

LOCAL PLANNING PANEL AGENDA

26 August 2024

PLEASE NOTE THIS MEETING HAS BEEN CHANGED TO AN MS TEAMS MEETING -
IF YOU WOULD LIKE TO RECEIVE A LINK TO THE MEETING PLEASE CONTACT
AMANDA MERCHANT, PANEL SUPPORT OFFICER ON 8711 7712

MATTERS FOR THE LOCAL PLANNING PANEL'S DETERMINATION

Monday, 26 August 2024

**LIVERPOOL CIVIC CENTRE, COUNCIL CHAMBERS, LEVEL 1,
50 SCOTT ST LIVERPOOL - PLEASE NOTE**

**THIS MEETING HAS BEEN CHANGED TO AN ONLINE MEETING
VIA MS TEAMS COMMENCING AT 2PM. IF YOU WOULD LIKE TO
ATTEND THE MEETING PLEASE CONTACT AMANDA - 8711 7712
FOR THE LINK TO THE MEETING.**

Submissions by the applicant and concerned parties will be considered at the meeting. A concerned party is deemed to be a person who has made a written submission in respect to the application. The Panel shall, upon request, hear submissions from persons who identify prior to a meeting that they wish to make a submission to be considered by the Panel. Presentations to the Panel by the applicant and concerned parties shall be restricted to **3 minutes each**. The Panel Chairperson has the discretion to extend the period if considered appropriate.

Should you wish to address the Panel, please advise Amanda Merchant, Panel Support Officer on 8711 7712, by 4pm, Thursday, 22 August 2024

For further information relating to the Local Planning Panel please refer to Council's web page:

[Liverpool Local Planning Panel / Liverpool City Council \(nsw.gov.au\)](https://www.liverpoolcitycouncil.nsw.gov.au/liverpool-local-planning-panel)

ITEM No.	SUBJECT	PAGE No.
1	DEVELOPMENT APPLICATION DA-629/2023 DEMOLITION OF EXISTING STRUCTURES AND CONSTRUCTION OF A 120-PLACE CHILDCARE CENTRE WITH BASEMENT PARKING. LOT 3 DP 602936 123 EPSOM ROAD, CHIPPING NORTON, NSW 2170	4 - 124

ITEM No.	SUBJECT	PAGE No.
2	DEVELOPMENT APPLICATION DA-615/2023 TWO LOT TORRENS TITLE SUBDIVISION INCLUDING CONSTRUCTION AND DEDICATION OF A PART ROAD, EARTHWORKS, INSTALLATION OF UTILITIES AND REMOVAL OF VEGETATION. LOT 946 DP 1206994, LOT 942 DP 1206994, LOT 9 DP 1202976 LOT 946 JARDINE DRIVE, EDMONDSON PARK NSW 2174, LOT 942 WAKELING DRIVE, EDMONDSON PARK NSW 2174, 214-220 JARDINE DRIVE, EDMONDSON PARK NSW 2174	125 - 246

Item Number:	1
Application Number:	Application No. 629/2023
Proposed Development:	Demolition of existing structures and construction of a 120-place childcare centre with basement parking.
Property Address	123 Epsom Road, Chipping Norton
Legal Description:	Lot 3 DP 602936
Applicant:	Artmade Architectural Pty Ltd
Land Owner:	Mr M T Brooks and Mrs C M Brooks
Cost of Works:	\$4,607,319.00
Recommendation:	Approved subject to conditions of consent
Assessing Officer:	Ben Paterson

1 EXECUTIVE SUMMARY

The purpose of this report is to supplement the original assessment report issued to the Liverpool Local Planning Panel (LLPP) for the 26 June 2024 public meeting. This supplementary report documents events and the actions of Council officers and the applicant and analyses the applicant's most recent response to the outstanding additional information request. Assessment of the proposal is contained within the original assessment report, see Attachment 5.

On 24 June 2024, the LLPP considered the subject application (Application No. 629/2023) and deferred the matter, noting:

The Panel decided to defer the matter for the applicant to address the issues raised in Council's report and in the Panel's discussion (see below).

The applicant is to provide the additional information and amended documentation to the Council within two months of 24th June 2024. Council is to then submit a further assessment report for the Panel's determination in a timely manner.

The Panel notes that Council has excluded the planter boxes and trunks of the proposed trees from the calculation of the children's outdoor play area, while the applicant has included them. Council advised the Panel that any variation to the standard needs to be approved by the Department of Education. A Section 4.6 request to vary the landscape area may also be required.

While the applicant has submitted additional information on the traffic issues raised, the Panel notes that further information is required from Transport for NSW. Deferring the application will provide the applicant the opportunity to address all the matters raised by Council.

The Panel notes concerns related to safety, particularly the potential for accidental vehicular entry into the site. The applicant is to submit amended plans for the boundary fences adjacent to Governor Macquarie Drive and Epsom Road. The fences are to be engineered to resist the impact of vehicles in accordance with relevant Australian Standards. The design may also incorporate other safety barrier systems in addition to the boundary fences.

The application was deferred as per the above meeting minutes. On 2 July 2024 a subsequent MS Teams meeting was held between Council representatives and the Applicant to provide clarity surrounding the additional required information. A summary of resolutions and additional information requested is as follows:

- Council accepts the panels viewpoint on the proposed colour scheme and as such no change is required in form, material or colour.
- Councils accepts the panels viewpoint on what is considered unencumbered outdoor area. Pursuant to Regulation 108 of the *Education and Care Services National Regulations* “Calculating unencumbered space for outdoor areas should not include areas of dense hedges or plantings along boundaries which are designed for landscaping purposes and not for children’s play”. Council also accepts that the previously excluded planter boxes that are not located along boundaries can be included in calculations. The Crepe Myrtle trees have thin trunks and wider canopies and will not have a discernible impact on unencumbered outdoor space calculations.
- Amended plans are to illustrate increased basement extents to demonstrate that there is no overlap of turning paths and pedestrian walkway.
- Council accepts the panels viewpoint that the visibility of passing vehicles from Playrooms 4 and 5 would not pose a detrimental impact on amenity. Notwithstanding, the Applicant has proposed a 1500mm translucent film to windows facing Governor Macquarie Drive.
- Amended plans are to indicate solar panels. A provision for a rainwater tank is to be illustrated. Council may condition the size if they disagree with the proposal.
- Council’s Traffic & Transport officer, in consultation with Council’s Road Safety Officer, has recommended the placement of a crash barrier at the kerbside near outdoor play area 2.
- Council accepts the panels viewpoint that Outdoor Play Area 3 is sufficiently protected from Governor Macquarie Drive and as such no change is required.
- No objection to the proposed footpath to Governor Macquarie Drive.
- The Applicant’s Traffic Engineers are required to provide a comprehensive package. Including, but not limited to, amended survey data and a full queue survey analysis.

The Applicant responded to Council’s Request for Additional Information (RFI) on 31 July 2024 and 2 August 2024, with the following:

- Amended Architectural Plans
- Amended Traffic Response
- Traffic Video Survey Data

The Applicant's response is satisfactory in response to matters raised by both Council and the Local Planning Panel.

1. DEVELOPMENT APPLICATION HISTORY

The following is a list of relevant applications related to the subject site/s, from Council's record systems:

DA No.	Lodged	Proposed Development	Determined
RZ-9/2018	13 December 2018	Planning proposal to amend LLEP - Schedule 1 to permit multi dwelling housing with consent on the site.	Approved and gazetted on 10 January 2020
DA-978/2021	30 August 2021	Demolition of all existing structures and construction of a 11-unit multi-dwelling housing development with associated landscaping and site works.	Approved on 17 June 2022
PL-20/2023	16 March 2023	Construction of single storey 120 place childcare centre with basement parking.	Advice Provided
DA-629/2023	8 December 2023	Demolition of existing structures and construction of a 120-place childcare centre with basement parking.	<i>Currently Under Assessment</i>

The following is a brief timeline on the history of the subject application DA-629/2023:

Date	Proposed Development
12 December 2023 – 16 February 2024	The subject application was placed on notification. An extension of the notification period was granted. A total of 38 submissions were received.

14 March 2024	A Request for Additional Information (RFI) letter was sent to the Applicant in relation to the following matters: • Demolition plan. • Plan of Management (PoM). • Inconsistent report information. • Site plan/landscape plan. • Outdoor play areas. • Nappy change tables/toilet facilities. • Pedestrian entrance. • Front setback. • Existing character. • Shadow diagrams. • Submissions. • Car parking. • Environmental health. • Land development engineering. • Traffic and transport. • Urban design and public domain. • Community planning.
22 March 2024	The Applicant requested a 14-day extension until 15 April 2024 to submit the requested information and this was accepted.
27 March 2024	A meeting was held between the Applicant and Council officers to discuss the RFI matters.
16 – 23 April 2024	The Applicant submitted additional information and this information was re-referred to Council's Engineering and Urban Design & Public Domain officers.
07 May 2024	The Applicant was provided with a copy of all submissions relating to the subject application.
13 May 2024	The subject application was reallocated to a new Assessment Planner.
14 May 2024	The additional information and submissions were referred to Council's Traffic & Transport officer for re-review.
24 June 2024	LPP deliberations held, and the matter differed.
2 July 2024	A MS Teams meeting was held between Council representatives and the Applicant to provide clarity surrounding additional required information.
31 July 2024	The Applicant provided amended architectural plans.
2 August 2024	The Applicant provided an amended Traffic Response.

2. APPLICANT RESPONSE – Matters raised by the LPP

The Applicant's response is considered to sufficiently address the deferred matters outlined by the Local Planning Panel on 24 June 2024.

LPP Comment:

The Panel notes that Council has excluded the planter boxes and trunks of the proposed trees from the calculation of the children's outdoor play area, while the applicant has included them. Council advised the Panel that any variation to the standard needs to be approved by the Department of Education. A Section 4.6 request to vary the landscape area may also be required.

Applicant Response:

A review of the diagrams on page 20 shows that both Council and the Applicant have excluded dense screen planting from the calculations. The difference in calculations then appears to be that Council have excluded "significant tree trunks". The proposed trees/shrubs in this area are identified by the Landscape Plan as being Crepe Myrtles (2 difference species) which have thin trunks and wider canopies.

Relevantly, the Child Care Planning Guideline (CCPG) provides the following design guidance for calculating unencumbered outdoor play areas:

"Calculating unencumbered space for outdoor areas should not include areas of dense hedges or plantings along boundaries which are designed for landscaping purposes and not for children's play".

The proposed trees do not constitute dense hedges or plantings along boundaries and should not be excluded as encumbered play space. In fact, the CCPG encourages trees as a major element for natural shade in outdoor play areas.

Council Comment:

Councils accepts the Applicant's and Local Planning Panel's viewpoint on what is considered unencumbered outdoor area. Pursuant to Regulation 108 of the *Education and Care Services National Regulations* "Calculating unencumbered space for outdoor areas should not include areas of dense hedges or plantings along boundaries which are designed for landscaping purposes and not for children's play". Council accepts that the previously excluded planter boxes that are not located along boundaries can be included in calculations. The Crepe Myrtle trees have thin trunks and wider canopies and will not have a discernible impact on unencumbered outdoor space calculations.

Council's revised unencumbered outdoor area calculations demonstrate compliance as per the amended table below:

State Environmental Planning Policy (Transport and Infrastructure) 2021			
Chapter 3 – Educational Establishments and child care facilities			
Part 3.3 Early education and care facilities – specific development controls			
Clause	Requirements	Proposed	Comment
3.22 - Centre-based child care	This clause applies to development for the purpose	Regulations 108 of Educational and Care Services	

facility— concurrence of Regulatory Authority required for certain development	of a centre-based child care facility if: (b) the outdoor space requirements for the building or place do not comply with regulation 108 (outdoor unencumbered space requirements) of those Regulations	National Regulation specifies the following: <u>Required outdoor:</u> (120 x 7) = 840sqm <u>Proposed outdoor</u> = 854sqm	Complies
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Outdoor Play Area 1

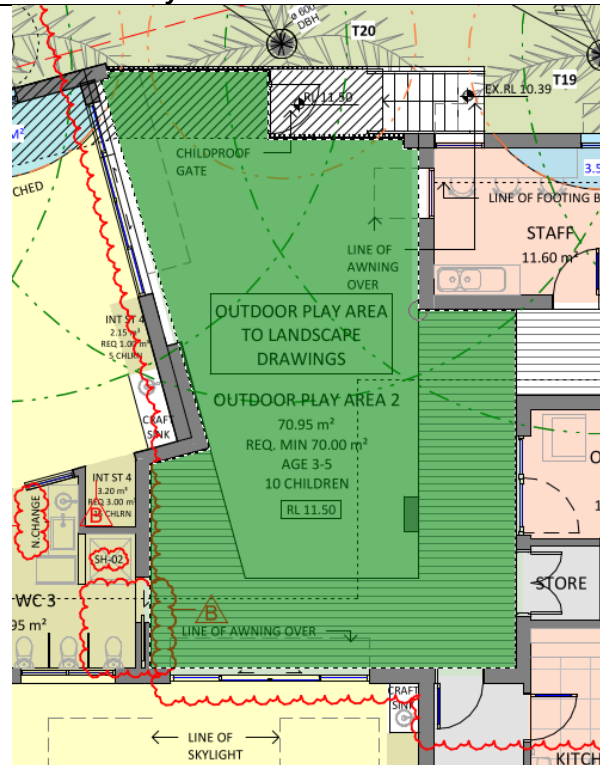


Council calculation: 85.63m²

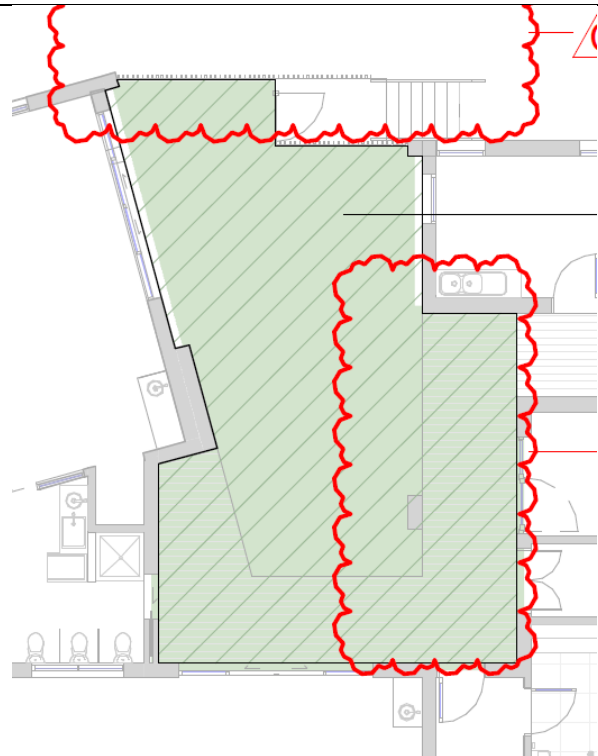


Applicant calculation: 84.05m²

Outdoor Play Area 2



Council calculation: 73.77m²

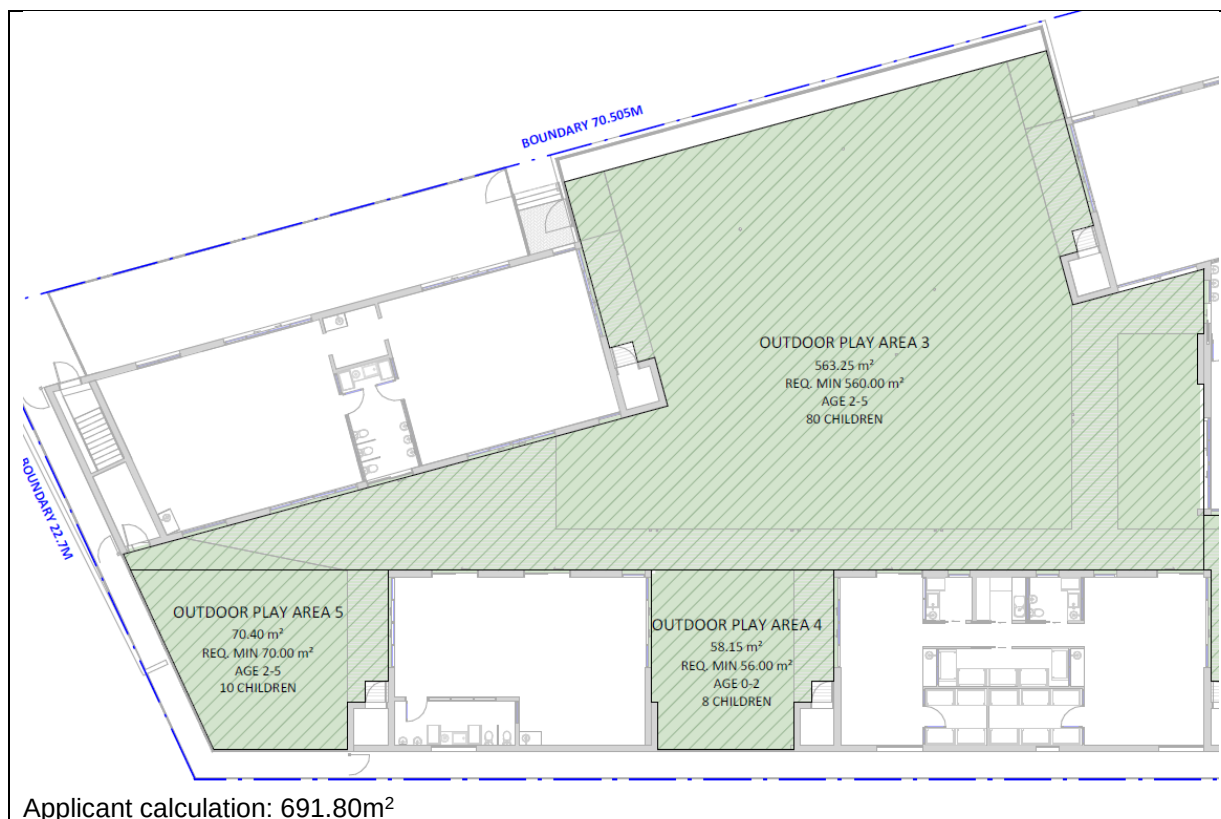


Applicant calculation: 70.95m²

Outdoor Play Areas 3, 4 and 5



Council calculation: 694.58m²



LPP Comment:

While the Applicant has submitted additional information on the traffic issues raised, the Panel notes that further information is required from Transport for NSW. Deferring the application will provide the Applicant the opportunity to address all the matters raised by Council.

Applicant Response:

Future traffic growth has been estimated based on the Sydney's Strategic Travel Forecast Model (STFM) provided by Transport for NSW (TfNSW). The data from the STFM has been used to determine the future 10-year background traffic volumes and the resultant traffic modelling for each scenario has been provided.

The SIDRA modelling results for the post development scenarios concluded that:

- The addition of development traffic will have a relatively minor impact with an increase of 4-11 seconds in average delay, to the Governor Macquarie Drive / Epsom Road intersection.
- The development would have a negligible impact on the Cosford Close and Wilby Street intersections with Epsom Road.
- The addition of background traffic growth to a 10-year horizon, will put further pressure on the Governor Macquarie Drive / Epsom Road intersection.
- The addition of development traffic results in further increases to average delays, with up to a 23 second increase to average delay. However, it is noted that the nature of a roundabout operating above capacity is such that any addition of any

traffic would have a significant impact on delays, with theoretical modelling tending to be sensitive once the intersection reaches capacity.

Based on the above, it is considered that the development would have a minor impact on the study intersections, with the key traffic impact expected from general background growth.

Council Comment:

The additional traffic assessment indicates that the impact of the development on the road network is marginal given that the intersection is nearing its operational capacity. The report indicates that the average delay at the intersection of Epsom Road and Governor Macquarie Drive will reach 92 seconds in 2034 without the proposed childcare development. This is forecast to increase to 115 seconds with the development (i.e. ten years post opening of the childcare).

Based on the queuing survey conducted and SIDRA modelling, the traffic report shows that the development will increase the 95th percentile vehicle queue along Epsom Road by 6 vehicles in the existing AM peak and 10 vehicles in the 2034 future AM peak. It argues that given the current long length of queues along Epsom Road, this level of increase to vehicle queues is not expected to be noticeable. It noted that a review of the video footage indicates that the recorded peak queue lasted for a short time (less than a minute) and did not last for the full length of the 5-minute interval.

Notably, the data also shows that in the entire 6 hours of filming, there were only four occasions of less than one minute, where there were more than 10 cars queueing.

It also indicates that the development would have a negligible impact on the Cosford Close and Wilby Street intersections with Epsom Road. It notes that based on video footage the intersections at Cosford Close and Wilby Street are currently operating satisfactorily and vehicles in the queue were observed to be constantly moving. Council is aware of the operational conditions of the intersection (current and future) and has prepared strategic design for its upgrade as and when funding becomes available. It also agrees that the contribution that the proposed development will have to the intersection delay will be marginal compared to the expected background traffic growth on the road network.

LPP Comment:

The Panel notes concerns related to safety, particularly the potential for accidental vehicular entry into the site. The Applicant is to submit amended plans for the boundary fences adjacent to Governor Macquarie Drive and Epsom Road. The fences are to be engineered to resist the impact of vehicles in accordance with relevant Australian Standards. The design may also incorporate other safety barrier systems in addition to the boundary fences.

Applicant Response:

A crash barrier has been illustrated on plans along the corner of the intersection of Governor Macquarie Drive and Epsom Road. This is in accordance with the request from Council.

Council Comment:

Council's Traffic & Transport Officer, in consultation with Council's Road Safety Officer, determined that an alternative safety barrier system would provide an improved outcome. The Applicant was encouraged to include a crash barrier at the kerbside near Outdoor Play

Area 2, in accordance with TfNSW standards. This option was considered more beneficial for the wider community as it would also protect the footpath at this location. Council is satisfied that the amended plans demonstrate this recommendation has been incorporated into the proposal.

It should be noted that sufficient setback so as not to hinder the future upgrade of the intersection is to be allowed for. The Applicant is to be aware that Council has a strategic concept design for the future upgrade of the intersection of Governor Macquarie Drive and Epsom Road. It appears that the site of the development will be impacted (approximately 5m encroachment at the corner of the block). The Applicant is to discuss with Council prior to finalising the detailed design of the development during the Construction Certificate application Stage.

3. APPLICANT RESPONSE – Additional matters raised by Council

(e) Child Care Planning Guideline 2021:

In determining a development application for development for the purpose of a centre-based childcare facility, the consent authority must take into consideration any applicable provisions of the Child Care Planning Guideline (CCPG) 2021. The amended proposal is considered to achieve compliance with the provisions of CCPG 2021. The proposed variations sought by the applicant are as follows:

Variation 1: Overshadowing

Pursuant to CCPG Part 3.1 Site Selection and location: **C1**

Proposed developments in or adjacent to a residential zone must consider:

Visual amenity impacts (e.g. additional building bulk and overshadowing, local character)

The overshadowing of the three adjoining units (1, 8 and 9 – refer to Figure 11) at No. 125 Epsom Road appears to be of concern, however, it has been demonstrated that the proposed development would not significantly exacerbate this issue. The northern façade of Unit 9 (the western unit) is currently overshadowed for the most part of the day. The proposed development would cause additional overshadowing during the early hours (between 9am and 10am) to the rear of the site, however the unit would retain suitable solar access to its private open space (POS) between 11am and 5pm.

The northern façade of Unit 8 (the centre unit) is also currently overshadowed for the most part of the day. The POS is located to the eastern side of the dwelling and currently does not achieve suitable solar access. Whilst the proposed overshadowing plans demonstrate that solar access would remain insufficient, a minor improvement has been demonstrated due to the proposed development. The northern façade of Unit 1 (the eastern unit) is currently overshadowed for the most part of the day and the POS currently receives limited solar access; however, the proposed development demonstrates that negligible additional overshadowing would be caused.

This variation was discussed at the LPP, and no objection was raised by the panel.

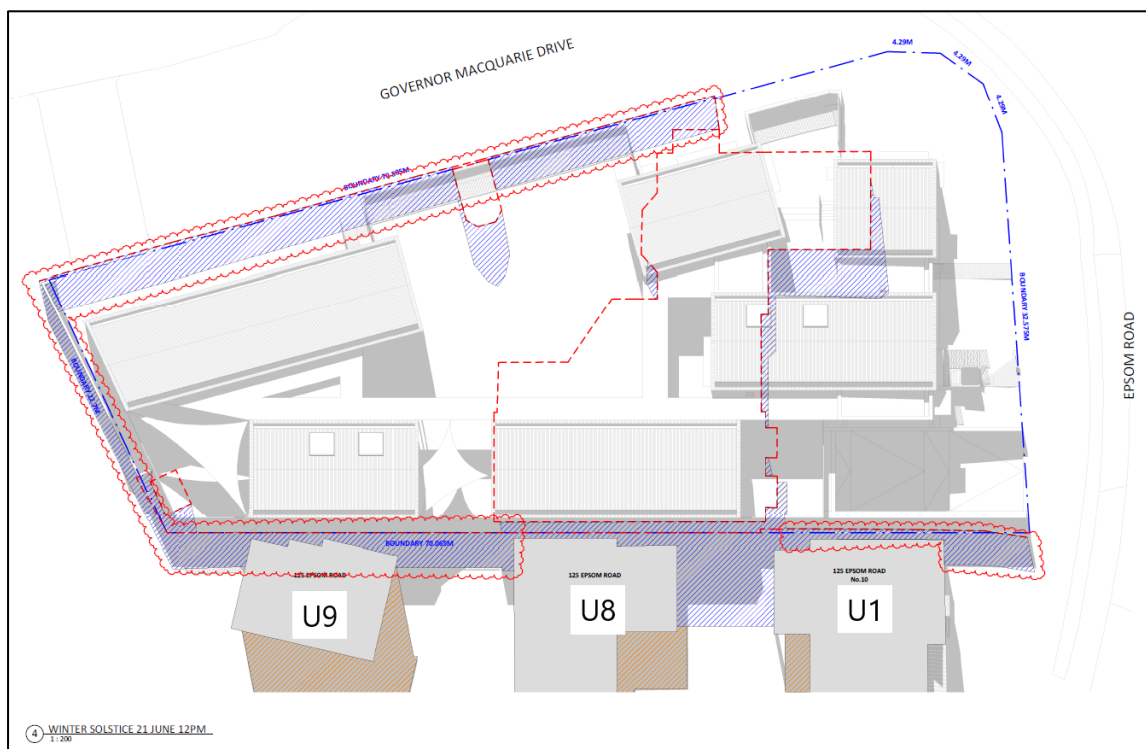


Figure 1: Winter solstice 21 June 12pm (existing v proposed overshadowing)

Variation 2: Roads & Safety

Pursuant to CCPG Part 3.1 Site Selection and location: **C2**

To ensure that the site selected for a proposed child care facility is suitable for the use the following must be considered:

The characteristics of the fronting road or roads (for example its operating speed, road classification, traffic volume, heavy vehicle volumes, presence of parking lanes) is appropriate and safe for the proposed use.

As noted above, the Applicant was encouraged to include a safety barrier of sufficient length at the kerbside near outdoor play area 2, in accordance with TfNSW standards. This option was considered more beneficial for the wider community as it would also protect the footpath at this location. Amended plans adequately address this concern.

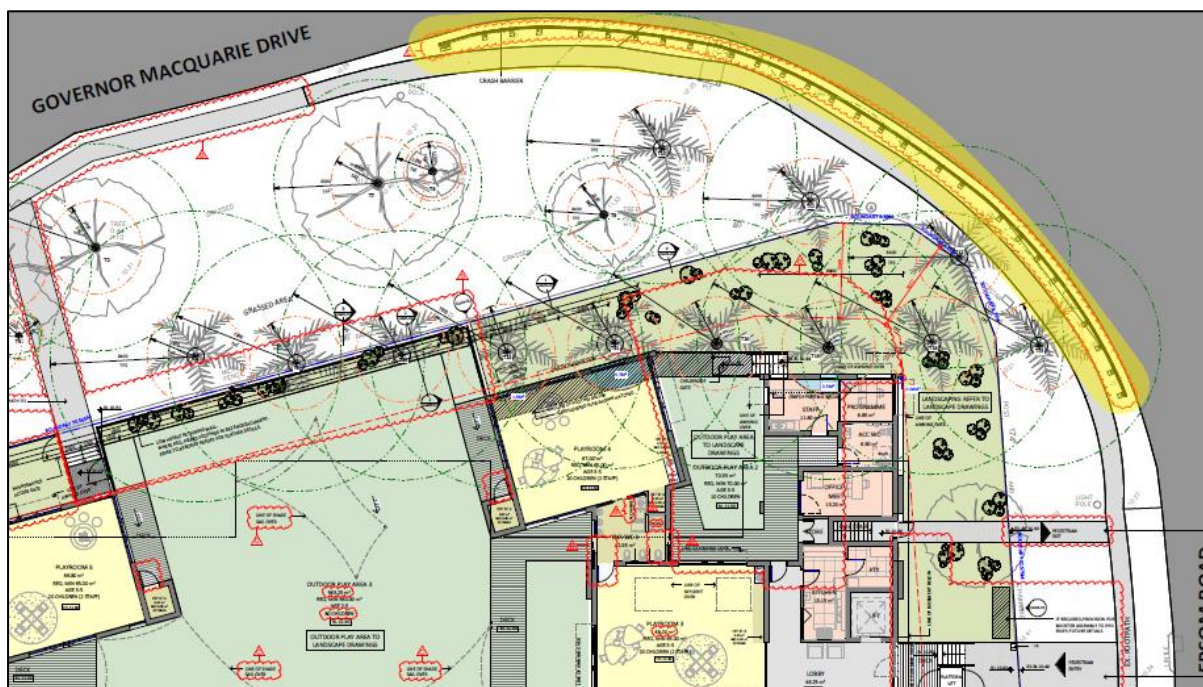


Figure 2: Proposed location of crash barrier highlighted in yellow.

Variation 3: Materials & Colours

Pursuant to CCPG Part 3.2 Local Character, Streetscape and the public domain interface:
C5

To ensure that the child care facility is compatible with the local character and surrounding streetscape:

Recognise predominant streetscape qualities, such as building form, scale, materials and colours. Include design and architectural treatments that respond to and integrate with the existing streetscape.

As discussed at the LPP, Council accepts the Applicant and the panels' view that proposed colour scheme would not be out-of-character with surrounding developments. No further amendments are required.

Variation 4: Fencing & Safety

Pursuant to CCPG Part 3.2 Local Character, Streetscape and the public domain interface:
C6

To ensure clear delineation between the child care facility and public spaces:

Fencing to ensure safety for children entering and leaving the facility.

As discussed at the LPP Council accepts the applicant and panels' view that Outdoor Play Area 3 is sufficiently protected from Governor Macquarie Drive and as such no change is

required. It is suitably setback from Governor Macquarie Drive (>16m) and the heritage listed palms may act as an additional natural safety barrier.

Variation 5: Privacy & Overlooking

Pursuant to CCPG Part 3.5 Visual and acoustic privacy: **C20**

To protect the privacy and security of children attending the facility:

Minimise direct overlooking of indoor rooms and outdoor play spaces from public areas through: Appropriate site and building layout facility; suitably locating pathways windows and doors; permanent screening and landscape design.

The buildings have been adequately set back from the street in accordance with LDCP 2008. Council accepts the panels viewpoint that the visibility of passing vehicles from Playrooms 4 and 5 would not pose a detrimental impact on amenity, rather, it would create a point of interest for the entertainment of children. Notwithstanding, the Applicant has proposed a 1500mm high translucent film to windows facing Governor Macquarie Drive.

Variation 6: Parking & Safety

Pursuant to CCPG Part 3.8 Traffic, parking and pedestrian circulation: **C35**

To provide a safe and connected environment for pedestrians both on and around the site the following design solutions may be incorporated:

Defined pedestrian crossings included within large car parking areas.

Amended plans illustrate that the basement has been extended further west to demonstrate that there is no longer an overlap of turning paths and pedestrian walkway when using Parking Spaces Nos 12 & 13.

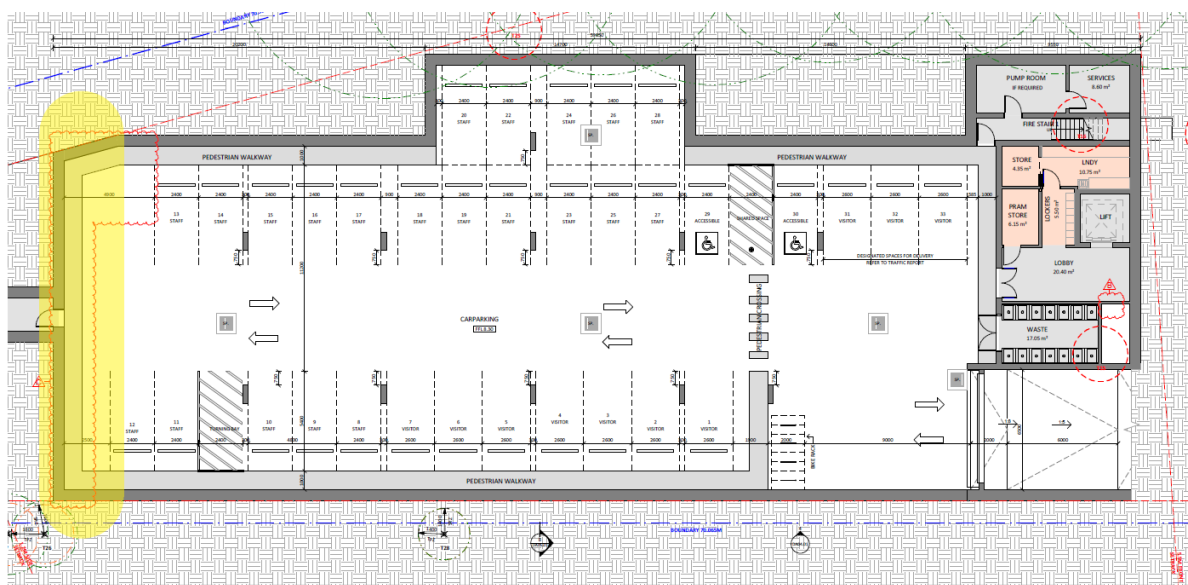


Figure 3: Basement extension highlighted in yellow

(f) *Liverpool Local Environmental Plan (LLEP) 2008*

(a) **Zoning and Permissibility**

The subject site is zoned R2 Low Density Residential under LLEP 2008 and the proposed development is best defined as a '**centre-based child care**', which is a permissible use within the zone, with consent. A centre-based childcare is defined below, and the zoning of the site can also be seen in **Figure 4** below.

centre-based child care facility means—

(a) a building or place used for the education and care of children that provides any one or more of the following—

- (i) long day care,
- (ii) occasional child care,
- (iii) out-of-school-hours care (including vacation care),
- (iv) preschool care, or

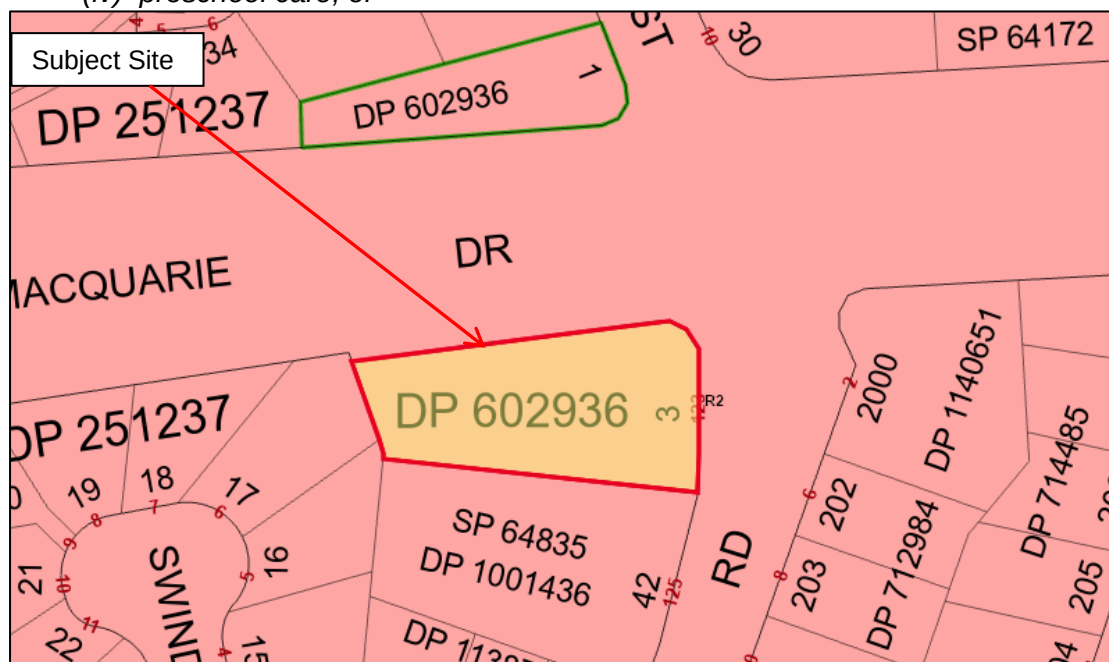


Figure 4: Zoning map (Source: Geocortex)

(ii) **Objectives of the zone**

The objectives of the R2 Low Density Residential zone are:

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To provide a suitable low scale residential character commensurate with a low dwelling density.
- To ensure that a high level of residential amenity is achieved and maintained.

The amended proposal is consistent with the objectives of the R2 - Low Density Residential zone.

(iii) Principal Development Standards

LLEP 2008 contains principal development standards which are discussed with respect to the proposal as follows:

Clause	Required	Proposed	Complies
2.7 Demolition requires development consent	The demolition of a building or work may be carried out only with development consent.	A demolition plan was submitted with DA-629/2023	Complies
4.3 Height of Buildings	Maximum height of 8.5m	The maximum proposed height of the development is 6.7m.	Complies
4.4 Floor Space Ratio	Maximum FSR of 0.5:1 is applicable.	Site area: 2,322sqm GFA 719.01sqm = 0.309:1	Complies
4.6 Exceptions to Development Standards	Provisions relating to exceptions to development standards	No Clause 4.6 variation required.	Not Applicable
5.10 Heritage Conservation	Provisions relating to the conservation of the environmental heritage of Liverpool.	The site is not identified as a heritage item or conservation area. However, there are a series of palm trees (<i>Phoenix Canariensis</i>) adjoining the northern eastern boundary of the site which are identified as a local heritage item (Item No.21) under LLEP 2008. A Heritage Impact Statement (HIS) has been submitted. The report concludes that the proposed works would have a minimal and satisfactory impact on this item. The application was reviewed by Council's Heritage Officer and no objection was raised subject to the implementation of the measures outlined within the tree protection plan and retention of the heritage listed palm trees.	Complies
5.21 Flood Planning	Provisions relating to the minimisation of flood risk to life	The proposed development is within the special flood consideration area; and the proposed development is considered as sensitive uses. Therefore, flood related	Complies

	and property.	controls do apply to this development. A flood advice report and an evacuation plan were submitted, and the application was reviewed by the Council's Floodplain Engineer who raised no objections subject to conditions.	
7.7 Acid Sulfate Soils	Class 1, 2, 3, 4 or 5	Site mapped as containing Class 5 Acid Sulphate Soils, however the proposal is highly unlikely to lower the water table below 1m AHD.	Complies
7.8A Floodplain Risk Management	Repealed	Not applicable.	Not applicable
7.31 Earthworks	Council to consider matters listed (a)-(g)	Cut/fill is proposed due to the proposed basement and is satisfactory.	Considered acceptable

6.1 Section 4.15(1)(a)(ii) – Any Draft Environmental Planning Instruments

No applicable draft EPIs.

6.2 Section 4.15(1)(a)(iii) – Any Development Control Plan

(a) Liverpool Development Control Plan (LCDCP) 2008

The proposed development is subject to the LCDCP 2008. The application has been assessed against the relevant controls of LCDCP 2008, particularly Part 1 General Controls for all Development and Part 3.8 Non-Residential Development in Residential Zones (Childcare Centres). The amended development is considered to achieve general compliance with the provisions of LCDCP 2008. The below variations are sought by the Applicant as follows:

Variation 1: Sustainable Design

Pursuant to LCDCP Part 1 General Controls for all Development: 22 *Energy Conservation » Non-Residential*

Control 3. Encourage passive solar designed dwellings.

Objectives

- To reduce the necessity for mechanical heating and cooling.*
- To minimise greenhouse gas emissions.*
- To provide thermal comfort by minimising temperature variations within buildings.*

As agreed upon following LPP it is accepted that indoor playrooms are adequately cross ventilated. The Applicant noted that solar panels would be incorporated into the amended

design, while these are not illustrated on plans a condition of consent would be imposed to require either the installation of solar panels, or ceiling fans to each indoor playroom. The provision of a rainwater tank within the side setbacks of the south-western corner of the site would be conditioned.

Variation 2: Location & Safety

Pursuant to *LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.3 Site Planning » Site Location*

Control 2. *Child Care Centres shall not be permitted:*

- adjacent to industrial activities.
- **Within 300m of an existing Child Care Centre.**
- On classified roads.
- Adjacent to railway lines.
- On streets with a carriageway width of 6.5m or less.
- On streets, which are cul-de-sacs.
- **On lots adjacent to a roundabout (including a proposed roundabout)**
- In areas where aircraft noise levels exceed 25 Australian Noise Exposure Forecast (ANEF).

Objectives

- a) *To ensure that Child Care Centres are sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.*
- b) *To ensure privacy for neighbours.*

One of the key objectives of this part of the DCP is 'To provide and maintain a safe and healthy learning and play environment for children.' It is considered that the incorporation of a safety barrier along the frontage adjacent to the roundabout addresses this concern.

Variation 2: Location & Safety

Pursuant to *LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.3 Site Planning » Site Planning*

Control 5. *The site layout should contribute to personal safety and to the protection of property by permitting casual surveillance of adequately lit outdoor spaces from windows and entries.*

Objectives

- c) *To ensure that Child Care Centres are sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.*
- d) *To ensure privacy for neighbours.*

As noted above, additional safety measures in the form of a crash barrier have been incorporated and are considered to satisfy this control.

Variation 2: Rear Setback

Pursuant to *LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.4 Setbacks*

Control 4. *Buildings shall be setback from the side and rear boundaries in accordance with Table 2.*

Objectives

- a) *To set Child Care Centres back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access.*
- b) *To set Child Care Centres back from other dwellings to provide visual and acoustic privacy.*
- c) *To create a streetscape that provides a desirable and safe environment.*
- d) *To establish a streetscape of a scale and sense of enclosure appropriate to the locality.*
- e) *To maximise the amount of area capable of allowing the growth of trees and shrubs.*

As per LDCP Table 2 the rear setback required for a single storey building is 4m and the majority of the western (rear) setback of the development is set back at least 10.685m. However, a proportion of built form (35% of the boundary length) is set back 1.2m from the boundary. Given that no windows are proposed along this boundary, dense planting is provided for, and solar access to the neighbouring property to the west is retained, this variation would be considered acceptable on merit. This variation was discussed at the LPP, and no objection was raised by the panel.

Variation 3: Open space in front of the Building Line

Pursuant to *LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.5 Landscaped Area and Open Space » Open Space*

Control 2. *Outdoor open space is to be located behind the childcare centre i.e. away from roads/streets.*

Objectives

- a) *To ensure that a minimum amount of Open Space is provided for outdoor activities.*
- b) *To ensure outdoor open space areas are located to minimise any potential risk from errant vehicles to children and staff.*

As noted in CCPG item C2 and C6 above Outdoor Play Area 2 is close to the intersection of heavy and high-speed vehicles. The incorporation of a crash barrier and amendments to Outdoor Play Area 2 is considered acceptable in addressing this concern.

Variation 4: Open space in front of the Building Line

Pursuant to *LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.6 Building Form, Style and Streetscape » Building Appearance*

Control 5. The front building facades shall be articulated. This articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.

Objectives

- a) To encourage designs that will enhance the *character* of the neighbourhood.
- b) To promote variation of *building facade and design*.
- c) To ensure the *building enhances the streetscape through the use of suitable built form design and landscaping*.
- d) To ensure buildings address all street frontages.
- e) To discourage garages and in particular garage doors, from visually dominating the streetscape.
- f) To ensure that the *building design, detailing colour and finish shall add visual interest to the street and shall compliment the street*.

As noted in CCPG item C5 above no further change to the materials and colours schedule is required.

Variation 5: Overshadowing

Pursuant to LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.9 Amenity and Environmental Impact » Overshadowing

Control. Adjoining properties must receive a minimum of three hours of sunlight between 9am and 3pm on 21 June to at least:

- One living, rumpus room or the like and/or
- 50% of the private open space.

Objectives

To minimise overshadowing of neighbouring dwellings and their private open space.

As noted in CCPG item C1 above, the adjoining properties do not currently achieve a minimum of three hours of sunlight between 9am and 3pm on 21 June to one living room and 50% of the private open space. However, the proposed development would not further exacerbate this issue. This variation was discussed at the LPP, and no objection was raised by the panel.

Variation 6: Privacy

Pursuant to LDCP Part 3.8 Non-Residential Development in Residential Zones » 2 Child Care Centres » 2.9 Amenity and Environmental Impact » Privacy

Control 3. Building siting, window location, balconies and fencing must consider the importance of the privacy of on-site and adjoining buildings and private open spaces.

Objectives

To ensure appropriate noise and vibration attention measures are incorporated into the development.

As detailed in CCPG item C20 above the location of windows facing Governor Macquarie Drive are not considered detrimental to occupant amenity, rather it would create a point of interest for the entertainment of children. Notwithstanding, the Applicant has proposed a 1500mm high translucent film to windows facing Governor Macquarie Drive.

6.3 Section 4.15(1)(a)(iia) – any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4

There are no draft planning agreements or planning agreements that apply to the site.

6.4 Section 4.15(1)(a)(iv) –The Regulations

The Environmental Planning and Assessment Regulation 2021 requires the Consent Authority to consider the provisions of the National Construction Code. Accordingly, appropriate conditions would need to be imposed.

6.5 Section 4.15(1)(b) – The Likely Impacts of the Development

Head of Consideration	Comment
Built Environment	The single storey form does not appear to propose significant adverse impacts on neighbouring developments. Safety concerns regarding the play areas located within front setback areas have been appropriately addressed.
Natural Environment	The proposed development is not likely to have significant adverse impacts on the existing natural environment, as the development is of an appropriate scale and size for the site, with adequate integration of the heritage listed palm trees.
Social Impacts	The proposed development would have a positive economic impact on the locality through construction of the development. It is noted that the submitted traffic report indicates that the development would have a minor impact on the adjacent intersections and would have minimal impact on existing queue lengths to Epsom Road.
Economic Impacts	The proposal would not have a negative economic impact on the locality through construction of the development.

6.6 Section 4.15(1)(c) – The Suitability of the Site for the Development

The proposal is a permissible development and satisfies the key planning controls as detailed above. It is therefore generally considered to be suitable for the subject site.

6.7 Section 4.55(1)(d)– Any Submissions made in relation to the Development

(a) Community Consultation

The Development Application was required to be notified to properties within a 75m radius in accordance with the Liverpool Community Participation Plan 2022. The proposal was notified during the period between 12 December 2023 and 16 February 2024. A total of 38 submissions were received objecting to the proposal and the issues of concern raised in the submissions can be summarised as follows:

Issue raised	Comments
Issue 1: Increased traffic congestion	As detailed in the submitted Traffic Impact Assessment (TIA) the proposed development is not expected to have significant adverse impact on the local road network. The TIA has been carried out with reference to the Roads and Maritime Services (RMS) Guide to Traffic Generating Developments, LDCP and Australian Standards AS 2890. The TIA concludes that the estimated peak period traffic generation is of low impact on existing traffic flows and the surrounding road network and can be readily accommodated without significant adverse impacts. Amended SIDRA modelling was provided by the Applicant that concludes the development would have a negligible impact on the existing queue lengths.
Issue 2: Part 3.8, Section 2.3 of the Liverpool Development Control Plan (LDCP) 2008 states that child care centres shall not be permitted within 300m of an existing centre. (Joey's Cottage Preschool is less than 100 metres away)	It is noted that Chapter 3, Section 3.27 of SEPP (Transport and Infrastructure) 2021 overrides the DCP control and states that DCP provisions such as issues relating to proximity do not apply.
Issue 3: Concern is raised about the capacity of the proposed child care centre. Part 3.8, Section 2.2 control 1 states a maximum capacity of 45 0-5 year olds with consideration of a maximum 60 children however, the application proposes twice the LDCP control at 120 Children.	It is noted that Chapter 3, Section 3.27 of SEPP (Transport and Infrastructure) 2021 overrides the DCP control and states that DCP provisions such as maximum capacity does not apply.
Issue 4: Part 3.8, Section 2.3 of LDCP 2008 states that childcare centres should be located 'on streets with	The development is of concern, being a childcare centre, with vulnerable people, located close to a roundabout, on a busy road. One of the key objectives of this part of the DCP is <i>'To provide and maintain a safe and healthy learning and</i>

<i>widths that permit adequate safe manoeuvrability of vehicles and line of sight for pedestrians' and shall not be permitted 'on lots adjacent to a roundabout or on a classified road'.</i>	<i>play environment for children.'</i> As identified within this report the Applicant has incorporated a crash barrier to that is considered to adequately address safety concerns. It is noted that an existing childcare centre Joey's Cottage Preschool is located 60m away adjacent to the roundabout.
Issue 5: The Child Care Centres' location and capacity will result in unacceptable queuing of traffic along the Western Side of Epsom Road. The roads leading up to the roundabout have two lanes which divide traffic between vehicles turning left, those either going straight or turning right. This includes the lanes on the western side of Epsom Road, in front of the site. The concern is that left turn access into and left turn egress from the site will cause vehicles not using the centre to be queued at peak times.	As per the submitted TIA and based on commissioned traffic surveys and the <i>Guide to Traffic Generating Developments (2002)</i> it is considered that the traffic generation of the proposed development is low (96 vehicles in the AM peak and 84 vehicles during the PM peak). Amended SIDRA modelling was provided by the Applicant that concludes the development would have a negligible impact on the existing queue lengths.
Issue 6: Concern is raised that staff and parents driving to the site from directions other than northbound on Epsom Road after using the roundabout will need to drive south on Epsom Road and use other nearby streets or the roundabout adjacent the Chipping Norton Village to turn around and enter the driveway.	Visitor access from alternate directions is expected and may be accommodated via the roundabout further south at Childs Road. The submitted TIA concludes that the proposed development is not expected to have significant adverse impact on the local road network. Amended SIDRA modelling was provided by the Applicant indicates that the development would have a negligible impact on the Cosford Close and Wilby Street intersections with Epsom Road. It notes that based on video footage the intersections at Cosford Close and Wilby Street are currently operating satisfactorily and vehicles in the queue were observed to be constantly moving.
Issue 7: The traffic report does not factor in that Epsom Road decreases from double lane to single lane in each direction south of the site. Any car queuing to enter the site may impact on all northbound vehicles along Epsom Road which	The provided traffic report concludes traffic generation of the proposed development is low (96 vehicles in the AM peak and 84 vehicles during the PM peak) and unlikely to significantly increase queueing of the northbound lane.

are waiting to access the roundabout.	
Issue 8: The location of the site and the difficulty in accessing the driveway could lead to parents using the vehicle inspection bay along Governor Macquarie Drive, on the northern side of the site. This would cause significant safety issues and has the potential to increase the frequency of disrupted flow of traffic on Governor Macquarie Drive.	Sufficient on-site parking is available within the basement and as such on-street parking is not required by visitors. Existing signage along Governor Macquarie Drive notes that the vehicle inspection bay is to be used by vehicles over 4.5tonnes. Additional instructions regarding the restriction of the use of this bay could be incorporated into the PoM.
Issue 9: Section 2.5 of the traffic report submitted notes the peak AM and PM times on the site are 7:45am to 8:45am (1 hour) and 4:30pm to 5:30pm (1 hour). The traffic report calculates the traffic generation using the Guide to Traffic Generating Development (2002) as generating 96 vehicles in the AM peak (48 in/48 out) and 84 vehicles during the PM peak (42 in/42 out). Therefore, Section 2.122 of the Transport and Infrastructure SEPP requires that traffic generating development be referred to TfNSW for comment.	Development listed under Column 3 of Schedule 3 of SEPP (Transport and Infrastructure) 2021 relates to “ <i>site with access to classified road or to road that connects to classified road (if access within 90m of connection, measured along alignment of connecting road)</i> ”. Governor Macquarie Drive is a regional road and not a classified road, and it does not connect to a classified road. Therefore, the subject site is exempt and is not considered traffic-generating development.
Issue 10: Limited on-street parking available. Parents will not use the basement parking and there is no available drop-off/pick-up space on the street	The application was reviewed by Council's Traffic & Transport Officer who raised no concerns with regards to the number of parking spaces provided for within the basement. The PoM would encourage parents to utilise this basement parking due to the limited on-street parking available.
Issue 11: Governor Macquarie Road is a thoroughfare for trucks servicing Warwick Farm Freight Company	As addressed within this report additional safety measures to protect its occupants from vehicles along Governor Macquarie Drive have been incorporated in the form of crash barriers.
Issue 12: Suitability of location given the proximity of the preschool opposite and numerous other centres within close proximity.	As noted above Chapter 3, Section 3.27 of SEPP (Transport and Infrastructure) 2021 permits development within proximity to surrounding childcare centres and as detailed within the provided social impact comment the centre is designed to support the population growth within the area.

Issue 13: Excavation of basement carpark will affect the stability of neighbouring buildings	Suitable conditions of consent would be imposed to ensure relevant construction standards and codes are met.
Issue 14: Potential flooding at the river from the Louis Mountbatten Bridge	The application was referred to Councils Flood Plain Engineer who raised no concerns.
Issue 15: Heritage Palms to be retained	The submitted Arborist Report incorporates retention and protection measures of the heritage palm trees. The application was referred to both Council's Heritage and Landscape Officers who raised no concerns subject to the implementation of tree protection measures outlined within the recommendations of the Arborists Report.
Issue 16: The proposed childcare centre buildings do not comply with the minimum rear setbacks required by Part 3.8, Section 2.4 of LDCP 2008. Section 2.4 requires a minimum 4m setback from single-storey buildings to the rear property boundary.	The majority of the western (rear) setback of the development is setback over 10m. However, a proportion of built form (35% of the boundary length) is setback 1.2m from the boundary. This is considered satisfactory on merit as no windows are proposed along this boundary, dense planting is provided for and solar access to the neighbouring property to the west is retained.
Issue 17: Although the child care centre buildings are proposed as single-storey, the proposed 1.2m side setback and higher floor levels result in adverse effects to adjoining amenity of the southern adjoining multi-dwelling housing through overshadowing onto dwellings on 125 Epsom Road.	The overshadowing of the three neighbouring units (1, 8 and 9) at No. 125 Epsom Road appears to be of concern, however, it has been demonstrated that the proposed development would not exacerbate this issue. The northern façade of Unit 9 (the rear western unit) is currently overshadowed for the most part of the day. The proposed development would cause additional overshadowing during the early hours (9-10am) to the rear of the site, however the unit would retain suitable solar access to its private open space (POS) from 11am-5pm. The northern façade of Unit 8 (the centre unit) is also currently overshadowed for the most part of the day. The POS is located to the eastern side of the dwelling and currently does not achieve suitable solar access. While the proposed overshadowing plans demonstrate that solar access would remain insufficient, it would be improved upon. The northern façade of Unit 1 (the front eastern unit) is currently overshadowed for the most part of the day. The POS currently receives limited solar access; however, the proposed development demonstrates that negligible additional overshadowing would be caused.

(b) Internal Referrals

The following comments have been received from Council's internal departments following the initial LPP deliberations:

DEPARTMENT	COMMENTS
Traffic and Transport	Transport management team raise no objection subject to compliance with the requirements of the DCP, Australian Standards and DA conditions. Impact on the Traffic Network The additional traffic assessment indicates that the impact of the development on the road network is marginal given that the intersection is nearing its operational capacity. The report indicates that the average delay at the intersection of Epsom Road and Governor Macquarie Drive will reach 92 seconds in 2034 without the proposed childcare development. This is forecast to increase to 115 seconds with the development (i.e. ten years post opening of the childcare). Based on the queuing survey conducted and SIDRA modelling, the traffic report shows that the development will increase the 95th percentile vehicle queue along Epsom Road by 6 vehicles in the existing AM peak and 10 vehicles in the 2034 future AM peak. It argues that given the current long length of queues along Epsom Road, this level of increase with vehicle queues is not expected to be noticeable. It noted that a review of the video footage indicates that the recorded peak queue lasted for a short time (less than a minute) and did not last for the full length of the 5-minute interval. Notably, the data also shows that in the entire 6 hours of filming, there were only four occasions of less than one minute, where there were more than 10 cars queueing. It also indicates that the development would have a negligible impact on the Cosford Close and Wilby Street intersections with Epsom Road. It notes that based on video footage the intersections at Cosford Close and Wilby Street are currently operating satisfactorily and vehicles in the queue were observed to be constantly moving. Council is aware of the operational conditions of the intersection (current and future) and has prepared strategic design for its upgrade as and when funding becomes available. It also agrees that the contribution that the proposed development will have to the intersection delay will be marginal compared to the expected background traffic growth on the road network. Car parking assessment Proposed Parking Rates: 33 car parking spaces (21 for staff and 12 for visitors) including 2 accessible parking spaces. Four (4) bicycle parking spaces (2 for staff and 2 for visitors), 1 shower and 4 lockers (trip-end

	facilities), and a space for delivery vehicles. Required Parking Rates: 31 car parking spaces including two (2) accessible parking (19 for staff and 12 for visitors), 4 bicycle parking spaces (2 for staff and 2 for visitors), 1 shower and 4 lockers (trip end facilities), and a space for delivery vehicles. Access and car parking design According to the TIA, vehicular access to the car parking area is to be provided via a new access driveway crossing from Epsom Road in a left in – left out arrangement. The access driveway is to have a width of 6.5 metres. The TIA indicates that the car park layout has been reviewed against the requirements of the Australian Standards for Off-Street Car Parking (AS2890.1:2004), and concludes that the car park and associated elements complies with the design requirements set out in the Australian Standards. Swept path diagrams have been submitted and show that vehicles will have adequate maneuverability to access the site as well as park and unpark in the designated parking spaces. Future intersection upgrade Based on the strategic concept, it appears that the land at DP 602936 will be impacted (approximately 5m encroachment at the corner of the block). However, the design still can be updated at the later design stage. The Applicant is to be made aware of this and design their development accordingly.
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(c) External Referrals

No external referrals were required for the subject application.

6.8 Section 4.15(1)(e) –The Public Interest

The proposal achieves compliance with the relevant planning instruments and controls, and as such would not be contrary to the public interest.

7 DEVELOPER CONTRIBUTIONS

7.11 Contributions: The site is located within the Liverpool Contributions Plan 2018 – Established Areas – Chipping Norton. A condition of consent would be imposed to ensure that the Section 7.11 contributions are paid prior to the issue of a construction certificate.

Housing Productivity Contributions (HPC): The site is located within the Greater Sydney region and therefore HPC's are applicable. A condition of consent would be imposed to ensure that contributions are paid prior to the issue of a construction certificate.

Special Infrastructure Contributions (SIC): The site is not zoned within the SIC area, therefore SIC's do not apply.

8 CONCLUSION

The application has been assessed having regard to the provisions of Section 4.15 of the EP&A Act 1979, and the Environmental Planning Instruments, including the applicable State Environmental Planning Policies, Liverpool LEP 2008, Liverpool DCP 2008, and the relevant codes and policies of Council. The proposed development is unlikely to result in adverse impacts upon neighbouring properties and the locality. Based on the assessment of the application, it is recommended that the application be approved subject to the imposition of conditions.

9 RECOMMENDATION

That Development Application DA No 629/2023 be **approved subject to conditions of consent**.

