parking spaces along the eastern Donald Street kerb alignment to the south of the development driveway; and

  - 12m of 'No Stopping' restrictions which will result in the loss of two on-street parking spaces along the western Donald Street kerb alignment adjacent to 24 and 26 Donald Street.

- The installation of:

  - Double barrier (BB line marking within Moseley Street on approach to and departure from Vickery Avenue); or

  - The installation of painted or raised channelisation islands within Moseley Street on approach to and departure from Vickery Avenue.

- The child care centre should formulate and implement a Neighbourhood Parking Policy, which provides a series of operational initiatives with the objective of minimising the potential impacts of the development on the adjoining public parking infrastructure and thus the surrounding residential amenity.

Yours sincerely,

Morgan Stanbury
Director
Traffic Engineer

APPENDIX 1

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SARKING INSTALLATION TO COMPLY TO AS 4200.2
TGSI INSTALLATION TO COMPLY TO AS1428.4

WATERPROOFING TO WET AREAS TO BCA REQ & AS.3740

SURVEY BY HRAMSAY SURVEYS, JOB REF 9338, DATED 05/10/2023

CAPIO

Registered Architect: Chenxiao Xu
Architect Registration No. NSW - 11314

CLIENT:

CAPTAG INVESTMENTS PTY LTD

PROJECT:

15a-15b Moseley St & 25-31 Donald St, Carlingford, NSW 2118

DRAWING TITLE:

LOWER BASEMENT PLAN

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TGSI INSTALLATION TO COMPLY TO AS1428.4

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SURVEY BY HRAMSAY SURVEYS, JOB REF 9338, DATED 05/10/2023

CAPIO
Registered Architect: Chenxiao Xu
Architect Registration No. NSW - 11314

CLIENT:
CAPTAG INVESTMENTS PTY LTD

PROJECT:
15a-15b Moseley St & 25-31 Donald St, Carlingford, NSW 2118

DRAWING TITLE:
UPPER BASEMENT PLAN

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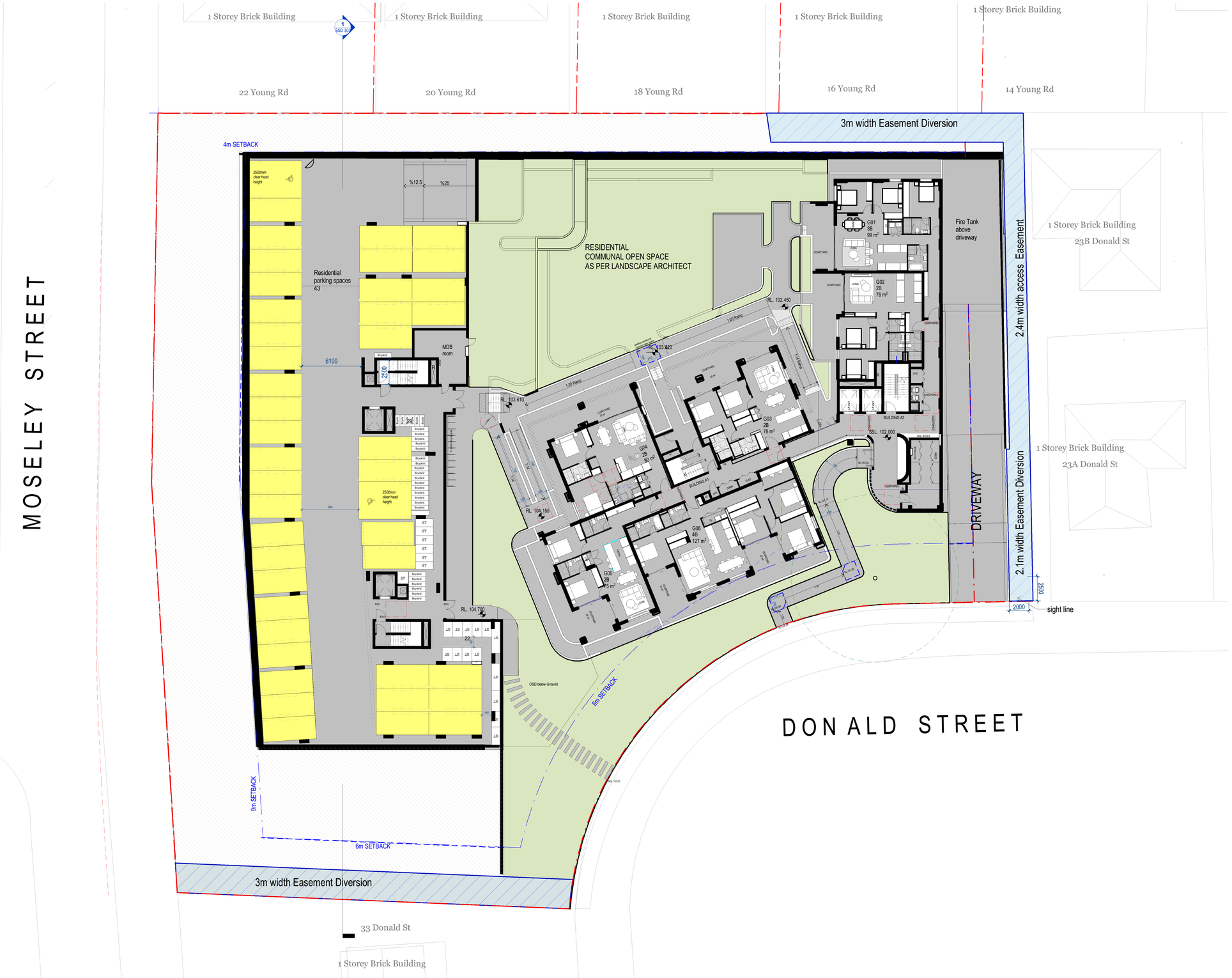

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WATERPROOFING TO WET AREAS TO BCA REQ.& AS.3740

SURVEY BY HRAMSAY SURVEYS. JOB REF 9338, DATED 05/10/2023

CAPIO

Registered Architect: Chenxiao Xu
Architect Registration No. NSW - 11314

CLIENT:

CAPTAG INVESTMENTS PTY LTD

PROJECT:

15a-15b Moseley St & 25-31 Donald St, Carlingford, NSW 2118

DRAWING TITLE:

GROUND FLOOR PLAN

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CAPIO
Registered Architect: Chenxiao Xu
Architect Registration No. NSW - 11314

CLIENT:
CAPTAG INVESTMENTS PTY LTD

PROJECT:
15a-15b Moseley St & 25-31 Donald St, Carlingford, NSW 2118

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LEVEL 2 PLAN

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APPENDIX 2

NOTES:

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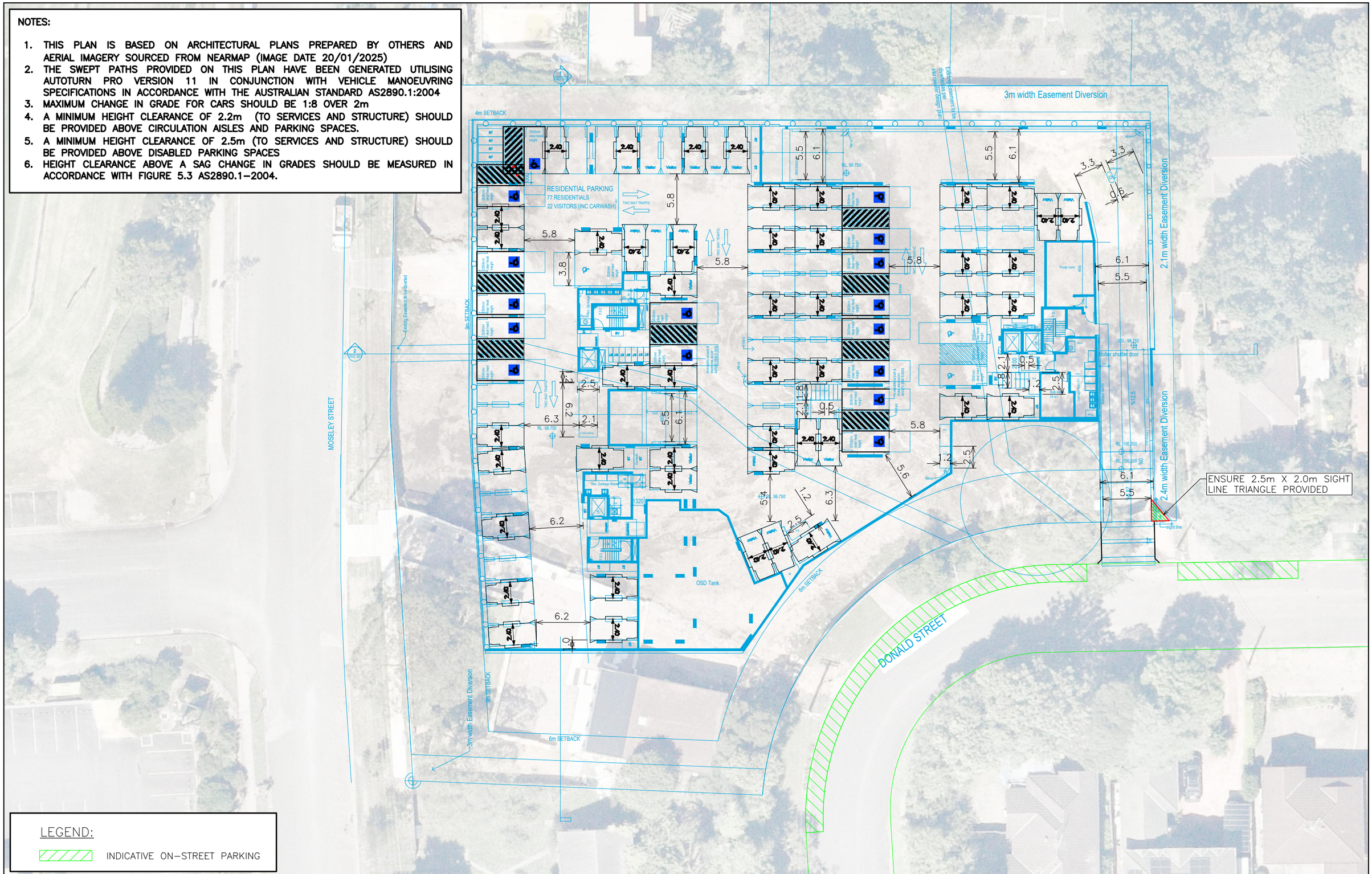
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004
3. MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
4. A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
5. A MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE DISABLED PARKING SPACES
6. HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1–2004.



LEGEND:

INDICATIVE ON–STREET PARKING

STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	ADDRESS: 401/380 HARRIS ST, PYRMONT PH: (02) 8971 8314 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	STANBURY TRAFFIC PLANNING 15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD CAR PARK COMPLIANCE REVIEW LOWER BASEMENT CONCEPT LAYOUT	SCALE 0 4.0 8.0 1:400@A3 DRAWING NO. 23–104–02–V8 DATE 7 July 2025	CREATED BY Y.H APPROVED BY M.S SHEET 01 / 14

