

LOCAL PLANNING PANEL AGENDA

31 July 2023

MATTERS FOR THE LOCAL PLANNING PANEL'S DETERMINATION

Monday, 31 July 2023

To be held at the
MS Teams
Commencing at 2:00pm

Microsoft Teams meeting

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Phone Conference ID: 226 238 422#

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 or 1300 36 2170, by 4pm, Friday 28th July 2023.

ITEM No.	SUBJECT	PAGE No.
1	<p>DEVELOPMENT APPLICATION DA-165/2023</p> <p>DEMOLITION OF EXISTING STRUCTURES, SUBDIVISION OF THE SITE INTO TWO TORRENS TITLE LOTS AND THE CONSTRUCTION OF TWO DOUBLE STOREY SEMI-DETACHED DWELLINGS WITH A SECONDARY DWELLING ON ONE LOT AND ASSOCIATED LANDSCAPING WORKS (INTEGRATED DEVELOPMENT: CONTROLLED ACTIVITY UNDER WATER MANAGEMENT ACT 2000).</p> <p>LOT 21 DP211007 29 O'NEILE CRESCENT, LURNEA NSW 2170</p>	5 - 18

ITEM No.	SUBJECT	PAGE No.
2	<p>DEVELOPMENT APPLICATION DA-264/2018/C</p> <p>MODIFICATION OF DEVELOPMENT CONSENT DA-264/2018 AS MODIFIED PURSUANT TO SECTION 4.55(2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979.</p> <p>THE MODIFICATION SEEKS AN INCREASE IN PRODUCTION CAPACITY AT THE APPROVED CONCRETE BATCHING PLANT FROM 200,000 TONNES PER ANNUM TO 300,000 TONNES PER ANNUM OF CONCRETE AND CONCRETE PRODUCTS.</p> <p>THE ORIGINAL DEVELOPMENT HAS BEEN PREVIOUSLY APPROVED AS A DESIGNATED DEVELOPMENT AS SPECIFIED IN SCHEDULE 3 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATIONS 2000.</p> <p>THE APPLICATION IS IDENTIFIED AS NOMINATED INTEGRATED DEVELOPMENT REQUIRING APPROVAL FROM THE NSW ENVIRONMENTAL PROTECTION AUTHORITY PURSUANT TO PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997.</p> <p>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</p> <p>LOT 8 DP241916 4 ASH ROAD, PRESTONS NSW 2170</p>	79-274

ITEM No.	SUBJECT	PAGE No.
3	<p>DEVELOPMENT APPLICATION DA-259/2022</p> <p>3 LOT TORRENS TITLE SUBDIVISION WITH SITE REMEDIATION, TREE REMOVAL, CONSTRUCTION OF ROADS AND ASSOCIATED CIVIL WORKS.</p> <p>THE APPLICATION IS INTEGRATED DEVELOPMENT REQUIRING APPROVAL FROM THE NSW RURAL FIRE SERVICE UNDER THE RURAL FIRES ACT 1997</p> <p>LOT 416 DP2475</p> <p>430 FIFTEENTH AVENUE, AUSTRAL NSW 2179</p>	275-415

Item Number:	1
Application Number:	DA-165/2023
Proposed Development:	Demolition of existing structures, subdivision of the site into two Torrens Title Lots and the construction of two double storey semi-detached dwellings with a secondary dwelling on one lot and associated landscaping works (Integrated Development: Controlled Activity under Water Management Act 2000).
Property Address	29 O'Neile Crescent, Lurnea NSW 2170
Legal Description:	Lot 21 DP211007
Applicant:	Mr. M J Oliveiro
Land Owner:	Mr. M J Oliveiro
Cost of Works:	\$950,000
Recommendation:	Approved subject to conditions of consent
Assessing Officer:	Margaret Roberts – GAT & Associates

1. EXECUTIVE SUMMARY

Council has received a Development Application (DA-165/2023) seeking consent for the demolition of existing structures, subdivision of the site into two (2) Torrens Title Lots and the construction of two (2) double storey semi-detached dwellings with a secondary dwelling on one lot and associated landscaping works at 29 O'Neile Crescent, Lurnea.

The site is zoned R3 Medium Density Residential pursuant to *Liverpool Local Environmental Plan 2008* (LLEP 2008) and the proposed development is permissible with consent.

The proposal has been assessed with regard to the LLEP 2008, the *Liverpool Development Control Plan 2008* (LDCP 2008) and other relevant plans and policies. The proposed development is generally consistent with the objectives and development standards of LLEP 2008 and the provisions of LDCP 2008, with the exception of proposed variations to the Subdivision of Land and Buildings controls of Section 21 under Part 1 of LDCP 2008, Setback controls of Section 3, Car parking and Access controls of Section 7 and Secondary Dwellings controls of Section 10 under Part 3.4 of LDCP. The proposed non-compliances have been addressed within this report and the proposal is considered to be acceptable in this regard.

The development application was not required to be placed on public exhibition in accordance with the Community Participation Plan 2022, and no submissions were received.

The application is referred to the Liverpool Local Planning Panel (LLPP) in accordance with its referral criteria and procedural requirements in that the development falls into the category of:

- Conflict of interest.

The application was referred to the Department of Planning and Environment – Water as the proposed development requires a Controlled Activity approval under the Water Management Act 2000. General Terms of Approval were issued by the Department on 6 July 2023.

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 The locality

The subject site is located within a medium density residential area of Lurnea. The surrounding area is characterised by a mix of one and two-storey dwellings with tile roofs.

The subject site and the adjoining properties are detailed in the following table.

<p>Existing single storey dwelling at No. 29 O’Neile Crescent, Lurnea.</p>	
<p>Neighbouring single-storey dwelling to the east at No. 27 O’Neile Crescent, Lurnea.</p>	

Neighbouring single-storey dwelling to the southeast at 31 O'Neile Crescent, Lurnea.



Single storey dwelling on the opposite side of O'Neile Crescent at 10 O'Neile Crescent, Lurnea.



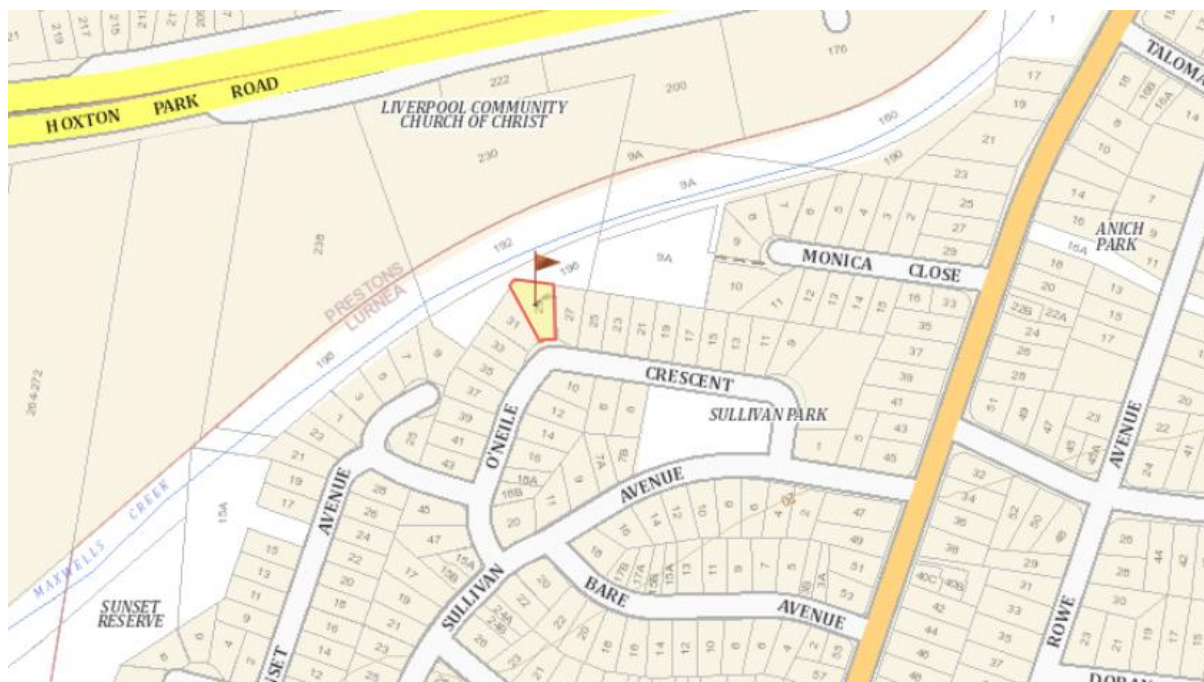


Figure 1: Locality Surrounding the Proposed Development. (Source: SIX Maps)

2.2 The site

The subject site is identified as Lot 21 in DP 211007 and is commonly known as 29 O'Neile Crescent, Lurnea. It is irregular in shape with a frontage of approximately 10.48 metres to O'Neile Crescent. It has a side boundary of 34.165 metres to the east and 39.47 metres to the west, and a rear boundary of 25 metres with a splayed northwestern corner of 5 metres. The site has a total area of 724.2 m². The site falls from the front to the rear with a level change of 0.77 m.

There are two easements located at the rear of the site. Easement A is for sewerage purposes and is located in the north-western corner of the site, with a width of 6.095 metres. Easement B is for drainage purposes, running along the rear boundary and is of varying width. These easements will be retained and are not affected by the proposed building footprints.

Currently, the subject site contains a single storey clad residence with a tile roof and a clad garage with a metal roof to the rear of the site. The site has a concrete driveway to the southwestern side which leads to the vehicle crossover to O'Neile Crescent.



Figure 2: Aerial view of the site (Source: Mecone Mosaic)

3. BACKGROUND/HISTORY

The Development Application was accepted by Council for assessment on the 4th of April 2023. An initial preliminary assessment of the proposal demonstrated that additional information was required to enable a complete assessment of the application. A Request for Additional Information letter was issued to the Applicant dated 18th of May 2023, requesting the following information:

- Indicate the sill height of the habitable room windows on the first floor
- Long cross section to be provided for the proposed semi-detached dwelling and secondary dwelling.

The applicant submitted additional information on 1st of June 2023. A long cross section has been provided for the proposed semi-detached dwelling and secondary dwelling with the height of the building indicated. The sill height of the habitable room windows on the first floor are indicated and satisfies the requirement of Control 2 under Section 8 of Part 3.4 of the Liverpool Development Control Plan (LDCP) 2008. The submitted additional information was found to be satisfactory in response to the issues.

As such, the proposal has been recommended for approval, subject to the imposition of conditions.

4. DETAILS OF THE PROPOSAL

The development application seeks approval for the demolition of existing structures, subdivision of the site into two (2) Torrens Title Lots and the construction of two (2) double storey semi-detached dwellings with a secondary dwelling. The proposal seeks approval, specifically, for the following:

- Demolition of existing structures, removal of trees and hardstand areas;
- Subdivision of land into two (2) Torrens Title Lots, with an area of 302.4m² for Lot 211 and 421.8m² for Lot 212;
- Construction of a pair of two storey semi-detached dwellings and an attached secondary dwelling; and
- Landscaping works for the site.

The development will result in the following:

- Lot 211
 - Ground floor level comprising a single car garage, dwelling entry, WC, laundry, and open plan living, kitchen and family room that extends to an outdoor alfresco area.
 - First floor level comprising bedroom 1 with walk-in-robe, ensuite and balcony, bedrooms 2, 3, 4 and 5 with built-in-robos, bathroom and linen cupboard.
- Lot 212
 - Ground floor level comprising a single car garage, dwelling entry, guest room, powder room, laundry, and open plan living, kitchen and family room that extends to an outdoor alfresco area.
 - First floor level comprising bedroom 1 with walk-in-robe and ensuite, bedrooms 2, 3, and 4 with built-in-robos, study area, bathroom, linen cupboard and void area over the ground floor entry.
 - An attached secondary dwelling with 2 bedrooms with built-in-robos, bathroom, and kitchen and living area.

The application also proposes new stormwater infrastructure, with rainwater tanks proposed on each lot, as shown on the submitted stormwater plans prepared by Prime Engineering Consultants.

5. STATUTORY CONSIDERATIONS

5.1 Relevant matters for consideration

The relevant planning instruments/policies applicable to the proposed development are as follows:

- State Environmental Planning Policy (Resilience and Hazards) 2021;
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- State Environmental Planning Policy (Biodiversity and Conservation) 2021;
- Liverpool Local Environmental Plan (LLEP) 2008; and
- Liverpool Development Control Plan (LDCP) 2008;
 - Part 1: General Controls for All Development; and
 - Part 3.4: Semi-Detached and Attached Dwellings (Duplexes and Terraces) in the R2, R3, and R4 Zone.

Contributions Plans

- Liverpool Contributions Plan 2018 – Established Areas applies to all development pursuant to Section 7.11 of the EPA & Act.

6. ASSESSMENT

The development application has been assessed in accordance with the relevant matters of consideration prescribed by Section 4.15 Evaluation 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)(i) – Any Environmental Planning Instrument

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

Pursuant to Clause 4.6 of SEPP (Resilience and Hazards) 2021, a consent authority is unable to grant development consent unless it has considered whether the land is contaminated and, if so, whether the consent authority is satisfied that the land is suitable in its contaminated state or can be remediated to be made suitable for the purposes for which the development is proposed to be carried out.

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	It is unlikely the land is contaminated as it is an existing residentially zoned allotment.

(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	The land is considered to be suitable for the proposed works and it is unlikely that the land is contaminated, considering the history of the site for residential use.
(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 land does not require remediation.

The application does not seek to alter the residential nature of the site. Therefore, a contamination assessment is not required for this application. In general, the proposed development is consistent with the relevant provisions of SEPP (Resilience and Hazards) 2021.

Based on the above assessment, the proposal is considered to satisfy the relevant objectives and provisions of SEPP (Resilience and Hazards) 2021. Therefore, it is considered that the subject site is suitable for the proposed development.

(b) State Environmental Planning Policy (BASIX) 2004

In accordance with this policy, all new residential dwellings and those seeking alterations and additions as identified under this policy require a BASIX certificate that measures the Building Sustainability Index to ensure dwellings are designed to use less portable water and are responsible for fewer greenhouse gas emissions by setting energy and water reduction targets for houses and units.

BASIX Certificates have been submitted for the proposed development.

The proposal is considered to be satisfactory with regard to water and energy efficiency and thermal comfort.

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

Chapter 2 Vegetation in non-rural areas

The provisions of Chapter 2 of State Environmental Planning Policy (Biodiversity and Conservation) 2021 are applicable to all non-rural land across New South Wales. The objectives and provisions of Chapter 2 generally aim to protect the biodiversity values of vegetation and trees in non-rural areas.

The proposed development seeks to remove eleven (11) trees on the site. A site inspection was conducted on 11 May 2023 which revealed that the trees were not significant. The trees

removed are to be replaced with a greater variety of vegetation within the proposed landscaped areas. The proposal was referred to Council's Landscaping officer who reviewed the landscaping plans and supports the proposal. As such, the proposal is considered consistent with the requirements and objectives of Chapter 2 of SEPP (Biodiversity and Conservation) 2021.

Chapter 6 Water catchments

The subject land is located within the Georges River Catchment and as such the State Environmental Planning Policy (Biodiversity and Conservation) 2021 - Chapter 6 Water catchments, applies to the application.

The proposed development was referred to Council's Land Development Engineer who reviewed the stormwater plans associated with the proposal. Council's engineer raised no objection to the proposal, subject to the imposition of conditions, including the relocation of the proposed rainwater tank on Lot 212 to be clear from the existing drainage easement, and investigation of the existing drainage easement within the lot to determine if reconstruction is required.

Based on Council's engineering comments, it is considered that the proposal satisfies the provisions of Chapter 6 – Water catchment of SEPP (Biodiversity and Conservation 2021), subject to appropriate conditions of consent.

(d) Liverpool Local Environmental Plan 2008

(i) Zoning

The subject site is zoned **R3 Medium Density Residential** pursuant to the LLEP 2008. An extract of the zoning map is provided in Figure 3.

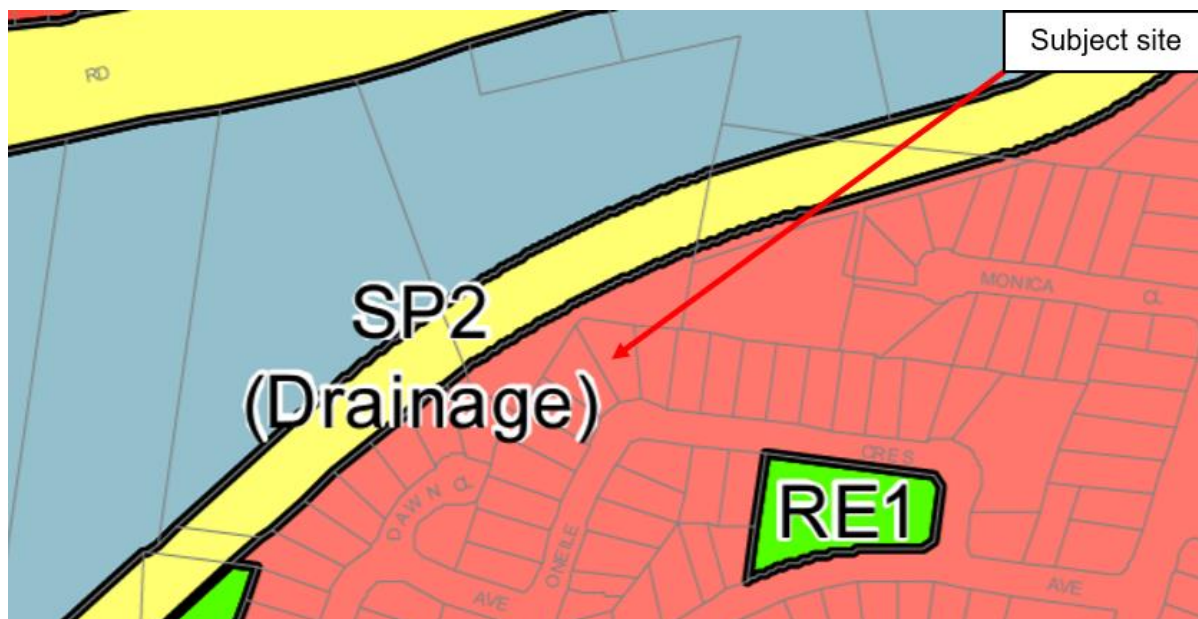


Figure 3: Zoning Map (source: NSW legislation)

(ii) Permissibility

The proposed development is defined by the standard instrument as **subdivision, semi-detached dwellings** and **secondary dwellings**.

Pursuant to Clause 2.6 of LLEP 2008, subdivision of land is permissible with consent.

Development of semi-detached dwellings and secondary dwellings are permissible with consent within the R3 Medium Density Residential zone under LLEP 2008

The LLEP 2008 defines a semi-detached dwelling as “a dwelling that is on its own lot of land and is attached to only one other dwelling.” and a secondary dwelling as “a self-contained dwelling that—

- (a) is established in conjunction with another dwelling (the principal dwelling), and
- (b) is on the same lot of land as the principal dwelling, and
- (c) is located within, or is attached to, or is separate from, the principal dwelling.”

The subdivision will result in each dwelling being on its own lot of land, and the dwellings will be attached to only one other dwelling.

(iii) Objectives of the zone

The objectives of the **R3 Medium Density Residential** zone are as follows:

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

- *To provide for a concentration of housing with access to services and facilities.*
- *To provide for a suitable visual transition between high density residential areas and lower density areas.*
- *To ensure that a high level of residential amenity is achieved and maintained.*

The proposal is considered to be consistent with the objectives of the R3 zone in that it continues to provide for the housing needs of the community in a medium density residential environment. The proposed development is conveniently located to recreational spaces and public transport. Furthermore, the proposed development is of appropriate form and scale and will provide a high level of residential amenity for occupants of the dwellings.

(iv) Principal Development Standards

LLEP 2008 contains a number of principal development standards which are relevant to the proposal, as detailed below.

Development Provision	Requirement	Proposed	Comment
Part 4 Principal Development Standards			
2.6 Subdivision	Land to which this Plan applies may be subdivided, but only with development consent.	Subdivision is being sought for this development.	Complies A subdivision plan is provided within the submitted architectural plans prepared by Urban Living Designs.
2.7 Demolition	The demolition of a building or work may be carried out only with development consent	The proposal seeks to demolish existing structures on site.	Complies Demolition plans are provided within the submitted architectural plans prepared by Urban Living Designs.
4.1 Minimum subdivision lot size	300m ² . Pursuant to Clause 4.1 (4A) the site may have a minimum lot size of 250m ² for the purpose of semi-detached dwellings as it is mapped within Area 2.	Lot 211: 302.4m ² Lot 212: 421.8m ²	Complies
4.3 Height of Buildings	8.5m	8.38m	Complies

4.4 Floor Space Ratio	0.5:1. Pursuant to Clause 4.4 (2A) the site may have an additional floor space ratio of 0.05 for the purpose of semi-detached dwellings as it is mapped within Area 2.	Lot 211: 0.54:1 Lot 212: 0.55:1	Complies
5.21 Flood Planning	Flood risk is minimised for the development	The site is mapped within a low-risk flood area. The proposal was referred to Council's Flood Engineer who supports the proposal subject to conditions, including that lowest floor level is no less than 1% AEP flood level + 500mm freeboard.	Complies with conditions
5.4 Controls relating to miscellaneous permissible uses	The total floor area of the dwelling, excluding any area used for parking, must not exceed whichever of the following is the greater— (a) 60 square metres, (b) 25% of the total floor area of the principal dwelling.	Secondary dwelling: 59.5m ²	Complies

As demonstrated in the above compliance table, the proposed development is consistent with the provisions of LLEP 2008.

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

There are no draft Environmental Planning Instruments which apply to the development.

6.3 Section 4.15(1)(a)(iii) - Any Development Control Plan

(a) Liverpool Development Control Plan (LDCP) 2008

The application has been assessed against the relevant controls of the LDCP 2008, namely:

- *Part 1 General Controls for all Development; and*
- *Part 3.4 Semi-Detached and Attached Dwellings (Duplexes and Terraces) in the R2, R3 and R4 zones.*

The proposal is considered to be generally consistent with the key controls outlined in LDCP 2008. All relevant compliance tables for the LDCP 2008 are provided in Report Attachment 3.

Below provides a summary of the non-compliances with the LDCP 2008 which are deemed supportable.

Control	Requirement	Provided	Complies
Part 1 General Controls for all Development			
Section 21 – Subdivision of land and buildings	Minimum lot width for R3 Medium Density Residential zones with minimum lot size of 300sqm in Area 2 as per the LLEP 2008 = 8m	The minimum lot width proposed to both lots is 5.24m. Justification is provided in the SEE report with reference to relevant objectives in Part 1, Section 21 Subdivision of Land and Buildings of the LDCP 2008. This variation is supported noting that the site is located at the bend of the road, which results in a combined front boundary length of 10.48m, compared to the combined rear boundary length of 25m. The average lot widths are 8.37m and 10.52m for Lot 211 and Lot 212 respectively. Furthermore, the proposal provides appropriate vehicular access and front landscaping area to both lots. The variation to minimum lot width is considered to be acceptable on merit.	Justified on merit
Part 3.4 Semi-Detached and Attached Dwellings (Duplexes and Terraces) in the R2, R3 and R4 zone			

<p>Section 3 – Setbacks</p>	<p>Garages must be set back a minimum of 1m behind the main face of the dwelling.</p>	<p>The garage for the proposed dwelling on Lot 211 setback 950mm behind the main face of the dwelling. This variation is modest (50mm) and is considered acceptable as it is setback behind the porch and does not dominate the front façade.</p>	<p>Justified on merit</p>									
	<p>Side Ground floor: 0.9m First floor: 1.2m</p>	<table border="1"> <thead> <tr> <th></th> <th>GF</th> <th>FF</th> </tr> </thead> <tbody> <tr> <td>East</td> <td>0.98m</td> <td>0.98m</td> </tr> <tr> <td>West</td> <td>0.95m</td> <td>1.21m</td> </tr> </tbody> </table> <p>The minimum setback of the first floor level of the dwelling on Proposed Lot 211 to the eastern boundary is 0.98m, measured at the front balcony of the dwelling.</p> <p>However, the setback to the eastern boundary then increases to be at least 1.2m measured at the wall of the stairs at first floor level. The extent of variation is minor and only applies to the front first floor balcony.</p>		GF	FF	East	0.98m	0.98m	West	0.95m	1.21m	<p>Justified on merit</p>
	GF	FF										
East	0.98m	0.98m										
West	0.95m	1.21m										
<p>Section 5 – Cut and Fill, Building Design, Streetscape and Layout</p>	<p>Two storey dwellings On two storey dual occupancies, balconies are encouraged to face the street or built over garages.</p>	<p>The first-floor balcony to the dwelling on Proposed Lot 211 is built over the porch, rather the garage. This is considered acceptable on merit as the façades of the proposed dwellings are well articulated.</p>	<p>Justified on merit</p>									

<p>Section 6 – Landscaping and Fencing</p>	<p>Tree and shrub planting along side and rear boundaries should assist in providing effective screening to adjoining properties. The minimum height of screening to be provided is 2.5m to 3m at maturity.</p>	<p>The proposed planting along the western side of the site has a maximum mature height of 1m. This is acceptable on merit given that adequate setback distance is provided between the habitable rooms of the proposed dwelling and the adjoining property.</p>	<p>Justified on merit</p>
<p>Section 10 – Secondary dwellings (Granny Flats)</p>	<p>Secondary dwellings are not permitted with semi-detached dwellings and Attached dwellings.</p>	<p>An attached secondary dwelling is proposed on Lot 212, which is not permitted with semi-detached dwellings under Section 10 Secondary dwellings of Part 3.4 LDCP 2008. However, there are no objectives or further controls listed under this section to justify the reason for this restriction.</p> <p>Pursuant to LLEP 2008, secondary dwellings are permissible with consent within the R3 Medium Density Residential zone, along with semi-detached dwellings. There are no clauses under the LLEP 2008 which prohibit the development of secondary dwellings on a site that has a semi-detached dwelling. As the controls of a LEP prevail over that of a DCP, the secondary dwelling is permissible and considered to be an appropriate form of development on the site, given that the proposed development complies with floor space ratio, private open space, solar access and</p>	<p>Justified on merit</p>

		landscaping requirements. The secondary dwelling is considered acceptable on merit.	
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6.4 Section 4.15(1)(a)(iiia) - Planning Agreements

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 BCA and the Safety standards for demolition (AS 2601 – 2001). Accordingly, appropriate conditions of consent will be imposed.

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

Natural and Built Environment

The proposed development is unlikely to create a detrimental impact on the natural environment surrounding the subject site, subject to the imposition of appropriate conditions of consent.

The proposed development is unlikely to create any adverse impacts on the surrounding built environment. The proposed development is considered to be of an appropriate scale and is unlikely to create any detrimental impacts on the adjoining properties or the locality as a whole. The proposal will facilitate residential development which is not an over-development and is consistent with the desired future built character of the locality.

It is considered that the proposed development has been designed with sufficient regard to surrounding properties to ensure that any adverse amenity impact is minimised, particularly in terms of visual and acoustic privacy and overshadowing.

Social Impacts and Economic Impacts

The proposal would result in a positive economic impact in the locality through the capital investment value of the development and employment generated through the construction phase. The proposal is unlikely to generate any identifiable detrimental social impacts, being consistent with the desired development type in the locality.

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 the site is considered to be suitable for the proposed development.

6.8 Section 4.15(1)(d) - Any submissions made in accordance with the Act or the Regulations

(a) Internal Referrals

The following comments have been received from Council's Internal Departments:

DEPARTMENT	COMMENTS
Building Officer	No objection subject to conditions of consent
Development Engineer	No objection subject to conditions of consent
Landscape Officer	No objection subject to conditions of consent
Environmental Health Officer	The application is not required to be referred to Council's Environmental Health Officer. However, conditions which are applicable to the application have been provided for information.
Flooding Officer	No objection subject to conditions of consent

(b) External Referrals

The following comments have been received from external Agencies:

DEPARTMENT	COMMENTS
Department of Planning and Environment - Water	The application was referred on 21 April 2023 as the proposed development requires a Controlled Activity approval under the Water Management Act 2000. General Terms of Approval were issued on 6 July 2023.

(c) Community Consultation

The proposal was not required to be notified in accordance with the Community Participation Plan 2022, and no submissions were received.

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

The proposed development is considered to be in the public interest.

7. DEVELOPMENT CONTRIBUTIONS

A Section 7.11 Development Contributions is applicable to the proposed development in accordance with Liverpool Contributions Plan 2018 and will be imposed as a condition of consent of any approval for the proposed development. The development attracts a total contribution of **\$26,341**.

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, LDCP 2008, and the relevant codes and policies of Council.

The proposed development is unlikely to result in any adverse impact 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-165/2023 seeking consent for the demolition of existing structures, subdivision of the site into two Torrens Title Lots and the construction of two double storey semi-detached dwellings with a secondary dwelling on one lot and associated landscaping works be approved subject to conditions of consent.

ATTACHMENTS

1. Attachment 1 - Conditions of Consent
2. Attachment 2 - Architectural Plans
3. Attachment 3 - LDCP Assessment Table

LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT

31 July 2023

REPORT ATTACHMENT 1 – CONDITIONS OF CONSENT**ATTACHMENT 1 – CONDITIONS OF CONSENT****A. THE DEVELOPMENT****Approved Plans and supporting documents**

1. Development the subject of this determination notice must be carried out strictly in accordance with the following approved plans/reports, except were modified by the undermentioned conditions.

(a) Architectural Plans

Plan number	Revision number	Plan title	Drawn by	Date of plan
2/17	C	Site Plan	Urban Living Designs	25/05/2023
5/17	C	Sub-division Plan	Urban Living Designs	25/05/2023
6/17	C	Demolition Plan	Urban Living Designs	25/05/2023
7/17	C	Floor Plan	Urban Living Designs	25/05/2023
8/17	C	Floor Plan	Urban Living Designs	25/05/2023
9/17	C	Elevations	Urban Living Designs	25/05/2023
10/17	C	Elevations	Urban Living Designs	25/05/2023
11/17	C	Section	Urban Living Designs	25/05/2023
12/17	C	BASIX & Party Wall	Urban Living Designs	25/05/2023
13/17	C	Site Management	Urban Living Designs	25/05/2023

(b) Landscape Plans

Plan number	Revision number	Plan title	Drawn by	Date of plan
14/17	C	Landscape Plan	Urban Living Designs	25/05/2023

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

(c) Reports

Report Name	Date	Reference	Prepared By
Waste Minimisation And Management Plan	--	--	--

(d) BASIX certificate for 29 O'Neile Crescent, Lurnea, Certificate No. 1375962M prepared by Certified Energy 1 dated Thursday, 1 March 2023

Except where modified by the undermentioned conditions.

General Terms of Approval

2. All General Terms of Approval issued by Department of Planning and Environment - Water shall be complied with prior, during, and at the completion of construction, as required in accordance with the General Terms of Approval dated 6 July 2023. A copy of the General Terms of Approval is attached to this decision notice.

Comply with EP&A Act

3. 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.

B. PRIOR TO 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.

Payment of development contributions

4. **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:

Community facilities – works	\$2,288
District Sporting Fields – works	\$7,696

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

District Passive Open Space – works	\$4,810
Local Passive Open Space – works	\$6,734
Transport – Bikeways – works	\$933
Transport – Traffic Management – works	\$2,659
Drainage	\$830
Administration	\$389

The total contribution payable to Council under this condition is **\$26,341** as calculated at the date of this consent, in accordance with the Liverpool Contribution 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 Contribution Plan 2018 – Established Areas.

A copy of the development contributions plan is available for inspection at Liverpool City Council.

Provision of detailed plans for construction certificate application

5. Before the issue of a construction certificate, detailed plans must be prepared by a suitably qualified person and provided to the Certifier that are consistent with the plans and documentation approved under this consent.

Utilities and services

6. Before the issue of the construction certificate, written evidence of the following service provider requirements must be provided to either the certifier:
1. a letter from Endeavour Energy demonstrating that satisfactory arrangements can be made for the installation and supply of electricity
 2. a response from Sydney Water as to whether THE PLANS ACCOMPANYING THE APPLICATION FOR A CONSTRUCTION CERTIFICATE would affect any Sydney Water infrastructure, and whether further requirements need to be met
 3. other relevant utilities or services - that the development as proposed to be carried out is satisfactory to those other service providers, or if it is not, the changes that are required to make the development satisfactory to them.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

S68 Local Government Act - Stormwater drainage works

7. Prior to the issue of a Construction Certificate, the Principal Certifying Authority and/ or Certifying Authority shall ensure that an application under Section 68 of the Local Government Act, including the payment of application and inspection fees, has been lodged with, and approved by Liverpool City Council for stormwater connection to existing drainage easement.

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

Possible reconstruction of existing drainage easement

8. Possible reconstruction of existing drainage easement within proposed Lot may be required, subject to the existing pipe condition. CCTV footage and a report detailing the existing pipe condition is to be provided with S68 application.

Relocate tank

9. The proposed combined tank for Lot 212 shall be relocated to be clear from the existing drainage easement

Fee payments – Land Development

10. 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, and
- (c) Long Service Levy payment is applicable on building work having a value of \$250,000 or more, at the rate of 0.25% of the cost of the works. The required Long Service Levy payment, under the Building and Construction Industry Long Service Payments Act 1986, is to be forwarded to the Long Service Levy Corporation or the Council, prior to the issuing of a Construction Certificate, in accordance with Section 6.8 of the *Environmental Planning & Assessment Act 1979*.

These fees are reviewed annually and will be calculated accordingly.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

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.

Notification

12. 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 contact is entered into for the work to be done by a different licensee, Council must be immediately informed.

Erosion and sediment control plan

13. Before the issue of a construction certificate, an erosion and sediment control plan must be prepared by a suitably qualified person in accordance with the following documents and provided to the certifier:
1. Council's relevant development control plan,
 2. the guidelines set out in the NSW Department of Housing manual 'Managing Urban Stormwater: Soils and Construction Certificate' (the Blue Book) (as amended from time to time), and
 3. the 'Do it Right On-Site, Soil and Water Management for the Construction Industry' (Southern Sydney Regional Organisation of Councils and the Natural Heritage Trust) (as amended from time to time).

S138 Roads Act – Minor Works in the Public Road

14. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Flooding – 1% AEP

15. The lowest habitable floor level shall be no less than the 1% AEP flood level plus half a metre freeboard (i.e. RL 17.50 m + 0.5m = RL 18.0 m Australian Height Datum).

Flooding – 1% AEP Structure

16. The structure shall be constructed from flood compatible building components below the 1% AEP flood level plus half a metre freeboard (i.e. RL 17.50 m + 0.5m = RL 18.0 m Australian Height Datum).

No Loading on Easements

17. 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.

On-Site Detention

18. On-Site Detention shall be provided generally in accordance with the concept plan/s lodged for development approval, prepared by Prime Engineering Consultants, reference number PSW23076 – SW01, SW02, SW03 & SW10, revision A, revision A, dated 10/03/2023.

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.

Dilapidation report

19. Prior to the Commencement of Works a dilapidation report of all infrastructure fronting the development in 29 O'Neile Crescent, Lurnea is to be submitted to Liverpool City Council. The report is to include, but not limited to, the road pavement, kerb and gutter, footpath, services, and street trees and is to extend 10 m either side of the development.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

C. PRIOR TO WORKS COMMENCING

The following conditions are to be complied with or addressed prior to works commencing on the subject site/s:

Payment of fees

20. Before any site work commences, the following must be paid to council and written evidence of these payments provided to the principal certifier:

1. inspection fees

Asbestos removal signage

21. Before demolition work commences involving the removal of asbestos, a standard commercially manufactured sign containing the words 'DANGER: Asbestos removal in progress' (measuring not less than 400mm x 300mm) must be erected in a prominent position at the entry point/s of the site and maintained for the entire duration of the removal of the asbestos.

Construction Certificates

22. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Survey Requirements

23. Prior to the commencement of building works the proposed building works shall be pegged out by a registered surveyor. For reference during construction, a benchmark shall be identified at the site, preferably on the kerb and gutter where it exists. The peg out report prepared by the registered surveyor shall be forwarded to the Principal Certifier prior to the first inspection.

Note: In the event that a kerb and gutter does not exist, a permanent structure shall be used as a benchmark such as a manhole, power/light pole or the top of an existing retaining wall

Construction Certificates

24. 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.

Compliance with Home Building Act (if applicable)

25. In the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any building work authorised to be carried out by the consent commences.

Home Building Act requirements

26. Residential building work within the meaning of the Home Building Act 1989 must not be carried out unless the principal certifier for the development to which the work relates (not being the council) has given the council written notice of the following information —
- a) In the case of work for which a principal contractor is required to be appointed—
 - (i) the name and licence number of the principal contractor, and
 - (ii) the name of the insurer by which the work is insured under Part 6 of that Act,
 - b) In the case of work to be done by an owner-builder—
 - (i) the name of the owner-builder, and
 - (ii) if the owner-builder is required to hold an owner-builder permit under that Act, the number of the owner-builder permit.

If arrangements for doing the residential building work are changed while the work is in progress so that the information notified becomes out of date, further work must not be carried out unless the principal certifier for the development to which the work relates (not being the Council) has given the Council written notice of the updated information.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Excavation

27. In the event the development involves an 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.

Construction Requirements

28. 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.

Demolition Works

29. Demolition works shall be carried out in accordance with the following:
1. Prior to the commencement of any works on the land, a detailed demolition work plan designed in accordance with the Australian Standard AS 2601-2001 – The Demolition of Structures, prepared by a suitably qualified person with suitable expertise or experience, shall be submitted to and approved by Council and shall include the identification of any hazardous materials, method of demolition, precautions to be employed to minimise any dust nuisance and the disposal methods for hazardous materials.
 2. Prior to commencement of any works on the land, the demolition Contractor(s) licence details must be provided to Council.
 3. The handling or removal of any asbestos product from the building/site must be carried out by a SafeWork NSW licensed contractor irrespective of the size or nature of the works. Under no circumstances shall any asbestos on site be handled or removed by a non-licensed person. The licensed contractor shall carry out all works in accordance with SafeWork NSW requirements.

Disconnection of services before demolition work

30. Before demolition work commences, all services, such as water, telecommunications, gas, electricity and sewerage, must be disconnected in accordance with the relevant authority's requirements.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Notice of commencement for demolition

31. At least one week before demolition work commences, written notice must be provided to council and the occupiers of neighbouring premises of the work commencing. The notice must include:
1. name
 2. address,
 3. contact telephone number,
 4. licence type and license number of any demolition waste removal contractor and, if applicable, asbestos removal contractor, and
 5. the contact telephone number of council and
 6. the contact telephone number of SafeWork NSW (4921 2900).

Site preparation

32. Before demolition work commences the following requirements, as specified in the approved demolition management plan, must be in place until the demolition work and demolition waste removal are complete:
1. Protective fencing and any hoardings to the perimeter on the site
 2. Access to and from the site
 3. Construction traffic management measures
 4. Protective measures for on-site tree preservation and trees in adjoining public domain
 5. Onsite temporary toilets
 6. A garbage container with a tight-fitting lid

Site Facilities

33. Adequate refuse disposal methods and builder's 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.

Signs on site

34. A sign must be erected in a prominent position on any site on which building work or demolition work is being carried out:
- (a) showing the name, address and telephone number of the principal certifier for the work, and
 - (b) showing 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) stating that unauthorised entry to the work site is prohibited.
- Any such sign is to be maintained while the building work or demolition work is being carried out, but must be removed when the work has been completed.
Note: This does not apply in relation to building work or demolition work that is carried out inside an existing building that does not affect the external walls of the building.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Sydney Water

35. Development plans must be processed and approved by Sydney Water.

“DIAL BEFORE YOU DIG”

36. 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.

Waste Classification and Disposal of Contaminated Soil and Material

37. 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 (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 with 30 days of the waste being disposed.

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.

Erosion and sediment controls in place

38. Before any site work commences, the principal certifier 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 the NSW Department of Housing manual 'Managing Urban Stormwater: Soils and Construction Certificate' (the Blue Book) (as amended from time to time).

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Driveway Crossing Application

39. 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.

D. DURING CONSTRUCTION

The following conditions are to be complied with or addressed during construction:

Building Work

40. 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.

Building Work

41. 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.

Surveys by a registered surveyor

42. 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:
- (a) All footings / foundations in relation to the site boundaries and any registered and proposed easements
 - (b) At other stages of construction – any marks that are required by the principal certifier.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Implementation of BASIX commitments

43. While building work is being carried out, the applicant must undertake the development strictly in accordance with the commitments listed in the BASIX certificate(s) approved by this consent, for the development to which the consent applies.

Identification Survey Report

44. The building and external walls are not to proceed past ground floor/reinforcing steel level until such time as the PC 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 PC 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.

Identification Survey Report

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

Toilet Facilities

46. 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:
- be a standard flushing toilet connected to a public sewer, or
 - have an on-site effluent disposal system approved under the *Local Government Act 1993*, or
 - be a temporary chemical closet approved under the *Local Government Act 1993*.

Compliance with the Building Code of Australia

47. Building work must be carried out in accordance with the requirements of the BCA.

Hours of Construction Work

48. 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

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT****31 July 2023**

Monday to Friday and 8:00am to 1:00pm Saturday. No work will be permitted on Sundays or Public Holidays, unless otherwise approved by Council.

Security Fence

49. 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.

Refuse Disposal

50. 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.

General Site Works – Surface contours

51. 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.

General Site Works - Sediment

52. The development, including construction, shall not result in any increase in sediment deposition into any water body, wetland, bushland or environmentally significant land.

Waste Management Plan

53. 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, detailing the following:
 - i. The contact details of the person(s) who removed the waste
 - ii. The waste carrier vehicle registration
 - iii. The date and time of waste collection
 - iv. A description of the waste (type of waste and estimated quantity) and whether the waste is to be reused, recycled or go to landfill
 - v. The address of the disposal location(s) where the waste was taken
 - vi. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Contamination

54. 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*, and *Managing Land Contamination – Planning Guidelines (Planning NSW/EPA 1998)*.

Imported Fill Material

55. 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

56. The following records of accepted waste derived fill material must be submitted to the Principal Certifying Authority at the completion of earth works:
- 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) Documentation confirming the results of the waste classification assessment carried out on the fill material used in the development, and
 - c) the results of any chemical testing undertaken on the fill material.

Unidentified Contamination

57. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Air Quality

58. 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.

Dropped Edge Beam

59. 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.

Salinity

60. 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.

Erosion Control - Stabilisation

61. All disturbed areas shall be progressively stabilised and/or revegetated so that no areas remain exposed to potential erosion damage for a period of greater than 14 days.

Implementation of the site management plans

62. 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.

Erosion Control - Maintenance

63. Sediment and erosion control measures are to be adequately maintained during the works until the establishment of grass.

Erosion Control

64. 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

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT****31 July 2023**

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.

Water Quality

65. 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.

Pollution Control – Site Operations

66. 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

67. 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.

Noise and Vibration requirements

68. While site work is being carried out, noise generated from the site must not exceed an LAeq (15 min) of <5dB(A) above background noise, when measured at a lot boundary of the site.

Vehicular crossing

69. The proposed vehicular crossing shall be constructed:
- Minimum 0.5m clear from the existing power pole.
 - Perpendicular to the street kerb.

The existing/redundant vehicular crossing and layback shall be demolished and reinstated with kerb & gutter as per Liverpool City Councils specifications.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

E. PRIOR TO ISSUE OF OCCUPATION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of either an Interim or Final Occupation Certificate by the Principal Certifier (PC):

Works-as-executed plans and any other documentary evidence

70. Before the issue of the 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:
- (a) All stormwater drainage systems and storage systems, and
 - (b) A copy of the plans must be provided to council with the Occupation Certificate.

Certificates

71. The premises must not be occupied until an OC is issued by the PC. Copies of all documents relied upon for the issue of the occupation certificate must be attached to the OC and registered with Council.

Certificates

72. 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.

Section 73 Sydney Water Certificate

73. A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained for submission to the Principal Certifier prior to issue of Occupation Certificate.

Completion of public utility services

74. 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.

Liverpool City Council Clearance – Roads Act/Local Government Act

75. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT****31 July 2023****Display of Street Numbers**

76. 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.

BASIX

77. Supporting documentation issued by a suitable qualified person who has installed or carried out the works associated with the BASIX commitments shall be submitted to Council.

Landscaping

78. Upon completion of the approved landscape works associated with the development and prior to the issue of any OC, 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.

Road Works

79. 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.

Connection to Reticulated Sewer

80. Before the issue of any occupation certificate, a restriction must be placed on the title of the land pursuant to S.88B of the Conveyancing Act 1919, requiring the following:
- (a) If a connection to a reticulated sewerage system becomes available within 75 meters from any property boundary, a connection must be established within 12 months of such connection becoming available.
 - (b) All wastewater generated at the premises must be directed to the reticulated sewerage system.
 - (c) Certification of connection to the reticulated sewerage system must be submitted to Council.

Stormwater Compliance

81. Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall ensure that the:

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

(a) On-site detention system/s,

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

82. 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:

(a) On-site detention system/s,

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.

Rectification of Damage

83. 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 29 O'Neile Crescent, Lurnea will require a Roads Act application. The application is to be submitted and approved by Liverpool City Council prior to such works commencing.

Dilapidation Report

84. Any rectification works required by Council regarding the condition of Council infrastructure shall be undertaken, at full cost to the developer.

F. PRIOR TO ISSUE OF SUBDIVISION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of a Subdivision Certificate by Council:

Linen Plans and 88B Instruments

85. 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 (where proposed).

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Linen Plans and 88B Instruments

85. The applicant shall pay the standard fee for purpose of subdivision certificate administration of plan checking and release.

Connection to Reticulated Sewer

86. Before the issue of a subdivision certificate, a restriction must be placed on the title of each lot pursuant to S.88B of the Conveyancing Act 1919, requiring the following:
- (a) If a connection to a reticulated sewerage system becomes available within 75 meters from any property boundary, a connection must be established within 12 months of such connection becoming available.
 - (b) All wastewater generated at the premises must be directed to the reticulated sewerage system.
 - (c) Certification of connection to the reticulated sewerage system must be submitted to Council.

Linen Plans and 88B Instruments

87. The final plan of subdivision must be supported by an 88B Instrument, approved by Council. The 88B instrument shall properly reflect the requirements of the conditions of development consent, the plans forming part of the consent, and Council's 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.

Linen Plans and 88B Instruments

88. The final plan of subdivision must be supported by an 88B Instrument, agreed to by Council. The 88B Instrument must burden each lot with a restriction as to user that the dwellings to be erected on each lot are to be sited and constructed in accordance with approved plans and notice of determination (Development Consent) issued by Council for Development Application No. (DA-165/2023). Any costs associated with the preparation and checking of the instrument are to be borne by the applicant. The preparation of an 88B Instrument will not be required if construction has reached a stage where all brickwork is a minimum 500mm above finished floor level and the construction is in accordance with the development consent and the CC's.

Linen Plans and 88B Instruments

89. The following restriction as to user must be placed over proposed Lots 1 and 2. Details shall be submitted with the application for a Subdivision Certificate.
- (a) No Construction Certificate shall be issued for a building on the lot burdened until on site drainage detention has been designed in

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

accordance with Council's On-Site Detention Policy and Construction Specification, and

- (b) No Occupation Certificate for a building shall be issued until the designed on-site detention system has been constructed on the subject lot and a licensed Surveyor prepares a "Work As Executed" plan and is certified as complying with the approved detention design by an appropriate accredited professional engineer.

Service Providers

90. The following documentation must be provided before the issue of a 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 must be submitted to the certifier before 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. Council will not accept any temporary facilities to service the site, including pump-out wet-wells.
 - (b) Notification of arrangement for the development from Endeavour Energy must be submitted to Council.
 - (c) Written certification from the relevant service providers that the telecommunications infrastructure is installed in accordance with:
 - i) The requirements of the Telecommunications Act 1997;
 - ii) For a fibre ready facility, the NBN Co's standard specifications current at the time of installation; and
 - iii) For a line that is to connect a lot to telecommunications infrastructure external to the premises, the line must 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.