ATTACHMENTS

1. Architectural Plans (Post LLPP)
2. Traffic report (Post LLPP)
3. Draft Conditions of Consent



123 EPSOM ROAD
CHIPPING NORTON, NSW 2170

CHILDCARE CENTRE
DEVELOPMENT APPLICATION

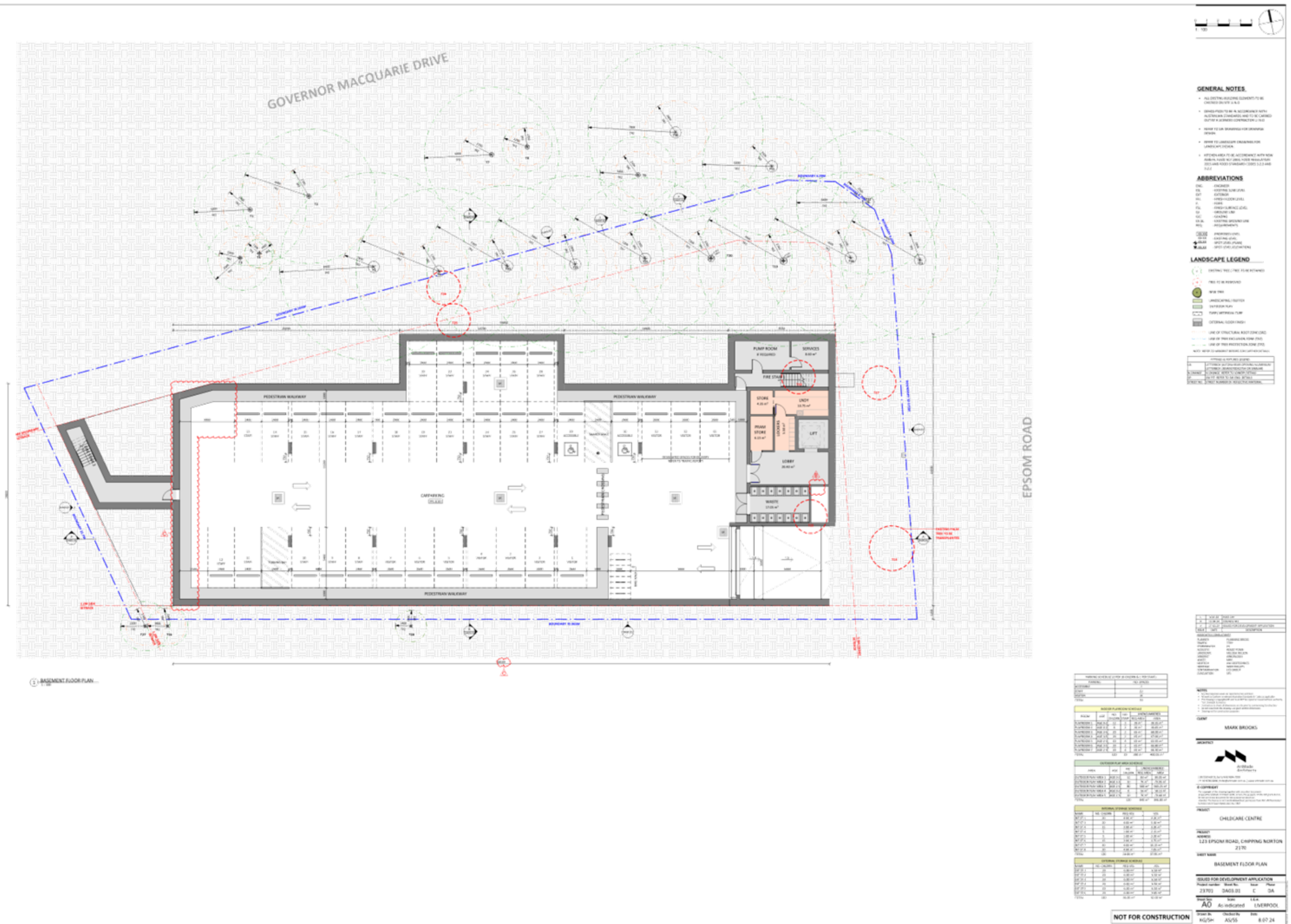
ARCHITECTURAL DRAWING LIST - DA				
Sheet Number	Sheet Name	Current Revision	Current Date	Current Author
DA01-01	CIVIL WORK	C	8/07/24	
DA01-02	SITE PLAN	C	8/07/24	
DA01-03	DEMOLITION PLAN	A	11/04/24	
DA01-04	FOUNDATION PLAN	C	8/07/24	
DA01-05	GROUND FLOOR PLAN	C	8/07/24	
DA01-06	FIRST FLOOR PLAN	C	8/07/24	
DA01-07	SECTION & FINISHES	C	8/07/24	
DA01-08	SECTION & FINISHES	C	8/07/24	
DA01-09	SECTION & FINISHES	C	8/07/24	
DA01-10	SECTION & FINISHES	C	8/07/24	
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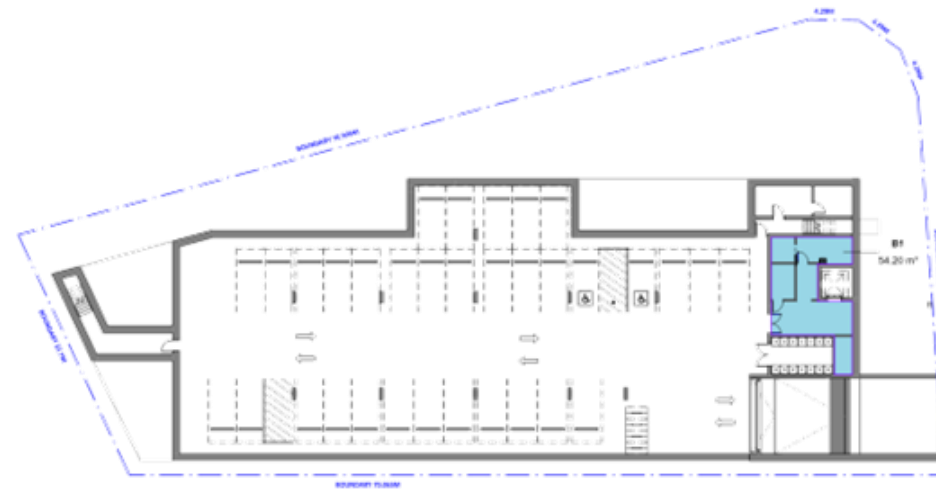
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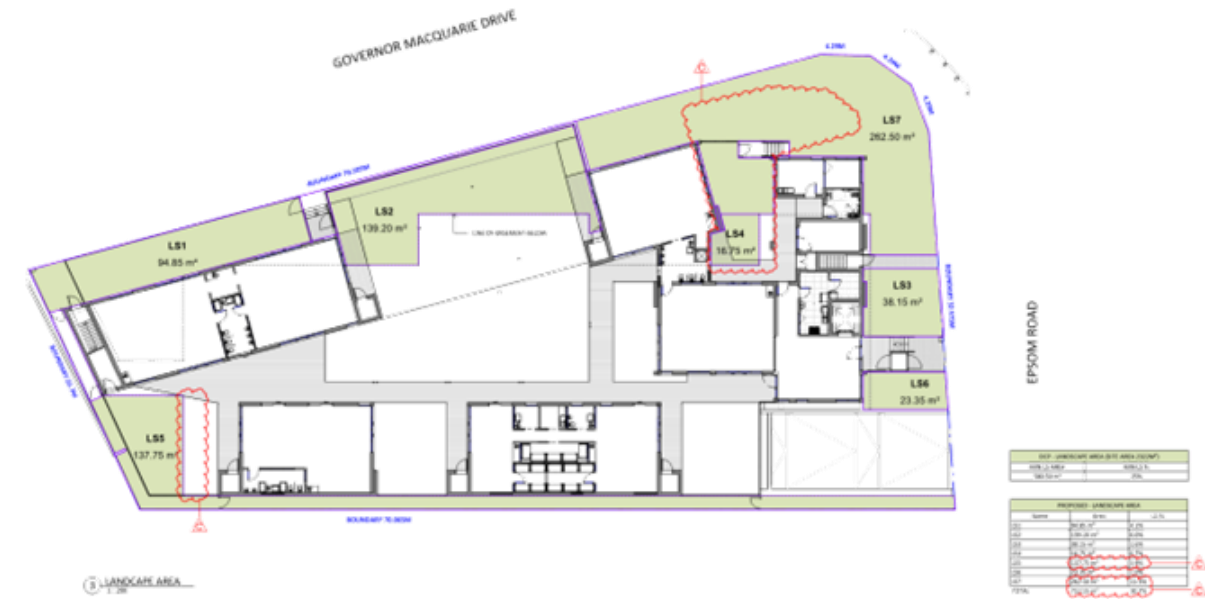




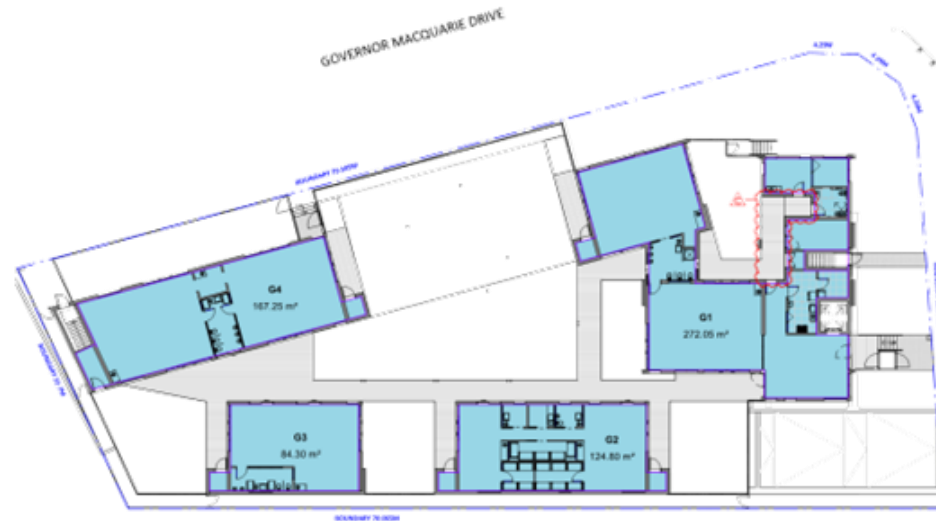




1 SFA - BASEMENT LEVEL
1:200



2 LANDSCAPE AREA
1:200



3 SFA - GROUND FLOOR LEVEL
1:200

TOTAL - GROUND FLOOR LEVEL	
Area	Value
1	100.00
2	100.00
3	100.00
4	100.00
5	100.00
6	100.00
7	100.00
8	100.00
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10	100.00
11	100.00
12	100.00
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95	100.00
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100	100.00



4 OUTDOOR PLAY AREA CALCULATIONS
1:200

TOTAL - OUTDOOR PLAY AREA CALCULATIONS	
Area	Value
1	100.00
2	100.00
3	100.00
4	100.00
5	100.00
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9	100.00
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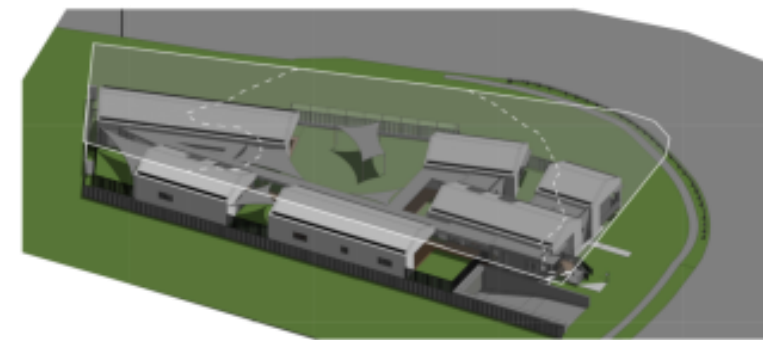
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EXTERNAL FINISHES	
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	CB2 GLAZUR LIGHT GLAZURE GLAZUR LIGHT (20 MPa)
	PCA/XP2 MARMARON (EPMAN)® GLAZUR LIGHT GLAZURE LIGHT (20 MPa)
	PC1 MARMARON (EPMAN)® GLAZUR LIGHT GLAZURE LIGHT (20 MPa)
	HEK1 HEK (EPMAN)® GLAZUR LIGHT (20 MPa)
	XP1 EXTERNAL FINISH 1 EPMAN GLAZUR LIGHT (20 MPa)
	XP2 EXTERNAL FINISH 2 EPMAN GLAZUR LIGHT (20 MPa)
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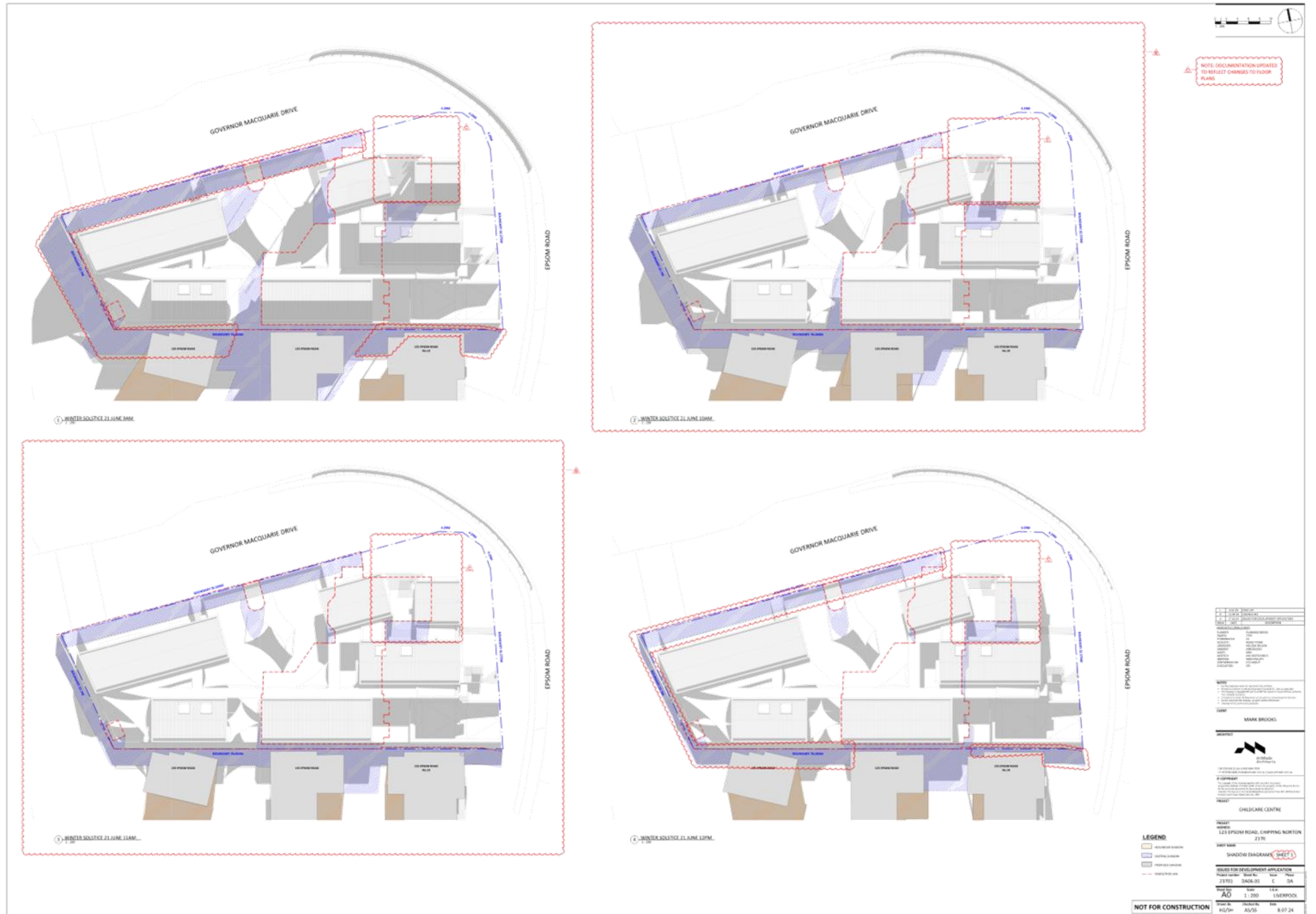
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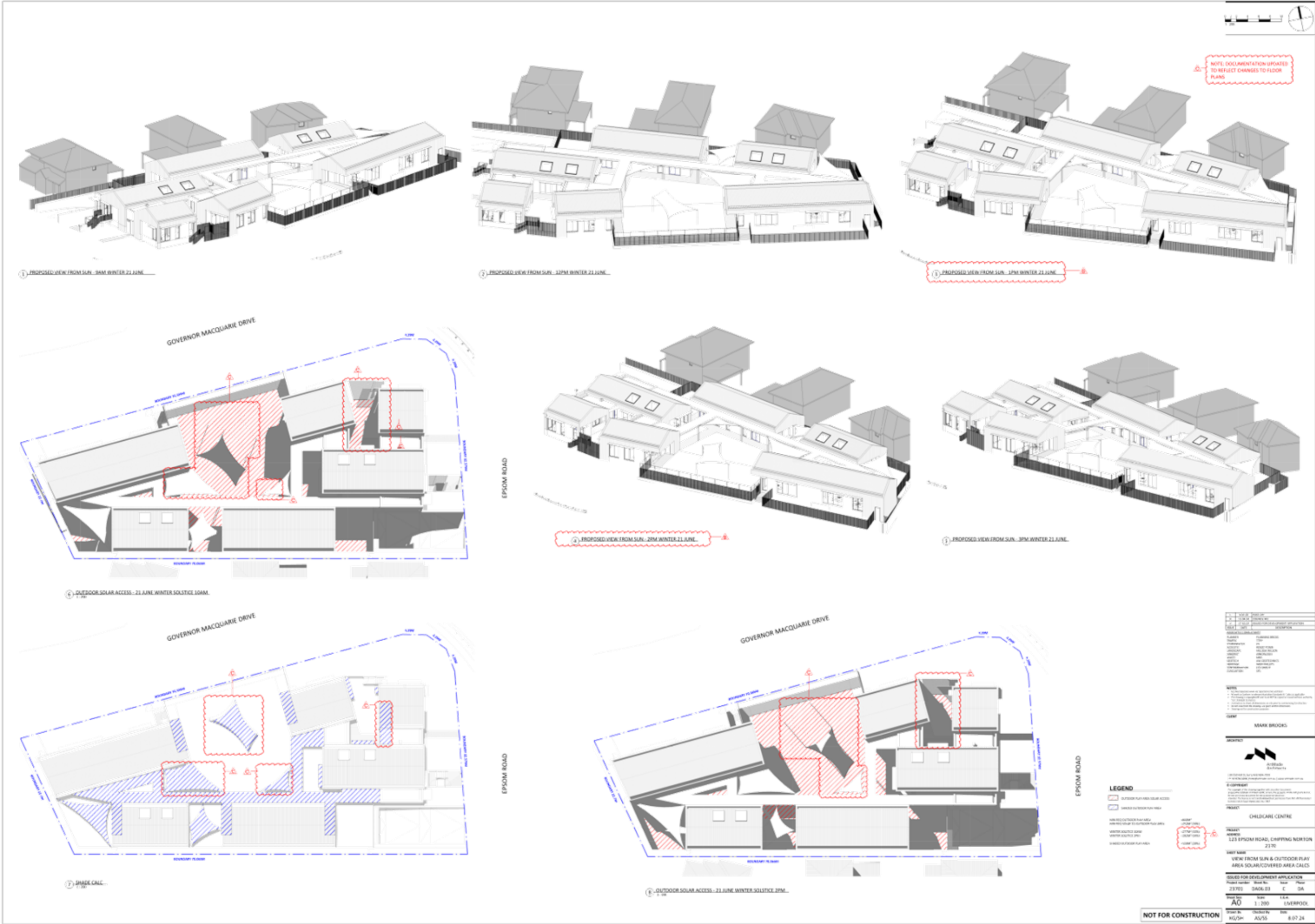
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Our Ref: 22539

2 August 2024

Artmade
Studio 507/ 50 Holt Street,
SURRY HILLS, NSW, 2010

[REDACTED]

[REDACTED]

**RE: 123 EPSOM ROAD, CHIPPING NORTON
RESPONSE TO TRAFFIC RFI**

Background

A development application (DA) has been submitted for a proposed childcare centre at 123 Epsom Road, Chipping Norton.

The DA has been exhibited for public consultation and referred to the Liverpool Local Planning Panel (LLPP). The LLPP meeting minutes dated 24 June 2024 raised several traffic issues which The Transport Planning Partnership (TPPP) addressed in the letter 22539-L01V01-240620 Traffic RFI.

During the follow up meeting with Liverpool City Council's traffic engineer on 2 July 2024, it was understood that further details were required to address the following traffic issue.

Access and car parking design

The objectors raise concern that traffic generated by the proposed development would exacerbate the queue on Epsom Road close to the intersection with Governor Macquarie Drive during the peak periods for vehicles turning left from Epsom Road onto Governor Macquarie Drive. It is noted that the submitted traffic report (SIDRA modelling movement summary) indicates a queue length of around 154m (95% back of queue) on Epsom Road southern approach (left turning lane). If this queue eventuates it is likely to impact the operation of Epsom Road intersection with Wilby Street and Cosford Close.

The applicant is to be requested to submit a revised traffic report addressing the issues raised in the objections including queueing analysis and propose measures to mitigate the



problem. The analysis is to consider traffic growth on Epsom Road ten years after the opening of the facility.

In response to the above comment and follow up consultation with Council, TTPP has undertaken new traffic counts and detailed queueing surveys to assess the development impact and address Council's queries.

Traffic Modelling Assessment

Data Collection

To address the above issue, intersection count surveys and queue length surveys were undertaken on Thursday, 25 July 2024 during the morning peak and evening peak periods at the following intersections:

- Governor Macquarie Drive-Epsom Road (Roundabout intersection)
- Epsom Road-Wilby Street (Priority-controlled intersection)
- Epsom Road-Cosford Close (Priority-controlled intersection)

The road network peak hours were identified as follows:

- AM Peak – 7:45am-8:45am
- PM Peak – 4:45pm-5:45pm

In addition to this, Strategic Traffic Forecast Model (STFM) data was also obtained to determine future traffic growth and has been presented in Attachment One.

Proposed Development Traffic Generation

Transport for New South Wales (TfNSW, formerly RMS) provide traffic generation rates for different land uses in the *Guide to Traffic Generating Developments* (2002).

Based on the Guide, the traffic generation rates for a childcare centre are as follows:

- AM Peak: 0.8 vehicle trips per child
- PM Peak: 0.7 vehicle trips per child.

A summary of the traffic generation of the proposed development is presented in Table 1.

**Table 1: Traffic Generation of Proposed Development**

Land Use	Size	Trip Rate		TINSW Trip Generation	
		AM Peak	PM Peak	AM Peak	PM Peak
Childcare Centre	120 children	0.8 vehicle trips per child	0.7 vehicle trips per child	96	84

Trip Distribution

The trip distribution for the childcare centre in the peak periods has been assumed as an even split between inbound and outbound trips, that is:

- Inbound Trips: 50% of total trip generation
- Outbound Trips: 50% of total trip generation

Additionally, the trip distribution of development traffic to the road network has been based on existing vehicle movement proportions. That is, in the AM peak 40% of vehicles travelled from the north, east and west, while 60% of vehicles travelled from the south. In the PM peak 50% of vehicles travelled from the north, east and west, and 50% of vehicles travelled from the south.

Scenarios

SIDRA intersection modelling has been carried out for nominated intersections. The following four scenarios have been assessed in this regard:

- Scenario 1 (S1) – Existing Conditions (2024)
- Scenario 2 (S2) – Scenario 1 plus Development Traffic (2024)
- Scenario 3 (S3) – Scenario 2 plus 10 years of Traffic Growth, without development (2034)
- Scenario 4 (S4) – Scenario 3 plus Development Traffic (2034).

Background Traffic Growth

Future traffic growth has been estimated based on the Sydney's Strategic Travel Forecast Model (STFM) provided by TfNSW. The STFM is a strategic transport planning model that considers population and employment growths and is used for high level assessment of major infrastructure proposals, transport strategies and policy decision making.

The STFM provides future year traffic volumes to determine the relative traffic growth between years for application to the baseline traffic to provide estimations for future year traffic conditions. This has been used to determine the future 10-year background traffic volumes.

The STFM data has been presented in Attachment One.

The traffic volumes for each modelled scenario are included in Attachment Two.



Traffic Modelling

The SIDRA results for the existing conditions and the post development scenarios are presented in Table 2 with full results presented in Attachment Three.

Table 2: Modelling Results

	AM Peak		PM Peak	
	Average Delay	LoS	Average Delay	LoS
Scenario 1 (Existing Conditions 2024)				
Governor Macquarie Drive-Epsom Road	44	D	25*	B
Epsom Road-Wilby Street	13	A	14	A
Epsom Road-Cosford Close	13	A	12	A
Scenario 2 (Existing 2024 + Development)				
Governor Macquarie Drive-Epsom Road	55	D	29*	C
Epsom Road-Wilby Street	15	B	16	B
Epsom Road-Cosford Close	15	B	14	A
Scenario 3 (Future 2034)				
Governor Macquarie Drive-Epsom Road	92	F	41*	C
Epsom Road-Wilby Street	14	A	15	B
Epsom Road-Cosford Close	14	A	14	A
Scenario 4 (Future 2034 + Development)				
Governor Macquarie Drive-Epsom Road	115	F	51*	D
Epsom Road-Wilby Street	17	B	17	B
Epsom Road-Cosford Close	16	B	16	B

*The average delays for U-turn movements are higher than those reported. However, there were only 0-1 vehicles recorded in these movements. Therefore, the movement with the second highest average delay was instead reported.

Table 2 indicates that the study intersections would operate as follows:

- The existing intersections operate well (LoS A or B), with the exception of Governor Macquarie Drive – Epsom Road, which is nearing capacity (LoS D) in the AM peak period. The critical movement is the left turn from Epsom Road into Governor Macquarie Drive, which has average delays of 44 seconds.



- The addition of development traffic will have a relatively minor impact with an increase of 4-11 seconds in average delay, to the Governor Macquarie Drive – Epsom Road intersection. The development would have a negligible impact on the Cosford Close and Wilby Street intersections with Epsom Road.
- The addition of background traffic growth to a 10-year horizon, will put further pressure on the Governor Macquarie Drive – Epsom Road intersection, with it predicted to operate above capacity in the future, without the development with average delays of up to 92 seconds and a degree of saturation greater than 1, for the left turn movement out of Epsom Road.
- The addition of development traffic results in further increases to average delays, with up to a 23 second increase to average delay. However, it is noted that the nature of a roundabout operating above capacity is such that any addition of any traffic would have a significant impact on delays, with theoretical modelling tending to be sensitive once the intersection reaches capacity.

Based on the above, it is considered that the development would have a minor impact on the study intersections, with the key traffic impact expected from general background growth.

Vehicle Queueing Analysis

Existing Queueing Patterns

Vehicle queues were recorded at each lane of each approach at the surveyed intersections. The survey recorded the peak number of vehicles that were stationary or moving very slowly over five-minute intervals. The raw data is provided in Attachment Four. The average and peak queues by lane and approach is summarised in Table 3.

Table 3: Average and Peak Queues by Approach

Surveyed 95th Percentile Queue (Number of Vehicles)								
Period	South Approach		East Approach		North Approach		West Approach	
	S1	S2	E1	E2	N1	N2	W1	W2
AM Peak	28.45	2.45	0	7.9	2	3.45	0	6.45
PM Peak	5.45	3	0.45	5.35	2.45	3	0.45	2.9

Surveyed Average Queue (Number of Vehicles)								
Period	South Approach		East Approach		North Approach		West Approach	
	S1	S2	E1	E2	N1	N2	W1	W2
AM Peak	6.5	1	0	0.5	1	3	0	0
PM Peak	4	2	0	3	1	2	0	0

The data in Table 3 indicates that vehicle queues are longest at the Epsom Road approach to the roundabout in the AM peak period, when there is a higher percentage of traffic travelling northbound along Epsom Road and turning left on to Governor Macquarie Road.

The vehicle queues at the Epsom Road approach throughout the survey period are summarised in Figure 1.

Figure 1: Longest Queues at 5-minute intervals – Epsom Road Approach

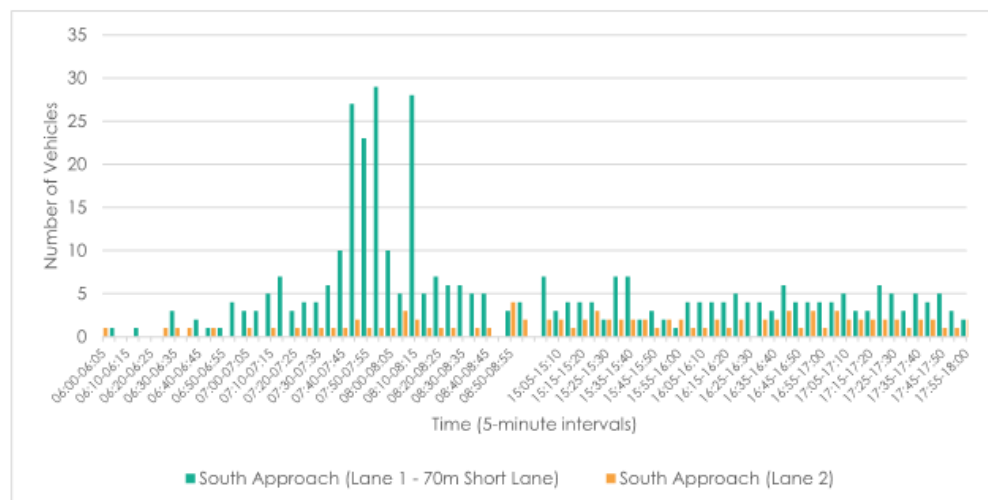


Figure 1 indicates that the 15-minute period between 7:45am and 8:00am contained the longest queues along Epsom Road. However, a review of the video footage indicates that the recorded peak queue lasted for a short time (less than a minute) and did not last for the full length of the 5-minute interval. Notably, the data also shows that in the entire 6 hours of filming, there were only four occasions of less than one minute, where there were more than 10 cars queueing.

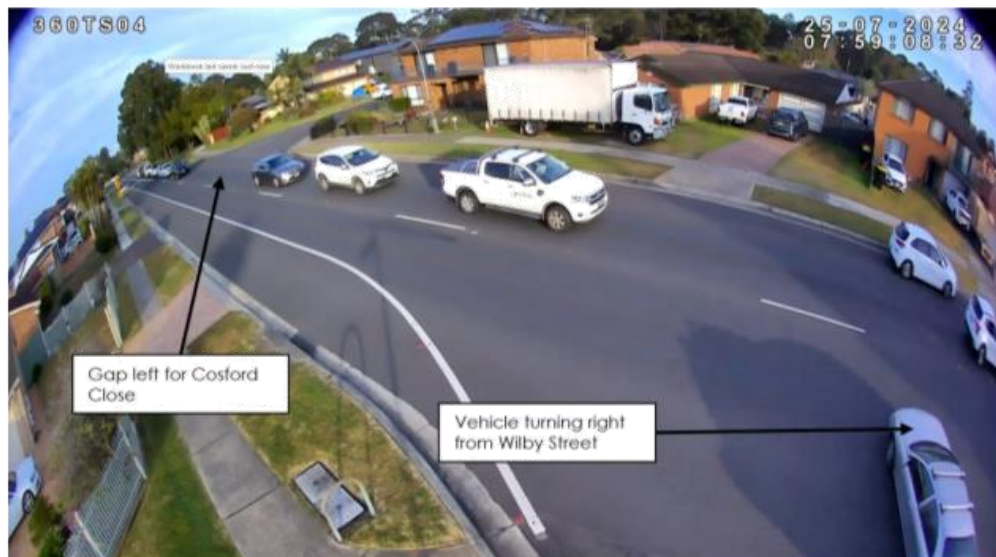


A copy of the video footage at the back of the longest queue can be found through this link: [Epsom Rd Queue 7.57-8.00am](#) (expires 31 August 2024).

The footage shows the vehicle queue extending beyond Cosford Close with around 29 vehicles, at 7:58:40am. Within 30 seconds, the queue is a rolling queue. By 8am, the queue has dissipated.

Of particular interest, the footage shows that the impact of these long queues to the minor road traffic is mitigated by driver behaviour, where traffic is typically giving way to traffic from the minor road. Notably, at 7:59 of the above footage, it can be seen that traffic is clearly leaving gaps to enable traffic to exit from Cosford Close and Wilby Street. An image of this is also shown in Figure 2.

Figure 2: Gaps in Traffic



Development Traffic Impact to Queues

The addition of development will increase the 95th percentile vehicle queue along Epsom road by 6 vehicles in the existing AM peak and 10 vehicles in the 2034 future AM peak. Given the current long length of queues along Epsom Road, this level of increase to vehicle queues is not expected to be noticeable.

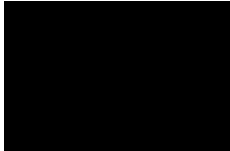
Notably, queues are currently extending past Cosford Close and Wilby Street, and video footage indicates that these intersections are currently operating satisfactorily.



In addition, the SIDRA modelling results indicate that the development will have a minor impact on vehicle delay. This is a result of the constantly moving vehicle queues, which are not often stationary and typically continuously rolling.

We trust the above is to your satisfaction. Should you have any queries regarding the above or require further information, please do not hesitate to contact the undersigned on 8437 7800.

Yours sincerely,



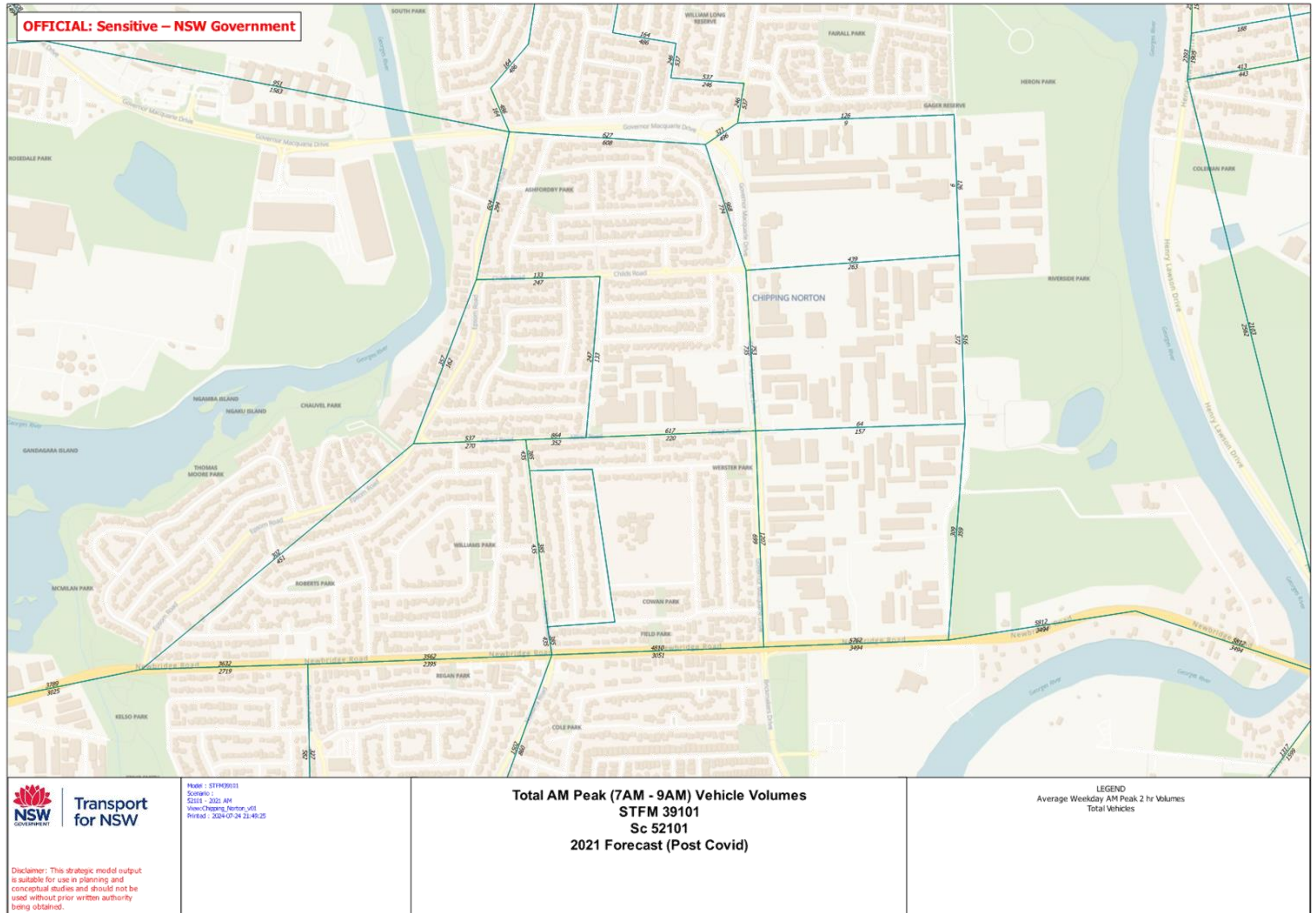
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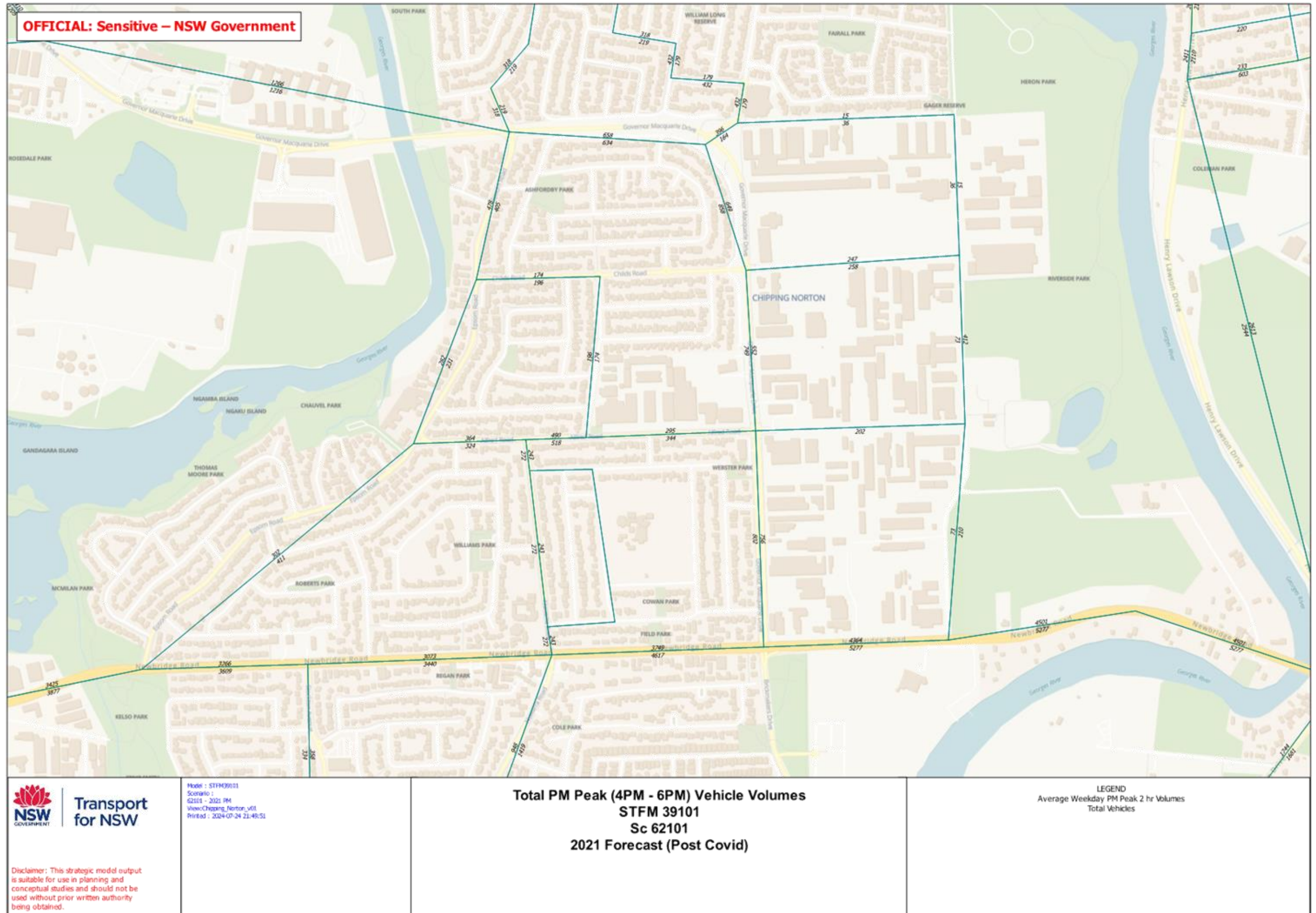
Encl. Attachment One – STFM Data
Attachment Two – Turning Movement Diagrams
Attachment Three – SIDRA Results
Attachment Four – Raw Survey Data

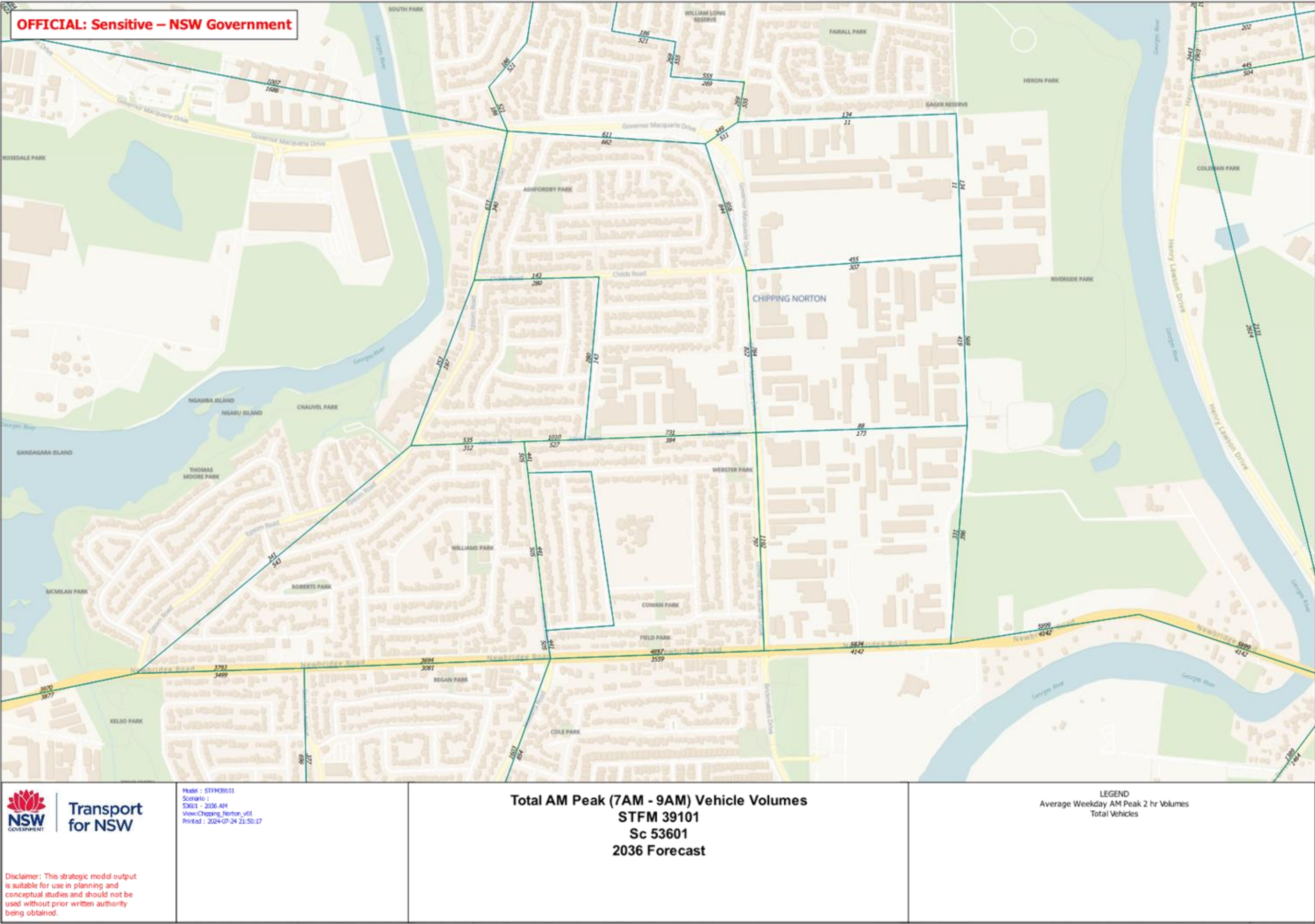


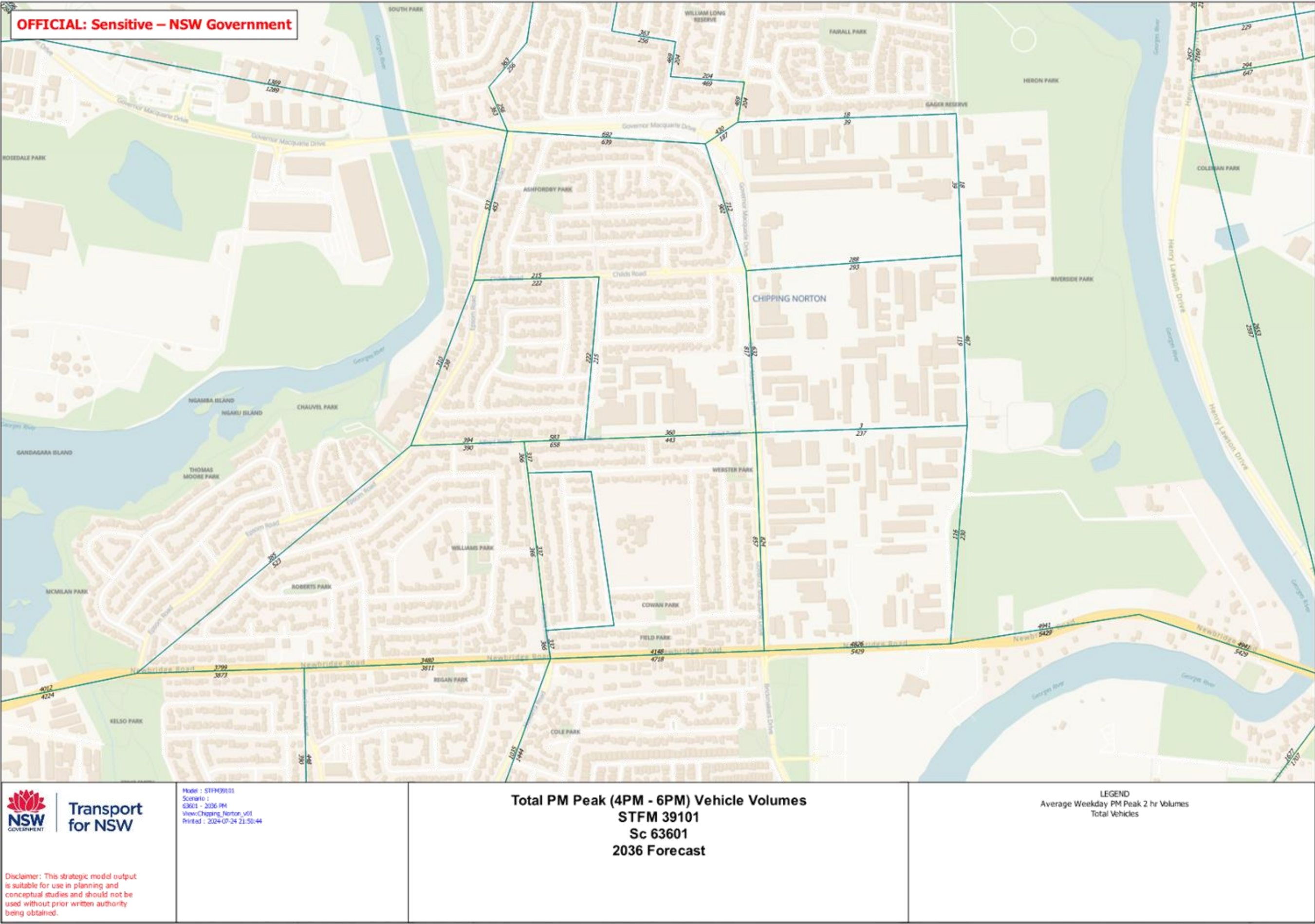
Attachment One

STFM Data





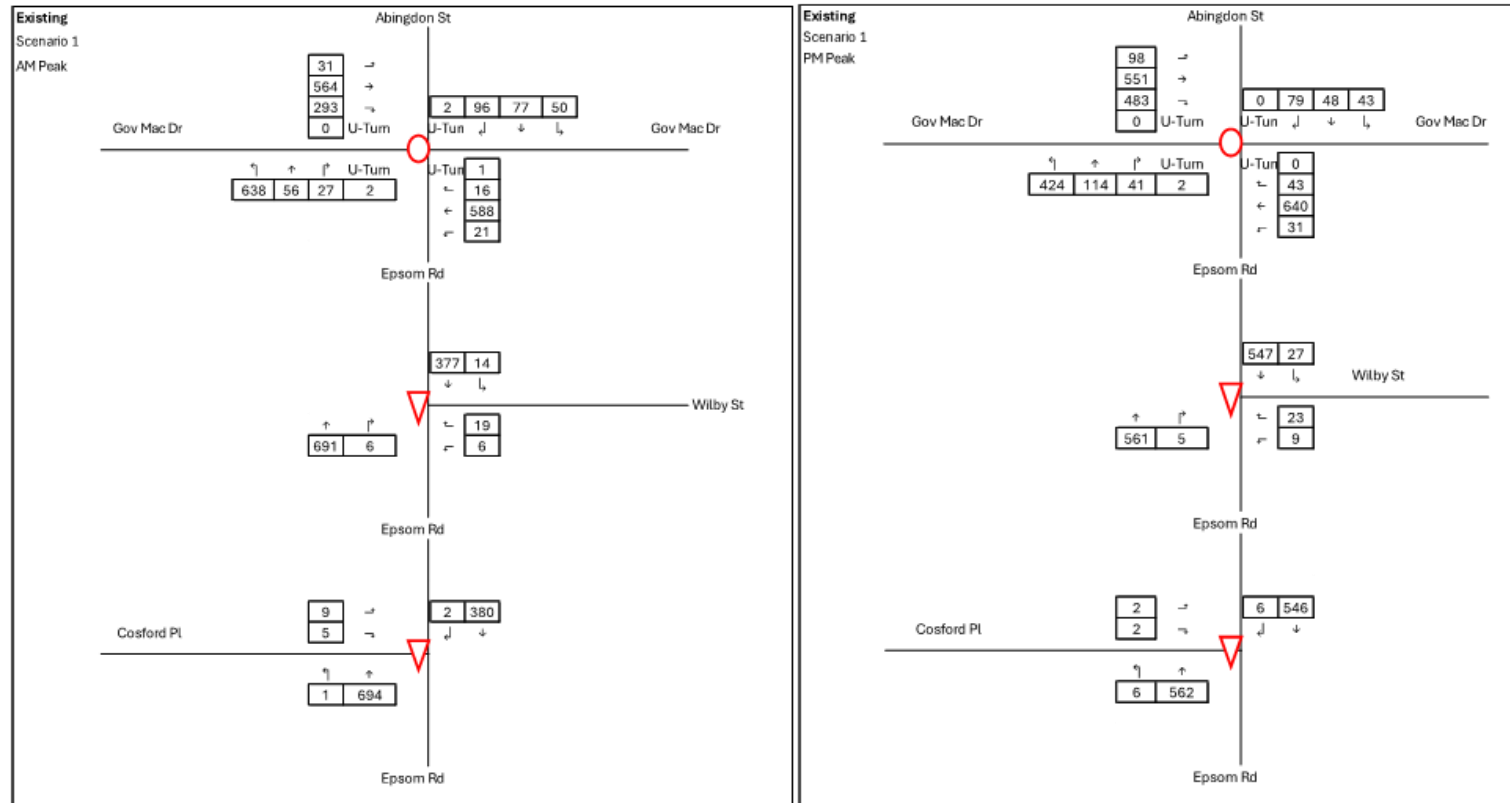


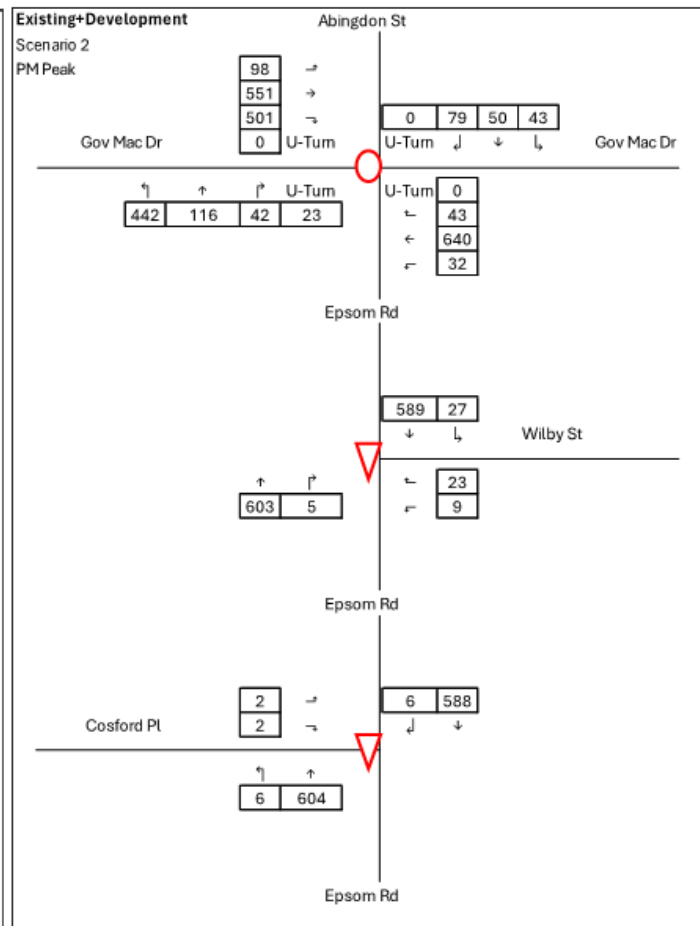
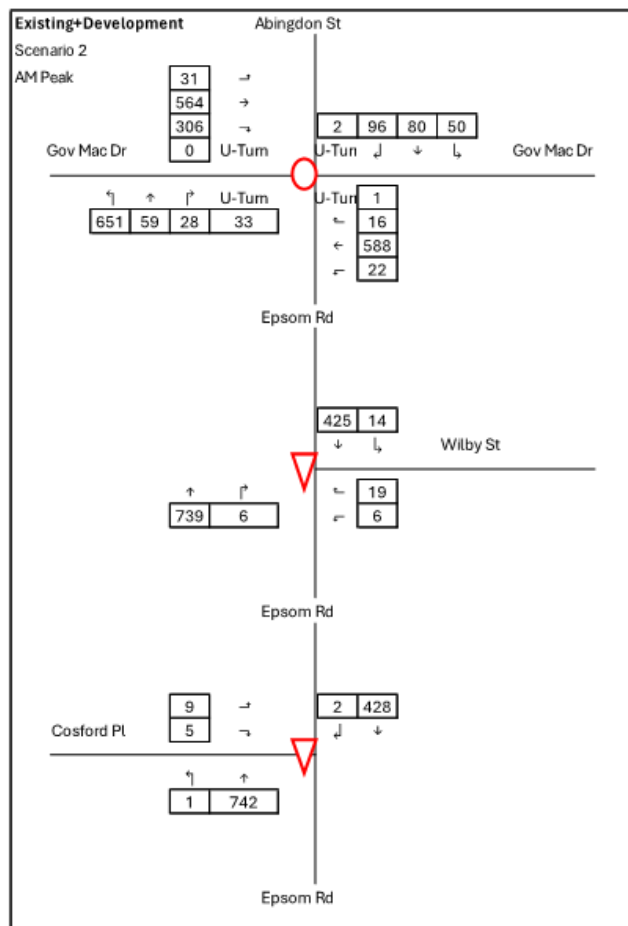


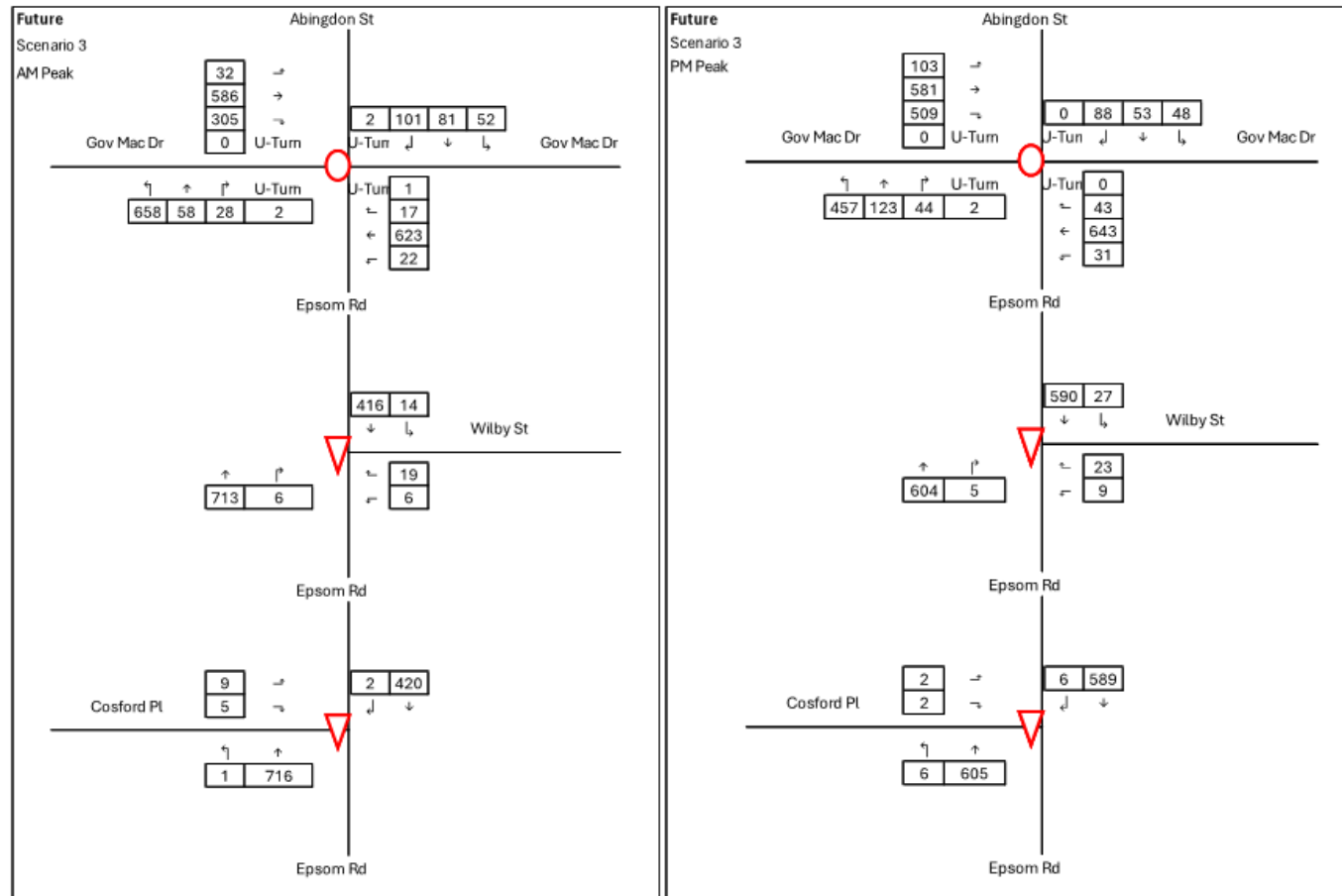


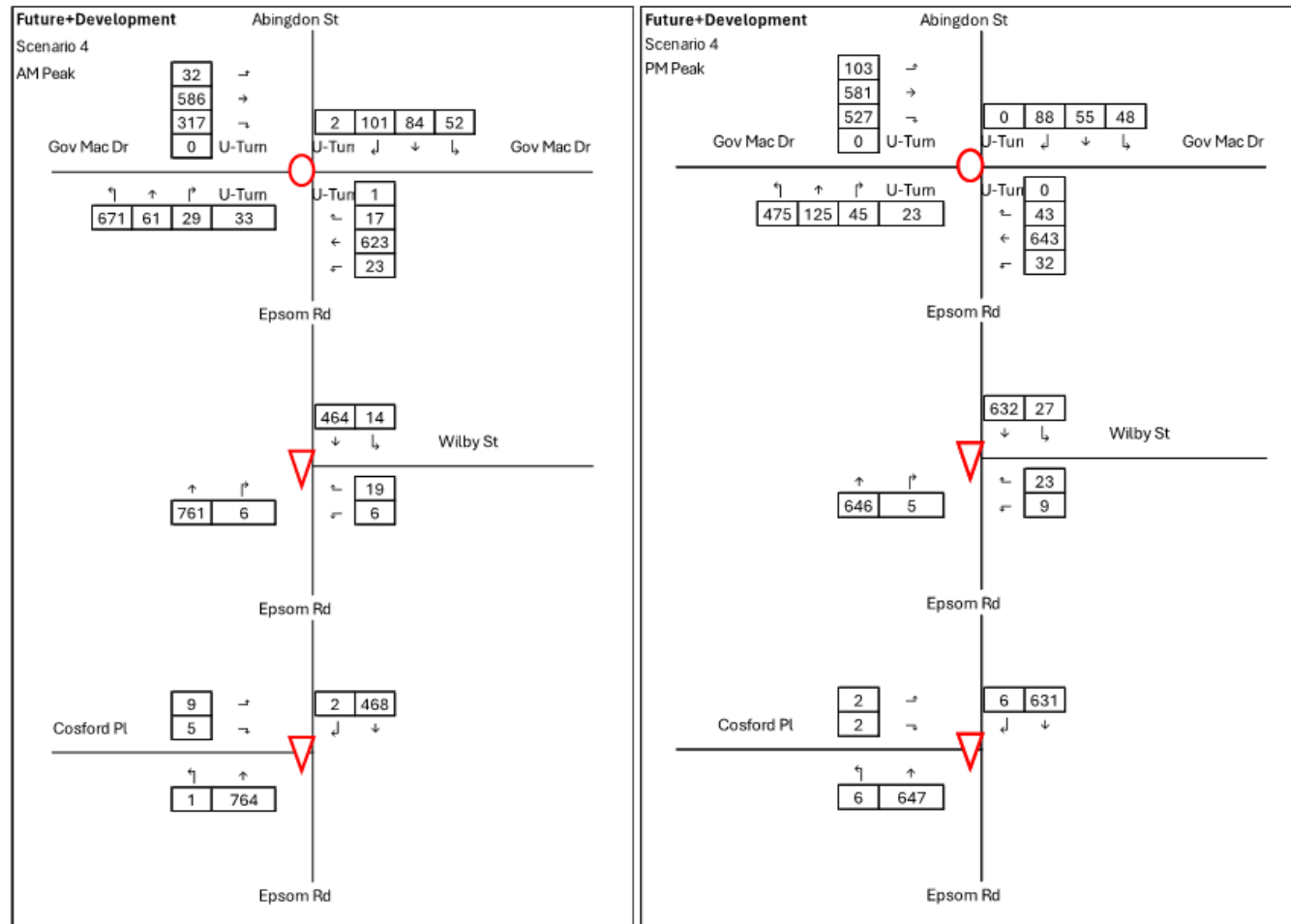
Attachment Two

Turning Movement Diagrams











Attachment Three

SIDRA Results

MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Ex.AM (Site Folder: Existing)]