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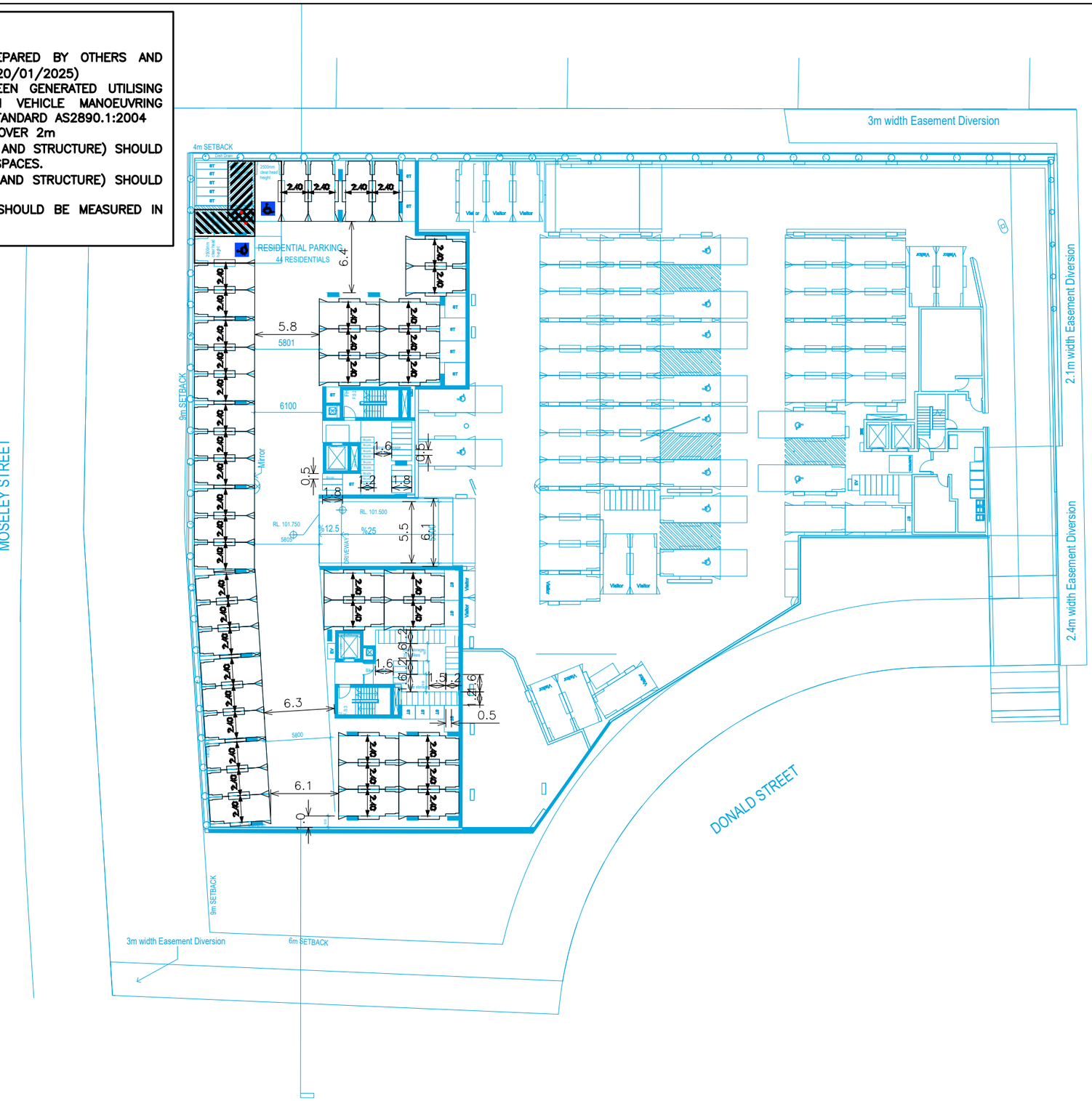
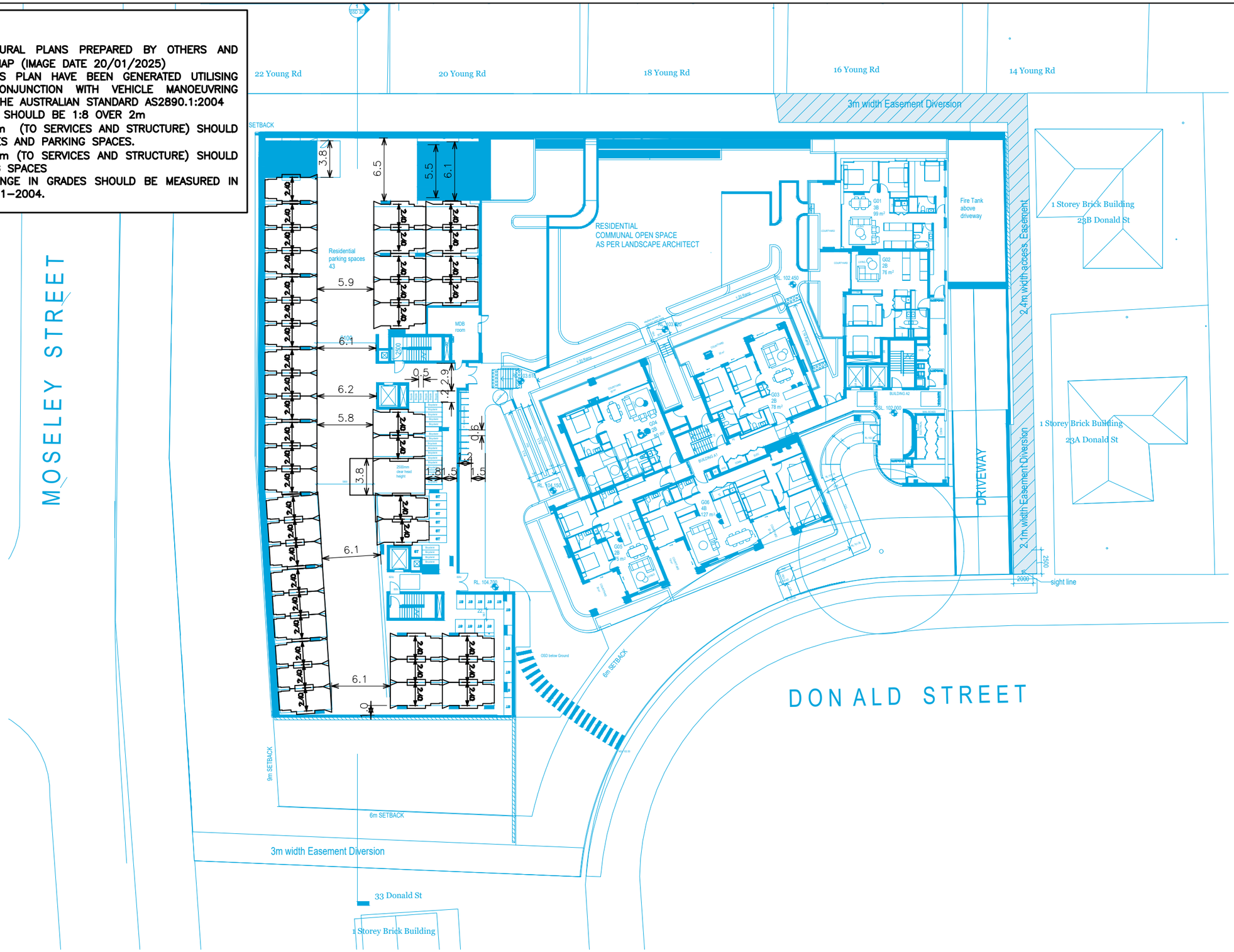
6. HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1–2004.



STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	ADDRESS: 401/380 HARRIS ST, PYRMONT PH: (02) 8971 8314 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	STANBURY TRAFFIC PLANNING 15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD CAR PARK COMPLIANCE REVIEW UPPER BASEMENT CONCEPT LAYOUT	SCALE 0 4.0 8.0 1:400@A3 DRAWING NO. 23–104–02–V8 DATE 7 July 2025	CREATED BY Y.H APPROVED BY M.S SHEET 02 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004
3. MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
4. A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
5. A MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE DISABLED PARKING SPACES
6. HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1–2004.



STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	ADDRESS: 401/380 HARRIS ST, PYRMONT PH: (02) 8971 8314 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	STANBURY TRAFFIC PLANNING 15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD CAR PARK COMPLIANCE REVIEW GROUND FLOOR CONCEPT LAYOUT	SCALE 0 4.0 8.0 1:400@A3 DRAWING NO. 23–104–02–V8 DATE 22 July 2025	CREATED BY Y.H APPROVED BY M.S SHEET 03 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004
3. MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
4. A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.
5. A MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE DISABLED PARKING SPACES
6. HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1–2004.

LEGEND:

INDICATIVE ON–STREET PARKING

22 Young Rd
20 Young Rd
18 Young Rd
16 Young Rd
MOSELEY STREET
DONALD STREET
6m SETBACK
1 Storey Brick Building
23B Donald St
1 Storey Brick Building
23A Donald St
1 Storey Brick Building
PLAYROOM 4
PLAYROOM 3
PLAYROOM 1
PLAYROOM 2
WALL MOUNTED STORAGE
CHILDCARE OUTDOOR AREA
SSL 107.800
SSL 108.300
1:20 RAMP
6.5m SETBACK
3m width Easement Diversion
MAXIMUM GRADE ON RAMPS FOR CARS TO A PUBLIC CAR PARK SHOULD BE 1:5 FOR RAMPS UP TO 20m LONG, 1:6 FOR LONGER RAMPS

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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LEVEL 2
CONCEPT LAYOUT

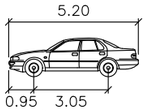
SCALE 0 4.0 8.0 1:400@A3		CREATED BY Y.H
DRAWING NO. 23–104–02–V8		APPROVED BY M.S
DATE 7 July 2025		SHEET 04 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004

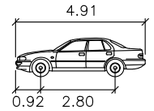
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B99

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



B85

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

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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LOWER BASEMENT
SWEPT PATH ASSESSMENT

SCALE 0 5.0 10.0	1:500@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 05 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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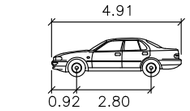
RESIDENTIAL PARKING
77 RESIDENTIALS
22 VISITORS (INC CARWASH)

SWEPT PATH KEY:
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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

ENTRY

EXIT

STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	ADDRESS: 401/380 HARRIS ST, PYRMONT PH: (02) 8971 8314 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	STANBURY TRAFFIC PLANNING 15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD CAR PARK COMPLIANCE REVIEW LOWER BASEMENT SWEPT PATH ASSESSMENT	SCALE 0 2.5 5.0 1:250@A3 DRAWING NO. 23–104–02–V8 DATE 7 July 2025	CREATED BY Y.H APPROVED BY M.S SHEET 06 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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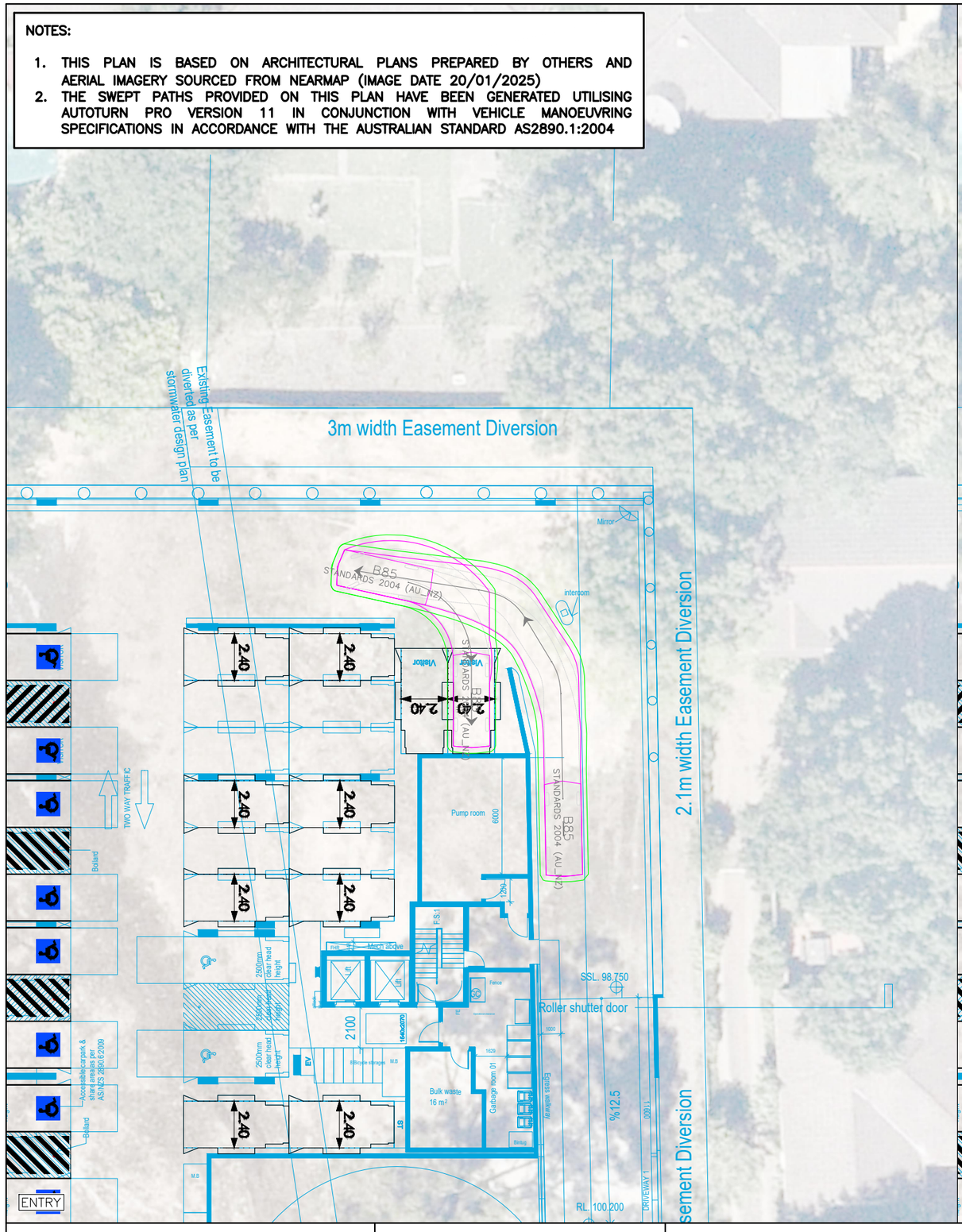