Dilapidation Report

91. Any rectification works required by Council regarding the condition of Council infrastructure shall be undertaken, at full cost to the developer.

Completion of Subdivision Works

92. Prior to the issue of a Subdivision Certificate, the Principal Certifying Authority shall ensure that all 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

Rectification of Damage

93. 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 29 O'Neile Crescent, Lurnea 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

94. Prior to the issue of an Subdivision Certificate the Principal Certifying Authority shall ensure that the:
- (a) On-site detention system/s

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

95. Prior to the issue of a Subdivision Certificate a restriction as to user and positive covenant relating to the:
- (a) On-site detention system/s

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 Council's Design and Construction Guidelines and Construction Specification for Civil Works.

G. CONDITIONS RELATING TO USE

Connection to reticulated sewerage system

96. In the event that a connection to a reticulated sewerage system becomes available within 75 meters from any property boundary, a connection must be established within 12 months of such connection becoming available, and all wastewater generated at the premises directed to the reticulated sewerage system. Certification of connection to the reticulated sewerage system must be submitted to Liverpool City Council.

Unreasonable Noise and Vibration

97. 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.

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT****31 July 2023**

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.

Environment

98. The use of the premises shall not give rise to the emission of gases, vapours, dusts or other impurities that are a nuisance, injurious or prejudicial to health.

H. 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 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

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

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 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.

LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT

31 July 2023

**ATTACHMENT 2 – GENERAL TERMS OF APPROVAL ISSUED BY
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-2023-10312
Issue date of GTA:	6 July 2023
Type of Approval:	Controlled Activity
Location of work/activity:	Lot 21, DP211007, 29 O'NEILE CRESCENT LURNEA 2170
Waterfront Land:	Maxwell's Creek
DA Number:	DA-165/2023
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-0001	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.
TC-0002	<p>A. This General Terms of Approval (GTA) only applies to the proposed controlled activity described in the plans and associated documents relating to Development Application DA-165/2023 provided by Council to Department of Planning and Environment-Water</p> <p>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.</p>

**LIVERPOOL CITY COUNCIL
LOCAL PANEL ASSESSMENT REPORT**

31 July 2023

ATTACHMENT 3 – SECTION 7.11 PAYMENT FORM

**CONTRIBUTIONS PURSUANT TO SECTION 7.11 OF THE ENVIRONMENTAL
PLANNING & ASSESSMENT ACT, 1979**

Liverpool Contribution Plan 2018 – Established Areas

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 quarter at the time of determination and will be adjusted at the time of payment in accordance with the conditions of consent.

APPLICATION NO: DA-165/2023

PROPOSAL: Demolition of existing structures, subdivision of the site into two Torrens Title Lots and the construction of two double storey semi-detached dwellings with a secondary dwelling on one lot and associated landscaping works

Facilities	Amount (\$)	Job No.
Liverpool Contributions Plan 2018 Established Areas		
Community Facilities - works	\$2,288	GL.10000001870.10099
District Sporting Fields - works	\$7,696	GL.10000001869.10211
District Passive Open Space - works	\$4,810	GL.10000001869.10093
Local Passive Open Space - works	\$6,734	GL.10000001869.10101
Transport - Bikeways - works	\$933	GL.10000001865.10207
Transport - Traffic management - works	\$2,659	GL.10000001865.10213
Drainage	\$830	GL.10000001866.10209
Administration	\$389	GL.10000001872.10104
TOTAL	\$26,341	

----- OFFICE USE ONLY -----
RECORD OF PAYMENT

Total Amount paid: _____ **Date:** _____
Receipt No.: _____ **Cashier:** _____

REPORT ATTACHMENT 2 – ARCHITECTURAL PLANS

NOTES:

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
2. REFER TO THE LURNEA LOCAL GOVERNMENT DEVELOPMENT CONTROL PLAN (DCP) FOR ALL DEVELOPMENT REQUIREMENTS.
3. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE LURNEA LOCAL GOVERNMENT DEVELOPMENT CONTROL PLAN (DCP).
4. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE LURNEA LOCAL GOVERNMENT DEVELOPMENT CONTROL PLAN (DCP).
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SCHEDULE OF TYPES

NO.	DESCRIPTION	TYPE
1	Lot 20	RES
2	Lot 21	RES
3	Lot 22	RES
4	Lot 23	RES
5	Lot 24	RES
6	Lot 25	RES
7	Lot 26	RES
8	Lot 27	RES
9	Lot 28	RES
10	Lot 29	RES
11	Lot 30	RES

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5. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE LURNEA LOCAL GOVERNMENT DEVELOPMENT CONTROL PLAN (DCP).

URBAN LIVING DESIGNS

PO BOX 879 STAMFORD QUADRANT 2166
 LURNEA NSW 2170
 EMAIL: info@urbanlivingdesigns.com.au

SEMI DETACHED 6/ GRANVILLE FLAT

CLIENT: OLIVIERO

Project: LOT 21 DP 210007
 29 O'NEILE CRESCENT
 LURNEA NSW

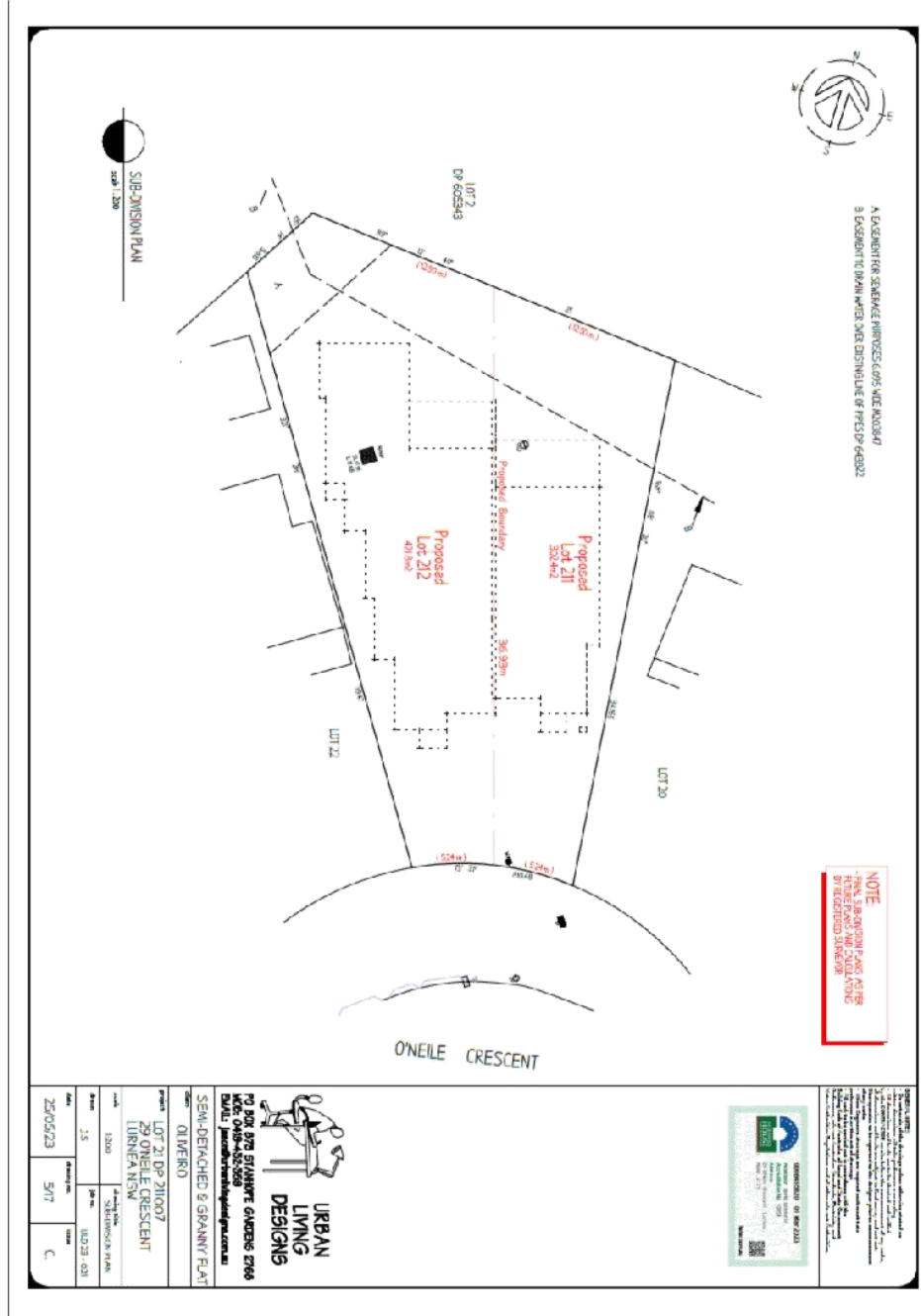
Scale: 1:200
 Drawing No: 21/18-041
 Date: 25/05/23
 2023
 C

URBAN LIVING DESIGNS

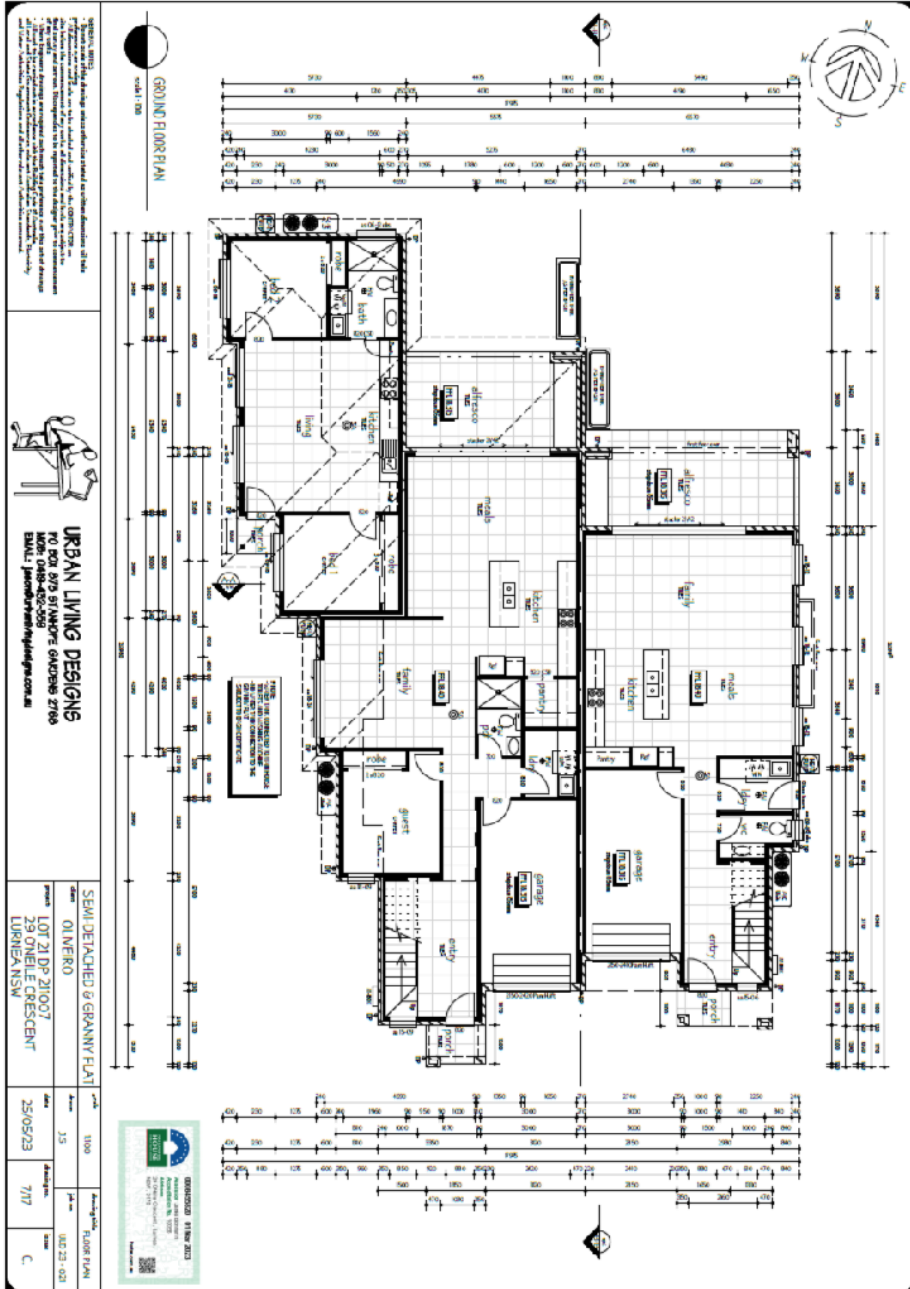
PO BOX 879 STAMFORD QUADRANT 2166
 LURNEA NSW 2170
 EMAIL: info@urbanlivingdesigns.com.au

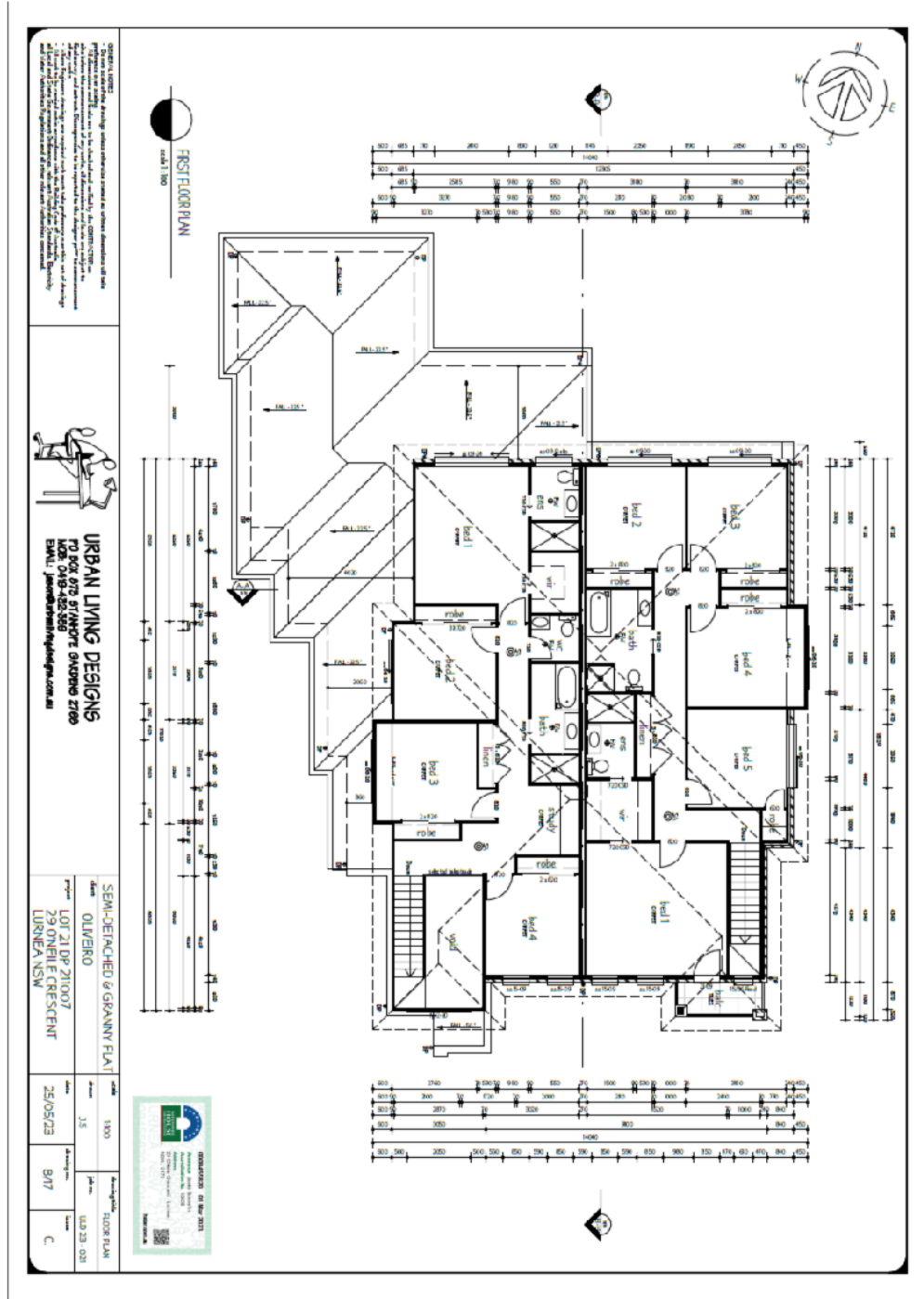
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SOUTH ELEVATION
SCALE 1:50

EAST ELEVATION
SCALE 1:50

URBAN LIVING DESIGNS
PO BOX 679 STANFORD GARDENS 2785
MOB: 0418-452-500
EMAIL: jason@urbanlivingdesigns.com.au

Project	SEMI-DETACHED & GRANNY FLAT	Code	100	Approved	E-PAVINGS
Client	OLIVERO	Area	35	Approved	03/23 - (03)
Address	LOT 21 DP 21007 29 O'NEILE CRESCENT LURNEA NSW	Date	25/05/23	Approved	9/17
					C

COMPLIANCE WITH DA 2023
This document is a digital copy of the original document. It is not a substitute for the original document. For more information, please contact the relevant authority.

WEST ELEVATION
Scale 1:100

NORTH ELEVATION
Scale 1:100

URBAN LIVING DESIGNS
PO BOX 878 STANMORE GARDENS 2166
MOB: 049-452-5019
EMAIL: jason@urbanlivingdesigns.com.au

Project	SEMI-DETACHED & GRANNY FLAT	Area	1100	Project No.	SL23/018
Client	OLNEIRO	Date	25/05/23	Drawn by	14/07/23 - CH
Address	LOT 71 DP 211007 29 O'NEILE CRESCENT LURNEA NSW	Scale	1:100	Checked by	14/07/23 - CH
				Issue	C

CONTRACT NOTES:
1. All dimensions are to the finished face of the work unless otherwise indicated.
2. All work is to be in accordance with the Australian Standards (AS) and the relevant Building Code of Australia (BCA) unless otherwise indicated.
3. The contractor is to ensure that all work is completed in accordance with the relevant Australian Standards (AS) and the relevant Building Code of Australia (BCA) unless otherwise indicated.
4. The contractor is to ensure that all work is completed in accordance with the relevant Australian Standards (AS) and the relevant Building Code of Australia (BCA) unless otherwise indicated.
5. The contractor is to ensure that all work is completed in accordance with the relevant Australian Standards (AS) and the relevant Building Code of Australia (BCA) unless otherwise indicated.

SECTION AA
Scale 1:50

SECTION BB
Scale 1:50

URBAN LIVING DESIGNS
PO BOX 979 SYDNEY NSW 1585
MO: 048-452-009
EMAIL: jason@urbanlivingdesigns.com.au

Project	SEMI-DETACHED & GRANNY FLAT	Area	1150	SECTION	SECTION C
Client	OLMERO	Drawn	JL	Date	10/07/2023
Address	LOT 21 DP 210007 29 O'NEILE CRESCENT LURNEA NSW	Checked		Scale	1:50
		Approved		Issue	C
		Date	25/05/23		

NOTES:
1. All dimensions are to be finished and unless otherwise stated, all dimensions are in millimetres.
2. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
3. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
4. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
5. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
6. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
7. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
8. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
9. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.
10. All work to be done in accordance with the Australian Standards AS/NZS 1170:2009 and AS/NZS 1171:2009.



31 July 2023

EXISTING PROPOSED COMMITMENTS

Project Name: 29 O'NEILE CRESCENT
 Address: 29 O'NEILE CRESCENT LURNEA NSW 2170
 Date: 23/07/2023

Site Area	1000 sqm	Proposed Area	1000 sqm
Site Use	Residential	Proposed Use	Residential
Site Zoning	Residential	Proposed Zoning	Residential
Site Description	...	Proposed Description	...
Site Location	...	Proposed Location	...
Site Access	...	Proposed Access	...
Site Easements	...	Proposed Easements	...
Site Services	...	Proposed Services	...
Site Constraints	...	Proposed Constraints	...
Site Features	...	Proposed Features	...
Site History	...	Proposed History	...
Site Surroundings	...	Proposed Surroundings	...
Site Potential	...	Proposed Potential	...
Site Recommendations	...	Proposed Recommendations	...

SECTION 1: PARTY WALL DETAIL

SECTION 2: WINDOW DETAIL

SECTION 3: DOOR DETAIL

SECTION 4: ROOF DETAIL

SECTION 5: FLOOR DETAIL

SECTION 6: CEILING DETAIL

SECTION 7: STAIR DETAIL

SECTION 8: BALCONY DETAIL

SECTION 9: TERRACE DETAIL

SECTION 10: GARAGE DETAIL

SECTION 11: ATTIC DETAIL

URBAN LIVING DESIGNS

FOR ROLAND STIMMERT ARCHITECTS PTDS
 150 O'NEILE CRESCENT
 LURNEA NSW 2170
 Phone: 02 9394 4444
 Email: info@urbanlivingdesigns.com.au

SEMI-DETACHED 6 GRANNY FLAT
 OLIVERIO

Project: LOT 21 DP 21007
 29 O'NEILE CRESCENT
 LURNEA NSW 2170
 DRAWING: EXISTING WALL

Date: 25/05/23
 Drawing No: DWG
 Scale: 1:50

PROFESSIONAL CERTIFICATE

REGISTERED ARCHITECT

ARCHITECTURE ACT 2006

NO. 123456789

ISSUED: 01 May 2023

EXPIRES: 01 May 2025

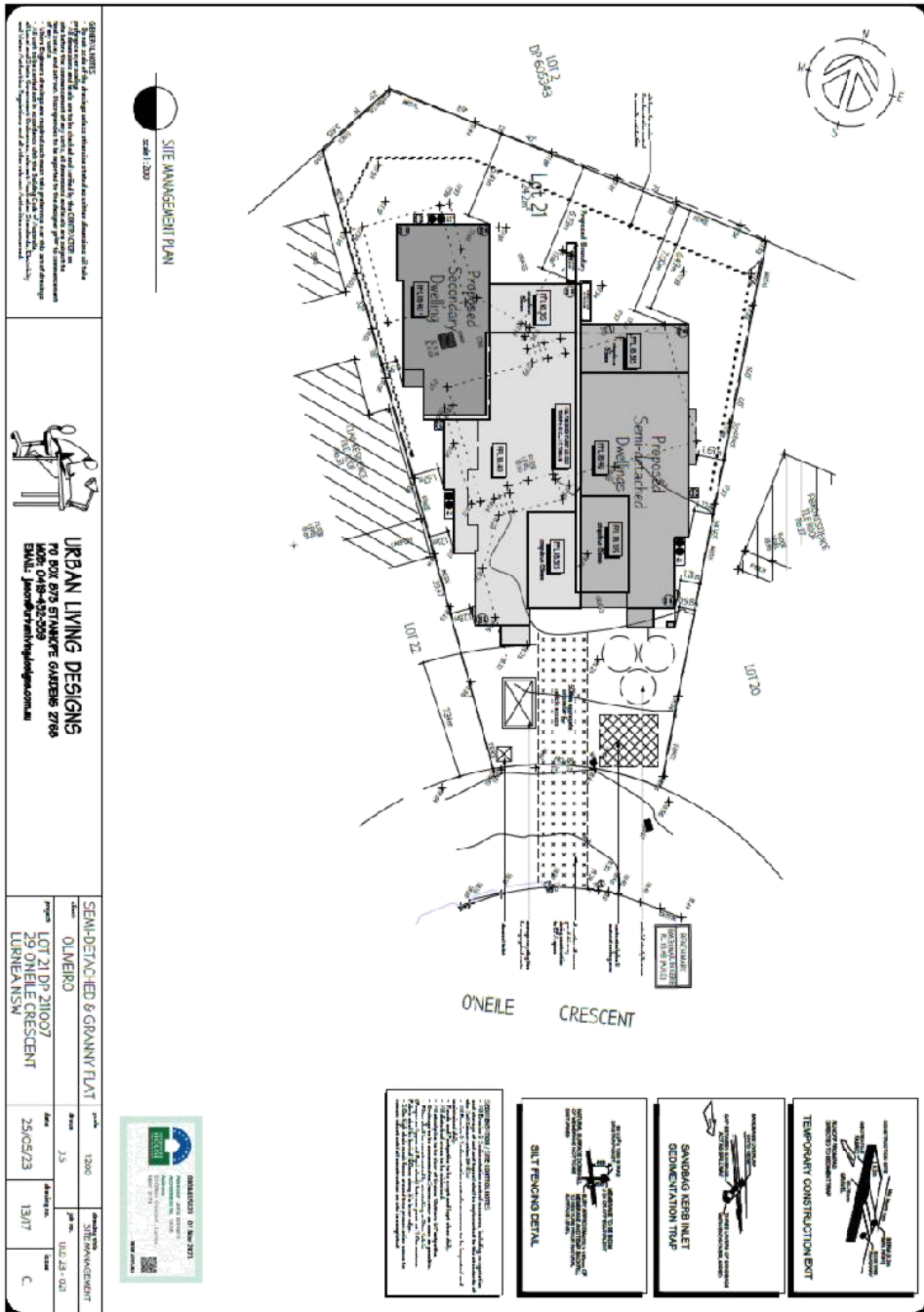
REGISTERED ARCHITECT

ARCHITECTURE ACT 2006

NO. 123456789

ISSUED: 01 May 2023

EXPIRES: 01 May 2025



REPORT ATTACHMENT 3: LIVERPOOL

DEVELOPMENT CONTROL PLAN

ASSESSMENT Liverpool Development Control Plan (LDCP)2008

The application has also been assessed against the relevant controls of the LDCP 2008, particularly *Part 1 General Controls for all Development and Part 3.4 – Semi-Detached and Attached Dwellings (Duplexes and Terraces) in the R2, R3 and R4 zones.*

LDCP 2008 Part 1: General Controls for All Development			
Development Control	Required	Provided	Complies
2. Tree Preservation	Consider the impact of development on existing vegetation	Eleven (11) trees within the site are proposed for removal and replacement. A site inspection revealed that the trees were insignificant within the streetscape.	Complies
3. Landscaping and Incorporation of Existing Trees	Incorporation of existing trees into development where appropriate	Eleven (11) trees within the site are proposed for removal and replacement. New trees and vegetations is proposed in the landscaping area, which is supported by Council's Landscaping Officer.	Complies
4. Bushland and Fauna Habitat Preservation	Consider the impact of development on bushland and habitats	Not Applicable	N/A
5. Bush Fire Risk	Land on or adjacent to bushfire-prone land to comply with RFS requirements	Not Applicable	N/A
6. WaterCycle Management	Stormwater runoff shall be connected to Council's drainage system by gravity means. A stormwater drainage concept plan is to be submitted.	The proposal was referred to Council's Land Development Engineers who has recommended conditions of consent.	Complies

7. Development Near a Watercourse	If any works are proposed near a water course, the Water Management Act 2000 may apply, and you may be required to seek controlled activity approval from the NSW Office of Water.	The proposal was referred to Department of Planning and Environment – Water as it is located within 40m of a watercourse. DPE – Water provided general terms of approval that will be imposed as a condition of consent.	Complies
LDCP 2008 Part 1: General Controls for All Development			
Development Control	Required	Provided	Complies
8. Erosion and Sediment Control	A Sediment Control Plan or Soil and Water Management Plan is required	A Sediment and Erosion control plan was submitted with the application. Conditions of consent will be imposed to ensure that erosion and sediment control measures are implemented during the construction of the development.	Complies
9. Flooding Risk	Provisions relating to development on flood prone land.	The property is mapped within a flood planning area. The proposal was referred to Council's Flooding Section who raised no concerns, subject to conditions.	Complies
10. Contaminated Land Risk	Previous use to be considered in assessing risk	Given the site has been historically residential in use, it is considered that contamination is unlikely.	Complies
11. Salinity Risk	Salinity Management response required for affected properties	The subject site is identified as having high Salinity Potential. Appropriate conditions of consent are proposed to address this.	Complies with Condition
12. Acid Sulphate Soils	Affected properties to consider the impact of development on soils	Not Applicable	N/A
13. Weeds	Noxious weeds are to be removed as part of development where applicable	Not Applicable	N/A

14. Demolition of Existing Development	Provisions relating to demolition works	<p>The site is currently occupied by a dwelling house that will be demolished to accommodate the proposed development.</p> <p>A Demolition Plan and Waste Management Plan have been submitted with the application. Waste generated from the construction of the building will be re-used where possible, with the remainder of the waste disposed of to appropriate facilities. Conditions will be applied to the consent to ensure demolition is conducted with respects to AS2601-2001.</p>	Complies with Condition
15. On Site Sewage Disposal	Provisions relating to OSMS.	OSMS is not proposed. The site is connected to a sewer line	N/A

LDCP 2008 Part 1: General Controls for All Development			
Development Control	Required	Provided	Complies
16. & 17. Aboriginal Archaeology	An initial investigation must be carried out to determine if the proposed development or activity occurs on land potentially containing an item of Aboriginal archaeology.	The property is not associated with items of Aboriginal archaeology or heritage items, and it is unlikely that it would contain Aboriginal archaeology.	N/A
19. Used Clothing Bins	Provisions relating to used clothing bins.	The DA does not propose used clothing bins	N/A
20. Car Parking and Access	Residential dwelling requirements: 2 space per dwelling	Each dwelling will be provided with a single garage and a car space in front of the proposed garages.	Complies
21. Subdivision of Land and Buildings	Minimum lot width for R3 Medium Density Residential zones with minimum lot size of 300sqm in Area 2 as per the LLEP 2008: R3 = 8m	The minimum lot width proposed to both lots is 5.24m. However, the average lot widths are 8.37m and 10.52m for Lot 211 and Lot 212 respectively Refer to further comment within the assessment report.	Non-compliant
22. Energy Conservation	New dwellings, including multi-unit development within a mixed-use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy – Building Sustainability Index (BASIX). A complying BASIX report is to be submitted with all development applications containing residential activities.	BASIX Certificates have been provided which outlines water and energy conservation commitments. The BASIX certificates form part of the supporting documents for the application and will be conditioned to ensure the development maintains sustainability measures.	Complies
23. Reflectivity	Provisions relating to the use of reflective materials on the exterior of buildings.	Highly reflective materials are not proposed.	Complies
25. Waste Disposal and Re-use Facilities	Waste Management Plan shall be submitted for demolition, construction and ongoing waste management.	A waste management plan has been submitted which outlines procedures for demolition, construction and ongoing waste management. Conditions regarding the demolition phase are to be included in the consent. Additionally, the bin location has been nominated on the landscape plan.	Complies

Development Control	Required	Provided	Complies
Part 3.4: Semi-Detached and Attached Dwellings (Duplexes and Terraces) in the R2, R3 and R4 zones			
2. Site Planning	The layout of the Semi-detached dwellings and Attached dwellings must be designed around the sites attributes such as slope, existing vegetation, land capability and/or solar access.	The proposal is designed to respond to the site attributes.	Complies
	There must be a direct link from at least one living area to the principal private open space area.	Direct link is provided from at least one living area to the principle private open space.	Complies
	The siting of windows of habitable rooms on the first floor must not overlook neighbouring properties.	Windows to first floor habitable rooms have a sill height of at least 1.5m to minimise overlooking.	Complies
	Siting of buildings should be sympathetic to surrounding development, taking specific account of the streetscape in terms of scale, bulk, setbacks, materials and visual amenity.	The development is sited sympathetically to surrounding development. The design is of a quality that will provide a positive contribution to the street and preserve visual amenity.	Complies
	Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate onsite detention of stormwater where street drainage is inadequate. Refer to Water cycle management in Part 1.	The proposed stormwater management system is supported by Council's engineer, subject to the imposition of conditions.	Complies

3. Setbacks						
Front	Ground floor: 4.5m First floor: 5.5m		GF	FF		Complies
		Lot 211	8.87m	8.87m		
		Lot 212	7.34m	7.34m		
	Garages must be set back a minimum of 1m behind the main face of the dwelling.	The garage for the proposed dwelling on Lot 211 is setback 950mm behind the main face of the dwelling. This variation is modest (50mm) and is considered acceptable as it is setback behind the porch and does not dominate the front façade.			Non-compliant	
Verandahs, balconies, eaves and other sun control devices may only encroach on the minimum secondary setback by up to 1m.	Not applicable. The site does not have a secondary frontage.			N/A		
Garages that address the secondary frontage must have a minimum setback of 5.5m.	See above			N/A		
Side and rear setback	Side Ground floor: 0.9m First floor: 1.2m		GF	FF		Non-compliant
		East	0.98m	0.98m		
		West	0.95m	1.21m		
	The minimum setback of the first floor level of the dwelling on Proposed Lot 211 to the eastern boundary is 0.98m, measured at the front balcony of the dwelling. However, the setback to the eastern boundary then increases to be at least 1.2m measured at the wall of the stairs at first floor level. The extent of variation is minor and only applies to the front first floor balcony.					
Rear Ground floor: 4m First floor: 7m		GF	FF		Complies	
	Lot 211	6.49m	7m			
	Lot 212	5.41m	9.59m			

	<p>Garages may only be built to the zero lot line if:</p> <ul style="list-style-type: none"> - An easement for access and maintenance of no less than 900mm wide must be created adjacent to the proposed zero lot on the adjoining property. Written consent from the adjoining owner(s) for the creation of any easements must be submitted as part of the development application. - The lot has a cross slope not exceeding 5%. - The zero lot line is situated on the down slope (filled) side of the lot and not on the up-slope (excavated) side. - Construction meets the Fire Resistance level requirements of the Building Code of Australia, with no windows along the zero lot line. - Piers to a minimum depth of 500mm are to be provided beneath the wall structure on the zero lot line. - Zero lot line construction is permissible only on one side boundary of the lot, with a minimum setback of 1.2m to be observed to the opposite boundary. - A zero lot line wall shall have select face brickwork, rendered or similar finish. - Fencing is not to be constructed immediately adjacent to the zero lot line as this may aid the access of termites into the dwelling. - It can be demonstrated that the zero lot line wall will have a similar impact on the solar access to the adjoining lot to that of a wall setback 900mm from the boundary. - The zero lot line wall will not have an adverse impact on the streetscape. - Where a garage is to be situated on the zero lot line, the garage shall have a physical barrier termite treatment (Note: 	None proposed	N/A
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	chemical treatments cannot be used, as this requires perimeter spraying on the adjoining lot).		
4. landscaped Area and Private Open Space			
Landscaped Area	A minimum of 20% of the site area shall consist of Landscaped Area, this may include lawn, deep rooted trees, garden beds and mulched areas.	Lot 211: 47% (144.13m ²) by calculation Lot 212: 32.5% (137.15m ²) by calculation	Complies
	A minimum unincumbered area of 4 x 6m shall be provided in rear setback to accommodate deep rooted trees	A minimum unincumbered area of 4 x 6m is provided in rear setback to accommodate deep rooted trees	Complies
	A minimum of 50% of the front setback area shall be Landscaped Area.	Lot 211: 59.6% (32m ²) by calculation Lot 212: 50.3% (23.74m ²) by calculation	Complies
	A minimum unincumbered area of 3 x 5m shall be provided in front setback to accommodate deep rooted trees.	A minimum unincumbered area of 3 x 5m is provided in front setback to accommodate deep rooted trees.	Complies
Private Open Space	The Private Open Space for each dwelling must have a minimum area of 60m ² .	Lot 211: 90.68m ² Lot 212 112.06m ² By calculation	Complies
	Areas less than 2.5 m in width does not qualify as Private Open Space.		Noted
	Private Open Space areas are not permitted within the primary street setbacks.	Private open space is located towards the rear of the site.	Complies
	Private Open Space must have an area for clothes drying with at least 2 hours of full sun between 9.00am and 5.00pm on 21 June.	Private Open Space has a predominantly northern orientation.	Complies
	The Private Open Space shall include a Principal Private Open Space area, which is directly accessible from the main living area of a dwelling with a minimum dimension of 4 x 6m.	Private Open Space has a direct link to the main living area and has a dimension of at least 4 x 6m for the proposed semi-detached dwellings.	Complies
	The principal private open space must receive 3 hours of sunlight to at least 50% of the area between 9:00am and 5:00pm on 21 June	Private Open Space has a predominantly northern orientation.	Complies
	Where the Principal Private Open has a predominately northern aspect Clause 6 (above) does not apply.	See above	Noted

5. Cut and Fill, Building Design, Streetscape and Layout			
Cut and fill of land	The maximum cut on a site must not exceed 600mm.	Cut is less than 600mm as per submitted SEE.	Complies
	All retaining wall structures shall be masonry construction and designed by a suitably qualified person or constructed as specified by the manufacture of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.	None proposed	N/A
	All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1 m. All fill must be contained within the dwelling footprint.	Dropped edge beams are used for the proposed dwellings. No fill proposed.	Complies
	Contaminated fill, either imported or found on site is not permitted. Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.	No fill is proposed for this development. Appropriate conditions of consent are proposed to address this.	Complies with condition
	Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include: - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites; - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites; and - Full details of any proposed retaining wall(s).	None proposed	N/A
Building Design and Appearance	All dwellings are to be orientated to the street.	The proposed semi-detached dwellings and secondary dwelling are oriented to the street.	Complies

	The front pedestrian entrance must be visible from the street.	The pedestrian entrances for the semi-detached dwellings are visible from.	Complies
	The front building facades shall be articulated. The façade should incorporate front porches, entries, pergolas and verandahs on front facades.	The pedestrian entrances are articulated with a porch for each of the proposed dwellings.	Complies
	Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400mm and be provided to a minimum of 70% of the dwelling.	The proposed eave is 450mm wide and is provided to at least 70% of the dwelling	Complies
	Semi-detached dwellings or Attached dwellings proposed on a corner allotment shall address both frontages by the use of verandahs, balconies, windows or similar modulating elements.	Not applicable	N/A
	"Mirror – imaging" of facades on Semi-detached dwellings and Attached dwellings are not permitted.	The proposed semi-detached dwellings are staggered by at least 1m. Different finishing materials are used for the façade for each of the dwellings.	Complies
	The front building line of semi-detached dwellings must be staggered by a minimum of 1m.	The proposed semi-detached dwellings are staggered by at least 1m.	Complies
Two storey dwellings	For two storey developments, a side wall must be articulated if the wall has a continuous length of over 10m.	The side wall of the proposed semi-detached dwellings does not have a continuous length of 10m.	Complies
	On two storey dual occupancies, balconies are encouraged to face the street or built over garages.	The balcony to Dwelling on Proposed Lot 211 will be built over the porch. This is considered acceptable as it articulates the façade of the proposed dwelling.	Non-compliant
	Balconies are not permitted on the first floor of the side and / or rear portion of the dwelling. Balconies may be considered if they address public open space / utilities.	None proposed	N/A
Garages and Carports	Garages and carports must be designed to be the minor element of the façade.	The garage for the semi-detached dwelling on Lot 211 is setback 950mm behind the front building line. This is considered acceptable as that variation is modest and it does not dominate the front façade.	Complies

		The garage for the semi-detached dwelling on Lot 212 is setback 1070mm behind the front building line and it does not dominate the front façade.	
	The maximum width of garage doors or carports must be no greater than 50% of the building frontage width.	Lot 211: 40% (2.4m measured) Lot 212: 38% (2.4m measured)	Complies
	Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages should be discouraged, unless actually separated from the dwelling.	Garages are integrated into the dwelling.	Complies
	The conversion of garages to living space may only be permitted if: - At least one car parking space is provided behind the front setback. - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.	None proposed	N/A
Internal Design of Attached Dwellings	All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.	The bedrooms for the proposed dwellings are located to the front of the dwelling for passive surveillance.	Complies
	Where possible, living rooms should take advantage of northern aspects.	Living room is located to the north for each of the proposed dwellings.	Complies
	Access to private open space must be from at least one living room.	There is a direct link between the living room and the POS for the proposed semi-detached dwellings.	Complies
	The internal layout of the dwelling is encouraged to incorporate cross ventilation.	Location of habitable rooms and windows are located to allow cross ventilation.	Complies
	Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.	Bathrooms, ensuites, laundries and walk in wardrobes are located to the side of the proposed dwellings.	Complies
	Each dwelling of the semi-detached and attached dwelling must provide a minimum storage area of 8m ³ .	Storage is provided throughout the dwelling.	Complies
	Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).	Habitable rooms on the first floor are located to the front for each of the proposed dwellings.	Complies

6. Landscaping and Fencing			
Landscaping	The setback areas of development are to be utilised for canopy tree planting. The landscape design for all development must include canopy trees that will achieve a minimum 8 m height at maturity within the front and rear setback areas.	One (1) canopy tree with a mature height of at least 8m is provided within the front and rear setback area for the proposed semi-detached dwellings.	Complies
	Landscape planting should be principally comprised of native species to maintain the character of Liverpool and provide an integrated streetscape appearance. Species selected in environmentally sensitive areas should be indigenous to the locality. However, Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access.	The proposal seeks to remove eleven (11) existing trees and replace them with a greater variety of vegetation. The proposed landscaping plan is reviewed by Council's Landscaping Officer, it is supported subject to conditions	Complies
	The landscaping shall contain an appropriate mix of canopy trees, shrubs and groundcovers. Avoid medium height shrubs (600 – 1800mm) especially along paths and close to windows and doors.	A mix of canopy trees and shrubs is proposed within the landscaping area.	Complies
	Landscaping in the vicinity of a driveway entrance should not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.	Vegetation provided within the front setback area will be arranged in a manner that does not obstruct visibility between the driveway and pedestrian pathway.	Complies
	Tree and shrub planting along side and rear boundaries should assist in providing effective screening to adjoining properties. The minimum height of screening to be provided is 2.5 to 3m at maturity.	The proposed shrub along the western side of the site has a maximum mature height of 1m. This is acceptable given that adequate setback distance is provided between the habitable rooms for the proposed dwelling and adjoining properties.	Non-compliant
	The development must be designed around significant vegetation on the site.	The proposal seeks to remove eleven (11) existing trees and replace them with a greater variety of vegetation. The proposed landscaping plan is reviewed by Council's Landscaping Officer, it is supported subject to conditions	Complies

	At least one tree shall be planted in the landscaped area. The tree must reach a mature height of over 8m.	One (1) canopy tree with a mature height of at least 8m is provided within the front and rear setback area for the proposed semi-detached dwellings.	Complies
	Trees adjacent to private open space areas and living rooms should provide summer shade and allow winter sun entry.	The proposed tree can provide shading during summer while allowing sunlight during winter.	Complies
	Any tree with a mature height over 8m should be planted a minimum distance of 3m from the building or utility services.	The proposed trees are planted more than 3m from the dwellings.	Compliant
	A landscape plan must be submitted to Council with the development application. Refer to Part 1 of the DCP.	A landscaping plan is submitted along with this application.	Complies
Fencing	To provide a clear transition between public and private areas.	Existing mesh fence is retained.	Complies
	To provide a visual element within the streetscape.	See above	Complies
	To ensure fencing enhances the streetscape.	See above	Complies
Primary Frontage	The maximum height of a front fence is 1.2m.	See above	Complies
	The front fence may be built to a maximum height of 1.5m if the fence is setback 1m from the front boundary with suitable landscaping in front of the proposed fence.	See above	Complies
	Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.	See above	Complies
	The front fence must be 30% transparent.	See above	Complies
	Front fences shall be constructed in masonry, timber, metal pickets and/or vegetation and must be compatible with the proposed design of the dwelling. 6. The front fence may be built to a maximum of 1.8m only if: <ul style="list-style-type: none"> The primary frontage is situated on a Classified Road. The fence is articulated by 1m for 50% of its length and have 	See above	Complies

	<p>landscaping in front of the articulated portion.</p> <ul style="list-style-type: none"> The fence does not impede safe sight lines from the street and from vehicles entering and exiting the site. 		
Secondary Frontage	Fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped.	The site does not have a secondary frontage.	N/A
	For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall may then be raised to a maximum of 1.8 m. The secondary setback is the longest length boundary.	The site does not have a secondary frontage.	N/A
Boundary Fences	The maximum height of side boundary fencing within the setback to the street is 1.2 m.	Existing mesh fence is retained.	Complies
	Boundary fences shall be lapped and capped timber or metal sheeting.	See above	Complies
7. Car parking and Access			
	Two car parking spaces shall be provided for each dwelling.	One (1) garage is proposed for the proposed semi-detached dwelling, with an additional car space provided in a stacked arrangement in front of the garage.	Complies
	One space per dwelling is permitted in front of the setback from the street frontage.	See above	Complies
	A car parking space is to be a minimum dimension of 2.5 x 5.5m.	The door linking the garage and the dwelling opens inwards and encroaches the garage space for both semi-detached dwellings. The opening direction of the door can be conditioned, so that the internal space is not impacted	Complies with condition
	A single garage is to be a minimum of 3 m wide internally and unobstructed.	See above	Complies with condition
	Kerbs shall be provided along the edge of all internal driveways.	None proposed	N/A

8. Amenity and Environmental Impact			
Overshadowing	Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least: - One living, rumpus room or the like. - 50% of the private open space.	Living areas and private open space of the adjoining properties will receive a minimum of three hours of sunlight between 9am and 5pm on 21 June. The shadows of the development fall towards the western side of the site and impact the neighbouring dwellings' private open space in the morning. By midday, shadows will fall towards the front of the site and does not affect solar access of the adjoining properties. In the afternoon, shadows are cast on the eastern side of the site and do not restrict solar access for the private open space for the adjoining properties	Complies
Privacy	Habitable room windows facing side boundaries are to be offset by at least 1m from any habitable room windows in an adjoining dwelling.	Habitable room windows facing side boundaries are offset by at least 1m from any habitable room windows in an adjoining dwelling.	Complies
	Habitable room windows on the first floor that face the side boundary are to avoid unreasonable overlooking by having a minimum sill height of 1.5m, except where they face a street or public open space.	Windows to habitable rooms on the first floor have a sill height of 1.5m, which minimises overlooking to adjoining properties.	Complies
	Building siting, window location, balconies and fencing must consider the importance of the privacy of on site and adjoining buildings and private open spaces.	Balconies are located to the front of the dwelling to avoid overlooking to adjoining properties. Windows to habitable rooms on the first floor are designed with a sill height of 1.5m to avoid overlooking.	Complies
	Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.	Landscaping are provided to the front, rear and western side of the site for privacy screening.	Complies
Acoustic Privacy	Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.	Noise generating rooms in each dwelling are located next door to each other as much as possible to mitigate noise between the dwellings.	Complies

	Developments in areas adversely impacted upon by rail or traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.	Not applicable	N/A
	Where party walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the Building Code of Australia.	The proposal is referred to Council's Building Officer for review, it is supported subject to conditions.	Complies
	The proposed buildings must comply with the Environment Protection Authority criteria and the current relevant Australian Standards for noise and vibration and quality assurance	The proposed development will not generate significant noise.	Complies
9. Site Services			
Letterboxes	Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post's requirements.	Letterboxes will be provided as per Australia Post specifications.	Complies
	Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.	See above.	Complies
	Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75mm in height, reflective and in contrast to the backing material.	See above.	Complies
Frontage works and damage to Council infrastructure	Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.	None proposed	N/A
	Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.	None proposed	N/A
	Where there are no existing street trees in front of the site and contributions have not been collected for street tree planting it may be a condition of consent that street trees be	None proposed	N/A

	provided in the footpath area immediately in front of the site.		
10. Secondary dwellings (Granny Flats)			
	Secondary dwellings are not permitted with semi-detached dwellings and Attached dwellings.	<p>An attached secondary dwelling is proposed on Lot 212, which is not permitted with semi-detached dwellings under Section 10 Secondary dwellings of Part 3.4 LDCP 2008. However, there are no objectives or further explanation/ controls listed under this section.</p> <p>Pursuant to LLEP 2008, secondary dwellings are permissible with consent within the R3 Medium Density Residential zone, along with semi-detached dwellings. There are no clauses under the LLEP 2008 which prohibit the development of secondary dwellings on a site that has a semi-detached dwelling. As the controls of a LEP prevail over that of a DCP, the secondary dwelling is permissible and considered to be an appropriate form of development on the site, given that the proposed development complies with floor space ratio and landscaping requirements.</p>	Non-compliant

Item Number:	2
Application Number:	DA-264/2018/C
Proposed Development:	<p>Modification of Development Consent DA-264/2018 as modified pursuant to Section 4.55(2) of the Environmental Planning and Assessment Act 1979.</p> <p>The modification seeks an increase in production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products.</p> <p>The original development has been previously approved as a Designated Development as specified in Schedule 3 of the Environmental Planning and Assessment Regulations 2000.</p> <p>The application is identified as Nominated Integrated Development requiring approval from the NSW Environmental Protection Authority pursuant to Protection of the Environment Operations Act 1997.</p> <p>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.</p>
Property Address	4 Ash Road Prestons
Legal Description:	Lot 8 DP241916
Applicant:	Renita Developments Pty Ltd
Land Owner:	Renita Developments Pty Ltd
Cost of Works:	Nil
Recommendation:	Approved subject to conditions of consent
Assessing Officer:	Emily Lawson

1 EXECUTIVE SUMMARY

Council has received a modification application, pursuant to Section 4.55(2) of the EP&A Act, 1979 to modify DA-264/2018 as modified, which was originally determined with consent issued for the:

Construction and opening of a concrete batching plant with associated site grading, earthworks, drainage, driveways, car parking, landscaping and extension to existing building.