 Network: N101 [Ex.AM (Network Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Epsom Rd															
1	L2	All MCs	672	2.2	672	2.2	0.949	43.9	LOS D	27.8	198.4	1.00	2.06	2.89	26.4
2	T1	All MCs	59	7.1	59	7.1	0.134	6.5	LOS A	1.0	7.4	0.87	0.70	0.87	40.2
3	R2	All MCs	28	3.7	28	3.7	0.134	10.5	LOS A	1.0	7.4	0.87	0.70	0.87	43.0
3u	U	All MCs	2	0.0	2	0.0	0.134	11.7	LOS A	1.0	7.4	0.87	0.70	0.87	27.0
Approach			761	2.6	761	2.6	0.949	39.7	LOS C	27.8	198.4	0.98	1.90	2.65	27.5
East: Governor Macquarie Dr (E)															
4	L2	All MCs	22	0.0	22	0.0	0.020	5.5	LOS A	0.1	0.8	0.54	0.54	0.54	50.4
5	T1	All MCs	619	9.0	619	9.0	0.670	11.5	LOS A	8.0	60.6	0.90	0.83	1.16	49.4
6	R2	All MCs	17	12.5	17	12.5	0.670	16.1	LOS B	8.0	60.6	0.90	0.83	1.16	45.5
6u	U	All MCs	1	0.0	1	0.0	0.670	17.4	LOS B	8.0	60.6	0.90	0.83	1.16	48.8
Approach			659	8.8	659	8.8	0.670	11.4	LOS A	8.0	60.6	0.89	0.82	1.13	49.3
North: Abingdon St															
7	L2	All MCs	53	4.0	53	4.0	0.067	6.9	LOS A	0.5	3.3	0.77	0.66	0.77	48.2
8	T1	All MCs	81	3.9	81	3.9	0.339	11.8	LOS A	2.8	19.7	1.00	0.79	1.00	36.7
9	R2	All MCs	101	0.0	101	0.0	0.339	15.9	LOS B	2.8	19.7	1.00	0.79	1.00	43.8
9u	U	All MCs	2	0.0	2	0.0	0.339	19.1	LOS B	2.8	19.7	1.00	0.79	1.00	43.8
Approach			237	2.2	237	2.2	0.339	12.5	LOS A	2.8	19.7	0.94	0.76	0.94	43.0
West: Governor Macquarie Dr (W)															
10	L2	All MCs	33	6.5	33	6.5	0.024	4.2	LOS A	0.1	1.0	0.25	0.46	0.25	50.1
11	T1	All MCs	594	21.8	594	21.8	0.660	5.5	LOS A	8.1	64.1	0.60	0.51	0.60	51.3
12	R2	All MCs	308	3.1	308	3.1	0.660	9.6	LOS A	8.1	64.1	0.60	0.51	0.60	47.5
12u	U	All MCs	1	0.0	1	0.0	0.660	11.4	LOS A	8.1	64.1	0.60	0.51	0.60	51.0
Approach			936	15.1	936	15.1	0.660	6.8	LOS A	8.1	64.1	0.59	0.51	0.59	50.4
All Vehicles			2593	8.6	2593	8.6	0.949	18.1	LOS B	27.8	198.4	0.82	1.02	1.37	41.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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Project: C:\Users\Ashwini\Uthishtran\OneDrive - TTPP\22539 123 Epsom Road, Chipping Norton\07 Modelling Files\Model\22539-123 Epsom Rd-240801.sip9

MOVEMENT SUMMARY

 Site: 101 [Epsom Rd-Wilby St Ex.AM (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

 Network: N101 [Ex.AM
(Network Folder: Existing)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
2	T1	All MCs	727	2.7	727	2.7	0.447	0.0	LOS A	0.1	0.7	0.01	0.01	0.02	39.3
3	R2	All MCs	6	0.0	6	0.0	0.447	5.5	LOS A	0.1	0.7	0.01	0.01	0.02	38.8
Approach			734	2.7	734	2.7	0.447	0.1	NA	0.1	0.7	0.01	0.01	0.02	39.3
East: Wilby St															
4	L2	All MCs	6	0.0	6	0.0	0.075	4.8	LOS A	0.2	1.4	0.67	0.83	0.67	32.3
6	R2	All MCs	20	0.0	20	0.0	0.075	12.8	LOS A	0.2	1.4	0.67	0.83	0.67	32.3
Approach			26	0.0	26	0.0	0.075	10.9	LOS A	0.2	1.4	0.67	0.83	0.67	32.3
North: Epsom Rd (N)															
7	L2	All MCs	15	7.1	15	7.1	0.216	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	397	2.9	397	2.9	0.216	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.6
Approach			412	3.1	412	3.1	0.216	0.1	NA	0.0	0.0	0.00	0.02	0.00	39.5
All Vehicles			1172	2.8	1172	2.8	0.447	0.3	NA	0.2	1.4	0.02	0.03	0.02	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Ex.AM (Site Folder: Existing)]

Network: N101 [Ex.AM (Network Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]	m			km/h
South: Epsom Rd (S)															
1	L2	All MCs	1	0.0	1	0.0	0.382	3.6	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	731	2.7	731	2.7	0.382	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach			732	2.7	732	2.7	0.382	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	400	2.9	400	2.9	0.212	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	40.0
9	R2	All MCs	2	0.0	2	0.0	0.212	9.2	LOS A	0.0	0.2	0.01	0.01	0.01	38.9
Approach			402	2.9	402	2.9	0.212	0.0	NA	0.0	0.2	0.01	0.01	0.01	39.9
West: Cosford CI															
10	L2	All MCs	9	0.0	9	0.0	0.029	6.9	LOS A	0.1	0.7	0.65	0.77	0.65	33.5
12	R2	All MCs	5	0.0	5	0.0	0.029	12.5	LOS A	0.1	0.7	0.65	0.77	0.65	35.9
Approach			15	0.0	15	0.0	0.029	8.9	LOS A	0.1	0.7	0.65	0.77	0.65	34.8
All Vehicles			1148	2.7	1148	2.7	0.382	0.2	NA	0.1	0.7	0.01	0.01	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Ex.PM (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

 Network: N101 [Ex.PM (Network Folder: Existing)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Epsom Rd															
1	L2	All MCs	446	2.4	446	2.4	0.479	6.7	LOS A	5.0	35.4	1.00	0.75	1.02	44.9
2	T1	All MCs	120	0.0	120	0.0	0.185	5.8	LOS A	1.7	12.1	0.95	0.68	0.95	40.6
3	R2	All MCs	43	0.0	43	0.0	0.185	9.9	LOS A	1.7	12.1	0.95	0.68	0.95	43.6
3u	U	All MCs	2	0.0	2	0.0	0.185	11.3	LOS A	1.7	12.1	0.95	0.68	0.95	27.5
Approach			612	1.7	612	1.7	0.479	6.7	LOS A	5.0	35.4	0.99	0.73	1.00	43.8
East: Governor Macquarie Dr (E)															
4	L2	All MCs	33	0.0	33	0.0	0.021	5.4	LOS A	0.2	1.1	0.62	0.53	0.62	50.0
5	T1	All MCs	674	11.6	674	11.6	0.522	7.6	LOS A	5.0	38.5	0.85	0.67	0.86	51.2
6	R2	All MCs	45	0.0	45	0.0	0.522	11.7	LOS A	5.0	38.5	0.85	0.67	0.86	47.2
6u	U	All MCs	1	0.0	1	0.0	0.522	13.6	LOS A	5.0	38.5	0.85	0.67	0.86	50.6
Approach			753	10.3	753	10.3	0.522	7.8	LOS A	5.0	38.5	0.84	0.67	0.85	50.9
North: Abingdon St															
7	L2	All MCs	45	0.0	45	0.0	0.069	7.6	LOS A	0.4	2.9	0.72	0.67	0.72	47.8
8	T1	All MCs	51	0.0	51	0.0	0.390	20.7	LOS B	3.0	20.7	0.99	0.90	1.11	31.1
9	R2	All MCs	83	0.0	83	0.0	0.390	25.1	LOS B	3.0	20.7	0.99	0.90	1.11	39.5
9u	U	All MCs	1	0.0	1	0.0	0.390	28.3	LOS B	3.0	20.7	0.99	0.90	1.11	39.5
Approach			180	0.0	180	0.0	0.390	19.5	LOS B	3.0	20.7	0.93	0.84	1.01	39.6
West: Governor Macquarie Dr (W)															
10	L2	All MCs	103	0.0	103	0.0	0.035	4.0	LOS A	0.3	1.9	0.30	0.46	0.30	50.1
11	T1	All MCs	580	6.7	580	6.7	0.388	4.5	LOS A	3.7	27.2	0.43	0.54	0.43	52.0
12	R2	All MCs	508	1.7	508	1.7	0.388	8.9	LOS A	3.7	27.2	0.43	0.54	0.43	48.0
12u	U	All MCs	1	0.0	1	0.0	0.388	10.8	LOS A	3.7	27.2	0.43	0.54	0.43	51.3
Approach			1193	4.0	1193	4.0	0.388	6.4	LOS A	3.7	27.2	0.41	0.53	0.41	50.6
All Vehicles			2737	5.0	2737	5.0	0.522	7.7	LOS A	5.0	38.5	0.69	0.63	0.71	48.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Ex.PM (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Ex.PM
(Network Folder: Existing)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
2	T1	All MCs	591	1.4	591	1.4	0.311	0.0	LOS A	0.1	0.5	0.02	0.02	0.02	39.2
3	R2	All MCs	5	0.0	5	0.0	0.311	8.9	LOS A	0.1	0.5	0.02	0.02	0.02	38.8
Approach			596	1.4	596	1.4	0.311	0.1	NA	0.1	0.5	0.02	0.02	0.02	39.2
East: Wilby St															
4	L2	All MCs	9	0.0	9	0.0	0.091	5.8	LOS A	0.3	1.9	0.71	0.85	0.71	32.0
6	R2	All MCs	24	4.3	24	4.3	0.091	13.9	LOS A	0.3	1.9	0.71	0.85	0.71	32.0
Approach			34	3.1	34	3.1	0.091	11.6	LOS A	0.3	1.9	0.71	0.85	0.71	32.0
North: Epsom Rd (N)															
7	L2	All MCs	28	3.7	28	3.7	0.314	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	576	1.5	576	1.5	0.314	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.5
Approach			604	1.6	604	1.6	0.314	0.2	NA	0.0	0.0	0.00	0.02	0.00	39.4
All Vehicles			1234	1.5	1234	1.5	0.314	0.5	NA	0.3	1.9	0.03	0.04	0.03	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Ex.PM (Site Folder: Existing)]

Network: N101 [Ex.PM (Network Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd (S)															
1	L2	All MCs	6	0.0	6	0.0	0.310	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	592	1.4	592	1.4	0.310	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
Approach			598	1.4	598	1.4	0.310	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.9
North: Epsom Rd (N)															
8	T1	All MCs	575	1.5	575	1.5	0.304	0.0	LOS A	0.1	0.6	0.02	0.02	0.02	39.9
9	R2	All MCs	6	0.0	6	0.0	0.304	9.9	LOS A	0.1	0.6	0.02	0.02	0.02	38.8
Approach			581	1.4	581	1.4	0.304	0.1	NA	0.1	0.6	0.02	0.02	0.02	39.9
West: Cosford CI															
10	L2	All MCs	2	0.0	2	0.0	0.009	5.7	LOS A	0.0	0.2	0.62	0.68	0.62	33.5
12	R2	All MCs	2	0.0	2	0.0	0.009	12.0	LOS A	0.0	0.2	0.62	0.68	0.62	35.9
Approach			4	0.0	4	0.0	0.009	8.9	LOS A	0.0	0.2	0.62	0.68	0.62	35.1
All Vehicles			1183	1.4	1183	1.4	0.310	0.2	NA	0.1	0.6	0.01	0.02	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Ex+Dev.AM (Site Folder: Existing+Dev)]

 Network: N102 [Ex+Dev.AM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd															
1	L2	All MCs	685	2.2	685	2.2	0.980	54.9	LOS D	33.6	239.8	1.00	2.35	3.35	23.5
2	T1	All MCs	62	6.8	62	6.8	0.189	6.7	LOS A	1.5	10.7	0.89	0.72	0.89	39.4
3	R2	All MCs	29	3.6	29	3.6	0.189	10.6	LOS A	1.5	10.7	0.89	0.72	0.89	42.1
3u	U	All MCs	35	0.0	35	0.0	0.189	11.9	LOS A	1.5	10.7	0.89	0.72	0.89	26.1
Approach			812	2.5	812	2.5	0.980	47.7	LOS D	33.6	239.8	0.98	2.10	2.97	24.8
East: Governor Macquarie Dr (E)															
4	L2	All MCs	23	0.0	23	0.0	0.022	5.8	LOS A	0.1	1.0	0.58	0.56	0.58	50.1
5	T1	All MCs	619	9.0	619	9.0	0.706	13.3	LOS A	9.2	69.7	0.95	0.91	1.30	48.2
6	R2	All MCs	17	12.5	17	12.5	0.706	17.9	LOS B	9.2	69.7	0.95	0.91	1.30	44.5
6u	U	All MCs	1	0.0	1	0.0	0.706	19.2	LOS B	9.2	69.7	0.95	0.91	1.30	47.7
Approach			660	8.8	660	8.8	0.706	13.2	LOS A	9.2	69.7	0.94	0.90	1.28	48.2
North: Abingdon St															
7	L2	All MCs	53	4.0	53	4.0	0.069	6.9	LOS A	0.5	3.5	0.79	0.66	0.79	48.2
8	T1	All MCs	84	3.8	84	3.8	0.386	12.9	LOS A	3.3	23.4	1.00	0.83	1.01	35.9
9	R2	All MCs	101	0.0	101	0.0	0.386	16.9	LOS B	3.3	23.4	1.00	0.83	1.01	43.2
9u	U	All MCs	2	0.0	2	0.0	0.386	20.2	LOS B	3.3	23.4	1.00	0.83	1.01	43.2
Approach			240	2.2	240	2.2	0.386	13.3	LOS A	3.3	23.4	0.95	0.79	0.96	42.5
West: Governor Macquarie Dr (W)															
10	L2	All MCs	33	6.5	33	6.5	0.024	4.2	LOS A	0.1	1.0	0.26	0.46	0.26	50.1
11	T1	All MCs	594	21.8	594	21.8	0.704	6.0	LOS A	8.9	70.5	0.72	0.55	0.72	50.9
12	R2	All MCs	322	2.9	322	2.9	0.704	10.0	LOS A	8.9	70.5	0.72	0.55	0.72	46.8
12u	U	All MCs	1	0.0	1	0.0	0.704	11.8	LOS A	8.9	70.5	0.72	0.55	0.72	50.6
Approach			949	14.9	949	14.9	0.704	7.3	LOS A	8.9	70.5	0.71	0.55	0.71	50.0
All Vehicles			2661	8.4	2661	8.4	0.980	21.6	LOS B	33.6	239.8	0.87	1.13	1.56	39.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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Project: C:\Users\Ashwini\Uthishtran\OneDrive - TTPP\22539 123 Epsom Road, Chipping Norton\07 Modelling Files\Model\22539-123 Epsom Rd-240801.sip9

MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Ex+Dev.AM (Site Folder: Existing+Dev)]

Network: N102 [Ex+Dev.AM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec			m				km/h
South: Epsom Rd (S)															
2	T1	All MCs	778	2.6	778	2.6	0.521	0.0	LOS A	0.1	0.9	0.01	0.02	0.02	39.3
3	R2	All MCs	6	0.0	6	0.0	0.521	6.2	LOS A	0.1	0.9	0.01	0.02	0.02	38.8
Approach			784	2.6	784	2.6	0.521	0.1	NA	0.1	0.9	0.01	0.02	0.02	39.3
East: Wilby St															
4	L2	All MCs	6	0.0	6	0.0	0.095	5.1	LOS A	0.2	1.7	0.73	0.86	0.73	31.4
6	R2	All MCs	20	0.0	20	0.0	0.095	15.0	LOS B	0.2	1.7	0.73	0.86	0.73	31.4
Approach			26	0.0	26	0.0	0.095	12.6	LOS A	0.2	1.7	0.73	0.86	0.73	31.4
North: Epsom Rd (N)															
7	L2	All MCs	15	7.1	15	7.1	0.242	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	39.1
8	T1	All MCs	447	2.6	447	2.6	0.242	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	39.6
Approach			462	2.7	462	2.7	0.242	0.1	NA	0.0	0.0	0.00	0.01	0.00	39.6
All Vehicles			1273	2.6	1273	2.6	0.521	0.4	NA	0.2	1.7	0.02	0.03	0.03	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Ex+Dev.AM (Site Folder: Existing+Dev)]

Network: N102 [Ex+Dev.AM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
1	L2	All MCs	1	0.0	1	0.0	0.408	3.6	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	781	2.6	781	2.6	0.408	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach			782	2.6	782	2.6	0.408	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	451	2.6	451	2.6	0.238	0.0	LOS A	0.0	0.3	0.01	0.01	0.01	40.0
9	R2	All MCs	2	0.0	2	0.0	0.238	10.1	LOS A	0.0	0.3	0.01	0.01	0.01	38.9
Approach			453	2.6	453	2.6	0.238	0.0	NA	0.0	0.3	0.01	0.01	0.01	40.0
West: Cosford CI															
10	L2	All MCs	9	0.0	9	0.0	0.033	7.4	LOS A	0.1	0.7	0.69	0.81	0.69	32.9
12	R2	All MCs	5	0.0	5	0.0	0.033	14.5	LOS B	0.1	0.7	0.69	0.81	0.69	35.6
Approach			15	0.0	15	0.0	0.033	10.0	LOS A	0.1	0.7	0.69	0.81	0.69	34.3
All Vehicles			1249	2.5	1249	2.5	0.408	0.3	NA	0.1	0.7	0.01	0.01	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Ex+Dev.PM (Site Folder: Existing+Dev)]

 Network: N101 [Ex+Dev.PM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Epsom Rd															
1	L2	All MCs	465	2.3	465	2.3	0.505	7.2	LOS A	5.5	39.2	1.00	0.78	1.06	44.5
2	T1	All MCs	122	0.0	122	0.0	0.216	5.8	LOS A	2.1	14.4	0.96	0.69	0.96	40.2
3	R2	All MCs	44	0.0	44	0.0	0.216	10.0	LOS A	2.1	14.4	0.96	0.69	0.96	43.1
3u	U	All MCs	24	0.0	24	0.0	0.216	11.4	LOS A	2.1	14.4	0.96	0.69	0.96	27.0
Approach			656	1.6	656	1.6	0.505	7.3	LOS A	5.5	39.2	0.99	0.76	1.03	43.2
East: Governor Macquarie Dr (E)															
4	L2	All MCs	34	0.0	34	0.0	0.022	5.6	LOS A	0.2	1.2	0.65	0.54	0.65	49.8
5	T1	All MCs	674	11.6	674	11.6	0.540	8.3	LOS A	5.6	43.0	0.89	0.71	0.94	51.0
6	R2	All MCs	45	0.0	45	0.0	0.540	12.4	LOS A	5.6	43.0	0.89	0.71	0.94	47.1
6u	U	All MCs	1	0.0	1	0.0	0.540	14.3	LOS A	5.6	43.0	0.89	0.71	0.94	50.4
Approach			754	10.3	754	10.3	0.540	8.5	LOS A	5.6	43.0	0.88	0.70	0.93	50.7
North: Abingdon St															
7	L2	All MCs	45	0.0	45	0.0	0.069	7.7	LOS A	0.4	2.9	0.73	0.67	0.73	47.7
8	T1	All MCs	53	0.0	53	0.0	0.429	24.6	LOS B	3.4	24.0	1.00	0.95	1.20	29.3
9	R2	All MCs	83	0.0	83	0.0	0.429	28.9	LOS C	3.4	24.0	1.00	0.95	1.20	37.9
9u	U	All MCs	1	0.0	1	0.0	0.429	32.2	LOS C	3.4	24.0	1.00	0.95	1.20	37.9
Approach			182	0.0	182	0.0	0.429	22.4	LOS B	3.4	24.0	0.93	0.88	1.08	38.2
West: Governor Macquarie Dr (W)															
10	L2	All MCs	103	0.0	103	0.0	0.035	4.0	LOS A	0.3	1.9	0.31	0.46	0.31	50.0
11	T1	All MCs	580	6.7	580	6.7	0.399	4.6	LOS A	3.9	28.6	0.46	0.54	0.46	51.8
12	R2	All MCs	527	1.6	527	1.6	0.399	9.0	LOS A	3.9	28.6	0.46	0.54	0.46	47.8
12u	U	All MCs	1	0.0	1	0.0	0.399	10.9	LOS A	3.9	28.6	0.46	0.54	0.46	51.2
Approach			1212	3.9	1212	3.9	0.399	6.4	LOS A	3.9	28.6	0.45	0.54	0.45	50.4
All Vehicles			2803	4.8	2803	4.8	0.540	8.2	LOS A	5.6	43.0	0.72	0.66	0.75	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Ex+Dev.PM (Site Folder: Existing+Dev)]

Network: N101 [Ex+Dev.PM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd (S)															
2	T1	All MCs	635	1.3	635	1.3	0.334	0.0	LOS A	0.1	0.5	0.01	0.02	0.01	39.3
3	R2	All MCs	5	0.0	5	0.0	0.334	9.9	LOS A	0.1	0.5	0.01	0.02	0.01	38.8
Approach			640	1.3	640	1.3	0.334	0.1	NA	0.1	0.5	0.01	0.02	0.01	39.2
East: Wilby St															
4	L2	All MCs	9	0.0	9	0.0	0.105	6.1	LOS A	0.3	2.2	0.75	0.87	0.75	31.1
6	R2	All MCs	24	4.3	24	4.3	0.105	16.0	LOS B	0.3	2.2	0.75	0.87	0.75	31.1
Approach			34	3.1	34	3.1	0.105	13.2	LOS A	0.3	2.2	0.75	0.87	0.75	31.1
North: Epsom Rd (N)															
7	L2	All MCs	28	3.7	28	3.7	0.336	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	620	1.4	620	1.4	0.336	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.5
Approach			648	1.5	648	1.5	0.336	0.2	NA	0.0	0.0	0.00	0.02	0.00	39.4
All Vehicles			1322	1.4	1322	1.4	0.336	0.5	NA	0.3	2.2	0.03	0.04	0.03	38.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Ex+Dev.PM (Site Folder: Existing+Dev)]

Network: N101 [Ex+Dev.PM (Network Folder: Ex+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec			m				km/h
South: Epsom Rd (S)															
1	L2	All MCs	6	0.0	6	0.0	0.332	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	636	1.3	636	1.3	0.332	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
Approach			642	1.3	642	1.3	0.332	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	619	1.4	619	1.4	0.327	0.0	LOS A	0.1	0.6	0.02	0.02	0.02	39.9
9	R2	All MCs	6	0.0	6	0.0	0.327	11.0	LOS A	0.1	0.6	0.02	0.02	0.02	38.8
Approach			625	1.3	625	1.3	0.327	0.1	NA	0.1	0.6	0.02	0.02	0.02	39.9
West: Cosford CI															
10	L2	All MCs	2	0.0	2	0.0	0.010	6.0	LOS A	0.0	0.2	0.66	0.71	0.66	33.0
12	R2	All MCs	2	0.0	2	0.0	0.010	13.7	LOS A	0.0	0.2	0.66	0.71	0.66	35.6
Approach			4	0.0	4	0.0	0.010	9.8	LOS A	0.0	0.2	0.66	0.71	0.66	34.7
All Vehicles			1272	1.3	1272	1.3	0.332	0.2	NA	0.1	0.6	0.01	0.02	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Fu.AM (Site Folder: Future)]

 Network: N101 [Fu.AM (Network Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Epsom Rd															
1	L2	All MCs	693	2.1	693	2.1	1.048	92.1	LOS F	49.3	351.5	1.00	3.17	4.77	17.2
2	T1	All MCs	61	6.9	61	6.9	0.149	7.0	LOS A	1.2	8.4	0.90	0.72	0.90	39.9
3	R2	All MCs	29	3.6	29	3.6	0.149	11.0	LOS A	1.2	8.4	0.90	0.72	0.90	42.7
3u	U	All MCs	2	0.0	2	0.0	0.149	12.2	LOS A	1.2	8.4	0.90	0.72	0.90	26.5
Approach			785	2.5	785	2.5	1.048	82.3	LOS F	49.3	351.5	0.99	2.88	4.31	18.5
East: Governor Macquarie Dr (E)															
4	L2	All MCs	23	0.0	23	0.0	0.022	5.6	LOS A	0.1	0.9	0.56	0.55	0.56	50.3
5	T1	All MCs	656	8.5	656	8.5	0.724	13.3	LOS A	9.9	74.1	0.95	0.91	1.31	48.3
6	R2	All MCs	18	11.8	18	11.8	0.724	17.9	LOS B	9.9	74.1	0.95	0.91	1.31	44.6
6u	U	All MCs	1	0.0	1	0.0	0.724	19.2	LOS B	9.9	74.1	0.95	0.91	1.31	47.7
Approach			698	8.3	698	8.3	0.724	13.1	LOS A	9.9	74.1	0.94	0.90	1.29	48.2
North: Abingdon St															
7	L2	All MCs	55	3.8	55	3.8	0.072	7.1	LOS A	0.5	3.7	0.79	0.67	0.79	48.0
8	T1	All MCs	85	3.7	85	3.7	0.382	12.6	LOS A	3.2	22.8	1.00	0.81	1.00	36.1
9	R2	All MCs	106	0.0	106	0.0	0.382	16.7	LOS B	3.2	22.8	1.00	0.81	1.00	43.4
9u	U	All MCs	2	0.0	2	0.0	0.382	19.9	LOS B	3.2	22.8	1.00	0.81	1.00	43.4
Approach			248	2.1	248	2.1	0.382	13.2	LOS A	3.2	22.8	0.95	0.78	0.95	42.6
West: Governor Macquarie Dr (W)															
10	L2	All MCs	34	6.3	34	6.3	0.025	4.2	LOS A	0.1	1.1	0.26	0.46	0.26	50.1
11	T1	All MCs	617	21.0	617	21.0	0.688	5.6	LOS A	8.9	69.8	0.64	0.52	0.64	51.2
12	R2	All MCs	321	3.0	321	3.0	0.688	9.7	LOS A	8.9	69.8	0.64	0.52	0.64	47.3
12u	U	All MCs	1	0.0	1	0.0	0.688	11.5	LOS A	8.9	69.8	0.64	0.52	0.64	50.8
Approach			973	14.5	973	14.5	0.688	6.9	LOS A	8.9	69.8	0.63	0.52	0.63	50.3
All Vehicles			2704	8.3	2704	8.3	1.048	31.0	LOS C	49.3	351.5	0.84	1.33	1.90	35.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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Project: C:\Users\Ashwini\OneDrive - TTPP\22539 123 Epsom Road, Chipping Norton\07 Modelling Files\Model\22539-123 Epsom Rd-240801.sip9

MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Fu.AM (Site Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu.AM
(Network Folder: Future)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Epsom Rd (S)															
2	T1	All MCs	751	2.7	751	2.7	0.705	0.1	LOS A	0.2	1.3	0.02	0.02	0.03	39.0
3	R2	All MCs	6	0.0	6	0.0	0.705	6.8	LOS A	0.2	1.3	0.02	0.02	0.03	38.8
Approach			757	2.6	757	2.6	0.705	0.1	NA	0.2	1.3	0.02	0.02	0.03	39.0
East: Wilby St															
4	L2	All MCs	6	0.0	6	0.0	0.118	5.0	LOS A	0.2	1.6	0.71	0.85	0.71	31.7
6	R2	All MCs	20	0.0	20	0.0	0.118	14.2	LOS A	0.2	1.6	0.71	0.85	0.71	31.7
Approach			26	0.0	26	0.0	0.118	12.0	LOS A	0.2	1.6	0.71	0.85	0.71	31.7
North: Epsom Rd (N)															
7	L2	All MCs	15	7.1	15	7.1	0.237	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	438	2.6	438	2.6	0.237	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.6
Approach			453	2.8	453	2.8	0.237	0.1	NA	0.0	0.0	0.00	0.02	0.00	39.6
All Vehicles			1236	2.6	1236	2.6	0.705	0.4	NA	0.2	1.6	0.03	0.04	0.03	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Fu.AM (Site Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu.AM
(Network Folder: Future)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
1	L2	All MCs	1	0.0	1	0.0	0.394	3.6	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	754	2.7	754	2.7	0.394	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach			755	2.6	755	2.6	0.394	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	442	2.6	442	2.6	0.233	0.0	LOS A	0.0	0.3	0.01	0.01	0.01	40.0
9	R2	All MCs	2	0.0	2	0.0	0.233	9.4	LOS A	0.0	0.3	0.01	0.01	0.01	38.9
Approach			444	2.6	444	2.6	0.233	0.0	NA	0.0	0.3	0.01	0.01	0.01	40.0
West: Cosford CI															
10	L2	All MCs	9	0.0	9	0.0	0.032	7.1	LOS A	0.1	0.7	0.67	0.79	0.67	33.2
12	R2	All MCs	5	0.0	5	0.0	0.032	13.7	LOS A	0.1	0.7	0.67	0.79	0.67	35.7
Approach			15	0.0	15	0.0	0.032	9.5	LOS A	0.1	0.7	0.67	0.79	0.67	34.5
All Vehicles			1214	2.6	1214	2.6	0.394	0.2	NA	0.1	0.7	0.01	0.01	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Fu.PM (Site Folder: Future)]

 Network: N101 [Fu.PM (Network Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Epsom Rd															
1	L2	All MCs	481	3.1	481	3.1	0.524	7.7	LOS A	5.9	42.2	1.00	0.81	1.09	44.0
2	T1	All MCs	129	3.3	129	3.3	0.206	5.9	LOS A	1.9	13.8	0.96	0.69	0.96	40.5
3	R2	All MCs	46	2.3	46	2.3	0.206	10.0	LOS A	1.9	13.8	0.96	0.69	0.96	43.4
3u	U	All MCs	2	0.0	2	0.0	0.206	11.4	LOS A	1.9	13.8	0.96	0.69	0.96	27.4
Approach			659	3.0	659	3.0	0.524	7.5	LOS A	5.9	42.2	0.99	0.78	1.06	43.2
East: Governor Macquarie Dr (E)															
4	L2	All MCs	33	0.0	33	0.0	0.022	5.6	LOS A	0.2	1.1	0.65	0.54	0.65	49.8
5	T1	All MCs	677	8.2	677	8.2	0.533	8.1	LOS A	5.5	41.0	0.89	0.70	0.92	51.1
6	R2	All MCs	45	4.7	45	4.7	0.533	12.4	LOS A	5.5	41.0	0.89	0.70	0.92	47.1
6u	U	All MCs	1	0.0	1	0.0	0.533	14.2	LOS A	5.5	41.0	0.89	0.70	0.92	50.5
Approach			756	7.7	756	7.7	0.533	8.2	LOS A	5.5	41.0	0.88	0.69	0.91	50.8
North: Abingdon St															
7	L2	All MCs	51	4.2	51	4.2	0.088	8.9	LOS A	0.5	3.9	0.77	0.71	0.77	46.9
8	T1	All MCs	56	5.7	56	5.7	0.540	37.4	LOS C	4.9	34.6	1.00	1.09	1.45	24.7
9	R2	All MCs	93	0.0	93	0.0	0.540	40.8	LOS C	4.9	34.6	1.00	1.09	1.45	33.7
9u	U	All MCs	1	0.0	1	0.0	0.540	44.0	LOS D	4.9	34.6	1.00	1.09	1.45	33.7
Approach			200	2.6	200	2.6	0.540	31.8	LOS C	4.9	34.6	0.94	1.00	1.28	34.4
West: Governor Macquarie Dr (W)															
10	L2	All MCs	108	1.9	108	1.9	0.038	4.0	LOS A	0.3	2.0	0.32	0.46	0.32	50.0
11	T1	All MCs	612	21.2	612	21.2	0.430	4.8	LOS A	4.3	33.0	0.46	0.55	0.46	51.4
12	R2	All MCs	536	1.8	536	1.8	0.430	9.0	LOS A	4.3	33.0	0.46	0.55	0.46	47.7
12u	U	All MCs	1	0.0	1	0.0	0.430	10.9	LOS A	4.3	33.0	0.46	0.55	0.46	51.1
Approach			1257	11.2	1257	11.2	0.430	6.5	LOS A	4.3	33.0	0.45	0.54	0.45	50.2
All Vehicles			2872	7.8	2872	7.8	0.540	8.9	LOS A	5.9	42.2	0.72	0.67	0.77	47.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Fu.PM (Site Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu.PM
(Network Folder: Future)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd (S)															
2	T1	All MCs	636	3.1	636	3.1	0.339	0.0	LOS A	0.1	0.5	0.01	0.02	0.01	39.3
3	R2	All MCs	5	0.0	5	0.0	0.339	9.9	LOS A	0.1	0.5	0.01	0.02	0.01	38.8
Approach			641	3.1	641	3.1	0.339	0.1	NA	0.1	0.5	0.01	0.02	0.01	39.2
East: Wilby St															
4	L2	All MCs	9	0.0	9	0.0	0.097	6.1	LOS A	0.3	2.1	0.74	0.87	0.74	31.5
6	R2	All MCs	24	0.0	24	0.0	0.097	14.8	LOS B	0.3	2.1	0.74	0.87	0.74	31.5
Approach			34	0.0	34	0.0	0.097	12.4	LOS A	0.3	2.1	0.74	0.87	0.74	31.5
North: Epsom Rd (N)															
7	L2	All MCs	28	3.7	28	3.7	0.338	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	621	1.9	621	1.9	0.338	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.5
Approach			649	1.9	649	1.9	0.338	0.2	NA	0.0	0.0	0.00	0.02	0.00	39.4
All Vehicles			1324	2.5	1324	2.5	0.339	0.4	NA	0.3	2.1	0.03	0.04	0.03	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Fu.PM (Site Folder: Future)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu.PM
(Network Folder: Future)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
1	L2	All MCs	6	0.0	6	0.0	0.337	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	637	3.1	637	3.1	0.337	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach			643	3.1	643	3.1	0.337	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	620	1.9	620	1.9	0.329	0.0	LOS A	0.1	0.6	0.02	0.02	0.02	39.9
9	R2	All MCs	6	0.0	6	0.0	0.329	11.3	LOS A	0.1	0.6	0.02	0.02	0.02	38.8
Approach			626	1.8	626	1.8	0.329	0.1	NA	0.1	0.6	0.02	0.02	0.02	39.9
West: Cosford CI															
10	L2	All MCs	2	0.0	2	0.0	0.010	6.1	LOS A	0.0	0.2	0.67	0.71	0.67	32.9
12	R2	All MCs	2	0.0	2	0.0	0.010	13.9	LOS A	0.0	0.2	0.67	0.71	0.67	35.6
Approach			4	0.0	4	0.0	0.010	10.0	LOS A	0.0	0.2	0.67	0.71	0.67	34.6
All Vehicles			1274	2.5	1274	2.5	0.337	0.2	NA	0.1	0.6	0.01	0.02	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Fu+Dev.AM (Site Folder: Future+Dev)]

 Network: N101 [Fu+Dev.AM (Network Folder: Future+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd															
1	L2	All MCs	706	2.1	706	2.1	1.083	115.4	LOS F	52.3	372.8	1.00	3.63	5.58	14.7
2	T1	All MCs	64	6.6	64	6.6	0.208	7.2	LOS A	1.7	12.1	0.93	0.73	0.93	39.2
3	R2	All MCs	31	3.4	31	3.4	0.208	11.2	LOS A	1.7	12.1	0.93	0.73	0.93	41.8
3u	U	All MCs	35	0.0	35	0.0	0.208	12.4	LOS A	1.7	12.1	0.93	0.73	0.93	25.7
Approach			836	2.4	836	2.4	1.083	99.0	LOS F	52.3	372.8	0.99	3.18	4.86	16.0
East: Governor Macquarie Dr (E)															
4	L2	All MCs	24	0.0	24	0.0	0.024	5.9	LOS A	0.1	1.0	0.60	0.57	0.60	50.1
5	T1	All MCs	656	8.5	656	8.5	0.763	15.7	LOS B	11.5	86.3	1.00	1.00	1.49	46.8
6	R2	All MCs	18	11.8	18	11.8	0.763	20.4	LOS B	11.5	86.3	1.00	1.00	1.49	43.3
6u	U	All MCs	1	0.0	1	0.0	0.763	21.6	LOS B	11.5	86.3	1.00	1.00	1.49	46.2
Approach			699	8.3	699	8.3	0.763	15.5	LOS B	11.5	86.3	0.99	0.99	1.46	46.7
North: Abingdon St															
7	L2	All MCs	55	3.8	55	3.8	0.075	7.1	LOS A	0.5	3.9	0.81	0.68	0.81	48.0
8	T1	All MCs	88	3.6	88	3.6	0.438	15.6	LOS B	4.0	28.6	1.00	0.90	1.11	34.2
9	R2	All MCs	106	0.0	106	0.0	0.438	19.7	LOS B	4.0	28.6	1.00	0.90	1.11	41.9
9u	U	All MCs	2	0.0	2	0.0	0.438	22.9	LOS B	4.0	28.6	1.00	0.90	1.11	41.9
Approach			252	2.1	252	2.1	0.438	15.5	LOS B	4.0	28.6	0.96	0.85	1.04	41.2
West: Governor Macquarie Dr (W)															
10	L2	All MCs	34	6.3	34	6.3	0.025	4.2	LOS A	0.1	1.1	0.27	0.46	0.27	50.1
11	T1	All MCs	617	21.0	617	21.0	0.733	6.1	LOS A	9.7	76.6	0.77	0.56	0.77	50.8
12	R2	All MCs	334	2.8	334	2.8	0.733	10.1	LOS A	9.7	76.6	0.77	0.56	0.77	46.6
12u	U	All MCs	1	0.0	1	0.0	0.733	12.0	LOS A	9.7	76.6	0.77	0.56	0.77	50.4
Approach			985	14.3	985	14.3	0.733	7.4	LOS A	9.7	76.6	0.75	0.56	0.75	49.8
All Vehicles			2772	8.1	2772	8.1	1.083	37.8	LOS C	52.3	372.8	0.90	1.48	2.20	32.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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Project: C:\Users\AshwiniUthishtran\OneDrive - TTPP\22539 123 Epsom Road, Chipping Norton\07 Modelling Files\Model\22539-123 Epsom Rd-240801.sip9

MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Fu+Dev.AM (Site Folder: Future +Dev)]

Network: N101 [Fu+Dev.AM (Network Folder: Future+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec			m				km/h
South: Epsom Rd (S)															
2	T1	All MCs	801	2.5	801	2.5	0.423	0.0	LOS A	7.7	55.3	0.01	0.01	0.01	39.3
3	R2	All MCs	6	0.0	6	0.0	0.423	6.6	LOS A	7.7	55.3	0.01	0.01	0.01	38.9
Approach			807	2.5	807	2.5	0.423	0.1	NA	7.7	55.3	0.01	0.01	0.01	39.3
East: Wilby St															
4	L2	All MCs	6	0.0	6	0.0	0.155	5.5	LOS A	0.3	1.9	0.77	0.89	0.79	30.6
6	R2	All MCs	20	0.0	20	0.0	0.155	16.9	LOS B	0.3	1.9	0.77	0.89	0.79	30.6
Approach			26	0.0	26	0.0	0.155	14.2	LOS A	0.3	1.9	0.77	0.89	0.79	30.6
North: Epsom Rd (N)															
7	L2	All MCs	15	7.1	15	7.1	0.263	3.5	LOS A	0.0	0.0	0.00	0.01	0.00	39.1
8	T1	All MCs	488	2.4	488	2.4	0.263	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	39.7
Approach			503	2.5	503	2.5	0.263	0.1	NA	0.0	0.0	0.00	0.01	0.00	39.6
All Vehicles			1337	2.4	1337	2.4	0.423	0.4	NA	7.7	55.3	0.02	0.03	0.02	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Fu+Dev.AM (Site Folder: Future+Dev)]

Network: N101 [Fu+Dev.AM (Network Folder: Future+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd (S)															
1	L2	All MCs	1	0.0	1	0.0	0.609	4.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.0
2	T1	All MCs	804	2.5	804	2.5	0.609	0.6	LOS A	0.0	0.0	0.00	0.00	0.00	39.5
Approach			805	2.5	805	2.5	0.609	0.6	NA	0.0	0.0	0.00	0.00	0.00	39.5
North: Epsom Rd (N)															
8	T1	All MCs	493	2.4	493	2.4	0.260	0.0	LOS A	0.0	0.3	0.01	0.01	0.01	40.0
9	R2	All MCs	2	0.0	2	0.0	0.260	10.4	LOS A	0.0	0.3	0.01	0.01	0.01	38.9
Approach			495	2.3	495	2.3	0.260	0.0	NA	0.0	0.3	0.01	0.01	0.01	40.0
West: Cosford CI															
10	L2	All MCs	9	0.0	9	0.0	0.047	7.7	LOS A	0.1	0.8	0.71	0.85	0.71	32.5
12	R2	All MCs	5	0.0	5	0.0	0.047	16.1	LOS B	0.1	0.8	0.71	0.85	0.71	35.3
Approach			15	0.0	15	0.0	0.047	10.7	LOS A	0.1	0.8	0.71	0.85	0.71	33.9
All Vehicles			1315	2.4	1315	2.4	0.609	0.5	NA	0.1	0.8	0.01	0.01	0.01	39.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

 Site: 101 [Gov Macq Dr-Epsom Rd Fu+Dev.PM (Site Folder: Future+Dev)]

 Network: N101 [Fu+Dev.PM (Network Folder: Future+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd															
1	L2	All MCs	500	2.9	500	2.9	0.550	8.2	LOS A	6.5	46.6	1.00	0.85	1.13	43.6
2	T1	All MCs	132	3.2	132	3.2	0.237	6.0	LOS A	2.3	16.2	0.97	0.70	0.97	40.1
3	R2	All MCs	47	2.2	47	2.2	0.237	10.1	LOS A	2.3	16.2	0.97	0.70	0.97	43.0
3u	U	All MCs	24	0.0	24	0.0	0.237	11.4	LOS A	2.3	16.2	0.97	0.70	0.97	27.0
Approach			703	2.8	703	2.8	0.550	8.1	LOS A	6.5	46.6	0.99	0.81	1.09	42.6
East: Governor Macquarie Dr (E)															
4	L2	All MCs	34	0.0	34	0.0	0.023	5.8	LOS A	0.2	1.2	0.68	0.55	0.68	49.6
5	T1	All MCs	677	8.2	677	8.2	0.553	8.9	LOS A	6.1	45.9	0.93	0.74	1.01	50.9
6	R2	All MCs	45	4.7	45	4.7	0.553	13.2	LOS A	6.1	45.9	0.93	0.74	1.01	46.9
6u	U	All MCs	1	0.0	1	0.0	0.553	15.0	LOS B	6.1	45.9	0.93	0.74	1.01	50.3
Approach			757	7.6	757	7.6	0.553	9.0	LOS A	6.1	45.9	0.92	0.73	0.99	50.6
North: Abingdon St															
7	L2	All MCs	51	4.2	51	4.2	0.089	8.9	LOS A	0.5	3.9	0.78	0.71	0.78	46.9
8	T1	All MCs	58	5.5	58	5.5	0.601	47.4	LOS D	5.8	41.2	1.00	1.17	1.60	21.9
9	R2	All MCs	93	0.0	93	0.0	0.601	50.7	LOS D	5.8	41.2	1.00	1.17	1.60	30.9
9u	U	All MCs	1	0.0	1	0.0	0.601	54.0	LOS D	5.8	41.2	1.00	1.17	1.60	30.9
Approach			202	2.6	202	2.6	0.601	39.3	LOS C	5.8	41.2	0.94	1.06	1.40	31.8
West: Governor Macquarie Dr (W)															
10	L2	All MCs	108	1.9	108	1.9	0.038	4.1	LOS A	0.3	2.1	0.33	0.46	0.33	50.0
11	T1	All MCs	612	21.2	612	21.2	0.442	4.8	LOS A	4.5	34.9	0.49	0.55	0.49	51.3
12	R2	All MCs	555	1.7	555	1.7	0.442	9.0	LOS A	4.5	34.9	0.49	0.55	0.49	47.5
12u	U	All MCs	1	0.0	1	0.0	0.442	10.9	LOS A	4.5	34.9	0.49	0.55	0.49	51.0
Approach			1276	11.1	1276	11.1	0.442	6.6	LOS A	4.5	34.9	0.48	0.55	0.48	50.0
All Vehicles			2938	7.6	2938	7.6	0.601	9.8	LOS A	6.5	46.6	0.75	0.69	0.82	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Wilby St Fu+Dev.PM (Site Folder: Future +Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu+Dev.PM (Network Folder: Future+Dev)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Epsom Rd (S)															
2	T1	All MCs	680	2.9	680	2.9	0.362	0.0	LOS A	0.1	0.6	0.01	0.02	0.02	39.2
3	R2	All MCs	5	0.0	5	0.0	0.362	11.1	LOS A	0.1	0.6	0.01	0.02	0.02	38.8
Approach			685	2.9	685	2.9	0.362	0.1	NA	0.1	0.6	0.01	0.02	0.02	39.2
East: Wilby St															
4	L2	All MCs	9	0.0	9	0.0	0.112	6.5	LOS A	0.3	2.3	0.78	0.89	0.78	30.7
6	R2	All MCs	24	0.0	24	0.0	0.112	16.9	LOS B	0.3	2.3	0.78	0.89	0.78	30.7
Approach			34	0.0	34	0.0	0.112	14.0	LOS A	0.3	2.3	0.78	0.89	0.78	30.7
North: Epsom Rd (N)															
7	L2	All MCs	28	3.7	28	3.7	0.361	3.5	LOS A	0.0	0.0	0.00	0.02	0.00	39.1
8	T1	All MCs	665	1.7	665	1.7	0.361	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	39.5
Approach			694	1.8	694	1.8	0.361	0.2	NA	0.0	0.0	0.00	0.02	0.00	39.4
All Vehicles			1413	2.3	1413	2.3	0.362	0.5	NA	0.3	2.3	0.03	0.04	0.03	38.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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MOVEMENT SUMMARY

Site: 101 [Epsom Rd-Cosford CI Fu+Dev.PM (Site Folder: Future+Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: N101 [Fu+Dev.PM (Network Folder: Future+Dev)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Epsom Rd (S)															
1	L2	All MCs	6	0.0	6	0.0	0.359	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	39.4
2	T1	All MCs	681	2.9	681	2.9	0.359	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	39.8
Approach			687	2.9	687	2.9	0.359	0.2	NA	0.0	0.0	0.00	0.00	0.00	39.8
North: Epsom Rd (N)															
8	T1	All MCs	664	1.7	664	1.7	0.352	0.0	LOS A	0.1	0.7	0.02	0.02	0.02	39.9
9	R2	All MCs	6	0.0	6	0.0	0.352	12.7	LOS A	0.1	0.7	0.02	0.02	0.02	38.8
Approach			671	1.7	671	1.7	0.352	0.1	NA	0.1	0.7	0.02	0.02	0.02	39.9
West: Cosford CI															
10	L2	All MCs	2	0.0	2	0.0	0.011	6.4	LOS A	0.0	0.2	0.71	0.75	0.71	32.2
12	R2	All MCs	2	0.0	2	0.0	0.011	15.8	LOS B	0.0	0.2	0.71	0.75	0.71	35.2
Approach			4	0.0	4	0.0	0.011	11.1	LOS A	0.0	0.2	0.71	0.75	0.71	34.1
All Vehicles			1362	2.3	1362	2.3	0.359	0.2	NA	0.1	0.7	0.01	0.02	0.01	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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.

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3:44:42 PM

Project: C:\Users\AshwiniUthishtran\OneDrive - TTPP\22539 123 Epsom Road, Chipping Norton\07 Modelling Files\Model\22539-123 Epsom Rd-240801.sip9



Attachment Four

Raw Survey Data

Intersection Count Survey (Governor Macquarie Drive-Epsom Road)

[illegible]

Vehicle Queue Survey (Governor Macquarie Drive-Epsom Road)

Time	S1	S2
06:00-06:05	1	1
06:05-06:10	1	0
06:10-06:15	0	0
06:15-06:20	1	0
06:20-06:25	0	0
06:25-06:30	0	1
06:30-06:35	3	1
06:35-06:40	0	1
06:40-06:45	2	0
06:45-06:50	1	1
06:50-06:55	1	0
06:55-07:00	4	0
07:00-07:05	3	1
07:05-07:10	3	0
07:10-07:15	5	1
07:15-07:20	7	0
07:20-07:25	3	1
07:25-07:30	4	1
07:30-07:35	4	1
07:35-07:40	6	1
07:40-07:45	10	1
07:45-07:50	27	2
07:50-07:55	23	1
07:55-08:00	29	1
08:00-08:05	10	1
08:05-08:10	5	3
08:10-08:15	28	2
08:15-08:20	5	1
08:20-08:25	7	1
08:25-08:30	6	1
08:30-08:35	6	0
08:35-08:40	5	1
08:40-08:45	5	1
08:45-08:50	0	0
08:50-08:55	3	4
08:55-09:00	4	2

15:00-15:05	7	2
15:05-15:10	3	2
15:10-15:15	4	1
15:15-15:20	4	2
15:20-15:25	4	3
15:25-15:30	2	2
15:30-15:35	7	2
15:35-15:40	7	2
15:40-15:45	2	2
15:45-15:50	3	1
15:50-15:55	2	2
15:55-16:00	1	2
16:00-16:05	4	1
16:05-16:10	4	1
16:10-16:15	4	2
16:15-16:20	4	1
16:20-16:25	5	2
16:25-16:30	4	0
16:30-16:35	4	2
16:35-16:40	3	2
16:40-16:45	6	3
16:45-16:50	4	1
16:50-16:55	4	3
16:55-17:00	4	1
17:00-17:05	4	3
17:05-17:10	5	2
17:10-17:15	3	2
17:15-17:20	3	2
17:20-17:25	6	2
17:25-17:30	5	2
17:30-17:35	3	1
17:35-17:40	5	2
17:40-17:45	4	2
17:45-17:50	5	1
17:50-17:55	3	1
17:55-18:00	2	2

Time	E1	E2
06:00-06:05	0	0
06:05-06:10	0	0
06:10-06:15	0	0
06:15-06:20	0	0
06:20-06:25	0	0
06:25-06:30	0	0
06:30-06:35	0	0
06:35-06:40	0	0
06:40-06:45	0	0
06:45-06:50	0	0
06:50-06:55	0	0
06:55-07:00	0	0
07:00-07:05	0	0
07:05-07:10	0	0
07:10-07:15	0	7
07:15-07:20	0	0
07:20-07:25	0	5
07:25-07:30	0	0
07:30-07:35	1	2
07:35-07:40	0	3
07:40-07:45	0	6
07:45-07:50	0	0
07:50-07:55	0	0
07:55-08:00	0	4
08:00-08:05	0	0
08:05-08:10	0	0
08:10-08:15	0	2
08:15-08:20	0	9
08:20-08:25	0	5
08:25-08:30	0	7
08:30-08:35	0	0
08:35-08:40	0	1
08:40-08:45	0	0
08:45-08:50	0	0
08:50-08:55	0	0
08:55-09:00	0	0

15:00-15:05	0	9
15:05-15:10	0	0
15:10-15:15	0	3
15:15-15:20	0	5
15:20-15:25	0	0
15:25-15:30	0	0
15:30-15:35	0	3
15:35-15:40	0	1
15:40-15:45	0	3
15:45-15:50	0	3
15:50-15:55	0	5
15:55-16:00	0	0
16:00-16:05	0	3
16:05-16:10	0	0
16:10-16:15	0	4
16:15-16:20	0	0
16:20-16:25	0	2
16:25-16:30	0	1
16:30-16:35	0	0
16:35-16:40	0	3
16:40-16:45	0	2
16:45-16:50	0	3
16:50-16:55	0	4
16:55-17:00	0	7
17:00-17:05	0	2
17:05-17:10	0	0
17:10-17:15	0	1
17:15-17:20	0	0
17:20-17:25	1	3
17:25-17:30	0	3
17:30-17:35	0	4
17:35-17:40	0	4
17:40-17:45	0	3
17:45-17:50	0	5
17:50-17:55	0	3
17:55-18:00	1	7

Time	N1	N2
06:00-06:05	0	1
06:05-06:10	0	0
06:10-06:15	0	1
06:15-06:20	2	0
06:20-06:25	1	0
06:25-06:30	0	2
06:30-06:35	3	2
06:35-06:40	0	3
06:40-06:45	1	1
06:45-06:50	1	1
06:50-06:55	0	1
06:55-07:00	1	3
07:00-07:05	1	2
07:05-07:10	0	2
07:10-07:15	1	3
07:15-07:20	2	1
07:20-07:25	1	3
07:25-07:30	1	1
07:30-07:35	1	2
07:35-07:40	3	3
07:40-07:45	1	4
07:45-07:50	1	3
07:50-07:55	1	3
07:55-08:00	1	3
08:00-08:05	1	2
08:05-08:10	1	2
08:10-08:15	1	3
08:15-08:20	2	3
08:20-08:25	1	2
08:25-08:30	1	3
08:30-08:35	0	3
08:35-08:40	2	2
08:40-08:45	1	4
08:45-08:50	1	11
08:50-08:55	1	3
08:55-09:00	1	3

15:00-15:05	1	5
15:05-15:10	1	4
15:10-15:15	2	3
15:15-15:20	1	2
15:20-15:25	0	2
15:25-15:30	1	2
15:30-15:35	1	2
15:35-15:40	0	1
15:40-15:45	1	1
15:45-15:50	1	3
15:50-15:55	1	1
15:55-16:00	2	2
16:00-16:05	1	2
16:05-16:10	0	2
16:10-16:15	2	2
16:15-16:20	1	3
16:20-16:25	1	1
16:25-16:30	0	2
16:30-16:35	0	3
16:35-16:40	1	2
16:40-16:45	0	2
16:45-16:50	1	2
16:50-16:55	0	3
16:55-17:00	1	1
17:00-17:05	2	3
17:05-17:10	2	2
17:10-17:15	3	2
17:15-17:20	1	1
17:20-17:25	1	2
17:25-17:30	1	2
17:30-17:35	1	3
17:35-17:40	1	2
17:40-17:45	2	3
17:45-17:50	1	4
17:50-17:55	1	1
17:55-18:00	2	11

Time	W1	W2
06:00-06:05	0	0
06:05-06:10	0	0
06:10-06:15	0	0
06:15-06:20	0	0
06:20-06:25	0	0
06:25-06:30	0	0
06:30-06:35	0	0
06:35-06:40	0	0
06:40-06:45	0	0
06:45-06:50	0	1
06:50-06:55	0	0
06:55-07:00	0	0
07:00-07:05	0	0
07:05-07:10	0	0
07:10-07:15	0	0
07:15-07:20	0	0
07:20-07:25	0	0
07:25-07:30	0	0
07:30-07:35	0	0
07:35-07:40	0	0
07:40-07:45	0	0
07:45-07:50	0	2
07:50-07:55	0	0
07:55-08:00	0	0
08:00-08:05	0	3
08:05-08:10	0	0
08:10-08:15	0	0
08:15-08:20	0	0
08:20-08:25	0	0
08:25-08:30	0	7
08:30-08:35	0	0
08:35-08:40	0	0
08:40-08:45	0	6
08:45-08:50	0	4
08:50-08:55	0	8
08:55-09:00	0	0

15:00-15:05	0	0
15:05-15:10	0	0
15:10-15:15	0	0
15:15-15:20	0	0
15:20-15:25	0	1
15:25-15:30	0	3
15:30-15:35	0	0
15:35-15:40	0	0
15:40-15:45	0	0
15:45-15:50	0	8
15:50-15:55	0	0
15:55-16:00	0	0
16:00-16:05	0	5
16:05-16:10	0	0
16:10-16:15	0	8
16:15-16:20	0	0
16:20-16:25	0	0
16:25-16:30	0	0
16:30-16:35	0	0
16:35-16:40	0	1
16:40-16:45	0	0
16:45-16:50	0	0
16:50-16:55	0	0
16:55-17:00	0	0
17:00-17:05	0	0
17:05-17:10	1	2
17:10-17:15	0	0
17:15-17:20	0	0
17:20-17:25	0	0
17:25-17:30	0	4
17:30-17:35	0	0
17:35-17:40	0	0
17:40-17:45	0	0
17:45-17:50	0	0
17:50-17:55	0	4
17:55-18:00	0	0

Vehicle Queue Survey (Governor Macquarie Drive-Epsom Road)



Intersection Count Survey (Epsom Road-Wilby Street)

[illegible]

Vehicle Queue Survey (Epsom Road-Wilby Street)

Time	S1
06:00-06:05	
06:05-06:10	
06:10-06:15	
06:15-06:20	
06:20-06:25	
06:25-06:30	
06:30-06:35	
06:35-06:40	
06:40-06:45	
06:45-06:50	
06:50-06:55	
06:55-07:00	
07:00-07:05	
07:05-07:10	
07:10-07:15	
07:15-07:20	
07:20-07:25	
07:25-07:30	
07:30-07:35	
07:35-07:40	
07:40-07:45	
07:45-07:50	
07:50-07:55	
07:55-08:00	
08:00-08:05	
08:05-08:10	
08:10-08:15	
08:15-08:20	
08:20-08:25	
08:25-08:30	
08:30-08:35	
08:35-08:40	
08:40-08:45	
08:45-08:50	
08:50-08:55	
08:55-09:00	