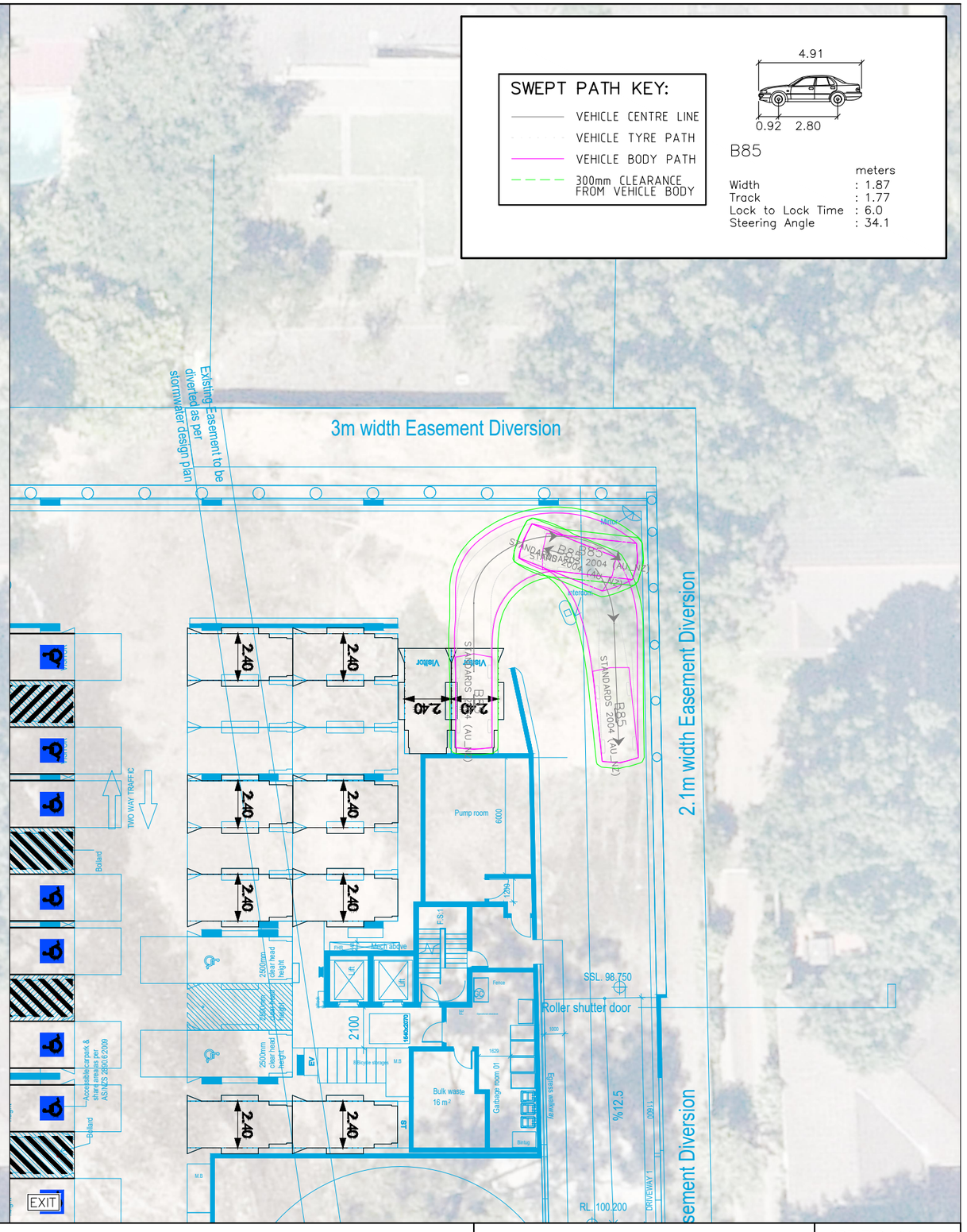

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

B85

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

STANBURY TRAFFIC PLANNING
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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LOWER BASEMENT
SWEPT PATH ASSESSMENT

SCALE 0 2.5 5.0	1:250@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 07 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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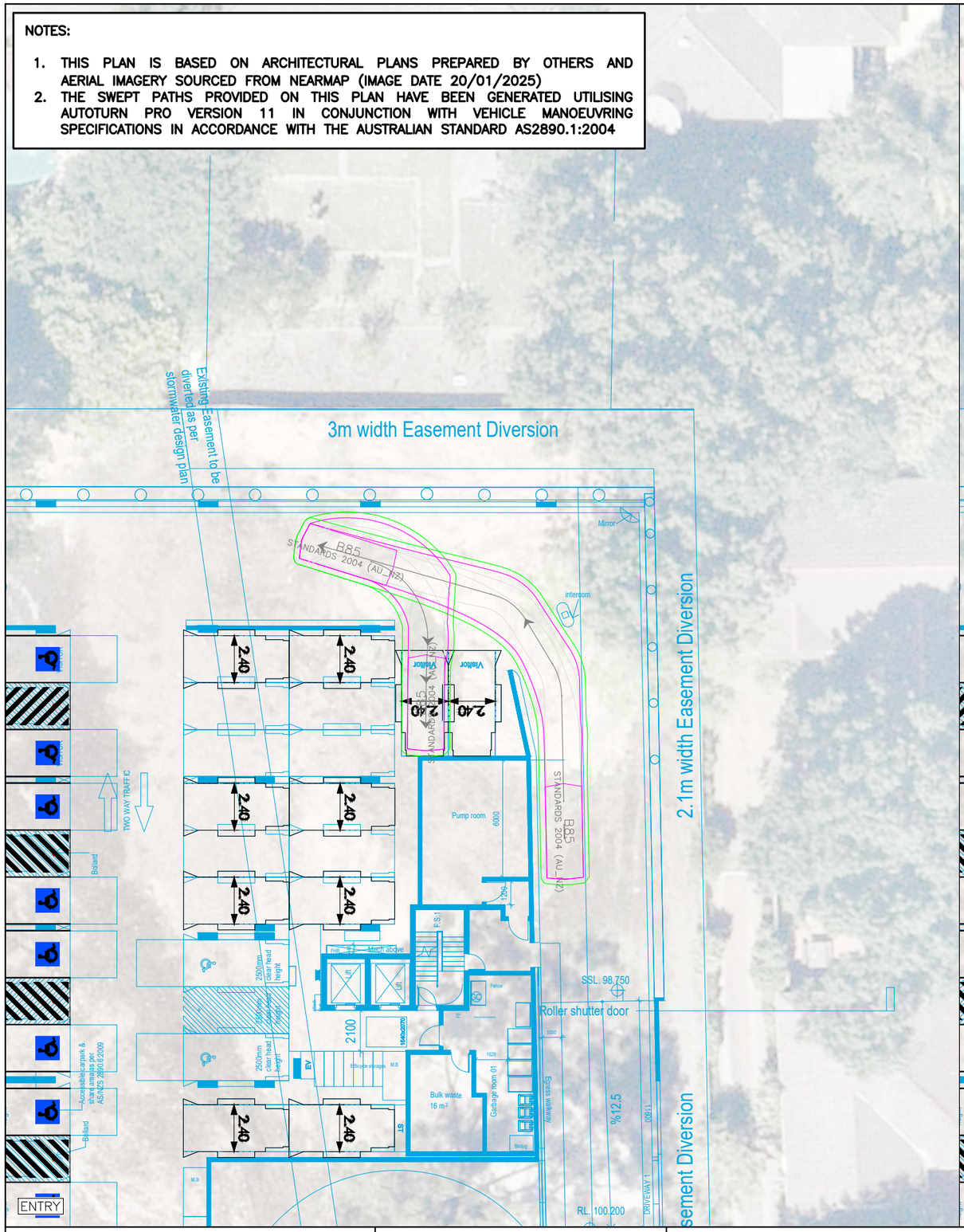
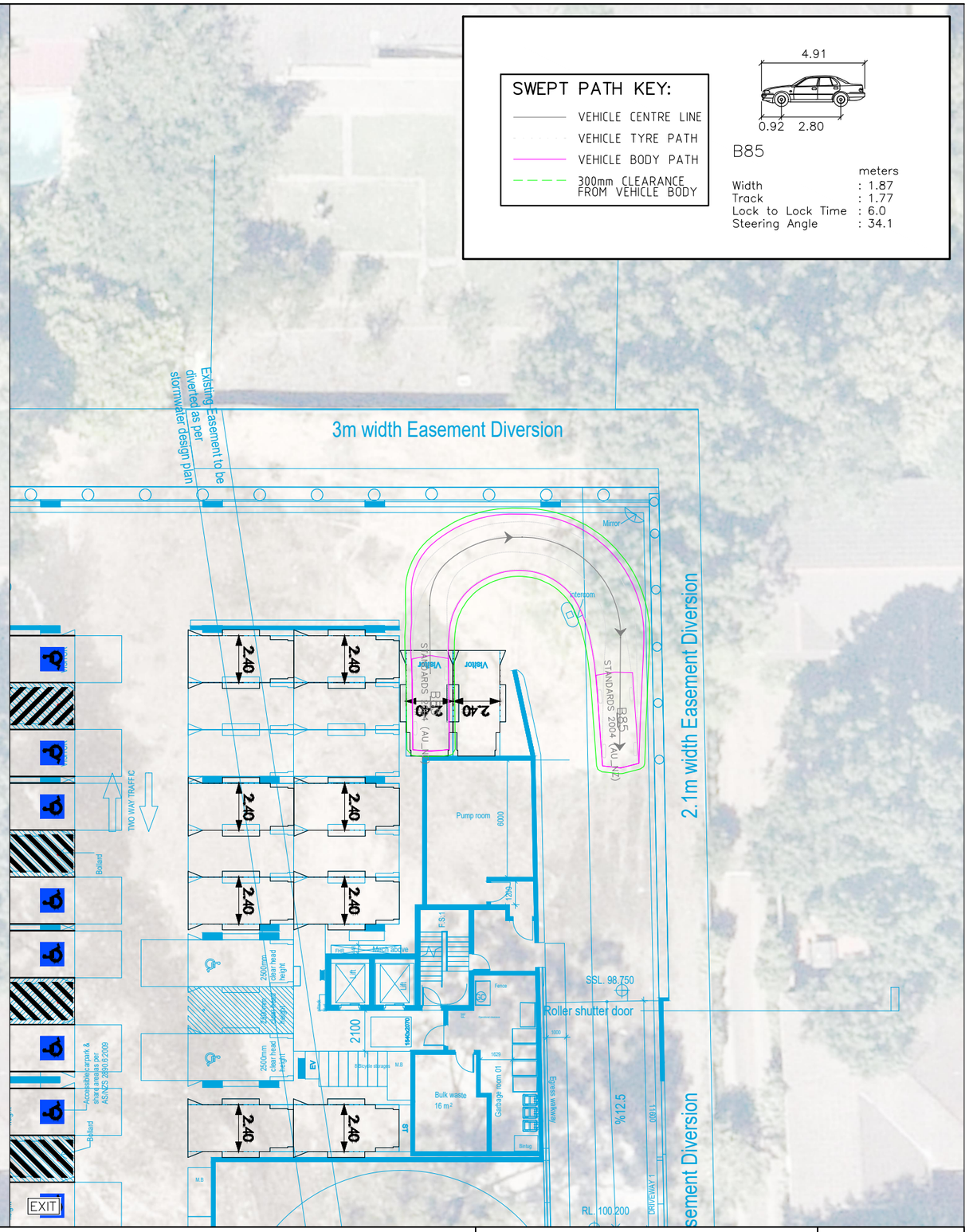
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

B85

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





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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LOWER BASEMENT
SWEPT PATH ASSESSMENT

SCALE 0 2.5 5.0	1:250@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 08 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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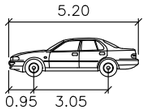
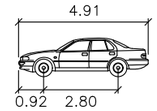
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