This development consent has been subsequently modified by two (2) applications as follows:

- DA-264/2018/A amending the consent through modifications approving alterations and additions (as identified in the table above).
- DA-264/2018/B amending the consent through deletion of conditions relating to Environment Protection License requirements.

Proposed modifications are sought for the purpose of increasing the production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products.

The site is zoned E5 Heavy Industry pursuant to Liverpool Local Environmental Plan 2008 and the proposed development is permissible with consent.

The development application was advertised/notified for a period of 14 days from 18 May 2022 to 15 June 2022 in accordance with Liverpool Community Participation Plan 2019. No submissions were received during the public consultation period objecting to the proposed development.

The key issues associated with the proposal relate to amended environmental conditions being additional noise impact assessment and the relevantly submitted Acoustic Report, and the amended traffic conditions through servicing of larger vehicles to the site and the traffic impact assessment on the surrounding road network. After referral of the application to Council Environmental Health section, TfNSW and Council's Traffic Officers, the issues have been resolved through the applicant demonstrating that consistency with the original approval can be achieved on the site through the imposition of modified conditions of consent.

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 categories of:

- Designated Development (previously approved as).

This report concludes, on balance, the proposal has sufficient merit to be recommended for approval to the Liverpool Local Planning Panel, subject to the standard conditions attached to the recommendation.

2. SITE DESCRIPTION AND LOCALITY

2.1 The locality

The subject site is identified as Lot 8 DP241916, No. 4 Ash Road, Prestons. The site is an irregular shaped allotment with an overall site area of 16,186.7sqm. The site has a primary frontage towards Ash Road of 82.7sqm. Located within an existing industrial area, the site adjoins E4- General Industry and is within close proximity to E3- Productivity Support zoned land.



Figure 1: Aerial view of Subject site and immediate surrounding locality

3. BACKGROUND/HISTORY

A brief history of the modification application is presented below as are details of the originally approved development application and subsequently approved modification applications:

Current Application

Date	Details
04/02/2022	Modification Lodged
18/05/2022	Modification Advertised and Notified
13/12/2022	RFI Issued (Environmental Health Issues to be addressed)
16/02/2023	RFI Responded to by applicant
02/03/2023	Environmental Health Officer support provided

List of Previous Applications

Application No.	Lodged	Proposed Development	Determined
DA-264/2018	04/04/2018	<p>Construction and opening of a concrete batching plant with associated site grading, earthworks, drainage, driveways, car parking, landscaping and extension to existing building.</p> <p>The application is a Designated Development as specified in Schedule 3 of the Environmental Planning and Assessment Regulations 2000.</p> <p>The application is a Nominated Integrated Development requiring approval from the NSW Environmental Protection Authority pursuant to Protection of the Environment Operations Act 1997.</p>	Approved 11/03/2019
DA-264/2018/A	22/06/2020	<p>Modification to Development Application DA-264/2018 seeking the following alterations and additions:</p> <ul style="list-style-type: none"> - Addition of a Batch Control Room No. 2 and Store (First Floor) above approved chemical tank farm. - New staircase to Batch Control Room No. 2. - The overall height of the Concrete Batching Plant will be 25.755m. - Truck wash bay reduced in size and wastewater separator relocated to outside of truck wash area. - Additives Bunded Storage Area proposed increase in building height. - Three (3) additional inground aggregate bins - Extend the awning over recycling stirrer and truck loading area. - Extend the inground drainage in the truck loading area to the recycling stirrer. 	Approved 17/12/2020
DA-264/2018/B	06/08/2020	<p>Modification to Development Application DA-264/2018 under Section 4.55(1A) of the Environmental Planning and Assessment Act 1979 seeking to delete conditions relating to Environment Protection License requirements.</p>	Approved 18/03/21

Approvals pathway of previous applications

DA-264/2018

Designated Development DA with SEARS for 200,000 tonnes p/a concrete approved through Liverpool Local Planning Panel (LLPP) and Integrated Development with EPA and Department of Primary Industries and Water pursuant to the Water Management Act 2000.

DA-264/2018/A

Modification Application s4.55(1A) assessment by Council, which considered that as per EP&A Regs, amendments sought resulted in a modified development substantially the same as originally approved with minimal impact, and not additionally assessed designated development.

DA-264/2018/B

Modification Application s4.55(1a) assessment by Council, which considered that erroneous conditions of consent were applied relating to the originally applied EPA GTAs, and the consent conditions themselves provided clarity relating to noise emission limits and the need to obtain and comply with an EPA license. The application was referred to EPA who did not raise an issue to the proposed modification to conditions of consent.

4. DETAILS OF THE PROPOSAL

The approved use of the site is for:

A concrete batching plant with associated site grading, earthworks, drainage, driveways, car parking, landscaping and extension to existing building.

The subject modification application seeks an increase in production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products.

- No changes to operations in terms of hours or staff levels are proposed.
- No changes to the existing and approved built form are proposed (no changes to plans).
- The changes are reflected in the increased noise (Acoustic Report) and altered vehicle typology accessing the site at increased levels (Traffic Report).

The proposed modification of consent requires amendments to some conditions of consent and the addition of a condition of consent, as follows:

i) Original wording of Condition 1:

- f) *Proposed Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons-Acoustic Report for the Environmental Impact Statement (Ref: 2870/D10) prepared by Sebastian Giglio Acoustic Consultant dated 15th October 2018;*
- g) *Environmental Management Plan for Renita Developments 4 Ash Road, Prestons (Report No. 171164_EMP_Rep_Rev5) prepared by Benbow Environmental dated 5th October 2018;*

- i) *Environmental Risk Assessment Report for Renita Developments Pty Ltd 4 Ash Road, Prestons (Report No. 171164_ERA_Rev8) prepared by Benbow Environmental dated 19 November 2018;*
- k) *Air Quality Impact Assessment for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164_AQIA_Rev12) prepared by Benbow Environmental dated 5th October 2018; and*
- m) *Waste Management Plan for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164_Waste_Rev6) prepared by Benbow Environmental dated 5th October 2018;*

To be replaced by:

- f) *Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons- Acoustic report for the Environmental Impact Statement, Ref: 2870-D25A prepared by Sebastian Giglio Acoustic Consultant dated 22nd December 2021 amended 9th February 2023;*
 - g) *Environmental Management Plan for Renita Developments 4 Ash Road, Prestons (Report No. 171164-03_EMP_Rep_Rev3) prepared by Benbow Environmental dated 20th December 2021;*
 - i) *Environmental Risk Assessment Report for Renita Developments Pty Ltd 4 Ash Road, Prestons (Report No. 171164-03_ERA_Rev3) prepared by Benbow Environmental dated 20th December 2021;*
 - k) *Air Quality Impact Assessment for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164-03_AQIA_Rev3) prepared by Benbow Environmental dated 20th December 2021;*
 - m) *Waste Management Plan for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164-03_Waste_Rev3) prepared by Benbow Environmental dated 20th December 2021.*
- ii) Original wording of Condition 101:
- *Vehicles servicing the site shall comply with the following requirements:*
 - (a) *All vehicular entries and exits shall be made in a forward direction.*
 - (b) *All vehicles awaiting loading, unloading or servicing shall be parked on-site and not on adjacent or nearby public roads.*
 - (c) *All vehicles are to be wholly contained on site before being required to stop.*

To be replaced by:

- *Vehicles servicing the site shall comply with the following requirements:*

- (a) All vehicular entries and exits shall be made in a forward direction.
- (b) All vehicles awaiting loading, unloading or servicing shall be parked on-site and not on adjacent or nearby public roads.
- (c) All vehicles are to be wholly contained on site before being required to stop.
- (d) The number of heavy vehicles accessing/exiting the site is to be restricted to 20 movements during AM (7am – 9am) and PM (4pm – 6pm) peak hours to minimise the impact on surrounding road network.**

iii) Original wording of Condition 103:

- *The production capacity of the concrete batching plant shall not exceed 200,000 tonnes per annum of concrete and concrete products.*

To be replaced by:

- *The production capacity of the concrete batching plant shall not exceed **300,000** tonnes per annum of concrete and concrete products.*

iv) Original wording of Condition 117:

- n) *An acoustic report shall be prepared by a suitably qualified and experienced acoustic consultant and be submitted to Council for its assessment and approval within three (3) months of occupation/completion of the development. The report shall include but not be limited to the following information:*
 - (a) *Noise measurements taken at the nearest noise sensitive locations as indicated in the report titled 'Proposed Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons - Acoustic Report for the Environmental Impact Statement' (Ref: 2870/D10) prepared by Sebastian Giglio Acoustic Consultant dated 15th October 2018;*
 - (b) *Verification that noise levels at the nearest potentially affected receiver 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 shall 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, any recommendations provided under point d) above shall be implemented fully.*

To be replaced by:

- o) *An acoustic report shall be prepared by a suitably qualified and experienced acoustic consultant and be submitted to Council for its assessment and approval within three (3) months of the commencement of any increased capacity onsite that is above 200,000 per annum. The report shall include but not be limited to the following information:*

- (a) *Noise measurements taken at the nearest noise sensitive locations as indicated in the report titled 'Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons-Acoustic report for the Environmental Impact Statement, Ref: 2870-D25A prepared by Sebastian Giglio Acoustic Consultant dated 22nd December 2021 amended 9th February 2023'.*
- (b) *Verification that noise levels at the nearest potentially affected receiver 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 shall 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, any recommendations provided under point d) above shall be implemented fully.*

5. STATUTORY CONSIDERATIONS

5.1 Relevant matters for consideration

The application has been lodged pursuant to Section 4.55(2) of the Environmental Planning and Assessment Act 1979, which provides:

(2) Other Modifications involving minimal environmental impact

A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if:

- (a) *it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and*

Comment: The amendments proposed under section 4.55 (2) are not considered significant and relate to the modifications in increased operational capacity to which the existing site can accommodate, rather than any physical changes or modifications to the other operational aspects (staff / hours, etc.) of the existing concrete batching plant.

The proposed modification was referred to the EPA as Integrated development. They have raised no objections on the basis that the development was originally approved with GTAs, and subsequently modified subject to their approval, and can operate consistent with the previous approval. Council's Environmental Health Officers have confirmed support for the proposal subject to modified conditions of consent relating to noise emission.

Additionally, the application was also referred to TfNSW who has made suggestions that modified conditions of consent be considered, which have been adopted by Council's Traffic Officers with respect to number of truck movements during peak hours.

Further the modifications, subject of this application, have been considered against the relevant Environmental Planning Instruments (as originally assessed and subsequently transferred), Development Control Plans and other Council Codes, as follows:

- State Environmental Planning Policy (Infrastructure) 2007 - now *SEPP Transport and Infrastructure 2021*;
- State Environmental Planning Policy No.33 – Hazardous and Offensive Development - now *SEPP Resilience and Hazards 2021*;
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) - now *SEPP Resilience and Hazards 2021*;
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (now deemed SEPP) - now *SEPP Biodiversity and Conservation 2021*;
- Liverpool Local Environmental Plan (LLEP) 2008 ;
- Liverpool Development Control Plan (LDCP) 2008;
 - Part 1: General Controls for All Development; and
 - Part 7: Development in Industrial Areas

Based on the acknowledged detail in the updated Air Quality, Acoustic, Environmental Management, Environmental Risk, Traffic Impact, and Waste Management Reports, the modifications are unlikely to result in any unreasonable additional impact than originally assessed and approved.

Environmental Planning and Assessment Regulation 2000

In accordance with *Schedule 6 Savings, transitional and other provisions* of the Environmental Planning and Assessment Regulation 2021, the application modification was made and submitted before 1 March 2022 and as such *Environmental Planning and Assessment Regulation 2000* still applies as originally approved and subsequently modified.

In consideration of the Environmental Planning and Assessment Regulation 2000 (as at time of modification lodgement), the applicant has provided accurate and supportable assessment, consistent with Council's Environmental Health Officer recommendations for approval.

Additionally, the application has been referred as Integrated Development to the EPA and Department of Planning and Environment - Water who have both not raised concerns relating to any additional environmental impact as a result of the proposed modification application.

As such, on the basis of the discussion above the amendments sought are considered to result in a modified development, be substantially the same as originally approved, and not additionally assessed designated development.

(b) it has consulted with the relevant Minister, public authority or approval body (within the meaning of Division 4.8) in respect of a condition imposed as a requirement of a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted by the approval body and that Minister, authority or body has not, within 21 days after being consulted, objected to the modification of that consent, and

Comment: The relevant authorities required to be consulted were the Department of Planning and Environment – Water, EPA and TfNSW. This has occurred and it was confirmed there are no concerns with the proposal subject to TfNSW who has made suggestion adopted through modified conditions of consent, adopted by Council's Traffic Officers.

(c) it has notified the application in accordance with:

- (i) the regulations, if the regulations so require, or*
- (ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*

Comment: The section 4.55 application was advertised as integrated development and notified.

(d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be

Comment: No submissions were received.

6. ASSESSMENT

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

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

- (a) Liverpool Local Environmental Plan (LLEP) 2008**
- (i) Zoning**

The subject site is zoned E5-~~IN3~~ Heavy Industrial pursuant to the LLEP 2008.

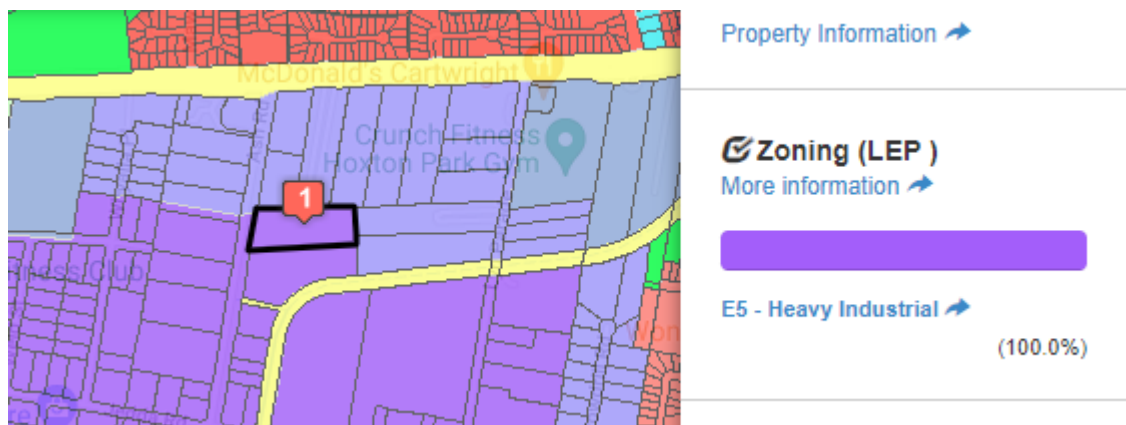


Figure 3: Extract of Zoning Map

(ii) Permissibility

The approved concrete batching plant was defined as 'general industry'. The proposed modifications are best described as a 'general industry' also.

general industry means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.

Note—

General industries are a type of **industry**—see the definition of that term in this Dictionary.

(iii) Objectives of the zone

Objectives of the E5 Heavy Industry Zone are;

- To provide areas for industries that need to be separated from other land uses.
- To ensure the efficient and viable use of land for industrial uses.
- To minimise any adverse effect of industry on other land uses.
- To encourage employment opportunities.
- To preserve opportunities for a wide range of industries and similar land uses by prohibiting land uses that detract from or undermine such opportunities.

The proposed use is considered consistent with the objectives of the E5 Heavy Industrial zone. The site is a suitable distance from more sensitive land uses, and is separated from these uses by major roads, any impacts on surrounding land uses are consistent with the expected use of within the zone.

(iv) Relevant LLEP 2008 Provisions

The LLEP 2008 contains a number of provisions, none of which are relevant to the proposed modification.

(a) State Environmental Planning Policy (Infrastructure) 2007 – (Now SEPP Transport and Infrastructure 2021)

The proposal was originally assessed to satisfy the relevant objectives and provisions of SEPP Infrastructure and was previously referred to TfNSW. As per the transferred provisions into the current SEPP this has again occurred with respect to the proposed modification with TfNSW suggestion adopted in modified conditions of consent as recommended by Council's Traffic and Transport Section, and any impact has been considered acceptable as originally approved.

(b) State Environmental Planning Policy No. 55 – Remediation of Land - (Now SEPP Resilience and Hazards 2021)

The proposal was originally assessed to satisfy the relevant objectives and provisions of SEPP 55, and no major modifications or any other operations on-site are proposed to alter this assessment into the transferred provisions of the current SEPP, therefore, it is considered the subject site remains suitable for the modified development.

(c) State Environmental Planning Policy No. 33 – Hazardous and Offensive Development – (Now SEPP Resilience and Hazards 2021)

The proposal was originally assessed to satisfy the relevant objectives and provisions of SEPP 33. No major modifications or any other operations on-site are proposed to alter this assessment other than through the increased noise emission and traffic generation, which has been quantified and received support from the EPA and TfNSW, Council's Environmental Health Officers, and Traffic and Transport Officers. It is considered that in applying Chapter 3 Part 3 as per the transferred provisions of the current SEPP, the subject site remains suitable for the modified development as follows:

Part 3 - Potentially hazardous or potentially offensive development

- 3.10 (1)(b) *The use remains a potentially offensive industry*
- 3.12 (a) *There are no current circulars or guidelines published by NSW Department of Planning relating to offensive development*
- 3.12 (b) *The EPA and TfNSW were consulted relating to environmental and land use safety requirements*

(d) Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (Deemed SEPP) – (Now SEPP Biodiversity and Conservation 2021)

The proposal was originally assessed to satisfy the relevant objectives and provisions of Greater Metropolitan Regional Environmental Plan No. 2 – Georges River, and no major

modifications are proposed to alter this assessment, therefore, it is considered that the subject site remains suitable for the modified development.

It is considered that the proposal satisfies the provisions of the current SEPP as transferred from the Regional Environmental plan as no physical works are proposed. That is also the basis for the application not requiring a referral to NRAR.

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

There are no draft Environmental Planning Instruments that apply to the site.

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

(a) Liverpool Development Control Plan (LDCP) 2008

Liverpool Development Control Plan 2008 is applicable to the proposed development. The proposed modification does not change any previous assessed aspect of the development, approved with respect to the relevant controls, from being contravened.

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

There are no Planning Agreements which apply to the development.

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

Under the provision of the EP&A Regulations 2000, Schedule 3 – Clause 7 details the regulatory requirements for ‘cement works’ as they pertain to Designed Development.

Clause 7 states the following:

‘7 Cement works

Cement works manufacturing portland or other special purpose cement or quicklime:

- (a) that burn, sinter or heat (until molten) calcareous, argillaceous or other materials, or*
- (b) that grind clinker or compound cement with an intended processing capacity of more than 150 tonnes per day or 30,000 tonnes per year, or*
- (c) that have an intended combined handling capacity of more than 150 tonnes per day, or 30,000 tonnes per year, of bulk cement, fly ash, powdered lime or other such dry cement product,*
- (d) that are located:*
 - (i) within 100 metres of a natural waterbody or wetland, or*
 - (ii) within 250 metres of a residential zone or a dwelling not associated with the development.’*

The approved development currently has a capacity of 200,000 tonnes per annum, with the modification seeking to increase this to 300,000 tonnes per annum.

Accordingly, the modification proposed is considered to be designated development.

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

(a) Natural Environment

There are unlikely to be any additional impacts to the natural environment beyond what was approved under the original DA. Environmental management conditions of consent are recommended to be modified to address the increase capacity proposed.

(b) Built Environment

The proposed development is unlikely to create any adverse impacts on the surrounding built environment and is unlikely to create any detrimental impacts on the adjoining properties or the locality and environmental management conditions of consent to be modified relate to approved documentation.

(c) Social Impacts and Economic Impacts

The proposed modifications are not considered likely to have a negative economic impact in the locality and are unlikely to generate any identifiable detrimental social impacts.

6.8 Section 4.15(1)(c) - The Suitability of the Site for the Development

The site is considered to be suitable for the proposed form of development as it has a size and dimensions capable of accommodating the increase capacity with adequate setbacks to surrounding properties, road and utility services infrastructure available, and no prohibitive environmental constraints.

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

Internal Referrals

DEPARTMENT	COMMENTS
Environmental Health Officers	Approval subject to conditions as modified.
Traffic Engineer	Approval subject to conditions as modified.

External Referrals

DEPARTMENT	COMMENTS
Environmental Protection Authority	No objection to the modification of consent.

TfNSW	Approval subject to modified condition of consent as suggested.
DPI - Water	No objection to the modification as no controlled activity approval required.

Community Consultation

The proposal was required to be advertised and notified from 18 May 2022 to 15 June 2022 in accordance with the provisions of the Liverpool Community Participation Plan 2019 and the EP&A Regulation 2000. No submissions were received.

6.8 Section 4.55(1)(e) –The Public Interest

The proposal is considered to be in the public interest.

7. Developer Contributions

Contributions are not applicable to industrial development in Prestons.

8. CONCLUSION

The application has been assessed having regard to the provisions of Section 4.55(2) of the EP&A Act 1979.

The proposed modification is permissible and complies with all relevant controls.

As per the findings of this assessment report, the development is considered to be substantially the same development as that originally approved.

9. RECOMMENDATION

The Liverpool Local Planning Panel as the consent authority grant Modification Consent for DA-264/2018/C for *an increase in production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products*, subject to the conditions outlined within Attachment 1.

ATTACHMENTS

1. Attachment 1 - Draft Section 4.55(2) Modification of Consent
2. Attachment 2- Acoustic report
3. Attachment 3 - Air Quality Report
4. Attachment 4 - Environmental Management Plan
5. Attachment 5 - EPA response

SECTION 4.55(2) MODIFICATION OF DEVELOPMENT CONSENT(In accordance with the provisions under Section 4.55 of the *EP&A Act 1979*)**ADDRESS: LOT 8 DP241916 - 4 ASH ROAD, PRESTONS NSW 2170****DESCRIPTION: MODIFICATION TO THE APPROVED CONSTRUCTION AND OPENING OF A CONCRETE BATCHING PLANT WITH ASSOCIATED SITE GRADING, EARTHWORKS, DRAINAGE, DRIVEWAYS, CAR PARKING, LANDSCAPING AND EXTENSION TO EXISTING BUILDING, CONSISTING OF -**

- a. An increase in production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products.

Reference is made to Modification Application DA-264/2018/C which seeks amendment to Development Consent DA-264/2018 as modified, issued for:

Construction and opening of a concrete batching plant with associated site grading, earthworks, drainage, driveways, car parking, landscaping and extension to existing building.

The application is a Designated Development as specified in Schedule 3 of the Environmental Planning and Assessment Regulations 2000.

The application is a Nominated Integrated Development requiring approval from the NSW Environmental Protection Authority pursuant to Protection of the Environment Operations Act 1997.

Modification Application DA-264/2018/C seeks consent for:

- An increase in production capacity at the approved concrete batching plant from 200,000 tonnes per annum to 300,000 tonnes per annum of concrete and concrete products.

Pursuant to Section 4.55(2) of the *Environmental Planning and Assessment Act 1979*, Council grants approval for the modifications sought. Accordingly, Development Consent DA-857/2020/B has been amended as follows:

1. **The following conditions of Development Consent DA-857/2020/B have been amended to read as follows (modifications in *italic bold font*):**

Approved Documents

1. Development the subject of this determination notice must be carried out strictly in accordance with the following plans/reports marked as follows:
 - a) Architectural drawings as prepared by Algorry Zappia & Associates Pty Ltd, Project No. P4976, as follows:



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170 **DX** 5030 Liverpool

All correspondence to Locked Bag 7064 Liverpool BC NSW 1871 **Call Centre** 1300 36 2170

Fax 9821 9333 **Email** lcc@liverpool.nsw.gov.au

Web www.liverpool.nsw.gov.au **NRS** 13 36 77 **ABN** 84 181 182 471

- i) Proposed Site Plan, Sheet No. A02, Issue K, dated 19.10.2020;
 - ii) Floor Plans, Sheet No. A03, Issue G, dated 4.12.2020;
 - iii) Elevations, Sheet No. A05, Issue G, dated 18.12.2019; and
 - iv) Section Plan, Sheet No. A04, Issue G, dated 28.04.2020.
- b) Stormwater Drainage Plans as prepared by Algorry Zappia & Associates Pty Ltd, Project No. P4976, as follows:
- i) Stormwater Drainage Concept Plan, Sheet No. D01, Issue C, dated 12.10.18;
 - ii) Catchment Plan & Displacement of Flood Volume, Sheet No. D02, Issue D, dated 12.10.18; and
 - iii) Sediment Control Concept Plan, Sheet No. D03, Issue C, dated 12.10.18.
- c) Landscape Plans as prepared by distinctive, Project No. 55-17, drawing number 55-17.00 to 55-17.03 (all inclusive), revision D, dated 20.02.18;
- d) Stage 1 Preliminary Site Investigation 4 Ash Road, Prestons NSW 2170 (Report Reference: 20-8500-01-LC, Revision 0 prepared by Clearsafe Environmental Solutions Pty Ltd dated 5th December 2017;
- e) Stage 2 Contamination Assessment at 4 Ash Road, Prestons (GTE1478-Stage 2 Contamination Report Rev 1 prepared by Ground Technologies Pty Ltd dated 27th August 2018
- f) **Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons-Acoustic report for the Environmental Impact Statement, Ref: 2870-D25A prepared by Sebastian Giglio Acoustic Consultant dated 22nd December 2021 amended 9th February 2023;**
- g) **Environmental Management Plan for Renita Developments 4 Ash Road, Prestons (Report No. 171164-03_EMP_Rep_Rev3) prepared by Benbow Environmental dated 20th December 2021;**
- h) Objection to DA-264/2018 Proposed Concrete Batching Plant, 4 Ash Road, Prestons Dust Control Measures (Ref: 171164_Let1) prepared by Benbow Environmental dated 24th September 2018;
- i) **Environmental Risk Assessment Report for Renita Developments Pty Ltd 4 Ash Road, Prestons (Report No. 171164-03_ERA_Rev3) prepared by Benbow Environmental dated 20th December 2021;**
- j) Construction Environmental Management Plan for Renita Developments Pty Ltd 4 Ash Road, Prestons (Report No. 171164_CEMP_Rev6) prepared by Benbow Environmental dated 5th October 2018;
- k) **Air Quality Impact Assessment for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164-03_AQIA_Rev3) prepared by Benbow Environmental dated 20th December 2021;**
- l) Arboriculture Assessment and Tree Management Plan as prepared by Horticultural Management Services, dated 1 March 2018;

- m) **Waste Management Plan for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW (Report No. 171164-03_Waste_Rev3) prepared by Benbow Environmental dated 20th December 2021.**
- n) Removal of UPSS at 4 Ash Road, Prestons (Ref: GTE1478-Val1) prepared by Ground Technologies Pty Ltd dated 28th November 2018. except where modified by the undermentioned conditions.

Vehicles servicing the site

101. Vehicles servicing the site shall comply with the following requirements:
- (a) All vehicular entries and exits shall be made in a forward direction.
 - (b) All vehicles awaiting loading, unloading or servicing shall be parked on-site and not on adjacent or nearby public roads.
 - (c) All vehicles are to be wholly contained on site before being required to stop.
 - (d) **The number of heavy vehicles accessing/exiting the site is to be restricted to 20 movements during AM (7am – 9am) and PM (4pm – 6pm) peak hours to minimise the impact on surrounding road network.**

Limits on Production

103. The production capacity of the concrete batching plant shall not exceed **300,000** tonnes per annum of concrete and concrete products.

Noise Limits

117. An acoustic report shall be prepared by a suitably qualified and experienced acoustic consultant and be submitted to Council for its assessment and approval within three (3) months of the commencement of any increased capacity onsite that is above 200,000 per annum. The report shall include but not be limited to the following information:
- (a) Noise measurements taken at the nearest noise sensitive locations as indicated in the report titled **'Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons-Acoustic report for the Environmental Impact Statement, Ref: 2870-D25A prepared by Sebastian Giglio Acoustic Consultant dated 22nd December 2021 amended 9th February 2023'**.
 - (b) Verification that noise levels at the nearest potentially affected receiver 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 shall 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, any recommendations provided under point d) above shall be implemented fully.

All other conditions of Development Consent DA-264/2018 as modified, remain unchanged.

Note: This determination notice is strictly for changes sought under Modification Application DA-264/2018/C. No approval is granted or implied for any other works / changes proposed to the submitted development.

ADVISORY NOTES:

- (a) Section 8.2 of the EP&A Act provides that an applicant may request that Council review the determination of the Modification Application (this does not relate to designated development or Crown development).

Section 244 of the EP&A Regulations provides that an application for review must be submitted within 28 days of the date of the determination, and Section 8.2 of the EP&A Act provides that an application cannot be reviewed/determined after 6 months of the date of determination.

- (a) Section 8.9 of the EP&A Act provides that an applicant who is dissatisfied with the determination of a Modification 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.
- (b) The Section 4.55 Modification Application does not extend the timeframe of the Development Consent initially granted by Council.
- (c) Modification of the Development Consent does not remove the need to obtain any other statutory consent necessary under the EP&A Act.

If you have any further enquiries, please contact Emily Lawson on the abovementioned contact details.



Sebastian Giglio

Acoustic Consultant

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Ref: 2870-D25A

Page 1 of 32

Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons – Acoustic Report for the Environmental Impact Statement

Building Acoustics: Sound Insulation, BCA Compliance, Offices, Studios, Auditoriums ♦
Noise: Transportation(road, rail, aircraft) ♦ Mechanical Services ♦ Domestic Airconditioning ♦
Environmental ♦ Occupational ♦ Industrial

22 December 2021
Amended: 9 February 2023

Report Prepared For:

Renita Developments Pty Ltd
C/
Algorry Zappia & Associates Pty Ltd
PO Box 825
Liverpool Business Centre NSW 1871
By Email: admin@algorryzappia.com.au

Report Prepared by:

Sebastian Giglio



Report Title: Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons
– Acoustic Report for the Environmental Impact Statement

Please note that this correspondence has only addressed the acoustical issues discussed. Other aspects of building design, such as fire-rating, structural and waterproofing considerations must be referred to others. All Figures are intended as Sketches showing intent for Acoustic purposes.

Table of Contents

1	Introduction	3
2	Project / Site Description.....	6
3	Noise Criteria	8
3.1	Noise Policy for Industry 2017.....	8
3.2	Background Noise Levels.....	9
3.3	Commercial and Industrial Noise Receivers	13
3.4	Road Traffic Noise	13
4	Noise Sources	14
5	Predicted Noise Levels.....	15
5.1	Noise Receivers.....	15
5.2	Noise Modelling Software.....	17
5.3	Noise Emission.....	18
5.4	Acoustic Recommendations	18
6	Road Traffic Noise	20
7	Conclusion.....	23
	Appendix A – Glossary of Terms.....	24
	Appendix B – Noise Logger.....	25
	Noise Logger Installation.....	25
	Noise Logger Graphs.....	29

1 INTRODUCTION

No. 4 Ash Road is the site of an existing concrete batching plant with approval from Liverpool City Council for production of up to 200,000 tonnes/annum. This Acoustic Report addresses a proposed increase to permissible production capacity of 300,000 tonnes/annum.

The plant operates 24/7. Concrete production and deliveries fall within this timeframe. Raw material deliveries to the site will take place between 6am and 6pm Monday to Friday and 6am to 1pm on Saturday.

This Acoustic Assessment is based on the following reference documents:

- Traffic Consultant's Report prepared by Stanbury Traffic Planning, 21-232, December 2021.
- EPA *Noise Policy for Industry* (NPI), which has replaced the EPA *Industrial Noise Policy* from October 2017.
- Architectural drawings prepared by Algorry Zappia & Associates Pty Ltd.

The development will have up to 302 truck movements per day.

Figure 1-1 shows an aerial view of the site and surroundings.

Figure 1-2 shows the relevant Land Zoning Map.

Figure 1-3 shows the Architectural Site Plan.

Figure 1-1 Site Aerial Photograph © Nearmap.com 2021

Nearest Potentially
Affected Residences

Site

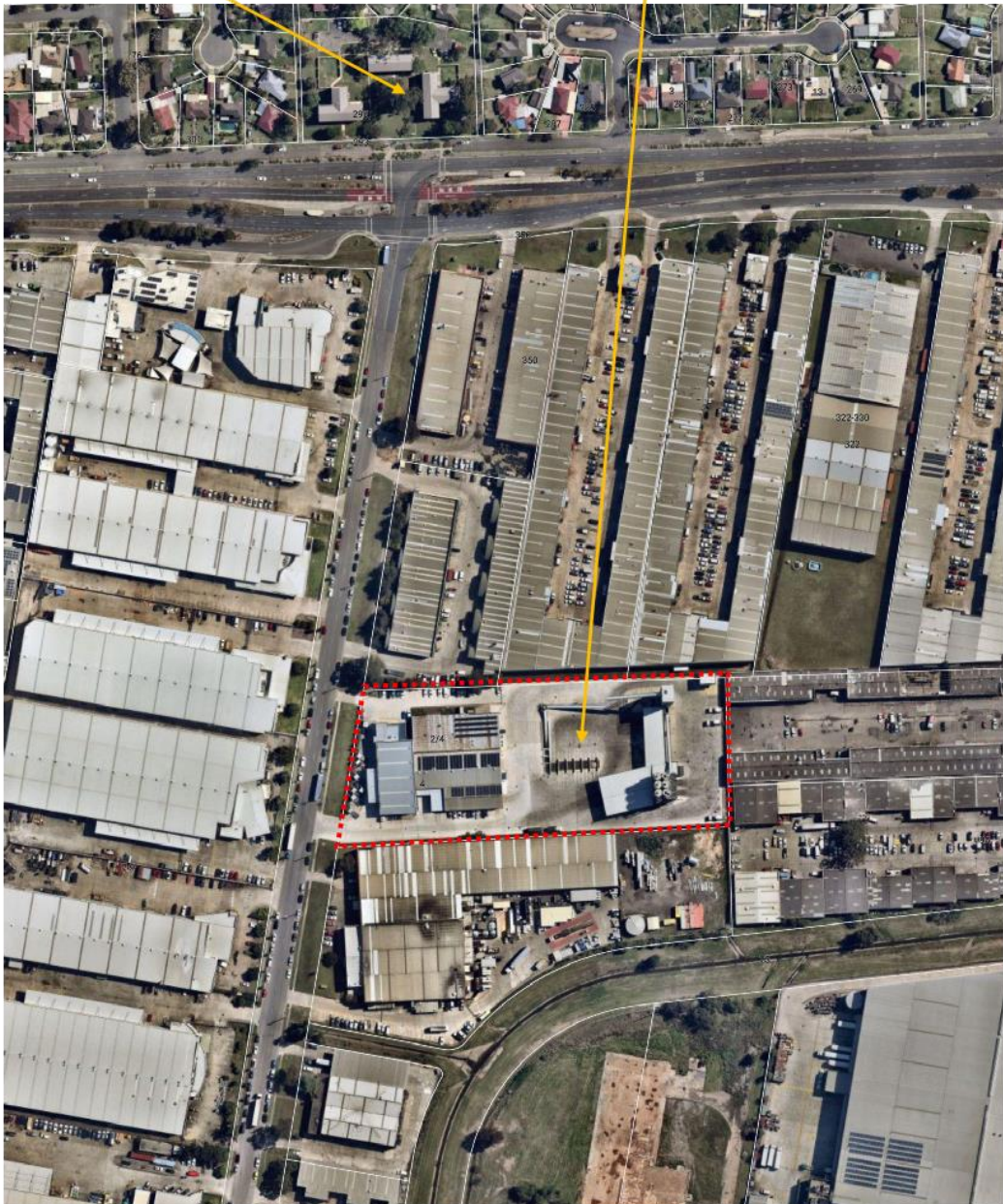


Figure 1-2 Land Zoning

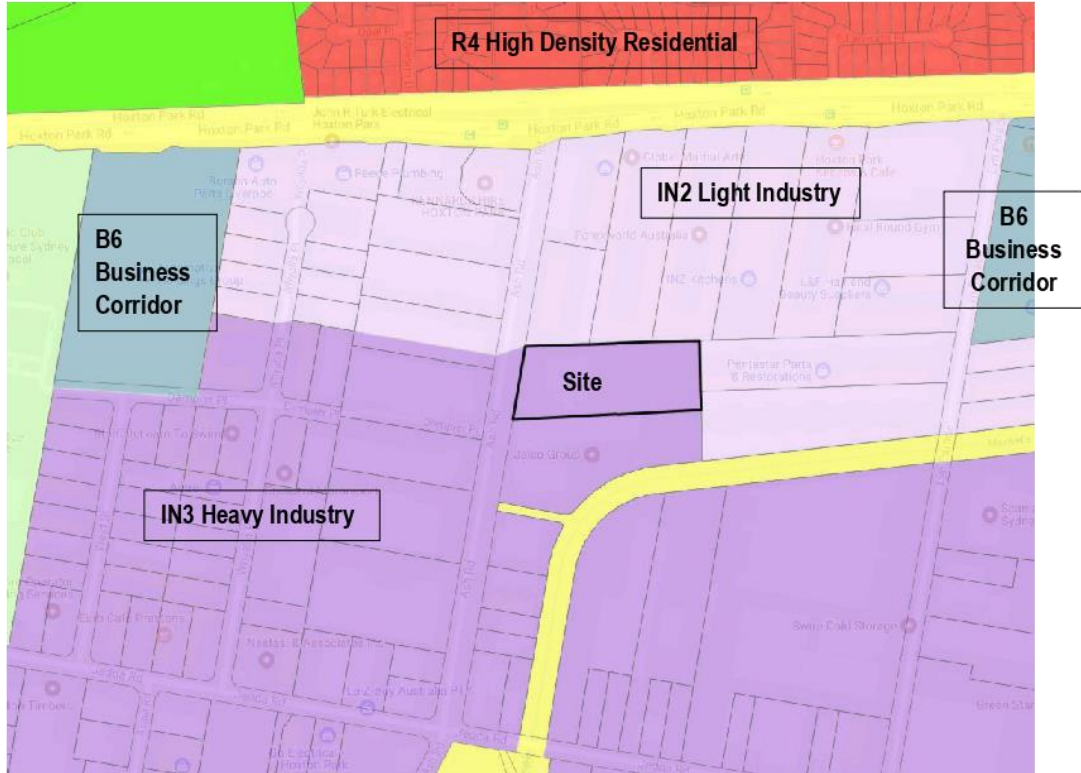
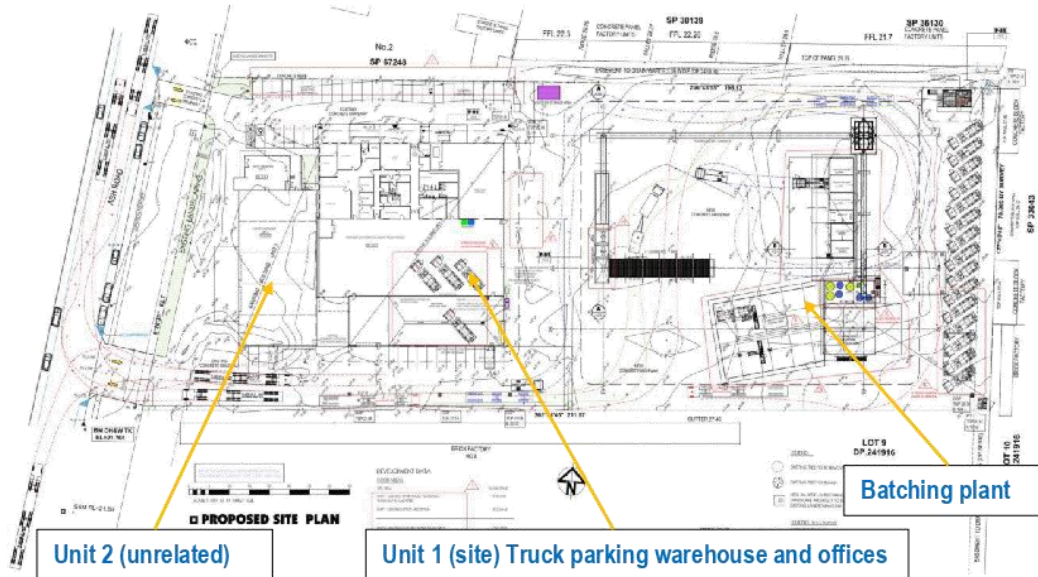


Figure 1-3 Site Plan



2 PROJECT / SITE DESCRIPTION

The subject development is a concrete batching plant located within an industrial area. The potentially nearest residences are around 300m to the north along Hoxton Park Road, a State Road – see Figure 1-1 and Figure 1-2.

The plant machinery will operate 24/7. Concrete deliveries from the site can also be 24/7 but are usually between 5am and 5pm. Raw material deliveries to the site will take place between 6am and 6pm Monday to Friday and 6am to 1pm on Saturday.

It is proposed plant will produce up to 300,000 tonnes of concrete per annum. This will require delivery of raw materials to site, approximately 76% of the delivery being aggregates, by weight, and 24% cement, which is then combined with water on site to produce the concrete.

There will be up to 302 total heavy vehicle movements per day (both directions), consisting of approximately 232 concrete agitator (mixer) trucks and 70 raw material delivery trucks. These are the number of truck trips travelling both to and from the site. For noise assessment purposes, the following time periods apply in the EPA guidelines:

For operational noise:

- Daytime, 7am to 6pm,
- Evening, 6pm to 10pm,
- Night-time, 10pm to 7am.

For road traffic noise generated by the development:

- Daytime, 7am to 10pm,
- Night-time, 10pm to 7am.

In this case, operational plant noise is potentially 24 hours. This consists of transferring raw materials from the underground storage to the elevated storage.

For the purposes of road traffic noise assessment, concrete trucks can leave the site during the night-time period, that is, prior to 7am. Raw materials start arriving at the site after 6am. Most of the concrete agitator trucks are owned by the site operator and so are kept on site overnight.

Of the 302 truck movements per day, it is expected that 80% of these will be during the daytime noise assessment period; that is, after 7am. Therefore, at most there would be around 20% – 60 truck movements – that would occur in the night-time period, prior to 7am.

Raw materials that are delivered to site are stored in underground bins. The raw materials are measured and delivered by conveyer to storage silos and bins up to 25m tall. The raw materials are then mixed and fed by hoppers into the concrete aggregator trucks. Two trucks can be filled at a time. The filling operation takes approximately 5 minutes.

The existing warehouse building on site will be used for minor service of trucks as well as the administration facilities. Towards the rear of the site (eastern half), are located the storage bins, silos, conveyer, truck parking, concrete control room and truck wash-down area. Heavy vehicles always travel on site in a forward direction and so there will be only minor instances of use of reverse alarms. Site trucks use the southern driveway.

There is an additional warehouse/office building at the front of the site, labelled Unit 2 in Figure 1-3. This is an unrelated business and not part of this Development Application.

3 NOISE CRITERIA

The *Noise Policy for Industry* (NPfI) has replaced the Industrial Noise Policy for assessment of commercial and industrial premises in NSW, from October 2017. There are substantial similarities between the two documents.

3.1 Noise Policy for Industry 2017

It is considered that for this assessment, the appropriate assessment methodology will be that provided in the EPA *Noise Policy for Industry* (NPfI) document. This sets a target cap on absolute noise levels (“amenity level”) as well as an “intrusiveness level” – “background + 5dBA”. Tonality and other adjustments are also applied where appropriate.

For residential noise receivers, the NPfI nominates two types of noise level to be used for assessment – amenity and intrusiveness – in each of three noise assessment periods. The more stringent level in each noise assessment period is the trigger level, which ideally should be complied with. The three noise assessment periods are daytime, evening and night-time (7am-6pm, 6pm-10pm and 10pm-7am). For commercial and industrial noise receivers, only an amenity level applies.

The intrusiveness noise level goal seeks to limit how “noticeable” a specific sound source is amongst an existing noise environment. To do this, it is necessary to identify the Rating Background Level (RBL), which is the “typical” background sound level – this is the sound level when the ambient noise environment is momentarily “quiet”, usually in the gaps between local car traffic. The intrusiveness noise level goal assesses the noise source over 15 minutes using the LAeq noise descriptor modified for any annoying characteristics that the noise source may have (such as tonality) and the trigger level is “RBL background + 5dBA”. The RBL is determined over a number of days and is a statistical description of the measured $L_{A90,15\text{-minute}}$ background sound levels during each of the daytime, evening and night-time periods. (See Appendix A for definition of the terms).

The amenity goal seeks to place an absolute limit on all “industrial” type noise sources affecting a noise sensitive receiver. The reason is that if a particular residential location, for example, is affected by three different businesses and they were each allowed to generate “background + 5dBA” then the total cumulative noise level would actually be 10dBA above the pre-existing background sound level instead of 5dBA. The amenity levels depend on the type of noise receiver (for example, “urban residential”, “suburban residential, “commercial”, “industrial”) – see Figure 3-1 and Figure 3-2.

3.2 Background Noise Levels

Existing ambient noise levels for Hoxton Park Road residences has been measured by this office for other projects – data for the most representative one of these is included in Appendix B. The other projects that were used for reference are listed below:

- 2822-D02 207-211 Hoxton Park Road, Cartwright – Acoustic and Traffic Noise Report, dated 15 March 2017
- 2830-D02 Proposed Residential Flat Building, Woolnough Place, Cartwright – Acoustic and Traffic Noise Report for the Development Application, dated 3 April 2017
- 2492-D02 Lot 6, No. 153 Access Road off Hoxton Park Road, Cartwright – Traffic Noise Report, dated 3 February 2014
- 2494-D02 Lot 100 DP 1126218 and Lot 1 DP 1148521 Hoxton Park Road, Hoxton Park – Traffic Noise Report, dated 20 December 2013

The RBL levels measured for these projects are very consistent – see Table 3-1 below.

Table 3-1 Summary of Ambient Noise Measurements along Hoxton Park Road

Site	Lot 6, 153 Hoxton Park Rd, Cartwright	616-618 Hoxton Park Rd, Hinchinbrook	209 Hoxton Park Rd, Cartwright	229 Hoxton Park Rd, Cartwright	Data Used for This project
Date	December 2013	December 2013	February 2017	March 2017	
Daytime, LA90,7am-6pm	53	52	53	55	53
Evening, LA90,6pm-10pm	53	52	50	53	50
Night-time, LA90,10pm-7am	40	41	42	45	42

It can be seen that even over a period of a number of years, there is a consistent pattern of background sound levels. The older projects (December 2013) were located further away from the receiver site for this project, as well as being further removed in time. Of the most recent projects (February and March 2017), the quieter of the two sites has been used for reference for this project.