Time	N1
06:00-06:05	0
06:05-06:10	0
06:10-06:15	0
06:15-06:20	0
06:20-06:25	0
06:25-06:30	0
06:30-06:35	0
06:35-06:40	0
06:40-06:45	0
06:45-06:50	1
06:50-06:55	0
06:55-07:00	0
07:00-07:05	0
07:05-07:10	0
07:10-07:15	0
07:15-07:20	0
07:20-07:25	0
07:25-07:30	0
07:30-07:35	0
07:35-07:40	0
07:40-07:45	0
07:45-07:50	0
07:50-07:55	0
07:55-08:00	0
08:00-08:05	0
08:05-08:10	0
08:10-08:15	0
08:15-08:20	0
08:20-08:25	0
08:25-08:30	0
08:30-08:35	0
08:35-08:40	0
08:40-08:45	0
08:45-08:50	0
08:50-08:55	0
08:55-09:00	0

Time	E1
06:00-06:05	0
06:05-06:10	0
06:10-06:15	1
06:15-06:20	0
06:20-06:25	0
06:25-06:30	1
06:30-06:35	1
06:35-06:40	1
06:40-06:45	1
06:45-06:50	1
06:50-06:55	1
06:55-07:00	1
07:00-07:05	1
07:05-07:10	1
07:10-07:15	1
07:15-07:20	1
07:20-07:25	2
07:25-07:30	1
07:30-07:35	1
07:35-07:40	1
07:40-07:45	1
07:45-07:50	1
07:50-07:55	2
07:55-08:00	2
08:00-08:05	1
08:05-08:10	1
08:10-08:15	1
08:15-08:20	1
08:20-08:25	0
08:25-08:30	2
08:30-08:35	1
08:35-08:40	1
08:40-08:45	1
08:45-08:50	1
08:50-08:55	1
08:55-09:00	1

15:00-15:05	
15:05-15:10	
15:10-15:15	
15:15-15:20	
15:20-15:25	
15:25-15:30	
15:30-15:35	
15:35-15:40	
15:40-15:45	
15:45-15:50	
15:50-15:55	
15:55-16:00	
16:00-16:05	
16:05-16:10	
16:10-16:15	
16:15-16:20	
16:20-16:25	
16:25-16:30	
16:30-16:35	
16:35-16:40	
16:40-16:45	
16:45-16:50	
16:50-16:55	
16:55-17:00	
17:00-17:05	
17:05-17:10	
17:10-17:15	
17:15-17:20	
17:20-17:25	
17:25-17:30	
17:30-17:35	
17:35-17:40	
17:40-17:45	
17:45-17:50	
17:50-17:55	
17:55-18:00	

15:00-15:05	0
15:05-15:10	0
15:10-15:15	0
15:15-15:20	0
15:20-15:25	0
15:25-15:30	0
15:30-15:35	0
15:35-15:40	0
15:40-15:45	0
15:45-15:50	0
15:50-15:55	0
15:55-16:00	0
16:00-16:05	0
16:05-16:10	1
16:10-16:15	0
16:15-16:20	0
16:20-16:25	0
16:25-16:30	0
16:30-16:35	0
16:35-16:40	0
16:40-16:45	0
16:45-16:50	0
16:50-16:55	0
16:55-17:00	0
17:00-17:05	0
17:05-17:10	0
17:10-17:15	0
17:15-17:20	0
17:20-17:25	0
17:25-17:30	0
17:30-17:35	0
17:35-17:40	0
17:40-17:45	0
17:45-17:50	0
17:50-17:55	0
17:55-18:00	0

15:00-15:05	1
15:05-15:10	0
15:10-15:15	0
15:15-15:20	0
15:20-15:25	1
15:25-15:30	0
15:30-15:35	1
15:35-15:40	0
15:40-15:45	0
15:45-15:50	2
15:50-15:55	1
15:55-16:00	1
16:00-16:05	1
16:05-16:10	1
16:10-16:15	1
16:15-16:20	0
16:20-16:25	2
16:25-16:30	0
16:30-16:35	1
16:35-16:40	3
16:40-16:45	1
16:45-16:50	1
16:50-16:55	1
16:55-17:00	1
17:00-17:05	1
17:05-17:10	1
17:10-17:15	2
17:15-17:20	3
17:20-17:25	1
17:25-17:30	1
17:30-17:35	1
17:35-17:40	1
17:40-17:45	3
17:45-17:50	1
17:50-17:55	1
17:55-18:00	1

Vehicle Queue Survey (Epsom Road-Wilby Street)



Intersection Count Survey (Epsom Road-Cosford Close)

[illegible]

Vehicle Queue Survey (Epsom Road-Cosford Close)

Time	S1
06:00-06:05	
06:05-06:10	
06:10-06:15	
06:15-06:20	
06:20-06:25	
06:25-06:30	
06:30-06:35	
06:35-06:40	
06:40-06:45	
06:45-06:50	
06:50-06:55	
06:55-07:00	
07:00-07:05	
07:05-07:10	
07:10-07:15	
07:15-07:20	
07:20-07:25	
07:25-07:30	
07:30-07:35	
07:35-07:40	
07:40-07:45	
07:45-07:50	
07:50-07:55	
07:55-08:00	
08:00-08:05	
08:05-08:10	
08:10-08:15	
08:15-08:20	
08:20-08:25	
08:25-08:30	
08:30-08:35	
08:35-08:40	
08:40-08:45	
08:45-08:50	
08:50-08:55	
08:55-09:00	

Time	N1
06:00-06:05	0
06:05-06:10	0
06:10-06:15	0
06:15-06:20	0
06:20-06:25	0
06:25-06:30	0
06:30-06:35	0
06:35-06:40	0
06:40-06:45	0
06:45-06:50	0
06:50-06:55	0
06:55-07:00	0
07:00-07:05	0
07:05-07:10	0
07:10-07:15	0
07:15-07:20	0
07:20-07:25	0
07:25-07:30	0
07:30-07:35	1
07:35-07:40	0
07:40-07:45	0
07:45-07:50	0
07:50-07:55	0
07:55-08:00	0
08:00-08:05	0
08:05-08:10	0
08:10-08:15	0
08:15-08:20	0
08:20-08:25	0
08:25-08:30	0
08:30-08:35	0
08:35-08:40	0
08:40-08:45	0
08:45-08:50	0
08:50-08:55	0
08:55-09:00	0

Time	W1
06:00-06:05	0
06:05-06:10	0
06:10-06:15	0
06:15-06:20	0
06:20-06:25	0
06:25-06:30	0
06:30-06:35	0
06:35-06:40	0
06:40-06:45	0
06:45-06:50	0
06:50-06:55	1
06:55-07:00	0
07:00-07:05	0
07:05-07:10	0
07:10-07:15	0
07:15-07:20	0
07:20-07:25	0
07:25-07:30	0
07:30-07:35	1
07:35-07:40	1
07:40-07:45	0
07:45-07:50	0
07:50-07:55	0
07:55-08:00	0
08:00-08:05	0
08:05-08:10	1
08:10-08:15	1
08:15-08:20	0
08:20-08:25	0
08:25-08:30	0
08:30-08:35	1
08:35-08:40	1
08:40-08:45	0
08:45-08:50	1
08:50-08:55	1
08:55-09:00	0

15:00-15:05	
15:05-15:10	
15:10-15:15	
15:15-15:20	
15:20-15:25	
15:25-15:30	
15:30-15:35	
15:35-15:40	
15:40-15:45	
15:45-15:50	
15:50-15:55	
15:55-16:00	
16:00-16:05	
16:05-16:10	
16:10-16:15	
16:15-16:20	
16:20-16:25	
16:25-16:30	
16:30-16:35	
16:35-16:40	
16:40-16:45	
16:45-16:50	
16:50-16:55	
16:55-17:00	
17:00-17:05	
17:05-17:10	
17:10-17:15	
17:15-17:20	
17:20-17:25	
17:25-17:30	
17:30-17:35	
17:35-17:40	
17:40-17:45	
17:45-17:50	
17:50-17:55	
17:55-18:00	

15:00-15:05	1
15:05-15:10	0
15:10-15:15	0
15:15-15:20	1
15:20-15:25	0
15:25-15:30	0
15:30-15:35	0
15:35-15:40	0
15:40-15:45	1
15:45-15:50	0
15:50-15:55	0
15:55-16:00	0
16:00-16:05	0
16:05-16:10	0
16:10-16:15	0
16:15-16:20	0
16:20-16:25	0
16:25-16:30	0
16:30-16:35	0
16:35-16:40	0
16:40-16:45	0
16:45-16:50	0
16:50-16:55	0
16:55-17:00	1
17:00-17:05	1
17:05-17:10	0
17:10-17:15	0
17:15-17:20	1
17:20-17:25	0
17:25-17:30	0
17:30-17:35	0
17:35-17:40	0
17:40-17:45	0
17:45-17:50	0
17:50-17:55	0
17:55-18:00	0

15:00-15:05	0
15:05-15:10	1
15:10-15:15	0
15:15-15:20	1
15:20-15:25	1
15:25-15:30	1
15:30-15:35	1
15:35-15:40	1
15:40-15:45	0
15:45-15:50	0
15:50-15:55	0
15:55-16:00	0
16:00-16:05	0
16:05-16:10	1
16:10-16:15	0
16:15-16:20	0
16:20-16:25	0
16:25-16:30	0
16:30-16:35	0
16:35-16:40	1
16:40-16:45	0
16:45-16:50	0
16:50-16:55	0
16:55-17:00	0
17:00-17:05	1
17:05-17:10	0
17:10-17:15	0
17:15-17:20	0
17:20-17:25	1
17:25-17:30	0
17:30-17:35	0
17:35-17:40	0
17:40-17:45	1
17:45-17:50	0
17:50-17:55	0
17:55-18:00	1

Vehicle Queue Survey (Epsom Road-Cosford Close)



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General Conditions**1. (A002) Approved plans and supporting documentation**

Development must be carried out in accordance with the following approved plans and documents, except where the conditions of this consent expressly require otherwise.

Approved plans

Plan number	Revision number	Plan title	Drawn by	Date of plan
DA02.01	C	SITE PLAN	ArtMade Architects	08.07.24
DA02.02	A	DEMOLITION PLAN	ArtMade Architects	11.04.24
DA03.01	C	BASEMENT FLOOR PLAN	ArtMade Architects	08.07.24
DA03.02	C	GROUND FLOOR PLAN	ArtMade Architects	08.07.24
DA04.01	C	EXTERNAL ELEVATIONS & FINISHES	ArtMade Architects	08.07.24
DA05.01	C	SECTIONS & FENCE DETAILS	ArtMade Architects	08.07.24
DA10.10	B	KITCHEN DETAILS	ArtMade Architects	08.07.24
LS01	B	LANDSCAPE SITE PLAN	MWLA	17.11.23
LS02	B	LANDSCAPE GROUND FLOOR	MWLA	17.11.23
LS03	B	LANDSCAPE SECTION + ELEVATION	MWLA	17.11.23
LS05	B	LANDSCAPE PLANT SPECIES	MWLA	17.11.23
LS06	B	LANDSCAPE NOTES	MWLA	17.11.23
LS07	B	LANDSCAPE TYPICAL DETAILS	MWLA	17.11.23

Approved documents

Document title	Version number	Prepared by	Date of document
Plan of Management + Operations	-	OzEducation	17.04.24
Traffic Impact Assessment	V05	The Transport Planning Partnership	15 April 2024
Response to Traffic RFI	Ref: 22539	The Transport Planning Partnership	2 August 2024
Noise Management Plan	2	Renzo Tonin & Associates	17 April 2024
Evacuation Diagram	-	SPS Fire and Safety	25 Sept 2023
Waste Management Plan	1	MRA Consulting Group	1 November 2023
Geotechnical Investigation	A	AWGeotechnics	14 August 2023
Preliminary Environmental Site Investigation	2	Environmental Consulting Services	15.11.2023
Flood Advice	N0230756-CLTR.01B	JN Responsive Engineering	9 November 2023
Arboricultural Impact Assessment	-	Arborlogix	3 November 2023
Noise Impact Assessment	2	Renzo Tonin &	3 November

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Associates

2023

In the event of any inconsistency between the approved plans and documents, the approved Plans prevail.

In the event of any inconsistency with the approved plans and a condition of this consent, the condition prevails.

Condition reason: To ensure all parties are aware of the approved plans and supporting documentation that applies to the development.

2. (A003) Payment of development contributions

Payment of section 7.11 contributions

For developments with an estimated cost of less than \$10 million:

Before the issue of a construction certificate, the applicant must pay the following contributions to Council for:

Transport - Bikeways - works	\$3,455
Transport - Traffic management - works	\$23,037
Transport - Bus shelters - works	\$1,152
Drainage- works	\$18,429

The total contribution payable to Council under this condition is \$46,073 as calculated at the date of this consent, in accordance with Liverpool Contributions Plan 2018 - Established Areas.

The total amount payable may be adjusted at the time the payment is made, in accordance with the provisions of the Liverpool Contributions Plan 2018 - Established Areas.

A copy of the development contributions plan is available for inspection at www.liverpool.nsw.gov.au.

Condition reason: To ensure development contributions are paid to address increased demand for public amenities and services or to address increased demand for regional infrastructure or to ensure any planning agreement is finalised at the specified time.

3. (A025) Comply with EP&A Act

The requirements and provisions of the Environmental Planning & Assessment Act 1979 and Environmental Planning & Assessment Regulation 2021, must be fully complied with at all times.

Failure to comply with these legislative requirements is an offence and may result in the commencement of legal proceedings, issuing of 'on-the-spot' penalty infringements or service of a notice and order by Council.

Condition reason: This condition is imposed to ensure compliance with legislative requirements.

4. (A032) Shoring and adequacy of adjoining property

1. This section applies to a development consent for development that involves excavation that extends below the level of the base of the footings of a building, structure or work on adjoining land, including a structure or work in a road or rail corridor.
2. It is a condition of the development consent that the person having the benefit of the development consent must, at the person's own expense—
 1. protect and support the building, structure or work on adjoining land from possible damage from the excavation, and
 2. if necessary, underpin the building, structure or work on adjoining land to prevent damage from the excavation.
3. This section does not apply if—
 1. the person having the benefit of the development consent owns the adjoining land, or
 2. the owner of the adjoining land gives written consent to the condition not applying.

Condition reason: Prescribed condition under section 74 of the Environmental Planning and Assessment Regulation 2021.

5. (A040) Compliance with the Building Code of Australia

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1. It is a condition of a development consent for development that involves building work that the work must be carried out in accordance with the requirements of the *Building Code of Australia*.
2. It is a condition of a development consent for development that involves residential building work for which a contract of insurance is required under the *Home Building Act 1989*, Part 6 that a contract of insurance is in force before building work authorised to be carried out by the consent commences.
3. It is a condition of a development consent for a temporary structure used as an entertainment venue that the temporary structure must comply with Part B1 and NSW Part H102 in Volume 1 of the *Building Code of Australia*.
4. In subsection (1), a reference to the *Building Code of Australia* is a reference to the Building Code of Australia as in force on the day on which the application for the construction certificate was made.
5. In subsection (3), a reference to the *Building Code of Australia* is a reference to the Building Code of Australia as in force on the day on which the application for development consent was made.
6. This section does not apply—
 1. to the extent to which an exemption from a provision of the *Building Code of Australia* or a fire safety standard is in force under the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021*, or
 2. to the erection of a temporary building, other than a temporary structure to which subsection (3) applies.

Condition reason: Prescribed condition under section 69 of the Environmental Planning and Assessment Regulation 2021.

6. (A050) Works at no cost to Council

All roadworks, drainage works and dedications, required to effect the consented development shall be undertaken at no cost to Liverpool City Council.

Condition reason: To ensure fairness, transparency and proberty.

7. (A060) Erection of signs

1. This section applies to a development consent for development involving building work, subdivision work or demolition work.
2. It is a condition of the development consent that a sign must be erected in a prominent position on a site on which building work, subdivision work or demolition work is being carried out—
 1. showing the name, address and telephone number of the principal certifier for the work, and
 2. showing the name of the principal contractor, if any, for the building work and a telephone number on which the principal contractor may be contacted outside working hours, and
 3. stating that unauthorised entry to the work site is prohibited.
3. The sign must be—
 1. maintained while the building work, subdivision work or demolition work is being carried out, and
 2. removed when the work has been completed.
4. This section does not apply in relation to—
 1. building work, subdivision work or demolition work carried out inside an existing building, if the work does not affect the external walls of the building, or
 2. Crown building work certified to comply with the Building Code of Australia under the Act, Part 6.

Condition reason: Prescribed condition under section 70 of the Environmental Planning and Assessment Regulation 2021.

Building Work Before Issue of a Construction Certificate

8. (B008) Housing and Productivity Contribution

Before the issue of a relevant construction certificate, the applicant is to make a Housing and Productivity Contribution payment through the NSW Planning Portal.

Condition reason: To ensure fairness, transparency and proberty.

9. (B010) Design amendments

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Before the issue of a construction certificate, the certifier must ensure the construction certificate plans and specifications detail the following required amendments to the approved plans and documents:

1. The provision of solar panels on the rooftop; or the provision of ceiling fans to all habitable areas.
2. The provision of a rainwater tank for water collection, storage and reuse for irrigation of landscape and other uses within the site.
3. Amended Landscape plans are to be provided to reflect the current Architectural Plans Issue C.

Condition reason: To require minor amendments to the plans endorsed by the consent authority following assessment of the development.

10. (B020) Equal access to the premises

Before the issue of a construction certificate, plans which demonstrate that adequate access to the premises will be provided for persons with disabilities in accordance with the Commonwealth Disability (Access to Premises – Buildings) Standards 2010. These plans must be submitted to the certifier.

Condition reason: To ensure safe and easy access to the premises for people with a disability

11. (B054) Retaining Walls on Boundary

All retaining walls shall be of masonry construction and must be wholly within the property boundary, including footings and agricultural drainage lines. Construction of retaining walls or associated drainage works along common boundaries shall not compromise the structural integrity of any existing structures.

Where a retaining wall exceeds 600mm in height, the wall shall be designed by a practicing structural engineer and a construction certificate must be obtained prior to commencement of works on the retaining wall.

Condition reason: To ensure fairness, transparency and proberty.

12. (B055) S138 Roads Act - roadworks requiring approval of civil drawings

Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that a S138 Roads Act application, including the payment of application and inspection fees, has been lodged with Liverpool City Council (being the Roads Authority under the Roads Act), for provision of stormwater connection to existing kerb inlet pit in Epsom Road and;
for provision of minimum 1.5m footpath construction to full property frontage on Epsom Road and Governor Macquarie Drive.

Engineering plans are to be prepared in accordance with the development consent, Liverpool City Council's Design Guidelines and Construction Specification for Civil Works, Austroad Guidelines and best engineering practice.

Note: Where Liverpool City Council is the Certifying Authority for the development the Roads Act approval for the above works may be issued concurrently with the Construction Certificate.

Condition reason: To ensure fairness, transparency and proberty.

13. (B075) Fee Payments

Unless otherwise prescribed by this consent, all relevant fees or charges must be paid. Where Council does not collect these payments, copies of receipts must be provided. The following fees are applicable and payable:

- (a) Damage Inspection Fee – relevant where the cost of building work is \$20,000 or more, or a swimming pool is to be excavated by machinery.
- (b) Fee associated with Application for Permit to Carry Out Work Within a Road, Park and Drainage Reserve.

These fees are reviewed annually and will be calculated accordingly.

Condition reason: To ensure statutory or associated fees are paid prior to construction commencing.

14. (B081) Site Development Work

Site development work in the form of excavation, underpinning or shoring works must not take place, until such time as a CC has been issued.

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	Condition reason: To prevent unauthorised commencement of building works.
15. (B095) Long Service Levy	
	Before the issue of a Construction Certificate, the long service calculated at a rate of 0.25% of the cost of the works on building work having a value of \$250,000 or more, as calculated at the date of this consent, must be paid to the Long Service Corporation under the Building and Construction industry Long Service Payments Act 1986, section 34, and evidence of the payment is to be provided to the certifier or Council (where a certifier is not required).
	Condition reason: To ensure the long service levy is paid.
16. (B112) Notification	
	In the event that Council is not the Principal Certifier (PC), the PC must advise Council, in writing of:
	(a) The name and contractor licence number of the licensee who has contracted to do or intends to do the work, or
	(b) The name and permit of the owner-builder who intends to do the work.
	If these arrangements are changed, or if a contract is entered into for the work to be done by a different licensee, Council must be immediately informed.
	Condition reason: To advise Council of the details of licensed contractors or owner-builder for the approved development.
17. (B116) Products banned under the Building Products (Safety) Act 2017	
	No building products that are banned, or products that are subject to a ban if used in a particular way under the Building Products (Safety) Act 2017 are to be used in the construction of the development.
	Condition reason: To ensure no banned products are used for a building's external cladding.
18. (B120) Cladding	
	Prior to issue of a construction certificate the certifier must be satisfied that all proposed attachments, cladding material and systems forming part of external walls comply with the BCA and relevant Australian Standards. The certifier must be able to demonstrate compliance with evidence of suitability as per clause A2G2 of BCA Volume 1 for all products/systems proposed.
	Condition reason: To ensure that the external cladding installed on a building is compliant.
19. (B149) S138 Roads Act - Minor Works in the public road	
	Prior to the issue of a Construction Certificate, a Section 138 Roads Act application/s, including payment of fees, shall be lodged with Liverpool City Council, as the Roads Authority for any works required in a public road. These works may include but are not limited to:
	(a) Vehicular crossings (including kerb reinstatement of redundant vehicular crossings),
	(b) Road opening for utilities and stormwater (including stormwater connection to Council infrastructure), or
	(c) Road occupancy or road closures.
	All works shall be carried out in accordance with the Roads Act approval, the development consent including the stamped approved plans, and Liverpool City Council's specifications.
	Note: Approvals may also be required from the Transport for NSW for classified roads.
	Condition reason: To ensure fairness, transparency and proberty.
20. (B156) Waste Storage Room	
	Prior to the issuing of a construction certificate, the principal certifier shall be satisfied that the designated garbage/waste storage area shall comply with the following requirements:
	1. The room shall be fully enclosed and provided with a concrete floor, and with concrete or cement rendered walls coved to the floor;
	2. The room shall have a floor waste which is to consist of a removable basket within a fixed basket arrestor and is to comply with Sydney Water requirements; and
	3. The door to the room must be tight-fitting, self-closing and fitted with mechanical ventilation.

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Please refer to the Liverpool Development Control Plan 2008 for further information regarding the construction standards for waste storage areas.

Condition reason: To ensure compliance with construction requirements and to mitigate risks to human health and the environment.

21. (B162) Recommendations of Acoustic Report

Before the issue of a construction certificate, the certifier must be satisfied that the recommendations provided in the approved acoustic report are implemented and incorporated into the design and construction of the development, and shown on plans accompanying the construction certificate application.

The construction methodology and plans accompanying the construction certificate application must be assessed and certified in writing by a suitably qualified acoustic consultant to verify conformance with the requirements of the aforementioned acoustic report. The written certification from the suitably qualified acoustic consultant must be submitted to and approved by the certifier before issue of the construction certificate.

Note: The 'suitably qualified acoustic consultant' must be a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm.

Condition reason: To mitigate potential intrusive noise and amenity impacts.

22. (B190) Flooding - PMF

The minimum habitable floor levels shall be no lower than the PMF level (i.e. 10.60m Australian Height Datum).

Condition reason: To ensure floor level requirement for sensitive developments (e.g. schools, senior housing) on flood prone land is satisfied in accordance with Part 1.1 of Council's DCP 2008.

23. (B226) Flooding - PMF Structure

The structure shall be constructed from flood compatible building components below PMF level (i.e. 10.60m Australian Height Datum).

Condition reason: To ensure structural stability of sensitive development (e.g. schools, senior housing) on flood prone land against forces of flood waters/debris is satisfied in accordance with Part 1.1 of Council's DCP 2008.

24. (B238) Flooding - PMF Engineer's Report

An engineer's report shall be required to certify that the structure can withstand the forces of floodwater including debris and buoyancy up to and including a PMF level. (i.e. 10.60m Australian Height Datum).

Condition reason: To ensure structural stability of sensitive development (e.g., schools, senior housing) on flood prone land against forces of flood waters/debris is satisfied in accordance with Part 1.1 of Council's DCP 2008.

25. (B275) Flooding - Evacuation

Suitable warning systems signage and exits shall be provided to ensure the safe evacuation of persons from the basement to the lowest habitable floor level during times of flood.

Condition reason: To warn of flooding risk and ensure safe & timely evacuation during a flood from basement car park and requirement of Part 1.1 of Council's DCP 2008 for car parking is satisfied.

26. (B355) Food Premises - Construction

Before the issue of a construction certificate, the certifier must be satisfied the relevant construction certificate plans demonstrate that the fit-out and construction of the premises complies with the following requirements:

- Building Code of Australia
- AS4674-2004 – Design, construction and fit-out of food premises
- Australia New Zealand Food Standards Code, and
- Australian Standard 1668 (Part 1 & 2).
- Education and Care Services National Regulation 2011.

Condition reason: To mitigate public health risks and ensure compliance with relevant legislative

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	requirements.
27.	(B360) Construction Environmental Management Plan (CEMP) Prior to issue of a construction certificate, a Construction Environmental Management Plan (CEMP) for the development must be provided to the Principal Certifying Authority for approval. The environmental site management measures must remain in place and be maintained throughout the period of the development. The CEMP must address all environmental aspects of the development's construction phases, and include (where relevant), but not be limited to, the following: 1. Asbestos Management Plan; 2. Project Contact Information; 3. Site Security Details; 4. Timing and Sequencing Information; 5. Site Soil and Water Management Plan; 6. Noise and Vibration Control Plan; 7. Dust Control Plan; 8. Air Monitoring; 9. Odour Control Plan; 10. Health and Safety Plan; 11. Waste Management Plan; 12. Incident management Contingency; and 13. Unexpected Finds Protocol. The CEMP must be kept on site for the duration of the works and must be made available to Council Officers upon request Condition reason: To require details of measures that will protect the public, and the surrounding environment, during site works and construction.
28.	(B380) Mechanical Plant and Equipment Before the issue of a construction certificate, the certifier must be satisfied that mechanical plant and equipment were selected in consultation with a suitably qualified acoustic consultant in accordance with the recommendations of the approved acoustic report. Note: The 'suitably qualified acoustic consultant' must be a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm. Condition reason: To mitigate potential intrusive noise and amenity impacts.
29.	(B404) Road Safety Audit A Stage 3 (detailed design) Road Safety Audit (RSA) shall be undertaken on the proposed roadworks by an accredited auditor who is independent of the design consultant. A copy of the RSA shall accompany the design plans submitted with the Construction Certificate or Roads Act application. Prior to the issue of the Construction Certificate or Roads Act approval, the Certifying Authority shall ensure that the recommendations of the RSA have been addressed in the final design. Condition reason: To ensure fairness, transparency and proberty.
30.	(B408) Access, Car Parking and Manoeuvring - General The Certifying Authority shall ensure and certify that vehicular access, circulation, manoeuvring, pedestrian and parking areas associated with the subject development have been designed and are in accordance with AS 2890.1, AS2890.2, AS2890.6 and Council's Development Control Plan. Condition reason: To ensure that the design of the facilities is in accordance with the required specifications.
31.	(B410) Access, Car Parking and Manoeuvring - Detail The Certifying Authority shall ensure and certify that: 1. Off street access and parking complies with AS2890.1, 2. Vehicular access and internal manoeuvring have been designed for the longest (B-Double/ Heavy Rigid/ Medium Rigid) vehicle expected to service the development site, in accordance with AS2890.2, 3. Sight distance at the street frontage has been provided in accordance with AS 2890.1,

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4.	All vehicles can enter and exit the site in a forward direction, and/or
	Condition reason: To ensure that the design of the access arrangement, car parking and maneuvering are in accordance with the required specifications including AS2890.
32.	(B452) Stormwater Discharge - Basement Car parks
	Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the stormwater drainage system for the basement car park has been designed in accordance with the requirements for pumped systems in AS3500.3:2003 and Council's Stormwater Drainage Design Specifications for pump out systems for basement car parks.
	Condition reason: To ensure fairness, transparency and proberty.
33.	(B453) No Loading on Easements
	Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the foundations of proposed structures adjoining the drainage and/ or services easement have been designed clear of the zone of influence.
	Condition reason: To ensure fairness, transparency and proberty.
34.	(B456) On-Site Detention
	On-Site Detention shall be provided generally in accordance with the concept plan/s lodged for development approval, prepared by JN Responsive Engineering, reference number N0230756 CSK01-7, revision B, dated 19/04/2024.
	The proposed development and stormwater drainage system shall be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties.
	Engineering plans and supporting calculations for the on-site detention system are to be prepared by a suitably qualified person and shall accompany the application for a Construction Certificate.
	Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the on-site detention system has been designed in accordance with Liverpool City Council's Design Guidelines and Liverpool City Council's On-Site Stormwater Detention policy and Technical Specification.
	Condition reason: To ensure fairness, transparency and proberty.
35.	(B462) Water Quality
	Prior to the issue of a Construction Certificate, the Certifying Authority shall ensure that details of a stormwater pre-treatment system have been provided on the stormwater plans and that the design meets pollutant retention criteria in accordance Council's Development Control Plan.
	The Construction Certificate must be supported by:
	(a) Specification & installation details of the stormwater pre-treatment system
	(b) The approval of an operation and maintenance manual/ schedule for the stormwater pre-treatment system
	A copy of the approved operation and maintenance manual/ schedule shall be submitted to Liverpool City Council with notification of the Construction Certificate issue.
	Condition reason: To ensure fairness, transparency and proberty.
36.	(B555) Detailed Design Drawings
	The applicant is to discuss with Council's Traffic Management Section of the traffic requirements prior to undertaking the detailed design of traffic facilities, signs and linemarking in the existing and/or proposed public domain.
	Detailed design drawings of the proposed traffic facilities, signs and line markings in the existing and proposed public domain areas are to be submitted to Council for approval using Approval of Traffic Facilities including Signs and Line Marking Schemes Application Form. The application is available on Council website and should be lodged online. The drawings are to be prepared by a suitably qualified person.

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	Condition reason: To ensure that detailed design of the required traffic facilities is submitted and approved.
37. (B560) Road Works	Works within the public road reserve shall not commence until the design drawings including the associated signs and line marking scheme have been approved by Council's Traffic Management Section.
	Condition reason: To ensure that works on the public road reserve are approved prior to commencement of works.
38. (B950) Heritage Interpretation Plan	A heritage interpretation Plan should be prepared focusing on the previous homestead associated with the remnant palm trees and the subject land owners.
	Condition reason: To ensure fairness, transparency and proberty.
39. (B951) Stormwater - Special Condition	- Stormwater outlet pipe to the kerb inlet pit shall be 375mm RCP. - Ensure minimum grate openings are in accordance with LCC OSD Standard. Minimum grate openings to be: i. 600mm x 600mm for pits up to 800mm in depth ii. 900mm x 900mm for pits greater than 800mm in depth - Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that an investigation on the existing pipe/stormwater street network has been completed. This is to ensure that the existing pipe network can cater for the proposed whole site discharge to the pit.
	Condition reason: To ensure fairness, transparency and proberty.
40. (B952) Flooding - On-site water quality treatment	On-site water quality treatment facilities shall be incorporated as in the Ref Drawing (CSK03 A and CSK04 A) and the music model and results as in the Ref Drawing (CSK06 A) by JN Responsive Engineering dated 03/11/2023 to ensure that stormwater runoffs leaving the site comply with Council's water quality standards. The treatment facilities shall capture all gross pollutants and liquid contaminants from the stormwater before discharging to downstream to council's stormwater system. Water quality treatment works shall be designed using MUSIC modelling software and the water quality treatment system performance shall be verified using Council's MUSIC link.
	Condition reason: To ensure fairness, transparency and proberty.
41. (B953) Tree Protection Measures	Tree protection measures are to be put in place in accordance with the recommendations of the Arborists report prepared by Arborlogix.
	Condition reason: To ensure fairness, transparency and proberty.
42. (B954) Traffic - Future Intersection Upgrade	The development is to provide sufficient setback so as not to hinder the future upgrade of the intersection. Council has a strategic concept design for the future upgrade of the intersection of Governor Macquarie Drive and Epsom Road. It appears that the site of the development will be impacted (approximately 5m encroachment at the corner of the block). The applicant is to discuss with Council prior to finalising the detailed design of the development during the Construction Certificate application Stage.
	Condition reason: To ensure fairness, transparency and proberty.

Before Building Work Commences

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43.	(C005) Construction Certificates Prior to the commencement of any building works, the following requirements must be complied with: (a) Construction Certificate must be obtained from the Council or an Accredited Certifier, in accordance with the provisions of the Environmental Planning & Assessment Act 1979, (b) Where a Construction Certificate is obtained from an Accredited Certifier, the applicant shall advise Council of the name, address and contact number of the Accredited Certifier, in accordance with Section 4.19, 6.6, 6.7, 6.12, 6.13, 6.14 of the Act, (c) A copy of the Construction Certificate, the approved development consent plans and consent conditions must be kept on the site at all times and be made available to the Council officers and all building contractors for assessment, (d) A Principal Certifier (PC) must be appointed to carry out the necessary building inspections and to issue an occupation certificate, and (e) The PC must advise Council of the intended date to commence work which is the subject of this consent by completing a notice of commencement of building works or subdivision works form, available from Council's Customer Service Centre. A minimum period of two (2) working days' notice must be given. Condition reason: To require approval to proceed with building work.
44.	(C010) Construction Certificates Any Construction Certificate that may be issued in association with this development consent must ensure that any certified plans and designs are generally consistent (in terms of site layout, site levels, building location, size, external configuration and appearance) with the approved Development Application plans. Condition reason: To ensure details and plans for CC are consistent with the approved DA.
45.	(C039) Construction Requirements Retaining walls or other approved methods necessary to prevent the movement of excavated or filled ground, together with associated subsoil drainage and surface stormwater drainage measures, shall be designed strictly in accordance with the manufacturers details or by a practising structural engineer. Retaining walls on any boundary are to be of masonry construction or if treated timber is used, all vertical support members (soldiers) shall be of galvanised steel. Condition reason: To require details of measures that will protect the public, and the surrounding environment, during site works and construction.
46.	(C055) Site Facilities Adequate refuse disposal methods and builders storage facilities shall be installed on the site. Builders' wastes, materials or sheds are not to be placed on any property other than that which this approval relates to. Condition reason: To ensure the required site management measures are implemented before the commencement of building work.
47.	(C065) Sydney Water Development plans must be processed and approved by Sydney Water. Condition reason: To require Sydney Water approval to proceed with building work.
48.	(C070) "DIAL BEFORE YOU DIG" Underground assets may exist in the area that is subject to your application. In the interest of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contact the Dial before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities. Condition reason: To ensure building works do not impact local underground assets.

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49. **(C117) Erosion and sediment controls in place**
- Before any site work commences, the principal certifier or Council (where a principal certifier is not required), must be satisfied the erosion and sediment controls in the erosion and sediment control plan are in place. These controls must remain in place until any bare earth has been restabilised in accordance with 'Managing Urban Stormwater: Soils and Construction' prepared by Landcom (the Blue Book) (as amended from time to time).
- Condition reason:** To ensure sediment laden runoff and site debris do not impact local stormwater systems and waterways.
50. **(C149) Driveway Crossing Application**
- In accordance with S138 Roads Act an application/s, including payment of fees shall be lodged with Liverpool City Council, as the Roads Authority for any works required in a public road. These works may include but are not limited to the following:
- (a) Vehicular crossings (including kerb reinstatement of redundant vehicular crossings)
 - (b) Road opening for utilities and stormwater (including stormwater connection to Council infrastructure)
 - (c) Road occupancy or road closures
- All works shall be carried out in accordance with the Roads Act approval, the development consent including the stamped approved plans, and Liverpool City Council's specifications.
- Note:** Approvals may also be required from the Roads and Maritime Service (RMS) for classified roads.
- Condition reason:** To ensure that all construction work is undertaken to an approved standard and related approvals.
51. **(C158) Construction Traffic Management Plan (CTMP)**
- A construction traffic management plan (CTMP) prepared by a suitably qualified person is to be submitted to and endorsed by Council's Transport Management Section. The CTMP is to be submitted using Assessment of Construction Traffic Management Plan application form. The application is available on Council website and can be lodged online. Comments on the CTMP will be provided and the updated CTMP are to be implemented during construction.
- A copy of the endorsed CTMP and traffic control plans are to be available on the works site for inspection by authorised Council officers.
- Construction shall not commence until the assessed construction traffic management plan has been endorsed. The endorsed CTMP is to be implemented during construction.
- Condition reason:** To ensure that the impact of construction traffic associated with the development on the surrounding road network is minimized.
52. **(C250) Notification**
- Notification to surrounding residents is to be undertaken within a 100 metre radius from the site. A letter box drop in the form of an informative pamphlet or the like is to be carried out at least 5 days prior to the event to local residents informing them of the event details and including contact details of the site supervisor for the event.
- Condition reason:** To advise neighbours of the commencement of building works.
53. **(C466) Dilapidation report**
- Before any site work commences, a dilapidation report must be prepared by a suitably qualified engineer detailing the structural condition of adjoining buildings, structures or works and public land, to the satisfaction of the principal certifier or Council (where a principal certifier is not required). Where access has not been granted to any adjoining properties to prepare the dilapidation report, the report must be based on a survey of what can be observed externally and demonstrate, in writing, to the satisfaction of the principal certifier or Council (where a principal certifier is not required), that all reasonable steps were taken to obtain access to the adjoining properties.
- No less than seven (7) days before any site work commences, adjoining building owner(s) must be provided with a copy of the dilapidation report for their property(ies) and a copy of the report(s) must be

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provided to Council (where Council is not the principal certifier) at the same time.

Condition reason: To establish and document the structural condition of adjoining properties and public land for comparison as site work progresses and is completed and ensure neighbours and council are provided with the dilapidation report.

54. (C950) Tree Protection Measures

Tree protection measures are to be monitored in accordance with the recommendations of the Arborists report prepared by Arborlogix.

Condition reason: To ensure fairness, transparency and proberty.

During Building Work

55. (D005) Building Work

The building works must be inspected by the Principal Certifier (PC), in accordance with Sections 6.5 of the Environmental Planning & Assessment Act 1979, to monitor compliance with the relevant standards of construction, Council's development consent and the construction certificate.

Condition reason: To require stage inspection and approval by the PC in accordance with EP & A Regulation clause 162A.

56. (D010) Building Work

The Principal Certifier (PC) must specify the relevant stages of construction to be inspected and a satisfactory inspection must be carried out, to the satisfaction of the PC, prior to proceeding to the subsequent stages of construction or finalisation of the works.

Condition reason: To require approval to proceed with building work following each critical stage inspection.

57. (D015) Surveys by a registered surveyor

While building work is being carried out, the positions of the following must be measured and marked by a registered surveyor and provided to the principal certifier:

1. All footings / foundations in relation to the site boundaries and any registered and proposed easements
2. At other stages of construction – any marks that are required by the principal certifier.

Condition reason: To ensure buildings are sited and positioned in the approved location.

58. (D020) Identification Survey Report

The building and external walls are not to proceed past ground floor/reinforcing steel level until such time as the Principal Certifier has been supplied with an identification survey report prepared by a registered surveyor certifying that the floor levels and external wall locations to be constructed, comply with the approved plans, finished floor levels and setbacks to boundary/boundaries. The slab shall not be poured, nor works continue, until the Principal Certifier has advised the builder/developer that the floor level and external wall setback details shown on the submitted survey are satisfactory.

In the event that Council is not the Principal Certifier, a copy of the survey shall be provided to Council within three (3) working days.

Condition reason: To ensure that the development is carried out in accordance with the conditions of consent and the approved plans.

59. (D025) Identification Survey Report

On placement of the concrete, works again shall not continue until the Principal Certifier has issued a letter stating that the condition of the approval has been complied with and that the slab has been poured at the approved levels.

Condition reason: To ensure that the development is carried out in accordance with the conditions of consent and the approved plans.

60. (D038) Toilet Facilities

Toilet facilities must be available or provided at the work site and must be maintained until the works are completed at a ratio of one toilet plus one additional toilet for every 20 persons employed at the

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	site. Each toilet must: (a) be a standard flushing toilet connected to a public sewer, or (b) have an on-site effluent disposal system approved under the Local Government Act 1993, or (c) be a temporary chemical closet approved under the Local Government Act 1993. Condition reason: To ensure the required site management measures are implemented during construction.
61. (D045) Hours of work	Site work must only be carried out between the following times – For work/civil work/demolition work, including delivery of materials is only permitted on the site from 7:00am to 6:00pm on Monday to Friday For work/civil work/demolition work, including delivery of materials is only permitted on the site from 8:00am to 1:00pm on Saturday Site work is not to be carried out outside of these times except where there is an emergency, or for urgent work directed by a police officer or a public authority. Condition reason: To protect the amenity of the surrounding area.
62. (D049) Security Fence	A temporary security fence to WorkCover Authority requirements is to be provided to the property during the course of construction. Note: Fencing is not to be located on Council's reserve area. Condition reason: To ensure the required site management measures are implemented during construction.
63. (D055) Refuse Disposal	Adequate refuse disposal methods and builders storage facilities shall be installed on the site. Builders' wastes, materials or sheds are not to be placed on any property other than that which this approval relates to. Condition reason: To ensure the required site management measures are implemented during construction.
64. (D061) Craning and Hoardings	Lifting or craning materials over a public footway or roadway is not permitted unless a "B" class construction hoarding has been installed in compliance with work cover authority requirements. Condition reason: To require details of measures that will protect the public, and the surrounding environment, during site works and construction.
65. (D063) Craning and Hoardings	If the work is likely to cause pedestrian or vehicular traffic in a public area to be obstructed or rendered inconvenient; or if craning of materials is to occur across a public or road reserve area, a separate Road Occupancy Certificate and/or Hoarding approval must be obtained from Liverpool City Council prior to undertaking the works. Condition reason: To ensure the required traffic management measures are implemented during construction.
66. (D096) Disabled Access	Access, parking and facilities for persons with disabilities to be provided in accordance with the provisions of the National Construction Code (NCC/BCA). Condition reason: To require any new building, part of a building and the affected part of the existing building to comply with the Premises Standards, National Construction Code (NCC/BCA) and Australian Standard.
67. (D100) General Site Works - Surface Contours	Alterations to the natural surface contours must not impede or divert natural surface water runoff, so as to cause a nuisance to adjoining property owners.

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	Condition reason: To protect the amenity of the neighbourhood.
68. (D105) General Site Works	
	All roofwater is to be connected to an approved stormwater system.
	Condition reason: To ensure environmental impacts and impacts to neighbouring properties are minimised.
69. (D110) General Site Works	
	Stormwater pipeline connections to the street kerb shall be constructed in the following manner:
	(a) the kerb shall be sawcut on both sides of the proposed pipe outlet.
	(b) an approved rectangular kerb adaptor shall be installed with the base matching the invert level of the gutter.
	(c) the kerb shall be reinstated to its original profile using a cement mortar containing an epoxy additive for adherence to the existing kerb.
	Condition reason: To ensure any alteration to Council infrastructure is to a suitable standard.
70. (D115) General Site Works - Existing Hydrology	
	Existing hydrological regimes shall be maintained so as not to negatively impact vegetation to be retained on site and downslope/downstream of the site.
	Condition reason: To minimise impacts to adjacent vegetation and habitat.
71. (D120) General Site Works - Runoff	
	Any runoff entering the areas of vegetation to be retained shall be of an equivalent or better quality, and of a similar rate of flow to present levels.
	Condition reason: To minimise impacts to adjacent vegetation and habitat.
72. (D125) General Site Works - Sediment	
	The development, including construction, shall not result in any increase in sediment deposition into any water body, wetland, bushland or environmentally significant land.
	Condition reason: To minimise impacts to adjacent vegetation and habitat.
73. (D130) Removal of dangerous and/or hazardous waste	
	All dangerous and/or hazardous material must be removed by a suitably qualified and experienced contractor licensed by SafeWork NSW. The removal of such material must be carried out in accordance with the requirements of SafeWork NSW and the material must be transported and disposed of in accordance with NSW Environment Protection Authority requirements.
	Condition reason: To ensure safe removal and disposal of dangerous and/or hazardous material.
74. (D140) Car Parking Areas	
	Car parking spaces and driveways must be constructed of a minimum two coat finish seal or better.
	All parking spaces must be clear of obstructions and columns, permanently line marked and provided with adequate manoeuvring facilities.
	The design of these spaces must comply with Council's DCP 2008, and Australian Standard 2890.1 Parking Facilities – Off-Street Car Parking.
	All car parking areas are to be appropriately line marked and sign posted in accordance with the Council approved stamped plans.
	All customer/visitor/staff parking areas are to be clearly signposted limiting car parking for customers/visitors/staff only. The applicant is to cover the costs of installation and maintenance of the signage.
	The on-site parking spaces shown in the approved plans must be identified in accordance with A.S.2890.1 Parking Facilities – Off-Street Car Parking.
	Condition reason: To ensure the facilities are constructed appropriately to comply with the DCP and

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AS2890.	
75. (D146) Directional Signage	Directional signage indicating the location of customer parking, "in" and "out", crossings and directional arrows are to be provided in accordance with the Council approved stamped plans. Condition reason: To ensure that appropriate signs are installed.
76. (D165) Public Domain Works	All works within the road reserve, including the approved sign and line making scheme, are to be carried out by the applicant, at no cost to Council, in accordance with the TfNSW/RMS 'Delineation Guidelines'. Condition reason: To ensure that the development covers all required costs associated with the development.
77. (D170) Council On Street Assets	Council's on-street assets and local road network are to be protected and kept in a serviceable state at all times. At the direction of Council, the applicant/project manager shall undertake remediation works, at no cost to Council and to Council's satisfaction. Condition reason: To ensure that the development covers all required costs associated with the development.
78. (D180) Waste management	While site work is being carried out: - all waste management must be undertaken in accordance with the waste management plan; and - upon disposal of waste, records of the disposal must be compiled and provided to the principal certifier or Council (where a principal certifier is not required), detailing the following: - The contact details of the person(s) who removed the waste; - The waste carrier vehicle registration; - The date and time of waste collection; - A description of the waste (type of waste and estimated quantity) and whether the waste is to be reused, recycled or go to landfill; - The address of the disposal location(s) where the waste was taken; - The corresponding tip docket/receipt from the site(s) to which the waste is transferred, noting date and time of delivery, description (type and quantity) of waste. If waste has been removed from the site under an EPA Resource Recovery Order or Exemption, records in relation to that Order or Exemption must be maintained and provided to the principal certifier and Council. Condition reason: To require records to be provided, during site work, documenting the lawful disposal of waste.
79. (D330) Switchboards	Switchboards for utilities shall not be attached to the street and/or road elevations of the development. Condition reason: To ensure switchboards are sited and positioned away from the public domain.
80. (D335) External Lighting	Any external lighting is to incorporate full cut-off shielding and is to be mounted so as to not cause any glare or spill over light nuisance within the development, neighbouring properties or road users. Condition reason: To protect the amenity of the neighbourhood.
81. (D426) Soil management	While site work is being carried out, the principal certifier or Council (where a principal certifier is not required) must be satisfied all soil removed from or imported to the site is managed in accordance with the following requirements: All excavated material removed from the site must be classified in accordance with the EPA's Waste Classification Guidelines before it is disposed of at an approved waste management facility and the classification and the volume of material removed must be reported

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	to the principal certifier or Council (where a principal certifier is not required) .
2.	All fill material imported to the site must be: 1. Virgin Excavated Natural Material as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i>; or 2. a material identified as being subject to a resource recovery exemption by the NSW EPA; or 3. a combination of Virgin Excavated Natural Material as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> and a material identified as being subject to a resource recovery exemption by the NSW EPA.
	Condition reason: To ensure soil removed from the site is appropriately disposed of and soil imported to the site is not contaminated and is safe for future occupants.
82.	(D430) Unidentified Contamination Any new information which arises during remediation, demolition or construction works that has the potential to alter previous conclusions about site contamination and remediation must be immediately notified in writing to the certifier and Liverpool City Council. A section 4.55 Application under the Environmental Planning and Assessment Act 1979 must be made for any proposed works outside the scope of the approved development consent. Condition reason: To ensure the suitability of land for the development.
83.	(D450) Air Quality During construction where operations involve excavation, filling or grading of land, or removal of vegetation, including ground cover, the consent holder is to ensure dust is suppressed by regular watering until such time as the soil is stabilised to prevent airborne dust transport. Where wind velocity exceeds five knots the Principal Certifier may direct that work is not to proceed. Condition reason: To ensure site works are managed appropriately and do not result in air pollution.
84.	(D455) Dropped Edge Beam The proposed concrete slab construction must incorporate drop edge beams to ensure any fill is adequately retained within the envelope of the building. The external masonry wall shall extend from the concrete beam at natural ground level. Condition reason: To ensure that all construction work is undertaken to an approved standard and relevant controls.
85.	(D460) Salinity The development shall be carried out in accordance with 'Appendix B' of the Liverpool Growth Precincts Development Control Plan 2013. The development shall be carried out in accordance with Part 1, Section 11 'Salinity Risk' of the Liverpool Development Control Plan 2008. Condition reason: To ensure that all construction work is undertaken to an approved standard.
86.	(D465) Air Conditioning The plant associated with any air conditioning system shall not cause any offensive noise as defined under the Protection of the Environment Operations Act 1997. Condition reason: To ensure fairness, transparency and probity.
87.	(D475) Imported Fill Material During construction the consent holder is to ensure fill imported on to the site is be compatible with the existing soil characteristic for site drainage purposes. Condition reason: To ensure soils introduced onsite do not result in drainage issues.
88.	(D480) Acoustic Report

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	The construction requirements recommended in the approved acoustic report are to be implemented by the consent holder during the construction of the development.
	Condition reason: To ensure human health and amenity is maintained by ensuring the development is not impacted by noise.
89. (D552) Implementation of the site management plans	
	While site work is being carried out:
	1. the measures required by the construction site management plan and the erosion and sediment control plan (plans) must be implemented at all times; and
	2. a copy of these plans must be kept on site at all times and made available to Council officers upon request.
	Condition reason: To ensure site management measures are implemented during the carrying out of site work.
90. (D555) Erosion Control - Maintenance	
	Sediment and erosion control measures are to be adequately maintained during the works until the establishment of grass.
	Condition reason: To ensure the required site management measures are implemented during construction.
91. (D565) Water Quality	
	During construction the consent holder is to ensure all topsoil, sand, aggregate, spoil or any other material that can be moved by water is stored clear of any drainage line, easement, water body, stormwater drain, footpath, kerb or road surface.
	Condition reason: To ensure site works are managed appropriately and do not result in water pollution.
92. (D570) Pollution Control - Site Operations	
	During construction, building operations including but not limited to brick cutting, mixing mortar and the washing of tools, paint brushes, form-work, concrete trucks and the like must not be performed on the public footway or any other locations which may lead to the discharge of materials into Council's stormwater drainage system.
	Condition reason: To mitigate potential risks to the environment during construction and facilitate compliance with legislative requirements.
93. (D574) Pollution Control - Truck Movements	
	The loading and unloading of all vehicles associated with the development must be undertaken within the property boundary of the premises subject to this consent.
	Measures must be implemented to prevent tracking of sediment by vehicles onto roads.
	Vehicle loads must be covered when entering and exiting the site with material.
	Condition reason: To mitigate potential risks to the environment during construction and facilitate compliance with legislative requirements.
94. (D655) Noise and Vibration requirements	
	While site work is being carried out, noise generated from the site must not exceed an LAeq (15 min) of LESS THAN 5dB (A) above background noise, when measured at a lot boundary of the site.
	Condition reason: To protect the amenity of the neighbourhood during construction.
95. (D829) Food Premises - Construction	
	The construction, fit-out and finishes of the premises must comply with the Food Act 2003, Australia New Zealand Food Standards Code and Australian Standard AS 4674-2004 Design, construction and fit-out of food premises. The food premises' construction must include, but not be limited to the following:
	(a) All walls (including partition walls) within the kitchen, food preparation, storage and display areas must be of solid construction (eg., bricks, cement or other approved material). These walls are to

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- be finished with glazed tiles, stainless steel or other approved material adhered directly to the wall to a height of 2 metres above floor level;
- (b) Walls within the kitchen, food preparation, storage and display areas which are not of solid construction (e.g. stud walls) must be finished in tiles or other approved material from the floor level to the underside of the ceiling;
 - (c) The floors within the kitchen, food preparation, storage and display areas must be constructed of a suitable material which is non-slip, durable, resistant to corrosion, non-toxic, non-absorbent and impervious to moisture. The floor is to be graded and drain to an appropriate floor waste fitted with a basket arrestor;
 - (d) If the floor in the food preparation and storage areas is constructed of tiles, the joints between the tiles must be of a material that is non-absorbent and impervious to moisture;
 - (e) The intersection of walls with floors and exposed plinths in the kitchen, food preparation, storage and display areas are to be coved to a minimum radius of 25mm;
 - (f) All plinths are to be constructed of a material which is of solid construction and impervious to moisture. The plinths must be:
 - (i) at least 75mm high;
 - (ii) finished level to a smooth even surface;
 - (iii) recessed under fittings to provide a toe space of not more than 50mm;
 - (iv) rounded at exposed edges; and
 - (v) coved at the intersection of the floor and wall to a minimum radius of 25mm.
 - (g) The ceiling is to be constructed of a material that is rigid, smooth faced and impervious to moisture. The ceiling over the food preparation, storage and display areas must be painted with a washable paint of a light colour. The surface finish is to be free of open joints, cracks, crevices or openings (drop ceiling panel is not permitted). The intersections of walls and the ceiling are to be tight jointed, sealed and dust-proof;
 - (h) The drop-in panel ceiling in the food preparation and storage areas must be replaced with an approved rigid, smooth faced and impervious material which is free of open joints, cracks, crevices or openings. The ceiling is to be painted with a light coloured washable paint;
 - (i) All service pipes and electrical conduits must be either:
 - (i) concealed in floors, walls, ceiling or concrete plinths, or
 - (ii) fixed with brackets so as to provide at least:
 - 25mm clearance between the wall and the pipe/conduit; &
 - 100mm between the floor and the pipe/conduit
 - pipes so installed are not to run underneath fittings.
 - (j) All architraves, skirting boards, picture rails and the like are not permitted within the kitchen, food preparation and storage areas;
 - (k) All openings in the walls, floors and ceilings through which service pipes and electrical conduits pass through are to be designed and constructed so as to prevent the access of vermin;
 - (l) The internal and external surfaces, including exposed edges to all benches, counters and shelving in the food preparation, storage, display and serving areas are to be finished with a rigid, smooth faced and non-absorbent material (e.g. laminate, stainless steel or other approved material) that is capable of being easily cleaned;
 - (m) All shelving must be located at least 25mm off the wall or alternatively, the intersection of the shelf and the wall is to be completely sealed. NOTE: The lowest shelf must be a minimum of at least 150mm above the floor level;
 - (n) The hot water service unit must be positioned a minimum of 75mm clear of the adjacent wall surface and mounted a minimum of 150mm above the floor level on a stand of non-corrosive metal construction;
 - (o) A free standing, hands free hand wash basin must be provided in a convenient position within the food preparation and serving areas. The hand wash basin must be provided with hot and cold water supplied through a single outlet and fitted with an approved mixing device to enable hands to be washed under hot running water at a temperature of at least 40°C;

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	(p) Cavities, false bottoms and similar hollow spaces capable of providing access and harbourage of vermin are not permitted to be formed in the construction of the premises or in the installation of fixtures, fittings and equipment;
	(q) A double bowl sink or two-compartment tub must be provided with hot and cold water supplied through a single spout in the kitchen/food preparation area. Double bowl sink or tubs must be supplied with water of at least: 45°C in one bowl for washing purposes; and 77°C in the other bowl for rinsing purposes, together with a thermometer accurate to 1°C.
	(r) Discharge of commercial trade wastewater is to be approved by Sydney Water. Before selecting or installing trade wastewater pre-treatment devices at a retail food business, refer to Plumbing for retail food businesses produced by Sydney Water.
	(s) A cleaners sink must be provided. The sink is NOT to be within an area where open food is handled.
	(t) The grease trap is NOT to be located within an area where food is being handled.
	(u) The construction, fit-out and finishes of the premises including the bottle prep room(s) and kitchen must comply with the Food Act 2003, Australia New Zealand Food Standards Code and Australian Standard AS 4674-2004 Design, construction and fit-out of food premises.
	Condition reason: To mitigate potential risks to human health and facilitate compliance with legislative requirements.
96.	(D950) Tree Protection Plan
	All measures of the tree protection plan are to be implemented.
	Condition reason: To ensure fairness, transparency and proberty.
97.	(D951) Heritage Listed Palms
	None of the heritage listed palm trees are to be moved or removed without consent from Council.
	Condition reason: To ensure fairness, transparency and proberty.

Before Issue of an Occupation Certificate

98.	(E003) Works-as-executed plans and any other documentary evidence
	Before the issue of an Occupation Certificate, works-as-executed plans, any compliance certificates and any other evidence confirming the following completed works must be submitted to the satisfaction of the principal certifier: 1. All stormwater drainage systems and storage systems.
	Condition reason: To confirm the location of works once constructed that will become council assets.
99.	(E005) Certificates
	The premises must not be occupied until an Occupation Certificate (OC) is issued by the certifier. Copies of all documents relied upon for the issue of the OC must be attached to the OC and registered with Council.
	Condition reason: To ensure the development is in accordance with the approval and the use meets health, safety and amenity provisions.
100.	(E010) Certificates
	All required documentary evidence for the critical stage inspections carried out prior, during and at the completion of construction, must be submitted to Council together with the required registration fee payment.
	Condition reason: To ensure the use meets health, safety and amenity provisions.
101.	(E020) Acoustic Report
	Confirmation in writing that the recommended measures were incorporated as required by the report.
	Condition reason: To ensure the use meets health and amenity provisions to occupants and/or neighbouring properties.

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102.	(E026) Removal of waste upon completion Before the issue of an Occupation Certificate: - all refuse, spoil and material unsuitable for use on-site must be removed from the site and disposed of in accordance with the approved waste management plan; and - written evidence of the waste removal must be provided to the satisfaction of the principal certifier or Council (where a principal certifier is not required). Condition reason: To ensure waste material is appropriately disposed or satisfactorily stored.
103.	(E030) Section 73 Sydney Water Certificate A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained and submitted to the Principal Certifier prior to issue of Occupation Certificate. Condition reason: To ensure relevant utility and service providers requirements are provided to the certifier.
104.	(E035) Completion of public utility services Before the issue of the relevant occupation certificate, confirmation must be obtained from the relevant authority that any adjustment or augmentation of any public utility services including gas, water, sewer, electricity, street lighting and telecommunications, required as a result of the development, have been completed and this confirmation must be provided to the principal certifier. Condition reason: To ensure required changes to public utility services are completed, in accordance with the relevant agency requirements, before occupation.
105.	(E037) Liverpool City Council clearance - Roads Act/ Local Government Act Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall ensure that all works associated with a S138 Roads Act approval or S68 Local Government Act approval have been inspected and signed off by Liverpool City Council. Condition reason: To ensure fairness, transparency and proberty.
106.	(E050) Display of Street Numbers Street numbers must be prominently displayed at the front of the development in a contrasting colour to the building materials and at the front of each individual unit to comply with the Local Government Act 1973, Section 124(8). The number should be a minimum height of 120mm and be visible at night. Condition reason: To ensure street number of the site is displayed in accordance with the Local Government Act.
107.	(E064) Completion of landscape and tree works Before the issue of an Occupation Certificate, the principal certifier must be satisfied all landscape and tree-works have been completed in accordance with approved plans and documents and any relevant conditions of this consent. Condition reason: To ensure the approved landscaping works have been completed in accordance with the approved landscaping plan(s).
108.	(E065) Landscaping Upon completion of the approved landscape works associated with the development and prior to the issue of any Occupation Certificate, an Implementation Report is to be submitted to the Principal Certifier attesting to the satisfactory completion of the landscape works in accordance with the approved landscape plan. The report is to be prepared by a suitably qualified person. Condition reason: To help ensure landscaping works have been carried to a high standard and in accordance with the original design plans.
109.	(E075) Road Works All redundant vehicular crossings shall be removed and replaced with Council's standard kerb and gutter at no cost to Council. The removal and replacement of a standard driveway with standard integral kerb and gutter shall be subject of a driveway application to Council and works supervised by that driveway inspection process. Condition reason: To protect and maintain Council infrastructure to an appropriate standard.