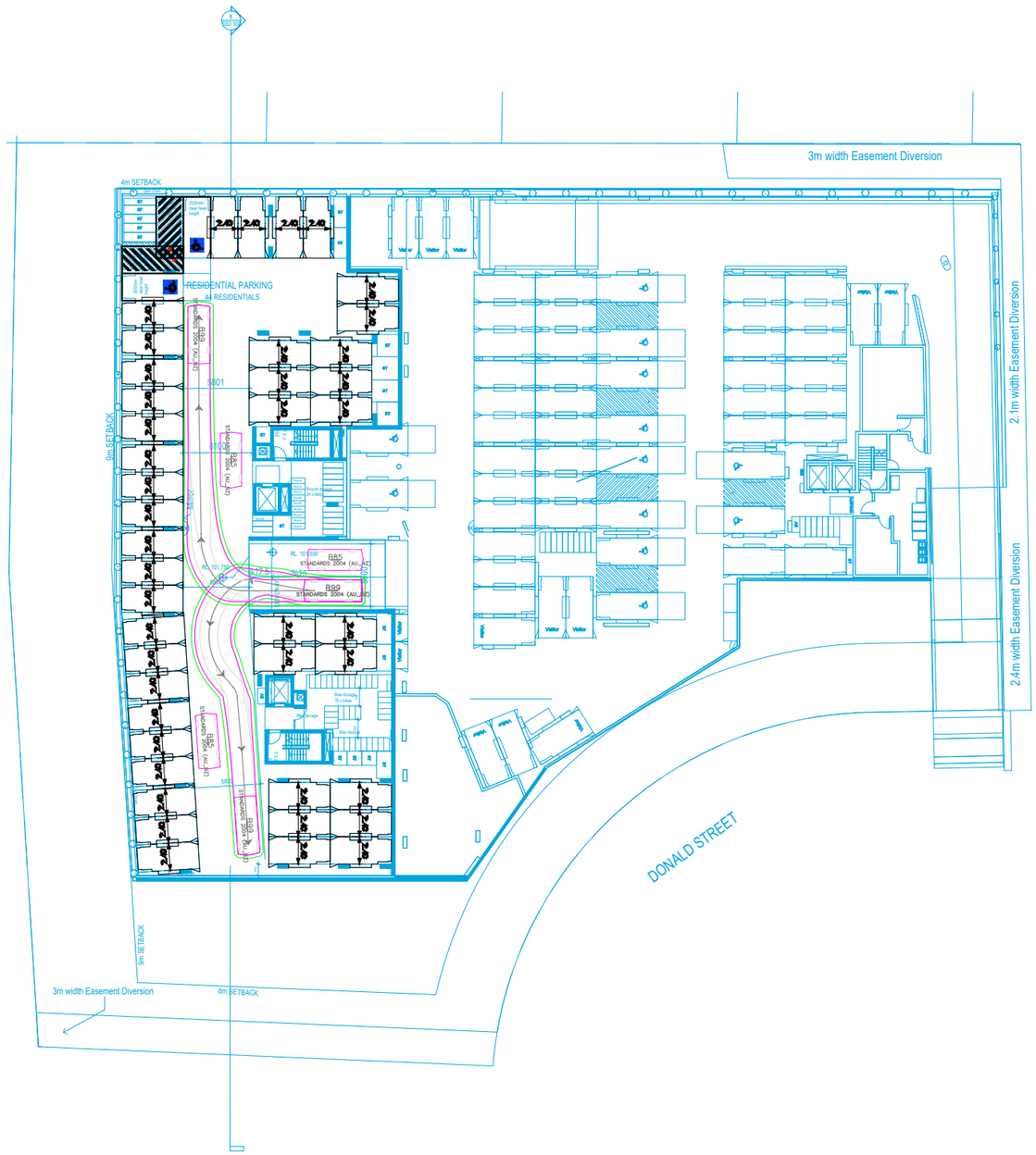
B99

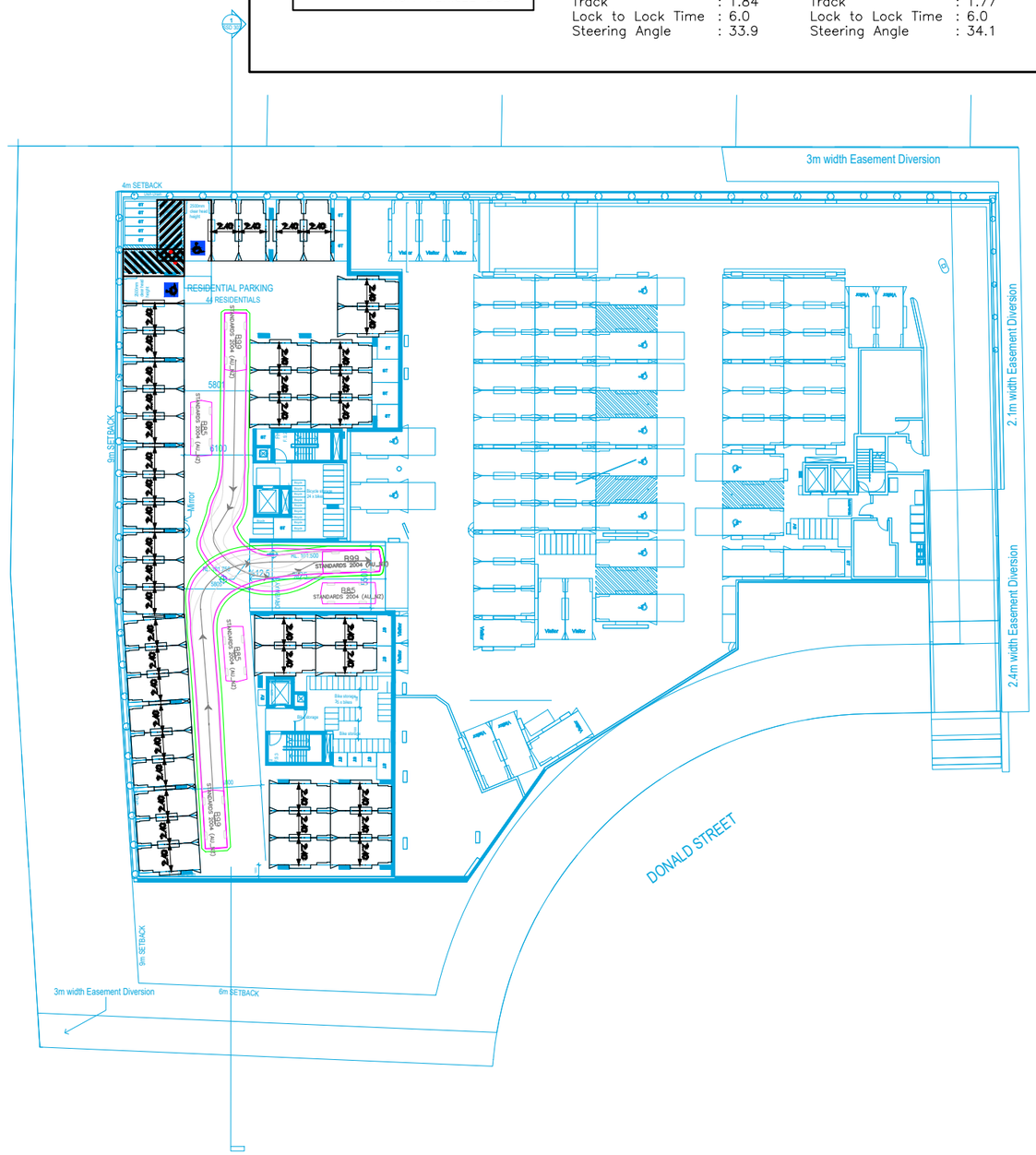
	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



B85

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





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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
UPPER BASEMENT
SWEPT PATH ASSESSMENT

SCALE 0 5.0 10.0 1:500@A3

DRAWING NO. 23–104–02–V8

DATE 7 July 2025

CREATED BY Y.H

APPROVED BY M.S

SHEET 09 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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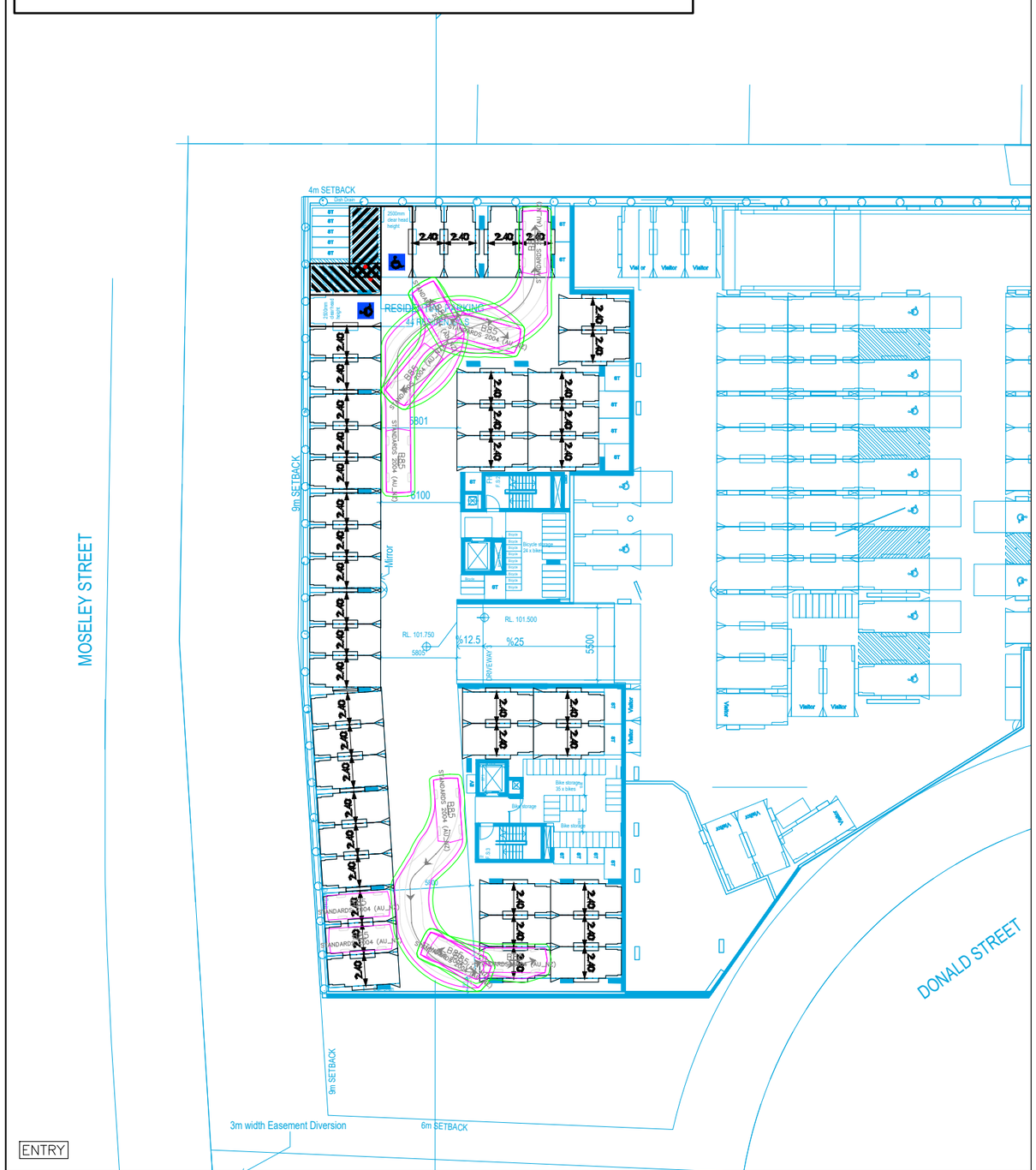
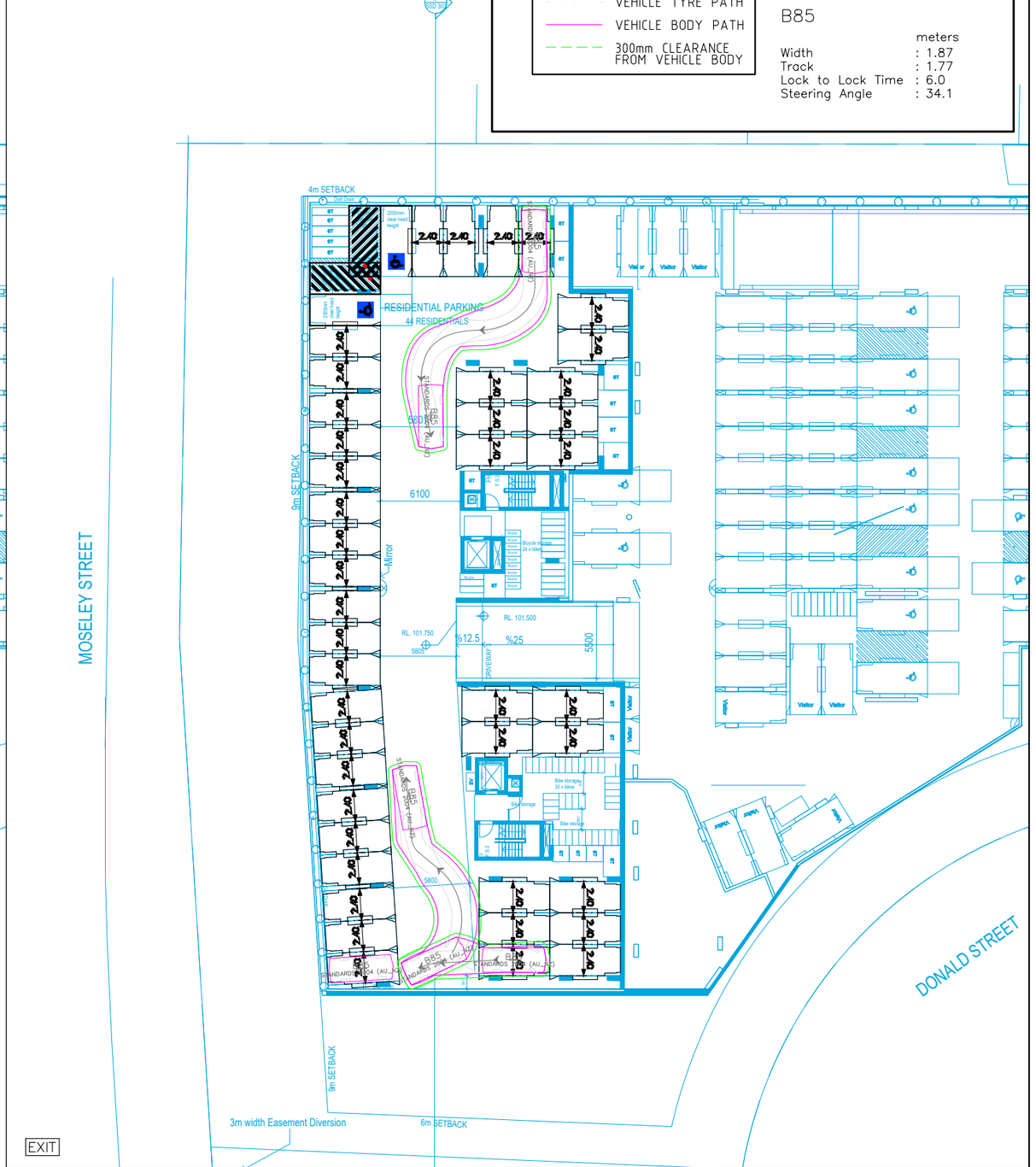
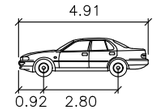




SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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