See the ambient noise data in Appendix B.

It is considered that the noise logger data used for this project, from 209 Hoxton Park Road, is representative of the ambient noise data for the noise receiver location considered in this Acoustic Report, which is the group of residential buildings at and around 295 Hoxton Park Road.

These residences are categorised as “urban residential” based on the guideline in the NPfI. See Figure 3-1 below. Figure 3-2 provides the corresponding amenity levels.

Table 3-2 below summarises the noise criteria for residential noise receivers this project.

Table 3-2 Noise Goals for this project

Day / Time of Day	RBL	Intrusiveness Noise Level	Existing LAeq	EPA Urban Amenity Level	Project Specific Amenity	Most Stringent	Project Noise Level Goal
Daytime, 7am-6pm	53	58	66	60	55	Amenity	55
Evening, 6pm-10pm	50	55	65	50	50	Amenity (traffic-affected)	50
Night-time, 10pm-7am	42	47	62	45	47	Both Amenity and Intrusiveness and traffic-affected	47

- In this case, the Amenity Goal has been modified as follows:
 - In general, *Project Specific amenity noise level equals the recommended amenity noise level minus 5 dB(A) + 3dBA (to adjust for different assessment periods)*. In this case, noise from six rather than the EPA-default of three other additional business has been considered to contribute at the noise receiver location.
 - In areas of high traffic noise, which includes Hoxton Park Road, *High traffic project amenity noise level equals $L_{Aeq, period(traffic)}$ minus 15 dB(A)*
 - Where the existing LAeq levels at the residential receivers are dominated by traffic and the traffic noise is more than 10dBA above the EPA Amenity Level for that receiver area category, and the traffic noise is unlikely to decrease in future; then the EPA Guideline provides a method to modify the Amenity Goal. The project-specific Amenity Level is 15dBA below the measured LAeq traffic noise.
 - It is noted that for this project, industrial noise is not measurable at the noise receiver locations.

Figure 3-1 NPI 2017 Noise Receiver Categories

Table 2.3: Determining which of the residential receiver categories applies.

Receiver category	Typical planning zoning – standard instrument*	Typical existing background noise levels	Description
Rural residential	RU1 – primary production RU2 – rural landscape RU4 – primary production small lots R5 – large lot residential E4 – environmental living	Daytime RBL <40 dB(A) Evening RBL <35 dB(A) Night RBL <30 dB(A)	Rural – an area with an acoustical environment that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels. Settlement patterns would be typically sparse. Note: Where background noise levels are higher than those presented in column 3 due to existing industry or intensive agricultural activities, the selection of a higher noise amenity area should be considered.
Suburban residential	RU5 – village RU6 – transition R2 – low density residential R3 – medium density residential E2 – environmental conservation E3 – environmental management	Daytime RBL <45 dB(A) Evening RBL <40 dB(A) Night RBL <35dB(A)	Suburban – an area that has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. This area often has the following characteristic: evening ambient noise levels defined by the natural environment and human activity.
Urban residential	R1 – general residential R4 – high density residential B1 – neighbourhood centre (boarding houses and shop-top housing) B2 – local centre (boarding houses) B4 – mixed use	Daytime RBL > 45 dB(A) Evening RBL > 40 dB(A) Night RBL >35 dB(A)	Urban – an area with an acoustical environment that: <ul style="list-style-type: none"> • is dominated by 'urban hum' or industrial source noise, where urban hum means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources • has through-traffic with characteristically heavy and continuous traffic flows during peak periods • is near commercial districts or industrial districts • has any combination of the above.

Notes: *As cited in Standard Instrument – Principal Local Environmental Plan, New South Wales Government, Version 15 August 2014. RBL = rating background noise level.

Figure 3-2 NPI 2017 Amenity Noise Levels**Table 2.2: Amenity noise levels.**

Receiver	Noise amenity area	Time of day	L _{Aeq} , dB(A)	
(see Table 2.3 to determine which residential receiver category applies)			Recommended amenity noise level	
Residential	Rural	Day	50	
		Evening	45	
		Night	40	
	Suburban	Day	55	
		Evening	45	
		Night	40	
	Urban	Day	60	
		Evening	50	
		Night	45	
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks	See column 4	See column 4	5 dB(A) above the recommended amenity noise level for a residence for the relevant noise amenity area and time of day	
School classroom – internal	All	Noisiest 1-hour period when in use	35 (see notes for table)	
Hospital ward	internal	All	Noisiest 1-hour	35
	external	All	Noisiest 1-hour	50
Place of worship – internal	All	When in use	40	
Area specifically reserved for passive recreation (e.g. national park)	All	When in use	50	
Active recreation area (e.g. school playground, golf course)	All	When in use	55	
Commercial premises	All	When in use	65	
Industrial premises	All	When in use	70	
Industrial interface (applicable only to residential noise amenity areas)	All	All	Add 5 dB(A) to recommended noise amenity area	

Notes: The recommended amenity noise levels refer only to noise from industrial sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Types of receivers are defined as follows:

- rural residential – see Table 2.3
- suburban residential – see Table 2.3
- urban residential – see Table 2.3
- industrial interface – an area that is in close proximity to existing industrial premises and that extends out to a point where the existing industrial noise from the source has fallen by 5 dB or an area defined in a planning instrument. Beyond this region the amenity noise level for the applicable category applies. This category may be used only for existing situations (further explanation on how this category applies is outlined in Section 2.7)
- commercial – commercial activities being undertaken in a planning zone that allows commercial land uses
- industrial – an area defined as an industrial zone on a local environment plan; for isolated residences within an industrial zone the industrial amenity level would usually apply.

Time of day is defined as follows:

- day – the period from 7 am to 6 pm Monday to Saturday or 8 am to 6 pm on Sundays and public holidays
- evening – the period from 6 pm to 10 pm
- night – the remaining periods.

(These periods may be varied where appropriate, for example, see A3 in Fact Sheet A.)

In the case where existing schools are affected by noise from existing industrial noise sources, the acceptable L_{Aeq} noise level may be increased to 40 dB L_{Aeq(1hr)}.

Table 3-2 provides the noise goals for noise emission from the site. These are:

- 55dBA for daytime, 7am-6pm.
- 50dBA for evening, 6pm-10pm.
- 47dBA for daytime, 10pm-7am.

Since the plant machinery is proposed to operate 24/7, and the full plant operations – which includes deliveries – from 6am, the allowable noise emission goal at the residences, based on the EPA guidelines, is 47dBA.

3.3 Commercial and Industrial Noise Receivers

The overall EPA amenity levels at nearby industrial and commercial boundaries is 70dBA and 65dBA, respectively. In the NPI:

Project amenity noise level for industrial noise receivers equals recommended amenity noise level minus 5 dB(A) (plus 3dBA when assessed over 15 minutes and not the full noise assessment period)

The site adjoins other industrial premises. These other premises may be affected by noise from the subject site as well as other sites. Therefore, the allowable noise emission is 68dBA LAeq.

The nearest commercial premises are the B6 Business Corridor sites – see Figure 1-2:

- Liverpool Catholic Club and Mercure Hotel 500m to the west.
- Officeworks, Repco and similar businesses 300m to the east.

The noise goal at commercial boundaries is 5dBA lower than at industrial boundaries but these are much further away so that if the industrial boundary limit is satisfied then so will the commercial boundary limits.

3.4 Road Traffic Noise

The site will generate traffic on the surrounding road network as a result of trucks travelling to and from the site. The relevant assessment document is the EPA *Road Noise Policy* (RNP). See Section 6 of this Report.

4 NOISE SOURCES

Noise sources include:

- Delivery trucks for raw materials to the site. Sound Power Level 109dBA.
- Concrete agitator trucks for delivery of materials from the site to construction sites. These trucks leave the site full and return empty. Sound Power Level 109dBA.
- Concrete agitator trucks revving to mix water and check slump, 112dBA for 5 minutes.
- Hoppers and materials handling equipment. Sound Power Level 100dBA.
- Conveyor drive motors. Sound Power Level 96dBA.
- Conveyor. Sound Power Level 102dBA/100m. (This conveyor on this site will be 70m so 100dBA Sound Power Level).
- Truck wash down area.
- Within the existing building, minor truck service will take place. This will include use of hand tools and air compressors.

5 PREDICTED NOISE LEVELS

5.1 Noise Receivers

The nearest premises to the site are located within IN1 and IN3 Light and Heavy Industry land zoning areas, respectively.

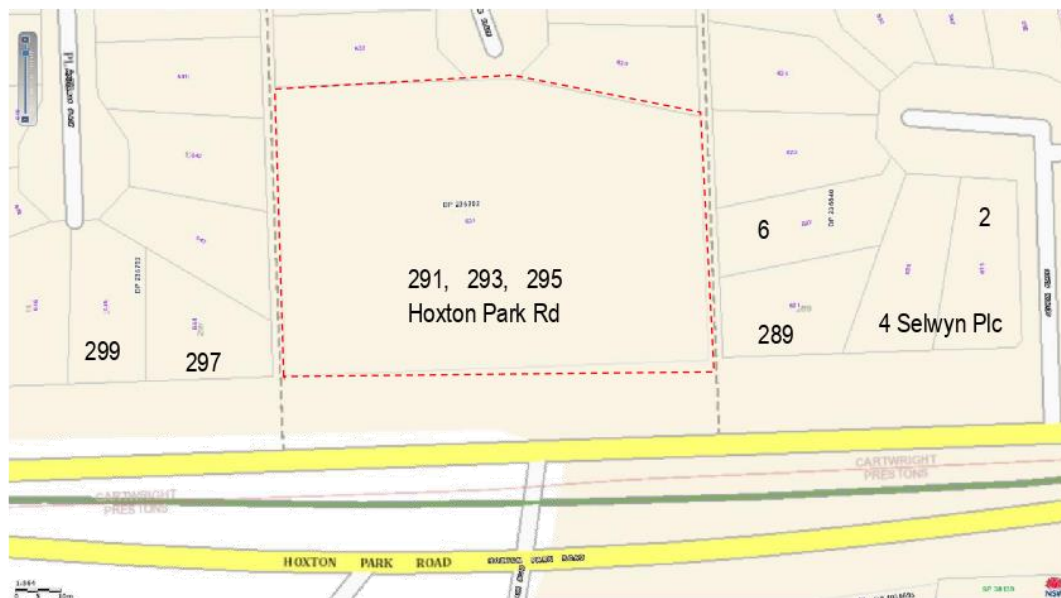
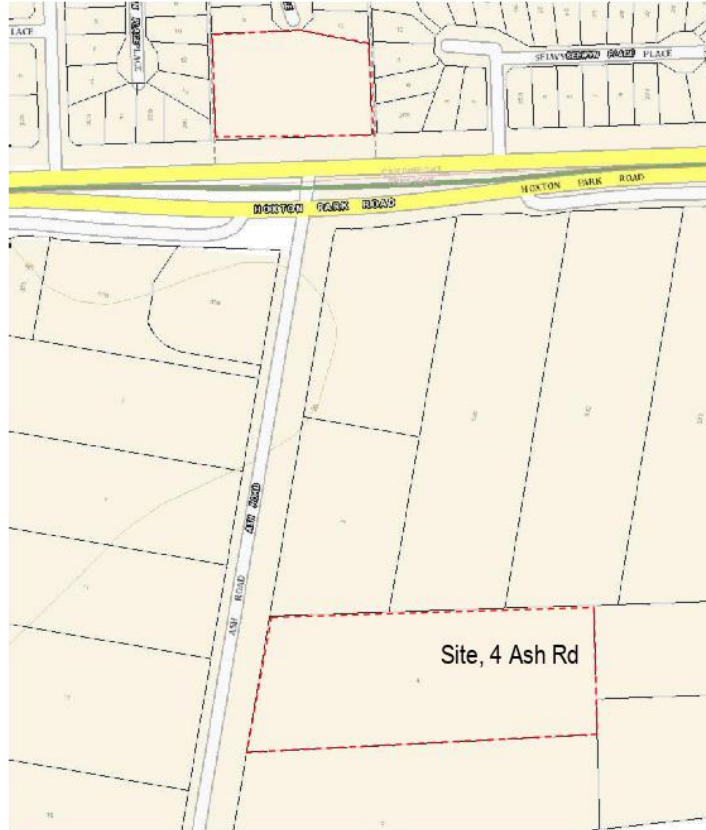
The nearest residential premises to the site are located 288m (boundary to boundary) to the north of the subject site, along the northern side of Hoxton Park Road. These nearest residential premises include:

- 289 Hoxton Park Road, Cartwright.
- The three residential flat buildings at 291, 293 and 295 Hoxton Park Road, Cartwright.
- 297 Hoxton Park Road, Cartwright.

The residential building at 295 Hoxton Park Road has been used for acoustic calculation purposes as being the representative noise receiver location for all of the nearest residences to the subject industrial site. The noise receiver height used for acoustic calculations was 7.5m as these are three-storey buildings.

See Figure 5-1 overleaf.

Figure 5-1 Nearest Residential Noise Receivers © NSW Lands Department



5.2 Noise Modelling Software

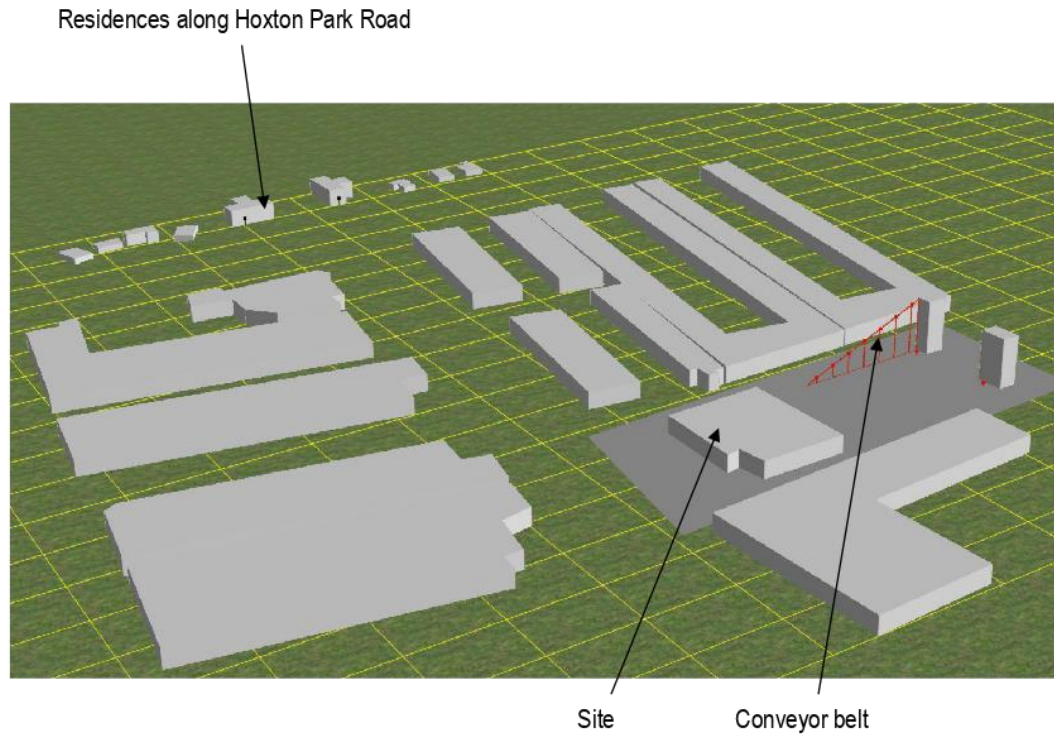
Acoustic calculations that have been carried out using iNoise Environmental Noise Modelling Software, based on the latest architectural proposal. The software implements calculation methods outlined in ISO 9613 and has been tested to conform to the software requirements of ISO 17354. The software is based on the following Standards:

- ISO 9613-1 *Acoustics – Attenuation of sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere*
- ISO 9613-2:1996 *Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation*
- ISO/TR 17534-3:2015 *Acoustics -- Software for the calculation of sound outdoors -- Part 3: Recommendations for quality assured implementation of ISO 9613-2 in software according to ISO 17534-1*

The modelling was done using the following settings:

- Default software calculation settings were used including standard temperature, pressure and humidity, hard ground and acoustically reflective surfaces generally.

Figure 5-2 shows some screenshots from the iNoise software.

Figure 5-2 Some Screenshots from iNoise

5.3 Noise Emission

Concrete batching plants have been measured for other projects and the site overall noise is a Sound Power Level of 115dBA LAeq.

The predicted noise emission to the residences is 46dBA. This complies with the noise goal of 47dBA.

The predicted noise emission to the neighbouring industrial sites is 60dBA. This complies with the goal of 68dBA.

5.4 Acoustic Recommendations

There are no specific acoustic recommendations made in this Report. However, good practice noise mitigation measures should be implemented, including the following:

- Using self-cleaning weigh hoppers
- Enclosing compressors and pumps
- Fitting silencing devices to all pressure operated equipment
- Lining hoppers with a sound absorbing material such as rubber
- Sealing roads and plant site with concrete or bitumen
- Fitting efficient muffling devices to all engines
- Using visual alarms in preference to audible alarms
- Using a personal paging service or two-way radios instead of hooters to gain attention of staff
- Weighing fine aggregates before coarse aggregates
- Storing aggregates below ground level where possible. This is the methodology that will be used on this site.

6 ROAD TRAFFIC NOISE

The Traffic Consultant has determined a peak daily heavy vehicle traffic generation for production of 300,000tonnes/annum (average of 25,000 tonnes/month). This is a maximum of up to 302 truck movements associated with the site per day (155 out and 147 inbound). This consists of:

- Approximately 70 aggregate, sand and cement delivery vehicles.
- Approximately 232 concrete agitator trucks.

For noise assessment purposes, the following traffic pattern has been used:

- 80% of all truck movements occur in the daytime period of 7am-10pm. This is 242 trucks.
- 20% of all truck movements occur in the night-time period of 10pm-7am. This is 60 trucks.
- The traffic Consultant has indicated a 50/50 split of heavy vehicles to the north and south of the site along Ash Road. This indicates half pass the residences along Hoxton Park Road.

The EPA *Road Noise Policy* (RNP) has the guidelines shown in Figure 6-1. Item 3 is the relevant item in this case; “additional traffic ... generated by land use developments”. It is note that the relevant road category for Hoxton Park Road is that of an *arterial road*.

This office has been advised by the relevant other consultants that there are two traffic routes proposed for this development:

1. Straight from Ash Road to Hoxton Park Road (300m to the north of the site), Cowpasture Road towards the west and the M7 ramps.
2. Ash Road, Jedda Road to the south of the site, Joadja Road, Bernera Road and M7 ramps.

In this case, the residences that are potentially affected are those on Route 1 on Hoxton Park Road.

The predicted traffic noise levels along Hoxton Park Road, generated by this development are as follows:

- 56dBA $L_{Aeq,15\text{-hour}}$ for daytime. Goal is 60dBA.
- 50dBA $L_{Aeq,9\text{-hour}}$ for night-time. Goal is 55dBA.

The truck noise at the residences along Hoxton Park Road was calculated using iNoise environmental noise software using a moving noise source. The truck noise levels for $L_{Aeq,9\text{-hour}}$ were calculated using a Sound Power Level of 109dBA for a concrete agitator truck, an average speed of 60km/hour along Hoxton Park Road and a straight 2km road with the residential noise receivers in the middle, at the appropriate sideline distance.

Existing traffic noise levels for Hoxton Park Road residences has been measured by this office for other projects – for example, see this Acoustic Report:

- 2822-D02 207-211 Hoxton Park Road, Cartwright – *Acoustic and Traffic Noise Report*, dated 15 March 2017

For reference, the measured traffic noise levels were from 24 February to 2 March 2017. The levels were:

- 66dBA $L_{Aeq,15\text{-hour}}$ for daytime.
- 62dBA $L_{Aeq,9\text{-hour}}$ for night-time.

It is noted that existing traffic levels along Hoxton Park Road exceed the predicted levels by a wide margin.

Figure 6-1 EPA Road Noise Policy

2.3 Noise assessment criteria

2.3.1 Noise assessment criteria – residential land uses

Table 3 sets out the assessment criteria for residences to be applied to particular types of project, road category and land use. These criteria are for assessment against façade-corrected noise levels when measured in front of a building façade as recommended in **Table 7**. In **Table 3**, freeways, arterial roads and sub-arterial roads are grouped together and attract the same criteria.

Table 3 Road traffic noise assessment criteria for residential land uses

Road category	Type of project/land use	Assessment criteria – dB(A)	
		Day (7 a.m.–10 p.m.)	Night (10 p.m.–7 a.m.)
Freeway/arterial/sub-arterial roads	1. Existing residences affected by noise from new freeway/arterial/sub-arterial road corridors	L _{Aeq} , (15 hour) 55 (external)	L _{Aeq} , (9 hour) 50 (external)
	2. Existing residences affected by noise from redevelopment of existing freeway/arterial/sub-arterial roads	L _{Aeq} , (15 hour) 60 (external)	L _{Aeq} , (9 hour) 55 (external)
	3. Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments		
Local roads	4. Existing residences affected by noise from new local road corridors	L _{Aeq} , (1 hour) 55 (external)	L _{Aeq} , (1 hour) 50 (external)
	5. Existing residences affected by noise from redevelopment of existing local roads		
	6. Existing residences affected by additional traffic on existing local roads generated by land use developments		

Note: Land use developers must meet internal noise goals in the Infrastructure SEPP (Department of Planning NSW 2007) for sensitive developments near busy roads (see **Appendix C10**).

The predicted truck noise for this site is within the EPA/RMS traffic noise guidelines of L_{Aeq} 60dBA and 55dBA for daytime and night-time, respectively.

7 CONCLUSION

This investigation has concluded that the noise generated by the proposed 300,000 tonnes/annum concrete batching plant will comply with the relevant noise goals, based on EPA guidelines. This assessment has included consideration of site noise emission and the generated traffic noise along Hoxton Park Road.

APPENDIX A – GLOSSARY OF TERMS

Most locations where ambient noise is studied are affected by environmental noise which varies continuously, largely as a result of nearby and distant road traffic. To describe the overall noise environment, a number of noise descriptors are used. These involve sampling the varying sound level for a defined time period (e.g. 15 minutes, or from 7am to 6pm). Statistical and other analysis of the varying sound level are carried out. These descriptors are described below.

Sound Level Descriptor	Explanation
Maximum Noise Level (L _{Amax})	The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.
L _{A1}	The L _{A1} level is the noise level which is exceeded for 1% of the sample period. During the sample period, the noise level is below the L _{A1} level for 99% of the time.
L _{A10}	The L _{A10} level is the noise level which is exceeded for 10% of the sample period. During the sample period, the noise level is below the L _{A10} level for 90% of the time. The L _{A10} is a common noise descriptor for environmental noise and road traffic noise.
L _{Aeq}	The equivalent continuous sound level (L _{Aeq}) is the energy average of the varying noise over the sample period and is equivalent to the level of a constant noise which contains the same energy as the varying noise environment. (In simple terms it is the average sound level). This descriptor is usually used to measure environmental noise and road traffic noise.
L _{A90}	The L _{A90} level is the noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below the L _{A90} level for 10% of the time. This measure is commonly referred to as the background noise level.
ABL	The Assessment Background Level is the single figure background level representing each assessment period (day, evening and night) for each day. It is determined by calculating the 10 th percentile (lowest 10 th percent) background level (L _{A90}) for each period.
RBL	The Rating Background Level for each period is the median value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period, day, evening and night.
SEL or L _{AE}	Single Event (noise) Level. This is a shorthand means to describe the acoustic energy of a noise event. Technically it is the same acoustic energy compressed to fit into 1 second; i.e. L _{Aeq} + 10 x Log (duration in seconds of the noise event).

APPENDIX B – NOISE LOGGER

Noise Logger Installation

A noise logger was installed at the front of the property at 209 Hoxton park Road, Cartwright, in order to monitor traffic noise levels. See the photographs below.

The noise logger site is 900m to the east of the putative noise receiver site for this project. Both sites are subject to regular heavy traffic noise along Hoxton Park Road. It is considered, based on the Author's experience, that this noise logger is representative of noise levels at the receiver site for this project.

Figure B1 Site Aerial Photograph © Nearmap.com 2017 (207-211 Hoxton park Road)



● Noise Logger Location

A noise logger was installed at the front of the property in order to monitor traffic noise levels. See the photograph below.

Figure B2 Noise logger installed at front boundary of the site



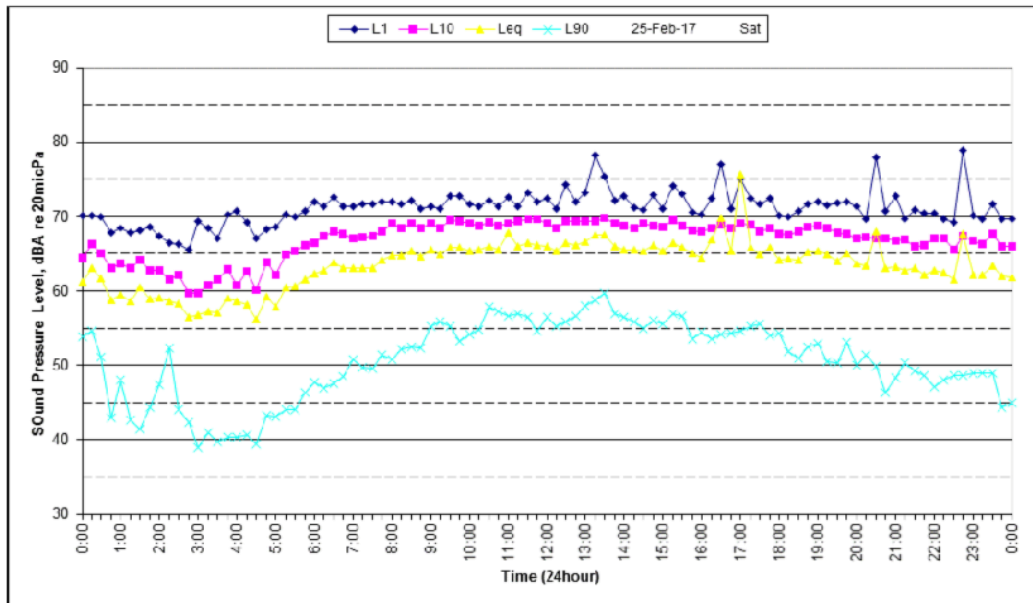
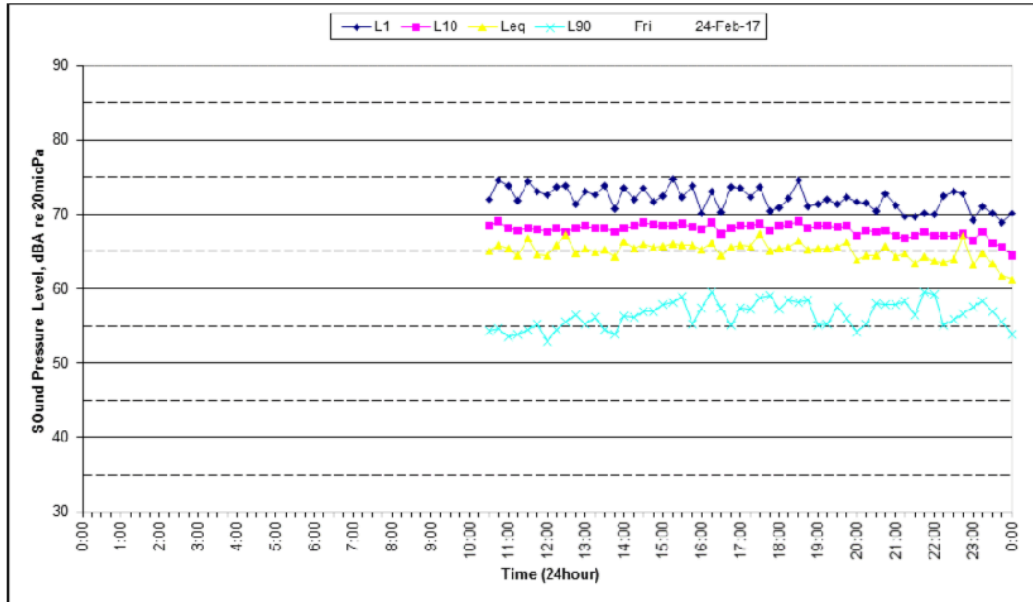
An NTi Audio XL2 Acoustic Analyser was used for this project. The device was set to 15-minute sampling periods, A-weighted and fast response. This equipment continuously monitors noise levels and stores statistical noise level descriptors for each sampling period. The equipment calibration was checked before and after the survey and no significant drift was noted.

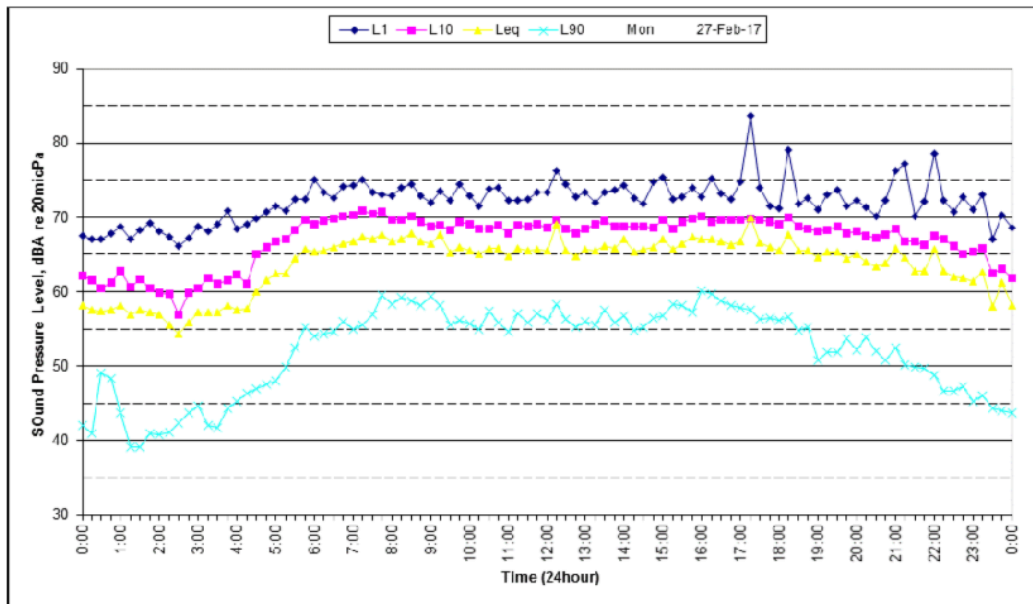
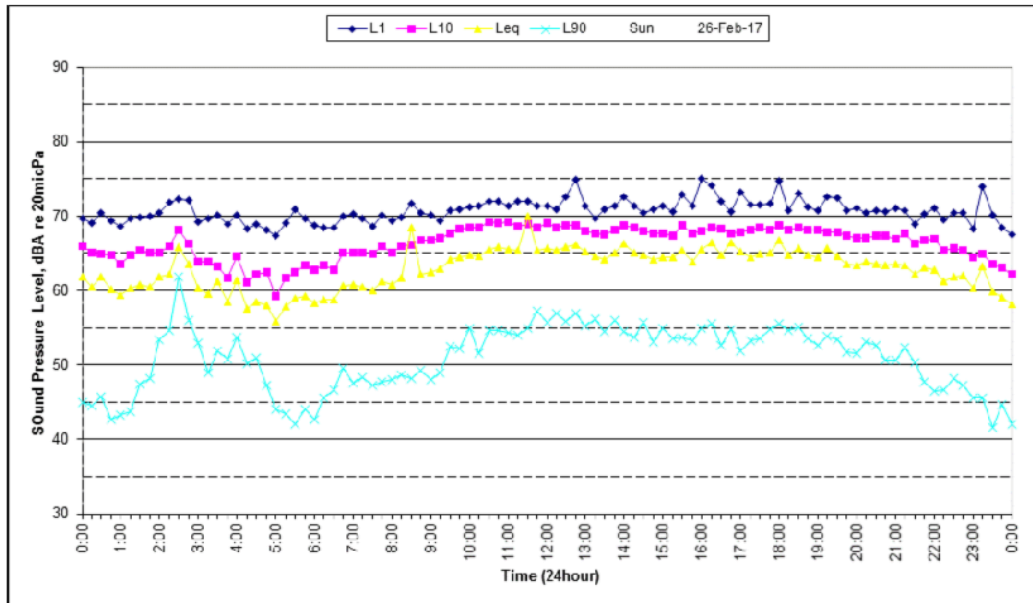
The logger determines L_{A1} , L_{A10} , L_{A90} and L_{Aeq} levels of the ambient noise. L_{A1} , L_{A10} and L_{A90} are the levels exceeded for 1%, 10% and 90% of the sample time, respectively. The L_{A1} is indicative of maximum noise levels due to individual noise events such as the occasional pass-by of a heavy vehicle or aircraft. The L_{A90} level is normally taken as the background

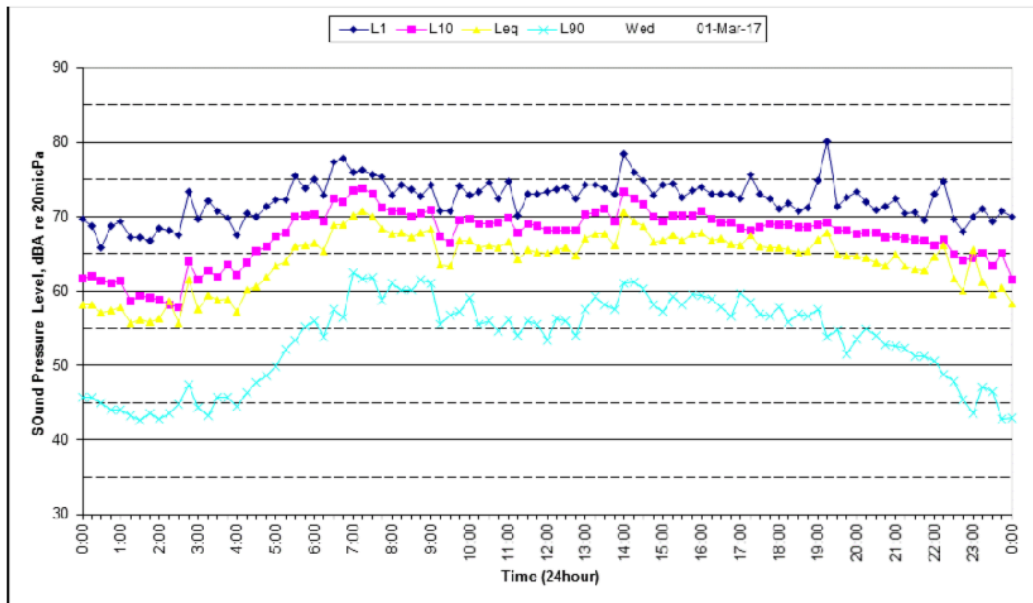
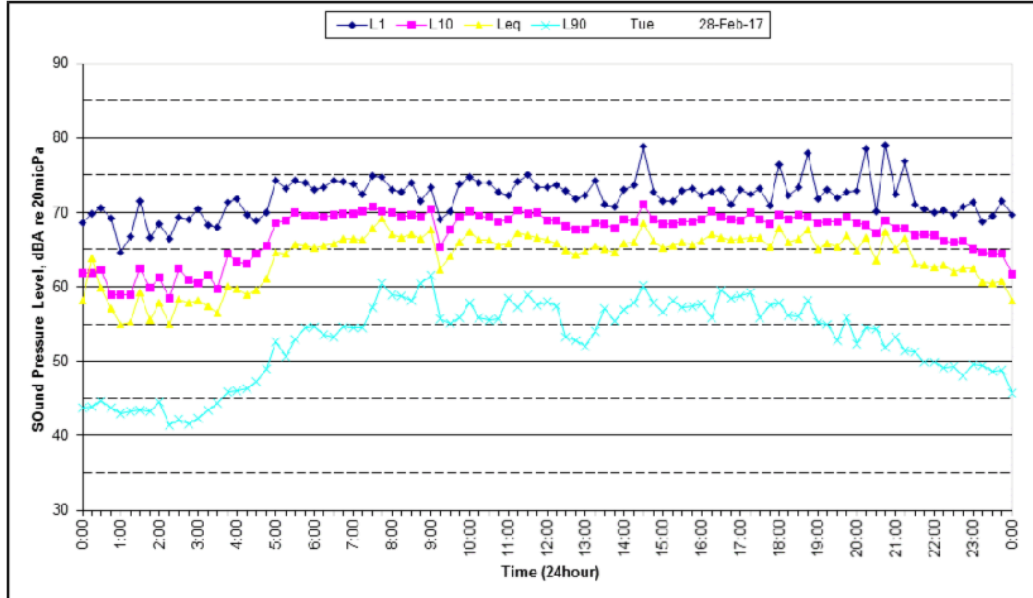
noise level during the relevant period. L_{Aeq} is the energy-average sound level during the measurement; in simple terms it can be thought of as the average sound level.

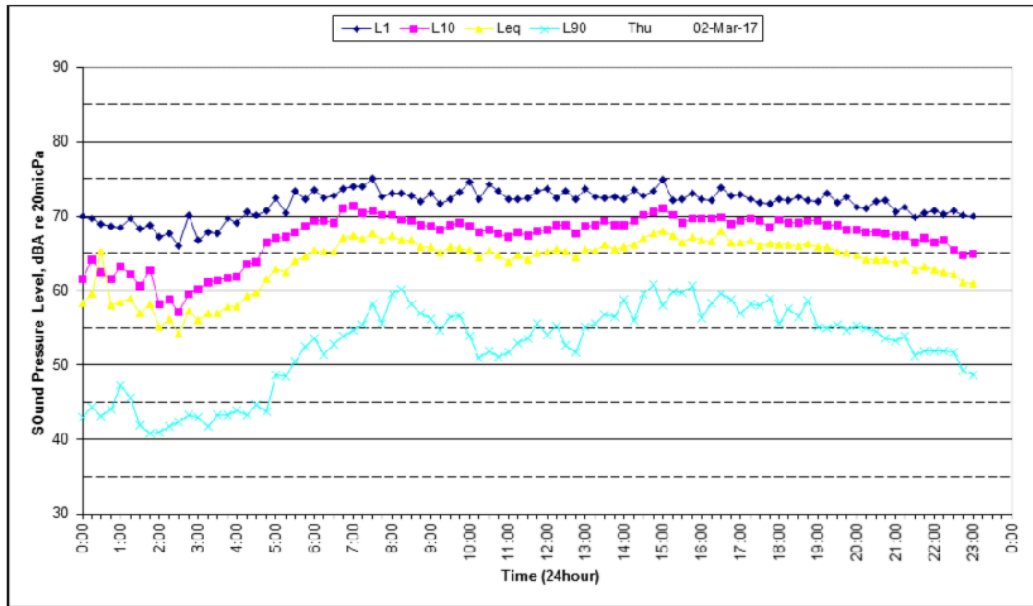
The graphical results of the noise logging are shown on the following pages.

Noise Logger Graphs









**AIR QUALITY IMPACT ASSESSMENT
FOR RENITA DEVELOPMENTS PTY LTD
4 ASH ROAD, PRESTONS NSW**

Prepared for: Renita Developments Pty Ltd

Prepared by: Kate Barker, Senior Environmental Scientist
R T Benbow, Principal Consultant

Report No: 171164-03_AQIA_Rev3
December 2021
(Released: 20 December 2021)



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Contents	Page
1. INTRODUCTION	1
2. SITE DETAILS	2
2.1 Site Location	2
2.2 Land Use of Site and Surroundings	3
2.3 Nearest Sensitive Receptors	5
3. DESCRIPTION OF THE PROPOSAL	8
3.1 Site and Process Description	8
3.2 Air Quality Impact Mitigation and Monitoring Measures	11
4. METEOROLOGY AND LOCAL AIR QUALITY	14
4.1 Project Site Representative Meteorological Data	14
4.1.1 WRF	14
4.1.2 AERMET	14
4.2 Wind Rose Plots	14
4.2.1 Local Wind Trends	15
4.3 Terrain and Structural Effects on Dispersion	17
4.4 Local Air Quality	18
5. AIR IMPACT ASSESSMENT	19
5.1 Emission Sources	19
5.2 Adopted Criteria and Guidelines	19
5.3 Adopted Emission Factors	20
5.3.1 Reduction Factors	22
5.4 Emission Rates	23
6. AIR IMPACT MODELLING	24
6.1 Dispersion Model	24
6.1.1 Meteorological Data	24
6.2 Source Configurations and Parameters	24
6.2.1 Assumptions	24
6.2.2 Emission Sources Modelled	24
6.3 Air Impact Modelling Results	27
6.3.1 Maximum Impacts at Sensitive Receptors	27
6.3.2 Predicted Days of Cumulative Exceedance	33
6.4 Discussion of Modelling Results	34
6.4.1 Residential Receptors	34
6.4.2 Industrial Receptors	34
7. SITE VISIT	35
8. STATEMENT OF POTENTIAL AIR QUALITY IMPACTS	36
9. REFERENCES	37
10. LIMITATIONS	38

Tables	Page
Table 2-1: Nearest Sensitive Receptors	5
Table 4-1: Summary of 2016 Data for PM _{2.5} and PM ₁₀ from Liverpool Air Quality Monitoring Station.	18
Table 5-1: Applicable Particulate Criteria at Sensitive Receptors from the NSW EPA Modelling Guidelines	20
Table 5-2: Emission Factors for PM ₁₀ from NPI EETM for Concrete Batching and Concrete Products 1999	20
Table 5-3: US EPA AP-42 Generalised Particle Size Distribution for Mechanically Generated Aggregate, Unprocessed Ores	21
Table 5-4: ASTM Particle Size Distribution for Portland cement powder ¹	21
Table 5-5: Calculated Emission Factors for TSP and PM _{2.5} Based on Particle Size Distributions	22
Table 5-6: Reduction Factors for PM ₁₀ for Concrete Batching Activities from NPI EETM for Concrete Batching and Concrete Products	22
Table 5-7: Emission Reduction Factors Applied to NPI EETM Emission Factors	23
Table 6-1: Summary of Emission Sources	26
Table 6-2: TSP Annual Averaging Period Modelling Results	28
Table 6-3: PM ₁₀ Annual Averaging Period Modelling Results	29
Table 6-4: PM _{2.5} Annual Averaging Period Modelling Results	30
Table 6-5: PM ₁₀ 24 Hour Averaging Period Modelling Results	31
Table 6-6: PM _{2.5} 24 Hour Averaging Period Modelling Results	32
Table 6-7: Summary of Top Ten Days of Contemporaneous PM ₁₀ Impact and Background at Residential Receptor R1 (<i>Approved Methods</i> Criterion = 50 µg/m ³)	33
Table 6-8: Summary of Top Ten Days of Contemporaneous PM _{2.5} Impact and Background at Residential Receptor R1 (<i>Approved Methods</i> Criterion = 25 µg/m ³)	33
Figures	Page
Figure 2-1: Aerial Photograph of the Local area	2
Figure 2-2: Aerial of the Site	3
Figure 2-3: Liverpool Council LEP 2008 Land Use Zoning Map	4
Figure 2-4: Aerial Photograph of the Project Site Location and the Nearest Potentially Affected Receptors	7
Figure 3-1: Concrete Batching Process Flow Diagram from NPI " <i>Emission Estimation Technique Manual (EETM) for Concrete Batching and Concrete Product Manufacturing</i> (NPI DEH, 1999).	9
Figure 3-2: Site Plan with Operational Features	10
Figure 3-3: Example of the In Ground Bin Foundation Plans	12
Figure 3-4: In Ground Bin Plans - Details	13
Figure 4-1: Wind Rose Plots for the Referenced Meteorological Station – Bankstown Airport, Bureau of Meteorology (2016)	16
Figure 4-2: Local Topography of Site, Factor of 10 Vertical Exaggeration	17
Figure 6-1: TSP Annual Averaging Period Modelling Results	28
Figure 6-2: PM ₁₀ Annual Averaging Period Modelling Results	29
Figure 6-3: PM _{2.5} Annual Averaging Period Modelling Results	30
Figure 6-4: PM ₁₀ 24 Hour Averaging Period Modelling Results	31

Figure 6-5: PM_{2.5} 24 Hour Averaging Period Modelling Results

32

Attachments

Attachment 1: Wind Rose Plots for the Referenced Meteorological Station – Bankstown Airport, Bureau of Meteorology 2010, 2011, and 2014 – 2016.

Attachment 2: Long-term Climate Statistics for the Referenced Meteorological Station – Bankstown Airport, Bureau of Meteorology



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Air Quality Impact Assessment



1. INTRODUCTION

Benbow Environmental has been engaged by Renita Developments Pty Ltd to undertake an Air Quality Impact Assessment (AQIA) to support a Modification Application for an increase in production from 200,000 tonnes p.a. to 300,000 tonnes p.a. for the existing concrete batching plant located at 4 Ash Road, Prestons.

This AQIA has been prepared in accordance with the NSW EPA guidelines "*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*" (2016) (AMMAAP), which shall henceforth be referred to as the *Approved Methods*.

This AQIA uses existing air quality data to establish the background levels of dust and particulates. This background data is then combined with the predicted levels resulting from the proposed increased operations of the concrete batching plant to assess the cumulative air quality impacts.

This assessment provides an updated report to include previously assessed quantities of the existing development. As such, the methodology regarding the assessment of the residential and industrial receptors remains consistent with the assessment for the approved and existing development.

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Air Quality Impact Assessment



2. SITE DETAILS

This section presents the site location, a description of the site and surrounds and a description of the existing development on the site.

2.1 SITE LOCATION

The subject site is located at 4 Ash Road, Prestons NSW, and is legally described as Lot 8 in DP 241916. The site is located 4 km south-west of Liverpool and 31 km south-west of the Sydney CBD within the Liverpool Local Government Area. Figure 2-1 shows an aerial photograph of the local area. Figure 2-2 shows an aerial photograph of the site.

Figure 2-1: Aerial Photograph of the Local area



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Figure 2-2: Aerial of the Site



2.2 LAND USE OF SITE AND SURROUNDINGS

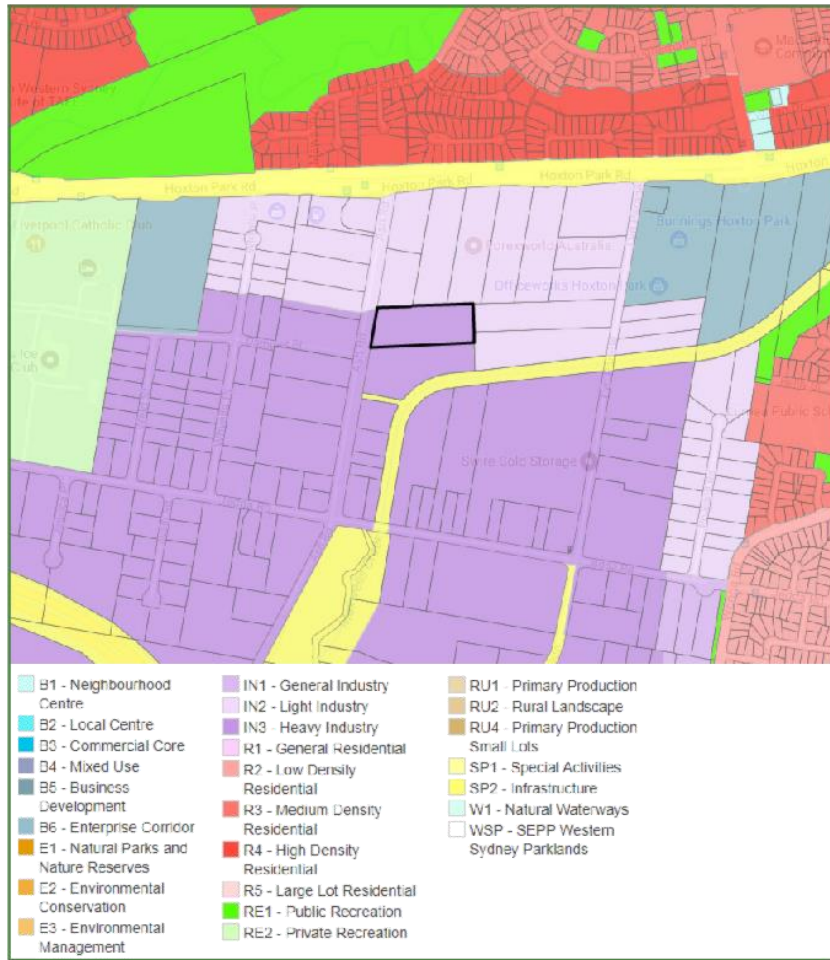
The surroundings are a mix of heavy and light industry, with the nearest residential area located 488 m to the north. The nearest school, the South Western Sydney Institute of TAFE, is located 883 m to the north-west. The Westlink M7 motorway is located less than 1 km south-west of the site, and Hoxton Park Road is 300 m to the north.