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110.	(E106) Recommendations of Acoustic Report Upon completion of works and before the issue of any occupation certificate, written certification prepared by a suitably qualified acoustic consultant must be submitted to and approved by the certifier. The written certification prepared by the suitably qualified acoustic consultant must confirm that the development complies with all requirements and recommendations detailed within the approved acoustic report titled Noise Impact Assessment, report reference TN427-01F02, Issued Revision 2, prepared by Renzo Tonin & Associates dated 3 November 2023. The acoustic consultant must confirm that the development or use is capable of operating in accordance with the design criteria. Note: The 'suitably qualified acoustic consultant' must be a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm. Condition reason: To mitigate potential acoustic impacts by ensuring that the development or use complies with the specified design criteria.
111.	(E250) Mechanical Ventilation Certification Upon completion of works and before the issue of any occupation certificate, a Mechanical Ventilation Certificate of Completion and Performance prepared by a professional engineer or other suitably qualified person must be submitted to certifier for their review and approval. The certification must be accompanied by details of the tests carried out in relation to ventilation and acoustics and confirm that the systems comply with the approved plans, specifications, Building Code of Australia and Australian Standard AS 1668 Parts 1 and 2. Condition reason: To facilitate compliance with legislative requirements.
112.	(E255) Notice of food business Before the issue of an occupation certificate, council and any other appropriate enforcement agency must be notified of the food business in accordance with the NSW <i>Food Act 2003</i> and the Australia New Zealand Food Standards Code – 3.2.2 – Food Safety Practices and General Requirements. Condition reason: To enable council to ensure compliance with the consent when the business is operating
113.	(E400) Stormwater Compliance Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall ensure that the: - On-site detention system/s, - Stormwater pre-treatment system/s, - Basement Carpark pump-out system: - Have been satisfactorily completed in accordance with the approved Construction Certificate and the requirements of this consent, - Have met the design intent with regard to any construction variations to the approved design, and - Any remedial works required to been undertaken have been satisfactorily completed. Details of the approved and constructed system/s shall be provided as part of the Works-As-Executed drawings. Condition reason: To ensure fairness, transparency and proberty.
114.	(E404) Restriction as to User and Positive Covenant Prior to the issue of an Occupation Certificate a restriction as to user and positive covenant relating to the following shall be registered on the title of the property: - On-site detention system/s, - Stormwater pre-treatment system/s, - Basement Carpark pump-out system: The restriction as to user and positive covenant shall be in Liverpool City Council's standard wording as detailed in Liverpool City Council's Design and Construction Guidelines and Construction Specification for Civil Works.

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	Condition reason: To ensure fairness, transparency and proberty.
115.	(E408) Rectification of Damage Prior to the issue of an Occupation Certificate, any damage to Council infrastructure not identified in the dilapidation report, as a result of the development shall be rectified at no cost to Liverpool City Council. Any rectification works within Epsom Road and Governor Macquarie Drive will require a Roads Act application. The application is to be submitted and approved by Liverpool City Council prior to such works commencing. Condition reason: To ensure fairness, transparency and proberty.
116.	(E436) Dilapidation Report Any rectification works required by Council regarding the condition of Council infrastructure shall be undertaken, at full cost to the developer. Condition reason: To ensure fairness, transparency and proberty.
117.	(E950) Noise & Vibration Control - Childcare Basement Car Park Before the issue of an occupation certificate the principal certifier must be satisfied that the proposed garage/security door fitted to the underground car parking entrance must be independently mounted on rubber pads or otherwise installed to prevent noise and transmission of noise through the concrete walls and/or columns. Condition reason: To ensure fairness, transparency and proberty.
118.	(E951) Safety Barrier The applicant is to install safety barrier along the frontage of the development as illustrated on architectural plans and in accordance with the requirements of Australian Standards. Condition reason: To ensure fairness, transparency and proberty.

Occupation and Ongoing use

119.	(G065) Unreasonable Noise and Vibration The use of the premises and/or machinery equipment installed must not give rise to offensive noise so as to interfere with the amenity of the neighbouring properties. Should an offensive noise complaint be received and verified by Liverpool City Council, an acoustic assessment must be undertaken by a suitably qualified acoustic consultant and an acoustic report must be submitted to Liverpool City Council for review. Any noise attenuation recommendations approved by Liverpool City Council must be implemented. Note: The 'suitably qualified acoustic consultant' must be a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm. Condition reason: To mitigate potential offensive noise and amenity impacts.
120.	(G100) Waste Collection and Management Waste and recyclable material must be managed in a satisfactory manner, covered at all times and not give rise to offensive odour or encourage pest activity. All solid and liquid waste must be removed regularly from the site by a registered waste contractor. Waste must not be permitted to accumulate near the waste storage bins. Condition reason: To mitigate potential risks to human health and the environment.
121.	(G170) Storage and Handling of Corrosive Substances Corrosive Substances must be stored and handled in accordance with AS 3780-2008 The Storage and Handling of Corrosive Substances. Condition reason: To promote safe storage and handling of corrosive substances.
122.	(G190) Parking Spaces

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	The following parking spaces should be used solely for the purpose it has been provided. 1. Staff car parking 2. Visitor car parking 3. Accessible car parking 4. Cycle parking 5. Delivery area 6. Garbage pick-up area Condition reason: To ensure that adequate parking and loading are provided.									
123.	(G210) Car Parking Management All parking areas shown on the approved plans must be used solely for this purpose. Condition reason: To ensure that adequate parking and loading are provided.									
124.	(G220) Loading Areas All loading and unloading must take place from the designated loading dock/bay. This area is to be clearly marked/signposted for use by delivery vehicles only. Condition reason: To ensure that adequate parking and loading are provided.									
125.	(G230) Vehicle Access Vehicles entering or leaving the development site should be in forward direction, if practicable. Condition reason: To ensure safety.									
126.	(G250) Operating hours During ongoing use of the premises, the hours of operation of the Childcare centre are restricted to: <table><tr><td></td><td>From</td><td>To</td></tr><tr><td>Monday to Friday</td><td>7:00am</td><td>6:00pm</td></tr><tr><td>The premises is not to operate Saturday, Sundays or Public Holidays</td><td></td><td></td></tr></table> Condition reason: To protect the amenity of the local area		From	To	Monday to Friday	7:00am	6:00pm	The premises is not to operate Saturday, Sundays or Public Holidays		
	From	To								
Monday to Friday	7:00am	6:00pm								
The premises is not to operate Saturday, Sundays or Public Holidays										
127.	(G260) Deliveries and waste collection times for food and drink and mixed use developments During ongoing use of the Childcare Centre, all deliveries, waste and recycling collection carried out by heavy vehicle: 1. are undertaken only during the following hours: <table><tr><td></td><td>From</td><td>To</td></tr><tr><td>Monday to Friday</td><td>10:00am</td><td>3:00pm</td></tr><tr><td>The premises is not to operate on Saturdays, Sundays or Public Holidays</td><td></td><td></td></tr></table> 2. only occur in designated loading and unloading areas on the property; 3. do not occur on the street; 4. do not obstruct other operations; 5. minimise disruption to public spaces; 6. maintain a clear service vehicle dock, car parking spaces and access driveways at all times; and 7. all vehicles must enter and leave in a forward direction. Condition reason: To ensure deliveries to the premises are carried out safely and protect the amenity of the local area		From	To	Monday to Friday	10:00am	3:00pm	The premises is not to operate on Saturdays, Sundays or Public Holidays		
	From	To								
Monday to Friday	10:00am	3:00pm								
The premises is not to operate on Saturdays, Sundays or Public Holidays										
128.	(G310) Childcare Centres Approval is granted for a maximum of 120 children to be on the premises at one time, in accordance with the following groupings: (a) 20 children 0 – 2 years; (b) 40 children 2 – 3 years; and (c) 60 children 3 years and over. Condition reason: To ensure that childcare centres maintain the maximum number of places in each									

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	age group approved with this consent.
129.	(G320) Childcare Centres A maximum number of 19 permanent staff members are permitted to work at the childcare centre at any given time. Condition reason: To ensure that childcare centres maintain the maximum number of permanent staff approved with this consent.
130.	(G340) Noise Complaints register The operator must keep a legible record of all complaints received in an up-to date Complaints Register. The Complaints Register must record, but not necessarily be limited to: (a) the date and time, where relevant, of the complaint; (b) the means by which the complaint was made (telephone, mail or email); (c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect; (d) the nature of the complaint; (e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken. (f) allocate an individual "complaint number" to each complaint received. The Complaints Register must be made available for inspection when requested by Liverpool City Council. The industry must be operated in accordance with the approved Noise Management Plan and Complaints Handling Procedure at all times. Condition reason: To mitigate potential impacts associated with the development and establish a procedure for responding to enquiries.
131.	(G345) Lighting Illumination of the site must be arranged in accordance with the requirements and specifications of AS 4282:2019 - Control of obtrusive effects of outdoor lighting so as not to impact upon the amenity of the occupants of adjoining and nearby premises. Condition reason: To mitigate potential lighting impacts and protect the amenity of the surrounding area.
132.	(G350) Noise - Spruiking No persons, such as those commonly known as 'spruikers' must operate either with or without sound amplification equipment for the purpose of advertising the use of the premises, the sale and availability of goods, services, entertainment or similar announcements. Condition reason: To mitigate potential acoustic impacts and protect the amenity of the surrounding area.
133.	(G360) Noise - Silent Building Intruder Alarm System Any building intruder alarm installed at the site must be a "silent back to base" type. Condition reason: To mitigate potential acoustic impacts and protect the amenity of the surrounding area.
134.	(G370) Use of building intruder alarm/s Any building intruder alarm/s associated with the development must only be permitted to operate in accordance with Clause 42 of the Protection of the Environment Operations (Noise Control) Regulation 2017. Condition reason: To mitigate potential acoustic impacts and facilitate compliance with legislative requirements.
135.	(G390) Noise - General

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	Noise associated with the use of the premises, including mechanical plant and equipment, must not give rise to any one or more of the following: (a) The use of the premises including the cumulative operation of any mechanical plant, equipment, public address system or other amplified sound equipment must not give rise to the emission of 'offensive noise' as defined by the Protection of the Environment Operations Act 1997. (b) The operation of any mechanical plant, equipment, public address system or other amplified sound equipment installed on the premises must not cause: i. The emission of noise as measured over a 15 minute period (LAeq (15 minute)) that exceeds the LA90 (15 minute) background noise level by more than 5 dB(A) when measured at the most affected residential boundary. Modifying factor corrections must be applied for tonal, impulsive, low frequency or intermittent noise in accordance with the NSW Environment Protection Authority's 'Noise Policy for Industry' (2017); ii. An internal noise level in any adjoining occupancy that exceeds the recommended design sound levels specified in Australian/New Zealand Standard AS/NZS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors; iii. 'offensive noise' as defined by the Protection of the Environment Operations Act 1997; and iv. Transmission of vibration to any place of different occupancy greater than specified in AS 2670. Condition reason: To mitigate potential intrusive noise and amenity impacts.
136.	(G392) Noise Management Plan The approved Noise Management Plan must be complied with at all times. Condition reason: To mitigate potential acoustic impacts and protect the amenity of the surrounding area.
137.	(G393) Acoustic Report An acoustic report prepared by a suitably qualified acoustic consultant must be submitted to Liverpool City Council for its assessment and approval within three (3) months of occupation/completion of the development. The report must include but not be limited to the following information: (a) Noise measurements taken during a time of peak occupation at the most affected noise sensitive locations as indicated in the approved acoustic report titled Proposed childcare centre at 123 Epsom Road, Chipping Norton: Noise Impact assessment, report reference (TN427-01F02, Revision 2) prepared by Renzo Tonin & Associates dated 3 November 2023; (b) Verification that noise levels at the most affected receivers comply with all relevant assessment criteria detailed in the abovementioned report; (c) All complaints received from local residents in relation to the operation of the premises/development; and (d) Where noise measurements required under point a) above indicate that the relevant assessment criteria are exceeded, recommendations must be provided in relation to how noise emissions can be satisfactorily reduced to comply with the assessment criteria. Following written approval from Liverpool City Council, recommendations provided under point d) above must be implemented fully. Note: The 'suitably qualified acoustic consultant' must be a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm. Condition reason: To mitigate potential acoustic impacts and protect the amenity of the surrounding area.
138.	(G400) Environment The use of the premises must not give rise to the emission into the surrounding environment of gases, vapours, dusts or other impurities that are a nuisance, injurious or prejudicial to health. Condition reason: To mitigate potential risks to human health and the environment.

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139.	(G410) Landscaping Landscaping shall be maintained in accordance with the approved plan, in a healthy state and in perpetuity by the existing or future owners and occupiers of the development. If any of the vegetation comprising the landscaping dies or is removed, it is to be replaced with vegetation of the same species, and similar maturity as the vegetation which has died or was removed. An annual report shall be submitted to Council, for the 3 years following issue of the OC, certifying that the landscaping works have been satisfactorily maintained. Condition reason: To require records to be provided, after occupation, documenting that landscaping is appropriately maintained.
140.	(G468) Smoke-free Requirements The requirements of the Smoke-free Environment Act 2000 and Smoke-free Environment Regulation 2016 must be complied with at all times. This development consent does not imply that the development meets the requirements of the aforementioned legislation. In the event that the Applicant and/or Occupier wishes to facilitate smoking within the premises, they must ensure that the design and construction of the area proposed to facilitate smoking fully complies with the requirements of the Smoke-free Environment Act 2000 and Smoke-free Environment Regulation 2016. Condition reason: To mitigate potential risks to human health and facilitate compliance with legislative requirements and relevant standards.
141.	(G470) Food Premises - Use of Charcoal The use of charcoal for the purposes of heating, cooking or smoking food on the premises is strictly prohibited. Condition reason: To mitigate potential risks to human health and the environment.
142.	(G666) Educational Establishment - Music The doors and windows of the child care centre must be closed at all times when used for noise generating activities including but not limited to singing, musical instruments and amplified sound equipment. These activities are not to be conducted outdoors. Condition reason: To mitigate potential intrusive noise and amenity impacts.
143.	(G668) Educational Establishment - Car Park Signage Prominent notices must be installed at the entry and exit to the building entry and the entry and exit to the car park informing people to enter and leave the premises and car park quietly. Condition reason: To mitigate potential intrusive noise and amenity impacts.
144.	(G670) Educational Establishments - Supervision Children must be supervised at all times during arrival, departure and outdoor play activities to minimise noise impacts from the child care centre. Condition reason: To mitigate potential intrusive noise and amenity impacts.
145.	(G810) Food Business Notification Requirements All retail food businesses must notify Liverpool City Council of their food activity details. The food business notification must be completed in the approved form and comprise all information specified in the Food Safety Standards. The completed registration form/s must be submitted to Council prior to the commencement of the business. Condition reason: To address legislative requirements.
146.	(G816) Food Safety Supervisor A Food Safety Supervisor must be appointed to the food premises. A copy of the Food Safety Supervisor certificate must be kept onsite and presented to Council's Authorised Officer upon

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	request. Further information can be obtained in the "Guideline to Food Safety Supervisor Requirements" published by the NSW Food Authority. A copy of the Food Safety Supervisor certificate must be presented to Council's Authorised Officer upon request.
	Condition reason: To mitigate potential risks to human health.
147.	(G950) Linen and mattresses
	1. The premises operator must ensure provision of clean linen for the use of each child; 2. All mattresses must be fitted with washable waterproof mattress protectors. 3. Evidence of a commercial contract to launder linen must be provided to Council upon request. Alternatively, a commercial washing machine capable of washing at a temperature of not less than 70 degrees Celsius must be installed on the premises and provided with hot water at all times. 4. Should any linen be laundered onsite, an appropriate clothes dryer is to be made available for the drying of linen and towels.
	Condition reason: To ensure fairness, transparency and proberty.
148.	(G951) Appliances and Cool Rooms
	Appliances used to store potentially hazardous food must have a capacity to keep foods hotter than 60 degrees Celsius, refrigerated foods below 5 degrees Celsius and frozen foods below 18 degrees Celsius and are to be provided with a digital thermometer accurate to 1 degree Celsius that can be easily observed from outside the appliance.
	Condition reason: To ensure fairness, transparency and proberty.
149.	(G952) Air Handling System
	Any liquid discharge from the air handling system resulting from the operation, maintenance and/or cleaning operations are to be disposed of into the sewer system. Discharge into the stormwater disposal system is not permitted.
	Condition reason: To ensure fairness, transparency and proberty.
150.	(G953) Non standard Environmental Health Condition
	The premises including but not limited to toilets and bathrooms shall be maintained in a clean and hygienic condition free from a build up of waste at all times.
	Condition reason: To ensure fairness, transparency and proberty.

Demolition Work Before Demolition Work Commences

151.	(C055) Site Facilities
	Adequate refuse disposal methods and builders storage facilities shall be installed on the site. Builders' wastes, materials or sheds are not to be placed on any property other than that which this approval relates to.
	Condition reason: To ensure the required site management measures are implemented before the commencement of building work.

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General advisory notes

This consent contains the conditions imposed by the consent authority which are to be complied with when carrying out the approved development. However, this consent is not an exhaustive list of all obligations which may relate to the carrying out of the development under the EP&A Act, EP&A Regulation and other legislation. Some of these additional obligations are set out in the Conditions of development consent: advisory notes. The consent should be read together with the Conditions of development consent: advisory notes to ensure the development is carried out lawfully.

The approved development must be carried out in accordance with the conditions of this consent. It is an offence under the EP&A Act to carry out development that is not in accordance with this consent.

A document referred to in this consent is taken to be a reference to the version of that document which applies at the date the consent is issued, unless otherwise stated in the conditions of this consent.

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Dictionary

The following terms have the following meanings for the purpose of this determination (except where the context clearly indicates otherwise):

Approved plans and documents means the plans and documents endorsed by the consent authority, a copy of which is included in this notice of determination.

AS means Australian Standard published by Standards Australia International Limited and means the current standard which applies at the time the consent is issued.

Building work means any physical activity involved in the erection of a building.

Certifier means a council or a person that is registered to carry out certification work under the Building and Development Certifiers Act 2018.

Construction certificate means a certificate to the effect that building work completed in accordance with specified plans and specifications or standards will comply with the requirements of the EP&A Regulation and Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

Council means LIVERPOOL CITY COUNCIL.

Court means the Land and Environment Court of NSW.

EPA means the NSW Environment Protection Authority.

EP&A Act means the *Environmental Planning and Assessment Act 1979*.

EP&A Regulation means the *Environmental Planning and Assessment Regulation 2021*.

Independent Planning Commission means Independent Planning Commission of New South Wales constituted by section 2.7 of the EP&A Act.

Local planning panel means LIVERPOOL LOCAL PLANNING PANEL.

Occupation certificate means a certificate that authorises the occupation and use of a new building or a change of building use for an existing building in accordance with this consent.

Principal certifier means the certifier appointed as the principal certifier for building work or subdivision work under section 6.6(1) or 6.12(1) of the EP&A Act respectively.

Site work means any work that is physically carried out on the land to which the development the subject of this development consent is to be carried out, including but not limited to building work, subdivision work, demolition work, clearing of vegetation or remediation work.

Stormwater drainage system means all works and facilities relating to:
the collection of stormwater,

the reuse of stormwater,

the detention of stormwater,

the controlled release of stormwater, and

connections to easements and public stormwater systems.

Strata certificate means a certificate in the approved form issued under Part 4 of the *Strata Schemes Development Act 2015* that authorises the registration of a strata plan, strata plan of subdivision or notice of conversion.

Subdivision certificate means a certificate that authorises the registration of a plan of subdivision under Part 23 of the *Conveyancing Act 1919*.

Subdivision works certificate means a certificate to the effect that subdivision work completed in accordance with specified plans and specifications will comply with the requirements of the EP&A Regulation.

Sydney district or regional planning panel means SYDNEY WESTERN CITY PLANNING PANEL.

Item Number:	2
Application Number:	DA-615/2023
Proposed Development:	Two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation. The development is identified as Integrated Development, requiring approval from NSW Rural Fire Service under Rural Fires Act 1997. The application is identified as Nominated Integrated development requiring approval from the Department of Planning and Environment - Water pursuant to the Water Management Act 2000.
Property Address	Lot 946 Jardine Drive, Edmondson Park NSW 2174, Lot 942 Wakeling Drive, Edmondson Park NSW 2174, 214-220 Jardine Drive, Edmondson Park NSW 2174
Legal Description:	Lot 946 DP 1206994, Lot 942 DP 1206994, Lot 9 DP 1202976
Applicant:	JG Developments Pty Ltd
Land Owner:	JG Developments Pty Ltd
Cost of Works:	\$669,850
Recommendation:	Approved subject to conditions of consent
Assessing Officer:	Kamar Warwar

1. EXECUTIVE SUMMARY

The subject Development Application (DA-615/2023) seeks consent for two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation on a site legally known as Lots 942 & 946, DP 1206994 and Lot 9 DP 1202976, also known as Lot 946 Jardine Drive, Lot 942 Wakeling Drive and 214-220 Jardine Drive, Edmondson Park.

In detail, the proposal seeks consent to subdivide Lot 946 into two residential lots, and the construction of a local road in accordance with the Indicative Layout Plan pursuant to Part 2.11 - Edmondson Park of the Liverpool Development Control Plan 2008. The proposed works within Lot 942 include earthworks to facilitate the construction of the road and proposed battle axe driveway. The works required within Lot 942 are ancillary to the construction of the ILP road.

The development is identified as Integrated Development, requiring approval from NSW Rural Fire Service under Rural Fires Act 1997. The application is also identified as Nominated Integrated Development requiring approval from the Department of Planning and

Environment - Water pursuant to the Water Management Act 2000. The relevant General Terms of Agreement (GTAs) have been obtained.

The site is zoned as R1 – General Residential and RE1 – Public Recreation, pursuant to Liverpool Local Environmental Plan (LLEP) 2008, with the proposed development being permissible with consent. The proposal is generally compliant with Council's applicable local provisions and an acceptable form of development in that regard. The proposal also involves a variation under Clause 4.6 of the Liverpool LEP 2008 regarding Clause 7.11 Minimum Dwelling Density, consisting of a variation of six (6) dwellings per hectare / 43%. The proposed variation is considered acceptable due to the site constraints and the irregular shape of the lot.

The proposal has been notified and advertised between 13 December 2023 to 31 January 2024 in accordance with Liverpool Community Participation Plan 2022. In response, no submissions have been received on the application.

The key matters for consideration for the Development Application relate to the variation to the minimum dwelling density development standard, and the land being mapped by the NSW Rural Fire Service as bushfire prone land. As demonstrated in the report, the variation to the minimum dwelling density development standard is considered acceptable in this instance and as mentioned above, the RFS have issued their relevant General Terms of Approval (GTA).

The application is referred to the Liverpool Local Planning Panel (LLPP) in accordance with the Local Planning Panels Direction – Development Applications and Applications to Modify Development Consent, endorsed by the Minister for Planning and Public Spaces on 30 June 2020, as the development falls in the category of:

Departure from Development Standards

Development that contravenes a development standard imposed by an Environmental Planning Instrument (EPI) by more than 10% or non-numerical development standards.

The application has been assessed pursuant to the provisions of the Environmental Planning and Assessment (EP&A) Act 1979. Based on the assessment of the application, it is recommended that the application be approved, subject to the imposition of conditions.

2. SITE DESCRIPTION AND LOCALITY

2.1 Site Description

The development site comprises three existing allotments, known as Lots 942 & 946, DP 1206994 and Lot 9 DP 1202976, also known as Lot 946 Jardine Drive, Lot 942 Wakeling Drive and 214-220 Jardine Drive, Edmondson Park. The part of the site (Lot 946) which is subject to the two-lot subdivision is an irregular shape with an area of 0.248ha.

The site is currently vacant and features extensive vegetation. Cabramatta Creek traverses Lot 942 and has been identified for acquisition by Council for a Riparian Park. Lot 946 slopes towards the east as it approaches Cabramatta Creek which is located within Lot 942.



Figure 1: Aerial map of Lot 946 (Primary), Lot 942 and Lot 9. (Source: Geocortex)

2.2 Locality Description

The site is located between Jardine Drive to the northeast, and the railway corridor to the southwest. The surrounding land east of the site is predominantly characterised by recently developed low density residential dwellings. The lots immediately northwest of the site are currently vacant and have been cleared of all vegetation.

The surrounding land beyond the railway corridor is characterised by large-lot residential development, consisting of detached single dwellings and outbuildings. The site is in proximity to Edmondson Park Train Station, approximately 2km to the south-east of the site. The immediate locality of the site can be seen in Figure 2 below.



Figure 2: Locality surrounding the subject site (Source: Six Maps)

2.3 Site Constraints

Are there any constraints or affectations on the site: • Bushfire • Flood Prone Land • Heritage Items • Aboriginal heritage • Environmentally Significant Land • Threatened Species/ Flora/ Habitat/ Critical Communities • Acid Sulphate Soils • Aircraft Noise • Flight Paths • Railway Noise • Road Noise/ Classified Road • Significant Vegetation • Contamination • Sydney Water Assets	Site Constraints: • The site is identified as bushfire prone land • The site is Environmentally Significant Land • The site is affected by flooding. • The site adjoins the railway corridor to the south. • Rip rap scour located on Lot 942.
Are there any easements of restriction on the title?	Lot 942 DP 1206994 • (4) Easement for Underground Cables 1.2 Wide.

3. BACKGROUND

3.1 Previous DA History

Review of Environmental Factors for Modification of Creeks in Edmondson Park

A Review of Environmental Factors (REF) titled *Modification of Creeks in Edmondson Park*, prepared by Storm Consulting for Council, dated 13 April 2014, has been relied upon for the subject development in relation to the proposed batter works for the construction of roads. The REF was developed to assess the flooding impact of partial filling of flood prone lands as per the Edmondson Park Masterplan. The report is accompanied by a concept design for the modification of creeks within the land which the subject application applies, which is shown in Figure 3.

The REF proposed concept designs for modification works, to enable future residential development and construction of roads surrounding the creek to be constructed above 1% AEP flood levels.

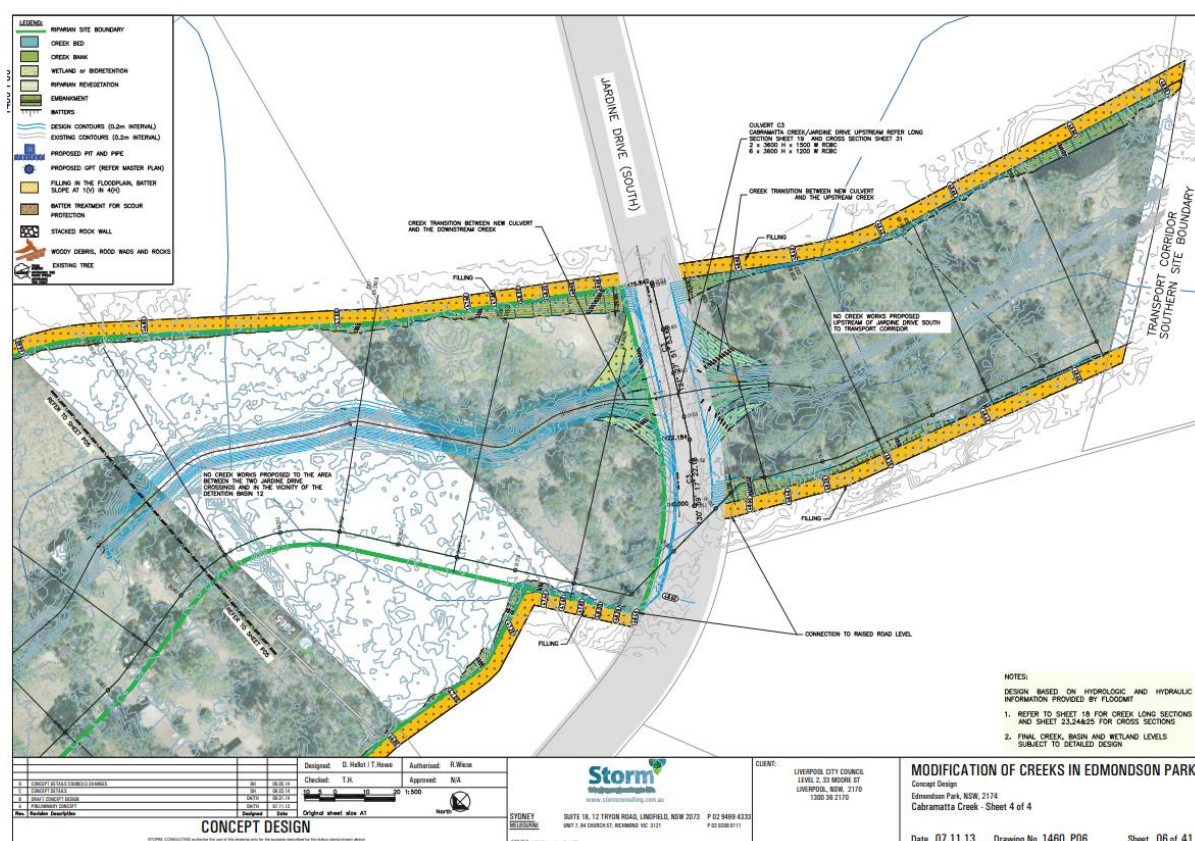


Figure 3: Concept Design from Modification of Creeks in Edmondson Park (Floodmit, 2014). Development Application DA-817/2014

The site was previously created as part of a larger subdivision which was approved by Council under Development consent DA-877/2014. The previous application, DA-877/2014, involved the demolition of 2 existing houses and Torrens title subdivision into 76 residential lots and 5 residue lots in three stages, and consent was granted on 24 March 2015. A further modification to the consent, to allow an additional residential lot in stage 2 of the

development, was granted 8 July 2016. The subdivision plan for DA-877/2014, which includes Lot 946 and Lot 942, is shown in Figure 4.

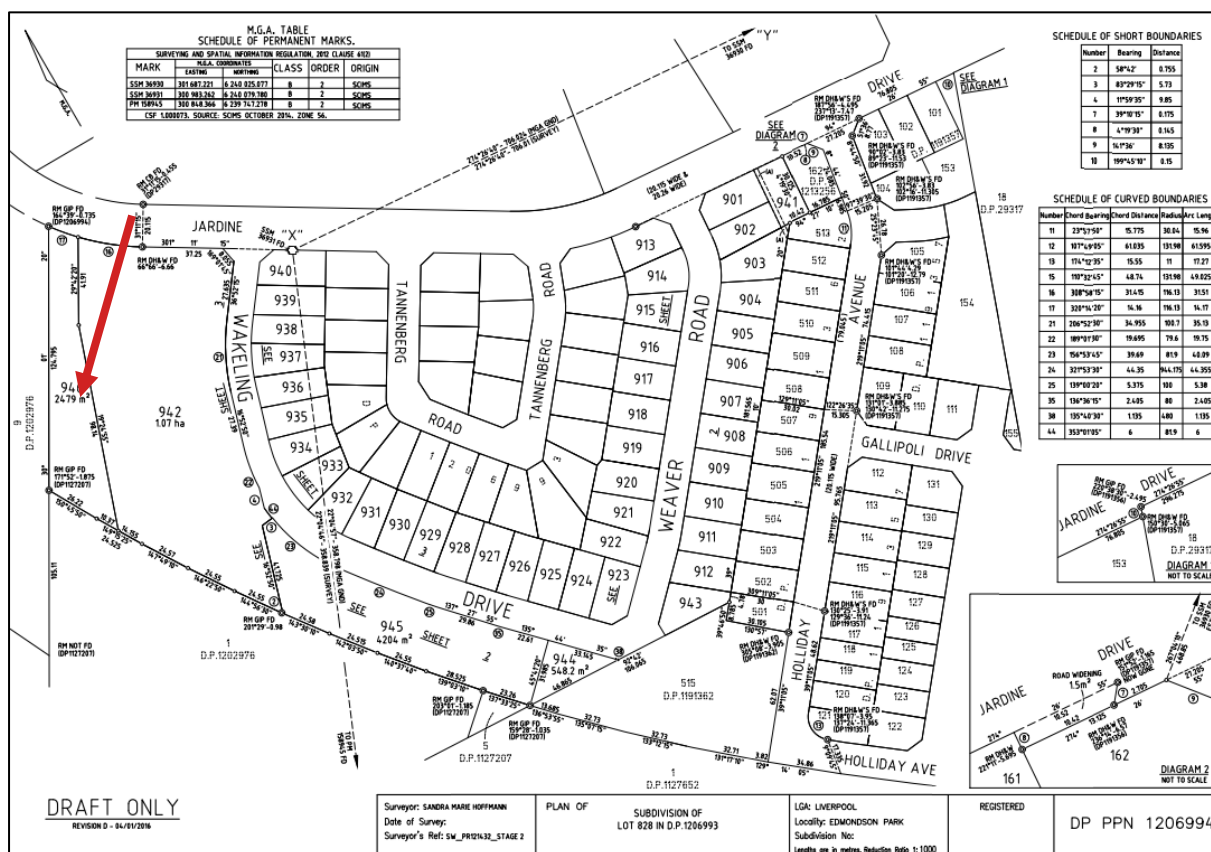


Figure 4: Extract of parent lot subdivision approved under DA-877/2014.

Development Application DA-445/2020

Development Application DA-445/2020 was lodged on 5 June 2020 seeking consent for *two lot Torrens title subdivision with construction of roads, earthworks and removal of vegetation*.

The proposed development originally sought consent for a three lot Torrens title subdivision in two stages involving the following:

1. Stage one construction of roads and earthworks.
2. Stage two subdivision of land to create three Torrens title residential lots.

Following an assessment of the application, the application was refused under Delegated Authority on 17 April 2023.

Review of Determination Application RD-11/2023

Review of Determination Application RD-11/2023 was lodged on 8 August 2023 seeking *review of determination of refusal for two lot Torrens title subdivision including construction of roads, earthworks, and removal of vegetation*.

Due to the application being lodged 4-months following the refusal of DA-445/2020, inadequate time was provided to consider the application prior to the 6-month review timeframe, and the application subsequently lapsed on 17 October 2023.

3.2 History of Development Application DA-615/2023

A brief history of Development Application DA-615/2023 is presented in the table below.

DATE	DETAILS
5 December 2023	Development Application lodged.
8 December 2023	Subject application referred to relevant internal referral officers and external concurrence / approval bodies.
13 December 2023 to 31 January 2024	The application was advertised. No submissions were received in response.
21 December 2023	Transport for NSW (TfNSW) had requested further information.
31 January 2024	Department of Planning and Environment - Water (DPE-Water) requested further information.
11 March 2024	Council issued an RFI letter, citing matters raised by Council's Waste Officer.
21 February 2024 and 8 May 2024	The Applicant responded to TfNSW, DPE-Water and Council's RFI letter.
4 June 2024	The application was found to be non-compliant with Clause 7.11 of the Liverpool LEP 2008, which relates to the minimum dwelling density requirement.
11 June 2024	An RFI letter was issued to the Applicant, requesting submission of a Clause 4.6 variation justification.
19 June 2024	Meeting between Council Officers and the Applicant.
21 June 2024	Council issued an RFI letter, citing planning matters.
9 July 2024 and 25 July 2024	Applicant response provided.

4. DETAILS OF THE PROPOSED DEVELOPMENT

The proposed development seeks approval for the removal of existing vegetation, subdivision of land into two lots and the construction of local roads and earthworks. Details of the proposal are summarised below:

Removal of Vegetation and Fencing

- Removal of 22 trees within Lot 946
- Removal of 10 trees within in Lot 942 which are located within the proposed batter area.
- Removal of 5 additional trees within the Jardine Drive Road reserve.
- Removal of fencing between the boundary of Lot 946 and Lot 942.

Subdivision

Torrens title battle axe subdivision of existing Lot 946 in DP1206994 to create proposed lots:

- Lot 801: 578sqm, approximately 16m frontage to the proposed road.

- Lot 802: 1094sqm, approximately 30m frontage, which is a battle-axe lot behind Lot 801.
- Construction of a battle axe handle driveway which is 5m wide and 52.91m long.

Construction of Roads

- Construction of part of the proposed road, in accordance with the Edmondson Park Indicative Layout Plan.
- The proposed road is a 15.2m local road, comprised of a two-lane carriageway and a 4m verge on either side.

Earthworks

Earthworks are proposed in the development to ensure the residential lots and access ways are constructed above the 1% AEP Flood Level.

A batter is proposed that encroaches into Lot 9 and along the boundary between Lot 946 and Lot 942, based on the concept design of the subject site as set out in in the REF *Modification of Creeks in Edmondson Park*.

Temporary Works

A temporary turning head has been proposed to Lot 9 to facilitate movement to the proposed road.

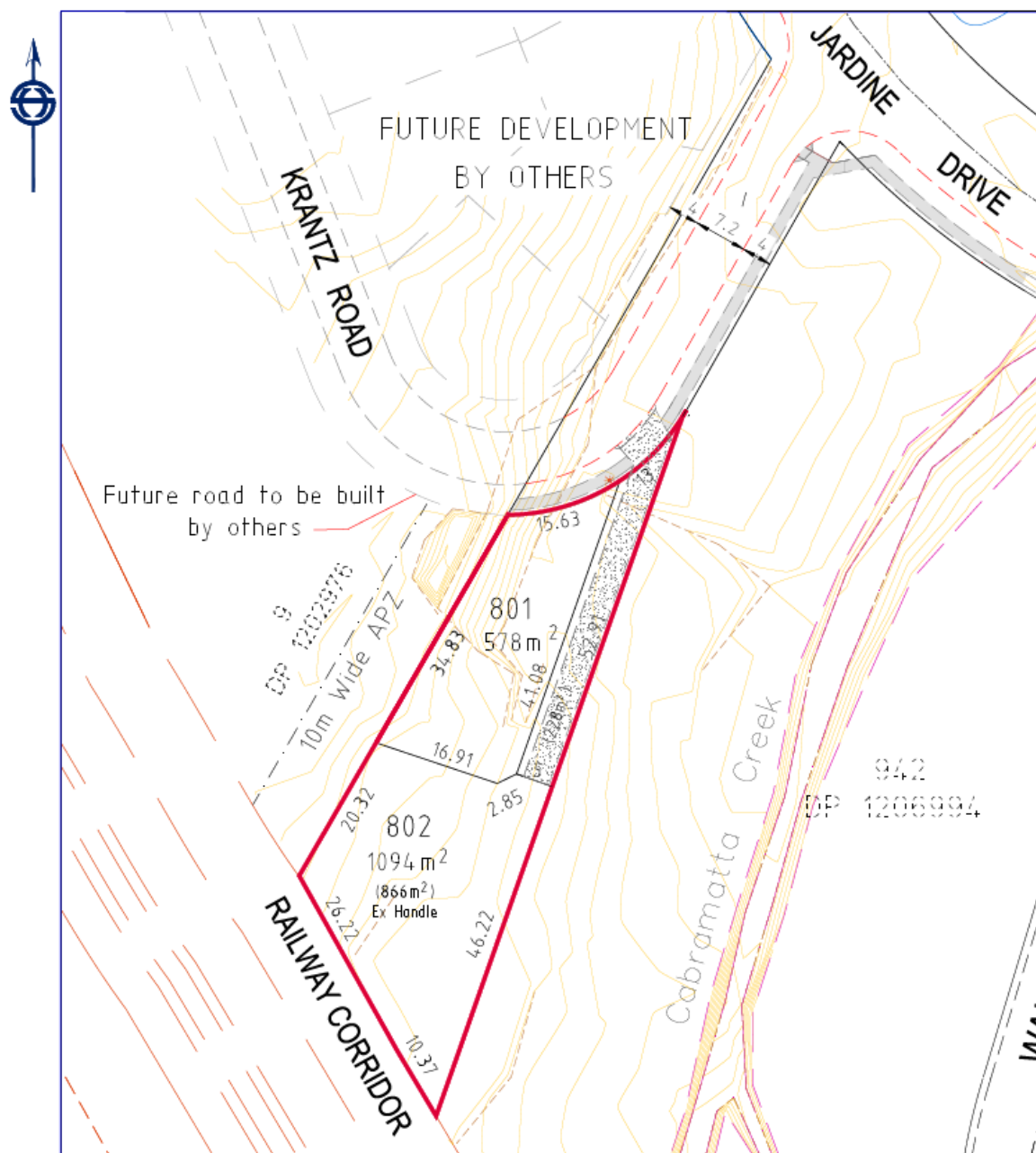


Figure 5: Proposed Subdivision Plan

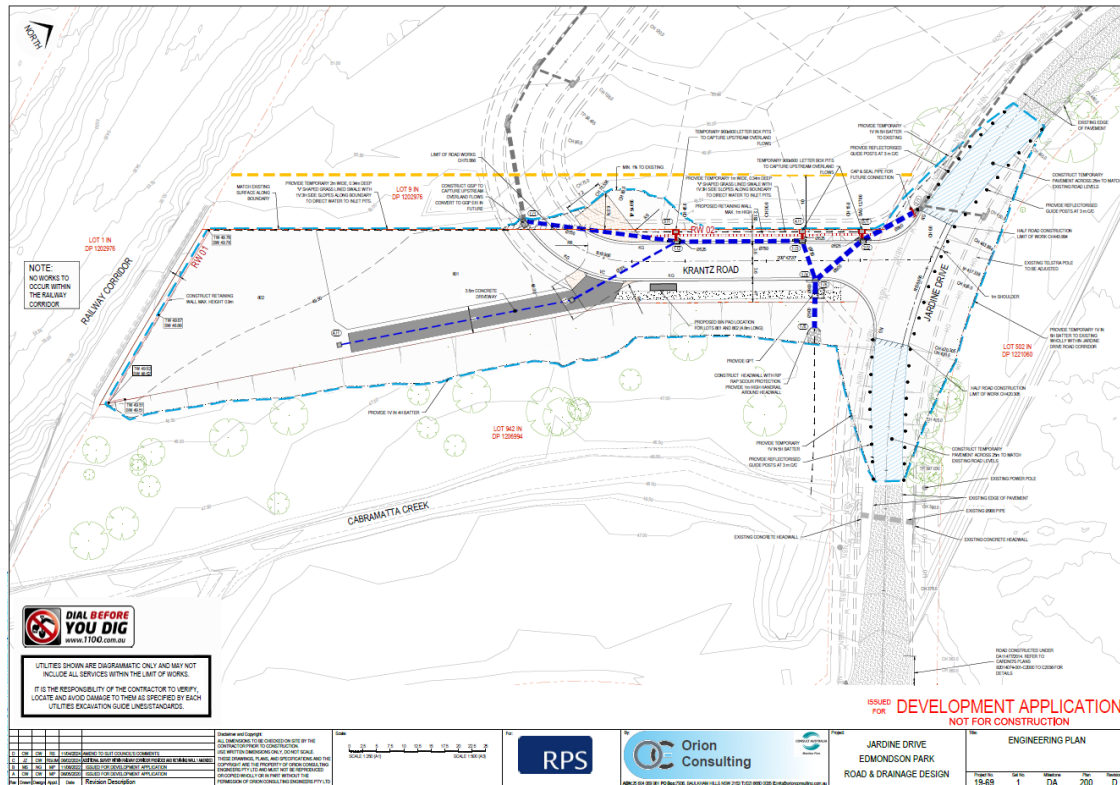


Figure 6: Proposed Engineering Plan

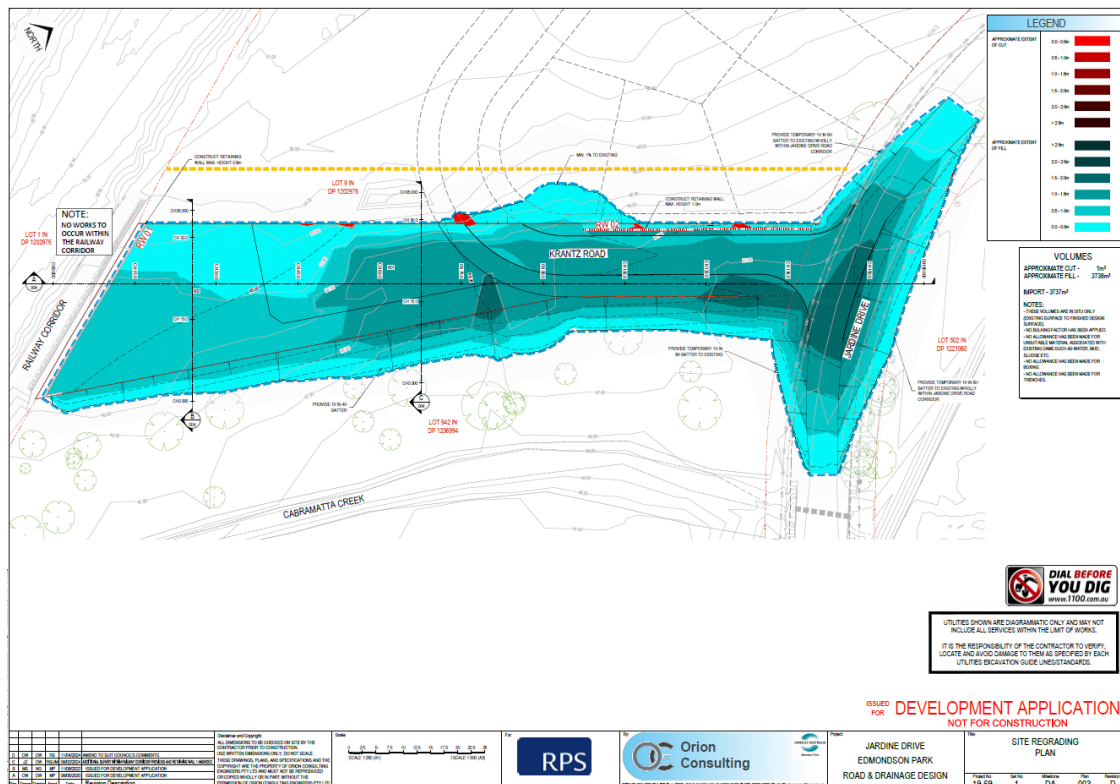


Figure 7: Extract of Site Regrading Plan showing proposed cut and fill levels

5. STATUTORY CONSIDERATIONS

The following planning instruments and plans are relevant to the proposed development:

- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Biodiversity and Conservation) 2021
- State Environmental Planning Policy (Transport and Infrastructure) 2021
- Liverpool Local Environmental Plan 2008
- Liverpool Development Control Plan 2008
 - Part 1 General Controls for all development
 - Part 2.11 Edmondson Park

6. ASSESSMENT

The development application has been assessed in accordance with the relevant matters of consideration prescribed by Section 4.15 of the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulation 2021*, as follows:

6.1 Section 4.15(1)(a)(1) – Any Environmental Planning Instrument

(a) State Environmental Planning Policy (Resilience and Hazards) 2021

The proposal has been assessed under the relevant provisions of SEPP (Resilience and Hazards). The objectives of Chapter 4 of the SEPP are:

- *to provide for a statewide planning approach to the remediation of contaminated land.*
- *to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.*

Pursuant to the above, Council must consider:

- *whether the land is contaminated.*
- *if the land is contaminated, whether it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the proposed use.*

Pursuant to Clause 4.6 of SEPP (Resilience and Hazards) 2021, Council is required to undertake a merit assessment of the proposed development. The following table summarises the matters for consideration in determining development application.

Clause 4.6 - Contamination and remediation to be considered in determining development application	Comment
(1) A consent authority must not consent to the carrying out of any development on land unless:	
(a) it has considered whether the land is contaminated, and	Preliminary investigations regarding the contamination and salinity of the site were submitted under the parent lot Development Application, DA-877/2014. A Remedial Action Plan was submitted under DA-877/2014, detailing that site remediation works which were carried out across September and October 2015.
(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and	Since the subject site was created under the parent lot subdivision, and conditions have remained relatively unchanged, it is unlikely that further contamination has developed. Therefore, the application does not require a separate site investigation for the proposed development. The sites are suitable for the future residential use of the land.
(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.	The site is not required to be further remediated. This aspect was looked at during the assessment of DA-877/2014. The current site is suitable for residential purposes.

Based on the above assessment, the application has satisfied the relevant objectives and provisions of SEPP (Resilience and Hazards) 2021, therefore, it can be confirmed the subject site is suitable for the proposed development.

(b) State Environmental Planning Policy (Biodiversity and Conservation) 2021

The State Environmental Planning Policy (Biodiversity and Conservation) 2021 generally aims to maintain and improve the water quality and river flows the majors Rivers associated its tributaries. As the site is located within the Georges River Catchment, Chapter 11 of the SEPP is applicable.

The subject land is located within the Georges River Catchment and as such the State Environmental Planning Policy (Biodiversity and Conservation) 2021 – Chapter 11 Georges River Catchment is applicable. This chapter generally aims to protect the environment of the Georges River system by ensuring that impacts of future land uses are considered in a state, regional, and local context.

The application was referred to Council's Land Development Engineering Department and Floodplain Engineering Department who reviewed the mainstream and overland flooding assessments, and drainage associated with the proposed development. These referrals support the subject application, subject to conditions.

When a consent authority determines a development application, planning principles are to be applied (Clause 11.5). Accordingly, a table summarising the matters for consideration in determining development applications (Clause 11.6 and Clause 11.7), and compliance with such is provided below.

11.6 General Principles	Comment
(a) the aims of this Chapter,	This chapter aims generally to maintain and improve the water quality and river flows of the Georges River and its tributaries An assessment of the impacts of the proposed development on the river catchment area has been submitted with the application. The works required within RE1 zoned land have been proposed in accordance with the REF <i>Modification of Creeks in Edmondson Park</i>, prepared by Storm Consulting, 2014. Conditions of consent were imposed on the parent lot subdivision DA-877/2014, requiring future development, which may impact on the Cabramatta Creek, to be designed in accordance with the REF guidelines.
(b) the likely effect of the proposed plan, development or activity on adjacent or downstream local government areas	Stormwater catchment plans have been submitted with the application. An internal referral to Councils Flooding Engineers finds the proposal to be satisfactory, subject to conditions.
(c) the cumulative impact of the proposed development on the Georges River and its tributaries	The proposed development has been designed to minimise the impact on Cabramatta Creek. The proposed works in proximity to the creek have been designed in relation to the REF <i>Modification of Creeks in Edmondson Park</i> , prepared by Storm Consulting, 2014.
(d) any relevant plans of management	The site is located within an area covered by the Liverpool District Stormwater Management Plan, as outlined within Liverpool City Council Water Strategy 2004.
(e) the Georges River Catchment Regional Planning Strategy	The proposed development is consistent with the Georges River Catchment Regional Planning Strategy.
(f) all relevant State Government policies, manuals and guidelines of which council, consent authority, public authority or person has notice	The proposed development has been referred to the Department of Planning and Environment – Water as works is proposed within 40m of a watercourse. They have provided General Terms of Approval to be applied to the conditions of consent.

(g) whether there are any feasible alternatives to the development or other proposal concerned	The proposed development is consistent with the Indicative Layout Plan and the proposed drainage solutions are consistent with developments within the Edmondson Park area. The proposed stormwater management system considers water quantity and water quality and is deemed satisfactory. The site is in an area nominated for residential development.
11.7 Specific Principles	Comment
(1) Acid sulphate soils	The site is not identified as containing acid sulphate soils under the Liverpool LEP 2008.
(2) Bank disturbance	Supporting statements from the Orion Consulting states that the development will comply with requirements for bank stabilisation methods to use soft techniques which increase the sustainability of the area.
(3) Flooding	Stormwater catchment plans and erosion and sediment control details are submitted with the application with measures for managing quality of stormwater discharge from the site. Council's Floodplain Engineer Department have stated the application is satisfactory, with conditions imposed in the consent.
(4) Industrial discharges	Not applicable.
(5) Land degradation	An erosion and sediment control plan has been submitted with the application, which demonstrates how sediment will be managed.
(6) On-site sewage management	Not applicable.
(7) River-related uses	The development will not involve the use of any rivers or creeks. It is noted that Cabramatta Creek traverses the portion of the site currently zoned RE1 Public Recreation. However, this portion is to be acquired by Council for their future management.
(8) Sewer overflows	A condition of consent has been imposed to require a Section 73 Compliance Certificate be lodged, prior to the issue of a Construction Certificate and Subdivision Certificate.
(9) Urban/stormwater runoff	A stormwater catchment plan has been submitted with the application. A referral to Councils Floodplain Engineers finds the proposal to be satisfactory, with conditions of consent imposed.
(10) Urban development areas	Edmondson Park was rezoned for development in 2008. The proposal has been referred to Council's Floodplain Engineering department who have assessed the impact of the development on overland flows, mainstream flooding and treatment of water. The referral supports the proposal, with conditions imposed on the consent.

(11) Vegetated buffer areas (appropriate buffer widths retained to improve surface runoff)	The removal of trees within Lot 942 where Cabramatta Creek is located, will be offset by a ratio of 3:1 to enable appropriate vegetation to remain. An internal referral to Council's Natural Environment and Landscape Department finds this to be satisfactory.
(12) Water quality and river flows	Erosion and sediment control is to be implemented throughout the development. Salinity measures have been addressed in the parent lot subdivision DA-877/2014.
(13) Wetlands (to be protected)	The site is not a wetland.

It is considered that the proposal satisfies the provisions of the SEPP (Resilience and Hazards) 2021 subject to appropriate sedimentation and erosion controls during construction. The development will have minimal impact on the Georges River Catchment.

(c) State Environmental Planning Policy (Transport and Infrastructure) 2021

The subject site adjoins an existing rail corridor along the southern boundary. As the application proposes the subdivision of land for future residential development, the impact of rail noise or vibration on non-rail development must be considered. Pursuant to Division 15, Subdivision 2, Council is required to consider the provisions in Part 2.98 (Development adjacent to rail corridors) and Part 2.99 (Excavation in, above, below or adjacent to rail corridors) in determining a development application which is in or adjacent to rail corridors.

Comment: In accordance with the above, the application was referred to TfNSW for assessment and has supported the proposal with conditions.

It is noted that there are no proposed excavation works within 25m of the railway corridor. The only earthworks proposed include a maximum fill of 1m within 25 meters adjacent to the railway corridor. It is to be noted that TfNSW has added the below condition to address this issue:

- *Copies of any certificates, drawings, approvals / certifications, or documents endorsed by, given to, or issued by Sydney Trains or TAHE (Transport Asset Holding Entity) must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.*

(d) Liverpool Local Environmental Plan 2008

(i) Zoning

Lot 946 is zoned R1– General Residential pursuant to the Liverpool Local Environmental Plan 2008.

Lot 942 is zoned RE1 - Public Recreation pursuant to the Liverpool Local Environmental Plan 2008 and has been identified for acquisition by Council as a future riparian corridor.

Lot 9 is zoned R1– General Residential pursuant to the Liverpool Local Environmental Plan 2008.

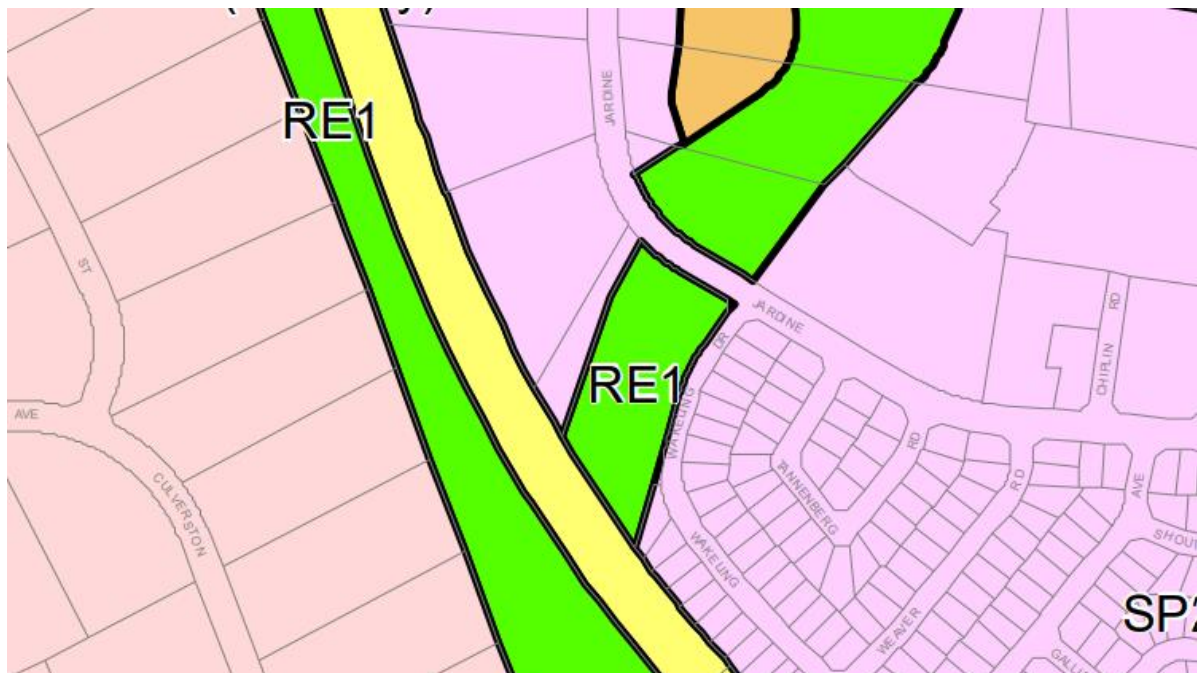


Figure 8: Extract of zoning image of the site Lot 946 abuts Lot 942 along the eastern boundary and Lot 9 along the western boundary.



Figure 9: Extract of Edmondson Park Indicative Layout Plan

(ii) Permissibility

The proposed development within the site is classified as ‘*subdivision, roads and earthworks*’. Within R1 – General Residential zoned land, subdivision and the construction of associated roads, drainage and earthworks are permissible pursuant to Clause 2.6 of the Liverpool Local Environment Plan (LLEP) 2008. Within RE1 – Public Recreation zoned land, the construction of roads (including earthworks pursuant to Clause 7.31) are also permissible with consent. The proposal is permissible with consent.

(iii) Objectives of the zone

The objectives of the R1 General Residential zone are:

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To ensure that housing densities are broadly concentrated in locations accessible to public transport, employment, services and facilities.*
- *To facilitate development of social and community infrastructure to meet the needs of future residents.*

The proposed subdivision is for future residential purposes and is consistent with the objectives of the R1 zone, in that it will contribute to the provision of housing to meet the needs of the community within an area of Liverpool LGA designated for future residential development growth.

The objectives of RE1 Public Recreation zone are:

- *To enable land to be used for public open space or recreational purposes.*
- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To provide sufficient and equitable distribution of public open space to meet the needs of residents.*
- *To ensure the suitable preservation and maintenance of environmentally significant or environmentally sensitive land.*

The proposed works in RE1 zoned land are ancillary to the construction of roads. It is considered the proposal is consistent with the zone objectives as the removal of trees within Lot 942 will be offset by a ratio of 3:1. The development proposes fill, near to Cabramatta Creek in Lot 942, which is identified as Environmentally Significant Land. The proposed fill has been designed in accordance with ‘Design for the Modification of Creeks in Edmondson Park’, prepared by Storm Consulting, which was a condition of the consent within the parent lot subdivision under DA-877/2014.

(iv) Summary of Relevant Liverpool LEP 2008 Provisions

LLEP 2008 contains a number of provisions which are relevant to the proposal. Assessment of the application against the applicable provisions is provided below. The proposal demonstrates compliance with these provisions.