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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
UPPER BASEMENT
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0	1:400@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 10 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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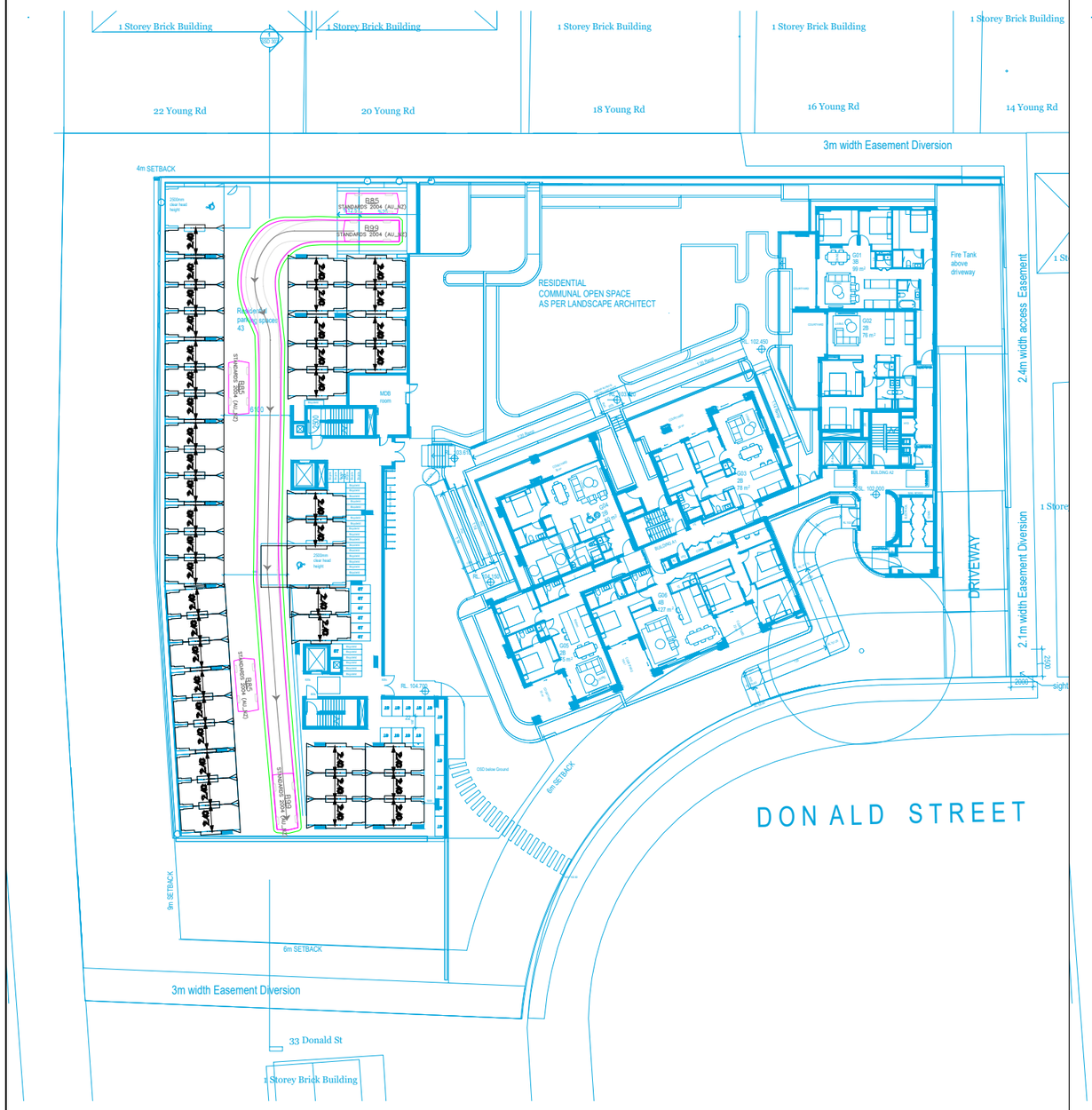
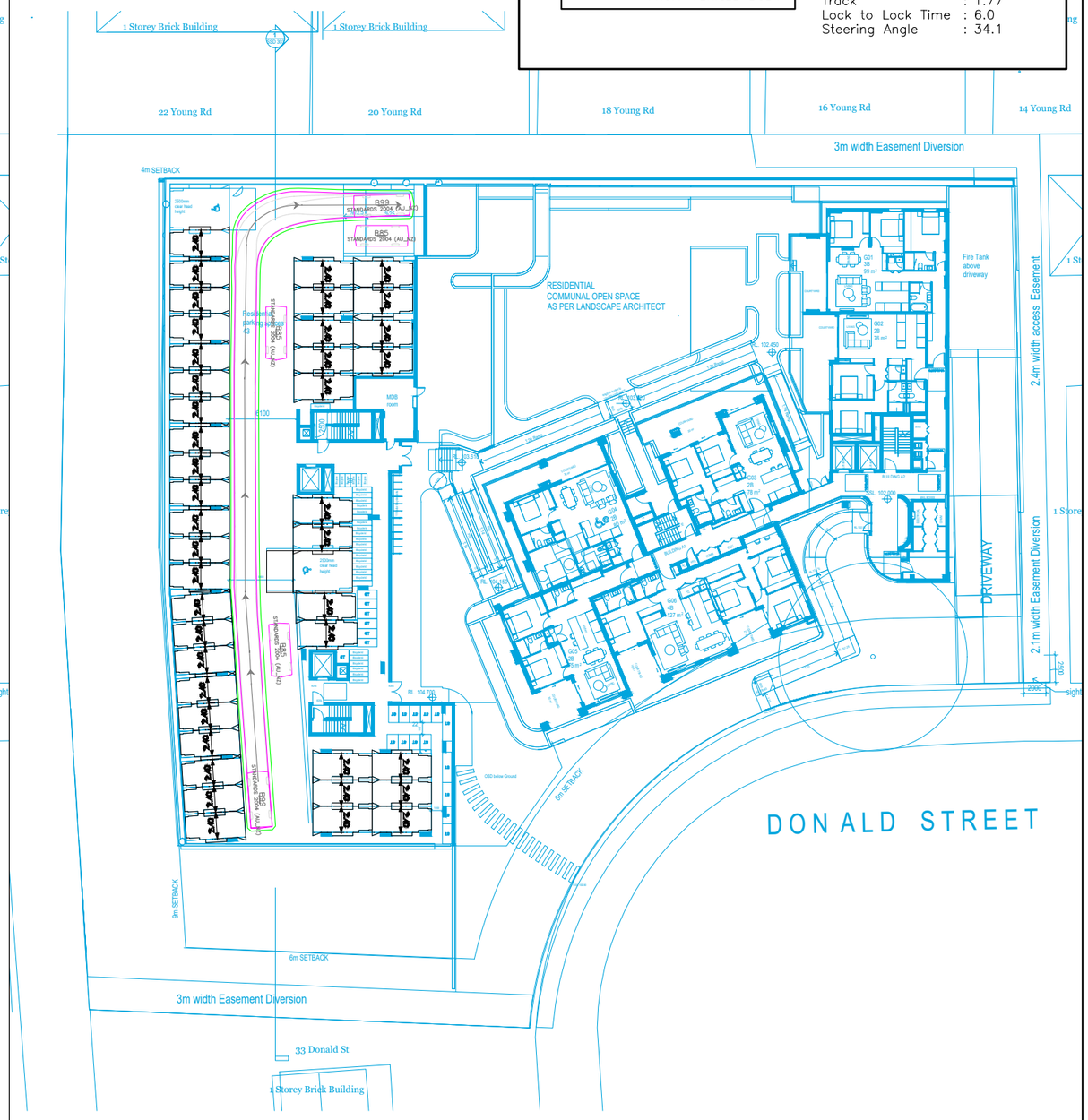


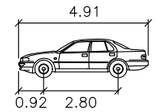
ENTRY



EXIT

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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

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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
GROUND FLOOR
SWEPT PATH ASSESSMENT

SCALE 0 5.0 10.0	1:500@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 11 / 14

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
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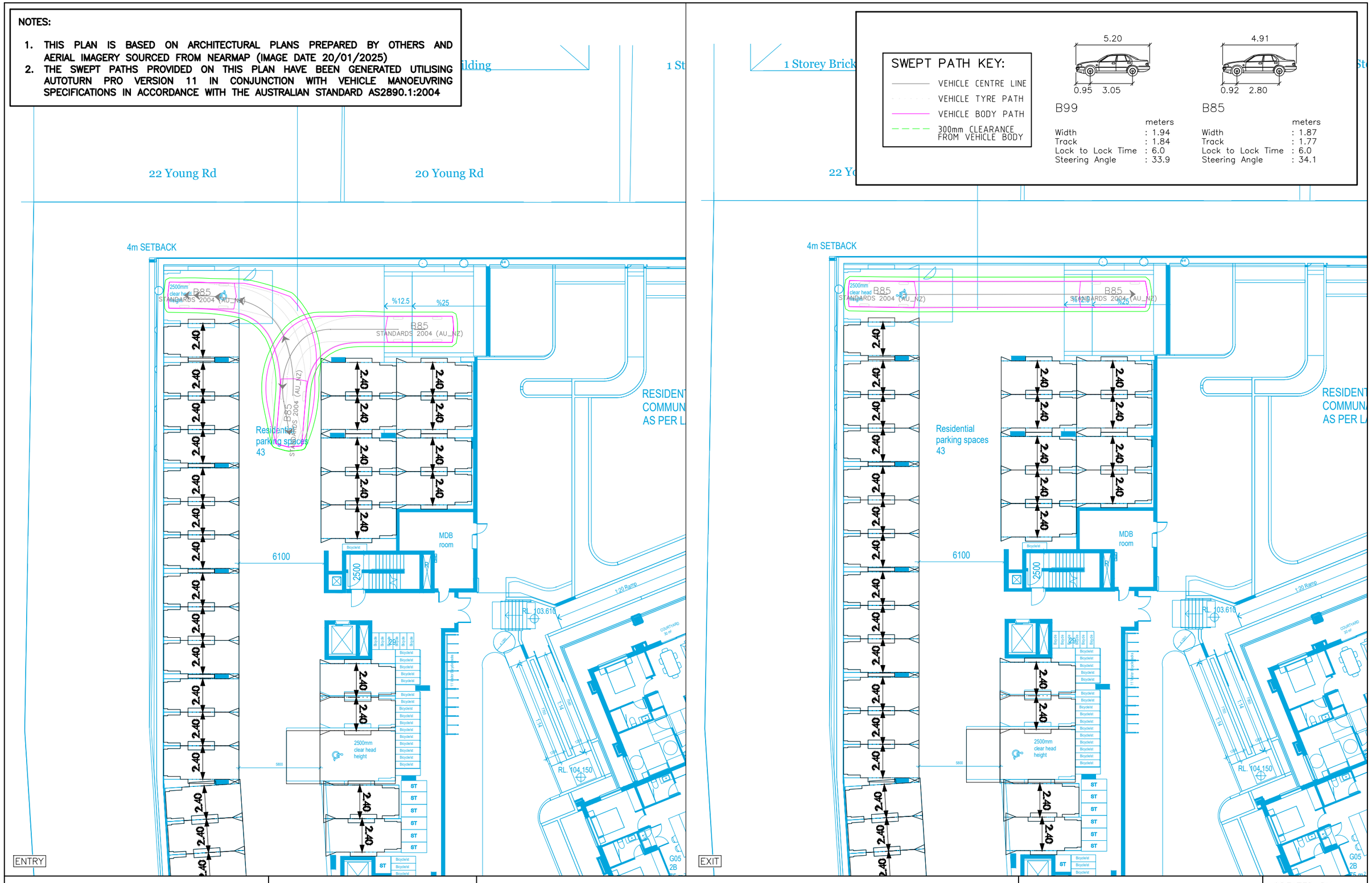

STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	ADDRESS: 401/380 HARRIS ST, PYRMONT PH: (02) 8971 8314 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	STANBURY TRAFFIC PLANNING 15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD CAR PARK COMPLIANCE REVIEW GROUND FLOOR SWEPT PATH ASSESSMENT	SCALE 0 2.5 5.0 1:250@A3 DRAWING NO. 23–104–02–V8 DATE 7 July 2025	CREATED BY Y.H APPROVED BY M.S SHEET 12 / 14

NOTES:

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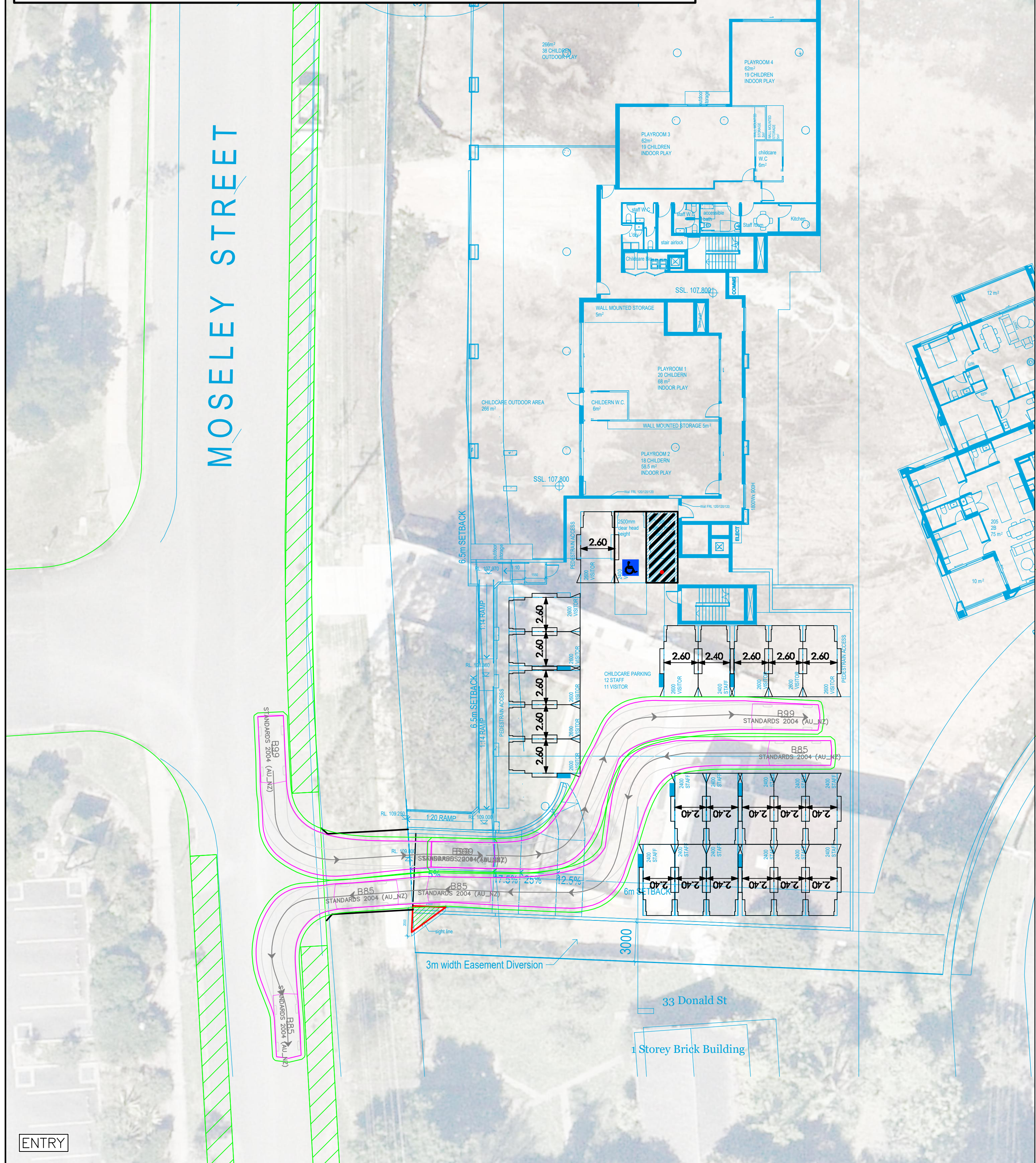


SWEPT PATH KEY:

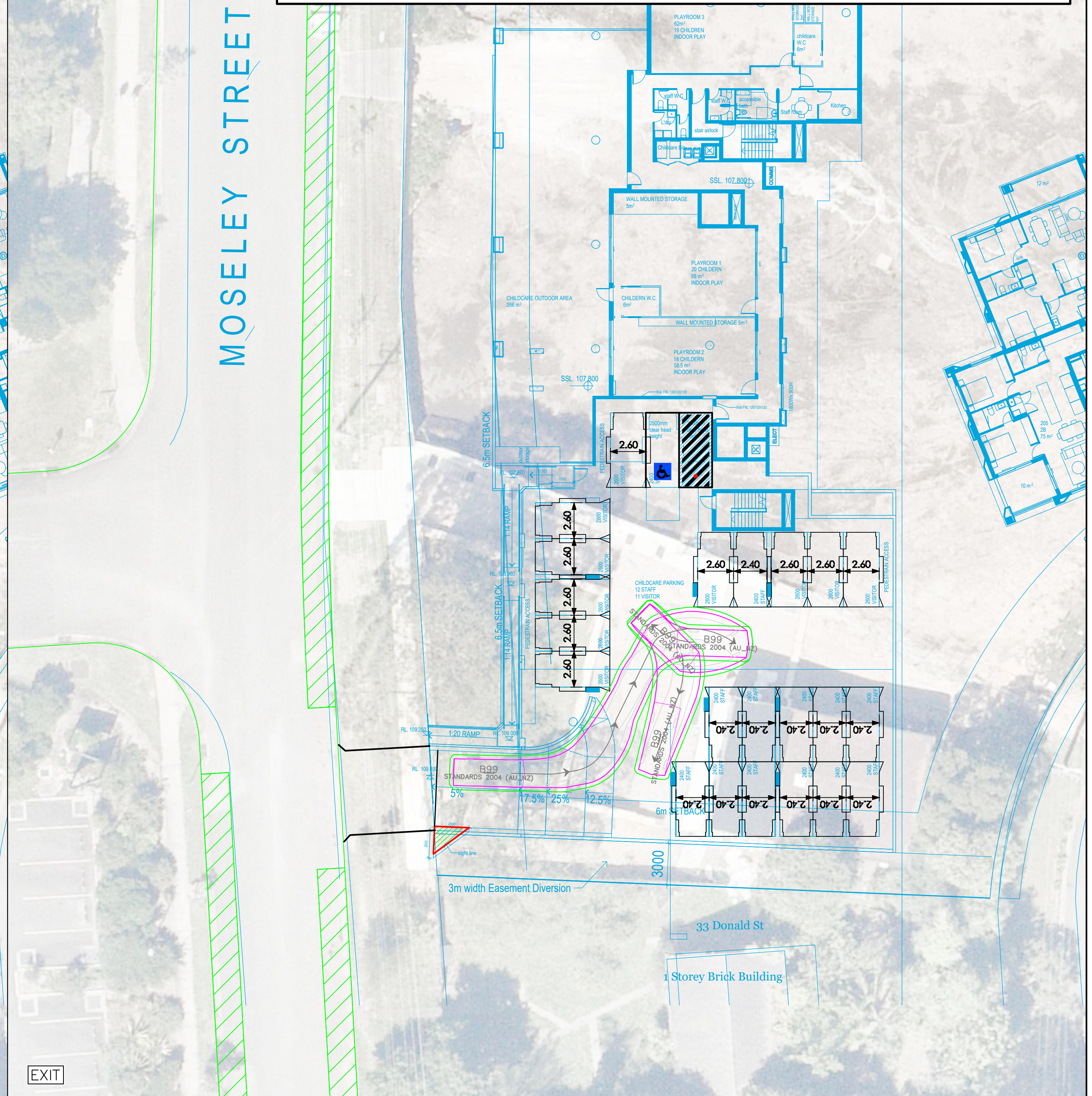
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

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

(5.20; 0.95; 3.05)

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

(4.91; 0.92; 2.80)



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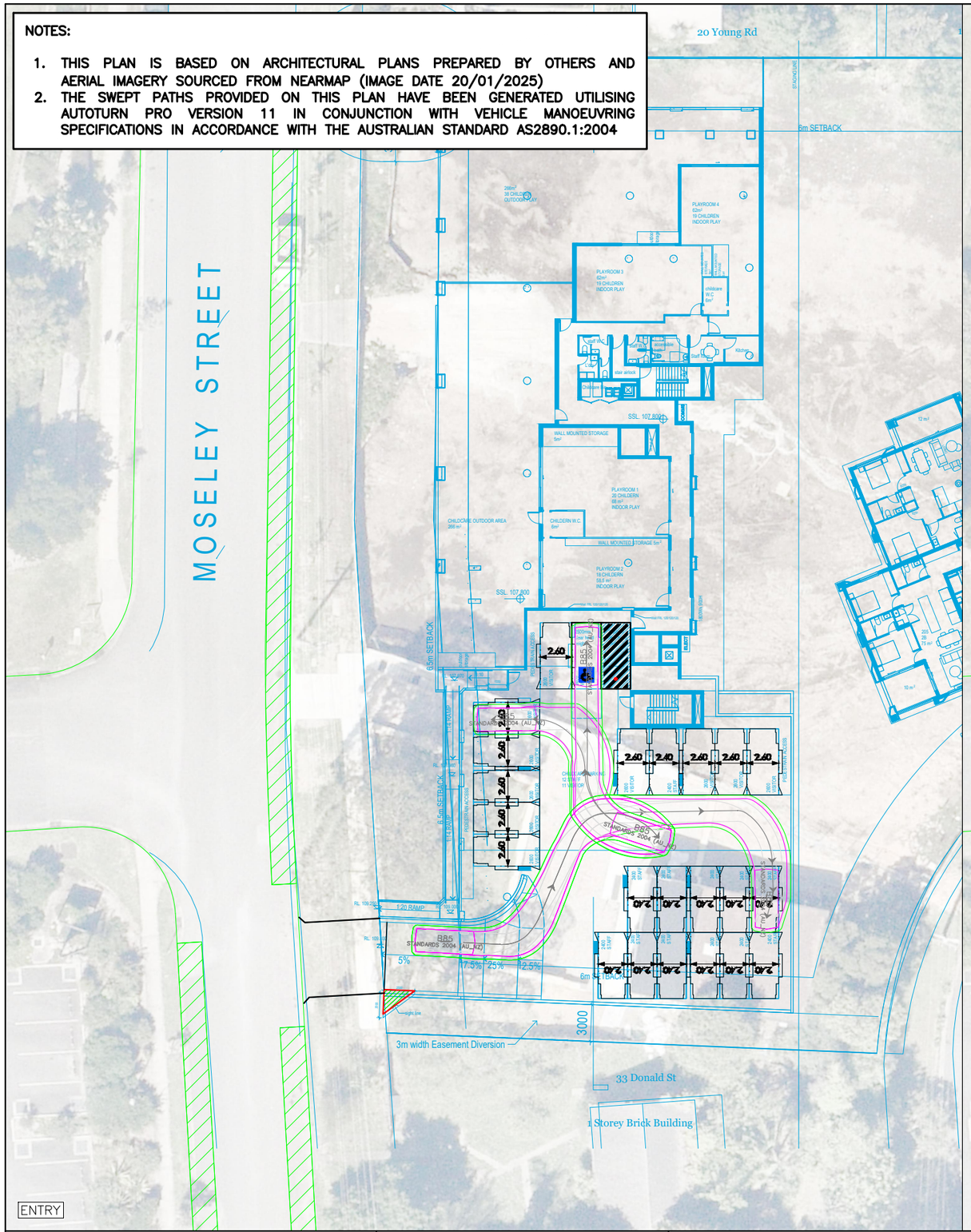
STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LEVEL 2
SWEPT PATH ASSESSMENT

SCALE	0 4.0 8.0 — 1:400@A3	CREATED BY	Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY	M.S
DATE	7 July 2025	SHEET	13 / 14

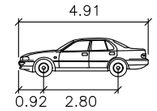
NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 20/01/2025)
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004



SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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

STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

ADDRESS: 401/380 HARRIS ST, PYRMONT
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STANBURY TRAFFIC PLANNING

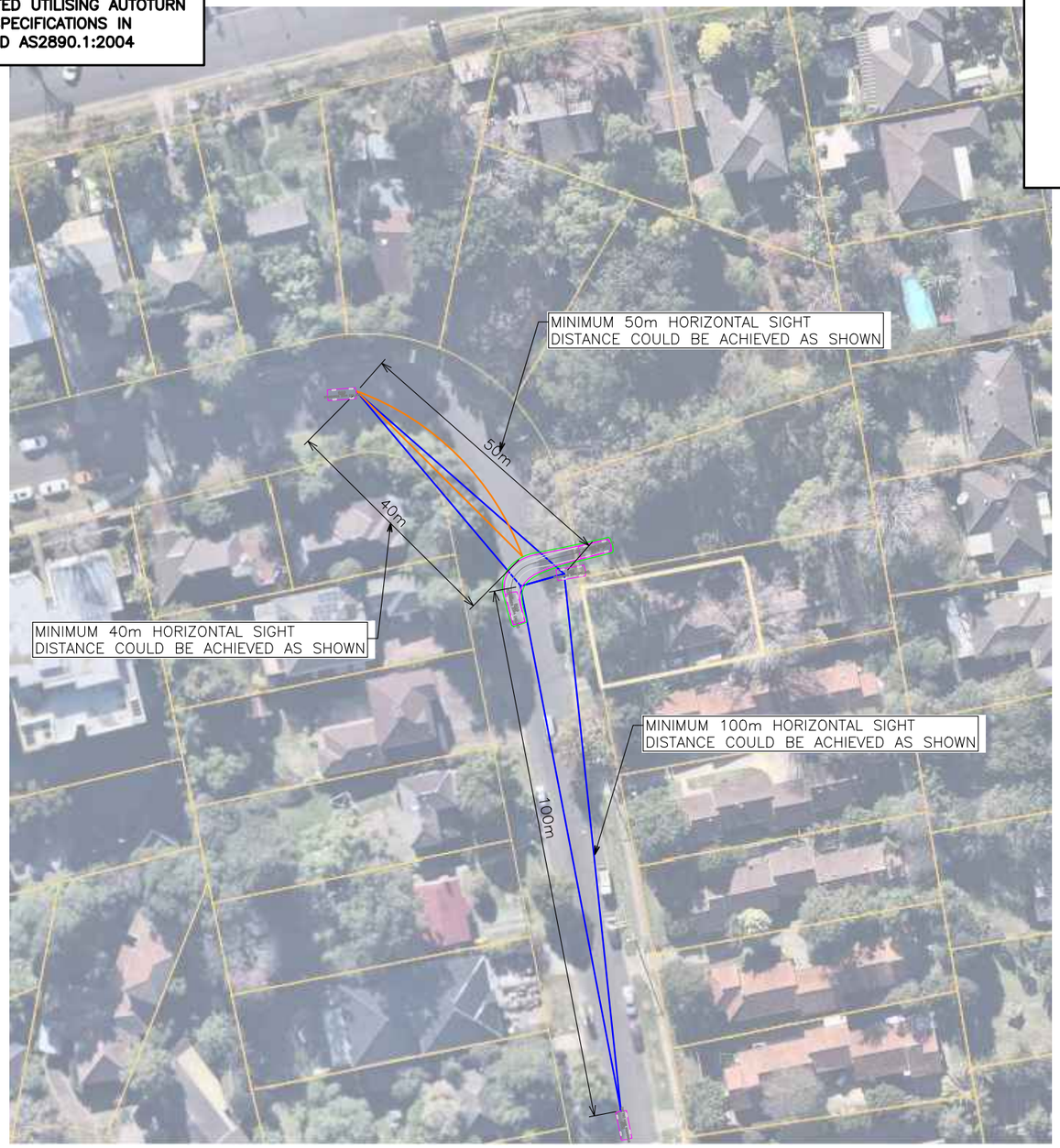
15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
CAR PARK COMPLIANCE REVIEW
LEVEL 2
SWEPT PATH ASSESSMENT