The site is within the Prestons Employment Lands Precinct and the land is zoned as 'IN3 Heavy Industry' under the Liverpool Local Environmental Plan (LEP) 2008 as shown in Figure 2-3.

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Figure 2-3: Liverpool Council LEP 2008 Land Use Zoning Map



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2.3 NEAREST SENSITIVE RECEPTORS

Table 2-1 lists the location of representative potentially affected receivers that are considered in this assessment. These are shown in Figure 2-4.

Table 2-1: Nearest Sensitive Receptors

Receptors	Address	Lot	DP	Approximate Distance to Development (m)	Direction	Description
R1	289 Hoxton Park Road Cartwright	621	236840	488	N	Residential
R2	8 Wedge Place, Lurnea	13	240822	840	NE	Residential
R3	19 Facey Crescent, Lurnea	41	215559	741	E	Residential
R4	1 Supply Avenue, Lurnea	16	243876	1075	SE	Residential
R5	2 Aspen Close, Prestons	1	876139	1350	S	Residential
R6	30 Latina Circuit, Prestons	231	876283	1564	SW	Residential
R7	21 Twentieth Avenue, Hoxton Park	2	510863	1727	W	School ¹
R8	152 Banks Road, Miller	3	1042706	883	NW	School ²
R9	17 Ash Road, Prestons	8	1209738	35	W	Industrial
R10	11 Ash Road, Prestons	9	1209738	35	W	Industrial
R11	2 Ash Road, Prestons	Null	SP 67248	Adjacent	N	Industrial
R12	340 Hoxton Park Road, Prestons	Null	SP 38139	Adjacent	N	Industrial
R13	332 Hoxton Park Road, Prestons	Null	SP 36130	Adjacent	N	Industrial
R14	322 Hoxton Park Road, Prestons	12	1036695	Adjacent	N	Industrial
R15	7 Lyn Parade, Prestons	Null	SP 33043	Adjacent	E	Industrial
R16	9 Lyn Parade, Prestons	10	241916	20	NE	Industrial
R17	6 Ash Road, Prestons	9	241916	Adjacent	S	Industrial

1. Good Shepherd Catholic Primary School

2. South Western Sydney Institute of TAFE

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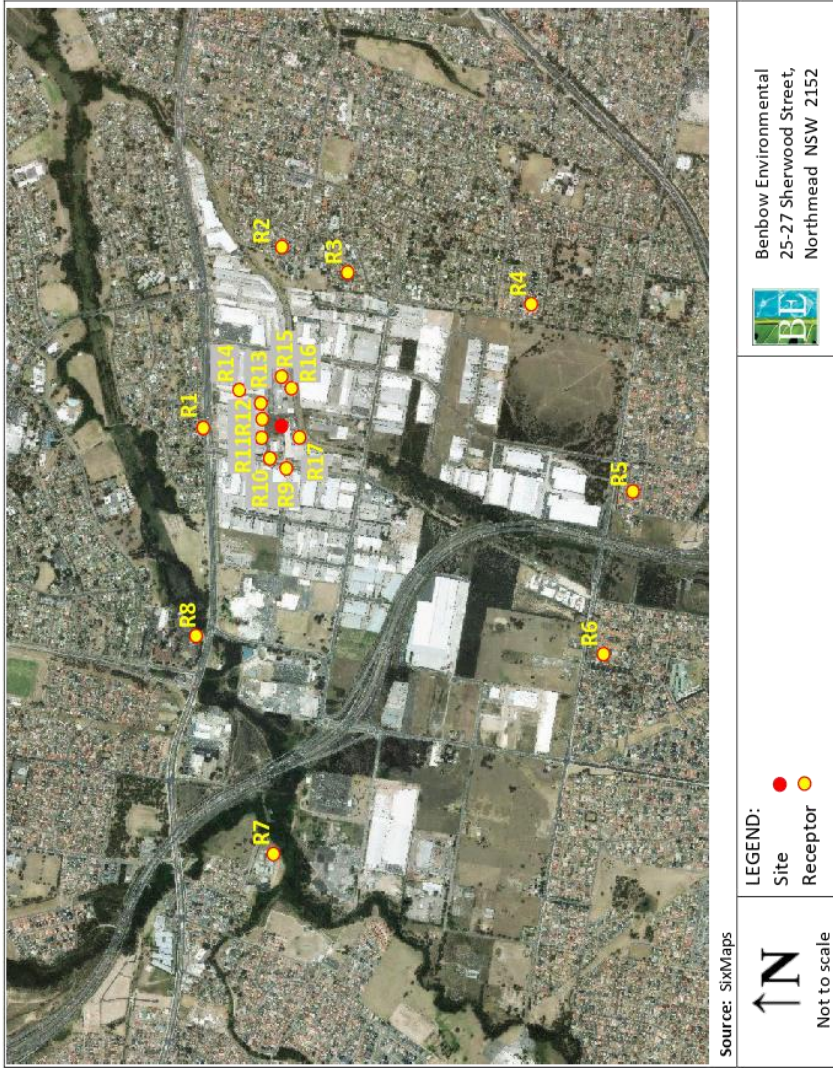


The air quality guidelines protect the health of the residential community and consider the need to protect the health of children, the elderly, and the infirm. These guidelines are not applicable to workers on industrial premises; however, it can be informative to include industrial receptors in air quality dispersion models to gain a better understanding of the air quality impacts of the site activities on adjacent businesses.



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Figure 2-4: Aerial Photograph of the Project Site Location and the Nearest Potentially Affected Receptors



Ref: 171164-03_AQIA_REV3
December 2021



3. DESCRIPTION OF THE PROPOSAL

This section of the report discusses the existing operation of the site and the proposed increased capacity. Figure 3-2 shows the layout of the site. A description of the process is provided below and a process flow chart is shown in Figure 3-1.

3.1 SITE AND PROCESS DESCRIPTION

The main activity at the site is concrete batching, with a proposed maximum amount of 300,000 t.p.a (230,000 tonnes of aggregate and sand, and 70,000 tonnes of cement) to be processed into ready-mix concrete per annum.

The concrete batching plant is located in the rear of the site behind the existing building. Access to the site is via the southern driveway. Nine (9) 50 tonne in-ground raw material bins are provided for the receipt of aggregates and sands. Material from the in-ground bins is transferred via conveyors to the north, then east into a 1000 tonne elevated aggregate bin with eight (8) compartments. From the aggregate bin, material is transferred from weigh hoppers to another conveyor belt leading south, to the fully-enclosed batching house. Cement and powders are delivered to the six (6) silos located above the batching house. The aggregates, sand, cement, and powder are transferred from weigh hoppers to the batching house and partially mixed with water in the concrete trucks. The concrete trucks then move to the slump stands where more water is added in the concrete trucks until the right consistency is achieved. Trucks then leave the site to deliver the mixed concrete.

Aggregate Unloading and Storage

Aggregates and sand are unloaded from delivery trucks directly into the in-ground raw material bins located on the site. Windbreak walls are located between each of the six in-ground bins. From here, sand and aggregates are released to a partially-enclosed conveyor belt that starts underground beneath the bins and transfers the material to elevated aggregate storage bins.

Cement Unloading and Storage

Cement and fly ash are delivered to the site in bulk road tankers. Each tanker connects to a pipeline and pneumatically transfers the material from the bulk tanker into the overhead storage silos. The truck engine powers a compressor or blower to pressurise the bulk tanker and cause the product (cement, fly ash, or Eco Cem) to be transferred. This process is entirely enclosed.

Weighing and Batching

The aggregates and sands are transferred from the elevated storage bins into weigh hoppers that weigh specified quantities of each material and are then transferred to the holding hoppers within the batching plant via a conveyor.

The mix of cement, fly ash and Eco Cem are metred from the silos using air slides into a "cement weigh hopper". The aggregate, sand, cement, fly ash, and Eco Cem are then combined with recycled water and additives inside the agitator truck.

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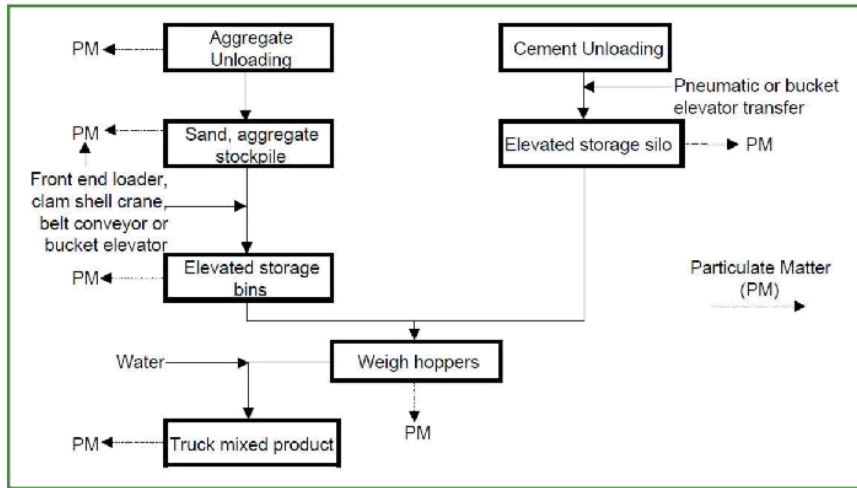
Mixing

The materials are released into an agitator truck located within an enclosed building of the site known as the batching house. Up to two (2) agitator trucks can mix cement at one time. The process of weighing and mixing fine powdered materials takes place in an entirely enclosed building, known as the batching house.

Slump Stand

After the materials are mixed in the barrel of the agitator truck, the agitator truck is driven forward out of the batching house to a slump stand. Here, the driver adds water until the slump is the correct consistency. During this process the barrel is continuously rotated. The agitator truck then departs the site for transport of the concrete to its destination.

Figure 3-1: Concrete Batching Process Flow Diagram from NPI "Emission Estimation Technique Manual (EETM) for Concrete Batching and Concrete Product Manufacturing (NPI DEH, 1999).

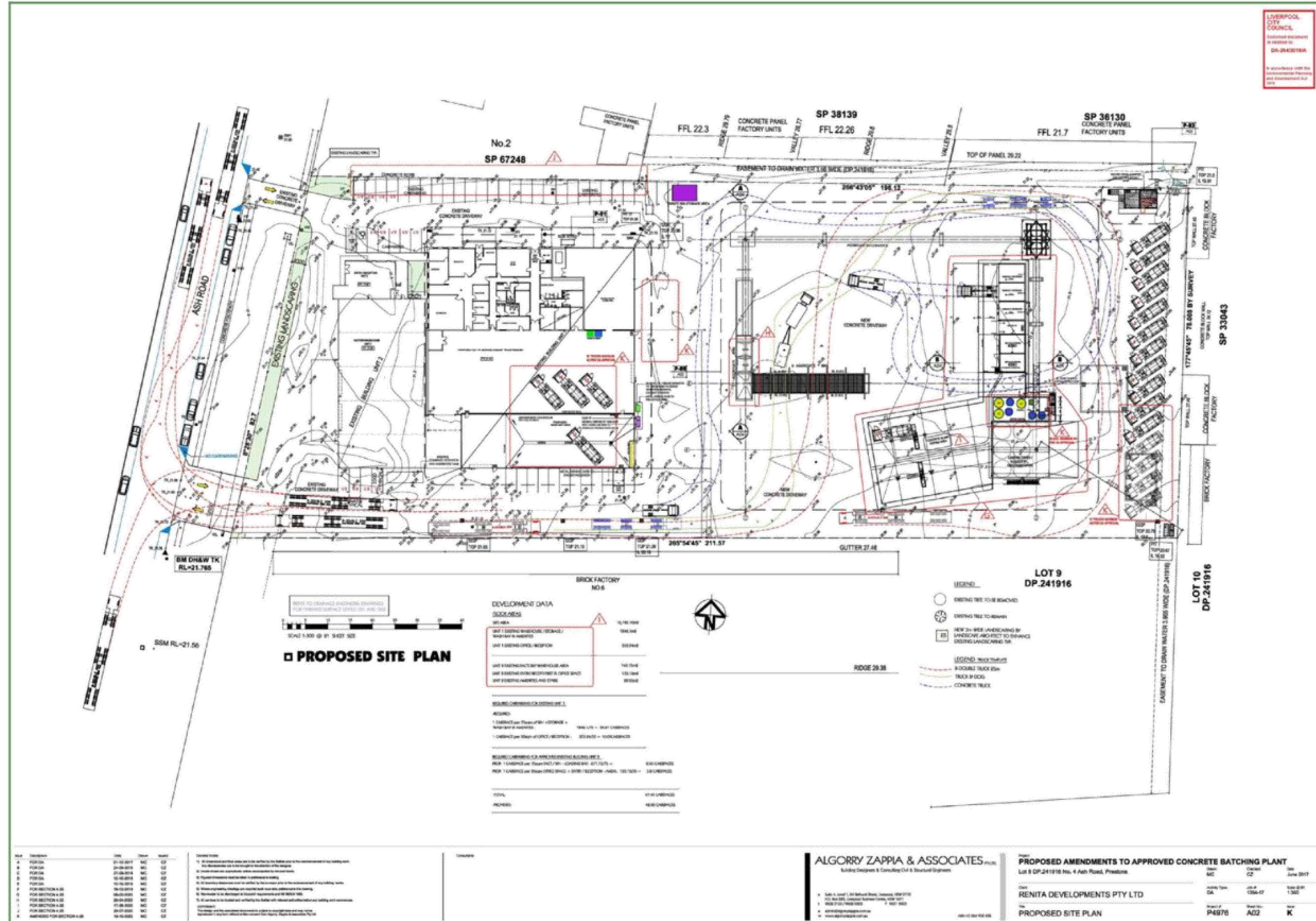


Dust controls are detailed in Section 3.2, Air Quality Mitigation and Monitoring Measures.

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Figure 3-2: Site Plan with Operational Features



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3.2 AIR QUALITY IMPACT MITIGATION AND MONITORING MEASURES

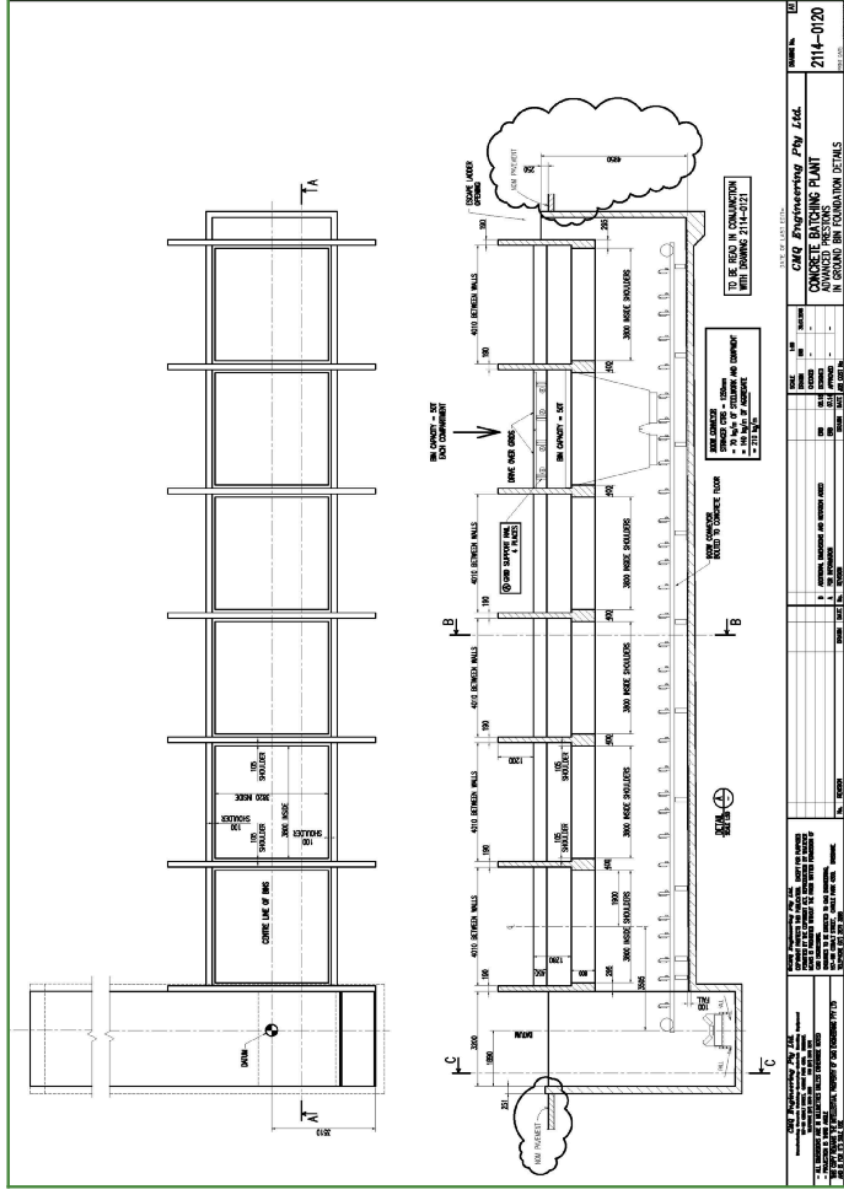
The air quality mitigation measures (for dust control) that are included in the development are summarised below.

- Material storage is belowground in receival bins, also described as ground bins.
- Aggregate receival bins are in-ground, covered with metal grates and with fixed steel wind walls to minimise wind erosion. An example is shown in Figure 3-3 and Figure 3-4.
- Use of water sprays or dust suppression agent to be applied to reduce dust emissions when needed.
- Conveyors for transfer of aggregates between storage bins, weigh hoppers, and the batching house building is covered on the top and one side. The other side is open for maintenance. In addition, conveyors will have spill trays and belt cleaning devices.
- Separate air filters are installed on cement silos (cartridge and filter bag dust filters) and weigh hoppers (reverse pulse filter system) are to be fitted with air filtering socks.
- The batching house building, where the transfer of cement, aggregate, and sand to weigh hoppers and agitator trucks occurs, is completely enclosed and has automated roller doors that will only open during the entry and exit of agitator trucks. Therefore the overhead aggregate storage bins are totally enclosed.
- An additional dust/fume extractor is installed inside the batching house building to collect excess particulate matter during the loading of cement, aggregates and sand into the trucks. This is to be maintained by expert contractors on a routine basis to monitor the effectiveness of the dust collectors.
- Air filter systems are to be in correct operating condition (service and maintenance records complete).
- Overfill protection systems are to be installed and operational (e.g. alarms activate when silos are full to maximum capacity).
- Emergency shut-down systems are to be operational for the filling of silos from console and silo delivery point.
- A means of testing the alarms are to be provided to ensure these are functioning correctly.
- Wheel and truck wash facilities are present on site.
- Regular sweeping of traffic areas is in practice, where required.
- There are to be no aboveground stockpiles on site.



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Figure 3-3: Example of the In Ground Bin Foundation Plans



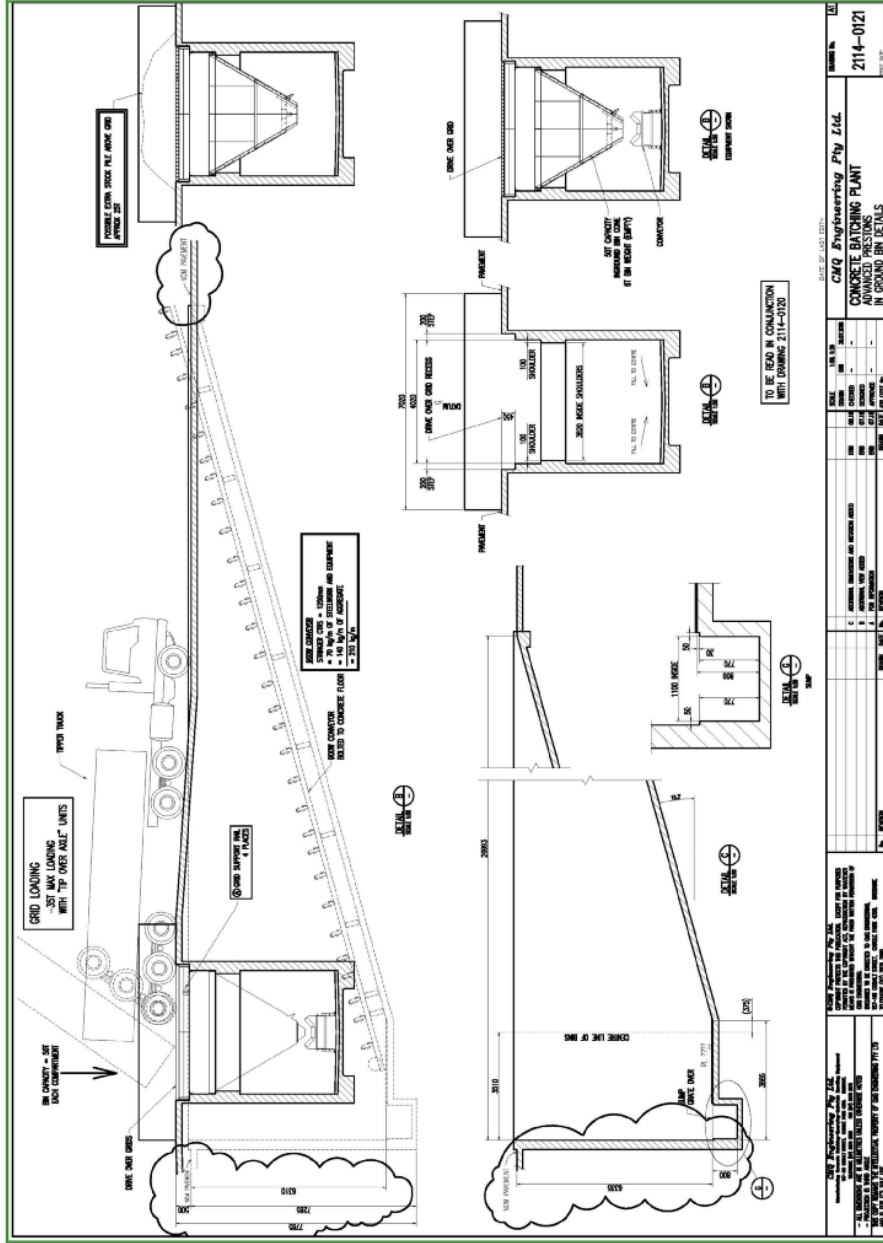
Ref: 171164-03_AQIA_REV3
December 2021

Benbow Environmental
Page: 12



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Figure 3-4: In Ground Bin Plans - Details





4. METEOROLOGY AND LOCAL AIR QUALITY

4.1 PROJECT SITE REPRESENTATIVE METEOROLOGICAL DATA

The nearest weather monitoring station, located approximately 9.1 kilometres to the north-west of the subject site, is the Horsley Park Automatic Weather Station (AWS) operated by the Bureau of Meteorology. However, the topography of Horsely Park AWS differs too greatly from the subject site for it to be considered representative. Bankstown Airport AWS, located 9.8 km east of the site, was considered to be the most appropriate weather monitoring station due to its proximity to the site, complete and current data, and similar topography to the subject site.

The representative meteorological year of 2016 was selected based on long term averages from Bankstown Airport AWS. Meteorological data for 2016 was compared with long term averages for minimum and maximum temperature and found to be consistent (Attachment 1). Wind roses, representing the annual frequency of wind speed and direction, were also compared for five meteorological years and found to be reasonably consistent (Attachment 2). The 2016 meteorological year had a higher proportion of wind speeds above 11 m/s than the other four years compared against, however, the predominant wind directions and frequencies were similar, and higher wind speeds provide a more conservative estimate of particulate matter dispersion.

4.1.1 WRF

The Weather Research and Forecasting (WRF) Model is a next-generation mesoscale numerical weather prediction system designed as a collaborative effort between the American National Center for Atmospheric Research (NCAR) and other meteorological specialist organisations. It was created for both atmospheric research and operational forecasting applications and serves a wide range of meteorological applications across scales from tens of meters to thousands of kilometres.

A prognostic meteorological data file was created by Lakes Environmental using the WRF model with observational meteorological data from 2016 (NCAR, 2017).

4.1.2 AERMET

AERMET is a meteorological pre-processor that organises data and estimates the necessary boundary layer parameters for dispersion calculations in AERMOD.

A meteorological data file was produced for inclusion in the air dispersion model using AERMET ver. 16216. The WRF prognostic data was entered into AERMET as onsite and upper air data. The surrounding land use was set to urban.

4.2 WIND ROSE PLOTS

Wind rose plots show the direction from which the wind is coming with triangles known as "petals". The petals of the plots in Figure 4-1 summarise wind direction data into 8 compass directions i.e., north, north-east, east, south-east, etc.

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The length of the triangles, or “petals”, indicates the frequency that the wind blows from the direction presented. Longer petals for a given direction indicate a higher frequency of wind from that direction. Each petal is divided into segments, with each segment representing one of the six wind speed classes. Thus, the segments of a petal show what proportion of wind for a given direction falls into each class.

The proportion of time for which wind speed is equal to or less than 0.5 m/s, when speed is negligible, is referred to as calm hours or “calms”. Calms are not shown on a wind rose as they have no direction, but they are noted under each wind rose as a temporal percentage.

The concentric circles in each wind rose are the axes that denote wind frequencies. In comparing the plots it should be noted that the axis varies between wind roses, although all wind roses are the same size. The frequencies shown in the first quadrant (top-left quarter) of each wind rose are stated beneath the wind rose.

4.2.1 Local Wind Trends

Seasonal wind rose plots for this site using Bankstown Airport AWS data from 2016 have been included in Figure 4-1. Annual average wind speeds of 3.08 m/s and a calms frequency of 14.87% were estimated. Annual winds from the north-west were found to be dominant and were present at a frequency of approximately 16%.

The average summer wind speed was estimated to be 3.35 m/s, with a calms frequency of 12.51%. South-easterly and north-easterly winds were found to be dominant at a frequency of around 16% and 17% respectively.

In autumn, dominant winds blew from the north-east and north-west (13-14%). The average autumn wind speed was 2.60 m/s with a calms frequency of 19.42%.

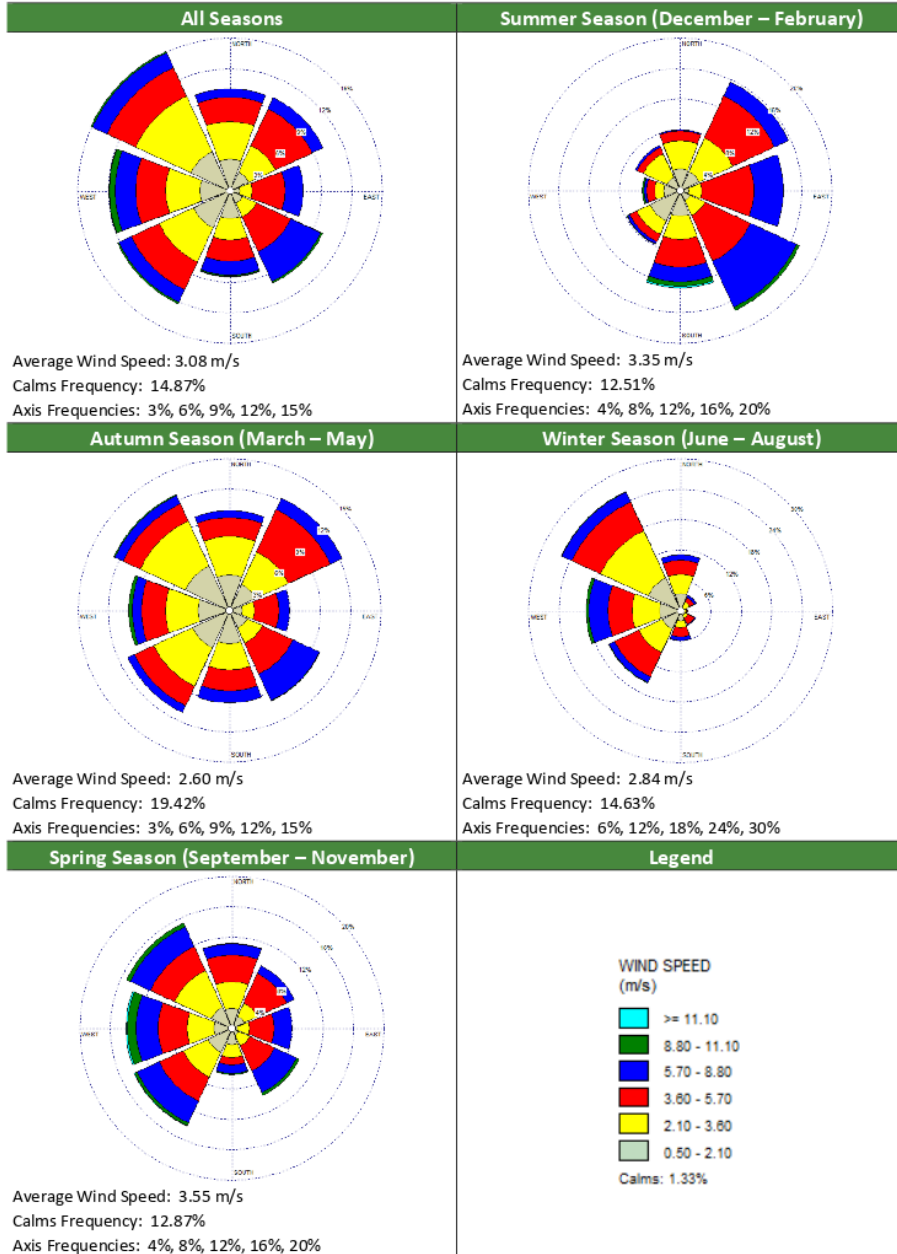
The winter season data showed the prevalence of winds from the north-west at a frequency of 26%. Winds from the west and south-west were also common, at 20% and 17% frequency respectively. The average winter wind speed was 2.84 m/s with a calms frequency of 14.63%.

In the spring time, average wind speeds of 3.55 m/s were recorded. Dominant winds were from the north-west (16%), west (15%) and south-west (14%). The spring calms frequency was 12.87%.

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Figure 4-1: Wind Rose Plots for the Referenced Meteorological Station – Bankstown Airport, Bureau of Meteorology (2016)



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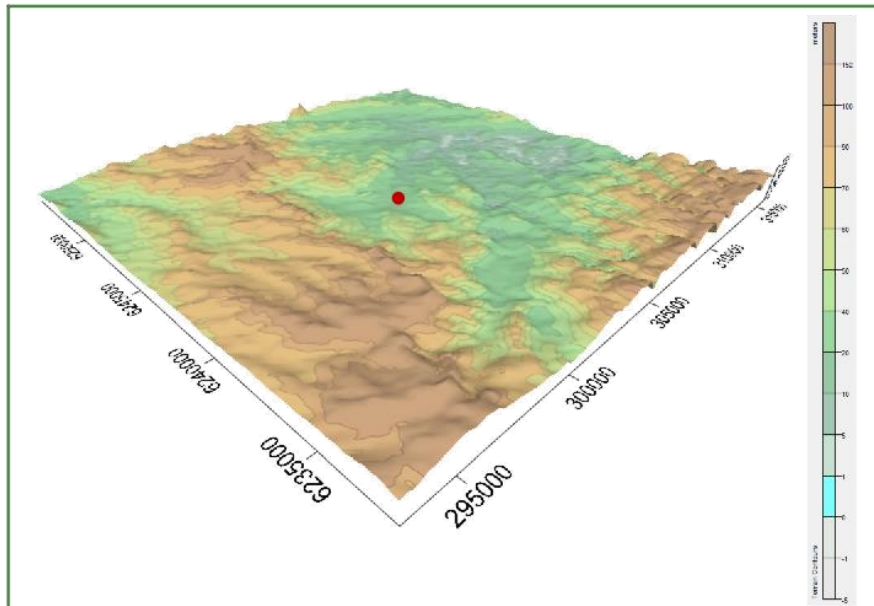


4.3 TERRAIN AND STRUCTURAL EFFECTS ON DISPERSION

The meteorological condition known as katabatic flow (or katabatic drift) is often identified as the condition under which maximum environmental impacts from primarily ground-based sources are likely to occur. Katabatic flow is simply the movement of cold air down a slope, generally under stable atmospheric conditions. Under such circumstances, dispersion of airborne pollutants is generally slow and the associated impacts can reach their peak.

Katabatic flow is unlikely to affect emissions from the subject site. Figure 4-2 shows the terrain with the z-axis (i.e. vertical axis) exaggerated by a factor of 10 (i.e. a given distance on the x-axis or y-axis appears three times as great on the z-axis) in order to provide a clearer description of the topography. A coloured scale bar shows elevations corresponding to the colours used in the figures. It should be noted that these figures are an approximation of the actual terrain, based on terrain information that have been digitised from local contour terrain maps.

Figure 4-2: Local Topography of Site, Factor of 10 Vertical Exaggeration



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4.4 LOCAL AIR QUALITY

No air quality measurements have been undertaken specifically for this project. Instead, the nearest available air quality monitoring data was used to gain an understanding of what current pollutant levels may be around the site and to provide background air quality parameters for the assessment.

Ambient air quality data for PM_{2.5} and PM₁₀ was obtained from the NSW EPA Liverpool air quality monitoring station located 2 km east of the subject site at Pearce Park, which is considered to be site-representative. The relevant data is summarised in Table 4-1.

Table 4-1: Summary of 2016 Data for PM_{2.5} and PM₁₀ from Liverpool Air Quality Monitoring Station.

Pollutant	Averaging period	Concentration ($\mu\text{g}/\text{m}^3$)
PM _{2.5}	Maximum 24 hr average for 2016	50.8
	2 nd highest 24 hr average for 2016	35
	3 rd highest 24 hr average for 2016	33.3
	Annual average for 2016	8.7
PM ₁₀	Maximum 24 hr average for 2016	68.7
	2 nd highest 24 hr average for 2016	52.2
	3 rd highest 24 hr average for 2016	51
	Annual average for 2016	19.6

Note: Bold values exceed the *Approved Methods* criteria.

No ambient air quality data for Total Suspended Particulates (TSP) is available from the referenced monitoring station. Therefore, the worst-case particle size distribution data from the AP-42 Emissions Database provided by the U.S. Environmental Protection Agency (US EPA, 1995), a PM₁₀-to-TSP ratio of 0.51 was used to estimate the TSP background concentration level of 38.4 $\mu\text{g}/\text{m}^3$ for an annual averaging period.

The data collected from Liverpool air quality monitoring station shows elevated background levels of both PM_{2.5} and PM₁₀. There were 4 days in 2016 when background PM_{2.5} levels exceeded the *Approved Methods* 24 hour average criterion of 25 $\mu\text{g}/\text{m}^3$, and 3 days when background PM₁₀ levels exceeded the 24 hour average criterion of 50 $\mu\text{g}/\text{m}^3$. The annual average of PM_{2.5} during 2016 also exceeded criterion of 8 $\mu\text{g}/\text{m}^3$.

In cases of elevated background concentrations, the *Approved Methods* states:

In some locations, existing ambient air pollutant concentrations may exceed the impact assessment criteria from time to time. In such circumstances, a licensee must demonstrate that no additional exceedances of the impact assessment criteria will occur as a result of the proposed activity and that best management practices will be implemented to minimise emissions of air pollutants as far as is practical.

This has been addressed in the modelling results and discussion in Sections 6.3 and 6.4.

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Air Quality Impact Assessment



5. AIR IMPACT ASSESSMENT

This section assesses the effects of potential emissions on the existing ambient air quality as a direct result of the proposal. The assessment methodology, modelling configurations, results and discussion of the potential impacts as well as any recommendations on mitigation measures are described in detail, as follows.

5.1 EMISSION SOURCES

The main air emissions typical of a concrete batching plant include dust and particulates (PM₁₀, PM_{2.5}, and total suspended particulates (TSP)). There will be no odour emissions associated with the proposed increase as none of the materials stored on-site and none of the processes undertaken are odour-generating. Therefore, odour does not warrant any further assessment.

The air emission sources associated with the development are listed below.

- Delivery and storage of aggregate and sand into in-ground bins;
- Wind erosion from aggregate and sand stored in in-ground bins;
- Wind erosion during transport of aggregate and sand along conveyors;
- Loading of aggregate and sand into hoppers below the elevated aggregate storage bin;
- Loading of aggregate and sand into weigh hoppers inside the batching house building;
- Loading of cement, fly ash, or Eco Cem into weigh hoppers located below the cement storage silos inside the batching house building; and
- Loading of mixed aggregate and cement with water into agitator trucks inside the batching house building.

The chemical additives used in the batching process do not release fumes or odour. They are dispensed along with the mixed aggregate, cementitious materials and water into the agitator trucks via an enclosed system.

Wheel generated dust has not been considered as a significant source of emissions. The entire site is hardstand, which is regularly cleaned to prevent any build-up of dust. Trucks will also be promptly cleaned in the wash bay after leaving the batching house to remove any dust or slurry, and will only achieve minimal speeds on the site. Hence, wheel generated dust emissions are adequately controlled.

Delivery of cementitious materials to the storage silos above the batching house building has not been modelled due to the excellent transfer and recovery systems in place. Tankers pneumatically transfer cement, fly ash, or Eco Cem powder via an enclosed hose directly to the fully sealed storage silos. Vented air during transfer is captured by a dust recovery system and all recovered dust is recycled.

5.2 ADOPTED CRITERIA AND GUIDELINES

The *Approved Methods* provide the impact assessment criteria for particulate matter, including PM₁₀ and TSP, as summarised in Table 5-1.

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Air Quality Impact Assessment



Table 5-1: Applicable Particulate Criteria at Sensitive Receptors from the NSW EPA Modelling Guidelines

Pollutant	Averaging Period	Concentration ($\mu\text{g}/\text{m}^3$)
PM _{2.5}	24 hours	25
	Annual	8
PM ₁₀	24 hours	50
	Annual	25
Total Suspended Particulates (TSP)	Annual	90

5.3 ADOPTED EMISSION FACTORS

Fine particulate emission factors for activities associated with the concrete batching plant were referenced from the NPI "Emission Estimation Technique Manual (EETM) for Concrete Batching and Concrete Product Manufacturing (NPI DEH, 1999).

These referenced emission factors were used as representative emission factors for the site and are listed in Table 5-2. It is to be noted that these emission factors are for uncontrolled emissions.

Table 5-2: Emission Factors for PM₁₀ from NPI EETM for Concrete Batching and Concrete Products 1999

NPI Description	Processes at Site	Uncontrolled Emission Factor
Wind erosion from sand and aggregate storage piles	Wind erosion from in-ground bins and during conveyor transport	3.9 kg/ha/day
Sand and aggregate transfer to elevated bin	Delivery to in-ground storage bins	0.014 kg/tonne
Weigh hopper loading (aggregate)	Loading of aggregate into hopper below elevated aggregate storage bin and weigh hopper inside batching house	0.01 kg/tonne
Cement unloading to elevated storage silo (bucket elevator)	Loading of cement into weigh hopper inside batching house	0.12 kg/tonne
Total process emissions (truck mix)	Loading of aggregate and cement into agitator trucks inside batching house	0.05 kg/tonne

Source: NPI – Emission Estimation Technique Manual for Concrete Batching and Concrete Product Manufacturing (February 1999)

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As the emission factor acquired from the NPI EETM only provides the emission factor for PM₁₀, further calculations were required to estimate the emission factors for Total Suspended Particulates (TSP) and PM_{2.5}. For this purpose, the generalised particle size distribution for mechanically generated aggregate and unprocessed ores from US EPA's AP-42 database was used to estimate the proportion of PM₁₀ to TSP and also for PM₁₀ to PM_{2.5}. These ratios were then used to derive the emission factors for TSP and PM_{2.5} (Aggregates). The excerpt for the generalised particle size distribution has been provided as Table 5-3.

Table 5-3: US EPA AP-42 Generalised Particle Size Distribution for Mechanically Generated Aggregate, Unprocessed Ores

Particle Size (µm)	Cumulative % ≤ Stated Size (Uncontrolled)	Minimum Value	Maximum Value	Standard Deviation
2.5	15	3	35	7
10.0	51	23	81	14

The emission factors for PM_{2.5} (cementitious materials) were referenced from the particle size distribution for a Portland cement industry from ASTM's database. The factors were calculated as a linear interpolation between the two nearest points for PM_{2.5} and PM₁₀ obtained from ASTM'S data (See Table 5-4). The factors were then used to calculate PM_{2.5} to PM₁₀ which was further used to calculate emission factors for PM_{2.5}(Cement).

Table 5-4: ASTM Particle Size Distribution for Portland cement powder¹

Particle Size (µm)	Cumulative % Mean	Calculated Cumulative % Mean
2	12.3	PM _{2.5} = 15.2
3	18.1	
8	37.1	PM ₁₀ = 42.2
12	47.3	

Note 1) Ferraris, C., Hackley, V., and Avilés, A., "Measurement of Particle Size Distribution in Portland Cement Powder: Analysis of ASTM Round Robin Studies," *Cement, Concrete and Aggregates*, Vol. 26, No. 2, 2004, pp. 1-11, <https://doi.org/10.1520/CCA11920>. ISSN 0149-6123

The above particle size distributions were used to calculate the emissions of TSP and PM_{2.5} based on the NPI EETM emission factors for PM₁₀, as presented in Table 5-5.

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Table 5-5: Calculated Emission Factors for TSP and PM_{2.5} Based on Particle Size Distributions

Processes at Site	TSP Uncontrolled Emission Factor	PM _{2.5} Uncontrolled Emission Factor
Wind erosion from in-ground bins and during conveyor transport	7.65 kg/ha/day	1.15 kg/ha/day
Delivery to in-ground storage bins	0.03 kg/tonne	0.004 kg/tonne
Loading of aggregate into hopper below elevated aggregate storage bin and weigh hopper inside batching house	0.02 kg/tonne	0.003 kg/tonne
Loading of cement into weigh hopper inside batching house	0.28 kg/tonne	0.04 kg/tonne
Loading of aggregate and cement into agitator trucks inside batching house	0.10 kg/tonne	0.02 kg/tonne

5.3.1 Reduction Factors

Typical reduction factors for concrete batching activities are listed in Table 7 of the *Emission Estimation Technique Manual for Concrete Batching and Concrete Product Manufacturing* (NPI DEH, 1999) and are shown in Table 5-6.

Table 5-6: Reduction Factors for PM₁₀ for Concrete Batching Activities from NPI EETM for Concrete Batching and Concrete Products

Control	Reduction Factor (Materials Handling)	Reduction Factor (Materials Storage)
Default	-	0.3
Wind Breaks	0.7	0.7
Water Sprays	0.5	0.5
Chemical Suppression	0.2	0.2
Enclosure (2-3 walls)	0.1	0.1
Covered Stockpiles	0.0	0.0
Enclosed	0.0	-

Reduction factors were applied to the NPI EETM emission factors depending on the emission reduction controls in place for each process, as outlined in Table 5-7. The suggested NPI EETM reduction factor for materials handling in an enclosed building is zero. However, a conservative reduction factor of 0.1 was applied to all processes occurring within the enclosed batching house to account for any dust emissions that may escape during the short period of time the roller doors are open to allow the entry and exit of agitator trucks.

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Table 5-7: Emission Reduction Factors Applied to NPI EETM Emission Factors

Processes at Site	Control in Place	Reduction Factor Applied
Wind erosion from in-ground bins	Wind break walls	0.7
Delivery to in-ground storage bins	Wind break walls	0.7
Wind erosion during conveyor transport	¾ enclosed conveyors	0.1
Loading of aggregate into hopper below elevated aggregate storage bin	Enclosed by 2-3 walls	0.1
All activities inside batching house building	Enclosed building	0.1

5.4 EMISSION RATES

Emission rates for input into the dispersion model were based on the adopted NPI EETM emission and reduction factors and the maximum proposed amount of 230,000 tonnes of aggregate/sand and 70,000 tonnes of cement to be processed by the facility per annum for a total of 300,000 tpa of concrete.

Wind erosion from the in-ground bins and during conveyor transport was calculated based on the surface area of the bins and conveyors and the hours of operation. A daily emission rate in kilograms per hectare was first calculated, which was then converted to grams per square metre per second and applied to the hours of operation. The in-ground bins and first two conveyors were assumed to be operating 24 hours per day, 365 days per year, (this is conservative and varies from the consent), while the third conveyor was only assumed to be operating during the business hours of Monday to Friday 6am to 6pm and Saturday 6am to 1pm.

Emissions from delivery to in-ground storage bins, and loading of aggregate and cement into hoppers and agitator trucks was based on the total amount of materials processed by the facility per annum. A yearly emission rate in kilograms was calculated, which was then converted into an emission rate of grams per second for the number of hours each process would be operating per year. Model assumptions for emission rates from DA 264/2018 have been maintained for consistency with previous assessment to assess higher processing tonnages. These assumptions include deliveries to in-ground bins were assumed to be operating 24 hours per day and 365 days per year (this is conservative and varies from the consent), while the loading of hoppers and agitator trucks was only assumed to take place during the business hours of Monday to Friday 6am to 6pm and Saturday 6am to 1pm as this is when most activities are likely to occur. However, the as per the consent conditions, deliveries to the CBP and operation will only occur between the hours of 6am-6pm Mon-Fri and 6am-1pm Sat. The concrete batching plant can operate 24 hours per day 7 days per week.

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Air Quality Impact Assessment



6. AIR IMPACT MODELLING

6.1 DISPERSION MODEL

The new generation air dispersion model, AERMOD ver. 16216r, was used for the prediction of off-site impacts associated with the air emissions from the proposed increased operations. AERMOD uses air dispersion based on planetary boundary layer turbulence structure and scaling concepts. The AERMOD model replaced AUSPLUME as the air dispersion model accepted by the Victorian EPA in January 2014 and is a suitable model to use for this air assessment.

The model was used to estimate the concentration impacts on receptors for each hour of input meteorology. Terrain was assumed to be elevated.

6.1.1 Meteorological Data

Prognostic meteorological data for the year 2016 were obtained from Lakes Environmental Services and pre-processed using AERMET, as described in Sections 4.1.1 and 4.1.2. The resultant upper air and surface data files were input to AERMOD.

6.2 SOURCE CONFIGURATIONS AND PARAMETERS

6.2.1 Assumptions

The following assumptions were used in the model:

- The total maximum annual raw material usage of 230,000 tonnes of aggregate/sand and 70,000 tonnes of cement (for a total of 300,000 tpa) was used to estimate emissions from the subject site;
- Emissions from the delivery of aggregates to ~60% of the in-ground bins area and the operation of the first two conveyors were calculated for 24 hours per day, 365 days per year (this is conservative);
- The main activities of concrete batching would occur during standard business hours of Monday to Friday 6am to 6pm and Saturday 6am to 1pm;
- Emissions from all weigh hopper loading, loading of agitator trucks, and operation of the third conveyor were calculated for the standard business hours;
- Emissions from the batching house building would occur from the roller doors and a conservative reduction factor of 0.1 was applied to the emissions inside the building or in walled areas.