Clause	Provision	Proposed	Comment
2.6 Subdivision	The subdivision of land may be carried out only with development consent.	A subdivision plan has been submitted with the application which seeking the subdivision of Lot 946 into two residential lots.	Complies
2.7 Demolition requires consent	The demolition of a building or work may be carried out only with development consent.	A demolition plan has been submitted with the application to identify the removal of existing trees and fencing along the boundary of Lot 946. Although demolition of a building is not proposed, the works are considered acceptable.	Complies
4.1 Minimum Subdivision Lot Size	450sqm minimum lot size	Proposed lots are: Lot 801 - 578sqm. Lot 802 – 1094sqm	Complies
4.3 Height of Buildings (as per HOB Map)	12m for this site	Not applicable. This application does not propose the construction of dwellings.	N/A
4.4 Floor Space Ratio	The site is subject to an FSR of 0.65:1.	Not Applicable. This application does not propose the construction of dwellings.	N/A
4.6 Exceptions to Development Standards	Provisions relating to exceptions to development standards	A Clause 4.6 request has been submitted in response to the non-compliance to Clause 7.11 Minimum Dwelling Density, which has been considered as part of this application.	See Clause 4.6 discussion below.
5.1. A Development on land intended to be acquired for public purpose	Development consent must not be granted to any development on land to which this clause applies other than development for the following purpose: Zone RE1 Public Recreation and marked for 'Local open space': • Earthworks, • Recreation areas	Lot 942 is zoned RE1 Public Recreation and has been identified for acquisition on the Council Land Acquisition Map. Earthworks, and the associated removal of vegetation, are the only works proposed within Lot 942. Works are proposed to construct a batter to ensure future dwellings within Lot 946 comply with flood mitigation requirements. The application has been referred to Council's internal	Complies

		Flooding Department, Property Department and Natural Environment Department. Application has been supported, with conditions imposed on the consent.	
6.5 Public Utility Infrastructure	Public utility infrastructure must be available within urban release areas.	A referral from Endeavor Energy states that the application does not address in detail whether electricity services are available and adequate for the development. Conditions of consent could be included to ensure adequate service provision is provided. Existing water servicing and recycled water servicing has adequate capacity for the development. Wastewater servicing is currently unavailable. Sydney Water conditions imposed.	Complies by conditions
7.6 Environmentally Significant Land	To maintain bushland, wetlands and wildlife corridors of high conservation value. Must ensure that consideration of how the development will impact on these environments.	Lot 942 is Environmentally Significant Land (ESL), due to the location of Cabramatta Creek. The proposed development has acknowledged the environmental significance of the land, and works within the ESL have been designed with the vision of the REF <i>Modification of Creeks in Edmondson Park</i>.	Complies
7.7 Acid Sulfate Soils	Class 1, 2, 3, 4 or 5	The site is not mapped as containing acid sulfate soils.	Complies
7.8A Flood Planning	Minimise flood risk to life and property	In conjunction with previous assessment referrals DA-445/2020 and RD-11/2023 the proposal. The site is partially affected by mainstream flooding from Cabramatta Creek. The flood	Complies by conditions

		affected area in the proposed road is to raise, above the 1%AEP flooding. The stormwater management plan has proposed to capture stormwater flows from the western external catchment and convey to the creek. A GPT has been incorporated into the stormwater design. There are no changes to the stormwater drainage strategy/plan previously proposed under the current DA-615/2023. Hence, the proposal is supported subject to similar development controls imposed under previous flooding referrals. The application has been referred to Council's internal Flooding Department. The internal Flooding Department supports the application, with conditions imposed on the consent.	
7.11 Minimum Dwelling Density	The site is subject to a minimum dwelling density of 14dw/ha.	Two (2) lots are achieved in 0.25ha (including internal road). 8dw/ha overall. The non-compliance is as follows: 2 lots / 0.25 ha = 8 Minimum required dwelling density: 14 dwellings p/hectare. Provided: 8 dwellings p/hectare. Non-Compliance: 6 dwellings p/hectare / 1.5 dwellings for 0.25 hectare site / 43% (rounded up)	Considered acceptable – see Clause 4.6 - Variation assessment below

7.31 Earthworks	To ensure that earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land, and to allow earthworks of minor nature without requiring separate development consent.	Sediment and erosion control details have been provided with the application. The application has been referred to Council's internal Land Development Engineering Department, who support the application, subject to conditions.	Complies by conditions
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Clause 4.6 – Exceptions to development standards (Variation to Clause 7.11 – Minimum Dwelling Density)

Clause 7.11 (2) of the LLEP 2008 states:

“Development consent must not be granted for the subdivision of land shown on the Dwelling Density Map unless the consent authority is satisfied that the dwelling density likely to be achieved by the subdivision is not less than the dwelling density shown for the land on that Map.”



Figure 10 - Extract of LLEP 2008 minimum dwelling density map (Source: Geocortex)

The proposal seeks a variation to Clause 7.11 minimum dwelling density contained in LLEP 2008. The subject proposal has achieved 8 dw/ha providing a 43% variation to the minimum 14 dw/ha standard as stated in the LLEP 2008 compliance table above. This report supports the variation to the development standard on the grounds that it is unreasonable to require strict compliance with the minimum dwelling density with the circumstances and site constraints impacting the proposed development. Accordingly, to the statutory requirements of Clause 4.6 of the LLEP 2008, the Applicant has provided a written request seeking the non-compliance to the minimum dwelling density control as prescribed by Clause 7.11.

The objectives of Clause 4.6(1) are as follows:

- (a) *“to provide an appropriate degree of flexibility in applying certain development standards to particular development,*
- (b) *to achieve better outcomes for and from development by allowing flexibility in particular circumstances.”*

Clause 4.6(3) prescribes:

“Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the Applicant that seeks to justify the contravention of the development standard by demonstrating:

- (a) *that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
- (b) *that there are sufficient environmental planning grounds to justify contravening the development standard.”*

Written request addressing why compliance with the development standard(s) is unreasonable or unnecessary in the circumstances of the case and that there are sufficient planning grounds to justify contravening of the development standard(s)

The application has been accompanied by a Clause 4.6 Variation Statement to Clause 7.11 Minimum Dwelling Density Development Standard, which seeks to justify the non-compliance on planning merit. The Applicant's request statement argues that the variation is both unreasonable and unnecessary under test one of the *Wehbe* tests by showing *‘that the objectives of the development standard are achieved notwithstanding noncompliance with the development standard’*.

Clause 7.11 objectives are as follows:

- (a) *to contribute toward the efficient use of land resources,*

Comment: The proposal provides the opportunity for residential development on a highly constrained lot. The proposal has considered the environmental constraints of the site and surrounding area to provide a suitable development on the land. Relative to the site's constraints, the proposal represents the contribution to the efficient use of land.

- (b) *to ensure the viability of public transport and other services planned for the area,*

Comment: The surrounding area is predominantly comprised of residential uses already well serviced by bus services and the nearby Edmondson Park train station. The proposal

provides additional dwellings which will use these services. It is considered that based on the constraints of the site, a future dwelling density of approximately 2 to 4 dwellings is appropriate and will contribute to the viability of public transport as well as other services planned for the area.

- (c) *to ensure adequate funds for the recreation and community facilities planned for the area.*

Comment: The dwellings will contribute to the expanding growth area around Edmondson Park. Specifically, they will require the payment of developer contributions as well as a Housing and Productivity Contribution which will deliver funds for the delivery of recreation and community facilities planned for the area.

The Applicant also states that sufficient environmental planning grounds to justify a written request are provided because the proposal achieves all the objectives of the zone and achieves objectives c) and e) of the Act.

- (c) *to promote the orderly and economic use and development of land,*
- (e) *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*

R1 General Residential Zone objectives are as follows:

- (a) *to provide for the housing needs of the community*

Comment: The proposal provides housing within a highly constrained site. Specifically, the proposal would deliver lots for residential dwellings. The design of the development, with consideration of the site constraints, has aimed to provide the highest dwelling density possible at the site to provide housing opportunities within the Edmondson Park area.

- (b) *to provide a variety of housing types and densities*

Comment: The subdivision can facilitate several housing types on the site including detached dwellings or dual occupancies. These housing types would be consistent with the surrounding low density residential character of the immediate locality. This aside, the proposed lots could also accommodate single dwellings, which represents diversity of dwellings in the locality given the R1 zoning permits dwellings, attached dwellings, multi dwelling housing as well as residential flat buildings.

- (c) *to enable other land uses that provide facilities or services to meet the day to day needs of residents*

Comment: The orientation of the proposed lots will enable, as part of future negotiations with Council, and flood way. This is considered to be an important land use as it will improve the safety and resilience of the broader locality as the floodway in question will accommodate flood events in the broader locality.

- (d) *to ensure that housing densities are broadly concentrated in locations accessible to public transport, employment, services and facilities*

Comment: Whilst the site is relatively close to public transport services such as Edmondson Park Train Station, there are lots which are in far closer proximity. Relative to the site's location therefore, it achieves a suitable density.

- (e) *to facilitate development of social and community infrastructure to meet the needs of future residents*

Comment: As discussed above, the lot configuration is designed to enable the future delivery of flood ways, which is an important social and/or community infrastructure.

Response to the Applicant's Written Request

The case for accepting the non-compliance on both the grounds that compliance is unnecessary and unreasonable is satisfactory in this instance. The objectives of Clause 7.11 (b) and (c) cannot be achieved by any way other than by providing at least the planned minimum dwelling density and by providing the corresponding development contributions to Council. Compliance is clearly not unnecessary because the objectives are not achieved by this proposal or by any variation from dwelling density standards.

- (b) *to ensure the viability of public transport and other services planned for the area,*
(c) *to ensure adequate funds for the recreation and community facilities planned for the area.*

However, it is agreed that the objectives of the R1 General Residential Zone are achieved with this proposed development. Rather than accept that compliance with the standard is unnecessary, this report's position is that strict compliance with the standard is unreasonable due to the constraints on developing the site are such that a Torrens subdivision of the site into more than 2 lots is not reasonable. This position is explained below.

Matters the consent authority must be satisfied on to grant development which contravenes a development standard.

Subclause 4.6(3) stipulates the two matters that the consent authority must be satisfied on before it can approve a development:

- (3) *Development consent must not be granted to development that contravenes a development standard unless the consent authority is satisfied the Applicant has demonstrated that—*
- (a) *compliance with the development standard is unreasonable or unnecessary in the circumstances, and*
 - (b) *there are sufficient environmental planning grounds to justify the contravention of the development standard.*

When the land reserved for the local road is taken out of consideration of the site's developable land, it is left with a 1672sqm sized lot with around 16m of frontage. Therefore, is not feasible to subdivide into 4 Torrens lots that have adequate width and adequate frontage on to the planned road. While a battle axe configuration could resolve the issue of lot width and frontage; the resulting impact of the driveway crossovers and lack of building frontage onto the proposed road would have a very poor outcome on visual character, tree

canopy, surveillance, and on street parking. It's unlikely for any 4 lot Torrens subdivision of the subject site to be given approval.

The larger lots have allowed for greater amenity for future residents, however, they are restricted to greater setbacks due to the impact of the Asset Protection Zone (APZ) on the site.

Paragraph (b) there are sufficient environmental planning grounds to justify the contravention of the development standard.

There are sufficient environmental planning grounds to justify a contravention of a development standard if paragraph (a) is satisfied and the proposed development is consistent with:

- *the objectives of particular development standard; and*
- *the development objectives of the zone in which the development is proposed.*

Note: Consistency with the objectives is to be taken to being harmonious or compatible with and not destructive of the objectives. This is not as high a standard in achieving the objectives.

7.11 Minimum Dwelling Density

(1) The objectives of this Plan for the control of dwelling densities are as follows—

(a) to contribute toward the efficient use of land resources,

Comment: Edmondson Park is an area currently being developed and transitioning to an urban character. The proposed subdivision will cater for future residential development of an appropriate scale which would not fetter the efficient use of land resources. The proposal is still consistent with the goal of efficient use of resources given the site's constraints and it is facilitating residential development of a currently isolated and undeveloped site.

(b) to ensure the viability of public transport and other services planned for the area,

Comment: The proposed allotments will accommodate residential development that will not fetter the availability of public transport. It is expected that any future residents will utilise public transport and planned services. Furthermore, the subject site is in proximity to Edmondson Park railway station and with a comprehensive approach to transportation and service infrastructure, the proposed development aims to establish a sustainable and efficient system that meets the needs of the community. By strategically locating the development in proximity to existing public transportation hubs, it encourages the use of eco-friendly modes of travel and reduces dependence on private vehicles.

(c) to ensure adequate funds for the recreation and community facilities planned for the area.

Comment: The planned contributions are approximately 30% less as well. While this is not achieving these objectives, the proposal's outcome is still consistent with them because the objectives remain viable even given this minor shortfall and the development represents, one of the highest and best uses of the land feasible given the constraints.

The context of the site's constraints and that the site is very unlikely to be acquired by the state government who owns Lot 9 DP 1202976 to the northwest mean that this subdivision may represent the most intensive development likely to take place in the medium term. Notwithstanding, it should be noted that the resulting lots are still able to be developed with secondary dwellings. Given that the development of secondary dwellings to existing pattern of subdivision across Edmonson Park, this report concludes that Clause 7.11 objectives would remain even with the proposed variation and that the proposal is consistent with the objectives.

Objectives of Zone R1 – General Residential:

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To ensure that housing densities are broadly concentrated in locations accessible to public transport, employment, services and facilities.*
- *To facilitate development of social and community infrastructure to meet the needs of future residents*

Comment: The proposed development meets the objectives as the proposed subdivision enables future development of dwellings and therefore fulfills the housing needs of the community. Through careful planning and design, it ensures an adequate supply of housing that caters to diverse groups of residents, including affordable housing, middle-income housing, and high-end housing, among others. The proposed subdivision allows for future development of dwellings and enables the provision of diverse housing types and densities. By incorporating a well-thought-out layout and design, it caters to residents' varying needs in terms of housing styles and sizes.

The proposed subdivision will enable future developments and allow for housing densities. are broadly concentrated in locations accessible to public transport, employment, services, and facilities. The project ensures that housing densities are primarily concentrated in areas that offer easy accessibility to public transportation, employment opportunities, services, and facilities. By promoting mixed-use development and locating housing in proximity to key amenities and transportation hubs, it encourages a more sustainable and connected living environment.

The proposed subdivision enables future developments to facilitate the development of social and community infrastructure that caters to the needs of future residents. This includes the establishment of community centers, recreational facilities, green spaces, and other amenities that promote social interaction, well-being, and community cohesion among residents.

Recommendation

With consideration to the discussion above, the variation to the minimum dwelling density of 14 dw/ha by 43% by providing 8 dw/ha should be accepted on the following reasons:

- Strict compliance with the standard is unreasonable due to the site's constraints.

- Notwithstanding the contravention, the proposal is still consistent with the objectives of both Clause 7.11 and of the R1 zone.
- Following from this consistency, the proposal would not be contrary to the public interest.

6.2 Section 4.15(1)(a)(ii) - Any Draft Environmental Planning Instrument

There are no draft EPIs applicable to the site.

6.3 Section 4.15(1)(a)(iii) - Provisions of any Development Control Plan

(a) Liverpool Development Control Plan 2008

The application has been considered against the controls contained in the Liverpool Development Control Plan (LCDCP) 2008 in particular:

- Part 1 – General Controls for all Development
- Part 2.11 – Edmondson Park

The assessment has identified that the proposal generally demonstrates compliance with the relevant DCP requirements. The controls to which are variation have been sought are discussed below.

Part 1 General Controls for all Development			
Control	Requirement	Proposed	Comment
Section 21 – subdivision of land buildings	Minimum lot width required is 20m	The proposed lots are irregular in shape as the development includes a battle-axe lot. Minimum lot width for Lot 801: 16.27m Minimum lot width for Lot 802: 30m (site does not have a street frontage and is a battle-axe lot) Lot 801 meets the minimum lot size and responds to the site attributes of the site. The lot width is considered acceptable due to the constraints of the site. The lot width is affected by the battle-axe handle proposed for Lot 802.	Considered Acceptable

All relevant compliance tables for LDCP 2008 can be found in Attachment 1.

6.4 Section 4.15(1)(a)(iiia) – Any Planning Agreement or Draft Planning Agreement

There are no Planning Agreements which apply to the development.

6.5 Section 4.15(1)(a)(iv) – The Regulations

The Environmental Planning and Assessment Regulation 2021 requires the consent authority to consider the provisions of the National Construction Code. Accordingly, appropriate conditions of consent will be imposed where the NCC is relevant to the proposed subdivision works.

6.6 Section 4.15(1)(b) – The Likely Impacts of the Development

Impacts	Comment
Built Environment	The proposed development is unlikely to create any adverse impacts on the surrounding built environment. The proposed development is of an appropriate scale and unlikely to create any detrimental impacts on the adjoining properties or the locality. The proposal will facilitate residential development consistent with the desired future built character of the locality.
Natural Environment	Impacts on the natural environment have been assessed as part of the development application. The proposal is unlikely to result in any detrimental impact on the natural environment surrounding the subject sites, or to any endangered and non-endangered species of flora and fauna. The development proposes works on Environmentally Significant Land (Lot 942). An assessment of the application finds that the Applicant has proposed measures to limit the impact of the development on the creek in Lot 942.
Social Impacts	The proposal is unlikely to cause any detrimental social impacts and will create residential lots to support future dwelling construction. The proposal involves the construction of public roads, which will increase the accessibility of the area for the wider community.
Economic Impacts	Positive economic impacts in the locality through the capital investment in the area and the creation of new jobs through construction.

6.7 Section 4.15(1)(c) – The Suitability of the Site for the Development

The proposal generally complies with the relevant planning controls and provisions that are applicable to development in the locality. It is therefore considered that the subject site is suitable for the proposed development.

6.8 Section 4.15(1)(d) – Any Submissions made in relation to the Development

(a) Internal Referrals

DEPARTMENT	COMMENTS
Engineering	Supported, subject to conditions
Environmental Health	Supported, subject to conditions
Flooding	Supported, subject to conditions
Urban Design & Public Domain	Not supported, conditions imposed

Natural Environment	Supported, subject to conditions
Traffic & Transport	Supported, subject to conditions
Property Services	Advice provided
Landscape	Supported, subject to conditions
Waste Management	Supported, subject to conditions

(b) External Referrals

AGENCY	COMMENTS
Endeavor Energy	Supported, subject to recommendations
Department of Planning and Environment - Water	Supported, subject to GTA
Transport for NSW (TfNSW) – Sydney Trains	Supported, subject to conditions
NSW Rural Fire Service (RFS)	Supported, subject to GTA

(c) Community Consultation

The proposal was notified and advertised between 13 December 2023 and 31 January 2024, in accordance with Liverpool Community Participation Plan 2022. In response, no submissions have been received on the application.

6.9 Section 4.15(1)(e) –The Public Interest

Approval of the proposed development would not be contrary to the public interest. The development is consistent with the objectives of the R1 and RE1 zones and may be conditioned to comply with the relevant provisions of the Liverpool Local Environmental Plan 2008 and Liverpool Development Control Plan 2008.

7. DEVELOPER CONTRIBUTIONS

Section 7.11 Development Contributions are applicable to the proposed development in accordance with the Liverpool Contributions Plan 2008 (Edmondson Park). As this development is a 2 lot Torrens title subdivision to facilitate future residential development, Council's Contributions Accountant has confirmed that contributions will be levied.

A Special Infrastructure Contribution condition is also required.

8. CONCLUSION

The application has been assessed having regard to the provisions of Section 4.15 of the EP&A Act 1979, and the Environmental Planning Instruments, including the applicable State Environmental Planning Policies, Liverpool LEP 2008, Liverpool DCP 2008, and the relevant codes and policies of Council. The proposed development is unlikely to result in adverse impacts upon neighbouring properties and the locality. Based on the assessment of the application, it is recommended that the application be approved subject to the imposition of conditions.

9. RECOMMENDATION

That Development Application DA-615/2023 seeking approval for two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation be approved, subject to conditions of consent.

ATTACHMENTS

1. Liverpool Development Control Plan 2008 Compliance Tables
2. RFS Response
3. TfNSW Response
4. Water Response
5. Endeavour Energy Response 1
6. Endeavour Energy Response 2
7. Liverpool Contributions Plan 2008
8. Plans of the Proposal
9. Clause 4.6 Request for a Variation
10. Draft Conditions of Approval

Attachment 1 – Liverpool Development Control Plan 2008 Compliance Tables

Part 1 General Controls for all Development			
Control	Requirement	Proposed	Comment
Section 2 – Tree Preservation	Consider impact of development on existing vegetation	Trees are proposed to be removed within Lot 946 and Lot 942. The application states that trees cannot be retained, due to Lot 946 being filled to raise the site above the 1% AEP flood constraints. The applicant has claimed that the removal of trees within the proposed RE1 batter area of Lot 942, is required to ensure future residential dwellings are above the 1% AEP Flood level and enable the construction of the local road in accordance with the Indicative Layout Plan. A tree health assessment has been submitted with the application. The submitted Statement of Environmental Effects proposes that trees removed in Lot 946 are to be replaced at a ratio of 1:1, while trees removed in Lot 942 are to be replaced at a ratio of 3:1, due to identification of the lot as a future riparian corridor. Referral to Council's Natural Environment Department finds the offset of trees to be satisfactory.	Complies
Section 3 – Landscaping and	Incorporation of existing trees into	All trees within Lot 946 are to be removed in the creation of residential lots and construction of roads. The	Complies

Incorporation of Existing Trees	development where appropriate	site is biodiversity certified, under the Threatened Species Conservation Act 1995, allowing the removal of vegetation for residential development purposes without further assessment. The application has been referred to Council's internal Natural Environment Department. The internal Natural Environment Department supports the application, subject to conditions imposed on the consent.	
Section 4 – Bushland and Habitat Preservation	Consider impact of development on bushland and habitats	Lot 946: the site is not within a bushland and fauna habitat preservation area. Lot 942: a batter is proposed to be constructed within Lot 942, to ensure that the residential land of Lot 946 is above the 1% AEP flood level. Trees located within the proposed batter area are required to be removed. Removed trees within Lot 942 will be offset by a ratio of 3:1. Council's Natural Environment Department have provided comments and is satisfied with the proposal.	Complies
Section 5 – Bushfire Risk	Land on or adjacent to bushfire prone land to comply with RFS requirements	The site is located within bushfire prone land. A Bushfire Assessment report has been submitted with the application which identifies the bushfire hazard to the east and west of the site. The hazard is identified as 'grassland'.	Complies

		The referral to RFS has determined the application to be satisfactory, subject to the general terms of approval.	
Section 6 – Water Cycle Management	Consideration of stormwater and drainage	A Gross Pollutant Trap is proposed to drain stormwater flows from Kantz Road into the riparian park. The application has been reviewed by Council's Land Development Engineers who have raised no objections subject to conditions of consent.	Complies
Section 7 – Development Near a Watercourse	Consideration of impact to Riparian Corridors	Cabramatta Creek traverses through Lot 942. A stormwater catchment plan has been submitted with the application to show how runoff will be diverted to protect the watercourse. A GPT is proposed to intercept the flow of water before it reaches the watercourse. The application has been referred to Department of Planning and Environment – Water, who have imposed their General Terms of Approval to the development.	Complies
Section 8 – Erosion and Sediment Control	Sediment Control Plan or Soil and Water Management Plan required	Sediment control details have been submitted with the application. Sediment controls have been developed to reduce the impact on the Riparian Corridor.	Complies
Section 9 – Flooding Risk	Flood affectation of property to considered	In conjunction with previous assessment referrals DA-445/2020 and RD-11/2023 the proposal.	Complies

		The site is partially affected by mainstream flooding from Cabramatta Creek. The flood affected area in the proposed road is to raise above the 1%AEP flooding. The stormwater management plan has proposed to capture stormwater flows from the western external catchment and convey to the creek. A GPT has been incorporated into the stormwater design. There are no changes to the stormwater drainage strategy/plan previously proposed under the current DA-615/2023. Hence, the proposal is supported subject to similar development controls imposed under previous flooding referrals. The application has been referred to Council's internal Flooding Department. The internal Flooding Department supports the application, with a number of conditions imposed on the consent. The site is affected by mainstream and overland flooding. The development proposes fill to raise the residential lot and road levels above the 1% AEP flood level.	
Section 10 – Contaminated Land Risk	Previous use to be considered in assessing risk	A preliminary site investigation for contamination and a Remedial Action Plan, was included in the parent subdivision plan DA-877/2014.	Complies

		As the site has remained unchanged, no contamination assessment is warranted.	
Section 11 – Salinity Risk	Salinity Management response required for affected properties	The Preliminary Contamination and Salinity Investigation was included in the parent subdivision plan, DA-877/2014. The assessment found that the site features saline soil and therefore suggested management strategies have been detailed. As the site has remained largely unchanged, no further salinity assessment is warranted.	Complies
Section 12 – Acid Sulphate Soils Risk	Affected properties to consider impact of development on soils	The site is not mapped as containing acid sulphate soils.	N/A
Section 13 - Weeds	Noxious weeds to be removed as part of development where applicable	No weeds have been identified on site.	N/A
Section 14 – Demolition of Existing Development	Appropriate measures proposed	There are no existing structures on site which require demolition, apart from the removal of fencing around Lot 946.	Complies
Section 15 – Onsite Sewage Disposal	S68 Application required where connection to sewer not available	An on-site sewage management system is not proposed.	N/A
Section 16 & 17 – Aboriginal Archaeology & Cultural Heritage	AHIA required where items of aboriginal archaeology exist	An Aboriginal Heritage Assessment was submitted with the parent subdivision application DA-877/2014. No sites are identified within the area of the proposed development	N/A

Section 19 – Used Clothing Bins	Applies to any charity bins located on either private or Council land.	No charity bins are located on site.	N/A
Section 20 – Car parking and access	Two (2) car parking spaces required for each dwelling.	The application does not propose the construction of dwellings.	N/A
Section 21 – subdivision of land buildings	Minimum lot width required is 20m	The proposed lots are irregular in shape as the development includes a battle-axe lot. Minimum lot width for Lot 801: 16.27m Minimum lot width for Lot 802: 30m (site does not have a street frontage and is a battle-axe lot) Lot 801 meets the minimum lot size and responds to the site attributes of the site. This is considered acceptable due to the site constraints on the site. The Lot width is affected by the battle-axe handle proposed for Lot 802.	Considered acceptable
	Subdivision of land involving the creation of lots less than 300sqm or less than 10m lot width shall include the dwelling house as part of the development application.	Proposed lots sizes are as follows: Lot 801 - 578sqm. Lot 802 – 1094sqm	N/A
	Road Works	The development proposes the construction of part of Krantz Road, in	Complies

		accordance with the Edmondson Park DCP. The application is supported by Engineering Plans which detail the construction of the road. The application has been referred to Council's internal Engineering Department, who have determined the application to be satisfactory, subject to conditions.	
	Stormwater	A stormwater drainage plan has been reviewed by Council's Engineering Department with no objections raised.	Complies
	Utilities (water, sewer, electricity, telephone)	The application is supported by engineering plans. A referral to Endeavor Energy has stated that the application does not provide adequate detail with regards to existing electricity access to the site. Sydney Water conditions imposed. Conditions of consent are imposed on the application to ensure the provision of adequate utilities to service the site.	Complies by conditions
	Street lighting	Street lighting has been conditioned in the consent.	Complies by conditions
	Street Trees	The application does not provide sufficient information concerning the provision of street trees.	Complies by condition

		The application has been referred to Council's internal Urban Design and Public Domain Department, who have deferred the application. Conditions have been imposed in the consent to meet their requirements.	
	Street Signage	The SEE states that street signs are to be provided by the developer, which would be conditioned.	Complies
	Hatchet Shaped Allotments, access handle width	Access handle is a minimum of 5m.	Complies
Section 22 – Water Conservation	This section applies to all development involving the use of water.	The application is for the subdivision of land for residential purpose, no construction of dwellings is proposed. Future applications for the construction of dwellings will be required to meet the BASIX requirements.	N/A
Section 23 – Energy Conservation	This section applies to development involving the use of energy	The application is for the subdivision of land for residential purposes, no construction of dwellings is proposed. Future applications for the construction of dwellings will be required to meet the BASIX requirements.	N/A
Section 25 – Waste Disposal & re-use Facilities	This section applies to Subdivision and excavation of land and Demolition of existing buildings.	A Waste Management Plan has been submitted with the application.	Complies

Liverpool DCP 2008 – Part 2.11 Land Subdivision and Development in Edmondson Park			
Control	Requirement	Proposed	Complies
1.1 Indicative Layout Plan	Development is to be undertaken in accordance with the ILP.	The proposed development involves the construction of part of a local road in accordance with the ILP.	Complies
2.1 Street Network and Access	Footpaths are to be provided on both sides of all streets	1.5m wide footpaths have been proposed within the Engineering Plans.	Complies
	All Development Applications for subdivision are to detail the proposed kerb type	Kerb details are provided within the Engineering Plans.	Complies
	Local Streets are designed for slow residential traffic: • 15.2m road reserve, 12.9m road reserve when adjacent to a park • 7.2m 2 lane carriageway • 4m verge	The proposed local street construction is in accordance with the DCP. The proposed road construction will consist of a 15.2m road reserve which includes 2 3.6m carriageways and a 4m verge on either side.	Complies
	Where possible, rear lane access is to be provided for dwellings that front parks.	The proposed battle axe subdivision does not include the construction of dwellings.	N/A
2.2 Pedestrian and Cycleway Network	Provide cycle ways as illustrated within Bicycle Network Plan	The construction of roads is in accordance with the ILP and DCP. This should allow pedestrians and cyclists to use the road safely.	Complies

2.3 Streetscape and Street Trees	Street trees required to be planted in conjunction with the creation of a new street, or extension of an existing street.	A Tree Planting Plan/ Public Domain Plan has been submitted with the application.	Complies
	A minimum of two trees is to be provided for every 6m of street frontage. These are to reach at least 4m at mature height.	The application does not provide sufficient information concerning the provision of street trees. The application has been referred to Council's internal Urban Design and Public Domain Department, who have deferred the application. Conditions have been imposed in the consent to meet their requirements.	Complies by conditions
	Trees and shrubs on individual streets must be a uniform species.	The application does not address the species of proposed street trees. The application has been referred to Council's internal Urban Design and Public Domain Department, who have deferred the application. Conditions have been imposed in the consent to meet their requirements.	Complies by conditions
2.4 Open Space	The open space network for Edmondson Park must be provided in accordance with the DCP.	Lot 942 has been identified for Council Acquisition for a Riparian Park	Complies
	Ensure that development which surrounds open space is oriented towards the park for casual surveillance.	No dwellings are proposed with this application.	N/A

	Riparian Parks are to exclude development other than low impact recreational facilities and detention basins.	Lot 942 has been identified for Council Acquisition for a Riparian Park. Proposed works within Lot 942 include the construction of a batter to facilitate the construction of the ILP road and residential lots. This will require the removal of trees within the batter area. The development will offset the trees removed at a ratio of 3:1. The proposed works are generally in accordance with the concept design submitted with the REF <i>Modification of Creeks in Edmondson Park</i>.	Complies
2.5 Environment Management	Provide for the protection of the riparian environment, including water quality, soil stability and creek bed habitat.	In accordance with conditions of consent attached to DA-877/2014, under which Lot 942 and Lot 946 were created, the application is conditioned to apply appropriate measures for the protection of riparian environment as set out in <i>Modification of Creeks in Edmondson Park</i> , prepared by Storm Consulting for Council.	Complies
	A Stream and Riparian Management Plan (SRMP) is to be prepared as part of the Water Cycle Management Plan	A SRMP is not required under this application.	N/A
	Perimeter streets are to be provided between the riparian corridor and residential / commercial development.	The proposed construction of roads is in accordance with the Indicative Layout Plan, which does not propose a perimeter street on the northern boundary of the park.	Complies

2.6 Water Cycle Management	Provide off line water quality control bio-retention systems to trap pollutants and fine sediment.	A GPT is proposed to drain stormwater flows from Kantz Road into the riparian park. The application has been reviewed by Council's Land Development Engineers and Floodplain Engineers who have raised no objections subject to conditions of consent.	Complies
	Provide structural water quality management devices, including, gross pollutant and sediment traps and litter management devices.	A GPT is proposed to drain stormwater flows from Kantz Road into the riparian park. The application has been reviewed by Council's Land Development Engineers and Floodplain Engineers who have raised no objections subject to conditions of consent.	Complies
	Provide bio-retention systems in accordance with the Water Sensitive Urban Design Strategy. Provision of swales, buffer strips, storage tanks, and rooftop planting is also encouraged where appropriate.	The application proposes swales along the northern boundary of Lot 946, in order to cater for upstream catchments arriving on the site.	Complies
	Where any construction adjacent to a creek, natural watercourse, drainage depression, or an enclosed drainage system is proposed, the DA should be consistent with the SRMP and is to be accompanied by a full hydrologic and hydraulic assessment.	The application is supported by a Hydraulic Assessment which responds to identified requirements in accordance with <i>Modification of Creeks in Edmondson Park</i> , prepared by Storm Consulting for Council.	Complies

	The trunk drainage system shall be designed to convey the 1% AEP flood.	No trunk drainage is proposed with the application	N/A
	Native vegetation is preferred, particularly in saline areas where deep-rooted vegetation can assist with salinity hazard reduction.	Landscape plan has been submitted. The application has been referred to Council's internal Natural Environment Department and Landscape Department. The internal Departments supported the application, subject to conditions imposed on the consent.	Complies by conditions
	Where drainage routes pass through a property, adequate provision must be made for the passage of stormwater runoff with adequate freeboard to building floor levels.	Stormwater Overland Flow and Hydraulics analysis has been submitted with the application. Internal referral to Council's Flooding Department finds the application to be satisfactory.	Complies
	Fill is permitted with Council consent in flood plains in the areas shown in Figure 25	Fill is proposed with the development to protect future dwellings on the site from flooding. The proposed fill is deemed satisfactory to Council's Land Development Engineering Department.	Complies
2.7 Contamination	In the consideration of any Development Application, Council must consider whether the land is likely to be contaminated.	The Preliminary Contamination and Salinity Investigation was included in the parent subdivision application, DA-877/2014. A Remedial Action Plan was also submitted providing recommendations. As the condition of the site is relatively unchanged since the provision of prior documentation is deemed sufficient.	Complies

8.2 Lots backing onto Camden Valley Way and the Rail Corridor	Lots are to have a minimum depth of 30m	Irregular shaped lots. Proposed Lot 801 has a minimum lot depth of 37.95m (average of 2 sides). Proposed Lot 802 has a minimum depth of 33.27m (average of 2 sides).	Complies
	An 8m minimum setback is required from the back of the lot to the rear, or side, façade of dwelling.	The application does not propose the construction of dwellings. However, RFS have imposed an APZ on Lot 946 and the adjoining site Lot 9 DP 1202976, which impacts the construction of future dwellings on the proposed lots due to the minimum requirement of setbacks.	N/A

**NSW RURAL FIRE SERVICE**

Liverpool City Council
Locked Bag 7064
LIVERPOOL BC NSW 1871

Your reference: (CNR-63549) DA-615/2023
Our reference: DA20231208005578-Original-1

ATTENTION: Nicholas Beck

Date: Tuesday 23 January 2024

Dear Sir/Madam,

Integrated Development Application
s100B – Subdivision – Torrens Title Subdivision
Jardine Drive Edmondson Park NSW 2174, 946//DP1206994

I refer to your correspondence dated 18/12/2023 seeking general terms of approval for the above Integrated Development Application.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted. General Terms of Approval, under Division 4.8 of the *Environmental Planning and Assessment Act 1979*, and a Bush Fire Safety Authority, under section 100B of the *Rural Fires Act 1997*, are now issued subject to the following conditions:

Asset Protection Zones

Intent of measures: to provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact.

1. At the issue of a subdivision certificate and in perpetuity, the entire site of the proposed residential lots 801 and 802 must be managed as an inner protection area (IPA) in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*.

When establishing and maintaining an inner protection area, the following requirements apply:

- tree canopy cover should be less than 15% at maturity,
- trees at maturity should not touch or overhang the building,
- lower limbs should be removed up to a height of 2m above the ground,
- tree canopies should be separated by 2 to 5m,
- preference should be given to smooth-barked and evergreen trees,
- large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings,
- shrubs should not be located under trees,
- shrubs should not form more than 10% ground cover,
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation,

1

Postal address

NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address

NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au

- grass should be kept mown (as a guide, grass should be kept to no more than 100mm in height), and
- leaves and vegetation debris should be removed.

2. At the issue of a subdivision certificate, a suitably worded instrument(s) must be created pursuant to section 88 of the *Conveyancing Act 1919* over proposed lots 801 and 802 which creates an Asset Protection Zone (APZ) for a distance of 7 metres along the eastern and southern site boundary as generally shown as 'Asset Protection Zone - Permanent' in Figure 17: BAL Contour Plan of the submitted bush fire report prepared by Bushfire Planning Australia (dated: 23 June 2023, referenced: 21100 Edmondson Park, version: FINAL V5 – June 2023) and prohibits the construction of buildings other than class 10b structures within the proposed APZ. The instrument may be lifted upon commencement of any future proposed development on the adjoining land, but only if the bush fire hazard is removed as part of the proposal. The name of authority empowered to release, vary or modify the instrument shall be Liverpool City Council. The APZ must be managed as an inner protection area (IPA) in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*.

3. At the issue of a subdivision certificate, if the hazard to the west of the subject site has not been removed, a suitably worded instrument(s) must be created pursuant to section 88 of the *Conveyancing Act 1919* over the adjoining west Lot 9 DP1202976 which creates an Asset Protection Zone (APZ) for a distance of 10 metres generally shown as 'Asset Protection Zone - Temporary' in Figure 17: BAL Contour Plan of the submitted bush fire report prepared by Bushfire Planning Australia (dated: 23 June 2023, referenced: 21100 Edmondson Park, version: FINAL V5 – June 2023) and prohibits the construction of buildings other than class 10b structures within the proposed APZ. The instrument may be lifted upon commencement of any future proposed development on the adjoining land, but only if the bush fire hazard is removed as part of the proposal. The name of authority empowered to release, vary or modify the instrument shall be Liverpool City Council. The APZ must be managed as an inner protection area (IPA) in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*.

4. Landscaping within the required asset protection zone must comply with Appendix 4 of *Planning for Bush Fire Protection 2019*. In this regard, the following principles are to be incorporated:

- A minimum 1 metre wide area (or to the property boundary where the setbacks are less than 1 metre), suitable for pedestrian traffic, must be provided around the immediate curtilage of the building;
- Planting is limited in the immediate vicinity of the building;
- Planting does not provide a continuous canopy to the building (i.e. trees or shrubs are isolated or located in small clusters);
- Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do not touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building; and
- Low flammability vegetation species are used.

Construction Standards

The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions shall apply:

5. At the issue of a subdivision certificate, a suitably worded instrument(s) must be created over the proposed lots 801 and 802 pursuant to section 88 of the *Conveyancing Act 1919*. The instrument(s) must require future dwellings to be constructed within the nominated building area as shown as 'Building Envelopes' in Building Envelope Plan prepared by RPS, titled: Lot 946 Jardine Drive - Edmondson Park, revision: B _ Issued 13/6/2023

and dated 30 March 2023. The name of authority empowered to release, vary or modify the instruments contained within this Bush Fire Safety Authority shall be Liverpool City Council.

6. A minimum 1.8 metre high radiant heat shield made of non-combustible materials must be constructed along the eastern boundary adjacent to the bush fire hazard. All posts and rails shall be constructed of steel. The bottom of the fence is to be in direct contact with the finished ground level or plinth.

Access – Public Roads

Intent of measures: to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

7. Access roads for subdivision developments must comply with the following requirements of Table 5.3b of *Planning for Bush Fire Protection 2019*:

- property access roads are two-wheel drive, all-weather roads;
- traffic management devices are constructed to not prohibit access by emergency services vehicles;
- maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient;
- where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road;
- where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system;
- the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/causeways are to clearly indicate load rating;
- hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;
- hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005 - *Fire hydrant installations System design, installation and commissioning*; and
- there is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.

8. Non-perimeter roads must comply with the general requirements of Table 5.3b of *Planning for Bush Fire Protection 2019* and the following:

- minimum 5.5m carriageway width kerb to kerb;
- parking is provided outside of the carriageway width;
- hydrants are located clear of parking areas;
- roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m;
- curves of roads have a minimum inner radius of 6m;
- the road cross fall does not exceed 3 degrees; and
- a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.

9. Temporary turning heads must be provided to temporary dead end roads incorporating either a minimum 12 metre radius turning circle or turning heads compliant with A3.3. Vehicle turning head requirements of *Planning for Bush Fire Protection 2019*. The turning areas may be removed upon opening of future proposed through roads.

Water and Utility Services

Intent of measures: to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.



10. The provision of water, electricity and gas must comply with Table 5.3c of *Planning for Bush Fire Protection* 2019.

General Advice – Consent Authority to Note

- This approval is for the subdivision of the land only. Future development applications lodged on lots created within this subdivision may be subject to further assessment under the *Environmental Planning & Assessment Act 1979*.
- The Bush Fire Attack (BAL) plan provided with the application and in the submitted bushfire report cannot be verified and therefore is not endorsed as part of current referral. As such, separate hazard assessment may be required for the future dwellings on the proposed lots 801 and 802 to determine the appropriate BAL level.

For any queries regarding this correspondence, please contact Surbhi Chhabra on 1300 NSW RFS.

Yours sincerely,


Manager Planning & Environment Services
Built & Natural Environment





BUSH FIRE SAFETY AUTHORITY

Subdivision – Torrens Title Subdivision
Jardine Drive Edmondson Park NSW 2174, 946//DP1206994
RFS Reference: DA20231208005578-Original-1
Your Reference: (CNR-63549) DA-615/2023

This Bush Fire Safety Authority is issued on behalf of the Commissioner of the NSW Rural Fire Service under s100b of the Rural Fires Act (1997) subject to the attached General Terms of Approval.

This authority confirms that, subject to the General Terms of Approval being met, the proposed development will meet the NSW Rural Fire Service requirements for Bush Fire Safety under *s100b of the Rural Fires Act 1997*.


Manager Planning & Environment Services
Built & Natural Environment

Tuesday 23 January 2024

Transport for NSW



Nicholas Beck
Liverpool City Council
beckn@liverpool.nsw.gov.au

17 April 2024

**STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021
DEVELOPMENT APPLICATION – DA-615/2023 – CNR-63549
Lot 946 in DP1206994 (Jardine Drive), Liverpool NSW 2170**

Dear Sir/Madam,

I refer to Council's referral requesting comments for the above development application in accordance with Section 2.98 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP)*.

Council is advised that TfNSW (Sydney Trains), via Instruments of Delegation, has been delegated to act as the rail authority for the heavy rail corridor, including infrastructure, and to process the review for this development application.

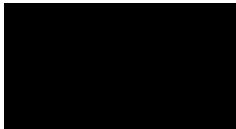
As such, TfNSW (Sydney Trains) advises that the proposed development has been assessed in accordance with the relevant Transport for NSW Assets Standard Authority standards and Sydney Trains requirements. To ensure that the proposed development is undertaken in a safe manner it is requested Council impose the conditions provided in Attachment A.

In the event that this proposed development is the subject of a Land and Environment Court appeal, Council is requested to notify TfNSW (Sydney Trains) should such an event occur.

Council is also advised that the TfNSW (Sydney Trains) requested conditions of consent as provided in Attachment A are not to be amended, replaced, or superseded by any subsequent submission provided by any other rail authority, without the further agreement from TfNSW (Sydney Trains).

Please contact TfNSW (Sydney Trains) Town Planning Management via email to DA_sydneytrains@transport.nsw.gov.au should you wish to discuss this matter. Finally, it is requested that when the proposed development's Determination is issued by the Council, a copy of the Notice of Determination and conditions of consent are provided.

Sincerely,



A/ Senior Town Planning Officer
Transport for NSW

Transport for NSW



ATTACHMENT A

- Prior to the issue of a Construction Certificate, the Applicant shall provide an accurate survey locating the development with respect to the rail boundary and rail infrastructure. This work is to be undertaken by a registered surveyor, to the satisfaction of Sydney Trains' representative.
- If required by Sydney Trains, prior to the commencement of works or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The submission of a detailed dilapidation report will be required within 10 days following the undertaking of the inspection, unless otherwise notified by Sydney Trains.
- If required by Sydney Trains, prior to the issue of the Occupation Certificate, or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The Certifier is not to issue the final Occupation Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.
- Prior to the issue of a Construction Certificate the Applicant is to provide structural details that the concrete slab or footings will be protected by a vapour barrier membrane. A copy of this detail is to be provided to the Certifier with the application for a Construction Certificate.
- Prior to the commencement of works, the Applicant shall provide certification from a qualified Geotechnical and Structural Engineer stating that the proposed works are to have no negative impact on the rail corridor and associated rail infrastructure.
- The Applicant must ensure that all drainage from the development is adequately disposed of and managed and not allowed to be discharged into the rail corridor unless prior written approval has been obtained from Sydney Trains.
- There is a need to ensure that the roots and foliage of trees being planted beside the rail corridor do not have an impact on the rail corridor or rail operations. A final landscaping and planting plan demonstrating measures to ensure compliance with this condition must be prepared to the satisfaction of Sydney Trains. No construction certificate can be issued until written confirmation has been received from Sydney Trains confirming that this condition has been complied with.
- Prior to the commencement of any works appropriate fencing must be in place along the rail corridor to prevent unauthorised access to the rail corridor during construction works.

Transport for NSW



Details of the type of fencing and the method of erection are to be to the satisfaction of Sydney Trains prior to the fencing work being undertaken.

- The development shall have appropriate fencing fit for the future usage of the development site to prevent unauthorised access to the rail corridor by future occupants of the development. Prior to the issuing of an Occupation Certificate the Applicant shall liaise with Sydney Trains regarding the adequacy of any existing fencing along the rail corridor boundary or design and construction of new fencing. Details of the type of new fencing to be installed and the method of erection are to be to the satisfaction of Sydney Trains prior to the fencing work being undertaken.
- No work is permitted within the rail corridor or any easements which benefit Sydney Trains/TAHE (Transport Asset Holding Entity), at any time, unless the prior approval of, or an Agreement with, Sydney Trains/TAHE (Transport Asset Holding Entity) has been obtained by the Applicant. The Certifier is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.
- The Applicant/Developer shall not at any stage block the corridor access gate and should make provision for easy and ongoing 24/7 access by rail vehicles, plant, and equipment to support maintenance and emergency activities.
- Copies of any certificates, drawings, approvals/certification, or documents endorsed by, given to, or issued by Sydney Trains or TAHE (Transport Asset Holding Entity) must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.
- The Applicant must ensure that at all times they have a representative (which has been notified to Sydney Trains in writing), who:
 - oversees the carrying out of the Applicant's obligations under the conditions of this consent and in accordance with correspondence issued by Sydney Trains;
 - acts as the authorised representative of the Applicant; and
 - is available (or has a delegate notified in writing to Sydney Trains that is available) on a 7 day a week basis to liaise with the representative of Sydney Trains, as notified to the Applicant.
- Without in any way limiting the operation of any other condition of this consent, the Applicant must, during demolition, excavation and construction works, consult in good faith with Sydney Trains in relation to the carrying out of the development works and must respond or provide documentation as soon as practicable to any queries raised by Sydney Trains in relation to the works.
- Where a condition of consent requires consultation with Sydney Trains, the Applicant shall forward all requests and/or documentation to the relevant Sydney Trains External Interface

Transport for NSW



Management team. In this instance the relevant interface team is **West Interface**, and they can be contacted via email on **West_Interface@transport.nsw.gov.au**.

Department of Planning and Environment



Contact: Department of Planning and Environment-Water
Phone: 1300081047
Email: waterlicensing.servicedesk@dpie.nsw.gov.au

Our ref: IDAS-2024-10010
Your ref: DA-615/2023

9 July 2024

The General Manager
LIVERPOOL CITY COUNCIL
33 MOORE STREET LIVERPOOL 2170

Attention: Nicholas Beck

Uploaded to the ePlanning Portal

Dear Sir/Madam

Re: IDAS-2024-10010 - Integrated Development Referral – General Terms of Approval
Dev Ref: DA-615/2023
Description: The proposal involves the two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation.
Location: Lot 946, DP1206994, JARDINE DRIVE EDMONDSON PARK 2174

I refer to your recent referral regarding an integrated Development Application (DA) proposed for the above location. Attached, please find Department of Planning and Environment-Water's General Terms of Approval (GTA) for part of the proposed development requiring a Controlled Activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 4.46 of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, the department requests these GTA be included (in their entirety) in Council's development consent. Please also note the department requests notification:

- if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works or activities (i) in the bed of any river, lake or estuary; (ii) on the banks of any river lake or estuary, (iii) on land within 40 metres of the highest bank of a river lake or estuary; or (iv) any excavation which interferes with an aquifer.

The Department of Planning and Environment-Water will ascertain from the notification if the amended plans require review of or variation/s to the GTA. This requirement applies even if the amendment is part of Council's proposed consent conditions and do not appear in the original documentation.

- if Council receives an application under s4.46 of the EPA Act to modify the development consent and the modifications change the proposed work or activities described in the original DA.
- of any legal challenge to the consent.

As the proposed work or activity cannot commence before the applicant applies for and obtains an approval, the department recommends the following condition be included in the development consent:

The attached GTA issued by the Department of Planning and Environment-Water do not constitute an approval under the *Water Management Act 2000*. The development consent holder must apply to the department for a Controlled Activity approval after consent has been issued by Council and before the commencement of any work or activity.

A completed application must be submitted to the department together with any required plans, documents, application fee and proof of Council's development consent. Finalisation of an approval can take up to eight (8) weeks from the date the application and all required supporting documentation is received.

Applications for controlled activity approval should be made to the department, by lodgement of a Controlled Activity Approval – New approval application on the NSW Planning Portal at:
<https://www.planningportal.nsw.gov.au/>

The Department of Planning and Environment-Water requests that Council provide a copy of this letter to the development consent holder.

The Department of Planning and Environment-Water also requests a copy of the determination for this development application be provided by Council as required under section 4.47(6) the EPA Act.



**Team Leader
Licensing and Approvals
Department of Planning and Environment-Water**



General Terms of Approval

for proposed development requiring approval under s89, 90 or 91 of the Water Management Act 2000

Reference Number: IDAS-2024-10010
Issue date of GTA: 9 July 2024
Type of Approval: Controlled Activity
Location of work/activity: Lot 946, DP1206994, JARDINE DRIVE EDMONDSON PARK 2174
Waterfront Land: Cabramatta Creek and Tributary of Cabramatta Creek
DA Number: DA-615/2023
LGA: LIVERPOOL

The GTA issued by Department of Planning and Environment-Water do not constitute an approval under the *Water Management Act 2000*. The development consent holder must apply to the Department of Planning and Environment-Water for the relevant approval **after development consent** has been issued by Council **and before** the commencement of any work or activity.

Condition Number	Details
------------------	---------

TC-G001	Before commencing any proposed controlled activity on waterfront land, an application must be submitted to Department of Planning and Environment-Water, and obtained, for a controlled activity approval under the Water Management Act 2000.
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TC-G004	A. This General Terms of Approval (GTA) only applies to the proposed controlled activity described in the plans and associated documents found in Schedule 1, relating to Development Application DA-615/2023 provided by Council to Department of Planning and Environment-Water.
----------------	--

B. Any amendments or modifications to the proposed controlled activity may render the GTA invalid. If the proposed controlled activity is amended or modified, Department of Planning and Environment-Water, must be notified in writing to determine if any variations to the GTA will be required.

TC-G005	A. The application for a controlled activity approval must include the following plan(s): • Detailed civil construction plans • Erosion and sediment control plans • Construction detailed drainage plans • Construction stormwater drainage outlet plan • Vegetation management plan - for revegetation of proposed batter and riparian offset area(s) • Landscape plan • Riparian offset plan - for encroachments into required Vegetation Riparian Zone as per the Controlled Activity Guidelines for Riparian Corridors. • Itemised VMP Costings • Construction detailed bulk earthworks plans B. The plan(s) must be prepared in accordance with Department of Planning and Environment-Water's guidelines located on the website https://www.dpie.nsw.gov.au/water/licensing-and-trade/approvals/controlled-activity-approvals/what/guidelines
----------------	---

TC-G006	A. A security deposit must be provided, if required by Department of Planning and Environment-Water.
----------------	--

B. The deposit must be:

- a bank guarantee, cash deposit or equivalent, and
 - equal to the amount required by Department of Planning and Environment-Water for that controlled activity approval.
-



General Terms of Approval

for proposed development requiring approval under s89, 90 or 91 of the Water Management Act 2000

SCHEDULE 1

The plans and associated documentation listed in this schedule are referred to in general terms of approval (GTA) issued by Department of Planning and Environment-Water for integrated development associated with IDAS-2024-10010 as provided by Council:

- Statement of Environmental Effects, prepared by GYDE, dated 15/11/2023
- Proposed Subdivision Plan, prepared by RPS Australia East Pty Ltd, Rev. B, dated 13/06/2023
- Civil Engineering Plans, Ref 19-69, prepared by Orion Consulting, Rev. B, dated 11/06/2022
- Landscaping Plan, prepared by iScape, dated June 2022

**Endeavour Energy**

ABN 11 247 365 823

T 133 718

Level 40-42, 8 Parramatta Square

10 Darcy Street

Parramatta NSW 2150

PO Box 811, Seven Hills NSW 1730

8 December 2023

Chief Executive Officer
Liverpool City Council**ATTENTION: Nicholas Beck**

Dear Sir or Madam

DA-615/2023 at Lot 946 Jardine Drive, Edmondson Park NSW 2174

I refer to the referral of 8 December 2023 from NSW Planning & Environment regarding NSW Government concurrence and referral request CNR-63549 for Liverpool City Council Development Application DA-615/2023 at Lot 946 Jardine Drive, Edmondson Park NSW 2174 (Lot 946 DP 1206994) for 'Two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation'. Submissions need to be made to Council by 29 December 2023.

Please refer to Endeavour Energy's previous submissions made to Council via the NSW Planning Portal on:

- 18 July 2020 regarding NSW Government concurrence and referral request CNR-9380 for Liverpool City Council Development Application DA-445/2020 at Lot 946 Jardine Drive, Edmondson Park NSW 2174 (Lot 946 DP 1206994) for 'Three lot Torrens title subdivision in two stages. Stage one construction of roads and earthworks. Stage two development of three residential lots'.
- 17 August 2023 regarding NSW Government concurrence and referral request CNR-58946 for Liverpool City Council Development Application RD-11/2023 at Lot 946 Jardine Drive, Edmondson Park NSW 2174 (Lot 946 DP 1206994) for Section 82A - Review of determination of refusal of DA-445/2020 for 'Two lot Torrens title subdivision including construction of roads, earthworks and removal of vegetation'.

The recommendations and comments previously provided therein essentially remain valid.

Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified in Endeavour Energy's submissions to DA-445/2020 and RD-11/2023 in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to Property.Development@endeavourenergy.com.au is preferred.

POWER
togetherendeavourenergy.com.au

Yours faithfully



We have moved: Level 40-42, 8 Parramatta Square, 10 Darcy Street
Parramatta NSW 2150.

Dharug/Wiradjuri/Dharawal/Gundungurra/Yuin Country

endeavourenergy.com.au |    



**Endeavour
Energy**

**POWER
together**



Endeavour Energy respectfully acknowledges the Traditional Custodians on whose lands we live, work, and operate and their Elders past and present.



The General Manager
Liverpool City Council

18 July 2020

ATTENTION: Peter Nelson

Dear Sir or Madam

I refer to the referral of 8 July 2020 from NSW Planning, Industry & Environment regarding NSW Government concurrence and referral request CNR-9380 for Liverpool City Council Development Application DA-445/2020 at Lot 946 Jardine Drive, Edmondson Park NSW 2174 (Lot 946 DP 1206994) for 'Three lot Torrens title subdivision in two stages. Stage one construction of roads and earthworks. Stage two development of three residential lots'. Submissions need to be made to Council by 29 July 2020.

As shown in the below site plans from Endeavour Energy's G/Net master facility model (and extracts from Google Maps Street View) there are:

- No easements over the site benefitting Endeavour Energy (active easements are indicated by red hatching).
- Low voltage overhead power lines to the road verge / roadway.
- No existing low voltage service conductor or customer connection point for the site.

Please note the location, extent and type of any electricity infrastructure, boundaries etc. shown on the plan is indicative only. In addition it must be recognised that the electricity network is constantly extended, augmented and modified and there is a delay from the completion and commissioning of these works until their capture in the model. Generally (depending on the scale and/or features selected), low voltage (normally not exceeding 1,000 volts) is indicated by blue lines and high voltage (normally exceeding 1,000 volts but for Endeavour Energy's network not exceeding 132,000 volts / 132 kV) by red lines (these lines can appear as solid or dashed and where there are multiple lines / cables only the higher voltage may be shown). This plan only shows the Endeavour Energy network and does not show electricity infrastructure belonging to other authorities or customers owned electrical equipment beyond the customer connection point / point of supply to the property. This plan is not a 'Dial Before You Dig' plan under the provisions of Part 5E 'Protection of underground electricity power lines' of the Electricity Supply Act 1995 (NSW).

Subject to the following recommendations and comments Endeavour Energy has no objection to the Development Application.

- Network Capacity / Connection

Endeavour Energy has noted the following in the Statement of Environmental Effects does not appear to address in detail the suitability of the site for the development in regard to whether electricity services are available and adequate for the development.



51 Huntingwood Drive, Huntingwood, NSW 2148
PO Box 811, Seven Hills, NSW 1730
T: 133 718

endeavourenergy.com.au

ABN 11 247 365 823

3.3 Subdivision

The proposed subdivision works includes:

- Construction of services including sewer, water, electricity and telecommunications;

4.2.7 Liverpool Development Control Plan (Section 4.15(1)(a)(iii))

The Liverpool Development Control Plan 2008 (LDCP 2008) applies to the subject site. The following table provides an assessment of the proposal against the relevant clauses of LDCP 2008.

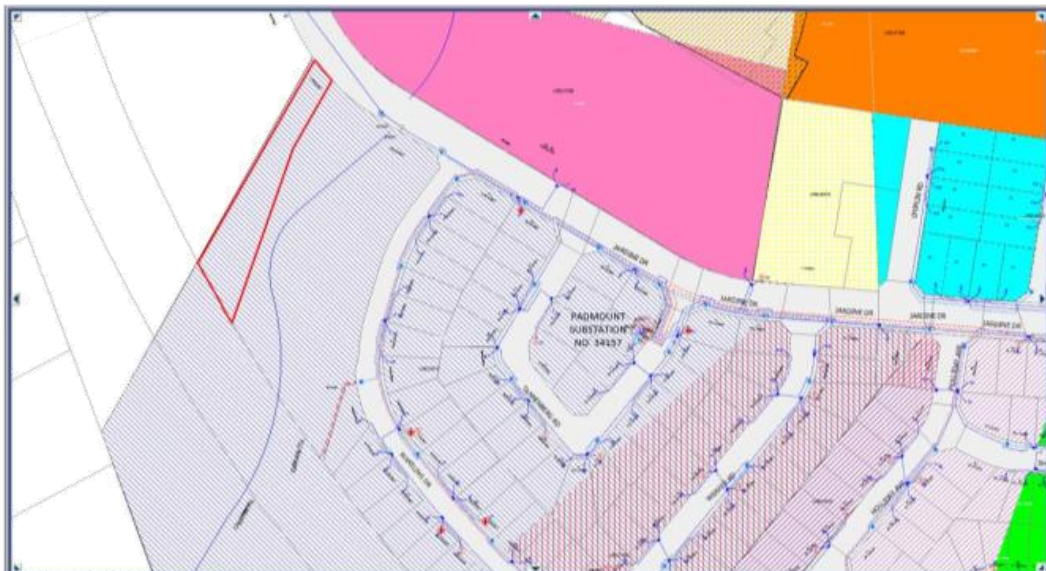
Table 7: DCP Controls

Control	Comment	Complies
Part 1 – General Controls for all development		
Electricity	Noted	✓
Electricity services are to be extend to the development / subdivision and at full cost to the development		
Underground electricity services will be required.		

The availability of electricity supply to a site is based on a wide range of factors eg. the age and design of the network; other development in the locality utilising previously spare capacity within the local network; the progress of nearby / surrounding sites including electricity infrastructure works eg. a smaller and isolated development that may not of its own accord require a distribution substation may require a substation to facilitate the development and from which the spare capacity is made available to subsequent nearby development.

Non-urban / above ground areas of the network utilising pole mounted substations have comparatively limited capacity of 25 kilovolt amperes (kVA) up to a maximum of 400 kVA. Newer padmount substations in urban areas can accommodate loads from 315 kVA up to 1,500 kVA (typically 500 kVA) ie. there is a significant variation in the number and type of premises able to be connected to a substation.

As shown in the following extract of Endeavour Energy's G/Net master facility model indicates that the site is part of a 'Work Polygon' (depicted by the coloured highlighting and/or hatching of the lot) indicating enquiries and applications for proposed contestable works projects with Endeavour Energy's Network Connections Branch for electricity supply to the development for urban residential subdivision (Endeavour Energy's reference URS15472).



URS15472

This subdivision includes the provision of a padmount substation no. 34157 (indicated by the symbol ) in Tannenberg Road located approximately 240 metres to the south east. As such it is likely that sufficient spare capacity will be available to facilitate the proposed development ie. provided the subdivision was factored into the load calculations for the original application for connection of load for the subdivision. This is due to load being based on a desktop assessment using an After Diversity Maximum Demand (ADMD) where demand is aggregated over a large number of customers providing an ADMD for the site / per lot. Depending on the actual development proposed for the site, the ADMD provided may not be sufficient.

As well as the capacity of distribution substations, other factors such as the size and rating / load on the conductors and voltage drop (which can affect the quality of supply particularly with long conductor runs) etc. need to be assessed.