SCALE	0 4.0 8.0 1:400@A3	CREATED BY Y.H
DRAWING NO.	23–104–02–V8	APPROVED BY M.S
DATE	7 July 2025	SHEET 14 / 14

APPENDIX 3

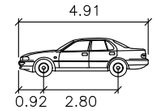
NOTES:

1. THIS PLAN IS BASED ON ARCHITETURAL PLANS PREPARED BY DKO ARCHITECTURE (NSW) PTY LTD AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 09/01/23)
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.2:2018 AND AS2890.1:2004



SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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

STANBURY TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

ADDRESS: 401/380 HARRIS ST, PYRMONT
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STANBURY TRAFFIC PLANNING

15A–15B MOSELEY STREET AND 25–29 DONALD STREET, CARLINGFORD
SIGHT DISTANCE ASSESSMENT

SCALE 0 9.0 18.0	1:901@A3	CREATED BY Y.H
DRAWING NO.	23–104–01–V5	APPROVED BY M.S
DATE	29 August 2023	SHEET 12 /(2)12

APPENDIX 4

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph. Mob.0418-239019

Client	: Stanbury Traffic Planning
Job No/Name	: 7871 CARLINGFORD Intersection Counts
Day/Date	: Tuesday 18th July 2023

Intersection Details

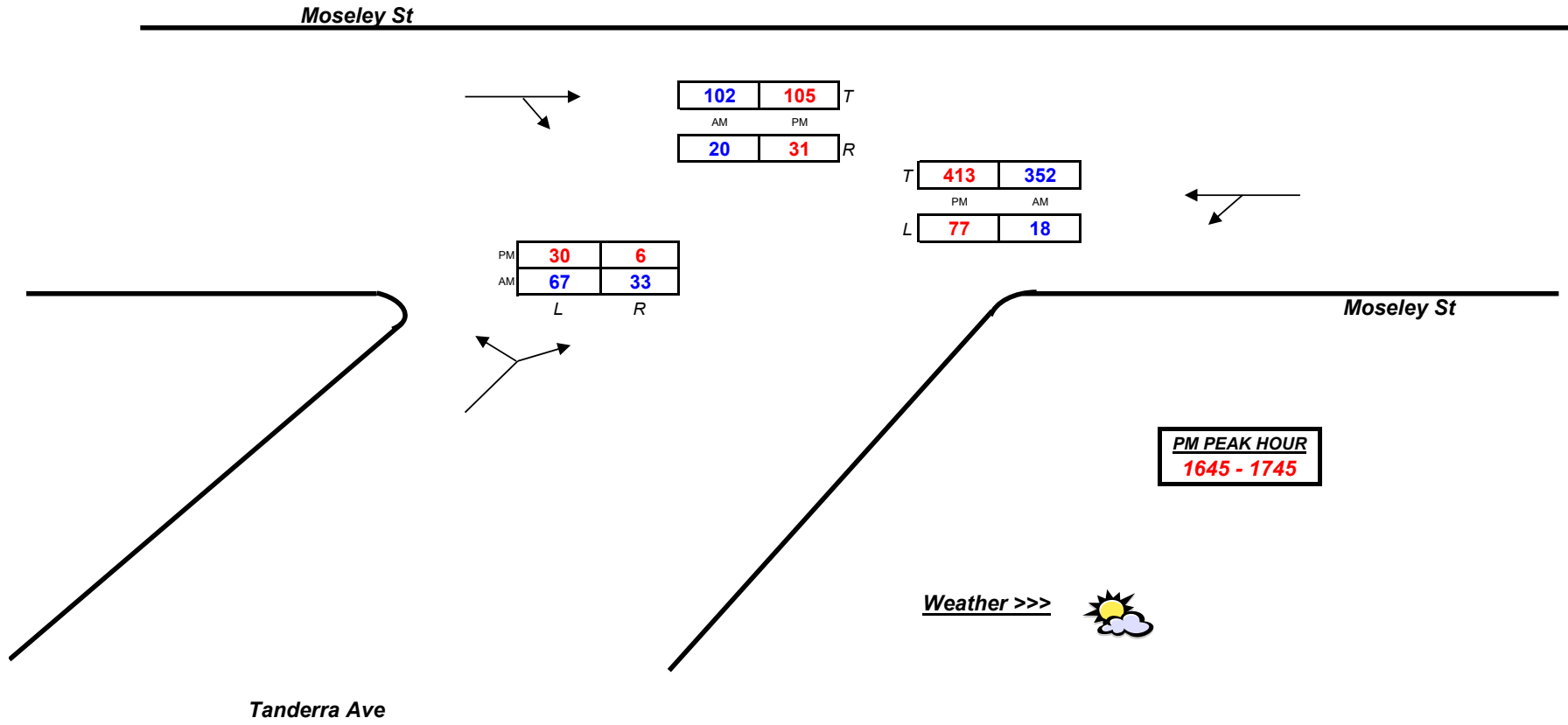
Obtained via satellite

May be incorrect

No signage or line markings

AM PEAK HOUR
0800 - 0900

N



PM PEAK HOUR
1645 - 1745

Weather >>>

R.O.A.R. DATA

Reliable, Original & Authentic Results

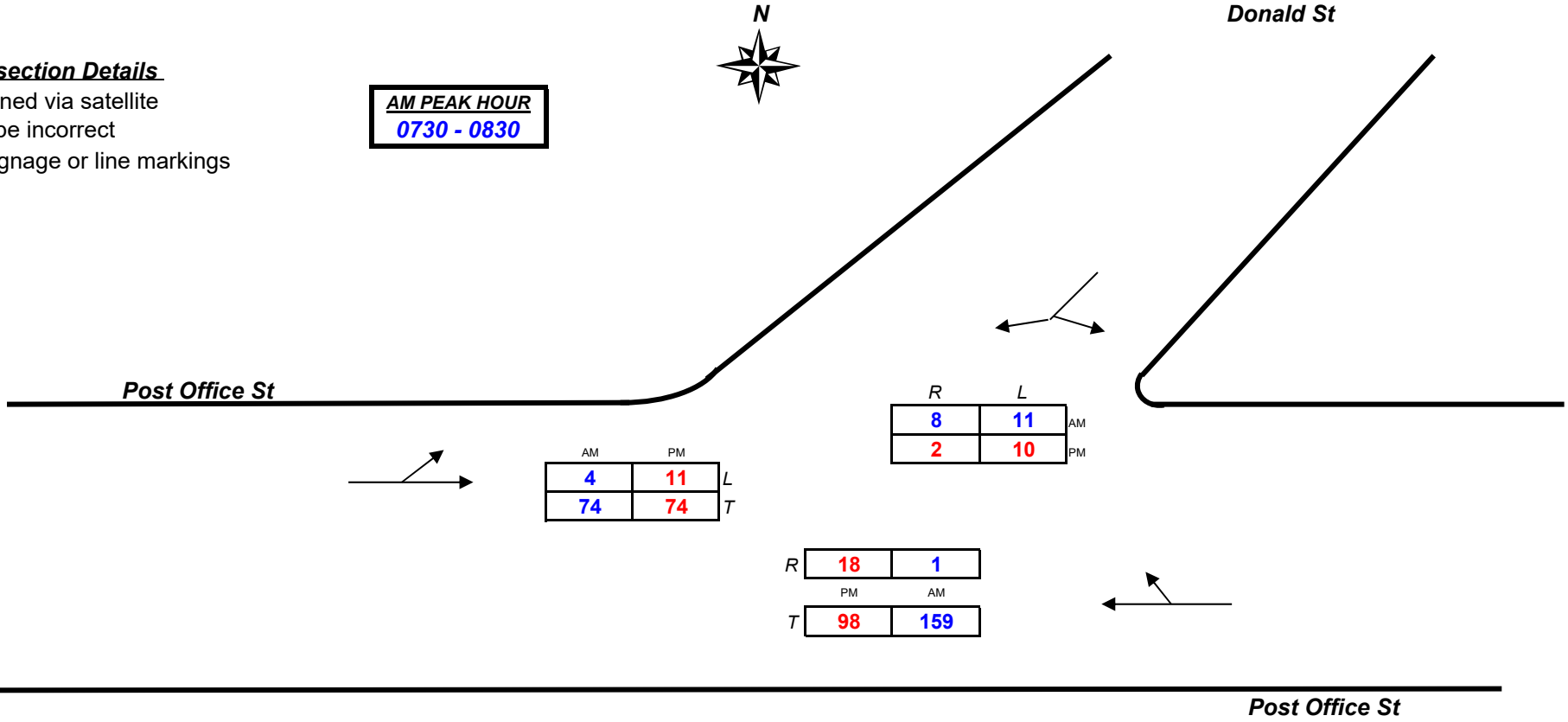
Ph. Mob.0418-239019

Client : Stanbury Traffic Planning
Job No/Name : 7871 CARLINGFORD Intersection Counts
Day/Date : Tuesday 18th July 2023

Intersection Details

Obtained via satellite
May be incorrect
No signage or line markings

AM PEAK HOUR
0730 - 0830



PM PEAK HOUR
1700 - 1800

Weather >>>

APPENDIX 5

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue am existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue am existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	71	0.0	71	0.0	0.105	6.9	LOS A	0.4	2.7	0.43	0.67	0.43	43.2
3	R2	All MCs	35	0.0	35	0.0	0.105	7.9	LOS A	0.4	2.7	0.43	0.67	0.43	45.2
Approach			105	0.0	105	0.0	0.105	7.2	LOS A	0.4	2.7	0.43	0.67	0.43	43.9
East: Moseley Street															
4	L2	All MCs	19	0.0	19	0.0	0.184	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	54.7
5	T1	All MCs	371	0.0	371	0.0	0.184	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.2
Approach			389	0.0	389	0.0	0.184	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.9
West: Moseley Street															
11	T1	All MCs	107	0.0	107	0.0	0.068	0.4	LOS A	0.2	1.3	0.19	0.20	0.19	55.7
12	R2	All MCs	21	0.0	21	0.0	0.068	6.9	LOS A	0.2	1.3	0.19	0.20	0.19	51.1
Approach			128	0.0	128	0.0	0.068	1.5	NA	0.2	1.3	0.19	0.20	0.19	54.8
All Vehicles			623	0.0	623	0.0	0.184	1.7	NA	0.4	2.7	0.11	0.17	0.11	54.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue pm existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue pm existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	32	0.0	32	0.0	0.038	7.1	LOS A	0.1	1.0	0.45	0.65	0.45	43.1
3	R2	All MCs	6	0.0	6	0.0	0.038	8.5	LOS A	0.1	1.0	0.45	0.65	0.45	45.1
Approach			38	0.0	38	0.0	0.038	7.3	LOS A	0.1	1.0	0.45	0.65	0.45	43.5
East: Moseley Street															
4	L2	All MCs	81	0.0	81	0.0	0.245	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	53.7
5	T1	All MCs	435	0.0	435	0.0	0.245	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	57.6
Approach			516	0.0	516	0.0	0.245	0.9	NA	0.0	0.0	0.00	0.09	0.00	56.8
West: Moseley Street															
11	T1	All MCs	111	0.0	111	0.0	0.083	0.9	LOS A	0.3	2.2	0.30	0.32	0.30	53.8
12	R2	All MCs	33	0.0	33	0.0	0.083	7.6	LOS A	0.3	2.2	0.30	0.32	0.30	49.7
Approach			143	0.0	143	0.0	0.083	2.4	NA	0.3	2.2	0.30	0.32	0.30	52.7
All Vehicles			697	0.0	697	0.0	0.245	1.6	NA	0.3	2.2	0.09	0.17	0.09	54.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street am existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street am existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	167	0.0	167	0.0	0.080	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.9
6	R2	All MCs	1	0.0	1	0.0	0.080	5.5	LOS A	0.0	0.1	0.00	0.00	0.00	53.5
Approach			168	0.0	168	0.0	0.080	0.0	NA	0.0	0.1	0.00	0.00	0.00	59.9
North: Donald Street															
7	L2	All MCs	12	0.0	12	0.0	0.016	5.8	LOS A	0.1	0.4	0.20	0.54	0.20	42.8
9	R2	All MCs	8	0.0	8	0.0	0.016	6.4	LOS A	0.1	0.4	0.20	0.54	0.20	45.8
Approach			20	0.0	20	0.0	0.016	6.0	LOS A	0.1	0.4	0.20	0.54	0.20	44.2
West: Post Office Street															
10	L2	All MCs	4	0.0	4	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.03	0.00	54.5
11	T1	All MCs	78	0.0	78	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.5
Approach			82	0.0	82	0.0	0.039	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.3
All Vehicles			271	0.0	271	0.0	0.080	0.6	NA	0.1	0.4	0.02	0.05	0.02	58.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street pm existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street pm existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	103	0.0	103	0.0	0.060	0.1	LOS A	0.1	0.8	0.07	0.11	0.07	58.1
6	R2	All MCs	19	0.0	19	0.0	0.060	5.8	LOS A	0.1	0.8	0.07	0.11	0.07	51.2
Approach			122	0.0	122	0.0	0.060	1.0	NA	0.1	0.8	0.07	0.11	0.07	57.3
North: Donald Street															
7	L2	All MCs	11	0.0	11	0.0	0.009	5.7	LOS A	0.0	0.2	0.17	0.53	0.17	43.0
9	R2	All MCs	2	0.0	2	0.0	0.009	6.2	LOS A	0.0	0.2	0.17	0.53	0.17	46.0
Approach			13	0.0	13	0.0	0.009	5.8	LOS A	0.0	0.2	0.17	0.53	0.17	43.6
West: Post Office Street															
10	L2	All MCs	12	0.0	12	0.0	0.042	5.5	LOS A	0.0	0.0	0.00	0.08	0.00	53.8
11	T1	All MCs	78	0.0	78	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.8
Approach			89	0.0	89	0.0	0.042	0.7	NA	0.0	0.0	0.00	0.08	0.00	58.2
All Vehicles			224	0.0	224	0.0	0.060	1.1	NA	0.1	0.8	0.05	0.12	0.05	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