6.2.2 Emission Sources Modelled

Each potential dust emitting process at the concrete batching facility was allocated a separate source in the dispersion model, as outlined in Table 6-1. The in-ground bins were allocated two area sources, one for wind erosion and one for material unloading with an area equal to that of the in-ground bins. A flagpole height of 0.5 m was assumed for material unloading to simulate the elevated release height from the delivery trucks.

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Air Quality Impact Assessment



The hopper under the aggregate storage bin was modelled with the base area equal to the base area of the aggregate storage bin and a height equal to the loading height of the hopper. A conservative flagpole height of 1.5 m was added to concentrate emissions above the mouth of the hopper. Sigma-Z and sigma-Y were set to AERMOD's suggested values.

Conveyors were modelled in parts so that the diagonal increase in height could be more accurately simulated. The conveyor length was split into one, two, or three equal sections, depending on the length of the conveyor and the increase in height, and the height at those points used for the start and end coordinates of the line area sources in the model.

All processes occurring inside the batching house building were modelled with a base area equal to the base area of the batching house building and a height equal to that of the roller doors. The building is otherwise enclosed and it is likely that any fugitive emissions would escape from the roller doors. Sigma-Z was set to AERMOD's suggested value.



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Air Quality Impact Assessment

Table 6-1: Summary of Emission Sources

Source Name	Source Type	Source Size (m)	Source Height (m)	Daily Emission Rate (g/s)			Annual Emission Rate (g/s)		
				PM _{2.5}	PM ₁₀	TSP	PM _{2.5}	PM ₁₀	TSP
In-ground storage bins – delivery	Area	25 x 4.3	0.5	0.02135076	0.07259259	0.14233842	0.01403696	0.04772566	0.09357973
Total in-ground storage bins –wind 9 bins	Area	37.5 x 4.3	0	0.00014990	0.00050950	0.00099900	0.00014990	0.00050950	0.00099900
First conveyor	Line area	32.1 x 0.54	0 – 3.3	0.00000230	0.00000783	0.00001536	0.00000230	0.00000783	0.00001536
Second conveyor – Part 1	Line area	21.7 x 0.54	0 - 9	0.00000467	0.00001587	0.00003111	0.00000467	0.00001587	0.00003111
Second conveyor – Part 2	Line area	21.7 x 0.54	9 – 16.7	0.00000467	0.00001587	0.00003111	0.00000467	0.00001587	0.00003111
Second conveyor – Part 3	Line area	21.7 x 0.54	16.7 – 25.1	0.00000467	0.00001587	0.00003111	0.00000467	0.00001587	0.00003111
Third conveyor – Part 1	Line area	19 x 0.53	0 – 6.2	0.00000269	0.00000914	0.00001791	0.00000269	0.00000914	0.00001791
Third conveyor – Part 2	Line area	19 x 0.53	6.2 – 11.4	0.00000269	0.00000914	0.00001791	0.00000269	0.00000914	0.00001791
Aggregate storage bin hopper	Volume	5.2 x 5.2 x 3	1.5	0.00435730	0.01481481	0.02904866	0.00361128	0.01227835	0.02407520
Batching house hopper –aggregate	Volume	12.2 x 12.2 x 4.52	0	0.00435730	0.01481481	0.02904866	0.00361128	0.01227835	0.02407520
Batching house hopper –cement	Volume	12.2 x 12.2 x 4.52	0	0.01901001	0.05277778	0.12506582	0.01585220	0.04401072	0.10429080
Batching house – agitator truck	Volume	12.2 x 12.2 x 4.52	0	0.02950606	0.09606481	0.18193199	0.02449385	0.07972956	0.16279312

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6.3 AIR IMPACT MODELLING RESULTS

This section details the results of air impact modelling at the nearest sensitive receptors.

6.3.1 Maximum Impacts at Sensitive Receptors

Table 6-2 to Table 6-6 to provide the results of the maximum modelled impacts for each identified receptor. Isopleths for each averaging period are provided in Figure 6-1 to Figure 6-5. Background concentrations that exceed the relevant *Approved Methods* criterion are marked with red text.

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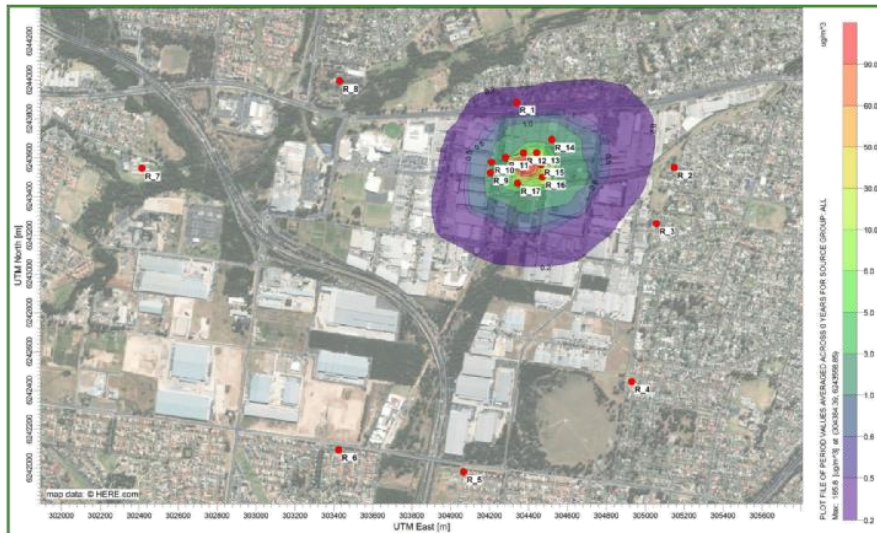
Table 6-2: TSP Annual Averaging Period Modelling Results

Receptor ID	Incremental Impact (µg/m³)	Background (µg/m³)	Cumulative Impact (µg/m³)	Criteria (µg/m³)
R1	0.3	38.4 µg/m³	38.7 ✓	90 µg/m³
R2	0.1		38.5 ✓	
R3	0.1		38.5 ✓	
R4	0.04		38.4 ✓	
R5	0.02		38.4 ✓	
R6	0.02		38.4 ✓	
R7	0.01		38.40 ✓	
R8	0.03		38.4 ✓	
R9	1.1		39.5	N/A ¹
R10	1.1		39.5	
R11	2.5		40.9	
R12	5.8		44.2	
R13	8.2		46.6	
R14	2.0		40.4	
R15	17.8		56.2	
R16	10.1		48.5	
R17	6.2		44.6	

✓ Complies ✗ Non-compliance

NOTE: ¹See section 6.4.2

Figure 6-1: TSP Annual Averaging Period Modelling Results



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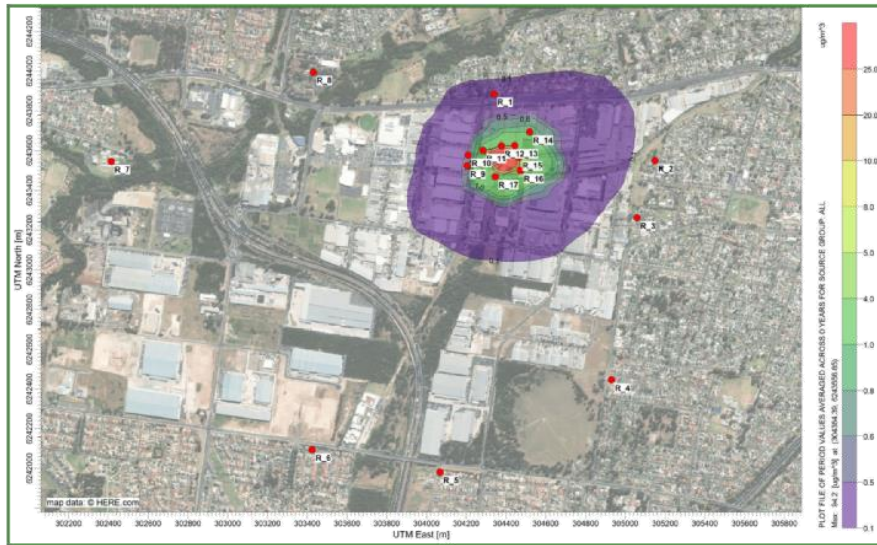


Table 6-3: PM₁₀ Annual Averaging Period Modelling Results

Receptor ID	Incremental Impact (µg/m ³)	Background (µg/m ³)	Cumulative Impact (µg/m ³)	Criteria (µg/m ³)
R1	0.2	19.6 µg/m ³	19.8 ✓	25 µg/m ³
R2	0.07		19.8 ✓	
R3	0.06		19.8 ✓	
R4	0.02		19.7 ✓	
R5	0.01		19.7 ✓	
R6	0.01		19.7 ✓	
R7	0.00		19.7 ✓	
R8	0.02		19.7 ✓	
R9	0.6		20.3	N/A
R10	0.5		20.2	
R11	1.2		20.9	
R12	2.9		22.6	
R13	4.03		23.7	
R14	1.0		20.7	
R15	8.7		28.4	
R16	4.9		24.6	
R17	3.1		22.9	

✓ Complies * Non-compliance

Figure 6-2: PM₁₀ Annual Averaging Period Modelling Results



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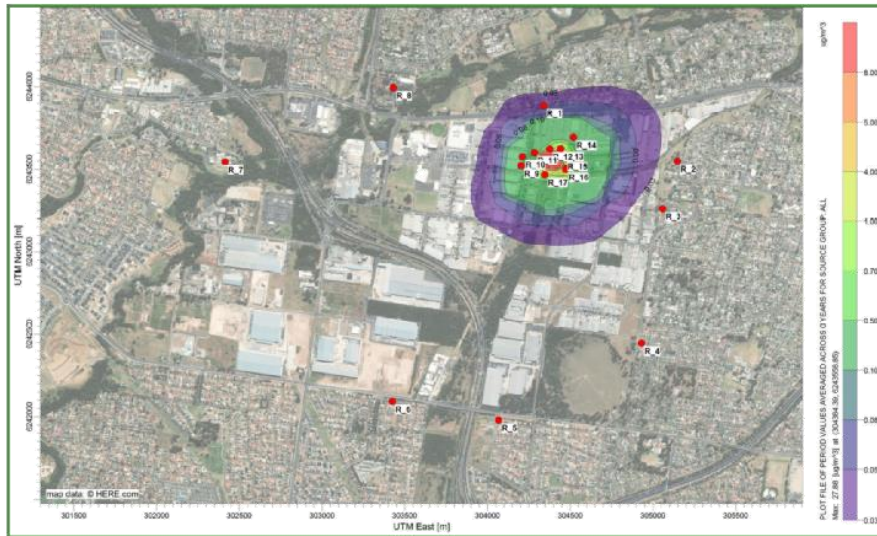


Table 6-4: PM_{2.5} Annual Averaging Period Modelling Results

Receptor ID	Incremental Impact (µg/m ³)	Background (µg/m ³)	Cumulative Impact (µg/m ³)	Criteria (µg/m ³)
R1	0.05	8.7 µg/m ³	8.8*	8 µg/m ³
R2	0.02		8.7*	
R3	0.02		8.7*	
R4	0.01		8.7*	
R5	0.003		8.7*	
R6	0.003		8.7*	
R7	0.001		8.7*	
R8	0.005		8.7*	
R9	0.2		8.9	N/A
R10	0.2		8.9	
R11	0.4		9.1	
R12	0.9		9.6	
R13	1.2		9.9	
R14	0.3		9.0	
R15	2.7		11.4	
R16	1.5		10.2	
R17	0.9		9.6	

✓ Complies * Non-compliance

Figure 6-3: PM_{2.5} Annual Averaging Period Modelling Results



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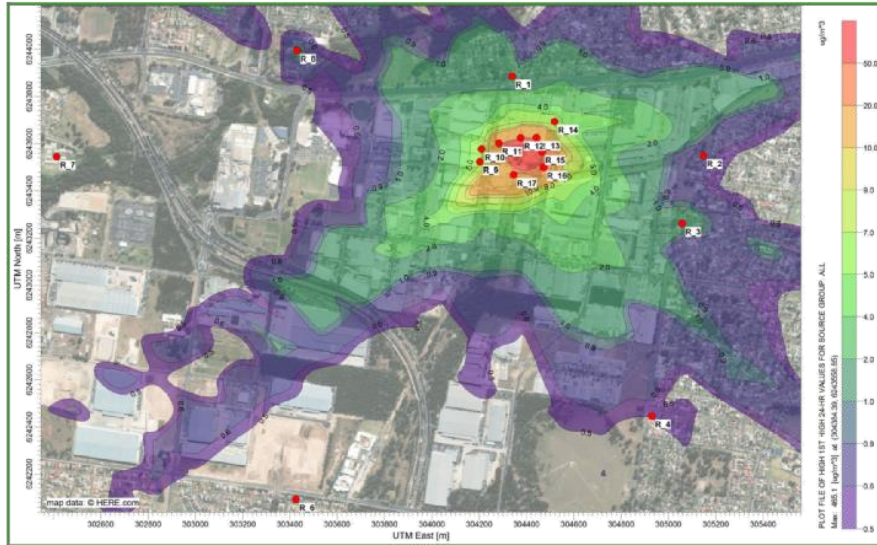


Table 6-5: PM₁₀ 24 Hour Averaging Period Modelling Results

Receptor ID	Incremental Impact (µg/m ³)	Background (µg/m ³)	Cumulative Impact (µg/m ³)	Criteria (µg/m ³)
R1	1.2	68.7 µg/m ³	69.9*	50 µg/m ³
R2	0.7		69.4*	
R3	1.2		69.9*	
R4	0.5		69.2*	
R5	0.2		68.9*	
R6	0.2		68.9*	
R7	0.1		68.8*	
R8	1.1		69.8*	
R9	6.2		74.9	N/A
R10	6.1		74.8	
R11	15.7		84.4	
R12	21.1		89.8	
R13	19.2		87.9	
R14	5.8		74.5	
R15	60.2		128.9	
R16	28.2		96.9	
R17	16.1		84.8	

✓ Complies * Non-compliance

Figure 6-4: PM₁₀ 24 Hour Averaging Period Modelling Results



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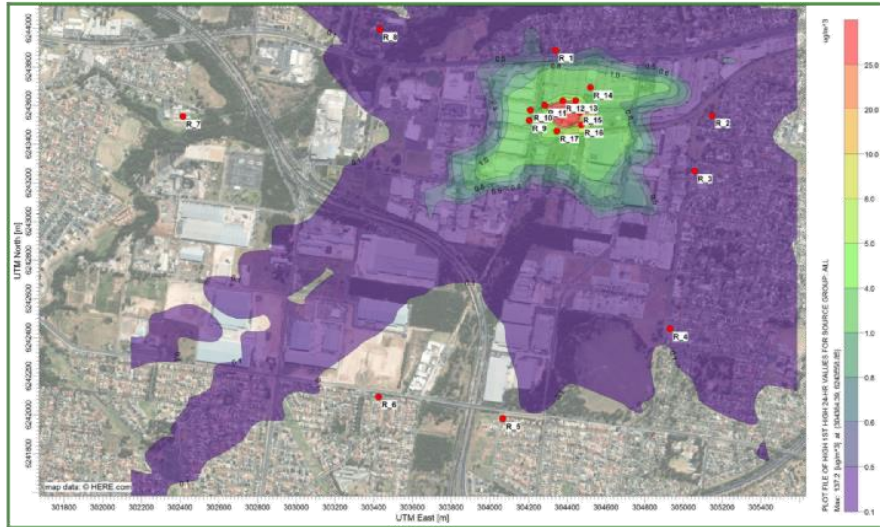


Table 6-6: PM_{2.5} 24 Hour Averaging Period Modelling Results

Receptor ID	Incremental Impact (µg/m ³)	Background (µg/m ³)	Cumulative Impact (µg/m ³)	Criteria (µg/m ³)
R1	0.4	50.8 µg/m ³	51.9*	25 µg/m ³
R2	0.2		51.0*	
R3	0.4		51.2*	
R4	0.2		51.0*	
R5	0.06		50.9*	
R6	0.06		50.9*	
R7	0.03		50.8*	
R8	0.3		51.1*	
R9	1.8		52.6	N/A
R10	1.8		52.6	
R11	4.7		55.5	
R12	6.3		57.1	
R13	5.7		56.5	
R14	1.7		52.5	
R15	18.8		69.3	
R16	8.5		59.3	
R17	4.8		55.6	

✓ Complies * Non-compliance

Figure 6-5: PM_{2.5} 24 Hour Averaging Period Modelling Results



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6.3.2 Predicted Days of Cumulative Exceedance

Due to the high background levels of PM₁₀ and PM_{2.5} at the site, the *Approved Methods* require a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the site activities.

Table 6-7 and Table 6-8 summarise the contemporaneous impact and background of the top ten days of highest background concentrations and the top ten days of highest predicted increment for PM₁₀ and PM_{2.5} for the most highly impacted residential receptor (R1). Any additional days where the *Approved Methods* criteria are exceeded are marked in **bold**.

Table 6-7: Summary of Top Ten Days of Contemporaneous PM₁₀ Impact and Background at Residential Receptor R1 (*Approved Methods* Criterion = 50 µg/m³)

Date	PM ₁₀ 24 Hour Average (µg/m ³)			Date	PM ₁₀ 24 Hour Average (µg/m ³)		
	Highest Background	Predicted Increment	Total		Background	Highest Predicted Increment	Total
08/05/2016	68.7 *	0.0	68.7 *	20/07/2016	9.6 ✓	1.3	10.9 ✓
22/05/2016	52.2 *	0	52.2 *	21/11/2016	30.8 ✓	0.9	31.7 ✓
07/05/2016	51.0 *	0.70	51.7 *	29/11/2016	26.9 ✓	0.9	27.8 ✓
29/04/2016	39.5 ✓	0.2	39.7 ✓	03/02/2016	22.1 ✓	0.8	22.9 ✓
19/11/2016	38.6 ✓	0.4	39.0 ✓	14/06/2016	23.9 ✓	0.8	24.7 ✓
21/10/2016	36.5 ✓	0.1	36.6 ✓	08/01/2016	20.1 ✓	0.8	20.9 ✓
28/11/2016	36.5 ✓	0.1	36.6 ✓	15/03/2016	13.7 ✓	0.7	14.4 ✓
20/10/2016	36.4 ✓	0.1	36.5 ✓	04/02/2018	22.2 ✓	0.7	22.9 ✓
16/08/2016	35.9 ✓	0.2	36.1 ✓	29/03/2016	18.9 ✓	0.7	19.6 ✓
25/05/2016	35.1 ✓	0.1	35.2 ✓	02/06/2016	12.1 ✓	0.7	12.8 ✓

✓ Complies * Non-compliance

Table 6-8: Summary of Top Ten Days of Contemporaneous PM_{2.5} Impact and Background at Residential Receptor R1 (*Approved Methods* Criterion = 25 µg/m³)

Date	PM _{2.5} 24 Hour Average (µg/m ³)			Date	PM _{2.5} 24 Hour Average (µg/m ³)		
	Highest Background	Predicted Increment	Total		Background	Highest Predicted Increment	Total
08/05/2016	50.8 *	0.00002	50.8 *	20/07/2016	7.4 ✓	0.46	7.9 ✓
07/05/2016	35.0 *	0.20	35.2 *	29/11/2016	9.7 ✓	0.26	10.0 ✓
22/05/2016	33.3 *	0	33.3 *	21/11/2016	12.8 ✓	0.26	13.1 ✓
09/05/2016	31.1 *	0.023	31.1 *	03/02/2016	7.6 ✓	0.25	7.9 ✓
23/05/2016	22.3 ✓	0.044	22.3 ✓	15/03/2016	7.4 ✓	0.25	7.7 ✓
03/07/2016	21.5 ✓	0.000050	21.5 ✓	14/06/2016	20.3 ✓	0.25	20.5 ✓
29/04/2016	21.1 ✓	0.07	21.2 ✓	04/02/2016	8.2 ✓	0.24	8.4 ✓
28/04/2016	21.1 ✓	0.063	21.1 ✓	18/04/2016	5.7 ✓	0.24	5.9 ✓
26/04/2016	21.1 ✓	0.043	21.1 ✓	02/06/2016	5.7 ✓	0.24	5.9 ✓
26/04/2016	21.1 ✓	0.029	21.1 ✓	06/01/2016	3.7 ✓	0.24	3.9 ✓

✓ Complies * Non-compliance

Renita Developments Pty Ltd
Air Quality Impact Assessment



6.4 DISCUSSION OF MODELLING RESULTS

6.4.1 Residential Receptors

TSP emissions at all sensitive receptors are predicted to comply with the *Approved Methods* criterion for an annual averaging period. PM₁₀ annual average emissions are also predicted to comply at all residential receptors.

The maximum predicted impacts for 24 hour averaging periods for PM₁₀ and PM_{2.5}, and the annual averaging period for PM_{2.5} all exceeded the relevant criteria due to elevated background concentrations. The background concentrations for these averaging periods alone exceeded the criteria even before the incremental impacts were added.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed increased site activities. Contemporaneous addition of the predicted daily increments of PM₁₀ and PM_{2.5} with daily measured background levels for 2016 showed that no additional days of exceedance would result at the most highly impacted receptor, R1, due to the proposed increased site activities.

This additional modelling shows that the *Approved Methods* criteria are satisfied at all residential receptors for all particulate air pollutants modelled. Therefore, it is considered that emissions to air from the site's operation are unlikely to cause harm to human health or the environment.

Additionally, there are various dust controls planned that were not included in the model, such as dust filters and dust extractors. These dust controls would further reduce particulate matter generation at the site. No further controls are recommended.

6.4.2 Industrial Receptors

Industrial receptors are not considered "sensitive receptors" in this assessment. The justification is provided below.

Many air quality impact assessments conducted by Benbow Environmental and other respected environmental consultancies have been submitted to and approved by the EPA where neighbouring industrial facilities were not required to be considered as sensitive receptors.

It is our understanding that the *Approved Methods* criteria is designed to protect residents who may live at their home 24/7 and vulnerable people such as children and the elderly. It is highly unreasonable and unfeasible that this development must assess the same approved methods criteria at a residence, school or hospital to that of an industrial facility like that of warehouses, wholesalers, manufacturers operating in close proximity to the site. As employees typically only work an 8 hour shift at such facilities, a more suitable criterion is for these places of business would be the occupational health and safety levels, which the site has demonstrated would readily comply with.

As it is not common practice in NSW to assess industrial or commercial facilities against the *Approved Methods* criteria, and based on the nature of works undertaken, we believe it is unwarranted to assess the neighbouring industrial facilities as sensitive receivers.

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7. SITE VISIT

A site visit was conducted by Kate Barker from Benbow Environmental on the 13th October 2021 at approximately 11am. During the site visit, the following was noted:

- A small amount of dust was evident below the conveyors and was able to be transported by light winds.
- Material storage was above ground level for one in-ground receival bin.

It is not considered that these events were significant enough to cause pollution outside the site, however to ensure future compliance, the following additional controls are recommended:

- Communication with delivery providers to ensure loads are at correct moisture level.
- Additional management to ensure delivered loads do not exceed the capacity of the bins, avoiding overflow.
- Regular inspection conveyors will have spill trays and belt cleaning devices.
- Regular sweeping of areas surrounding inground bins and conveyer structures, where required.

Contingency measures in the case of exceedances or impacts at sensitive receptors include:

- Installation water sprays or dust suppression equipment fixed to the concrete wind walls;
- Use of dust suppression during receival of materials to inground bins and until all material is below ground level.

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Air Quality Impact Assessment



8. STATEMENT OF POTENTIAL AIR QUALITY IMPACTS

TSP emissions at all sensitive receptors were predicted to comply with the *Approved Methods* criterion for an annual averaging period. PM₁₀ annual average emissions are also predicted to comply at all residential receptors. Odour is not considered as a potential emission that would be generated from the proposed increase processing capacity at the development and therefore was not assessed.

The maximum predicted impacts for 24 hour and annual averaging periods for PM_{2.5}, and the 24hr averaging period for PM₁₀ all exceeded the relevant criteria at all residential receptors due to elevated background concentrations. However, contemporaneous addition of the predicted daily increments with daily background levels showed that no additional days of exceedance would result from the proposed increased site activities at nearest sensitive residential receptors. Therefore, the *Approved Methods* criteria are satisfied at all residential receptors for all particulate air pollutants modelled. No further controls are recommended.

This assessment provides an updated report to include previously assessed quantities of the existing development. As such, the methodology regarding the assessment of the residential and industrial receptors remains consistent with the assessment for the approved and existing development.

The following additional controls are recommended:

- Communication with delivery providers to ensure loads are at correct moisture level.
- Additional management to ensure delivered loads do not exceed the capacity of the bins, avoiding overflow.
- Regular inspection conveyors will have spill trays and belt cleaning devices.
- Regular sweeping of areas surrounding inground bins and conveyer structures, where required.

It is suggested that future modifications of the development regarding tonnages should be supported by an updated AQIA.

Contingency measures in the case or exceedances of impacts at sensitive receptors include:

- Installation water sprays or dust suppression equipment fixed to the concrete wind walls;
- Use of dust suppression during receipt of materials to inground bins and until all material is below ground level.

This concludes the report.

Kate Barker
Senior Environmental Scientist

R T Benbow
Principal Consultant

Renita Developments Pty Ltd
Air Quality Impact Assessment



9. REFERENCES

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Ferraris, C., Hackley, V., and Avilés, A (2004) *Measurement of Particle Size Distribution in Portland Cement Powder: Analysis of ASTM Round Robin Studies*. Cement, Concrete and Aggregates. Vol. 26, No. 2, 2004, pp. 1-11.

NSW legislation (1997) *Protection of the Environment Operations Act. No 156*. Available at: <https://www.legislation.nsw.gov.au/#/view/act/1997/156/whole> (Accessed: 29 August 2017).

National Pollutant Inventory (1999) *Emission Estimation Technique Manual for Concrete Batching and Concrete Product Manufacturing*. Available at: <http://www.npi.gov.au/resource/emission-estimation-technique-manual-concrete-batching-and-concrete-product-manufacturing> (Accessed: 27 August 2017).

United States Environmental Protection Agency (1995) *AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*. Available at: <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissionfactors> (Accessed: 11 August 2017).

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Air Quality Impact Assessment



10. LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

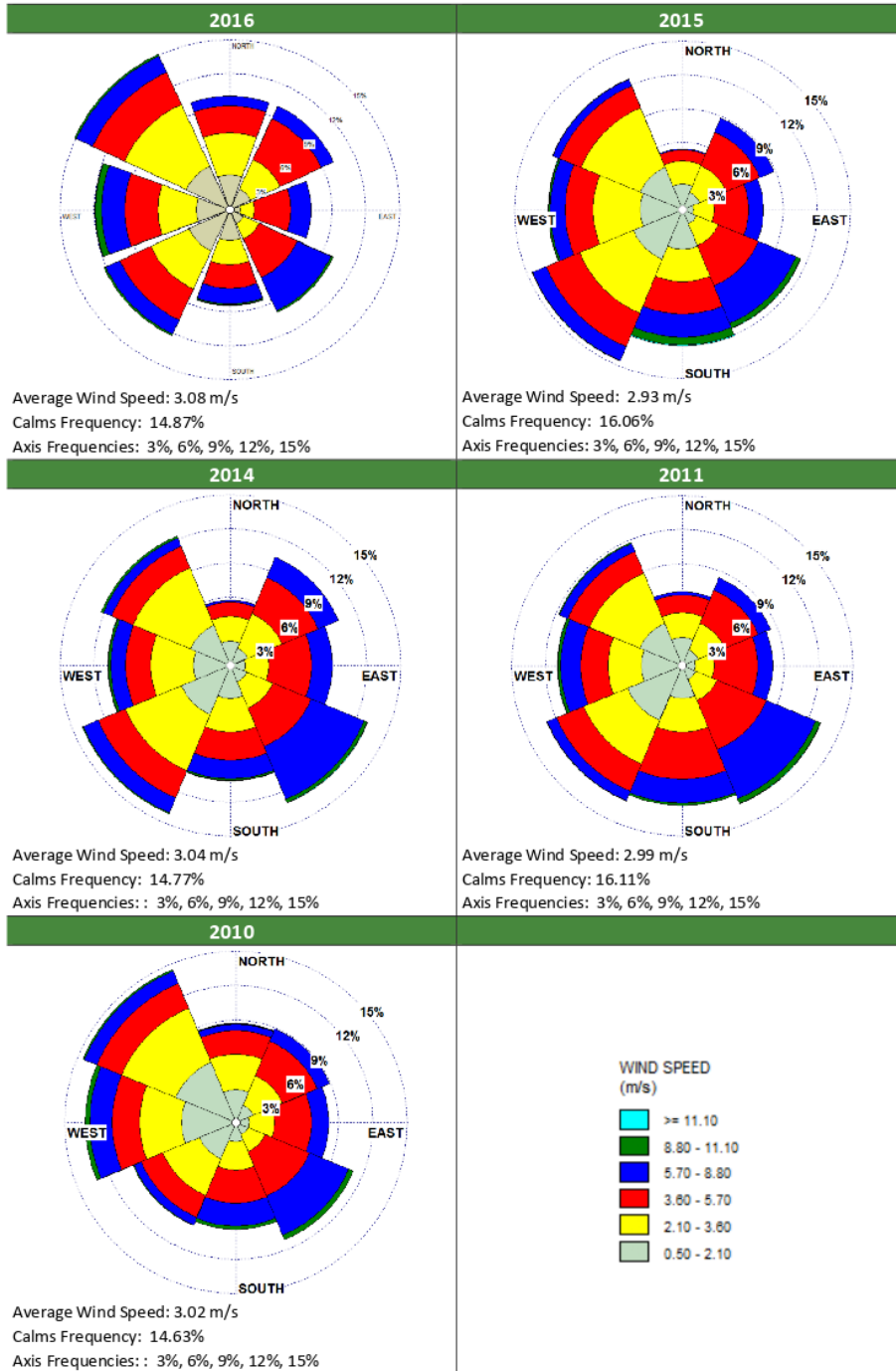
This report has been prepared solely for the use of Renita Developments Pty Ltd, as per our agreement for providing environmental services. Only Renita Developments Pty Ltd is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

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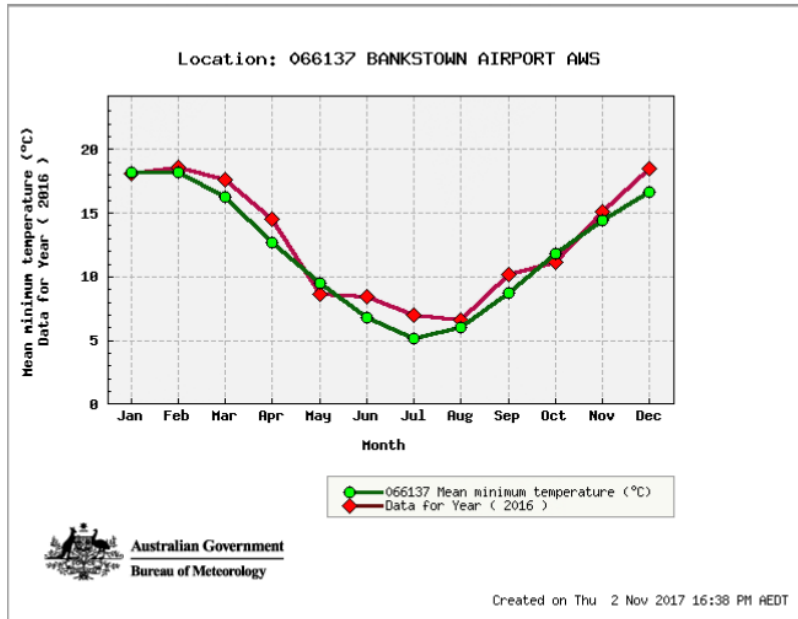
ATTACHMENTS

Attachment 1: Wind Rose Plots for the Referenced Meteorological Station – Bankstown Airport,
Bureau of Meteorology 2010, 2011, and 2014 – 2016.

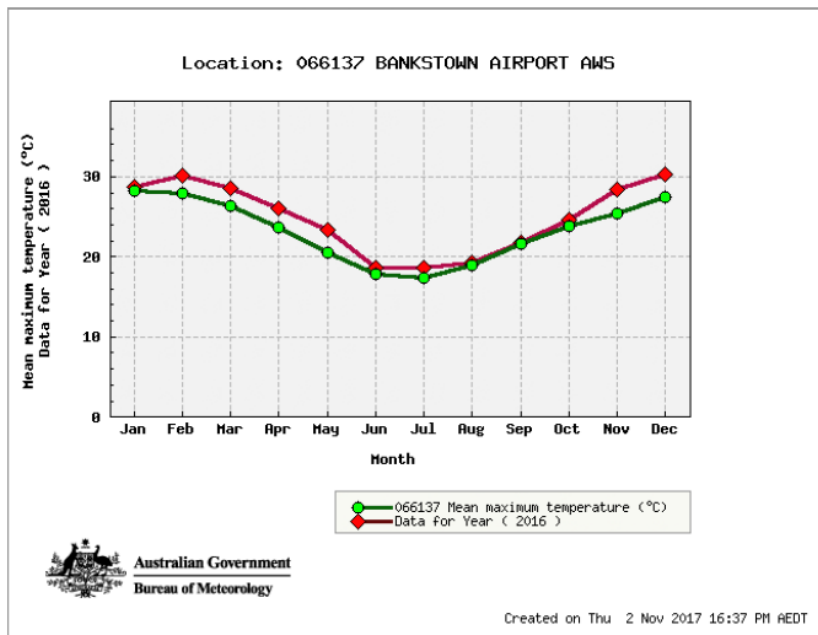


Attachment 2: Long-term Climate Statistics for the Referenced Meteorological Station –
Bankstown Airport, Bureau of Meteorology

Long-term Mean Minimum Monthly Temperature and Mean Minimum Monthly Temperature for 2016



Long-term Mean Maximum Monthly Temperature and Mean Maximum Monthly Temperature for 2016



**ENVIRONMENTAL MANAGEMENT PLAN
FOR RENITA DEVELOPMENTS
4 ASH ROAD, PRESTONS**

Prepared for: Renita Developments
Advanced Readymix

Prepared by: Linda Zanotto, Senior Environmental Engineer
Kate Barker, Senior Environmental Scientist
R T Benbow, Principal Consultant

Report No: 171164-03_EMP_Rep_Rev3
December 2021
(Released: 20 December 2021)



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ENVIRONMENTAL

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 <p>ADVANCED READYMIX</p>	<p>ENVIRONMENTAL POLICY</p>
---	------------------------------------

ENVIRONMENTAL POLICY

Advanced Readymix recognises that the protection and conservation of the natural environment is an important element in our social & legal responsibilities. We are therefore committed to the continuous improvement in environmental performance and in minimising any adverse environmental impacts throughout our business operations.

Advanced Readymix is committed to the protection of the environment through the minimisation of waste, the responsible consumption of resources, the efficient use of energy, and the prevention of pollution.

The success of our environmental management is dependent on:

- Ensuring our staff is aware of their responsibilities relating to environmental management and actively seek opportunities to improve environmental performance.
- Establish and encourage all employees to identify improvements in areas such as energy use, recycling, waste minimization and the avoidance of pollution.
- Setting measurable improvement targets and ensuring progress towards the achievement of these targets is subject to regular management review.
- Conduct all activities to meet or exceed mandatory environmental legislation and regulations.
- Where appropriate, Advanced Readymix will participate in external environmental improvement initiatives.

Signature: _____

Print Name: _____

Dated: _____ / _____ / _____

UNCONTROLLED COPY: Last printed 12/20/2021 1:03:00 PM - For up to date copy please refer to Website		
Doc Name: Form 2 Environmental Policy	Version No: 2	
Approval: Roy Sergi	Last Revision: 1	Page i of 55

Renita Developments Pty Ltd
Environmental Management Plan



EXECUTIVE SUMMARY

This Environmental Management Plan (EMP) has been developed for Renita Developments Pty Ltd following the guidelines of AS/NZS ISO 14001, *Environmental Management Systems – Specifications with guidance for use* and AS/NZS ISO 14004, *Environmental Management Systems – General guidelines on principles, systems and supporting techniques*. The EMP is the guiding document in establishing an environmental management system at the site

The site is operated by Advanced Readymix, a sister company of Renita Developments. As such, the EMP is prepared for Advanced Readymix and tailored to their management practices and organisational structure; however, the environmental procedures are site specific and can be adopted by any company operating the subject site. Advanced Readymix operate a number of concrete batching plants located in Smithfield and Seven Hills in NSW, Australia. This Environmental Management Plan provides the framework for the site located at 4 Ash Road, Prestons so that operations are undertaken with environmental aspects and impacts of activities in mind and to minimise potential for environmental harm.

The EMP identifies how the management structure at Advanced Readymix, Prestons will satisfy the requirements of the environmental protection legislation and other regulatory requirements within their contractual boundaries. The EMP covers all operations relating to the Prestons site undertaken by Advanced Readymix and contractors on their behalf.

The EMP explains the basis of the AS/NZS ISO 14001 environmental management system approach.

The objectives of the EMP for Advanced Readymix operations are:

- Apply best environmental practices within the economic constraints that exist within the community.
- Support the precautionary principle of ecologically sustainable development.
- Reduce unacceptable risks to the environment.
- Implement awareness programs across all levels of personnel involved with the site activities to ensure the objectives of the EMP are achieved.
- Require site supervisors to practice due diligence in the environmental management of the site.
- Establish measurable and realistic targets in any environmental monitoring program and as a consequence of any internal audits undertaken.
- Be proactive in addressing environmental issues raised as a consequence of any internal or external audits of the site.
- Ensure the team of staff and contractors are proactive in the cycle of achieving continuous improvement of environmental performance.

Implementing an environmental management plan to AS/NZS ISO 14001:2015 requires each of the core elements to be addressed. At the end of the Executive Summary, a diagrammatic form of these elements is provided for continual reference.

The environmental matters that concern the site management can be grouped into 3 headings:

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Environmental Management Plan



SITE SPECIFIC

- compliance with Advanced Readymix's corporate environmental policy;
- compliance with legislation at both the State and local levels;
- achieving objectives and targets;
- implementation of environmental management programs;
- actively seeking improvements;
- achieving best practice status;
- minimisation of waste; and
- protection of residential amenity.

REGIONAL

- supporting pollution reduction initiatives of Local and State Governments;
- supporting the principles of ecological sustainable development;
- minimisation of waste;
- taking up opportunities for cleaner processes; and
- maximising efficiency in production while minimising the resources needed.

GLOBAL

- supporting pollution reduction initiatives of the Federal Government;
- achieving greenhouse gas reduction goals;
- supporting the principles of ecologically sustainable development; and
- supporting cleaner production processes.

Initially, efforts by the site management should be directed at site-specific matters, and the EMP as outlined focuses on this only, although some efforts also contribute to regional and global targets. Future issues of the EMP could address regional and global matters.

Linda Zanotto
Senior Environmental Engineer

Kate Barker
Senior Environmental Scientist

R T Benbow
Principal Consultant

Renita Developments Pty Ltd
Environmental Management Plan



Core Elements of AS/NZS ISO 14001 - Circle of Improvement



Reference: Vale, A., 1996, 'Environmental Awareness Training'.

Contents	Page
EXECUTIVE SUMMARY	I
1. INTRODUCTION	1
1.1 Objectives of the EMP	1
1.2 Environmental Procedures	1
2. PROJECT DESCRIPTION	3
2.1 Site Location	3
2.2 Site and Process Description	4
3. RELEVANT LEGISLATION	6
3.1 Licences, Permits and Approvals	6
3.2 Protection of the Environment Operations Act, 1997	7
3.3 Waste Avoidance & Recovery Act, 2001	14
3.4 Work Health and Safety Act, 2011	14
3.4.1 SafeWork NSW Notification	18
4. SIGNIFICANT ENVIRONMENTAL ASPECTS & IMPACTS	20
5. ENVIRONMENTAL OBJECTIVES & TARGETS	30
6. IMPLEMENTATION AND OPERATION	32
6.1 Organisation	32
6.2 Roles and Responsibilities	33
6.3 Environmental Training	34
6.3.1 Staff Training	34
6.3.2 Training for Contractors	35
6.3.3 Training Register	35
6.4 Communication	35
6.4.1 Community Relations	35
6.4.1.1 Complaints Response	35
6.4.2 Regulatory Authorities	36
6.4.2.1 Reporting Requirements	36
6.4.3 Internal Communication	36
6.5 Emergency Preparedness and Response	39
7. MONITORING, CORRECTIVE AND PREVENTATIVE ACTIONS	40
7.1 Monitoring and Inspection	40
7.2 Corrective and Preventative Actions	40
7.2.1 Request for Corrective Action	41
7.3 Auditing	43
7.4 Records	43
8. LIMITATIONS	44

Tables**Page**

Table 3-1: Licences, permits and approvals	6
Table 4-1: Environmental Aspects Register for Advanced Readymix	21
Table 5-1: Environmental Objectives, KPIs and Targets	30

Figures**Page**

Figure 2-1: Location of Subject Site	3
Figure 2-2: Site Plan	5
Figure 6-1: Organisation Structure	33

Attachments

Attachment 1: Environmental Procedures Manual





1. INTRODUCTION

This Environmental Management Plan (EMP) documents the expected environmental aspects, potential impacts and the associated environmental management procedures of the existing concrete batching plant with proposed increased maximum production of 300,000 tonnes per annum to be located at 4 Ash Road, Prestons (the "subject site").

The site is operated by Advanced Readymix, a sister company of Renita Developments. As such, the EMP is prepared for Advanced Readymix and tailored to their management practices and organisational structure; however, the environmental procedures are site specific and can be adopted by any company operating the subject site. Advanced Readymix is an Australian owned business that supplies premixed concrete to residential, commercial, industrial and civil construction industry. Advanced Readymix have over 30 years' experience and operate a number of concrete batching plants located in Smithfield and Seven Hills that service the Sydney metropolitan area.

At the time of writing, the concrete batching plant is in operation. This EMP is required to support the modification application to Liverpool City Council to increase processing quantities from 200,000 to 300,000 tpa. The proposal involves the continued use of the existing concrete batching plant located at the rear of the site.

There are a range of environmental aspects and potential impacts associated with the activities of the facility, particularly related to the potential for the release of dust emissions, and spillages of chemicals or releases of wastewater. An examination of these aspects and potential impacts has led to the preparation of a set of environmental procedures to guide the future environmental management on site.

The EMP has been developed following the guidelines of: AS/NZS ISO 14001, *Environmental Management Systems: Specifications with guidance for use*; AS/NZS ISO 14004, *Environmental Management Systems: General guidelines on principles, systems and supporting techniques*; and *Environmental management Plan Guidelines* (Commonwealth of Australia, 2014).

1.1 OBJECTIVES OF THE EMP

The objectives of the EMP are:

- To ensure that all staff and contractors are aware of the environmental aspects and impacts related to the works and that they are competent in implementing the specific environmental safeguards that apply to their activities;
- To establish environmental management objectives and procedures in order to:
 - ▶ Achieve the regulatory compliance;
 - ▶ Minimise any environmental harm on-site and off-site, resulting from the site;
 - ▶ Improve environmental performance during the works on site.

1.2 ENVIRONMENTAL PROCEDURES

A set of environmental procedures has been compiled into a manual, the Environmental Procedures Manual, to compliment this management plan. Combined, the EMP and the

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Environmental Management Plan



procedures manual are designed to help staff and contractors carry out activities in an environmentally responsible way.

The environmental procedures manual forms a vital component of the site's EMP, and should be effectively used by all staff and contractors. A review of the EMP report and procedures manual must be undertaken once the site becomes operational, to ensure that the procedures contained within this EMP are all effective in meeting its environmental objectives.

The Environmental Procedures Manual is provided as a separate document (see Attachment 1).

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Environmental Management Plan



2. PROJECT DESCRIPTION

2.1 SITE LOCATION

The concrete batching plant is located at 4 Ash Road, Prestons ("the subject site"), legally described as Lot 8 in DP 241916. An aerial photograph of the subject site is shown in Figure 2-1.

Figure 2-1: Location of Subject Site



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Environmental Management Plan



2.2 SITE AND PROCESS DESCRIPTION

The concrete batching plant is located at the rear of the site behind the pre-existing building. Access to the site is via the southern driveway. Nine (9), 50 tonne in-ground raw material bins are provided for the receipt of aggregates and sands along with several above ground storage bays, and six silos for the storage of cement and powders. Raw materials are delivered to the site: aggregates and sands in covered dump trucks and cement and powders in bulk road tankers. Aggregates and sands are stored in the in-ground bins while cement and powders are stored in the six silos. Material from the in-ground bins are transferred via partially enclosed conveyors to overhead bins and then into weigh hoppers. The aggregates and sand are conveyed to the batching house, the cement and powders pneumatically transferred to the batching house and dry mixed in the concrete trucks. Water is also mixed into the trucks within the batching house. The concrete trucks then move to the slump stands where additional water is mixed in, until the right consistency is achieved.

Water treatment pits are located on site and include a first flush pit, water holding (recycling) pit, stirrer pits and a washout drying bay. The water treatment pits capture site washwater and stormwater runoff. Treated water is then recycled back into the concrete batching process.

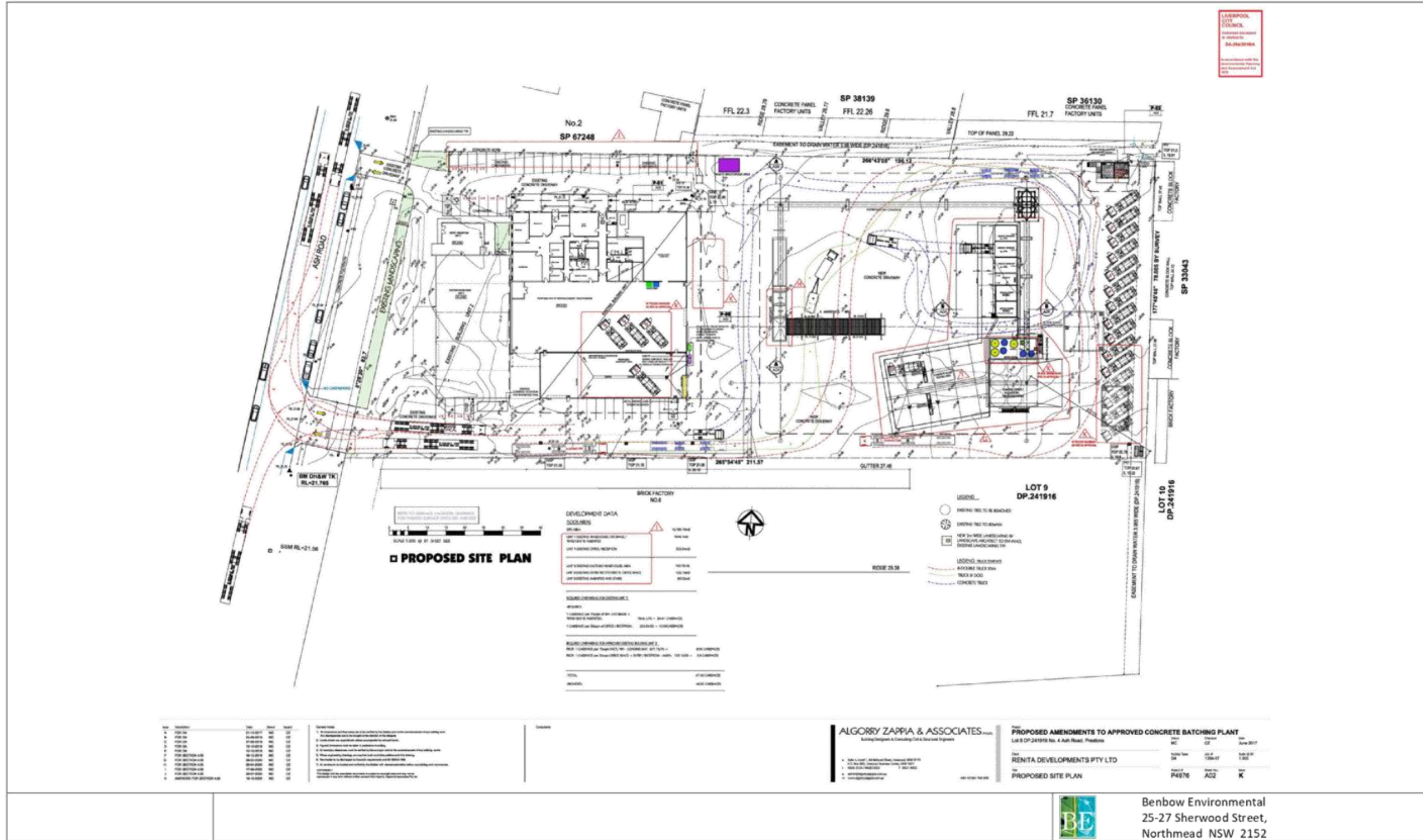
A bunded and covered truck wash bay is also installed. The truck wash bay contains sump pits that discharge to an oil & grease separator that is connected to sewer under a tradewaste agreement.