However, an extension and/or augmentation of the existing network may be required but this will not be determined until a detailed assessment is undertaken. Endeavour Energy's preference is to alert proponents / applicants (and Council) of the potential matters that may arise as further development of areas continues to occur.

In due course the applicant for the future proposed development of the site will need to submit an application for connection of load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined.

Further details are available by contacting Endeavour Energy's Network Connections Branch via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 8am - 5:30pm or on Endeavour Energy's website under 'Home > Residential and business > Connecting to our network' via the following link:

<http://www.endeavourenergy.com.au/> .

Advice on the electricity infrastructure required to facilitate the proposed development can be obtained by submitting a Technical Review Request to Endeavour Energy's Network Connections Branch, the form for which FPJ6007 is attached and further details (including the applicable charges) are available from Endeavour Energy's website under 'Our connection services'.

The response to these enquiries is based upon a desktop review of corporate information systems, and as such does not involve the engagement of various internal stakeholders in order to develop a 'Connection Offer'. It does provide details of preliminary connection requirements which can be considered by the applicant prior to lodging a formal application for connection of load.

Alternatively the applicant should engage an Accredited Service Provider (ASP) of an appropriate level and class of accreditation. The ASP scheme is administered by Energy NSW and details are available on their website via the following link or telephone 13 77 88:

<https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory-requirements/asp-scheme-and-contestable-works> .

- Network Asset Design

Endeavour Energy's Company Policy 9.2.5 'Network Asset Design', includes the following requirements for electricity connections to new urban subdivision / development:

5.11 Reticulation policy

5.11.1 Distribution reticulation

In order to improve the reliability performance of and to reduce the operating expenditure on the network over the long term the company has adopted the strategy of requiring new lines to be either underground cables or where overhead is permitted, to be predominantly of covered or insulated construction. Notwithstanding this strategy, bare wire overhead construction is appropriate and permitted in some situations as detailed below.

In areas with the potential for significant overhanging foliage, CCT is used to provide increased reliability as it is less susceptible to outages from wind-blown branches and debris than bare conductors. CCT must only be used in treed² areas as the probability of a direct lightning strike is low. In open areas where the line is not shielded from a direct lightning strike, bare conductors must generally be used for 11kV and 22kV reticulation.

Non-metallic Screened High Voltage Aerial Bundled Cable (NMSHVABC) must be used in areas which are heavily treed and where it is not practicable to maintain a tree clearing envelope around the conductors.

² A "treed" area is one with a substantial number of trees adjacent to the line, in each span. In these situations CCT is used to provide increased reliability as it is less susceptible to outages from wind-blown

5.11.1.1 Urban areas

Reticulation of new residential subdivisions will be underground. In areas of low bushfire consequence, new lines within existing overhead areas can be overhead, unless underground lines are cost justified or required by either environmental or local council requirements.

Where underground reticulation is required on a feeder that supplies a mixture of industrial, commercial and/or residential loads, the standard of underground construction will apply to all types of load within that development.

Where ducting is used, adequate spare ducts and easements must be provided at the outset to cover the final load requirements of the entire development plan.

Extensions to the existing overhead 11kV/22kV network must generally be underground. Bare wire will be used for conductor replacements and augmentations except in treed areas where CCT or NMSHVABC must be used.

Extensions to the existing overhead LV network and augmentations must either be underground or ABC. Conductor replacements greater than 100m in route length must utilise aerial bundled cable.

- Earthing

The construction of any building or structure (including fencing, signage, flag poles, hoardings etc.) whether temporary or permanent that is connected to or in close proximity to Endeavour Energy's electrical network is required to comply with Australian/New Zealand Standard AS/NZS 3000:2018 'Electrical installations' as updated from time to time. This Standard sets out requirements for the design, construction and verification of electrical installations, including ensuring there is adequate connection to the earth. It applies to all electrical installations including temporary builder's supply / connections.

Inadequate connection to the earth to allow a leaking/fault current to flow into the grounding system and be properly dissipated places persons, equipment connected to the network and the electricity network itself at risk from electric shock, fire and physical injury.

- Flooding and Drainage

Endeavour Energy has noted that the Statement of Environmental Effects indicates that 'The site is subject to flooding in accordance with the flood mapping contained within the LEP'.

Endeavour Energy requires the electricity network needed to service an area / development to be fit for purpose and meet the technical specifications, design, construction and commissioning standards based on Endeavour Energy's risk assessment associated with the implementation and use of the network connection / infrastructure for a flood prone site. Risk control has focused typically on avoiding the threat, but where this is not possible, reducing the negative effect or probability of flood damage to assets by implementing good design and maintenance practices.

- Vegetation Management

The planting of large trees in the vicinity of electricity infrastructure is not supported by Endeavour Energy. Suitable planting needs to be undertaken in proximity of electricity infrastructure (including any new electricity infrastructure required to facilitate the proposed development). Larger trees should be planted well away from electricity infrastructure and even with underground cables, be installed with a root barrier around the root ball of the plant.

Landscaping that interferes with electricity infrastructure could become a potential safety risk, restrict access, reduce light levels from streetlights or result in the interruption of supply may become subject to Endeavour Energy's Vegetation Management program and/or the provisions of the *Electricity Supply Act 1995* (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.

- Dial Before You Dig

Before commencing any underground activity the applicant is required to obtain advice from the **Dial Before You Dig 1100** service in accordance with the requirements of the *Electricity Supply Act 1995* (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk.

- Public Safety

Workers involved in work near electricity infrastructure run the risk of receiving an electric shock and causing substantial damage to plant and equipment. I have attached Endeavour Energy's public safety training resources, which were developed to help general public / workers to understand why you may be at risk and what you can do to work safely. The public safety training resources are also available via Endeavour Energy's website via the following link:

<http://www.endeavourenergy.com.au/wps/wcm/connect/ee/nsw/nsw+homepage/communitynav/safety/safety+brochures> .

If the applicant has any concerns over the proposed works in proximity of the Endeavour Energy's electricity infrastructure to the road verge / roadway, as part of a public safety initiative Endeavour Energy has set up an email account that is accessible by a range of stakeholders across the company in order to provide more effective lines of communication with the general public who may be undertaking construction activities in proximity of electricity infrastructure such as builders, construction industry workers etc. The email address is Construction.Works@endeavourenergy.com.au .

- Emergency Contact

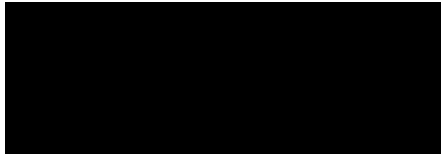
In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days. Endeavour Energy's contact details should be included in the any risk or safety management plan.

I appreciate that not all the foregoing issues may be directly or immediately relevant or significant to the Development Application ie. if a padmount substation is not required on site. However, Endeavour Energy's preference is to alert proponents / applicants of the potential matters that may arise should development within closer proximity of the existing and/or required electricity infrastructure needed to facilitate the proposed development on or in the vicinity of the site occur.

Could you please pass on a copy of this submission and the attached resources to the applicant? Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified above in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to property.development@endeavourenergy.com.au is preferred.

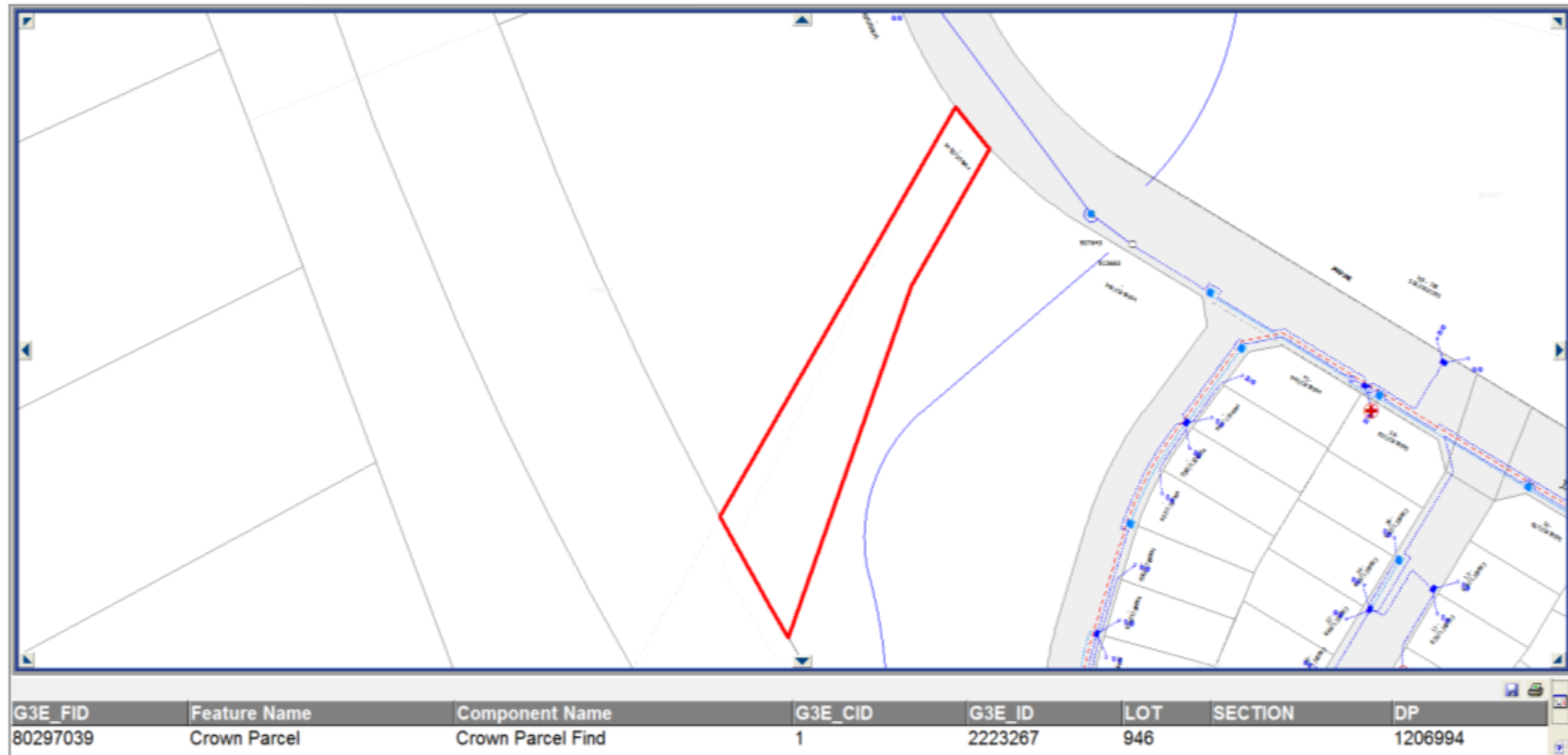
With the current COVID-19 health risk, as many as possible of Endeavour Energy staff are working from home. As a result there is only a small contingent located at the Huntingwood head office for essential operations. Although working from home, access to emails and other internal stakeholders is now somewhat limited and as a result it may take longer than usual to respond to enquiries. Thank you for your understanding during this time.

Yours faithfully



51 Huntingwood Drive, Huntingwood NSW 2148
www.endeavourenergy.com.au







ATTACHMENT 7 – SECTION 7.11 PAYMENT FORM

**CONTRIBUTIONS PURSUANT TO SECTION 7.11 OF THE
ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979
Liverpool Contribution Plan 2008 – Edmondson Park**

When remitting payment as specified in the Conditions of Consent to the approval, this Form must be submitted with your payment.

These figures have been calculated to the current CPI Quarter and will be adjusted at the time of payment in accordance with the conditions of consent.

APPLICATION NO: DA-615/2023

PROPOSAL: Two lot Torrens title subdivision including construction and dedication of a part road, earthworks, installation of utilities and removal of vegetation.

<u>Facilities</u>	<u>Amount (\$)</u>	<u>Job No.</u>
Community Facilities - Land	\$6,724	GL.10000001870.10174
Community Facilities - Works	\$0	GL.10000001870.10175
Open Space and Recreation - Land	\$41,253	GL.10000001869.10176
Open Space and Recreation - Works	\$0	GL.10000001869.10177
Transport and Access - Land	\$7,676	GL.10000001865.10178
Transport and Access - Works	\$0	GL.10000001865.10179
Drainage - Land	\$3,015	GL.10000001866.10180
Drainage - Works	\$0	GL.10000001866.10181
Technical Study Fees Recoverable	\$313	GL.10000001872.10182
Professional Fees	\$1,020	GL.10000001872.10183
<u>TOTAL</u>	<u>\$60,000</u>	

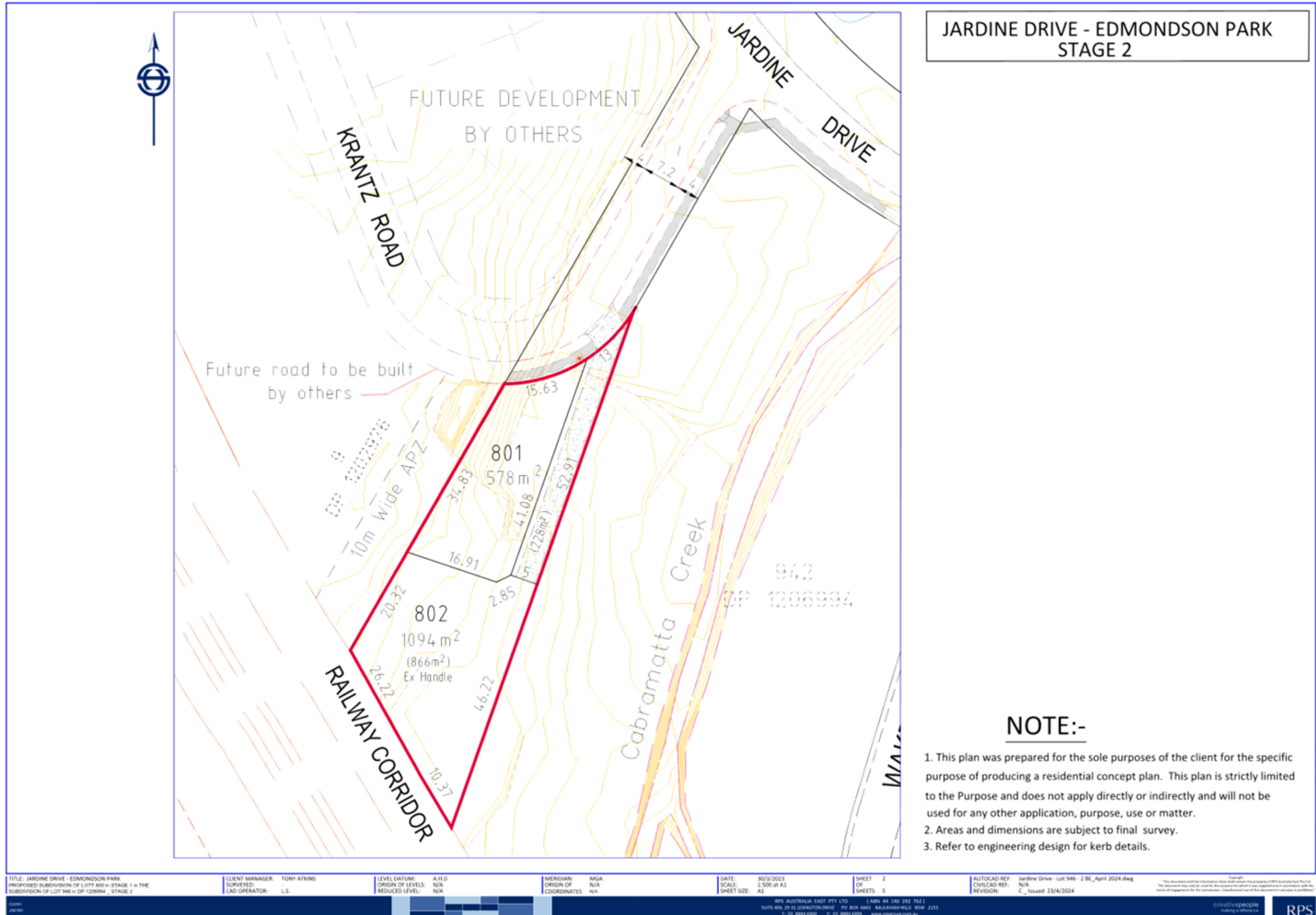
-----OFFICE USE ONLY -----

RECORD OF PAYMENT

Total Amount paid: _____

Date: _____

Receipt No.: _____ **Cashier:** _____



SCHEDULE OF EXISTING TREES

KEY	BOTANICAL NAME	COMMON NAME	HEIGHT X SPREAD
2204	<i>Eucalyptus tereticornis</i>	Forest Red Gum	5 x 1m
2205	<i>Eucalyptus moluccana</i>	Grey Box	6 x 1m
2206	<i>Eucalyptus tereticornis</i>	Forest Red Gum	7 x 1m
2207	<i>Eucalyptus tereticornis</i>	Forest Red Gum	10 x 2m
2208	<i>Eucalyptus tereticornis</i>	Forest Red Gum	4 x 1m
2210	<i>Eucalyptus moluccana</i>	Grey Box	4 x 1m
2211	<i>Eucalyptus moluccana</i>	Grey Box	15 x 4m
2212	<i>Eucalyptus tereticornis</i>	Forest Red Gum	20 x 6m
2223	Unknown Tree	Dead Tree	

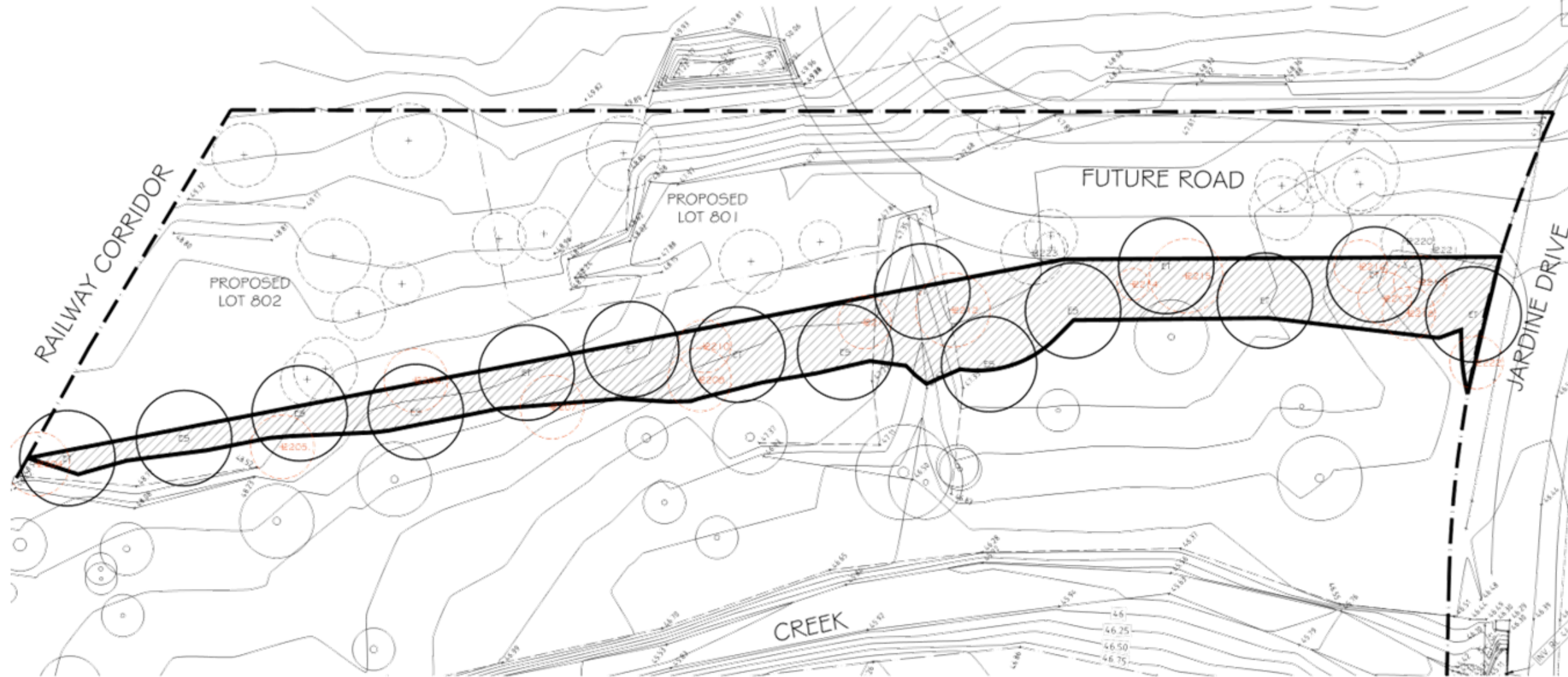
NOTE: Also refer to the Tree Health Report prepared by Jason Anderson, from Anderson Environmental for Trees Nos. 2204 - 2223.

2214	<i>Eucalyptus tereticornis</i>	Forest Red Gum	20 x 4m
2215	<i>Eucalyptus tereticornis</i>	Forest Red Gum	16 x 6m
2216	<i>Eucalyptus moluccana</i>	Grey Box	20 x 3m
2217	<i>Eucalyptus moluccana</i>	Grey Box	20 x 5m
2218	<i>Eucalyptus moluccana</i>	Grey Box	16 x 4m
2219	<i>Eucalyptus moluccana</i>	Grey Box	14 x 3m
2220	<i>Eucalyptus tereticornis</i>	Forest Red Gum	16 x 4m
2221	<i>Eucalyptus moluccana</i>	Grey Box	18 x 8m
2222	<i>Eucalyptus tereticornis</i>	Forest Red Gum	20 x 8m

SCHEDULE OF PLANT MATERIAL

CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	MATURE HEIGHT	CONTAINER SIZE	HEIGHT AT PLANTING	STAKES
ES	<i>Eucalyptus saligna</i>	Sydney Blue Gum	6	25m	100 litre	3m	2
ET	<i>Eucalyptus tereticornis</i>	Forest Red Gum	9	20m	100 litre	3m	2

LEGEND



REVISIONS

A	20.06.22
1. Additional replacement trees added.	
2. Revisions to Lot layouts.	
B	09.04.24
1. Replacement tree numbers revised to suit council's RFI and RFS comments.	

Verify all dimensions on site before commencing construction or ordering materials. Verify the dimensions of all manufactured products before installation. Use figured dimensions in preference to scaled dimensions. Report any discrepancies to the Landscape Architect for a decision before work commences.

NOTES

LANDSCAPE SPECIFICATION

1. SITE PREPARATION

Any minor levelling, either cutting or filling, shall be undertaken by the Landscape Contractor so that areas are left ready for final finishes. Adequate watering points shall be provided to enable the Landscape Contractor to maintain planted area throughout construction and the maintenance period. Weeds are to be sprayed with 'Roundup' or equal, to manufacturer's directions and must be dead before being disturbed.

2. WORKS BY OTHERS

The following works shall be undertaken by others prior to the commencement of the landscape works:

- All trees to be removed
- Tree protection fencing
- Stripping & stockpiling site topsoil
- Erosion control measures and siltation fences / devices

3. TREE PLANTING

3.1.1 Materials

Soil mix to be suitable for improving depleted soils such as Botany Humus Mix from Australian Native Landscapes or equal. Samples to be shown to Principals and Representative for approval before installation. Also provide written breakdown of contents, pH and trace elements and suitability for improving existing soil. Soil mix to comply with AS 3743-2003: Potting mixes, AS 4419-2003: Soils for landscaping and garden use & AS 4454-2003: Composts, soil conditioners and mulches. Mulch to be forest litter or pine bark mulch from Australian Native Landscapes or equal. Samples to be shown to Superintendent for approval before installation. Mulch to comply with AS 4454-2003: Composts, soil conditioners and mulches. Water crystals to be Garden King Wetsoil Granular deep watering agent form Arngrow or equal product. Trees shall be true to name and variety. Substitutes in size or variety shall not be made without the approval of the Principals Representative. Also refer to Plant Schedule. All trees shall be true to size in well developed healthy condition, free from insects and diseases, with well established root systems. Sample of each species to be shown to Principals Representative for approval before installation.

3.1.2 Installation

Excavate hole minimum 1.5 times diameter and twice the depth of the root ball, backfill allowing a mound of soil 200mm above ground level to form a basin around the trunk. Spread 1m diameter area of 100mm thick mulch layer around each tree.

Planting shall not be carried out in dry soil or in extreme weather conditions. The root systems must be moist before planting to ensure turgidity. The plants shall be removed from their containers with as little disturbance as possible to the root system. Plants should be planted as the same depth as the plants were in the containers and allow for a shallow saucer of soil to be formed around the plant to aid penetration of water.

Avoid filling up of top soil around young plant stems. Firm soil around the root ball and thoroughly soak the areas after planting. On completion, cultivate, rake and leave all garden areas in a neat and tidy condition. Remove old containers and plant labels from the site.

Fertilise with an approved nine-months formulation general purpose slow release fertiliser such as 'Nutricote' or 'Osmocote' that is mixed into the prepared planting space just prior to planting. Fertiliser is to be applied at the rate as specified by the manufacturer for the plant size and type. Maintain all plants and trees and provide adequate watering for the duration of the contract.

Staking - Trees as indicated in the Schedule are to be staked with four 50 x 50mm x 1800mm long hardwood stakes secured in each corner of a 1000 x 1000mm square.

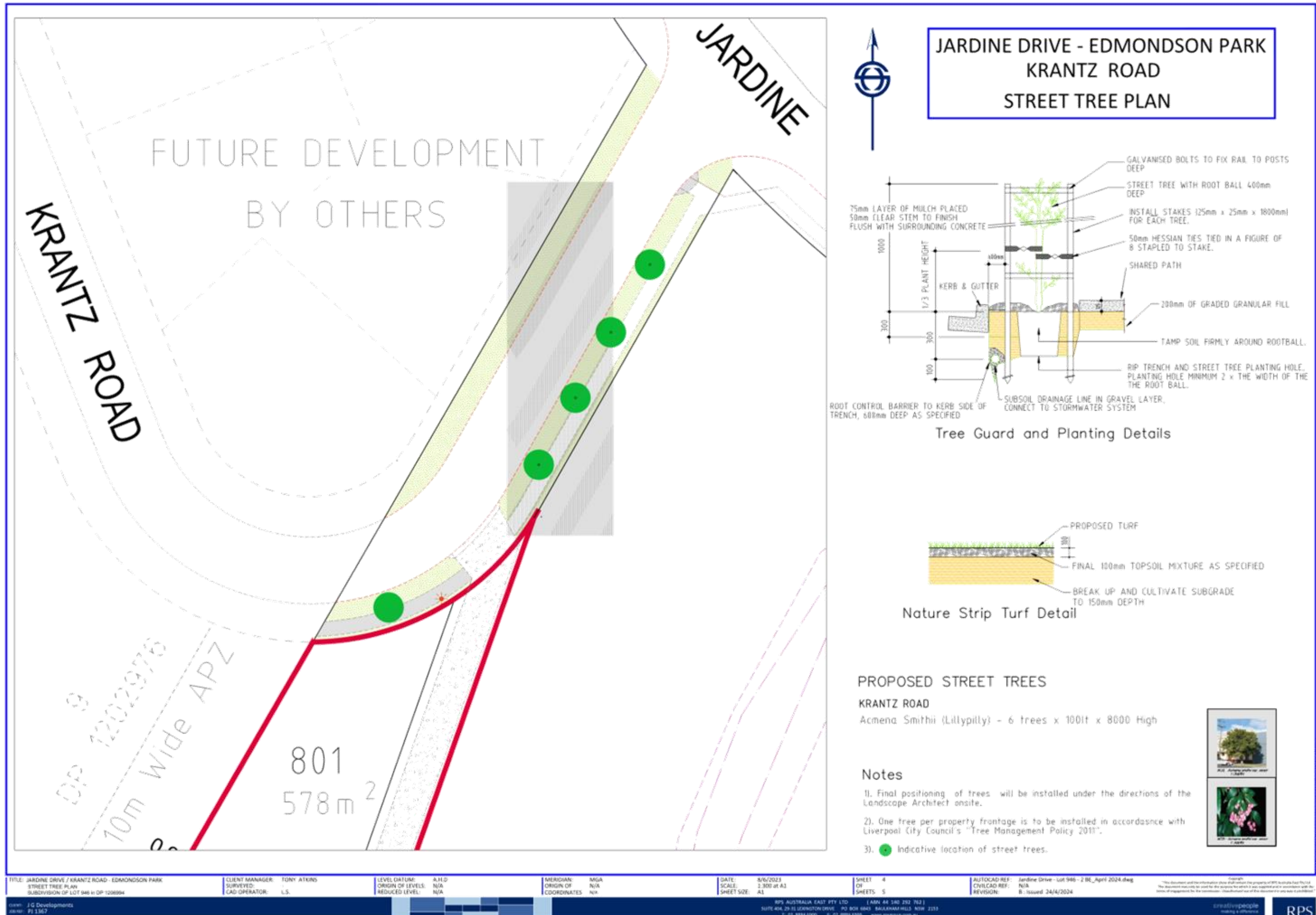


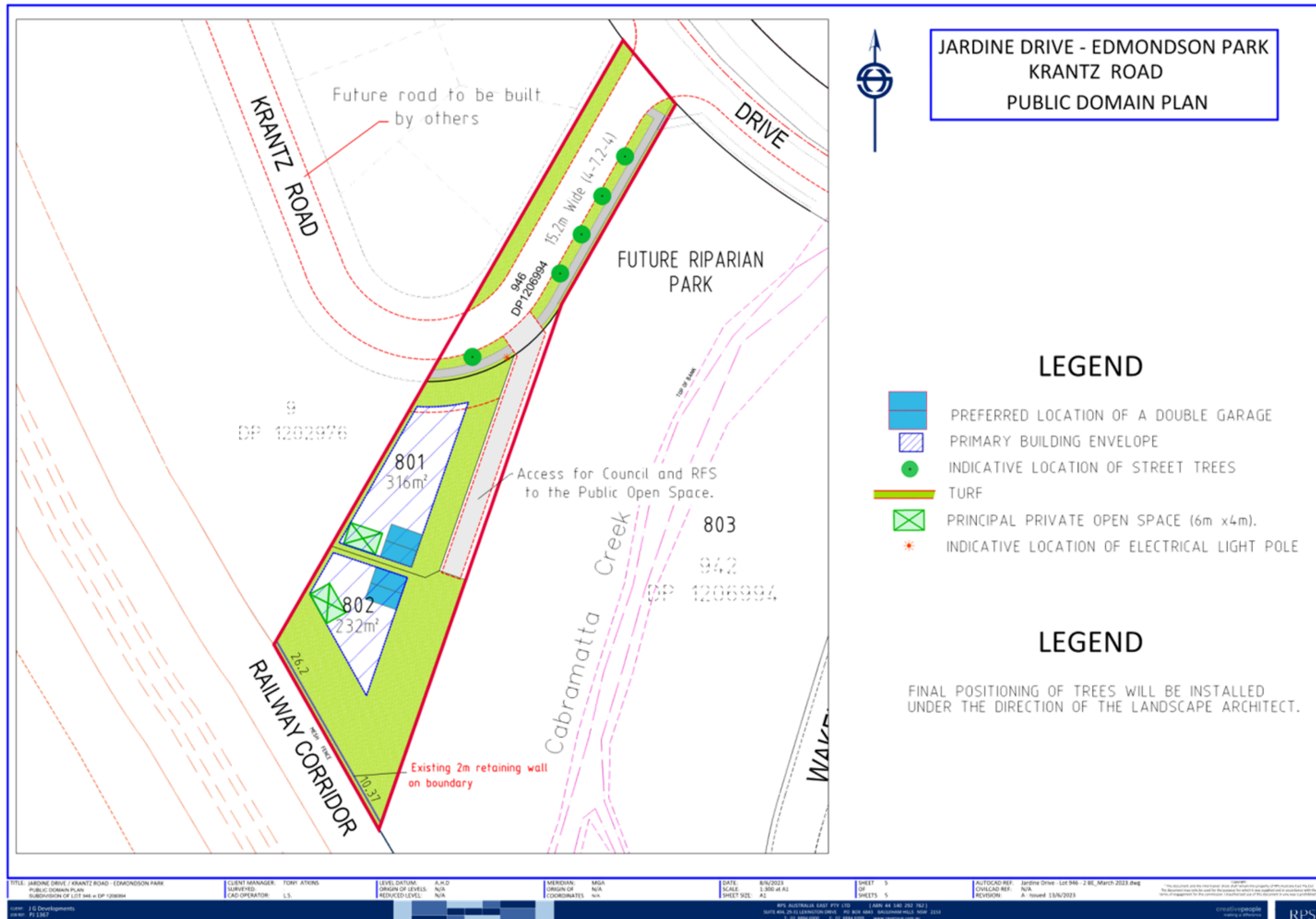
Tree as specified.
100mm layer of mulch as specified.
4 x 50 x 50 x 1800mm hardwood stakes spaced to form a 1m square with the tree stem central between them.
Refer to other details for garden bed preparation.

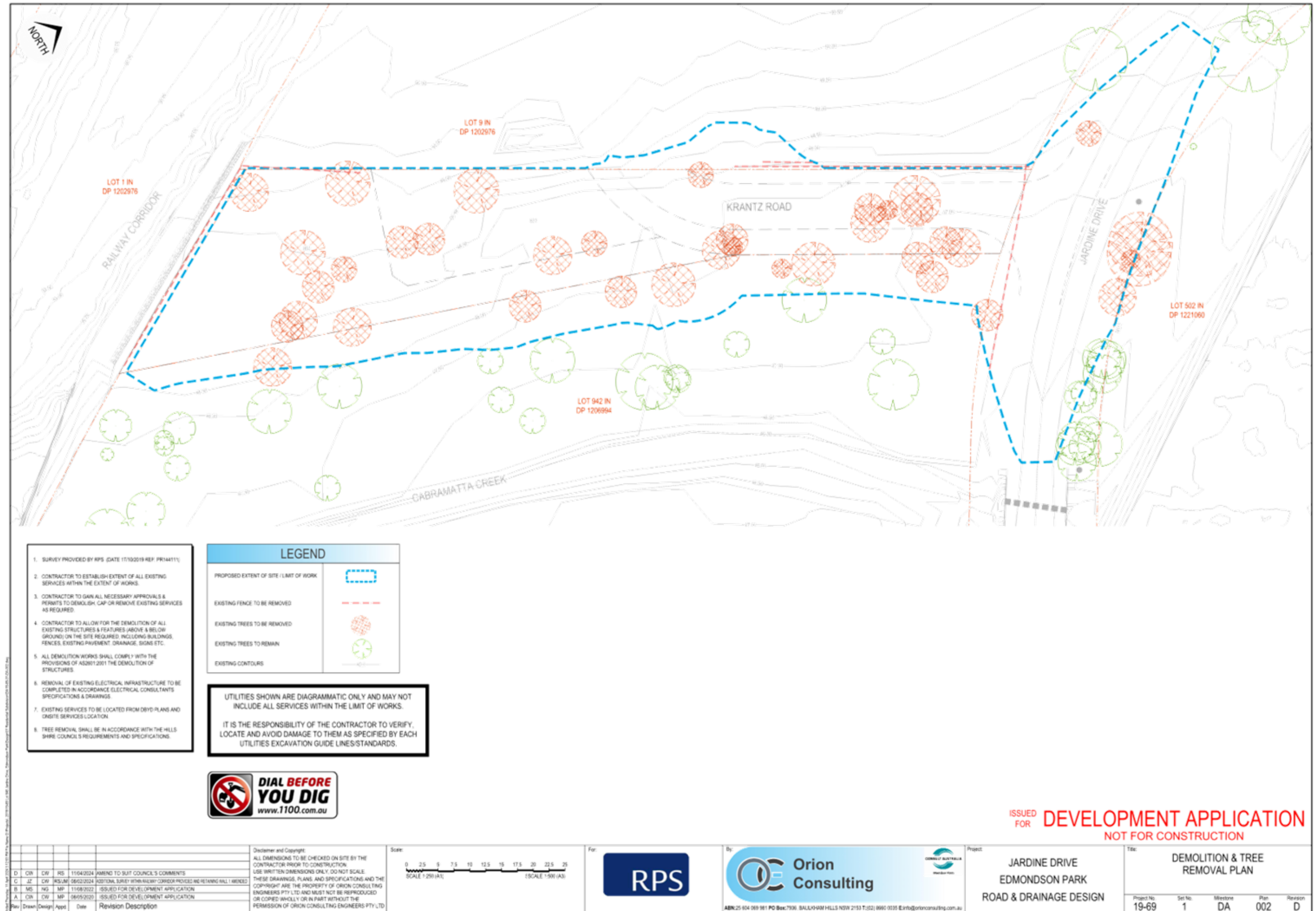
1 HARDWOOD STAKING FOR TREES
SCALE 1:20
TYPICAL SECTION

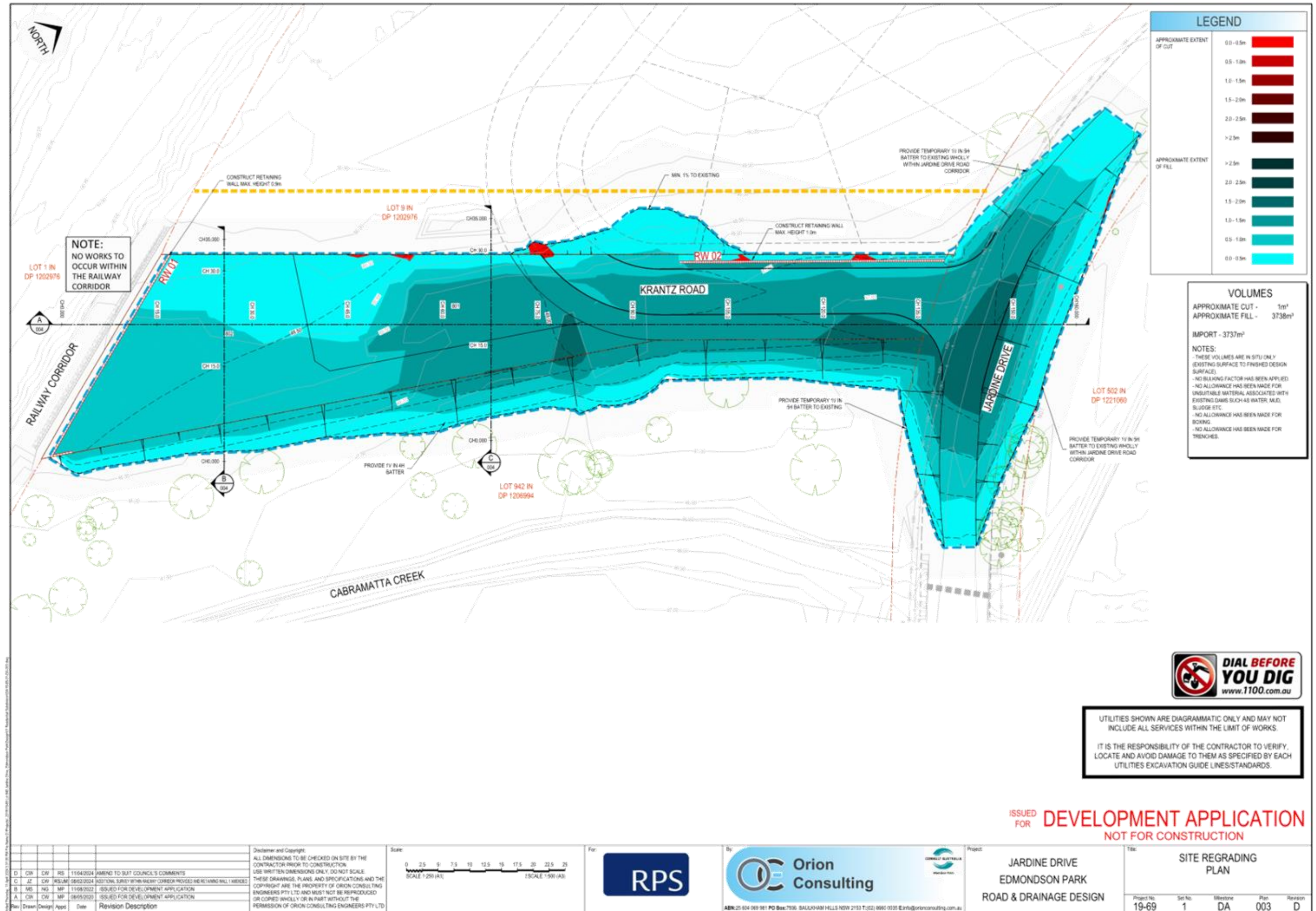


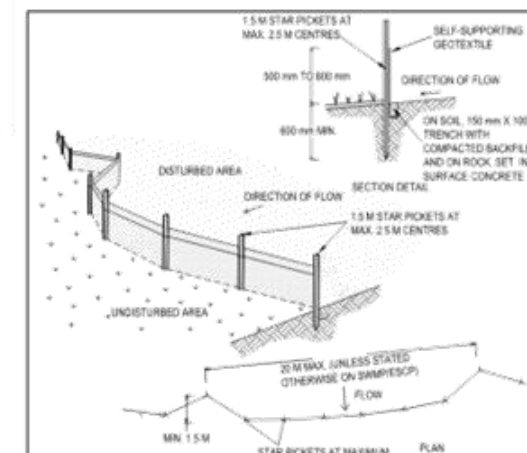
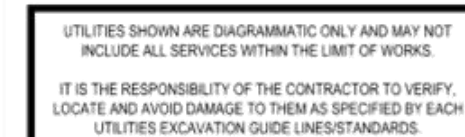
project	Proposed Subdivision
client	Lot 946 Jardine Drive, Edmondson Park
drawing	Tree Planting Plan
date	scale
April 2024	1:200 @ A1
job.dwg no.	no. in set
172.24(21)/389B	ONE/ONE
designed by	drawn by
IJ	HL









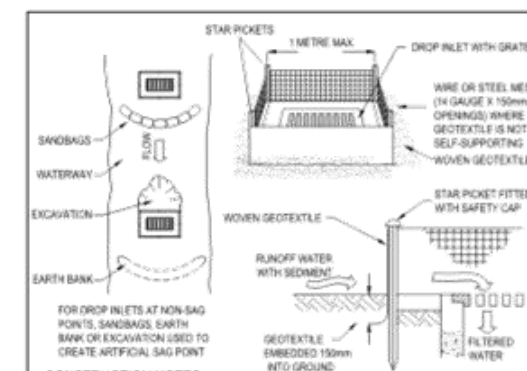


CONSTRUCTION NOTES:

2.5M SPACINGS

1. CONFIRM THAT SEDIMENT FENCES ARE AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT. USUALLY THE 10-15% EVENT.
2. CUT A 150MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE EXTENDED TO.
3. DRIVE 15 METRE LONG STAP PICKETS INTO GROUND AT 2.5M INTERVALS (MAX) AT THE DOWNSLOPE SIDE OF THE TRENCH. ENSURE ANY STAP PICKETS ARE FITTED WITH SAFETY CAPS.
4. UNROLL SUPPLY OF GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PROVIDED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150MM OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE	SD 6-8
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CONSTRUCTION NOTES:

1. FIBREGLASS BARRIER MADE FROM GEOTEXTILES OR STRAIN BALES.
2. FOLLOW STANDARD DRAWING 6-4 AND STANDARD DRAWING 6-4-1 FOR INSTALLATION PROCEDURES FOR THE STRAIN BALES OR GEOTEXTILES REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERSHED TO BYPASS IT.

GEOTEXTILE INLET FILTER	SD 6-12
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ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

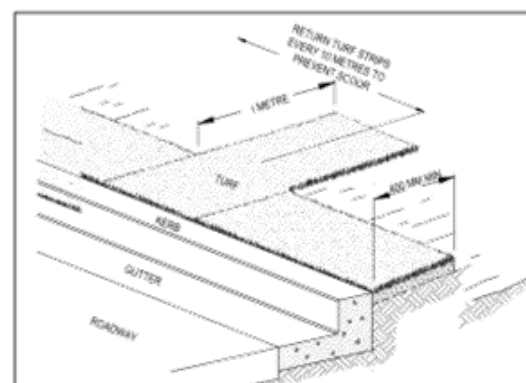
1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL, AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "ENVIRONMENT PROTECTION AUTHORITY" AND "DEPT OF LAND AND WATER CONSERVATION". MEASURES OUTLINED IN THE SEDIMENT & EROSION CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER REAPPLIED TO AND REVEGETATED IN THOSE AREAS.
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAIN BAILS SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING AREAS WHERE POSSIBLE. UNPAVED OR EXISTING ROAD ALIGNMENTS AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
6. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
7. ALL DISTURBED AREAS SHALL BE REVEGETATED WITHIN 14 WORKING DAYS FROM THE COMPLETION OF LAND SHAPING.
8. MINIMIZE COST BY WATERING WHEN REQUIRED.

9. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
10. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
11. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPIRED TO A MINIMUM DEPTH OF 100mm ON THE BASE SOIL SURFACES AND REVEGETATED.
12. ALL STOCKPILES TO BE MAXI-100 HIGH AND PROTECTED WITH SILT FENCE.

13. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE SAME CENTRE LINE.

14. SALT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m (3m MAX) CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

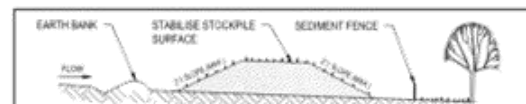
15. LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES AND DIAGRAMS SHALL BE IDENTICAL TO THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.
16. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES SET OUT IN "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION" 4TH EDITION AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.
17. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.
18. MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS. WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.
19. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS, AND AFTER THE ROAD CENTRELINES HAVE BEEN PEGGED AND/OR PERMANENTLY MARKED, THE SITE MUST BE INSPECTED BY COUNCIL'S REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE TO IDENTIFY AND APPROPRIATELY MARK:
 - a) THE TREES TO BE RETAINED
 - b) ALL TREES TO BE LEFT UNDISTURBED AND TO BE CORRODED OFF.
20. NO TREES SHALL BE REMOVED WITHOUT COUNCIL'S CLEARANCE.
21. MANAGEMENT DEVICES TO REMAIN UNTIL THE END OF THE MAINTENANCE PERIOD.



CONSTRUCTION NOTES:

1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.4 METRE LONG TURF STRIPS NORMAL TO THE KERB EVERY 10th.
3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCARPMENT.

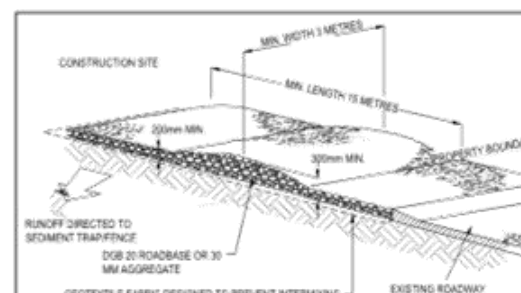
KERBSIDE TURF STRIP SD 6-13



CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 3 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. ALL STOCKPILES ARE TO BE LOCATED AND PLACED IN ACCORDANCE WITH THE CONTRACTORS EROSION AND SEDIMENT CONTROL PLAN.
5. WHERE STOCKPILES ARE TEMPORARY (>14 DAYS) NO STABILISATION IS REQUIRED. REVIEW THE ADEQUACY OF SEDIMENT CONTROLS IF RAINFALL IS PREDICTED.
6. WHERE STOCKPILES ARE TEMPORARY (>14 DAYS) THE FOLLOWING ADDITIONAL CONTROLS ARE REQUIRED:
 - MAXIMUM BATTER SLOPES REDUCED TO 1:4
 - CONSTRUCT A CONTOUR DRAIN AT THE LOW SIDE OF THE STOCKPILE, AND DISCHARGING THROUGH A STRAIN BALE OR 200mm (8 INCH) OAM
 - ESTABLISH GRASS COVER TO SURFACE OF STOCKPILE WITHIN 14 DAYS. USE HYPOCHOERIS WITH A 75% MOW OF SEASONAL AND PERMANENT GRASS SEEDS, AND A STRAW MULCH THICKNESS OF NO LESS THAN 5mm.
7. CONSTRUCT WITH BANKS (STANDARD DRAINING) AS ON THE UPRILE SIDE TO DIAPYR WATER DRAIN. STOCKPILES AND SEDIMENT FRAMES (STANDARD DRAINING) ALL 1.2 METRES DOWN TO

STOCKPILES SD 4-1

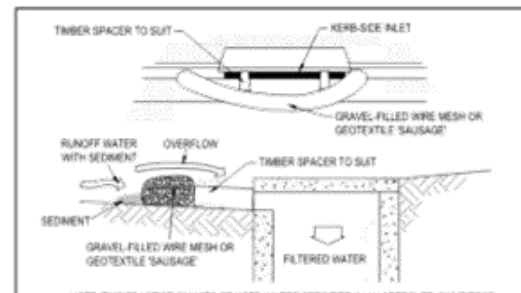


GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOFABRIC MAY BE A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AASHTO 4-93) OF 2500 N

CONSTRUCTION NOTES:

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH REINFORCED PUNCHING-RESISTANT GEOTEXTILE.
3. CONSTRUCT A 300mm DEEP PAD COMPACTED TO 95% USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS	SD 6-14
------------------------	---------



NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWAMP/SCIP

CONSTRUCTION NOTES:

1. INSTALL FILTER TO HEED INLETS ONLY AT SAG POINTS.
2. FABRICATE A RELIEF HATCH FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25cm TO 30cm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOVE 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 2cm SPACE BETWEEN IT AND THE KORB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KORB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDWICH FILTER WITH 30cm KORB CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE. PROVIDING THE KORB ARE SO SIZED THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LOADED WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER SD 6-11

[illegible]

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USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.
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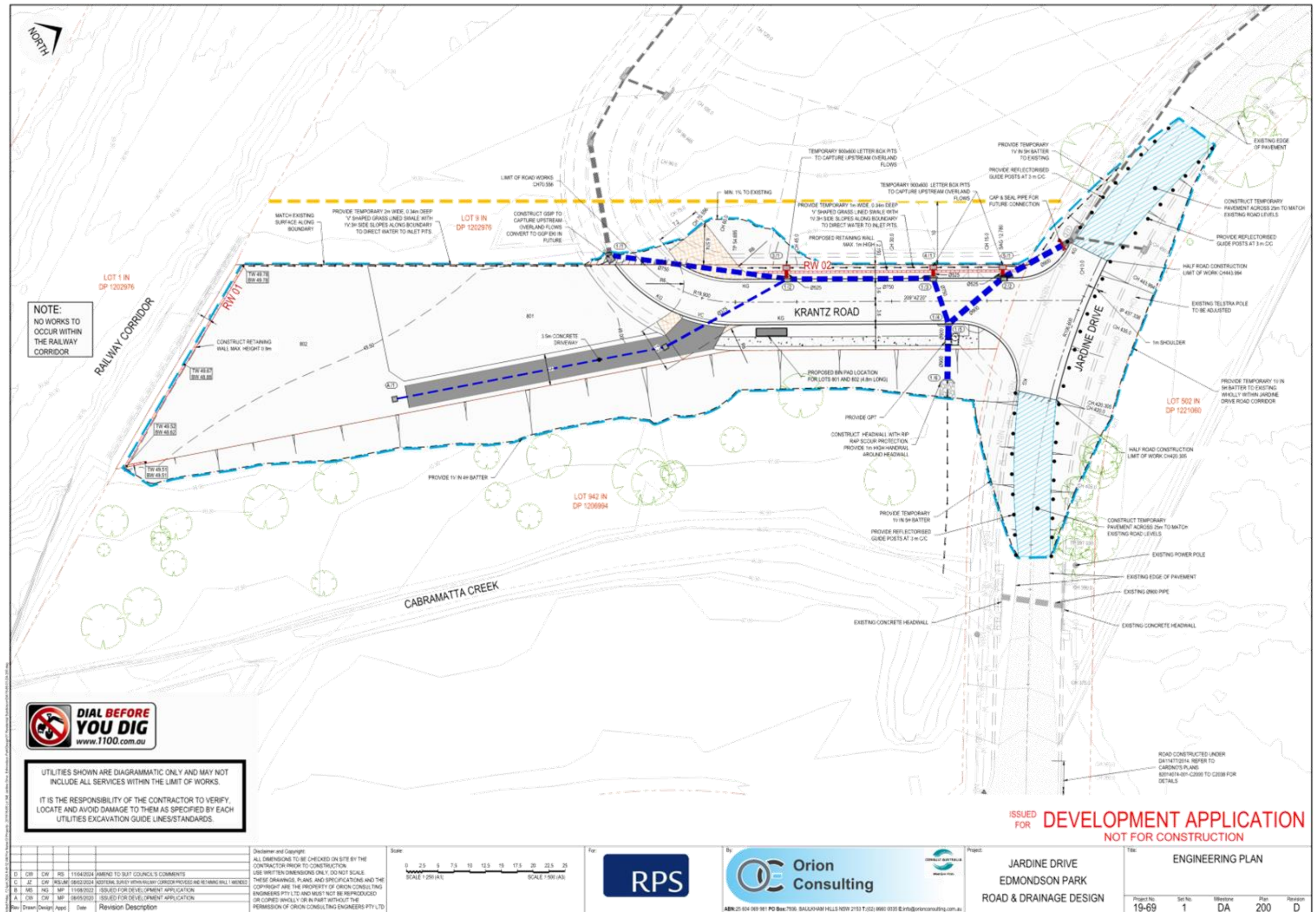
For



ABN: 35 604 069 561 PO Box 7936, SALEM HAMMILLIS NSW 2153 T: (02) 8995 0335 E: info@originnews.com.au

Project: JARDINE DRIVE
EDMONDSON PARK
ROAD & DRAINAGE DESIGN

SEDIMENT & EROSION CONTROL PLAN AND DETAILS				
Project No.	Set No.	Milestone	Plan	Revision
19-69	1	DA	100	D



BASSETT DEMOLITIONS

WASTE MANAGEMENT PLAN –For: Lot 946 Jardine Drive, Austral

MATERIALS ON SITE		DESTINATION		
		RE-USE AND RECYCLING		DISPOSAL
TYPE OF MATERIAL	ESTIMATED VOLUME (m3)	ON – SITE	OFF – SITE	CONTRACTOR
GENERAL SOLID WASTE	4 tonnes	N/A		To be appointed
GREEN WASTE	200 tonnes	N/A	Blacktown waste services	920 Richmond road Marsden Park
BRICKS	N/A	N/A	N/A	N/A
SANDSTONE	N/A	N/A	N/A	N/A
CONCRETE	N/A	N/A	N/A	N/A

Clause 4.6 Variation Request

Clause 7.11 Minimum
Dwelling Density

Lot 942 and 946 Jardine
Drive, Edmondson Park

Submitted to Liverpool City Council

22 July 2024

The logo for GYDE, featuring the word in a bold, white, sans-serif font. The letters are positioned over a dark teal background, with a light olive-green triangular shape in the bottom-left corner.

gyde.com.au

GYDE

Acknowledgment of Country



Towards Harmony by Aboriginal Artist Adam Laws

Gyde Consulting acknowledges and pays respect to Aboriginal and Torres Strait Islander peoples past, present, Traditional Custodians and Elders of this nation and the cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander people. We recognise the deep and ongoing connections to Country – the land, water and sky – and the memories, knowledge and diverse values of past and contemporary Aboriginal and Torres Strait communities.

Gyde is committed to learning from Aboriginal and Torres Strait Islander people in the work we do across the country.

This report was prepared by:

[Redacted]

Project: Clause 4.6 P-23156

Report Version: Final

[Redacted]

Disclaimer

This report has been prepared by Gyde Consulting with input from a number of other expert consultants (if relevant). To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. Gyde Consulting accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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The logo for GYDE, featuring the word "GYDE" in a bold, sans-serif font. The letters are dark blue, and the "Y" is stylized with a horizontal bar that extends to the left, creating a unique graphic element.

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GYDE

Glossary and Abbreviations

Term/Acronym	Description
AS	Australian Standards
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2016</i>
CEMP	Construction Environmental Management Plan
Council	Liverpool City Council
CPTED	Crime Prevention through Environmental Design
DA	Development Application
DCP	Development Control Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
The Regulations	Environmental Planning and Assessment Regulations 2021
ESD	Ecologically Sustainable Development
FSR	Floor Space Ratio
GFA	Gross Floor Area
INP	Industrial Noise Policy
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NCC	National Construction Code
SEPP	State Environmental Planning Policy
WSUD	Water Sensitive Urban Design



1. Introduction

This is a formal request that has been prepared in accordance with Clause 4.6 of the *Liverpool Local Environmental Plan 2008* to justify a variation to Clause 7.11 Minimum dwelling density.

This report has been prepared in response to the request for additional information from Liverpool City Council dated 11 June 2024. Whilst we do not believe this request is necessary in order to determine the application, we have prepared this report in any case and on a without prejudice basis entirely.

The objectives of Clause 4.6 are to provide an appropriate level of flexibility in applying a certain development standard to particular development, and to achieve better outcomes for and from development, by allowing flexibility in particular circumstances.

This request has been prepared having regard to the Department of Planning and Environment's Guidelines to Varying Development Standards (November 2023) and various recent decision in the New South Wales (NSW) Land and Environmental Court (LEC) and the NSW Court of Appeals (Appeals Court).

Clause 7.11 prescribes that development consent must not be granted for the subdivision of land shown on the Dwelling Density Map unless the consent authority is satisfied that the dwelling density likely to be achieved by the subdivision is not less than the dwelling density shown for the land on that Map. The site is identified as requiring 14 dwellings per hectare on the Dwelling Density Map.

Council states that the control is applied literally and not on a pro-rata basis. We are of the view that the standard should be applied on a pro-rata basis. Based on Council's approach, the site should accommodate up to 14 dwellings in accordance with clause 7.11. The proposal provides a two lot Torrens title subdivision on the site. This will allow for at least 2 future dwellings on site. This represents a deviation from the 14 dwellings Council believes is required for the site.

Due to the environmental constraints, in particular bushfire and flooding, the public road construction requirements of the site, the noise impacts from the adjoining rail way line, and the irregular shape of the site, the developable area has been significantly decreased such that 14 dwellings could not be achieved. The proposed 2 lot subdivision is deemed to be an appropriate use of the land in order to provide future dwellings, whilst considering the environmental constraints.

It is therefore considered appropriate in this circumstance to vary the development standard.

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2. Standard to be Varied

The standard that is proposed to be varied is the minimum dwelling density. Lot 946 is subject to this provision which requires 14 dwellings/ha.

- (1) *The objectives of this Plan for the control of dwelling densities are as follows—*
- (a) *to contribute toward the efficient use of land resources,*
 - (b) *to ensure the viability of public transport and other services planned for the area,*
 - (c) *to ensure adequate funds for the recreation and community facilities planned for the area.*
- (2) *Development consent must not be granted for the subdivision of land shown on the Dwelling Density Map unless the consent authority is satisfied that the dwelling density likely to be achieved by the subdivision is not less than the dwelling density shown for the land on that Map.*



Figure 1: Dwelling Density Map (Source: NSW Legislation)

The development standard to be varied is not excluded from the operation of Clause 4.6 of the LEP.

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3. Extent of Variation

The proposal includes a two lot Torrens title subdivision. Based on the site area of Lot 946 (2,479sqm), the site is proposed to accommodate at least 2 dwellings in the future. This is below the 14 dwellings the site is expected to accommodate according to Council's application of clause 7.11 of the Liverpool LEP.

Due to the requirements of constructing Krantz Road on the northwestern boundary of the site, the developable area is significantly reduced. The site is also impacted by several environmental constraints including bushfire and flooding. A large Asset Protection Zone is required along the eastern and southern boundaries to provide a protective barrier against potential fire threats. The eastern boundary of the site is also impacted by flooding. This has resulted in future residential development being situated on the western boundary of the lots to maintain a significant distance from the flood prone land. To the south west is a rail line which would necessitate a setback to create a suitable buffer from rail related noise impacts. These constraints have further reduced the developable area of the site as shown in the bushfire plans in figure 2.