APPENDIX 6

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue am projected (Site Folder: Projected Stage 1)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue am projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	73	5.0	73	5.0	0.117	7.1	LOS A	0.4	3.1	0.45	0.68	0.45	42.5
3	R2	All MCs	38	5.0	38	5.0	0.117	8.3	LOS A	0.4	3.1	0.45	0.68	0.45	44.2
Approach			111	5.0	111	5.0	0.117	7.5	LOS A	0.4	3.1	0.45	0.68	0.45	43.2
East: Moseley Street															
4	L2	All MCs	20	5.0	20	5.0	0.191	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	53.3
5	T1	All MCs	371	5.0	371	5.0	0.191	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.2
Approach			391	5.0	391	5.0	0.191	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.7
West: Moseley Street															
11	T1	All MCs	107	5.0	107	5.0	0.072	0.5	LOS A	0.2	1.4	0.20	0.22	0.20	55.5
12	R2	All MCs	22	5.0	22	5.0	0.072	7.2	LOS A	0.2	1.4	0.20	0.22	0.20	49.6
Approach			129	5.0	129	5.0	0.072	1.6	NA	0.2	1.4	0.20	0.22	0.20	54.2
All Vehicles			631	5.0	631	5.0	0.191	1.8	NA	0.4	3.1	0.12	0.18	0.12	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue am projected - Copy (Site Folder: Projected Stage 1 & 2)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue am projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	73	5.0	73	5.0	0.146	7.2	LOS A	0.5	3.9	0.47	0.70	0.47	42.2
3	R2	All MCs	57	5.0	57	5.0	0.146	8.6	LOS A	0.5	3.9	0.47	0.70	0.47	43.9
Approach			129	5.0	129	5.0	0.146	7.8	LOS A	0.5	3.9	0.47	0.70	0.47	43.0
East: Moseley Street															
4	L2	All MCs	37	5.0	37	5.0	0.203	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	53.0
5	T1	All MCs	379	5.0	379	5.0	0.203	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	58.6
Approach			416	5.0	416	5.0	0.203	0.5	NA	0.0	0.0	0.00	0.05	0.00	57.9
West: Moseley Street															
11	T1	All MCs	116	5.0	116	5.0	0.077	0.5	LOS A	0.2	1.6	0.20	0.22	0.20	55.5
12	R2	All MCs	23	5.0	23	5.0	0.077	7.3	LOS A	0.2	1.6	0.20	0.22	0.20	49.6
Approach			139	5.0	139	5.0	0.077	1.6	NA	0.2	1.6	0.20	0.22	0.20	54.3
All Vehicles			684	5.0	684	5.0	0.203	2.1	NA	0.5	3.9	0.13	0.21	0.13	53.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue pm projected (Site Folder: Projected Stage 1)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue pm projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	34	0.0	34	0.0	0.042	7.1	LOS A	0.2	1.1	0.45	0.65	0.45	43.1
3	R2	All MCs	7	0.0	7	0.0	0.042	8.5	LOS A	0.2	1.1	0.45	0.65	0.45	45.1
Approach			41	0.0	41	0.0	0.042	7.4	LOS A	0.2	1.1	0.45	0.65	0.45	43.5
East: Moseley Street															
4	L2	All MCs	84	0.0	84	0.0	0.246	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	53.6
5	T1	All MCs	435	0.0	435	0.0	0.246	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	57.6
Approach			519	0.0	519	0.0	0.246	0.9	NA	0.0	0.0	0.00	0.10	0.00	56.7
West: Moseley Street															
11	T1	All MCs	111	0.0	111	0.0	0.086	0.9	LOS A	0.3	2.3	0.31	0.34	0.31	53.5
12	R2	All MCs	35	0.0	35	0.0	0.086	7.7	LOS A	0.3	2.3	0.31	0.34	0.31	49.5
Approach			145	0.0	145	0.0	0.086	2.6	NA	0.3	2.3	0.31	0.34	0.31	52.4
All Vehicles			705	0.0	705	0.0	0.246	1.6	NA	0.3	2.3	0.09	0.18	0.09	54.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Moseley Street and Tanderra Avenue pm projected - Copy (Site Folder: Projected Stage 1 & 2)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Moseley Street and Tanderra Avenue pm projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tanderra Avenue															
1	L2	All MCs	34	0.0	34	0.0	0.068	7.2	LOS A	0.2	1.6	0.48	0.70	0.48	42.5
3	R2	All MCs	24	0.0	24	0.0	0.068	8.8	LOS A	0.2	1.6	0.48	0.70	0.48	44.5
Approach			58	0.0	58	0.0	0.068	7.9	LOS A	0.2	1.6	0.48	0.70	0.48	43.4
East: Moseley Street															
4	L2	All MCs	103	0.0	103	0.0	0.260	5.6	LOS A	0.0	0.0	0.00	0.11	0.00	53.4
5	T1	All MCs	443	0.0	443	0.0	0.260	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	57.2
Approach			546	0.0	546	0.0	0.260	1.1	NA	0.0	0.0	0.00	0.11	0.00	56.2
West: Moseley Street															
11	T1	All MCs	119	0.0	119	0.0	0.095	1.1	LOS A	0.4	2.7	0.33	0.36	0.33	53.2
12	R2	All MCs	39	0.0	39	0.0	0.095	7.9	LOS A	0.4	2.7	0.33	0.36	0.33	49.3
Approach			158	0.0	158	0.0	0.095	2.7	NA	0.4	2.7	0.33	0.36	0.33	52.1
All Vehicles			762	0.0	762	0.0	0.260	1.9	NA	0.4	2.7	0.10	0.21	0.10	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: STANBURY TRAFFIC PLANNING | Licence: NETWORK / 1PC | Processed: Thursday, 10 April 2025 2:19:18 PM
Project: D:\Stanbury Traffic Planning\STPCloud - Documents\GDrive\STP1\Stanbury Traffic Planning\Project Folders\2023\23-104 Donald Street, Carlingford\6 Modelling\Moseley Street and Tanderra Avenue.sip9

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street am projected (Site Folder: Projected - Stage 1)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street am projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	167	5.0	167	5.0	0.082	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.9
6	R2	All MCs	1	5.0	1	5.0	0.082	5.6	LOS A	0.0	0.1	0.00	0.00	0.00	52.9
Approach			168	5.0	168	5.0	0.082	0.0	NA	0.0	0.1	0.00	0.00	0.00	59.9
North: Donald Street															
7	L2	All MCs	14	5.0	14	5.0	0.020	5.8	LOS A	0.1	0.5	0.20	0.54	0.20	41.8
9	R2	All MCs	11	5.0	11	5.0	0.020	6.5	LOS A	0.1	0.5	0.20	0.54	0.20	45.5
Approach			24	5.0	24	5.0	0.020	6.1	LOS A	0.1	0.5	0.20	0.54	0.20	43.6
West: Post Office Street															
10	L2	All MCs	5	5.0	5	5.0	0.041	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	53.9
11	T1	All MCs	78	5.0	78	5.0	0.041	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.4
Approach			83	5.0	83	5.0	0.041	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.1
All Vehicles			276	5.0	276	5.0	0.082	0.7	NA	0.1	0.5	0.02	0.06	0.02	58.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street am projected - Copy (Site Folder: Projected - Stage 1 & 2)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street am projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	167	5.0	167	5.0	0.088	0.0	LOS A	0.1	0.5	0.03	0.04	0.03	59.2
6	R2	All MCs	11	5.0	11	5.0	0.088	5.8	LOS A	0.1	0.5	0.03	0.04	0.03	52.0
Approach			178	5.0	178	5.0	0.088	0.4	NA	0.1	0.5	0.03	0.04	0.03	58.9
North: Donald Street															
7	L2	All MCs	25	5.0	25	5.0	0.041	5.8	LOS A	0.1	1.0	0.22	0.55	0.22	41.8
9	R2	All MCs	23	5.0	23	5.0	0.041	6.6	LOS A	0.1	1.0	0.22	0.55	0.22	45.4
Approach			48	5.0	48	5.0	0.041	6.2	LOS A	0.1	1.0	0.22	0.55	0.22	43.7
West: Post Office Street															
10	L2	All MCs	15	5.0	15	5.0	0.045	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	53.0
11	T1	All MCs	78	5.0	78	5.0	0.045	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.6
Approach			93	5.0	93	5.0	0.045	0.9	NA	0.0	0.0	0.00	0.09	0.00	57.8
All Vehicles			319	5.0	319	5.0	0.088	1.4	NA	0.1	1.0	0.05	0.13	0.05	56.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: STANBURY TRAFFIC PLANNING | Licence: NETWORK / 1PC | Processed: Thursday, 10 April 2025 2:29:40 PM
Project: D:\Stanbury Traffic Planning\STPCloud - Documents\GDrive\STP1\Stanbury Traffic Planning\Project Folders\2023\23-104 Donald Street, Carlingford\6 Modelling\Post Office Street and Donald Street.sip9

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street pm projected (Site Folder: Projected - Stage 1)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street pm projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	103	5.0	103	5.0	0.064	0.1	LOS A	0.1	1.0	0.08	0.12	0.08	57.9
6	R2	All MCs	21	5.0	21	5.0	0.064	5.9	LOS A	0.1	1.0	0.08	0.12	0.08	50.4
Approach			124	5.0	124	5.0	0.064	1.1	NA	0.1	1.0	0.08	0.12	0.08	57.0
North: Donald Street															
7	L2	All MCs	11	5.0	11	5.0	0.010	5.8	LOS A	0.0	0.3	0.18	0.53	0.18	42.0
9	R2	All MCs	3	5.0	3	5.0	0.010	6.3	LOS A	0.0	0.3	0.18	0.53	0.18	45.6
Approach			14	5.0	14	5.0	0.010	5.9	LOS A	0.0	0.3	0.18	0.53	0.18	42.9
West: Post Office Street															
10	L2	All MCs	14	5.0	14	5.0	0.045	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	53.1
11	T1	All MCs	78	5.0	78	5.0	0.045	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.6
Approach			92	5.0	92	5.0	0.045	0.8	NA	0.0	0.0	0.00	0.09	0.00	57.9
All Vehicles			229	5.0	229	5.0	0.064	1.3	NA	0.1	1.0	0.05	0.13	0.05	56.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Post Office Street and Donald Street pm projected - Copy (Site Folder: Projected - Stage 1 & 2)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Post Office Street and Donald Street pm projected
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Post Office Street															
5	T1	All MCs	103	5.0	103	5.0	0.071	0.1	LOS A	0.2	1.5	0.12	0.17	0.12	57.1
6	R2	All MCs	33	5.0	33	5.0	0.071	5.9	LOS A	0.2	1.5	0.12	0.17	0.12	49.3
Approach			136	5.0	136	5.0	0.071	1.5	NA	0.2	1.5	0.12	0.17	0.12	55.6
North: Donald Street															
7	L2	All MCs	20	5.0	20	5.0	0.026	5.8	LOS A	0.1	0.7	0.20	0.54	0.20	41.9
9	R2	All MCs	13	5.0	13	5.0	0.026	6.5	LOS A	0.1	0.7	0.20	0.54	0.20	45.5
Approach			33	5.0	33	5.0	0.026	6.1	LOS A	0.1	0.7	0.20	0.54	0.20	43.4
West: Post Office Street															
10	L2	All MCs	26	5.0	26	5.0	0.051	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	52.2
11	T1	All MCs	78	5.0	78	5.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	57.7
Approach			104	5.0	104	5.0	0.051	1.4	NA	0.0	0.0	0.00	0.15	0.00	56.5
All Vehicles			273	5.0	273	5.0	0.071	2.0	NA	0.2	1.5	0.08	0.21	0.08	54.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.