A site plan is provided as Figure 2-2.

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Environmental Management Plan



Figure 2-2: Site Plan





3. RELEVANT LEGISLATION

The legal requirements that affect the operation of this site include any legislation which relates to activities or potential environmental impacts of the operations. It is important for staff and contractors to be aware of the legislative and regulatory requirements involved in the operations of the site and their corresponding responsibilities.

The following federal and state acts, and their associated regulations, pertain to the environmental management of the site and are discussed in more detail in the subsequent sections:

- Protection of the Environment Operations Act, 1997 (POEO Act);
- Environmental Planning and Assessment Act, 1979 (EP&A Act);
- Waste Avoidance and Resource Recovery Act, 2001 (WARR Act); and
- Work Health and Safety Act, 2011 (WHS Act).

Note that changes to legislation or regulations during operations would require a corresponding change to the EMP and specific procedures. Visit <http://www.legislation.nsw.gov.au/> for further details.

All licences, permits and approvals required for the site are also presented.

3.1 LICENCES, PERMITS AND APPROVALS

A list of licences, permits and approvals are provided in Table 3-1.

Table 3-1: Licences, permits and approvals

Type	Relevant Legislation	Required?	Agency
LICENCES			
Environment Protection Licence	Schedule 1 of the Protection of the Environment Operations Act 1997	No	NSW EPA
Surface Water Licence	Water Act 1912	No	Office of Water
Groundwater Licence	Water Act 1912	No	Office of Water
PERMITS			
Permits under the Fisheries Management Act	Fisheries Management Act 1994	No	DPI Fishing and Aquaculture
Aboriginal Heritage Impact Permit	National Parks & Wildlife Act 1974	No	OEH
Permits under the Heritage Act 1977	Heritage Act 1977	No	OEH
APPROVALS			
Development Consent	Environmental Planning and Assessment Act 1979	Yes	Liverpool City Council
Approval to discharge tradewaste	Sydney Water Act, 1994	Yes	Sydney Water

Renita Developments Pty Ltd
Environmental Management Plan



The Table above indicates that, under the EP&A Act, development consent from Liverpool City Council is required. Development consent conditions (DCCs) are issued with the consent. Development consent conditions (DCCs) are issued with the consent. The DCCs that apply for the operation of the concrete batching plant will need to be fulfilled.

This EMP would need to be revised upon receipt of the DCCs to that ensure any conditions associated with operation of the facility are adequately addressed.

An approval to discharge tradewaste (Trade Waste Agreement) is also required for the discharge of treated wastewater from the truck wash bay.

3.2 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT, 1997

The production of pre-mixed concrete (concrete batching) does not require a licence under the Protection of the Environment Operations Act, 1997 (POEO Act). This is stipulated in Clause 13 of the POEO Act.

Nevertheless, site operations must comply with the general requirements of the POEO Act. Relevant sections of the Act are briefly summarised below, with an explanation of how the requirement relates to site operations in the right hand column.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p>The principal objective of the legislation is to avoid causing environmental harm. Harm is defined in the Act as being:</p> <p><i>“harm”, in relation to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above includes any act or omission that results in pollution.</i></p> <p>“Pollution” means:</p> <p>(a) water pollution, or (b) air pollution, or (c) noise pollution, or (d) land pollution.</p>	<p>The implementation of the EMP would ensure that the environmental impacts of the activities taking place on site are minimised.</p> <p>Safeguards and procedures are implemented to ensure that site operations avoid causing environmental harm.</p>
<p>The primary objectives of this Act as applied to the site are:</p> <p>(a) <i>to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development,</i></p> <p>(b) <i>to provide increased opportunities for public involvement and participation in environment protection,</i></p> <p>(c) <i>to ensure that the community has access to relevant and meaningful information about pollution,</i></p>	<p>Monitoring, corrective, and self-auditing activities are also encouraged in this EMP.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p>(d) to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following:</p> <ul style="list-style-type: none"> • pollution prevention and cleaner production, • the reduction to harmless levels of the discharge of substances likely to cause harm to the environment, • the elimination of harmful wastes, • the reduction in the use of materials and the re-use or recycling of materials, • the making of progressive environmental improvements, including the reduction of pollution at source, • the monitoring and reporting of environmental quality on a regular basis, <p>(e) to rationalise, simplify and strengthen the regulatory framework for environment protection,</p> <p>(f) to improve the efficiency of administration of the environment protection legislation,</p> <p>(g) to assist in the achievement of the objectives of the Waste Avoidance and Resource Recovery Act 2001.</p>	<p>This EMP allows a set of environmental safeguards to be established and maintained. Maintain an effective housekeeping standard using the EMP procedures.</p>
Air Pollution	
<p>“Air pollution,” (defined in the Act) means the emission into the air of any air impurity.</p> <p>While “air impurity” includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.</p>	<p>Air pollution has the potential to result from dust generated at several steps in the concrete batching process from receipt of raw materials, to transfer, batching and mixing activities.</p>
<p>Clause 124 Operation of plant (other than domestic plant)</p> <p>The occupier of any premises who operates any plant in or on those premises in such a manner as to cause air pollution from those premises is guilty of an offence if the air pollution so caused, or any part of the air pollution so caused,</p> <p>Is caused by the occupier’s failure:</p> <p>(a) to maintain the plant in an efficient condition, or</p> <p>(b) to operate the plant in a proper and efficient manner.</p> <p>“Offensive odour” means an odour:</p> <p>(a) that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances:</p> <p>(i) is harmful to (or is likely to be harmful) a person who is outside the premises from which it is emitted, or</p> <p>(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or</p>	<p>An Air Quality Control procedure has been provided to address these objectives.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p>(b) <i>that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations.</i></p>	
<p>Clause 132 details the maximum penalty for air pollution offences. Tier 2 penalties apply. <i>A person who is guilty of an offence under this Division is liable, on conviction.</i></p>	<p>Responsibility extends to all employees. If found guilty of an air pollution offence, both the company and the individual can be held liable.</p>

Water Pollution

<p>“water pollution” or “pollution of waters” means:</p> <p>(a) <i>placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or</i></p> <p>(b) <i>placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or</i></p> <p>(c) <i>placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,</i> and, without affecting the generality of the foregoing, includes:</p> <p>(d) <i>placing any matter (whether solid, liquid or gaseous) in a position where:</i> (i) <i>it falls, descends, is washed, is blown or percolates, or</i> (ii) <i>it is likely to fall, descend, be washed, be blown or percolate,</i> <i>into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or</i> (e) <i>placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted,</i></p> <p><i>if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.</i></p>	<p>The potential to pollute waters would mainly be from potential releases of wastewater or spillages of chemicals if these are not managed adequately or there is a failure of pollution control equipment.</p> <p>The main risk would be to stormwater. A Stormwater and Wastewater Management procedure and a Pollution Control Equipment Maintenance procedure are provided.</p>
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Renita Developments Pty Ltd
Environmental Management Plan

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p>“waters” means the whole or any part of:</p> <p>(a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or</p> <p>(b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.</p>	
<p>Clause 120 relates to the prohibition of pollution of waters:</p> <p><i>A person who pollutes any waters is guilty of an offence.</i></p> <p>Clause 123 details the maximum penalty for water pollution offences. Tier 2 penalties apply.</p> <p><i>A person who is guilty of an offence under this Part is liable, on conviction.</i></p>	
Noise Pollution	
<p>“Offensive noise” means noise that by reason of its level, nature, character or quality, or the time at which it is made is harmful to (or likely to be harmful to) a person who is outside the premises or interferes unreasonably with (or is likely to) the comfort or repose of a person outside the premises.</p> <p>Clause 139 relates to the operation of plants:</p> <p><i>The occupier of any premises who operates any plant (other than control equipment) at those premises in such a manner as to cause the emission of noise from those premises is guilty of an offence if the noise so caused, or any part of it, is caused by the occupier’s failure:</i></p> <p>(a) to maintain the plant in an efficient condition, or</p> <p>(b) to operate the plant in a proper and efficient manner.</p> <p>Clause 141 details the maximum penalty for noise offences. Tier 2 offences apply.</p> <p><i>A person who is guilty of an offence under this Part is liable, on conviction.</i></p>	<p>Noise can be generated at various steps in the process. A Noise Management procedure has been provided to address sources of noise at the site.</p>
Land Pollution	
<p>“land pollution” or “pollution of land” means placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous:</p> <p>(a) that causes or is likely to cause degradation of the land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, or</p> <p>(b) that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,</p> <p>(c) but does not include placing in or on, or otherwise introducing into or onto, land any substance excluded from this definition by the regulations.</p>	<p>Staff needs to ensure that waste is not discarded to land within or outside the boundaries of the site. As the site is fully sealed where activities would be carried out, soil is not exposed and the risk of contamination from activities is low. Safeguards are in place to prevent contamination of land.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p><i>“land” does not include waters.</i></p> <p>Clause 142A relates to the pollution of land. Tier 2 penalties apply. <i>A person who pollutes land is guilty of an offence.</i></p>	
Waste Generation and Disposal	
<p><i>“waste” (unless specially defined) includes:</i></p> <ul style="list-style-type: none"> <i>(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or</i> <i>(b) any discarded, rejected, unwanted, surplus or abandoned substance, or</i> <i>(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or</i> <i>(d) any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or</i> <i>(e) any substance prescribed by the regulations to be waste</i> <p><i>A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered.</i></p> <p>Waste needs to be disposed of in a manner which does not create or is likely to create environmental harm.</p> <p>Clause 143 relates to the unlawful transporting or depositing of waste:</p> <p><i>If a person transports waste to a place that cannot lawfully be used as a waste facility for that waste, or causes or permits waste to be so transported:</i></p> <ul style="list-style-type: none"> <i>(a) the person, and</i> <i>(b) if the person is not the owner of the waste, the owner, are each guilty of an offence.</i> <p>Clause 144 deals with the use of land as waste facility without lawful authority:</p> <ul style="list-style-type: none"> <i>(1) A person who is the owner or occupier of any land and who uses the land, or causes or permits the land to be used, as a waste facility without lawful authority is guilty of an offence.</i> <i>(2) In any proceedings for an offence under this section the defendant bears the onus of proving that there is lawful authority to use the land concerned as a waste facility.</i> <p>All waste must be classified in accordance with the EPA’s Waste Classification Guidelines.</p> 	<p>The generation of waste requires appropriate management. Any disposal required must be undertaken in accordance with the NSW EPA’s <i>Waste Classification Guidelines</i>. Management of waste and classification of all waste generated are addressed in a separate Waste Management Plan for the development.</p> <p>All waste should be stored in an environmentally safe manner and away from any incompatible wastes. Staff are responsible for being aware of the nature and quantity of waste generated at the site.</p> <p>False or misleading information regarding waste is an offence under the Act.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
Reporting Responsibility	
<p>Clause 148 <i>Pollution incidents causing or threatening material harm to be notified.</i></p> <ul style="list-style-type: none"> • <i>Kinds of incidents to be notified</i> <i>This Part applies where a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.</i> • <i>Duty of person carrying on activity to notify</i> <i>A person carrying on the activity must, immediately after the person becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.</i> • <i>Duty of employee engaged in carrying on activity to notify</i> <i>A person engaged as an employee in carrying on an activity must, immediately after the person becomes aware of the incident, notify the employer of the incident and all relevant information about it. If the employer cannot be contacted, the person is required to notify each relevant authority.</i> • <i>Duty of employer to notify</i> <i>An employer who is notified of an incident or who otherwise becomes aware of a pollution incident which is related to an activity of the employer, must, immediately after being notified or otherwise becoming aware of the incident notify each relevant authority of the incident and all relevant information about it.</i> • <i>Duty of occupier of premises to notify</i> <i>The occupier of the premises on which the incident occurs must, immediately after the occupier becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.</i> • <i>Duty on employer and occupier to ensure notification</i> <i>An employer or an occupier of premises must take all reasonable steps to ensure that, if a pollution incident occurs in carrying on the activity of the employer or occurs on the premises, as the case may be, the persons engaged by the employer or occupier will, immediately, notify the employer or occupier of the incident and all relevant information about it.</i> • <i>Extension of duty to agents and principals</i> <i>This section extends to a person engaged in carrying on an activity as an agent for another. In that case, a reference in this section to an employee extends to such an agent and a reference to an employer extends to the principal.</i> <p>Clause 152: A person who contravenes this Part is guilty of a Tier 2 offence.</p>	<p>In the event of an incident, the duty to notify extends to all staff and contractors of the site. Staff and/or contractors are required to notify the employer. When management is not contactable, they are required to notify the relevant authorities. Staff are required to notify in the event of an incident that causes or threatens material harm to the environment.</p> <p>Relevant authorities for notification are:</p> <ul style="list-style-type: none"> • Liverpool City Council; • NSW EPA; • The Ministry of Health; • Safework Australia; • Fire and Rescue NSW.

Renita Developments Pty Ltd
Environmental Management Plan

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
Offences and Penalties	
<p>The Act establishes the penalty provisions of causing environmental harm and committing the following breaches (wilfully or negligently) presented under the tier system stipulated in the legislation. These breaches are considered offences under the Act.</p>	
<p>Tier 1. <i>If a person wilfully or negligently disposes of waste in a manner that harms or is likely to harm the environment:</i> (a) the person, and (b) if the person is not the owner of the waste, the owner, are each guilty of an offence.</p> <ul style="list-style-type: none"> • Penalty for Corporation: \$5,000,000 for an offence that is committed wilfully or \$2,000,000 for an offence that is committed negligently • for Individual: \$1,000,000 or 7 years imprisonment or both for an offence that is committed wilfully, or \$500,000 or 4 years imprisonment, or both, for an offence that is committed negligently; • disposal of waste without lawful authority; • cause a substance to leak, spill or escape that causes environmental harm or is likely to harm the environment; • emission of an ozone depleting substance. 	<p>All staff and contractors should be aware and understand their individual and corporate responsibilities under the Act. This is addressed in the Environmental training Section of this EMP.</p>
<p>Tier 2.</p> <ul style="list-style-type: none"> • Penalty for Corporation: \$1,000,000 and for a continuing offence \$120,000 for each day the offence continues, • for Individual: \$250,000 and \$60,000 per day for a continuing offence; • cause air pollution; • pollution of waters; • cause noise pollution; • unlawful transport or disposal of waste; • failure to report incidents that threaten material harm to the environment; • permitting land to be used as an unlawful waste facility. 	
<p>Tier 3.</p> <p><i>Clause 114 - Tier 3 offences are tier 2 offences that may be dealt with under Part 8.2 by way of penalty notice.</i></p>	



3.3 WASTE AVOIDANCE & RECOVERY ACT, 2001

This Act relates to the efficient use of resources, resource recovery, including reuse and recycling and continual reduction of the disposal of waste. The Act stipulates the requirements and objectives of Resource NSW, a corporation created under the Act.

Waste Avoidance and Recovery Act, 2001	
Definitions and objectives	Relevance to Site Operations
General Requirements	
<p>The primary objectives of the act in relation to site activities are:</p> <ul style="list-style-type: none"> to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development; to provide for the continual reduction in waste generation; to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste; and To establish a hierarchy of resource management options: <ol style="list-style-type: none"> “avoidance of unnecessary resource consumptions, resource recovery (including reuse, reprocessing, recycling and energy recovery), disposal”. 	<p>This act is of relevance to the site in relation to segregation of waste streams and maximising the reuse and recycling of waste materials.</p> <p>These objectives have been considered and embedded in the Waste Management Plan.</p>

3.4 WORK HEALTH AND SAFETY ACT, 2011

The Work Health and Safety Act 2011 and associated regulation provide requirements for the storage and handling of dangerous goods.

The following table lists some of the general requirements for labelling, placarding and other requirements that apply for sites where dangerous goods or hazardous chemicals exceed quantities listed in Schedule 11 of the regulation. Penalties apply in most cases. Visit <http://www.legislation.nsw.gov.au/> for further details.

Work Health and Safety Regulation 2017	
Requirements relating to Hazardous Chemicals and Dangerous Goods	Relevance to Site Operations
Labelling of Hazardous Chemicals	
<p>Clause 341 – Labelling hazardous chemicals – general requirement</p> <p><i>A person conducting a business or undertaking at a workplace must ensure that a hazardous chemical used, handled or stored at the workplace is correctly labelled in accordance with clause 335.</i></p> <p>Schedule 9, Part 3 of the Regulation sets out requirements for labelling.</p>	<p>Ensure hazardous chemicals are labelled correctly.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Work Health and Safety Regulation 2017	
Requirements relating to Hazardous Chemicals and Dangerous Goods	Relevance to Site Operations
Hazardous Chemicals Register	
<p>Clause 346 – Hazardous chemicals register</p> <p><i>(1) A person conducting a business or undertaking at a workplace must ensure that:</i></p> <ul style="list-style-type: none"> <i>(a) a register of hazardous chemicals used, handled or stored at the workplace is prepared and kept at the workplace, and</i> <i>(b) the register is maintained to ensure the information in the register is up to date.</i> <p><i>(2) The register must include:</i></p> <ul style="list-style-type: none"> <i>(a) a list of hazardous chemicals used, handled or stored, and</i> <i>(b) the current safety data sheet for each hazardous chemical listed.</i> <p><i>(3) The person must ensure that the register is readily accessible to:</i></p> <ul style="list-style-type: none"> <i>(a) a worker involved in using, handling or storing a hazardous chemical, and</i> <i>(b) anyone else who is likely to be affected by a hazardous chemical at the workplace.</i> 	<p>A copy of the hazardous chemical register will need to be made available at the workplace and kept up to date.</p>

Renita Developments Pty Ltd
Environmental Management Plan



Work Health and Safety Regulation 2017	
Requirements relating to Hazardous Chemicals and Dangerous Goods	Relevance to Site Operations
Manifest & Notification Requirements	
<p>Schedule 11 lists the placard and manifest quantities of hazardous chemicals. The following Clauses apply:</p> <p>Clause 347 – Manifest of hazardous chemicals</p> <p><i>(1) A person conducting a business or undertaking at a workplace must, if the quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals used, handled or stored at the workplace exceeds the manifest quantity for the Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals:</i></p> <p style="margin-left: 40px;"><i>(a) prepare a manifest of Schedule 11 hazardous chemicals, and</i> <i>(b) amend the manifest as soon as practicable if:</i></p> <p style="margin-left: 80px;"><i>(i) the type or quantity of Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals that must be listed in the manifest changes, or</i> <i>(ii) there is a significant change in the information required to be recorded in the manifest</i></p> <p><i>(2) A manifest of Schedule 11 hazardous chemicals must comply with Schedule 12.</i></p> <p><i>(3) The person must keep the manifest:</i></p> <p style="margin-left: 40px;"><i>(a) in a place determined in agreement with the primary emergency service organisation, and</i> <i>(b) available for inspection under the Act, and</i> <i>(c) readily accessible to the emergency service organisation.</i></p>	<p>A manifest of hazardous materials is not required.</p> <p>Should storage quantities change, this would need to be reviewed.</p>
<p>Clause 348 – Regulator must be notified if manifest quantities to be exceeded</p> <p><i>(1) A person conducting a business or undertaking at a workplace must ensure that the regulator is given written notice if a quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals that exceeds the manifest quantity is used, handled or stored, or is to be used, handled or stored, at the workplace.</i></p>	<p>Manifest quantities not exceeded.</p>
Placarding Requirements	
<p>Clause 349 – Outer warning placards – requirement to display</p> <p><i>(1) A person conducting a business or undertaking at a workplace must ensure that an outer warning placard is prominently displayed at the workplace if the total quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals used, handled or stored at the workplace exceeds the placard quantity for the Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals.</i></p>	<p>This is required and is good practice to label all dangerous goods.</p>

Renita Developments Pty Ltd
Environmental Management Plan

Work Health and Safety Regulation 2017	
Requirements relating to Hazardous Chemicals and Dangerous Goods	Relevance to Site Operations
<p>Clause 350 – Placard – requirement to display</p> <p><i>(1) A person conducting a business or undertaking at a workplace must ensure that a placard is prominently displayed at the workplace if the total quantity of a Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals stored at the workplace exceeds the placard quantity for the Schedule 11 hazardous chemical or group of Schedule 11 hazardous chemicals.</i></p> <p><i>(2) A placard must comply with Schedule 13.</i></p>	
Emergency Plans and Safety Equipment	
<p>Clause 359 – Fire protection and firefighting equipment</p> <p><i>(1) A person conducting a business or undertaking at a workplace must ensure the following:</i></p> <p><i>(a) the workplace is provided with fire protection and firefighting equipment that is designed and built for the types of hazardous chemicals at the workplace in the quantities in which they are used, handled, generated or stored at the workplace, and the conditions under which they are used, handled, generated or stored, having regard to:</i></p> <p><i>(i) the fire load of the hazardous chemicals, and</i></p> <p><i>(ii) the fire load from other sources, and</i></p> <p><i>(iii) the compatibility of the hazardous chemicals with other substances and mixtures at the workplace,</i></p> <p><i>(b) the fire protection and firefighting equipment is compatible with firefighting equipment used by the primary emergency service organisation,</i></p> <p><i>(c) the fire protection and firefighting equipment is properly installed, tested and maintained,</i></p> <p><i>(d) a dated record is kept of the latest testing results and maintenance until the next test is conducted.</i></p>	<p>The risk of fire at the site is associated with the storage and use of dangerous goods in the manufacturing process. The potential for fire could also relate to packaging materials and overheating of electrical equipment.</p> <p>Procedures relating to Emergency response, use of firefighting equipment and the storage and handling of chemicals and dangerous goods are provided in the Environmental Procedures Manual.</p>
<p>Clause 360 – Emergency equipment</p> <p><i>A person conducting a business or undertaking at a workplace that uses, handles, generates or stores hazardous chemicals must ensure that equipment is always available at the workplace for use in an emergency.</i></p>	

Renita Developments Pty Ltd
Environmental Management Plan

Work Health and Safety Regulation 2017	
Requirements relating to Hazardous Chemicals and Dangerous Goods	Relevance to Site Operations
<p>Clause 361– Emergency plans</p> <p><i>(1) This clause applies if the quantity of a Schedule 11 hazardous chemical used, handled, generated or stored at a workplace exceeds the manifest quantity for that hazardous chemical.</i></p> <p><i>(2) A person conducting a business or undertaking at the workplace must give a copy of the emergency plan prepared under Division 4 of Part 3.2 for the workplace to the primary emergency service organisation.</i></p> <p><i>(3) If the primary emergency service organisation gives the person a written recommendation about the content or effectiveness of the emergency plan, the person must revise the plan in accordance with the recommendation.</i></p>	An Emergency Plan is not required but strongly recommended.
<p>Clause 362 – Safety equipment</p> <p><i>(1) This clause applies if safety equipment is required to control an identified risk in relation to using, handling, generating or storing hazardous chemicals at a workplace.</i></p> <p><i>(2) A person conducting a business or undertaking at the workplace must ensure that the safety equipment is provided, maintained and readily accessible to persons at the workplace.</i></p>	

3.4.1 SafeWork NSW Notification

Schedule 11 of the Work Health and Safety Regulation 2017 provides the placarding and manifest quantities. Exceedance of the placarding quantity requires the site to display placards in relation to the hazardous chemical. Exceedance of the manifest quantity requires notification to SafeWork NSW in accordance with Schedule 12 of the Regulation.

The site would store the following hazardous chemicals:

Product Name	ADG/GHS	Quantities stored (Max)	Placard/Manifest Quantities exceeded?
Liquefied Petroleum gas (LPG)	ADG: Class 2.1 / GHS: Flammable Gases: Category 1 Gases Under Pressure: Liquefied Gas	150 L	No
MasterAir 940 also MICRO AIR 940	ADG: Non-dangerous good / GHS: Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2A; Skin sensitization Category 1	1,000 L	Not relevant
MasterPozzolith 370	ADG: Non-dangerous good / GHS: Not classified	5,000 L	Not relevant

Renita Developments Pty Ltd
Environmental Management Plan



Product Name	ADG/GHS	Quantities stored (Max)	Placard/Manifest Quantities exceeded?
MasterPozzolith RT 300 also POZZOLITH 300Ri	ADG: Non-dangerous good / GHS: Not classified	5,000 L	Not relevant
MasterSet AC 102	ADG: Non-dangerous good / GHS: Serious eye damage/eye irritation Category 2A	5,000 L	Not relevant
MasterSet AC 534 also POZZOLITH NC 534	ADG: Non-dangerous good / GHS: Acute toxicity Category 4 (oral); Serious eye damage Category 1	5,000 L	Not relevant
MasterGlenium SKY 8100	ADG: Non-dangerous good / GHS: Not classified	5,000 L	Not relevant

The site is not required to notify SafeWork NSW as the manifest threshold is not exceeded. The placarding threshold is exceeded for Class 8 PG II (Corrosive to metal, Category 1) and therefore a placard needs to be displayed in accordance with Schedule 13 of the Regulation.

Renita Developments Pty Ltd
Environmental Management Plan



4. SIGNIFICANT ENVIRONMENTAL ASPECTS & IMPACTS

The following section highlights the significant environmental aspects and impacts expected from the site operations.

An environmental aspect is defined in ISO14001, 3.6 as:

'An element of the organisation's activities, products or services which can interact with the environment.'

NOTE: A significant environmental aspect has or can have a significant environmental impact.

An environmental impact is defined as:

'Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.'

The Environmental Aspects Register provided in Table 4-1 identifies the environmental aspects associated with the development, as well as potential impacts and the risk of environmental harm. Control measures, including procedures, are listed for each impact/risk.

Aspects and impacts have been determined by identifying the activities expected to be undertaken on site and their designated areas as shown on the site plans. To ensure that the aspects and impacts are addressed comprehensively, all the facilities and equipment associated with the concrete batching plant must be re-evaluated and the aspects register must then be revisited in accordance with the following:

- After the first review, at least once every 2 years;
- After improvements have been made to the environmental management of the site;
- After any changes to activities or operations undertaken at the site;
- If there are any changes to legislation and environmental policies that are relevant to the site.



Table 4-1: Environmental Aspects Register for Advanced Readymix

Environmental Aspects Register - Advanced Readymix (Prestons)														
Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
RECEIPT, STORAGE & TRANSFER OF RAW MATERIALS	Unloading & storage of aggregates	Unwanted noise, generation of dust & particulates.			X	X			POEO Act 1997	M	Physical: Covered loads, dust collection system, dust suppression system Procedural: Air Quality Control, Noise Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L
	Bulk tanker unloading of cement and fly ash to overhead silos via pneumatic transfer	Unwanted noise, generation of dust & particulates.			X	X			POEO Act 1997	M	Physical: Enclosed system of transfer, dust collection system, Pressure release valve ducted to ground, Silo high level probes for level detection. Procedural: Air Quality Control, Noise Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Environmental Aspects Register - Advanced Readymix (Prestons)														
Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
	Storage of raw materials in in-ground bins	Generation of dust and sediment causing contamination of waterways	X	X		X			POEO Act 1997	M	Physical: Enclosed in-ground storage bins, site stormwater drains to wastewater treatment system Procedural: Air Quality Control, Stormwater & wastewater management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L
	Storage of cement and fly ash in overhead silos	Failure of dust collection system resulting in emissions of dust. Potential contamination of waterways by the dust.	X			X			POEO Act 1997	M	Physical: Alarm system, Outlet ducted to ground. Procedural: Air Quality Control, Stormwater & wastewater management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L

Ref: 171164-03_EMP_REV3
December 2021

Benbow Environmental
Page: 22



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
	Use of Conveyor Belts	Spillages of material resulting in generation of dust or sedimentation of waterways. Unwanted noise.		X	X	X			POEO Act 1997 NSW INP	M	Physical: Conveyor belt enclosed on 3 sides. Procedural: Air Quality Control, Stormwater and Wastewater Management, Noise Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L
WEIGHING & BATCHING	Weighing & Batching of materials	Release of dust and particulates. Unwanted noise. Potential for water pollution.		X	X	X			POEO Act 1997 NSW INP	H	Physical: Undertaken within enclosed building, dust collection system. Procedural: Air quality Control, Workplace Inspection, Noise Management Behavioural: Trained personnel	Training records, Workplace Inspection, Audit reports	Emergency Response Plan	L

Ref: 171164-03_EMP_REP_REV3
December 2021

Benbow Environmental
Page: 23



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
	Mixing and loading of agitator truck	Release of air pollutants, unwanted noise, potential generation of waste.	X	X	X	X	X		POEO Act 1997 NSW INP	M	Physical: Dust collection system, enclosed building Procedural: Air Quality Control, Noise Management, Waste Management Plan, Stormwater and Wastewater Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L
	Transfer of additives to concrete mix via dosing pumps & above ground pipes	Spillages of chemicals, potential release to stormwater	X	X	X	X			WHS Act 2011 POEO Act 1997 NSW INP	M	Physical: Dust collection system, enclosed building Procedural: Storage and Handling of Chemicals, Stormwater and Wastewater Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L

Ref: 171164-03_EMP_REV3
December 2021

Benbow Environmental
Page: 24



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
ON-SITE WASTEWATER TREATMENT & REUSE	Capture of Wastewater in Treatment Pits	Potential release to stormwater, water pollution		X					POEO Act 1997	H	Physical: On-site wastewater treatment system, site stormwater drains to treatment system. Procedural: Stormwater and Wastewater Management, Waste Management Plan Behavioural: Trained personnel	Training records, Monitoring Records, Workplace Inspection, Audit reports	Emergency Response Plan	L
	Transfer & handling of sludge generated by wastewater treatment	Potential release of sludge resulting in water pollution		X					POEO Act 1997	M	Physical: Bunded treatment pit Procedural: Stormwater and Waste Management Behavioural: Trained personnel	Training records, Workplace inspection, Audit reports	Emergency Response Plan	L

Ref: 171164-03_EMP_REP_REV3
December 2021

Benbow Environmental
Page: 25



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Environmental Aspects Register - Advanced Readymix (Prestons)														
Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
	Use of truck wash	Potential release to stormwater, water pollution		X					POEO Act 1997	M	Physical: On-site wastewater treatment system, all pits drain to system. Procedural: Stormwater and Waste Management Plan Behavioural: Trained personnel	Training records, Workplace Inspection, Audit reports	Emergency Response Plan	L
CHEMICAL USE & STORAGE	Storage & use of chemicals	Spillages resulting in water pollution	X	X					POEO Act 1997	M	Physical: Designated storage areas, spill kits Procedural: Storage and Handling of Chemicals, Spill Procedure Behavioural: Trained personnel	Training records, Workplace Inspection, Audit reports	Emergency Response Plan	L

Ref: 171164-03_EMP_REP_REV3
December 2021

Benbow Environmental
Page: 26



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
WASTE	Management of waste	Incorrect management of waste, incorrect on-site storage resulting in release of waste, dust and potential contamination,	X	X		X	X	X	POEO Act 1997 WARR Act 2001 Waste Classification Guidelines	L	Physical: Designated waste and recycling storage areas, Signage Procedural: Pollution Control Equipment Maintenance, Waste Management Plan Behavioural: Trained personnel	Training records, Monitoring records, Workplace Inspection, Audit reports	Emergency Response Plan	L
	On-site traffic movements	Unwanted vehicle noise, generation of dust			X				POEO Act 1997 NSW INP	M	Procedural: Air Quality Control, Noise Management Behavioural: Trained personnel	Training records, Workplace Inspection, Audit reports	Emergency Response Plan	L
GENERAL PLANT ACTIVITIES	Use of P.A System	Unwanted noise.			X				POEO Act 1997 NSW INP	L	Procedural: Noise Management Behavioural: Trained personnel	Training records, Workplace Inspections, Internal Audits	None	L

Ref: 171164-03_EMP_REP_REV3
December 2021

Benbow Environmental
Page: 27



Renita Developments Pty Ltd
Environmental Management Plan

Table 4-1: Environmental Aspects Register for Advanced Readymix

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Health & Amenity	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/Monitoring	Contingency Plans	Residual Risk
	Fire risk	Damage to property, Release of toxic products of combustion, contaminated fire water runoff	X	X		X		X	POEO Act 1997 WHS Act 2011	M	Physical: Fire safety equipment, alarm system, smoke detectors, fenced site. Procedural: Use of Firefighting equipment Behavioural: Trained personnel	Training records, Workplace Inspections, Internal Audits	Emergency Response Plan	L
OFFICE	Administration activities – Paper use	Wasted resources, incorrect management of waste					X	X	EP&A Act 1979 POEO Act 1997 WARR Act 2001	L	Physical: Dedicated recycling bin Procedural: Waste Management Plan Behavioural: Trained personnel	Training records, Environmental inspection, Audit reports	None	L
	Photocopier / Printer Toner Use and Disposal	Wasted resources, Incorrect management of waste					X	X	EP&A Act 1979 POEO Act 1997 WARR Act 2001	L	Procedural: Waste Management Plan Behavioural: Trained personnel	Training records, Environmental inspection, Audit reports	None	L

Ref: 171164-03_EMP_REV3
December 2021

Benbow Environmental
Page: 28



Renita Developments Pty Ltd
Environmental Management Plan

<p>Notes to Table 4-1: L = Low M = Medium H = High AS = Australian Standards POEO Act = Protection of the Environment Operations Act WARR Act = Waste Avoidance and Resource Recovery Act DG = Dangerous Goods NSW INP = NSW Industrial Noise Policy PCD = Pollution Control Devices</p>	<p>Land includes soil, groundwater and all issues related to habitat/biodiversity Water includes surface water, mains water, stormwater runoff etc. Waste includes solid, hazardous, inert waste, wastewater and tradewaste generated by the facility. Air quality includes air emissions, odour etc. Raw risk is the risk of the identified potential impacts without controls in place Residual risk is the risk assessed once controls and procedures are in place. Risk assessment – (Reference: Standards Australia, HB-203 2006 Environmental Risk Management – Principles and process)</p>
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5. ENVIRONMENTAL OBJECTIVES & TARGETS

This section outlines general environmental objectives, Key Performance Indicators (KPIs) and targets that could be adopted by the concrete batching plant for the ongoing environmental management of the site. The purpose of setting environmental objectives and targets is to achieve the internal performance criteria set by the future operators of the site and to assist in correcting and preventing environmental issues identified during inspections and internal audits on site. Recommended environmental objectives, KPIs and targets for the site are presented in Table 5-1.

Table 5-1: Environmental Objectives, KPIs and Targets

Objective	Method of Achievement	KPI ¹	Responsibility	Timeframe
1. Update this EMP with relevant development consent conditions once approval is granted.	Review and update EMP document & distribute changes to relevant employees.	N/A	Site Manager or delegate	Within first month
2. Introduce environmental awareness training for key activities.	Conduct environmental awareness training.	Competency testing (Target: Minimum 90% score)	Site Manager or delegate	Within first month
3. Reflect on objectives and targets that the operators of the wish to achieve.	Update initial objectives and targets table based on staff & managerial input.	Specific to each objective.	Director or delegate	Within first 3 months
4. Introduce use of environmental procedures.	Implementation of this EMP.	Workplace Inspection, non-conformances recorded. (Target: No non-conformances)	Director or delegate	Within first 3 months
5. Review training program.	Conduct training for updated material.	Competency testing for updated material. (Target: Minimum 90% score)	Site Manager or delegate	Within first 6 months
6. Minimise waste going to landfill that can be recycled.	Establish a waste register to record waste generated. Implement a waste minimisation program; Undertake waste audits.	% waste to landfill; % recyclable waste. (Target: 10% waste reduction per year)	Site Manager or delegate	Within first 12 months
7. Minimise Energy use.	Keep records of energy use and identify opportunities to minimise usage.	Energy usage. (Target: 5% use reduction per year)	Site Manager or delegate	Within first 12 months

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Environmental Management Plan



Table 5-1: Environmental Objectives, KPIs and Targets

Objective	Method of Achievement	KPI ¹	Responsibility	Timeframe
8. Implement an internal environmental audit program.	Undertake annual internal audits covering waste, energy management, resource use, review of non-conformances records.	Audit outcomes; non-conformances. (Target: No non-conformances)	Site Manager or delegate	Annually
9. Ensure effectiveness of environmental management.	Undertake annual Internal Management Review.	Review outcomes. (Target: No non-conformances)	Director or delegate	Annually
10. External Audit Program	Engage an independent auditor	Audit outcomes, (Target: No non-conformances)	Site Manager or delegate	Annually

¹ KPI – Key Performance Indicator, the means in which performance will be measured in relation to this objective. There may be more than one KPI for an objective.

The operators of the concrete batching plant should customise the above objectives and targets within the first three months of site becoming operational to ensure relevance. Every 12 months during the management review phase of the EMP, this set of objectives and targets should be reviewed and evaluated. A new set of objectives and targets should then be generated to ensure continuous improvement in the environmental management of site operations.

It is recommended that environmental programs be established, implemented and maintained in order to achieve objectives and targets.

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Environmental Management Plan



6. IMPLEMENTATION AND OPERATION

Successful implementation of this EMP requires knowledge, skills and training, as well as the appropriate allocation of resources, and the clear delegation of responsibilities. It is also important that stakeholders and regulatory authorities are kept informed of any significant modifications to normal operations that may take place on the site, and that the residential community are given the opportunity to voice their concerns or complaints.

This section discusses the following:

- The company's organisation structure and associated responsibilities for each role;
- Environmental training and appropriate communication strategies/procedures for the various stakeholders involved; and
- Emergency preparedness and response is also discussed in this section.

6.1 ORGANISATION

Each employee is responsible for protecting the environment and implementing environmental procedures in a manner similar to that undertaken for occupational health and safety. Depending on the business agreement between the owner of the site and the operators, the ultimate responsibility is likely to lie with the Director of the company operating the site.

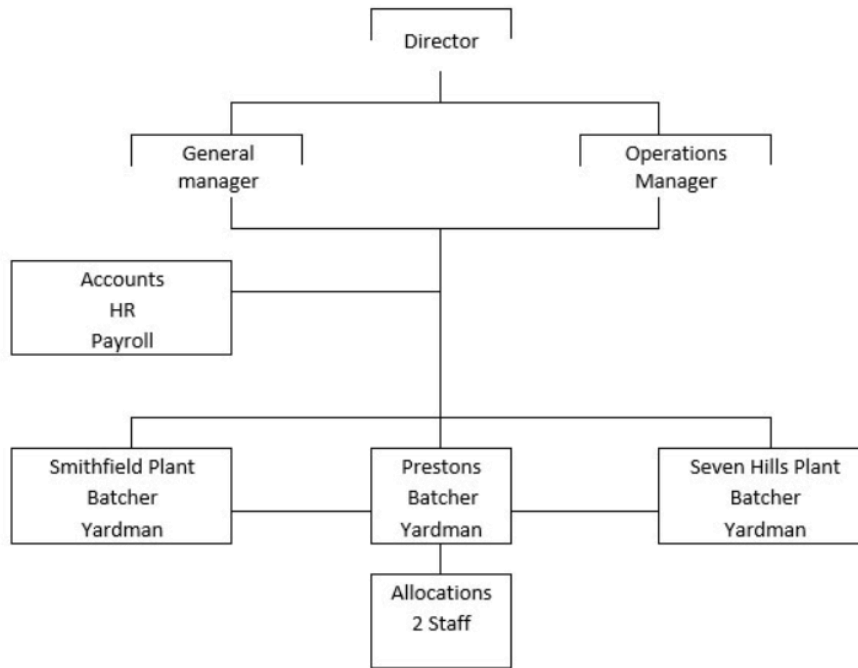
The organisational structure of Advanced Readymix is provided below. This should be reviewed in conjunction with the allocated roles and responsibilities, for the appropriate implementation of this EMP.



Figure 6-1: Organisation Structure



ORGANISATIONAL STRUCTURE



6.2 ROLES AND RESPONSIBILITIES

The following table outlines typical roles and responsibility levels. It is not all encompassing, rather a guide to assist management in assigning the correct responsibilities and accountabilities to their staff and to assist staff in applying the EMP to their daily work activities.

All staff members have the responsibility of actively participating in the implementation of the EMP and of ensuring that improvements or problems with implementing the EMP are brought to the immediate attention of their supervisor or manager.

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Role / Position	Responsibilities
Director	<ul style="list-style-type: none"> Ensure the company environmental policy is implemented in the EMP for the site; Ensure adequate resources are available to ensure satisfactory implementation and maintenance of EMP.
General/Operations Manager	<ul style="list-style-type: none"> Develop EMP, objectives, targets and programs; Responsible to ensure adherence to environmental policy and implementation of the EMP at the facility; Responsible for managing changes to EMP from changes across site operations and/or legislation; Responsible for implementing corrective and preventative actions; Ensure responsibilities of others are delegated and understood; Ensure the environmental training program adequately covers all requirements of the EMP and that competency testing is carried out regularly; Monitor overall EMP performance.
Labourers / Drivers	<ul style="list-style-type: none"> Responsible for carrying out work activities in accordance with the EMP and procedures; Responsible for informing supervisor/manager of any issues with implementing the EMP, or amendments required as soon as practicable.
Sales Manager / Office/Admin	<ul style="list-style-type: none"> Responsible for implementation of EMP in office environment across all administration functions; Responsible for informing supervisor/manager of any issues with implementing the EMP, or amendments required as soon as practicable.

6.3 ENVIRONMENTAL TRAINING

Environmental training is essential for all staff working at the site to ensure that the environmental aspects of the site activities, and their management, are understood.

Training of staff will need to be assessed on a periodic basis, while contractors would be assessed on a job-by-job basis. It is recommended that environmental training be included as part of the site induction and revisited annually.

6.3.1 Staff Training

Training of staff is recommended to cover the following areas:

- How to communicate and respond in an emergency situation, who to contact and what assistance is available.
- Where to go in an emergency, how to evacuate to a safe location and who will co-ordinate an evacuation.
- Aspects of the site operations and how these could potentially impact on the environment.
- Awareness of potential impacts of staff work activities and the environmental benefits of improved personal performance.
- Awareness of the corporate environmental policy and objectives of the site EMP.

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- Awareness of legal requirements and individual accountability under environmental legislation applicable to the site, including penalties for offences under the POEO Act.
- How the potential impacts are managed on site – including monitoring, site inspections and any regular maintenance undertaken.
- Understanding of the various roles and responsibilities, with relevant procedures; e.g. Administration staff should understand how the complaints register is implemented, and staff responsible for daily operations should be trained in any inspection checklists and how to follow up on any non-conformances.

6.3.2 Training for Contractors

Contractors should be inducted by the Plant Manager or delegate, who would provide a tour of the site and outline site policy, procedures, and scope of works. All staff and contractors must complete a sign-in and sign-out register and must sign a document stating that they understand and agree to abide by the site's procedures.

Shortfalls could be addressed by specific on-site training. Updates and reviews should also be conducted in the case of complaints or after any changes in the EMP, in particular, a change in management, procedures, site operations or legislation.

6.3.3 Training Register

Details of all environmental training programs need to be recorded, and should include, at the minimum: the date of when training was completed, the name of the person being trained, and the general content of the training program.

6.4 COMMUNICATION

The Director and/or Plant Manager would communicate with relevant stakeholders when required. Stakeholders include community groups, contractors, regulatory authorities, non-regulatory agencies and the State Government.

6.4.1 Community Relations

It is important to foster open communications with the other stakeholders of the site to ensure that an integrated approach is used to deal with issues which reflect on all stakeholders. Regular communications with adjacent facilities should be undertaken to ensure any environmental management issues from either party are addressed promptly.

6.4.1.1 Complaints Response

All complaints or enquiries should be handled in a courteous manner. Every complaint is a potential opportunity for improvement in environmental management. A procedure for handling complaints is provided below:

- Record in Log Book and on a Complaint Response Form:
 - ▶ Name of Complainant;
 - ▶ Address;
 - ▶ Telephone Number; and
 - ▶ Details of Complaint: date, time of occurrence, precise location of event.

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Environmental Management Plan



- Connect/refer caller to one of the following staff members who are authorised to discuss the complaint with the caller:
 - ▶ Director/s; and
 - ▶ Personnel with environmental responsibilities.
- Authorised staff member requests details of the complaint or information required by the caller and completes the Complaint Response Form and the Complaint Response Logbook Index (provided in the following pages).

6.4.2 Regulatory Authorities

Communications with regulatory authorities, such as the local Council, shall occur on an as-needed basis. All communication with regulatory authorities concerning environmental matters is to be noted and records of any subsequent actions appropriately filed.

6.4.2.1 Reporting Requirements

Under Part 5.7 of the POEO Act, a pollution incident that occurs in the course of an activity so that material harm to the environment is caused or threatened must be notified immediately to relevant authorities.

If the incident presents an immediate threat to human health or property, call 000 immediately. If the incident does not require emergency services, notify the following regulatory bodies, in order of relevance, as follows:

- | | |
|--|----------------------------------|
| 1. Liverpool City Council | 1300 36 2170 |
| 2. NSW Environment Protection Authority | 131 555 |
| 3. The Ministry of Health (Liverpool Office) | 8778 0855; 9828 3000 After hours |
| 4. SafeWork NSW | 13 10 50 |
| 5. Fire and Rescue NSW | 1300 729 579 |

6.4.3 Internal Communication

The site management is to establish simple yet effective communication channels for implementation of the EMP. Typical methods of communication that may suit the size of the operation include meetings and discussions with formal records. A receipt of the agreement between parties may also be kept as an alternative.

Document control and written communication would be necessary when new contractors or employees are trained or changes are made to the EMP or any other matters that affect the holistic environmental management of the site.

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Environmental Management Plan



COMPLAINT RESPONSE **PAGE 1 OF 2**

REF: REV: 1

LOG BOOK REFERENCE NO:

DATE:TIME:AM/PM

NAME OF PERSON WHO RECEIVED CALL:

NAME OF COMPLAINANT:TELEPHONE NO:

ADDRESS:

DETAILS OF COMPLAINT:

DATE OF OCCURANCE:TIME AM/PM:

TYPE OF INCIDENT:

NOISE	<input type="checkbox"/>	STORMWATER	<input type="checkbox"/>
AIR EMISSIONS	<input type="checkbox"/>	ODOUR	<input type="checkbox"/>
TRAFFIC/TRANSPORT	<input type="checkbox"/>	FIRE	<input type="checkbox"/>
EROSION/SEDIMENT	<input type="checkbox"/>	WASTE	<input type="checkbox"/>
OTHER	<input type="checkbox"/>	DETAILS:	

PRECISE LOCATION OF INCIDENT:

PARTICULAR DETAILS RELATING TO THE INCIDENT:

.....
.....

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Environmental Management Plan



COMPLAINT RESPONSE **PAGE 2 OF 2**

ACTION TAKEN:

COMPLAINANT TRANSFERRED TO:

MESSAGE TAKEN FOR:

CORRECTIVE AND PREVENTATIVE ACTION:

INFORMATION BULLETIN SENT

COMPLAINT INVESTIGATED BY: CPAR NO.

RESULTS OF INVESTIGATION:

.....