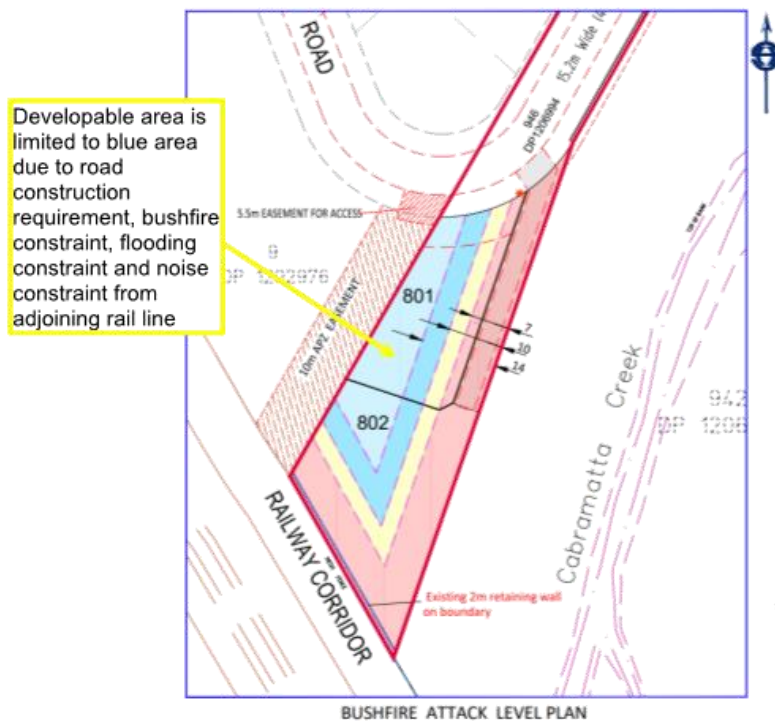


Figure 2: Bushfire Attack Plan and Building Envelope Plan (Source: RPS)

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4. Unreasonable or Unnecessary

In this section it is demonstrated why compliance with the development standard is unreasonable or unnecessary in the circumstances of this case as required by Clause 4.6(3)(a) of the LEP.

The Court held that there are at least five (5) different ways, and possibly more, through which an applicant might establish that compliance with a development standard is unreasonable or unnecessary. *See Wehbe v Pittwater Council [2007] NSWLEC 827 (Wehbe)*.

The five (5) ways of establishing that compliance is unreasonable or unnecessary are:

1. The objectives of the development standard are achieved notwithstanding non-compliance with the standard; (First Test)
2. The underlying objectives or purpose is not relevant to the development with the consequence that compliance is unnecessary; (Second Test)
3. The objectives would be defeated or thwarted if compliance was required with the consequence that compliance is unreasonable; (Third Test)
4. The development standard has been virtually abandoned or destroyed by the Council's own actions in granted consents departing from the standard hence the standard is unreasonable and unnecessary; (Fourth Test) and
5. The zoning of the land is unreasonable or inappropriate. (Fifth Test)

It is sufficient to demonstrate only one of these ways to satisfy Clause 4.6(3)(a) (*Wehbe v Pittwater Council [2007] NSWLEC 827*, *Initial Action Pty Limited v Woollahra Municipal Council [2018] NSWLEC 118* at [22] and *RebelMH Neutral Bay Pty Limited v North Sydney Council [2019] NSWCA 130* at [28]) and *SJD DB2 Pty Ltd v Woollahra Municipal Council [2020] NSWLEC 1112* at [31]).

Nonetheless, we have considered each of the ways as follows.

4.1 The objectives of the development standard are achieved notwithstanding non-compliance with the standard.

The following table considers whether the objectives of the development standard are achieved notwithstanding the proposed variation (First Test under *Wehbe*).

Table 1 Consistency with Objectives of clause 7.11

Objective	Demonstration
7.11 Minimum dwelling density	
1. The objectives of this clause are as follows –	
(a) to contribute toward the efficient use of land resources,	The proposal provides the opportunity for residential development on a highly constrained lot. The proposal has considered the environmental constraints of the site and surrounding area to provide a suitable development on the land. Relative to the site's constraints, the proposal represents the contribution to the efficient use of land.
(b) to ensure the viability of public transport and other services planned for the area,	The surrounding area is predominantly comprised of residential uses already well serviced by bus services and the nearby Edmondson Park train station. The proposal provides additional dwellings which will use these services. It is considered that based on the constraints of the site, a future dwelling density of approximately 2 to 4 dwellings is appropriate and will contribute to the viability of public transport as well as other services planned for the area.
(c) to ensure adequate funds for the recreation and	The dwellings will contribute to the expanding growth area around Edmondson Park. Specifically, they will require the payment of developer



Objective	Demonstration
community facilities planned for the area.	contributions as well as a Housing and Productivity Contribution which will deliver funds for the delivery of recreation and community facilities planned for the area.

As demonstrated in Table 1 above, the objectives of Clause 7.11 development standard are achieved notwithstanding the proposed variation.

In accordance with the decision in *Wehbe v Pittwater Council* [2007] NSWLEC 827, *Initial Action Pty Limited v Woollahra Municipal Council* [2018] NSWLEC 118, *Al Maha Pty Ltd v Huajun Investments Pty Ltd* (2018) 233 LGERA 170; [2018] NSWCA 245 and *RebelMH Neutral Bay Pty Limited v North Sydney Council* [2019] NSWCA 130 and *SJD DB2 Pty Ltd v Woollahra Municipal Council* [2020] NSWLEC 1112 at [31], therefore, compliance with the minimum dwelling density standard is demonstrated to be unreasonable or unnecessary and the requirements of Clause 4.6(3)(a) have been met on this way alone.

4.2 The underlying objectives or purpose is not relevant to the development with the consequence that compliance is unnecessary.

The underlying objective or purpose is relevant to the development and therefore is not relied upon.

4.3 The objective would be defeated or thwarted if compliance was required with the consequent that compliance is unreasonable.

The objective would not be defeated or thwarted if compliance was required. This reason is not relied upon.

4.4 The development standard has been virtually abandoned or destroyed by the Council's own actions in granting consents departing from the standard and hence the standard is unreasonable and unnecessary.

The standard has not been abandoned by Council in this case and so this reason is not relied upon.

4.5 The zoning of the land is unreasonable or inappropriate.

The zoning of the land is reasonable and appropriate and therefore is not relied upon.

5. Sufficient Environmental Planning Grounds

In *Initial Action Pty Ltd v Woollahra Council [2018] NSWLEC 118*, Preston CJ observed that in order for there to be 'sufficient' environmental planning grounds to justify a written request under Clause 4.6 to contravene a development standard, the focus must be on the aspect or element of the development that contravenes the development standard, not on the development as a whole.

In *Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 90*, Plain J observed that it is within the discretion of the consent authority to consider whether the environmental planning grounds relied on are particular to the circumstances of the proposed development on the particular site.

The environmental planning ground to justify the departure of the minimum dwelling density development standard are as follows:

- **Object 1.3(c) of the EP&A Act** - the development assists in promoting "the orderly and economic use of land" by providing housing opportunities in a highly constrained area. The environmental constraints and road construction requirements of the site have significantly reduced the site's developability. It is considered that this proposal provides an effective use of the land which will provide much needed high quality housing into the future.
- **Object 1.3(e) of the EPA&A Act** – the development assists in protecting the environment by situating future residential development away from bushfire and flooding areas and the neighbouring riparian park. By limiting the developable area for the construction of future dwellings, it ensures increased safety for residents and increased protection of the surrounding environment.
- **Satisfies objectives of the R1 zone:**

Table 2: Assessment of R1 zone objectives

Objective	Demonstration
R1 General Residential Zone	
The objectives of this clause are as follows –	
• To provide for the housing needs of the community.	The proposal provides housing in a highly constrained site. Specifically, the proposal would deliver lots for residential dwellings. The design of the development, with consideration of the site constraints, has aimed to provide the highest dwelling density possible at the site in order to provide housing opportunities within the Edmondson Park area.
• To provide for a variety of housing types and densities.	The two Torrens lot subdivision can facilitate several housing types on the site including detached dwellings or dual occupancies. These housing types are similar to the surrounding low density residential character of the immediate locality. This aside, the proposed lots could also accommodate single dwellings, which in itself represents diversity of dwellings in the locality given the R1 zoning permits dwellings, attached dwellings, multi dwelling housing as well as residential flat buildings.
• To enable other land uses that provide facilities or services to meet the day	The orientation of the proposed lots will enable, as part of future negotiations with Council, and flood way. This is considered to be an important land use as it will improve the safety and resilience of the broader locality as the flood way in question will accommodate flood events in the broader locality.

GYDE

Objective	Demonstration
to day needs of residents.	
To ensure that housing densities are broadly concentrated in locations accessible to public transport, employment, services and facilities.	Whilst the site is in relatively close proximity to public transport services such as Edmondson Park Train Station, there are lots which are in far closer proximity. Relative to the site's location therefore, it is considered to be a suitable density.
To facilitate development of social and community infrastructure to meet the needs of future residents.	As discussed above, the lot configuration is designed to enable the future delivery of flood ways, which is considered to be an important social and/or community infrastructure.

For completeness, we note that the size of the variation is not in itself, a material consideration as whether the variation should be allowed. There is no constraint on the degree to which a consent authority may depart from a numerical standard under clause 4.6: *GM Architects Pty Ltd v Strathfield Council [2016] NSWLEC 1216 at [85]*.

In short, Clause 4.6 is a performance-based control, so it is possible (and not uncommon) for variations to be approved in the right circumstances.

The logo for GYDE, featuring the word "GYDE" in a bold, sans-serif font. To the left of the text is a grey triangle pointing towards the top-left corner, partially overlapping the text.

6. Conclusion

This submission requests a variation, under clause 4.6 of the *Liverpool Local Environmental Plan 2008*, to the minimum dwelling density development standard and demonstrates that:

- Compliance with the development standard would be unreasonable and unnecessary in the circumstances of this development;
- The development achieves the objectives of the development standard (Wehbe Test 1);
- There are sufficient environmental planning grounds to justify the contravention;

On this basis, therefore, it is appropriate to exercise the flexibility provided by clause 4.6 in the circumstances of this application.

ATTACHMENT 10 – CONDITIONS OF APPROVAL

Council has imposed the following conditions under the relevant planning instruments and policies.

A. THE DEVELOPMENT

Approved Plans

1. Development the subject of this determination notice must be carried out in accordance with the following approved plans/reports marked as follows, except where modified by the undermentioned conditions.

Plan Name	Plan Number	Revision	Date	Prepared By
Plan of proposed Subdivision	2	C	23.04.2024	RPS
Tree Planting Plan	172.24(21)/389'B'	---	April 2024	iScape Landscape Architecture
Street Tree Plan	4	B	24.04.2024	RPS
Public Domain Plan	5	A	13.06.2024	RPS
Demolition & Tree Removal Plan	002	D	11.04.2024	Orion Consulting
Site Regrading Plan	003	D	11.04.2024	Orion Consulting
Sediment & Erosion Control Plan and Details	100	D	11.04.2024	Orion Consulting
Engineering Plan	200	D	11.04.2024	Orion Consulting

Document	Date	Prepared By
Waste Management Plan	---	---

NSW Rural Fire Service (RFS) General Terms of Approval (GTAs)

2. The development is to demonstrate compliance with all relevant General Terms of Approval issued by the NSW Rural Fire Service, dated 23 January 2024 (Attachment 2).

Transport for NSW (TfNSW) conditions

3. The development is to demonstrate compliance with all relevant conditions issued by TfNSW, dated 17 April 2024 (Attachment 3).



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Department of Planning and Environment – Water General Terms of Approval (GTAs)

4. The development is to demonstrate compliance with all relevant General Terms of Approval issued by the Department of Planning and Environment – Water, dated 9 July 2024 (Attachment 4).

Endeavour Energy (EE) recommendations

5. The development is to demonstrate compliance with all relevant recommendations issued by Endeavour Energy dated 8 December 2023 and 18 July 2020 (Attachment 5 & 6).

Council Waste-Water Requirements

6. The development must provide for a physical sewerage connection to each created allotment to enable the method of sewage disposal by gravity reticulation mains to either, Sydney Water branch and trunk sewers or Sydney Water point of treatment. Liverpool City Council will not accept any temporary facilities to service the site, including pump-out wet-wells.

Works at no cost to Council

7. All roadworks, drainage works and dedications, required to effect the consented development shall be undertaken at no cost to Liverpool City Council.

B. PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

The following conditions are to be complied with or addressed prior to the issue of a Construction Certificate by the Principal Certifying Authority.

Street Naming

8. Prior to the issue of a Construction Certificate, an application for proposed street names must be lodged with and approved by Liverpool City Council and the signs erected on-site.

The proposed names must be in accordance with Council's Street Naming Policy.

Notes: Allow eight (8) weeks for notification, advertising and approval

9. Any reference to Krantz Road must be removed from the architectural plans and reference the name of the proposed road.



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Urban Design & Public Domain

10. Prior to issue of construction certificate, details of the following are to be provided to Council for review and approval by Council's Urban Design & Public Domain Officer:
- (a) a detailed Public Domain Plan including:
- all street trees and landscaping (quantity, spacing, canopy coverage etc)
 - street furniture (location, orientation, and specification etc),
 - street signage (typology and location),
 - kerb and gutter design,
 - bollards (where required),
 - driveway locations with pedestrian footpath treatment
 - vehicle calming measures (at intersections if any)
 - pram ramp location and size (e.g., 2.5m for share paths),
 - footpaths / shared paths,
 - street garbage collection locations,
 - street lighting,
 - utilities and services (location and orientation of substation etc).

Site Development Work

11. Site development work in the form of excavation, underpinning or shoring works must not take place, until such time as a CC has been issued.

BCA Compliance

12. The requirements and provisions of the *Environmental Planning & Assessment Act 1979* and *Environmental Planning & Assessment Regulation 2021*, must be fully complied with at all times.

Failure to comply with these legislative requirements is an offence and may result in the commencement of legal proceedings, issuing of 'on-the-spot' penalty infringements or service of a notice and order by Council.

Fee Payments

13. Unless otherwise prescribed by this consent, all relevant fees or charges must be paid. Where Council does not collect these payments, copies of receipts must be provided. For the calculation of payments such as Long Service Levy, the payment must be based on the value specified with the Development Application/Construction Certificate.

The following fees are applicable and payable:

- (a) Damage Inspection Fee – relevant where the cost of building work is \$20,000 or more, or a swimming pool is to be excavated by machinery.
- (b) Fee associated with Application for Permit to Carry Out Work Within a Road, Park and Drainage Reserve.



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These fees are reviewed annually and will be calculated accordingly.

Long Service Levy

14. Before the issue of a Construction Certificate, the long service levy of 0.25% of the cost of works, as calculated at the date of this consent, must be paid to the Long Service Corporation under the Building and Construction industry Long Service Payments Act 1986, section 34, and evidence of the payment is to be provided to the certifier or Council (where a certifier is not required).
15. All fees associated with a road opening permit required for the connection, extension or amplification of any services within Council's road reserve must be paid to Council and receipts provided to the PCA. A separate form must be submitted in conjunction with payment of the fees. The fees include the standard road opening permit fee and any restoration fees that may be required as a result of the works.

Notification

16. The Principal Certifying Authority must advise Council, in writing of:
 - (a) The name and contractor licence number of the licensee who has contracted to do or intends to do the work, or
 - (b) The name and permit of the owner-builder who intends to do the work.

If these arrangements are changed, or if a contract is entered into for the work to be done by a different licensee, Council must be immediately informed.

S138 Roads Act - roadworks requiring approval of civil drawings

17. Prior to the issue of a Construction Certificate for building or subdivision works the Certifying Authority shall ensure that a S138 Roads Act application, including the payment of application and inspection fees, has been lodged with Liverpool City Council (being the Roads Authority under the Roads Act), for provision of road works in Jardine Drive and Diamond Hill Circuit.
18. Engineering plans are to be prepared in accordance with the development consent, Liverpool City Council's Design Guidelines and Construction Specification for Civil Works, Austroad Guidelines and best engineering practice.

Note: Where Liverpool City Council is the Certifying Authority for the development the Roads Act approval for the above works may be issued concurrently with the Construction Certificate.



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S138 Roads Act – Minor Works in the public road

19. Prior to the issue of a Construction Certificate, a Section 138 Roads Act application/s, including payment of fees, shall be lodged with Liverpool City Council, as the Roads Authority for any works required in a public road. These works may include but are not limited to:
- (a) Vehicular crossings (including kerb reinstatement of redundant vehicular crossings),
 - (b) Road opening for utilities and stormwater (including stormwater connection to Council infrastructure), or
 - (c) Road occupancy or road closures.

All works shall be carried out in accordance with the Roads Act approval, the development consent including the stamped approved plans, and Liverpool City Council's specifications.

Note: Approvals may also be required from the Transport for NSW for classified roads.

Subdivision Work Certificate

20. Prior to the issue of a Subdivision Work Certificate the Certifying Authority shall ensure that engineering plans are consistent with the stamped approved concept plan/s prepared by Orion Consulting, reference number 19-69, revision D, dated 11-04-2024 and that all subdivision works have been designed in accordance with conditions of this consent, Liverpool City Council's Design Guidelines and Construction Specification for Civil Works, any Roads Act approval issued, Austroad Guidelines and best engineering practice.
21. Prior to the issue of any Subdivision Works Certificate written owner's consent for any works on adjoining land must be submitted to Council. The consent must refer to specific Subdivision Works Certificate plans issued for construction.

The subdivision works may include but are not limited to the following:

- (a) Public and private roads
- (b) Stormwater drainage including water quantity and quality treatment measures
- (c) Interallotment drainage
- (d) Private access driveways
- (e) Sediment and erosion control measures
- (f) Overland flowpaths
- (g) Flood control measures
- (h) Traffic facilities including roundabouts, intersection treatments, car parks, bus stops, cycleways, pathways etc.
- (i) Earthworks
- (j) Bridges, culverts, retaining walls and other structures
- (k) Landscaping and embellishment works
- (l) All works required for conversion of the proposed sediment basin to a bio retention function
- (m) All works required for the decommissioning temporary OSD systems including pipe removal, basin filling and works to existing pit structures if required



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The Subdivision Work Certificate must be supported by engineering plans, calculations, specifications and any certification relied upon.

Road design criteria table

22. Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the proposed roads have been designed in accordance with Liverpool City Council's Design Guidelines and Construction Specification for Civil Works and the following criteria:

Road No.	Road Reserve Width	Carriageway Width	Verge	Footpath	ESA
Jardine Drive	20.12m	5.5m (1/2 road)	4.6m	1.5m	2 x 10 ⁶
Diamond Hill Circuit	20m	15.2m	4.0m	1.5m	3 x 10 ⁵

A - Provision of Services - Street Lighting

23. The applicant/developer shall engage the services of an Endeavour Energy accredited ASP Level 3 service provider. The consultant is to lodge Endorsement of Public Lighting Design Application Form. The application is available on Council website and can be lodged online.

This form is to be used to seek Council requirements for upgrading or installing new street lights at all frontages.

24. Consult Council's Traffic Management Section for streetlight upgrade requirement for infill developments in the existing established areas.
25. The upgrade shall include undergrounding of existing aerial power lines, communication cables and replacement of existing street light poles with Endeavour Energy approved Macarthur Poles as specified by Council in the public lighting design brief.

Detailed Design Drawings

26. The applicant is to discuss with Council's Traffic Management Section of the traffic requirements prior to undertaking the detailed design of traffic facilities, signs and linemarking in the existing and/or proposed public domain.
27. Detailed design drawings of the proposed traffic facilities, signs and line markings in the existing and proposed public domain areas are to be submitted to Council for approval



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using Approval of Traffic Facilities including Signs and Line Marking Schemes Application Form. The application is available on Council website and should be lodged online. The drawings are to be prepared by a suitably qualified person.

Road Works

28. Works within the public road reserve shall not commence until the design drawings including the associated signs and line marking scheme have been approved by Council's Traffic Management Section.

Access, Car Parking and Manoeuvring – General

29. The Certifying Authority shall ensure and certify that vehicular access, circulation, manoeuvring, pedestrian and parking areas associated with the subject development have been designed and are in accordance with AS 2890.1, AS2890.2, AS2890.6 and Council's Development Control Plan.

Access, Car Parking and Maneuvering – Detail

30. The Certifying Authority shall ensure and certify that:
 - (a) Off street access and parking complies with AS2890.1,
 - (b) Vehicular access and internal manoeuvring have been designed for the longest vehicle expected to service the development site, in accordance with AS2890.2,
 - (c) Sight distance at the street frontage has been provided in accordance with AS 2890.1,
 - (d) All vehicles can enter and exit the site in a forward direction, and/or

Flooding

31. A detailed stormwater drainage design prepared by a qualified practicing civil engineer must be provided for assessment. The design shall align with the Concept Road & Drainage Design for Lot 946 DP 1206994 Jardine Drive, Edmondson Park, Rev D, dated 11/04/2024 and stormwater drainage letter date 11/08/2022 prepared by Orion Consulting and shall include all engineering details for collection and disposal of stormwater, existing site levels, finished levels, pipe sizes and grades and water quality treatment trains.

The design shall consider the following:

- (a) Provision to capture fully developed upstream catchment flows from the western side of the development site and conveyed to the point of discharge,
 - (b) Provision of Gross Pollutant Trap (GPT) in the proposed stormwater network prior to discharge stormwater into the creek.
32. Formation level of new roads shall be above the 1% AEP flood level of the creek.
33. Finished surface level of new residential lots shall be above the 1% AEP flood level of the creek.
34. Finished floor levels of future residential buildings shall be no lower than the 1%AEP flood level plus 0.5m freeboard.



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35. The development and associated earthwork shall be consistent with Desing of Modification of Creeks in Edmondson Park 2014 by Storm Consulting.

Stormwater Concept Plan

36. A stormwater drainage system shall be provided generally in accordance with the concept plan/s lodged for development approval prepared by Orion Consulting, reference number 19-69, revision D, dated 11-04-2024.
- (a) The proposed development and stormwater drainage system shall be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties.
 - (b) Engineering plans and supporting calculations for the stormwater drainage system are to be prepared by a suitably qualified engineer and shall accompany the application for a Construction Certificate. The plan shall indicate the method of disposal of all stormwater and must include rainwater tanks, existing ground levels, finish surface levels and sizes of all pipes.
 - (c) Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the stormwater drainage system has been designed in accordance with Liverpool City Council's Design Guidelines and Construction Specification for Civil Works.

No Loading on Easements

37. Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the foundations of proposed structures adjoining the drainage and/ or services easement have been designed clear of the zone of influence.

Water Quality

38. Prior to the issue of a Construction Certificate, the Certifying Authority shall ensure that details of a stormwater pre-treatment system have been provided on the stormwater plans and that the design meets pollutant retention criteria in accordance Council's Development Control Plan.

The Construction Certificate must be supported by:

- (a) Specification & installation details of the stormwater pre-treatment system
- (b) The approval of an operation and maintenance manual/ schedule for the stormwater pre-treatment system

A copy of the approved operation and maintenance manual/ schedule shall be submitted to Liverpool City Council with notification of the Construction Certificate issue.

Retaining Walls on Boundary

39. All retaining walls, if proposed, shall be of masonry construction and must be wholly within the property boundaries, including footings and agricultural drainage lines. Construction of



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retaining walls or associated drainage works along common boundaries shall not compromise the structural integrity of any existing structures.

Where a retaining wall exceeds 600mm in height, the wall shall be designed by a practicing structural engineer and a construction certificate must be obtained prior to commencement of works on the retaining wall.

Inter-allotment drainage

40. Inter-allotment drainage shall be provided for all lots that are unable to be drained by gravity to the street system. Inter-allotment drainage is to be constructed with a pit located immediately within the lot boundary of each lot created by the subdivision at the lowest point in the line or a maximum pit spacing of 40m.

Dilapidation Report

41. Prior to the Commencement of Works a dilapidation report of all infrastructure fronting the development in Jardine Drive is to be submitted to Liverpool City Council. The report is to include, but be not limited to, the road pavement, kerb and gutter, footpath, services and street trees and is to extend 20m either side of the development.

Provision of Services – Sydney Water

42. Prior to the issue of a Construction Certificate, an application to obtain a Section 73 Compliance Certificate under the Sydney Water Act 1994, is to be lodged with Sydney Water. To facilitate this, an application must be made through an authorised Water Servicing Coordinator. Please refer to the "building and developing" section of Sydney Water's web site at www.sydneypwater.com.au, or telephone 13 20 92.

Following receipt of the application, a 'Notice of Requirements' will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design. A copy of the 'Notice of Requirements' must be submitted to the PCA, prior to the issue of a Construction Certificate.

Provision of Services – Endeavour Energy

43. Written clearance from Endeavour Energy, stating that electrical services have been made available to the development or that arrangements have been entered into for the provision of services to the development must be submitted to the PCA, prior to the issue of a Construction Certificate.



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Provision of Services – Telecommunications

44. Prior to the issue of a Construction Certificate, the Principal Certifying Authority shall be satisfied that telecommunications infrastructure may be installed to service the premises which complies with the following requirements of the Telecommunications Act 1997:
- (a) For a fibre ready facility, the NBN Co's standard specifications current at the time of installation, and
 - (b) For a line that is to connect a lot to telecommunications infrastructure external to the premises, the line shall be located underground.

Unless otherwise stipulated by telecommunications legislation at the time of construction, the development must be provided with all necessary pits and pipes, and conduits to accommodate the future connection of optic fibre technology telecommunications.

Road Design

45. Road Design Levels shall comply with drawing prepared Storm Consulting, reference number 1460, revision E, dated 24/07/2014.
46. Road drainage system shall be designed to accommodate the flows from catchment upstream to the site. Details shall be provided on the plans accompanying with a construction certificate.

Construction Environmental Management Plan (CEMP)

47. Prior to issue of a construction certificate, a Construction Environmental Management Plan (CEMP) for the development must be provided to the Principal Certifying Authority for approval. The environmental site management measures must remain in place and be maintained throughout the period of the development. The CEMP must address all environmental aspects of the development's construction phases, and include (where relevant), but not be limited to, the following:
- (a) Asbestos Management Plan;
 - (b) Project Contact Information;
 - (c) Site Security Details;
 - (d) Timing and Sequencing Information;
 - (e) Site Soil and Water Management Plan;
 - (f) Noise and Vibration Control Plan;
 - (g) Dust Control Plan;
 - (h) Air Monitoring;
 - (i) Odour Control Plan;
 - (j) Health and Safety Plan;
 - (k) Waste Management Plan;
 - (l) Incident management Contingency; and
 - (m) Unexpected Finds Protocol.

The CEMP must be kept on site for the duration of the works and must be made available to Council Officers upon request.



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C. PRIOR TO WORKS COMMENCING

The following conditions are to be complied with or addressed prior to works commencing on the subject site/s:

Commencement of work

48. Building work shall not commence prior to the issue of a Construction Certificate. Building work as defined under Section 1.4 of the Environmental Planning and Assessment Act, 1979 means any physical activity involved in the erection of a building and includes but is not limited to, the placement of any site shed/s or builders facilities, site grading, retaining walls, excavation, cutting trenches, installing formwork and steel reinforcement or, placing of plumbing lines.

Construction Certificates

49. Detailed engineering plans and specifications relating to the work shall be endorsed with a CC, in accordance with Section 4.19, 6.6, 6.7, 6.12, 6.13, 6.14 of the EP&A Act, and a copy submitted to Council, with payment of any relevant fees.
50. Any CC that may be issued in association with this development consent must ensure that any certified plans and designs are generally consistent (in terms of site layout, site levels, building location, size, external configuration and appearance) with the approved Development Application plans.
51. Where this consent requires both engineering and building works to be undertaken, a separate construction certificate shall be issued for each category of works i.e., a separate Civil Engineering CC and a separate Building CC.

Notification/Principal Certifying Authority

52. The applicant shall advise Council of the name, address and contact number of the Accredited Certifier, in accordance with Section 81A (4) of the Act.
53. The PCA must advise Council of the intended date to commence work which is the subject of the consent, by completing a notice of commencement of building works or subdivision works form, available from Council's Customer Service Centre. A minimum period of two (2) working days notice must be given.
54. Written notice of intention shall be given to the owners or the adjoining allotments of land, outlining the particulars of the work, which involves:
 - (a) Any excavation below the base of the footings of a building on an adjoining allotment of land.



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(b) The notice shall be given seven (7) days prior to the commencement of work.

55. In the event the development involves excavation that extends below the level of the base of the footings of a building on adjoining land, the following is to be undertaken at full cost to the developer;
- (a) Protect and support the adjoining premises from possible damage from the excavation, and
 - (b) Where necessary, underpin the adjoining premises to prevent any such damage.

Traffic Management Plan

56. A construction traffic management plan (CTMP) prepared by a suitably qualified person is to be submitted to and endorsed by Council's Transport Management Section. The CTMP is to be submitted using Assessment of Construction Traffic Management Plan application form. The application is available on Council website and can be lodged online. Comments on the CTMP will be provided and the updated CTMP are to be implemented during construction.
57. A copy of the endorsed CTMP and traffic control plans are to be available on the works site for inspection by authorised Council officers.
58. Construction shall not commence until the assessed construction traffic management plan has been endorsed. The endorsed CTMP is to be implemented during construction.

Work Zone

59. A Works Zone application is required if on-street parking is affected with commuter parking and there is insufficient off-street parking space.
60. A Works Zone Application Form is available on Council website and can be lodged online by attaching all required documents indicated on the application form.

Road Occupancy Permit

61. Road occupancy and road opening approvals will be required from Council to undertake works within the existing road reserve. The following applications are available on Council's website and can be lodged online attaching all required documents indicated on the application form.

Environmental Management

62. Adequate soil and sediment control measures shall be installed and maintained. Furthermore, suitable site practices shall be adopted to ensure that only clean and unpolluted waters are permitted to enter Council's stormwater drainage system during construction/demolition. Measures must include, as a minimum:
- (a) Siltation fencing;



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- (b) Protection of the public stormwater system; and
- (c) Site entry construction to prevent vehicles that enter and leave the site from tracking loose material onto the adjoining public place.

Site Notice Board

63. A sign must be erected in a prominent position on the premises on which work is to be carried out. The sign is to be maintained during work, and removed at the completion of work. The sign must state:
- (a) The name, address and telephone number of the principal certifying authority for the work; and
 - (b) The name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours; and
 - (c) Unauthorised entry to the premises is prohibited.

Matters to be addressed prior to commencement of Subdivision Works

64. Work on the subdivision shall not commence until:
- (a) a Construction Certificate (if required) has been issued,
 - (b) a Principal Certifying Authority has been appointed for the project, and
 - (c) any other matters prescribed in the development consent for the subdivision and the Environmental Planning and Assessment Act and Regulation have been complied with.

A Notice of Commencement is to be submitted to Liverpool City Council two (2) days prior to commencement of engineering works or clearing associated with the subdivision.

Sediment & Erosion Control

65. Before any site work commences, the principal certifier or Council (where a principal certifier is not required), must be satisfied the erosion and sediment controls in the erosion and sediment control plan are in place. These controls must remain in place until any bare earth has been restabilised in accordance with 'Managing Urban Stormwater: Soils and Construction' prepared by Landcom (the Blue Book) (as amended from time to time).
66. The erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.

Site Facilities

67. Adequate refuse disposal methods and builders storage facilities shall be installed on the site. Builders' wastes, materials or sheds are not to be placed on any property other than that which this approval relates to.



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Facilities

68. Toilet facilities must be available or provided at the work site and must be maintained until the works are completed at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site.

Each toilet must:

- (a) be a standard flushing toilet connected to a public sewer, or
- (b) have an on-site effluent disposal system approved under the *Local Government Act 1993*, or
- (c) be a temporary chemical closet approved under the *Local Government Act 1993*.

Waste Classification and Disposal of Contaminated Soil and Material

69. All soils and material(s), liquid and solid, to be removed from the site must be analysed and classified by an appropriately qualified and certified consultant, in accordance with the Protection of the Environment Operations (Waste) Regulation 2014 and related guidelines, in particular the NSW EPA Waste Classification Guidelines, prior to off-site disposal. All Waste material(s) must be disposed of at an appropriately licensed waste facility for the specific waste. Receipts for the disposal of the waste must be submitted to the Principal Certifying Authority within 30 days of the waste being disposed of. All waste must be transported by a contractor licenced to transport the specific waste, and in vehicles capable of carting the waste without spillage, and meeting relevant requirements and standards. All loads must be covered prior to vehicles leaving the site.

Return of Existing Bins

70. Prior to commencing demolition or site clearing works, any existing domestic waste bins that have been issued to Lot 946 Jardine Drive, must be returned to Liverpool City Council. Please ring Council on 1300 36 2170 to advise that the bins are empty and ready to be removed, so their removal can be noted on Council's rates system.

Remove and Destroy Refrigerants

71. Prior to any works commencing, any air-conditioning or refrigeration systems fitted to the buildings or outbuildings to be demolished, must have the refrigerants present in those systems extracted into a durable, air-tight container by a licensed air-conditioning technician. This container and its contents must be sent intact, for secure destruction, to a facility licensed to destroy such refrigerants. Documentary evidence that this has been completed, if these systems are present, must be sighted by the Principal Certifying Authority and included as part of the Occupation Certificate documentation.



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D. DURING CONSTRUCTION

The following conditions are to be complied with or addressed during construction:

General Site Works – Sediment

72. The development, including construction, shall not result in any increase in sediment deposition into any water body, wetland, bushland or environmentally significant land.

Vegetation – Existing Vegetation

73. All existing trees and areas of native vegetation not identified for removal on approved plans of the proposed development shall be protected from damage during site works. This protection shall consist of 1800mm high protective fencing, securely installed beneath the outer canopy of any tree to be retained. Trees may be fenced off in clusters where it is not practical to fence off individual trees. There shall be no storing materials, washing machinery or changes to existing soil levels within the fenced areas.

Vegetation – Weeds

74. No known environmental weeds or known invasive plant species shall be included in the landscaping or revegetation. Hygiene practices shall be employed to avoid the spread of invasive plants.

Vegetation – Mulch

75. Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately and in accordance with legislative requirements.

Vegetation – Imported Soil or Mulch

76. Any imported soil and/or mulch shall be free of contaminants, seed and propagules of weeds and undesirable species. Mulch shall not be used on flood liable land.

Vegetation Clearing – Fauna Protection

77. Prior to the removal of each tree, they shall be examined by a qualified ecologist for the presence of hollows, active nests of birds or fauna. The removal of trees with hollows or active nests shall be undertaken under the supervision of a qualified and appropriately licenced ecologist, in a manner recommended by the ecologist. Any native fauna encountered shall be relocated by a qualified ecologist, or member of a wildlife rescue organisation, with necessary permits.



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Phytophthora Control

78. The appropriate hygiene measures will be undertaken every morning and afternoon to prevent the spread of phytophthora pathogens. Before works commence all earth working tools and the sole of work boots will be sprayed with a seven (7) parts methylated spirits to three (3) parts water ratio. At the end of the day all earth works equipment, vehicle tyres and work boots will be thoroughly cleaned of all excess mud, sludge, and dirt then a final spray of work equipment will be conducted with the pathogen spray to ensure diseases are unable to spread.

Hygiene and Contamination

79. Imported mulch and soils will be certified and free of any disease and pathogens and tested to ensure they meet the standards of drainage, particle size, purity, and consistency.

Fauna Protection

80. To minimise the risk of fauna entrapment, digging and trenching shall be undertaken and completed on the same day where possible. If holes, pits, trenches, or other cavities must be left overnight, they will all be covered with secure boards to ensure that fauna does not get trapped. Before commencing work each day, all excavated areas will be inspected and if fauna is encountered a licenced ecologist or wildlife handler will be utilised to safely remove the trapped fauna and relocate it to a suitable location. Works can continue when the fauna has been safely removed.

Implementation of the Site Management Plans

81. While site work is being carried out:
- a) the measures required by the construction site management plan and the erosion and sediment control plan (plans) must be implemented at all times; and
 - b) a copy of these plans must be kept on site at all times and made available to Council officers upon request.

Building Inspections

82. The building works must be inspected by the Principal Certifying Authority, in accordance with section 6.5 of the EP&A Act 1979 and Clause 61 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, to monitor compliance with the relevant standards of construction, Council's development consent and the construction certificate.
83. The Principal Certifying Authority must specify the relevant stages of construction to be inspected and a satisfactory inspection must be carried out, to the satisfaction of the



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Principal Certifying Authority, prior to proceedings to the subsequent stages of construction or finalisation of the works (as applicable).

Security Fence

84. A temporary security fence to WorkCover Authority requirements is to be provided to the property during the course of construction.

Note: Fencing is not to be located on Council's reserve area.

Construction Requirements

85. The applicant/ builder shall be responsible to report to the Council any damage to Council's footpath and road carriageway as a consequence of demolition or excavation or building activities or delivery/ departure of materials associated with this site. The damage shall be reported to Council as soon as the damage becomes apparent to the builder/ site manager. Arrangements to the satisfaction of Council are to be made for making safe by temporary repairs to the public way until permanent restoration and repair can be organised with Council.

Drainage Connection

86. If a connection of private drainage to Council's drainage system is required, an inspection is to be carried out by Liverpool City Council's Development Engineering Unit. A fee will be charged in accordance with Council's adopted Fees and Charges, and is to be paid prior to the inspection.

Hours of Construction Work and Deliveries

87. Construction work/civil work/demolition work, including the delivery of materials, is only permitted on the site between the hours of 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm on Saturday. No work will be permitted on Sundays or Public Holidays, unless otherwise approved by Council.

Unidentified Contamination

88. Any new information which comes to light during remediation, demolition or construction works which has the potential to alter previous conclusions about site contamination and remediation must be immediately notified to Council and the Principal Certifying Authority in writing.

A Section 4.55 Application under the EP&A Act shall be made for any proposed works outside the scope of the approved development consent.



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Contamination

89. The development, including all civil works and demolition, must comply with the requirements of the Contaminated Land Management Act 1997, State Environmental Planning Policy (Resilience and Hazards) 2021, chapter 4, and Managing Land Contamination – Planning Guidelines (Planning NSW/EPA 1998).

Pollution Control – Site Operations

90. During construction, building operations including but not limited to brick cutting, mixing mortar and the washing of tools, paint brushes, form-work, concrete trucks and the like must not be performed on the public footway or any other locations which may lead to the discharge of materials into Council's stormwater drainage system.

Pollution Control – Truck Movements

91. The loading and unloading of all vehicles associated with the development must be undertaken within the property boundary of the premises subject to this consent.

Measures must be implemented to prevent tracking of sediment by vehicles onto roads.

Vehicle loads must be covered when entering and exiting the site with material.

Imported Fill Material

92. Filling material must be limited to the following:
- (a) Virgin excavated natural material (VENM)
 - (b) Excavated natural material (ENM) certified as such in accordance with Protection of the Environment (Waste) Regulation 2014; and/or
 - (c) Material subject to a Waste Exemption under Clause 91 and 92 Protection of the Environment Operations (Waste) Regulation 2014 and recognised by the NSW Environment Protection Authority as being "fit for purpose" with respect to the development subject of this application.

Certificates proving that the material imported is ENM or VENM must be provided to the Principal Certifying Authority prior to filling. Certificates are to be provided to Council officers if and when requested.

Fill imported on to the site must be compatible with the existing soil characteristic for site drainage purposes.

Record Keeping of Imported Fill

93. Records of the following must be submitted to the principal certifying authority monthly and at the completion of earth works:



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- (a) The course (including the address and owner of the source site), nature and quantity of all incoming loads including the date, the name of the carrier, and the vehicle registration;
- (b) The results of a preliminary contamination assessment carried out on any fill material used in the development.
- (c) The results of any chemical testing of fill material.

Removal of Dangerous and/or Hazardous Waste

- 94. All dangerous and/or hazardous material shall be removed by a suitably qualified and experienced contractor licensed by SafeWork NSW. The removal of such material shall be carried out in accordance with the requirements of SafeWork NSW and the material shall be transported and disposed of in accordance with NSW Environment Protection Authority requirements.

Soil testing – Subdivisions

- 95. Soil Testing is to be carried out to enable each lot to be classified according to AS2870 "Residential Slabs and Footings".

Major Filling / Earthworks

- 96. All earthworks shall be undertaken in accordance with AS 3798 and Liverpool City Council's Design Guidelines and Construction Specification for Civil Works.

The level of testing shall be determined by the Geotechnical Testing Authority/ Superintendent in consultation with the Principal Certifying Authority.

Car Parking Areas

- 97. Car parking spaces and driveways must be constructed of a minimum two coat finish seal or better.
- 98. All parking spaces must be clear of obstructions and columns, permanently line marked and provided with adequate manoeuvring facilities.
- 99. The design of these spaces must comply with Council's DCP 2008, and Australian Standard 2890.1 Parking Facilities – Off-Street Car Parking.
- 100. All car parking areas are to be appropriately line marked and sign posted in accordance with the Council approved stamped plans.
- 101. The on-site parking spaces shown in the approved plans must be identified in accordance with A.S.2890.1 Parking Facilities – Off-Street Car Parking.



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Public Domain Works

102. All works within the road reserve, including the approved sign and line making scheme, are to be carried out by the applicant, at no cost to Council, in accordance with the TfNSW/RMS 'Delineation Guidelines'.

Council On Street Assets

103. Council's on-street assets and local road network are to be protected and kept in a serviceable state at all times. At the direction of Council, the applicant/project manager shall undertake remediation works, at no cost to Council and to Council's satisfaction.

Public Domain Works – Street Lighting

104. Street lights are to be installed in accordance with the Endeavour Energy certified plans to their satisfaction.

Traffic Management

105. The endorsed CTMP is to be implemented during construction.
106. Applications must be made to Transport Management Section for any road closures. The applicant is to include a Traffic Control Plan, prepared by a suitably qualified person including the date and times of closures and any other relevant information. A copy of the Traffic Control Plan shall be made available on site at all times.

General Site Works

107. Erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.
108. Dust screens shall be erected and maintained in good repair around the perimeter of the subject land during land clearing, demolition, and construction works.
109. Where operations involve excavation, filling or grading of land, or removal of vegetation, including ground cover, dust is to be suppressed by regular watering until such time as the soil is stabilised to prevent airborne dust transport. Where wind velocity exceeds five knots the PCA may direct that such work is not to proceed.
110. All vehicles involved in the delivery, demolition or construction process departing from the property shall have their loads fully covered before entering the public roadway.
111. Building operations such as brick cutting, mixing mortar and the washing of tools, paint brushes, form-work, concrete trucks and the like shall not be performed on the public footway or any other locations which may lead to water pollution.



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112. The loading and unloading of all vehicles associated with the development must be undertaken within the property boundary of the premises subject to this consent.

Measures must be implemented to prevent tracking of sediment by vehicles onto roads.

Vehicle loads must be covered when entering and exiting the site with material.

113. Vehicular access to the site shall be controlled through the installation of wash down bays or shaker ramps to prevent tracking of sediment or dirt onto adjoining roadways. Where any sediment is deposited on adjoining roadways is shall be removed by means other than washing. All material is to be removed as soon as possible and the collected material is to be disposed of in a manner which will prevent its mobilisation.
114. All topsoil, sand, aggregate, spoil or any other material shall be stored clear of any drainage line, easement, water body, stormwater drain, footpath, kerb or road surface and there shall be measures in place in accordance with the approved erosion and sediment control plan.
115. The developer is to maintain all adjoining public roads to the site in a clean and tidy state, free of excavated "spoil" material.
116. While site work is being carried out:
- (a) the measures required by the construction site management plan and the erosion and sediment control plan (plans) must be implemented at all times, and
 - (b) a copy of these plans must be kept on site at all times and made available to council officers upon request.

Waste Management Plan

117. The Waste Management Plan approved by the PCA prior to a construction certificate must be adhered to at all times throughout all stages of the development. Supporting documentation (receipts/dockets) of waste/recycling/disposal methods carried out, is to be kept and must be produced upon the request of Council or any other authorised officer.

Note: Any non-compliance with this requirement will result in penalties being issued.

Waste Management

118. While site work is being carried out:
- (a) all waste management must be undertaken in accordance with the waste management plan; and
 - (b) upon disposal of waste, records of the disposal must be compiled and provided to the principal certifier or Council (where a principal certifier is not required), detailing the following:
 - The contact details of the person(s) who removed the waste;
 - The waste carrier vehicle registration;
 - The date and time of waste collection;



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- A description of the waste (type of waste and estimated quantity) and whether the waste is to be reused, recycled or go to landfill;
- The address of the disposal location(s) where the waste was taken;
- The corresponding tip docket/receipt from the site(s) to which the waste is transferred, noting date and time of delivery, description (type and quantity) of waste.

If waste has been removed from the site under an EPA Resource Recovery Order or Exemption, records in relation to that Order or Exemption must be maintained and provided to the principal certifier and Council.

Correct Waste Separation and Removal

119. All demolition, excavation and construction wastes must be separated as they are generated and kept in separate spoil piles, bays, builder's skips and/or site bins. No wastes other than those noted on the approved waste management plan as being re-used on site, are to be left on site after the completion of the works.

Containment of Site Wastes during Building

120. All demolition, excavation or construction wastes, e.g. wrapping, packaging materials, bags, insulation, sand, soil etc., must be kept fully enclosed at all times to prevent them from becoming displaced in strong wind conditions or from washing into sewers, storm drains or creeks, or onto adjacent properties or public land during wet weather.

Vegetation

121. No known environmental or noxious weeds or known invasive plant species shall be included in the landscaping/revegetation.
122. Any imported soil and/or mulch shall be free of contaminants, seed and propagules of weeds and undesirable species. Mulch shall not be used on flood liable land.
123. Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately and in accordance with legislative requirements.

Aboriginal Heritage

124. As required by the National Parks and Wildlife Service Act 1974 and the Heritage Act 1977, in the event that Aboriginal cultural heritage or historical cultural fabric or deposits are encountered/discovered where they are not expected, works must cease immediately and Council and the Heritage Division of the Office of Environment and Heritage (OEH) must be notified of the discovery.

In the event that archaeological resources are encountered, further archaeological work may be required before works can re-commence, including the statutory requirement



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under the Heritage Act 1977 to obtain the necessary approvals/permits from the Heritage Division of the OEH.

Note: The National Parks and Wildlife Service Act 1974 and the Heritage Act 1977 impose substantial penalty infringements and / or imprisonment for the unauthorised destruction of archaeological resources, regardless of whether or not such archaeological resources are known to exist on the site.

125. All relevant on-site staff and contractors should be made aware of their statutory obligations for heritage under NSW National parks and Wildlife Act 1974 and the NSW Heritage Act 1977. They are to be informed of what the potential heritage on the site will be and the significance of the heritage. The site supervisor is to maintain a record of who has completed the heritage induction and this is to be provided to Council prior to Issue of Subdivision Certificate.
126. In the event that skeletal remains are uncovered, work must cease immediately in that area and the area secured. NSW Police must be contacted and no further action taken until written advice has been provided by the NSW Police. If the remains are determined to be of Aboriginal origin, the Office of Environment and Heritage must be notified by ringing the Enviroline 131 555 and a management plan prior to works re-commencing must be developed in consultation with relevant Aboriginal stakeholders.
127. Copies of all relevant Aboriginal Archaeological assessments and reports (including summary excavation and analysis reports) are to be provided to Liverpool City Council, Liverpool City Library and the relevant Local Aboriginal Land Councils.

E. PRIOR TO THE ISSUE OF A SUBDIVISION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of a Subdivision Certificate by Council:

Street Naming

128. Prior to the issue of a Subdivision Certificate, an application for proposed street names must be lodged with and approved by Liverpool City Council and the signs erected on-site.

The proposed names must be in accordance with Council's Street Naming Policy.

Notes: Allow eight (8) weeks for notification, advertising and approval

Section 7.11 Payment (Liverpool Contributions Plan 2008 – Edmondson Park)

129. As a consequence of this development, Council has identified an increased demand for public amenities and public services. The following payment is imposed in accordance with Liverpool Contributions Plan 2018 – Edmondson Park as amended.



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The total contribution is \$60,000 and will be adjusted at the time of payment in accordance with the contributions plan.

A breakdown of the contributions payable is provided in the attached payment form.

The Contributions Plan may be inspected online at www.liverpool.nsw.gov.au

Payment must be accompanied by the attached form (Attachment 7).

SPECIAL INFRASTRUCTURE CONTRIBUTION

130. A special infrastructure contribution is to be made in accordance with the Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Growth Areas) Determination 2011, as in force when this consent becomes operative. Information about this special infrastructure contribution can be found on the Department of Planning and Environment website regarding arrangements for the making of a payment.

Liverpool City Council clearance – Roads Act/ Local Government Act

131. Prior to the issue of a Subdivision Certificate, the Principal Certifying Authority shall ensure that all works associated with a S138 Roads Act approval or S68 Local Government Act approval have been inspected and signed off by Liverpool City Council.

Completion of Subdivision Works

132. Prior to the issue of a Subdivision Certificate, the Principal Certifying Authority shall ensure that all relevant subdivision works required by this consent have been satisfactorily completed or that suitable arrangements have been made with Liverpool City Council for any outstanding works.

Subdivision Compliance Documentation

133. Prior to the issue of a Subdivision Certificate the following compliance documentation shall be submitted to the Principal Certifying Authority. A copy of the following documentation shall be provided to Council where Council is not the Principal Certifying Authority:
- (a) Work as Executed (WAE) drawings of all civil works. The WAE drawings shall be marked in red on copies of the stamped Construction Certificate drawings signed, certified and dated by a registered surveyor or the design engineer. The Work as Executed drawings shall be prepared in accordance with Council's Design Guidelines. Electronic copies of the WAE shall be provided in PDF format and a DXF format to Council along with two hard copies of the WAE plans;
 - (b) The WAE drawings shall clearly indicate the 1% Annual Exceedence Probability flood lines (local and mainstream flooding),



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- (c) The WAE drawings shall be accompanied by plans indicating the depth of fill for the entire development site. The plans must show, by various shadings or cross hatchings, the depth of any fill within 0.3m depth ranges;
- (d) CCTV footage in DVD format to Council's requirements and a report in "SEWRAT" format for all drainage within future public roads and public land. Inspections are to be carried out in accordance with the Conduit Inspection Reporting Code of Australia WSA 05-2006. Any damage that is identified is to be rectified in consultation with Liverpool City Council,
- (e) Surveyor's Certificate certifying that all pipes and services are located wholly within the property or within appropriate easements and that no services encroach boundaries;
- (f) Documentation for all road pavement materials used demonstrating compliance with Council Design Guidelines and Construction Specification; and
- (g) Structural Engineer's construction certification of all structures.
- (h) A Geotechnical Report certifying that all earthworks and road formation have been completed in accordance with AS3798 and Council's Design Guidelines and Construction specifications. The report shall include:
 - Compaction reports for road pavement construction,
 - Compaction reports for bulk earthworks and lot regrading,
 - Soil classification for all residential lots, and
 - Statement of Compliance.

Linen Plans & 88B Instruments

- 134. In order to enable a Subdivision Certificate to be issued for submission to the LPI Service, the applicant is required to lodge a separate application along with one (1) original and ten (10) copies of the proposed plan of subdivision and one (1) original and two (2) copies of the proposed 88B instrument if required.
- 135. The applicant shall pay the standard fee for purpose of Subdivision Certificate administration of plan checking and release.
- 136. The final plan of subdivision must be supported by an 88B instrument to the approval of Council. The 88B instrument shall properly reflect the requirements of the conditions of development consent, the plans forming part of the consent, and Councils standards, codes and policies. Part 2 of the 88B instrument shall contain a provision that any easements, right of ways or covenants shall not be extinguished or altered without the written consent of Council.
- 137. Where common drainage lines or other drainage lines are required, a drainage easement shall be created in accordance with Council's minimum widths as scheduled in councils design specification for subdivisions (as amended).
- 138. Correct notation concerning easements is required. The prepared 88B Instrument should be forwarded initially to Council. The land value of the easement and costs associated with checking the instrument are to be borne by the applicant. Part 2 of the 88B



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Instrument shall contain a provision that the easement may not be extinguished or altered without the written consent of Council.

139. The final plan of subdivision is to show the dedication of a road widening/service way/easement/right-of-way/6m x 6m/3m x 3m cut-off corner (delete whichever is not relevant) to Council.

Service Providers

140. The following documentation is to be provided prior to the release of the subdivision certificate.
- (a) Written evidence of suitable arrangements with Sydney Water (Section 73 Compliance Certificate) for the supply of water and sewerage services to the development is to be submitted to the PCA prior to the issue of a Subdivision Certificate.
Council will not issue a Subdivision Certificate unless the method of sewerage disposal is by gravity reticulation mains to either Sydney Water branch and trunk sewers or Sydney Water point of treatment.
 - (b) Notification of arrangement for the development from Endeavour Energy shall be submitted to Council.
 - (c) Written certification from the relevant service providers that the telecommunications infrastructure is installed in accordance with:
 - The requirements of the Telecommunications Act 1997;
 - For a fibre ready facility, the NBN Co's standard specifications current at the time of installation; and
 - For a line that is to connect a lot to telecommunications infrastructure external to the premises, the line shall be located underground.

Unless otherwise stipulated by telecommunications legislation at the time of construction, the development must be provided with all necessary pits and pipes, and conduits to accommodate the future connections of optic fibre technology telecommunications.

Footpaths

141. Construction of 1.5m wide by 100mm thick (with one layer of SL72 reinforcing mesh) concrete path paving on both sides of all residential streets, unless where varied by other conditions in this consent.

Bonds

142. A maintenance bond in the form of a bank guarantee or cash bond, shall be lodged with Council prior to the issue of a subdivision certificate. The bond shall cover maintenance and any damage to roads, drainage lines, public reserves or other council property or works required as a result of work not in accordance with Council's standards, and/or development consent conditions. The bond will be held by Council for a minimum period of 6 months from the date of Council's acceptance of final works.



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Dilapidation Report

143. Any rectification works required by Council regarding the condition of Council infrastructure shall be undertaken, at full cost to the developer.
144. All disturbed areas must be turfed and all sediment controls must remain in place until the turf is established well enough to avoid any sediment loss.

Rectification of Damage

145. Prior to the issue of a Subdivision Certificate any damage to Council infrastructure not identified in the dilapidation report, as a result of the development shall be rectified at no cost to Liverpool City Council.

Any rectification works within Jardine Drive, will require a Roads Act application. The application is to be submitted and approved by Liverpool City Council prior to such works commencing.

Stormwater Compliance

146. Prior to the issue of an Subdivision Certificate the Principal Certifying Authority shall ensure that the:
- (a) Stormwater pre-treatment system/s
 - (b) Overland flow path works
 - (c) Flood control works
 - Have been satisfactorily completed in accordance with the approved Construction Certificate and the requirements of this consent.
 - Have met the design intent with regard to any construction variations to the approved design.
 - Any remedial works required to been undertaken have been satisfactorily completed.

Details of the approved and constructed system/s shall be provided as part of the Works-As-Executed drawings.

Restriction as to User and Positive Covenant

147. Prior to the issue of a Subdivision Certificate a restriction as to user and positive covenant relating to the:
- (a) Stormwater pre-treatment system/s
 - (b) Overland flow path works
 - (c) Flood control works

Shall be registered on the title of the property. The restriction as to user and positive covenant shall be in Liverpool City Council's standard wording as detailed in Liverpool City



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Council's Design and Construction Guidelines and Construction Specification for Civil Works.

Linemarking & Signage

148. Prior to the issue of a Subdivision Certificate and installation of regulatory / advisory linemarking and signage, plans are to be lodged with Liverpool City Council and approved by the Local Traffic Committee.

Note: Allow eight (8) weeks for approval by the Local Traffic Committee.

Public Domain Works – Street Lighting

149. The approved street lighting designs are to be implemented along all new and existing streets within the proposed development in accordance with Liverpool City Council standards and to the satisfaction of Council. Endeavour Energy pole numbers and the date poles were energised are to be submitted to Council's Traffic Management Section prior to submitting OC or SC application.

All cost associated with the installation of street lighting shall be borne by the developer.

E. ONGOING USE

The following conditions are to be complied with or addressed during ongoing use:

Replacement Trees

150. All replacement tree planting is to be completed as per landscape Plans.

Car Parking Management

151. All parking areas shown on the approved plans must be used solely for this purpose.

Vehicle Access

152. Vehicles entering or leaving the development site should be in forward direction, if practicable.

Waste Collection

153. Waste and recyclable material must be managed in a satisfactory manner, covered at all times and not give rise to offensive odour or encourage pest activity. All solid and liquid waste must be removed regularly from the site by a registered waste contractor. Waste must not be permitted to accumulate near the waste storage bins.



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Storage and Disposal of Waste Materials During Ongoing Use

154. During ongoing use of the premises:

- (a) each site must have a full set of bins consisting of 1 x 140L waste bin collected weekly, 1 x 240L recycling bin and 1x 240L green (garden) waste bin collected alternate weeks over a fortnight, however with the Council's commitment to implement a FOGO (Food Organics, Garden Organics) service in near future, these arrangements are subject to change. All the proposed residences must have sufficient access to the kerbside for collection. After the introduction of FOGO, each household will need at least 2.4m of unobstructed kerbside (non-driveway) for the presentation of three bins and a 300mm gap between two bins.
- (b) must be put on the premises for the storage of any waste that is generated (including for recycling),
- (c) all garbage and recyclable materials generated from the premises must be stored wholly within any approved storage area and must not be stored outside the premises (including any public place) at any time
- (d) arrangements must be implemented for the separation of recyclable materials from garbage
- (e) any approved waste storage area must be appropriately maintained to prevent litter and the entry of pests
- (f) where council does not provide commercial garbage and recyclable materials collection services:
 - a contract must be entered into with a licensed contractor to provide these services for the premises;
 - and a copy of the contract must be kept on premises and provided to relevant authorities including council officers on request.
- (g) all liquid trade waste discharged to sewerage system must comply with the trade waste approval issued by the relevant water authority
- (h) all liquid trade waste pre-treatment devices must be regularly maintained to remain effective in accordance with the conditions of the liquid trade waste approval issued by the relevant water authority.

F. ADVISORY

- (a) Section 4.53 of the EP&A Act provides that unless otherwise stated by a condition of this consent, this consent will lapse if development is not physically commenced within five years of the date of this notice.
- (b) Section 8.2 of the EP&A Act provides that an applicant may request, within six (6) months of the date of the determination of the Development Application, that Council review its determination (this does not relate to designated development or Crown development).

An application under Section 8.2 of the EP&A Act cannot be reviewed/determined after 6 months of the date of determination. Therefore, the submission of a Section 8.2



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Application must allow sufficient time for Council to complete its review within the prescribed timeframe, including the statutory requirement for public notification.

- (c) Section 8.7 of the EP&A Act provides that an applicant who is dissatisfied with the determination of a Development Application, may appeal to the Land and Environment Court within six (6) months of the date of determination, or as otherwise prescribed by the EP&A Act.
- (d) Section 8.8 of the EP&A Act provides that an objector who is dissatisfied with the determination of the consent authority to grant consent to a Development Application for Designated Development (including any State significant development that would be designated development but for Section 4.10(2) of the EP&A Act), may, within 28 days after the date on which the application is taken to have been determined, appeal to the Land and Environment Court, against the determination.
- (e) The Commonwealth Disability Discrimination Act 1992 may apply to this proposal. Approval of this application does not imply or infer compliance with this Act. Applicants and owners are required to satisfy themselves as to compliance and make their own enquiries to the Human Rights and Equal Opportunity Commission. Attention is also drawn to the provisions of Australian Standard 1428 – Design for Access and Mobility.
- (f) The requirements of all authorities including the Environmental Protection Authority and the Work Cover Authority shall be met in regard to the operation of the building.
- (g) "DIAL BEFORE YOU DIG"

Underground assets may exist in the area that is subject to your application. In the interest of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contact the Dial before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.

- (h) TELECOMMUNICATIONS ACT 1997 (COMMONWEALTH)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in



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any way, you are required to contact: Telstra's Network Integrity Team on Phone Number 1800 810 443.

- (i) The Liverpool City Council Local Government area soils and ground water may be subject to varying levels of Salinity. Whilst Council may require applicants to obtain Salinity reports relating to some developments, no assessment has been made by Council. Soil and ground water salinity levels can change over time due to varying factors. It is recommended that all applicants make their own independent inquiries as to appropriate protection against the current and future potential affect of Salinity to ensure the ongoing structural integrity of any work undertaken. Liverpool City Council will not accept any liability for damage occurring to any construction of any type affected by soil and or ground water Salinity.
- (j) Care shall be taken by the applicant and the applicant's agents to prevent any damage to adjoining properties. The applicant or applicant's agents may be liable to pay compensation to any adjoining owner if, due to construction works, damage is caused to such an adjoining property.
- (k) Letter boxes must be provided in accordance with the requirements of Australia Post. In this regard, the developer is required to obtain approval from Australia Post for letter box positioning and dimensions.
- (l) The cost of any necessary adjustments to utility mains and services shall be borne by the applicant.

If you have any further enquiries, please contact Kamar Warwar on the abovementioned contact details.

William Attard
Manager
DEVELOPMENT ASSESSMENT



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