.....

.....

ON COMPLETION OF CORRECTIVE AND PREVENTATIVE ACTION:

LETTER SENT TO COMPLAINANT YES NO N/A DATE:

WORK PRACTICE MODIFIED YES NO N/A DATE:

COMPLAINT RESPONSE COMPLETE:
PRINT NAME

SIGNATURE:

DATE: TIME:AM/PM

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Environmental Management Plan

COMPLAINT RESPONSE LOG BOOK INDEX

COMPLAINT NUMBER	DATE	COMPLAINANT	CALL DIRECTED TO:	COMPLAINT ACTION AND RESPONSE SIGN & DATE

6.5 EMERGENCY PREPAREDNESS AND RESPONSE

Emergency Response Procedures have been provided in the Procedures Manual to give directions and to guide the response to various severe weather events, an environmental incident or a medical emergency.

The procedures deal with the following:

- Fire/Explosion;
- Gas Release;
- Evacuation;
- Severe Storms;
- Flooding;
- Earthquake;
- Medical Emergency; and
- Suspect Package/Bomb Threat.

Additional procedures are provided in the Procedures Manual for hazardous chemical spill emergencies (Spill Procedure) and for operating equipment in the case of a fire (Use of Firefighting Equipment).

The above procedures are provided as guidance in the event of emergencies. An Emergency Response Plan is recommended to be implemented at the site and this would prevail over procedures in this EMP.

Training in all emergency procedures must be provided to staff during the induction process.

Renita Developments Pty Ltd
Environmental Management Plan



7. MONITORING, CORRECTIVE AND PREVENTATIVE ACTIONS

This section details the monitoring actions required for the proper implementation, maintenance and due diligence of the EMP. Corrective and preventative actions are also detailed to facilitate continuous improvement of environmental management across operations. Finally, auditing and record keeping requirements are described.

7.1 MONITORING AND INSPECTION

Regular inspections of the workplace allow potential environmental problems to be recognised in the early stages, before a problem occurs, so that preventative action can be taken.

Inspection checklists are an effective and methodical way to investigate areas of the site for environmental or safety aspects of concern, and provide a straightforward way to keep records of workplace inspections. A recommended environmental inspection plan is presented as a simple Inspection Checklist in the Procedures Manual. Workplace inspections are to be carried out on a daily basis with use of the Inspection Checklist.

Maintenance checklists for pollution control equipment perform a similar function by providing a framework to keep equipment in good working order and by minimising the risk of equipment failure. A recommended maintenance checklist, the "Pollution Control Equipment Maintenance Schedule", is provided in the Procedures Manual.

Completed checklists, schedules, and records of any preventative or maintenance actions taken, must be maintained.

7.2 CORRECTIVE AND PREVENTATIVE ACTIONS

This section of the EMP details non-conformance with the EMP, and corrective and preventative actions. Non-conformances include errors and deficiencies that can be identified through the Inspection Checklist and Pollution Control Equipment Maintenance Schedule, and/or from any complaints received in relation to daily operations. Non-conformances should be effectively logged and promptly resolved. Non-conformances are to be reviewed by site management who will coordinate the appropriate corrective and preventative actions to address the respective non-conformances. Site management will then inform any staff or contractors who are affected by significant non-conformances about the subsequent required actions.

Renita Developments Pty Ltd
Environmental Management Plan



7.2.1 Request for Corrective Action

Corrective Actions are an ideal way to demonstrate and account for any issues and improvements to the EMP. A Corrective Action Request (CAR) should be issued and processed using a CAR form (a sample is provided overleaf). This form can be initiated by site management or staff, and should be passed to the appropriate staff or contractors responsible for the source of the non-conformance. Different events often initiate a CAR being raised, some typical ones follow:

- Council or other regulatory agency direction or request;
- Detection of non-conformances during site inspection;
- Audit verified non-conformance;
- Public complaints;
- Periodic meetings; and/or
- Opportunity for improvement process.

Site management shall ensure that CARs are actioned within a reasonable time frame. Records shall be maintained by the site management for all relevant corrective actions.

Renita Developments Pty Ltd
Environmental Management Plan



CORRECTIVE AND/OR PREVENTATIVE ACTION **PAGE 1 OF 1**

REF:

REV: 1

CORRECTIVE ACTION

PREVENTATIVE ACTION

Name of personnel requesting corrective/preventative action: _____

Signature: _____

Personnel responsible for action: _____

Date: _____

Outline of the 'Initiating Event' and necessary corrective and/or preventative actions (to be filled out by those requesting action):

Actions taken to fulfil the requirement of the corrective and/or preventative action:

Corrective and/or preventative action complete:

Signature : _____

Date: _____

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Environmental Management Plan



7.3 AUDITING

Auditing is necessary to evaluate compliance and shall be conducted on a regular basis.

Internal audits need to be undertaken at regular intervals (at least annually) to determine whether the EMP conforms to the requirements of the ISO14001 International Standard and that it has been properly implemented and maintained. Results of the internal audit need to be provided to the Director and/or Site Manager.

Internal audits of the environmental management system should include the following:

- Assess the effectiveness of the environmental control implemented on site, and the procedures used in the application of the EMP;
- Review of Inspection Checklist results and/or reports for non-conformances, and the adequacy of corrective and preventive actions on areas of non-compliance;
- Degree of conformance to nominated procedures, and review of complaint register;
- Identification of areas of the system which could be improved, and identifying possible missing procedures, procedures which require updating, documentation which could be simplified, or other target areas;
- Overall commitment to, and implementation of, the EMP;
- Updates in industry best practice;
- Changes in legislation;
- Annual set of objectives/target; and
- Revisions to objectives/targets due to regional or global initiatives by Government.

It is recommended that consultants are engaged to conduct an external audit every 2 years. Independence must be demonstrated by the freedom from responsibility for the activity being audited or freedom from bias and conflict of interest.

7.4 RECORDS

Records relating to non-conformances, and their corrective and/or preventive action request forms, are to be maintained by site management. Reports and records concerning any monitoring results, regular inspections, audits, staff training and correspondence with any regulatory authorities should also be maintained and archived.

All records are to be kept and compiled in the office on site, as access to these records may occasionally be required by stakeholders and by regulatory authorities.

This concludes the report.

Linda Zanotto
Senior Environmental
Engineer

Kate Barker
Senior Environmental
Scientist

R T Benbow
Principal Consultant

Renita Developments Pty Ltd
Environmental Management Plan



8. LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of Renita Developments Pty Ltd, as per our agreement for providing environmental services. Only Renita Developments Pty Ltd is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by Renita Developments Pty Ltd for the purposes of preparing this report.

Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.

ATTACHMENTS

ENVIRONMENTAL MANAGEMENT PLAN

ENVIRONMENTAL PROCEDURES MANUAL

for 4 Ash Road, Prestons

Issued and Approved by:

Date:

Document Reference: 171164-03_EMP_Env Proc_Rev2

Date of Issue: 20 December 2021

Prepared by:



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Contents

Procedure No.	Page
1. AIR QUALITY CONTROL	1
1.1 Purpose	1
1.2 Definitions	1
1.3 Procedure	1
1.3.1 General Site Activities	1
1.4 Inspection And Records	2
2. NOISE MANAGEMENT	3
2.1 Purpose	3
2.2 Definitions	3
2.3 Procedure	3
2.4 Inspection and Records	4
3. STORAGE & HANDLING OF CHEMICALS	5
3.1 Purpose	5
3.2 Scope	5
3.3 Definitions	5
3.4 Hazardous Chemicals Stored On Site	7
3.5 Procedure	9
3.5.1 General Storage and Handling of Chemicals	9
3.5.2 Flammable Gases (LPG)	9
3.5.3 Corrosive Substances	10
3.5.4 Disposal of Dangerous Good / Hazardous Chemicals	10
3.6 References	10
4. SPILL PROCEDURE	11
4.1 Purpose	11
4.2 Definitions	11
4.3 Equipment	12
4.4 Procedures	12
4.4.1 For Minor Spillage	13
4.4.2 For Major Spillage	13
4.5 Inspection And Records	14
5. STORMWATER AND WASTEWATER MANAGEMENT	15
5.1 Purpose	15
5.2 Definitions	15
5.3 Procedure	15
5.3.1 General Stormwater Management	15
5.3.2 Wash Bay Area	16
5.3.3 Washout Drying Bay	16
5.4 Inspection and Records	16

6.	EMERGENCY RESPONSE	17
6.1	Purpose	17
6.2	Responsibilities	17
6.3	Definitions	18
6.4	Procedures	19
6.4.1	Fire/Explosion	19
6.4.2	Gas Release	20
6.4.3	Evacuation	20
6.4.4	Severe Storms	20
6.4.5	Flooding	21
6.4.6	Earthquake	21
6.4.7	Medical Emergency	21
6.4.7.1	Action on discovery of a Medical Emergency (General)	21
6.4.8	Bomb Threat/Suspect Package	21
6.4.8.1	When a threat has been received:	22
6.4.8.2	When a Bomb Threat/Suspect Package has been found:	22
6.4.9	Clearance and Return to Work	22
6.5	Incident Investigation Reporting	22
7.	USE OF FIRE FIGHTING EQUIPMENT	25
7.1	Purpose	25
7.2	Definitions	25
7.3	Procedures	25
7.3.1	For Operation of a Hose Reel	25
7.3.2	For Operation of a Portable Fire Extinguisher	25
7.3.3	For Operation of a Fire Hydrant	26
7.4	Elements of an Induction and Training Program	26
8.	POLLUTION CONTROL EQUIPMENT MAINTENANCE	29
8.1	Purpose	29
8.2	Definitions	29
8.3	Procedures	29
8.3.1	Air Filter and Dust Extractor Systems	30
8.3.2	Stormwater and Wastewater Management Devices	30
8.3.3	Bunding & Dangerous Goods Storage Areas	30
8.3.4	Spill Kits	31
8.3.5	Automated Systems/Alarms and Firefighting equipment	31
8.4	Records	31
8.5	Pollution Control Equipment Maintenance Schedule	32
9.	WORKPLACE INSPECTION	33
9.1	Purpose	33
9.2	Definitions	33
9.3	Procedures	33
9.4	Inspection Checklist	34



Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME:	AIR QUALITY CONTROL	DATE:	December 21
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

1. AIR QUALITY CONTROL

1.1 PURPOSE

The purpose of this procedure is to set out the process relating to management and monitoring of air emissions.

1.2 DEFINITIONS

Air Emissions

Any particles or odour discharged to the local air amenity.

Air impurity

Includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.

Air pollution

Means the emission into the air of any air impurity.

1.3 PROCEDURE

1.3.1 General Site Activities

Measures to minimise generation of dust:

- All hardstand areas must be well maintained to prevent broken surfaces which could generate dust. Inspect these areas and ensure they are free of debris, sediment and litter.
- Ensure reasonable operating practices are followed regarding the loading and unloading of trucks and movement along internal access roads. (i.e. trucks are not to be overloaded or driven too fast).
- Where dust emissions are evident during daily inspections, road-sweeping (ride-on street sweeper) or wetting down of surfaces may be required. Use of water sprays or dust suppression agent to reduce dust emissions when needed.
- A recommended on-site speed limit of 10 km/hr should be sign posted at the entrance to the site.
- Ensure dust suppression system for stockpiles is functioning, maintained and in use.
- Ensure all vehicles are washed in the truck wash bay prior to leaving the site. Should any sediment accumulate on site or be tracked onto the roadways, immediately clean this up using a road sweeper to minimise potential dust emissions.
- Ensure all dust extraction equipment is maintained in good working order in accordance with manufacturer's specifications. A Pollution Control Equipment Maintenance Schedule is provided that lists all dust control equipment to be maintained.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



1.4 INSPECTION AND RECORDS

A daily Inspection Checklist and Pollution Control Equipment Maintenance Schedule have been prepared to assist staff in checking that all procedures and equipment used to control and mitigate potential pollution are functioning effectively.

Any issues or non-conformances noted during workplace inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME:	NOISE MANAGEMENT	DATE:	December 21
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

2. NOISE MANAGEMENT

2.1 PURPOSE

To effectively manage noise emissions from the site to minimise the occurrence of offensive and nuisance noise in the community.

2.2 DEFINITIONS

Offensive noise

Noise that by reason of its level, nature, character or quality, or the time at which it is made is harmful to (or likely to be harmful to) a person who is outside the premises or interferes unreasonably with (or is likely to) the comfort or repose of a person outside the premises.

2.3 PROCEDURE

2.3.1 General Site Activities

- Deliveries are to be undertaken between the hours of 6am-6pm Mon-Fri and 6am-1pm Sat.
- Truck unloading/loading is to be undertaken in designated areas only.
- Concrete trucks must only use the southern driveway.
- Scheduling of activities (where possible) shall be undertaken to minimise noise at any one time.
- If problem areas of additional noise generation are identified, action should be taken to alleviate any additional noise as soon as practicable by the Director.
- Noise shall be included in the awareness training and induction of staff and contractors.
- Other good practise noise mitigation measures should be implemented where possible, which may include any of the following as described by the acoustic report:
 - Using self-cleaning weigh hoppers;
 - Enclosing compressors and pumps;
 - Fitting silencing devices to all pressure operated equipment;
 - Lining hoppers with a sound absorbing material such as rubber;
 - Sealing roads and plant site with concrete or bitumen;
 - Fitting efficient muffling devices to all engines;
 - Using visual alarms in preference to audible alarms;
 - Using a personal paging service instead of hooters to gain attention of staff;
 - Weighing fine aggregates before coarse aggregates; and
 - Storing aggregates below ground level where possible.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



2.3.2 Equipment and Infrastructure

- Preventative maintenance of all noise generating equipment, such as pumps and air compressors shall be undertaken.
- To minimise noise levels, site management shall endeavour to position new equipment behind structures that act as barriers, or at the greatest distance from residential areas and orientating equipment such that noise emissions are directed away from residential areas.
- When purchasing new equipment, quieter equipment must be selected.
- Silencers must be fitted and maintained on air compressors.

2.3.3 On-Site Vehicles

- Enforcement and signage of on-site speed limits at 10 kph.
- Replacement of any beeping reversing alarms on vehicles which are regularly used on site with reversing lights or a white noise reversing alarm (if applicable).
- Prohibition of extended periods of on-site revving/idling.

2.4 INSPECTION AND RECORDS

A daily Inspection Checklist and Pollution Control Equipment Maintenance Schedule have been prepared to assist staff in checking that all procedures and equipment used to control and mitigate potential pollution are functioning effectively.

Any issues or non-conformances noted during workplace inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME: STORAGE & HANDLING OF CHEMICALS **DATE:** December 21

PREPARED BY: Benbow Environmental **ISSUE NO.:** 1

3. STORAGE & HANDLING OF CHEMICALS

3.1 PURPOSE

This procedure aims to outline aspects of the management of dangerous goods, hazardous substances or other materials stored or used at the site in accordance with the relevant legislation covering occupational health & safety, dangerous goods, hazardous substances and the environment.

3.2 SCOPE

This procedure outlines the steps to be taken to manage diesel and gas cylinders at the workplace. This procedure shall apply to all personnel and contractors.

3.3 DEFINITIONS

Bund

An embankment of earth, or a wall of brick, stone, concrete or other approved material which may form part or all of the perimeter of a compound.

Dangerous Goods

Substances that are listed in The Australian Dangerous Goods (ADG) Code or that meet the classification criteria specified in that Code.

Hazardous Chemicals

A substance, mixture or article that satisfies the criteria for a hazard class in the GHS (including a classification referred to in Schedule 6), but does not include a substance, mixture or article that satisfied the criteria solely for the following hazard classes:

- a) *acute toxicity – oral, dermal and inhalation – category 5;*
- b) *skin corrosion/irritation – category 3;*
- c) *serious eye damage/eye irritation – category 2B;*
- d) *aspiration hazard – category 2;*
- e) *flammable gas – category 2;*
- f) *acute hazard to the aquatic environment – category 1, 2 and 3;*
- g) *chronic hazard to the aquatic environment – category 1, 2, 3, and 4; and*
- h) *hazard to the ozone layer.*

Note: The WHS Regulations Schedule 6 tables replace some tables in the GHS.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



Flammable Liquids

Liquids that are classified as Class 3 flammable liquids in The Australian Dangerous Goods (ADG) Code and classified as “Flammable Liquids” under the Global Harmonised System of Classification and Labelling of Chemicals (GHS) or that meet the classification criteria specified in that Code for flammable liquids. Flammable substances ignite on contact with ignition sources.

Hazardous substance

A substance which is toxic, harmful, corrosive, irritating, sensitising, carcinogenic, mutagenic, teratogenic or radioactive.

Safety Data Sheet (SDS)

A document that provides information on the identification, health hazards, precautions for use and the safe handling of specific chemical product.

These data sheets are obtained from the supplier and provide essential information required to allow safe handling of hazardous substances at work. Employers must ensure that all employees have access to SDS and must encourage employees to read the SDS's for all hazardous substances, which they may encounter in their work.

All SDS's include the following information:

- Product name and classification by UN No., GHS category, hazard statement and signal word;
- Product identification including physical and chemical properties;
- Health hazard information detailing acute effects and first aid advice;
- Precautions for use;
- Safe handling information including storage and transport, spills and disposal and fire explosion hazards;
- Recommendation on the use of PPE; and
- Miscellaneous information.

The information in a SDS is very important and all members of staff must be familiar with the location of the SDS's and their contents. For new chemicals on site, an SDS must be provided from manufacturers and read by the staff.

Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

A new classification system for hazardous chemicals based on the GHS came into effect as of the 1 January 2012, and the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) was terminated after the 31 December 2016. The requirements of both the ADG Code and GHS are addressed in this procedure.

Occupier

The person who has overall management or control of the workplace.

Packing Group (PG)

One of three hazard groups into which dangerous goods (of Classes other than 1, 2, 6.2 & 7) are designated in the ADG Code, in decreasing order of hazard by the Roman numerals “I” (great danger), “II” (medium) and “III” (minor danger).

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures

**Incompatible**

In relation to substances or the containers in which such substances are kept, having the ability to react or combine with one another in a manner that increases the hazard of an individual substance, that could cause deterioration of any of those substances and increase the hazards presented by them, or that could increase the hazards in the event of fire.

NOHSC

National Occupational Health & Safety Commission (NOHSC) now known as Safe Work Australia – website: <http://www.safeworkaustralia.gov.au>.

PPE

Personal Protective Equipment.

3.4 HAZARDOUS CHEMICALS STORED ON SITE

The management of hazardous chemicals is regulated under the Work Health and Safety (WHS) Regulation 2017. The regulation has two basic limits on storage quantities listed in Schedule 11; these are the Placarding quantity and the Manifest quantity. If the quantities of hazardous chemicals at the site exceed the Manifest quantity, notification to SafeWork NSW is required.

Chemicals stored on site are listed in Table 3-1 and compared to Placarding and Manifest thresholds. Class 8 PGII Corrosive Substances (Barrell Kleen Safe) is the only chemical that requires placarding; however, notification to SafeWork NSW is not required.



Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures

Table 3-1: On-site Chemical Storage

Product Name	ADG/GHS	GHS Signal Word	Quantities stored (Max)	Storage type	Storage Location	Placard/Manifest required?
Liquefied Petroleum gas (LPG)	ADG: Class 2.1 / GHS: Flammable Gases: Category 1 Gases Under Pressure: Liquefied Gas	Danger	150 L	3 Cylinders	In locked cage outside	None
MasterAir: 940 also MICRO AIR 940	ADG: Non-dangerous good / GHS: Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2A; Skin sensitization Category 1	Warning	1,000 L	1 Tank	Batch Plant	Not relevant
MasterPozzolith 370	ADG: Non-dangerous good / GHS: Not classified	-	5,000 L	1 Tank	Batch Plant	Not relevant
MasterPozzolith RT 300 also POZZOLITH 300Ri	ADG: Non-dangerous good / GHS: Not classified	-	5,000 L	1 Tank	Batch Plant	Not relevant
MasterSet AC 102	ADG: Non-dangerous good / GHS: Serious eye damage/eye irritation Category 2A	Warning	5,000 L	1 Tank	Batch Plant	Not relevant
MasterSet AC 534 also POZZOLITH NC 534	ADG: Non-dangerous good / GHS: Acute toxicity Category 4 (oral); Serious eye damage Category 1	Danger	5,000 L	1 Tank	Batch Plant	Not relevant
MasterGlenium SKY 8100	ADG: Non-dangerous good / GHS: Not classified	-	5,000 L	1 Tank	Batch Plant	Not relevant



3.5 PROCEDURE

3.5.1 General Storage and Handling of Chemicals

- Do not store greater quantities of dangerous goods than the above listed.
- If spillage occurs, act **immediately** in accordance with the Spill Procedure in 4.4. Ensure that all spilled materials and materials used for clean-up are disposed of by a licensed contractor.
- Keep a suitable fire extinguisher where it can be easily accessed, see Section 7.3 for more detailed information.
- A supply of water must be available at a nearby location. Training to identify if water is applicable to a particular hazard incident should be undertaken.
- All personnel engaged in the handling of dangerous goods must be aware of the hazards involved and be trained in the use, care, and maintenance of personal protective equipment, actions to be taken in various emergencies, and the properties of hazards associated with the substances handled.
- A folder of safety data sheets (SDS) on all chemicals used or stored on site is to be maintained and all staff are to be aware of its location.
- A register of all chemicals used or stored on site, both hazardous and non-hazardous, must accompany the abovementioned folder of chemical SDS.
- Smoking should be prohibited on site apart from designated areas which present no risk to storage of flammable and combustible liquids.
- All flammable liquid and gas containers/outlets must be clearly marked 'DANGER, NO SMOKING, KEEP FIRE AWAY'.
- Remove finished cylinders regularly; do not allow them to build up.
- Do not stack cylinders or containers where they would block exit from a building during an emergency.
- Storage of flammable substances shall not be kept near incompatible substances: refer to specific standards and safety data sheets for incompatible chemicals.
- Chemicals shall not be stored below the 1% Annual Exceeded Probability (AEP) flood plus half a metre freeboard, to avoid the potential to cause pollution or be hazardous in the event of a flood.

Specific requirements have been addressed in the following sections.

3.5.2 Flammable Gases (LPG)

- All installations in which ADG Class 2.1/GHS Flammable Gases Category 1 (e.g. LPG) are stored, must be designed, constructed and maintained in accordance with the following Standards:
 - ▶ AS 1596, Storage and handling of LP Gas;
 - ▶ AS 2030.1, The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases - Cylinders for compressed gases other than acetylene;
 - ▶ AS 2430.3.4, Classification of hazardous areas – Examples of area classifications – flammable gases; and
 - ▶ AS 4332, The storage and handling of gases in cylinders.



3.5.3 Corrosive Substances

- All installations in which corrosive substances are stored shall be designed and constructed in accordance with *AS 3780 - 2008 The Storage and Handling of Corrosive Substances*.
- Packages shall not be kept near incompatible substances (i.e. keep strong acids away from bases) and from sources of heat.
- Packages shall be kept on surfaces which, in the event of spillage, are resistant to damage by the contents of the packages.
- Appropriate spillage retention measures shall be provided at locations where packages are likely to be opened or their contents transferred; e.g. drip trays and bunds.
- The transfer of corrosive substances from packages to other containers shall be conducted in a dedicated area away, and into containers suitable for corrosive substance storage.

3.5.4 Disposal of Dangerous Good / Hazardous Chemicals

- Dangerous goods and hazardous chemicals that require disposal may be classified as hazardous waste and must be disposed of accordingly.
- Appropriate staff shall be designated with the responsibility for ensuring the safe disposal or recycling of empty containers.
- A designated area for waste chemical containers is to be maintained for adequate storage and handling.
- Spills of hazardous waste should be handled in accordance with the Spill Procedure and any relevant safety data sheets.

3.6 REFERENCES

- Work Health and Safety Act, 2011.
- Work Health and Safety Regulation, 2017.
- Safework NSW, Guidance material: Notifications for Schedule 11 hazardous chemicals and abandoned tanks.
- Australian Code for the Transport of Dangerous Goods by road and rail (ADG Code 7.7th Edition).
- Globally Harmonised System of Classification and labelling of Chemicals 3rd Edition (GHS).
- National model Code of Practices for Labelling Hazardous Chemicals.
- National model Code of Practices for the Preparation of Safety Data Sheets.
- AS 3780–2008 The storage and handling of corrosive substances.
- AS 4332–2004 The storage and handling of gas in cylinders.
- AS/NZS 1596:2014 Storage and handling of LP Gas.



PROCEDURE NAME:	SPILL PROCEDURE	DATE:	December 21
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

4. SPILL PROCEDURE

4.1 PURPOSE

The purpose of this procedure is to ensure the containment of all spills on the site to prevent the entry of spilled materials/debris into stormwater systems and public waterways, reducing the risk of environmental pollution and exposure to breaches and penalties under environmental pollution legislation.

4.2 DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater and surface water (including stormwater drainage system).

Environmental Incident/Release

An environmental incident/release is defined as any spillage, release, upset, out of limits operation, procedural violation, which potentially:

- *Harms human health;*
- *May cause environmental harm; and*
- *May result in non-compliance with regulations, permits and/or intervention of environmental authorities or results in penalties or fines.*

Minor Spillage

A minor spillage is one that can be contained quickly and efficiently using the provisions of the Spill Kits located at various points around the site. It is typically less than 50 L. A minor spill would not be expected to reach the stormwater system. If the minor spill does reach the stormwater system the same action as outlined for a major spill will need to be taken.

Major Spillage

A major spillage has the potential to leave the site and is characterised by the spillage of a quantity greater than 50 L. A spill of this size must be prevented from reaching the stormwater system, and requires the sealing of stormwater drainage pits and the stormwater outlets, which is necessary to isolate the site from surrounding waterways.

Safety Data Sheet (SDS)

A document that provides information on the identification, health hazards, precautions for use and the safe handling of specific chemical product, which complies with ASCC:2011 (1994).

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



These data sheets are obtained from the supplier and provide essential information required to allow safe handling of hazardous substances at work. Employers must ensure that all employees have access to SDS and must encourage employees to read the SDS's for all hazardous substances, which they may encounter in their work.

All SDS's include the following information:

- Product name and classification by UN No., GHS category, hazard statement and signal word;
- Product identification including physical and chemical properties;
- Health hazard information detailing acute effects and first aid advice;
- Precautions for use;
- Safe handling information including storage and transport, spills and disposal and fire explosion hazards;
- Recommendation on the use of PPE; and
- Miscellaneous information.

The information in an SDS is very important and all members of staff must be familiar with the location of the SDS's and their contents. For new chemicals on site, an SDS must be provided from manufacturers and read by the staff.

4.3 EQUIPMENT

To properly contain any spill it is important to know the name of the material (shipping and/or common name) and the type (solid, liquid, granulated), as well as the GHS classification or Dangerous Good class. It is also important to ensure the listed resources are present on site:

- SDS outlining any recommended method for containing the spill and preventing environmental damage.
- Spill control tools to contain and clean up spills, such as a Hazchem spill kit. Spill kits must include at least the following items: shovels, brooms, chemically resistant boots and gloves, disposal bags for contaminated waste and portable containment barriers. An additional spill kit specifically for flammable liquids must also be available on site, if flammable liquids are to be stored on site.
- Spill control tools should be kept together at one location and communicated to all personnel. Signage should indicate the designated locations of the Hazchem spill kits/spill control tools.

4.4 PROCEDURES

If a spill occurs on the site the following procedure is to be followed:



4.4.1 For Minor Spillage

- Take action to stop or reduce the source of the spill, or divert the flow to safe containment, to the extent that personal safety will permit;
- For spills of solid materials, the spilled material should be carefully returned to the appropriate storage container;
- Contain the spillage to minimise spread of material;
- Consult SDS for recommended clean-up procedure and follow these instructions. Use spill control tools to aid in clean-up procedure;
- Dispose of material and all contaminated material (including soil contaminated from liquid spill) according to the Disposal Procedure outlined in the SDS or contact a licensed waste contractor for assistance;
- Inform the Site Manager on the details of the spill; and
- Record details of the spill.

4.4.2 For Major Spillage

- Take action to stop or reduce the source of the spill, or divert the flow to safe containment, to the extent that personal safety will permit;
- For spills of solid materials, the spilled material should be carefully returned to the appropriate storage container;
- Contain the spillage to minimise spread of material. In particular, the spill will have to be isolated from the on-site stormwater network by use of portable containment barriers;
- Inform the Site Manager and/or Principal Contractor on the details of the spill;
- Consult SDS for recommended clean-up procedure;
- Under the direction of the Site Manager and/or with the assistance of the emergency response crews (if required), clean up the spill;
- Dispose of material and all contaminated material (including soil contaminated from liquid spill) according to the Disposal Procedure outlined in the SDS or contact a licensed waste contractor for assistance.
- Record details of the spill.

Reporting a Major Spill

- Under section 148 of the Protection of the Environment Operations Act, 1997, there is a duty to report pollution incidents. The Director is responsible for notifying the relevant authorities.
- Relevant authorities include one or more the following, depending on the type and extent of the spill:

Liverpool City Council	1300 36 2170
NSW EPA	131 555
The Ministry of Health	8778 0855; 9828 3000 (After hours)
SafeWork NSW	13 10 50
Fire and Rescue NSW	1300 729 579

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



- The following provides guidance on notifying pollution incidents:
 - ▶ Any pollution incident that causes or threatens material harm to the environment must be notified immediately.
 - ▶ A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur.
 - ▶ Material harm includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.
 - ▶ Notification must be given immediately after the person becomes aware of the incident.

4.5 INSPECTION AND RECORDS

A daily Inspection Checklist and Pollution Control Equipment Maintenance Schedule have been prepared to assist staff in checking that all procedures and equipment used to control and mitigate potential pollution are functioning effectively.

Any issues or non-conformances noted during workplace inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME: STORMWATER AND WASTEWATER MANAGEMENT **DATE:** December 21

PREPARED BY: Benbow Environmental **ISSUE NO.:** 1

5. STORMWATER AND WASTEWATER MANAGEMENT

5.1 PURPOSE

This procedure serves to ensure the cleanliness of stormwater releases during normal operation and the appropriate treatment and disposal of wastewater.

5.2 DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater, surface water (including stormwater drainage system).

Stormwater

Rainwater runoff over hardstand or impermeable surfaces.

Sediment

Dust and particulate matter deposited in hardstand areas that during wind or rain may cause the release of these contaminants.

5.3 PROCEDURE

5.3.1 General Stormwater Management

- Keep the premises clean and tidy.
- Stormwater drains will be inspected routinely for evidence of debris – any debris build-up must be removed.
- Stormwater pollution control equipment must be maintained in optimum working condition. This means broken piping or drain lines are repaired, and gross pollutant traps are unblocked.
- No waste or items of any description shall be tipped down stormwater drains.
- All hardstand areas shall be inspected and maintained to ensure the integrity of the hardstand surface be maintained, with any cracks repaired immediately.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



- If contaminated stormwater has exited the site, or is strongly suspected to be contaminated but cannot be sampled, incident reporting will take place and the Director shall notify all relevant authorities (i.e. local council, NSW EPA), and shall co-operate fully with them in their clean up and investigations.

5.3.2 Wash Bay Area

- The bunding and drainage system in the wash bay area must be checked daily for blockages or degradation and cleared of any debris. If bunding is compromised, the Director must be notified and action taken to arrange appropriate repairs.
- Wastes from the oil/water separator must be discharged to the sewer under a trade waste agreement with Sydney Water. If unable to do so, the wastewater can be discharged to storage tanks for collection by a licensed contractor.
- Only biodegradable degreasing products are to be used in the wash area if waste water is to be diverted to the sewer.
- The oil/water separator must be maintained according to the manufacturer's instructions, including periodic inspections by a qualified professional.

5.3.3 Washout Drying Bay

- The bunding and drainage system in the washout drying bays must be checked daily for blockages or degradation and cleared of any debris. If bunding is compromised, the Director must be notified and action taken to arrange appropriate repairs.
- Wastewater collected into the washout bays is to be recycled through the on-site treatment pits and reused in the concrete batching process. If unable to do so, a licenced waste contractor would have to be arranged for offsite disposal.
- The collection bay or treatment pit must have an alarm installed that sounds when wastewater levels are high. A pump must be started when the alarm sounds to move the contents of the pit to another storage tank/containment on-site.
- For any spills from the washout bays, immediately contain the spill with potable containment barriers and act in accordance with the Spill Procedure.

5.4 INSPECTION AND RECORDS

A daily Inspection Checklist (see Section 9.4) and Pollution Control Equipment Maintenance Schedule (see Section 8.5) have been prepared to assist staff in checking that all procedures and equipment used to control and mitigate potential pollution are functioning effectively.

Any issues or non-conformances noted during workplace inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME:	EMERGENCY RESPONSE	DATE:	December 21
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

6. EMERGENCY RESPONSE

6.1 PURPOSE

The purpose of this procedure is to provide directions in the event of severe weather, an environmental incident or a medical emergency. The procedure aims to protect human life and minimise damage to equipment, plant and installations in the following emergencies:

- Fire/Explosion;
- Gas Release;
- Evacuation;
- Severe Storms;
- Flooding;
- Earthquake;
- Medical Emergency; and
- Suspect Package/Bomb Threat.

Detailed procedures for spills can be found in the Spill Procedure in section 4.4.

This procedure is a standard emergency procedure to be used as a guide, to be used in conjunction with the site's Emergency Plan. Any other existing emergency procedures must take precedence over this procedure.

6.2 RESPONSIBILITIES

An Incident Response Team (IRT) consists of a group of members that have the responsibility of providing first response action to an incident in terms of organising the necessary resources, communications, evacuation of personnel and implementing any corrective actions that may be necessary to return the situation back to normal.

The Chief Warden is in charge of overseeing and controlling **all** emergency and incident response actions at the Site. In the case that the Chief Warden is unavailable at the time of the emergency, control will be the responsibility of the Deputy Chief Warden.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



The Incident Response Team consists of the following members:

Incident Response Team Member	Personnel Name	Identification in an Emergency	Internal Contact No
Chief Warden			
Deputy Chief Warden			
Occupational First Aiders			
Traffic Controller			

Note: Names and contact details need to be filled in by the Director.

6.3 DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater, and surface water (including stormwater drainage system).

Environmental Incident/Release

An environmental incident/release is defined as any spillage, release, upset, out of limits operation, procedural violation, which potentially:

- Harms human health;
- May cause environmental harm; and
- May result in non-compliance with regulations, permits and/or intervention of environmental authorities or results in penalties or fines.

Emergency

A sudden unforeseen event involving danger that requires immediate action such as the occurrence of fire, substance spill, gas leak, collapse of plant equipment.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



The following are standard for all emergencies:

Emergency Alarm	The evacuation alarm consists of a digital siren.
Evacuation Signal	Is a continuous signal which means move to the Emergency Assembly Area.
Communication	Without communication there cannot be any interaction between the person discovering a potential emergency and the people designated to handle the situation. The communication systems available at the site include two-way radios, telephones and mobile telephones.
Emergency Contacts	Police, Ambulance or Fire Brigade on 000 .
Checklists	Warden's checklist of site.
Emergency Assembly Area	This is a safe location to which all people are required to assemble in the case of an emergency.

Note: This table must be updated according to the emergency standards at the site.

6.4 PROCEDURES

6.4.1 Fire/Explosion

A fire or explosion at the Site can have severe repercussions in terms of loss of life and property damage. Manual intervention or control may be necessary to limit the extent of the fire so that human life is protected and the damage to property is minimised as much as possible. Certain members will possess a minimum level of fire response training that includes basic fire-fighting skills using fire extinguishers and hose reels (see also Section 7.3).

First-Response Action on Discovery of Fire or Smoke (General)

1. Assist and remove any person from the danger area, only if safe to do so.
2. Immediately notify the Chief Warden.
3. If safe to do so, use the nearest fire extinguisher to smother the fire.
4. Move to the designated Emergency Assembly Area, if instructed to do so by the Chief Warden.

Chief Warden/Deputy Chief Warden

When informed of the incident:

1. Mobilise and co-ordinate IRT personnel to take incident response action.
2. If required, telephone the Fire Brigade and/or Police or Ambulance Services confirming the state of the emergency at the Site and requesting for additional assistance.
3. Brief the Emergency Services upon their arrival.
4. Ensure that no vehicles other than emergency services vehicles enter the Site.
5. If necessary, activate a Partial or Total Evacuation.



6.4.2 Gas Release

This section applies to a major release of gaseous substances into the ambient environment. The gases that can potentially be released at the Site are the following:

- Class 2.1 Flammable gases.
- Class 2.2 Non-flammable, non-toxic gases.

First-Response Action on Discovery of Gas Release (General)

1. Assist and remove any person from the danger area, only if safe to do so.
2. Immediately notify the Chief Warden and specify details of gas release such as odour, and location or source of release.
3. Check that all potential sources of ignition have been shut down (if safe to do so).
4. Move to the designated Emergency Assembly Area, if instructed to do so by the Chief Warden.

Chief Warden/Deputy Chief Warden

When informed of the incident:

1. Mobilise and co-ordinate IRT personnel to take incident response action.
2. Initiate a Partial or Full Evacuation, depending upon the location and severity of the gas release. Manually activate the Evacuation alarm if required.
3. If required, telephone the Fire Brigade and/or Police or Ambulance Services confirming the state of the emergency at the Site and requesting for additional assistance.
4. Brief the Emergency Services upon their arrival.
5. Ensure that no vehicles other than emergency services vehicles enter the Site.
6. Consideration must be given to the notification of neighbouring buildings, particularly those down-wind of the incident.

6.4.3 Evacuation

Evacuation procedures will be provided in the site's Emergency Plan.

Note that the Emergency Assembly Areas listed in the Emergency Plan will change in the following situations:

1. During a bomb threat/suspect package if the danger area is located close to the Emergency Assembly Area or at the discretion of the Chief Warden.
2. During a severe storm if the current Emergency Assembly Area endangers the lives of personnel.

6.4.4 Severe Storms

Severe storms produce extreme wind speeds, rainfall and atmospheric pressures. Although torrential rains produce flooding of river systems, the most severe threats of storms arise from destructive winds. During violent winds, loose sheets of galvanised iron, masonry and other debris may become lethal flying objects.



Action on Warning of Severe Storms

1. Restrain loose material that could cause injury and damage during extreme winds.
2. Avoid using the telephone during a storm.
3. Listen to local radio for further information.
4. Await instructions from Chief Warden.
5. If driving during a storm after an evacuation from site, stay clear of trees, power lines or streams.

6.4.5 Flooding

In the case of flooding at the site, follow evacuation procedures.

6.4.6 Earthquake

Chief Warden/Deputy Chief Warden

1. Telephone the Fire Brigade and/or Ambulance if required, confirming the emergency at the site.
2. Notify the Production Manager and General Manager.
3. Brief the Emergency Service personnel upon their arrival.
4. Ensure that no vehicles other than emergency services vehicles enter the site.
5. If necessary, activate a Partial or Total Evacuation.

6.4.7 Medical Emergency

Medical emergencies are events such as when a person suffers a heart attack, respiratory failure or broken limbs due to a fall or accident.

There will be a number of First-Aid Officers working at the Site at any one time. These personnel have the training to be able to provide first-aid response and care to such emergencies until the Ambulance Service arrives at the location to take over the care of the patient.

6.4.7.1 Action on discovery of a Medical Emergency (General)

1. Check for any threatening situation and control it if safe to do so.
2. Remain with the casualty (unless there is no other option) and provide appropriate support.
3. Do not remove or move any casualties unless in a life threatening situation.
4. Notify the Shift First-Aid Officer and Chief Warden.
5. Provide support to the First-Aid Officer or Ambulance if required.
6. Should the medical emergency consist of a car accident you are involved in whilst driving a company vehicle either on or off-site then notify Management and the appropriate motor vehicle insurance company.

6.4.8 Bomb Threat/Suspect Package

Action on receiving a Bomb Threat or discovery of a Suspect Package Such as an unidentifiable box, bag, tin or container.



6.4.8.1 When a threat has been received:

1. Notify the Chief Warden by telephone - do not use two-way radio as this may trigger the bomb.
2. In consultation with the Chief Warden initiate a Total Evacuation to the relevant Emergency Assembly Area or the safest Assembly Area depending where the bomb or package may be located.
3. Leave doors and windows open where possible when evacuating.

6.4.8.2 When a Bomb Threat/Suspect Package has been found:

1. Do not touch suspect package.
2. Clear the area and do not re-enter until instructed.
3. Notify the Chief Warden and/or National Operations Manager by telephone - do not use two-way radio as this may trigger the bomb.
4. In consultation with the Chief Warden initiate a Total Evacuation to the relevant Emergency Assembly Area or the safest Assembly Area depending where the bomb or package may be located.
5. Leave doors and windows open where possible when evacuating.

The Chief Warden/Deputy Chief Warden should do the following: Telephone the Police on **000**; Brief the Police upon their arrival; Initiate Evacuation Procedure and manually activate Evacuation alarm if required.

6.4.9 Clearance and Return to Work

Once clearance is given by the attending Authority or the incident has been mitigated:

1. The Chief Warden must undertake a full investigation and assessment of the area prior to allowing workers to return.
2. The Chief Warden must ensure any clean up required is done so to ensure a safe work environment for all staff. In addition, ensure the safe handling, transport and storage of any waste materials is undertaken. An environmental consultant must be contacted if unsure of correct methods.
3. All clean up material and contaminated items must be disposed of appropriately, according to the Waste Management Procedure. Contact an environmental consultant if unsure.
4. When the area is considered safe, workers can return to work.

6.5 INCIDENT INVESTIGATION REPORTING

In the event of an emergency or incident, Management will conduct an investigation to assess all hazards and risks, review all documentation associated with the incident and formulate a report. A sample *Incident Reporting Form* is included with this procedure. Records of any incident investigation reports and corrective actions (if required) must be maintained.

SUBJECT: EMERGENCY RESPONSE - Incident Reporting Form (Page 1 of 2)

INCIDENT REPORTING	FORM
Date: _____	
Site Address: _____	
Reported by: _____	
Cause, time and duration of the event/incident:	
The type, volume and concentration of every pollutant discharged or spilt as a result of the incident:	
Major hazards and impacts as a result of the incident:	
The name, address and business hours telephone number of member or contractors or a specified class of them, who witnessed the event:	
The name, address and business hours telephone number of every other person who witnessed the event, unless unable to obtain that information after making reasonable effort:	

SUBJECT: EMERGENCY RESPONSE - Incident Reporting Form (Page 2 of 2)

INCIDENT REPORTING	FORM
Action taken in relation to the event, including any follow-up contact with any complainants:	
Details of any actions to be taken or proposed to be taken to prevent or mitigate against a recurrence of such an event, who is responsible, and by when:	
Any other relevant matters:	
Verification of corrective or preventative actions: I verify that all the nominated corrective and preventative actions have been implemented effectively. Signed: _____ Name: _____ Date: _____	
Additional comments:	

Note: Any eyewitness accounts or additional reports resulting from the investigation into the incident must be documented and recorded with this incident investigation report.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME: USE OF FIRE FIGHTING EQUIPMENT **DATE:** December 21
PREPARED BY: Benbow Environmental **ISSUE NO.:** 1

7. USE OF FIRE FIGHTING EQUIPMENT

7.1 PURPOSE

To ensure all staff and on-site contractors use the correct procedure in the operation of fire hose reels, fire extinguishers and fire hydrants, to prevent spread of fire and minimise threat to human health and environment in the case of a fire at the site.

7.2 DEFINITIONS

Fire hose reel

Assembly consisting essentially of a hose, nozzle, drum, inlet pipe, connection fitting, stop valve and where required, a hose guide.

Fire extinguisher (foam)

Extinguisher from which foam is expelled by pressure stored within the body of the extinguisher as a whole.

Fire Hydrant

A fitting attached to a water main below street level. The hydrant incorporates a control valve and an outlet connection to which a standpipe is attached.

7.3 PROCEDURES

7.3.1 For Operation of a Hose Reel

To turn on:

- Turn on stop valve to release hose;
- Run out hose;
- Turn on water at nozzle and direct stream at base of fire.

To turn off:

- Turn off water at nozzle;
- Wind up the hose and turn the stop valve to tighten the hose.

7.3.2 For Operation of a Portable Fire Extinguisher

- The Director must ensure that all staff members follow the guidelines laid out in this document as per AS 1221-1997 *Fire hose reels* and AS 1841.5-1997 *Portable fire extinguishers, Part 5: Specific requirements for powder type extinguishers*.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



- Management must ensure that all staff members are fully trained in the use of all fire equipment (maintain training documents) and that all fire equipment is serviced in accordance with legislative requirements.

A list of the most suitable fire extinguisher for typical chemicals on-site and electrical fires is outlined in the table below. The SDS for all potential burning material must be consulted to ensure the appropriate fire extinguishers are used.

Burning Substance	Appropriate fire extinguisher
Liquified Petroleum Gas (LPG)	Dry Chemical Powder
Unleaded Petrol	Foam, Water Fog, or Dry Chemical Powder
Electrical fire	Dry Chemical Powder or Carbon Dioxide

Note: This table must be updated according to the specific chemicals kept at the site.

To turn on:

- Select appropriate type of fire extinguisher;
- Make sure the fire extinguisher is upright;
- Pull pin out;
- Aim at base of fire;
- Squeeze trigger.

To turn off:

- Release trigger and place pin in;
- Label the extinguisher as 'used' and call in fire service provider to fill or replace.

7.3.3 For Operation of a Fire Hydrant

Specific training is required in the use of fire hydrants due to safety implications as nozzles, if not correctly held, can strike personnel. Hydrants would only be operated by emergency response personnel, those site personnel correctly trained, or left to be operated by the fire brigade.

7.4 ELEMENTS OF AN INDUCTION AND TRAINING PROGRAM

All site personnel should be trained in the operation of all firefighting equipment.

An induction and training program should include the following elements:

- the operation of a fire extinguisher;
- the operation of a hose reel;
- proper use and fitting of personal protective equipment;
- the procedures to be followed in case of an emergency involving a fire;
- first aid and incident reporting procedures to be followed in case of injury or illness; and
- that the operation of a fire hydrant is usually left to emergency response personnel, e.g. fire brigades.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



Induction and training programs are to be documented and include the following information:

- the names of employees receiving training and the date(s) of attendance;
- an outline of the training content;
- the names of persons providing the induction and training program.

A training document is shown overleaf. Training will be reviewed on a periodic basis.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



COMPETENCY TRAINING DOCUMENT

SUBJECT: Operation of Fire Fighting Equipment

Name of person providing :

induction and training

Signature :

Name of employee :

Signature :

Date(s) of attendance :

Outline of the course content

Course to include:

Topics to be covered	Tick when topic finished
Operation of a fire extinguisher	
Operation of a hose reel	
Operation of a fire hydrant	
Information about the risk involved in the burning of flammable and harmful substances.	
Proper use and fitting of personal protective equipment	
Procedures to be followed in case of an emergency involving hazardous substances, including any special decontamination procedures to be followed	
First aid and incident reporting procedures	

Induction and Training in operation of firefighting equipment has been completed and understood. I now feel competent to use firefighting equipment.

Signature :

Date:

(Employee/Attendee)

Induction and Training Attendee demonstrated appropriate competencies in use of firefighting equipment.

Signature :

Date:

(Trainer)

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME: POLLUTION CONTROL EQUIPMENT MAINTENANCE **DATE:** December 21

PREPARED BY: Benbow Environmental **ISSUE NO.:** 1

8. POLLUTION CONTROL EQUIPMENT MAINTENANCE

8.1 PURPOSE

To ensure correct and regular maintenance of the pollution control equipment installed at the site so as to minimise non-compliance for all environmental emissions from the site.

8.2 DEFINITIONS

Pollution Control Equipment

Devices used to prevent or minimise the discharge of contaminants, including noise, air emissions, and contaminants to surface water, groundwater, natural waterways that causes pollution. Devices considered must include those that a failure of would result in a pollution incident.

Stormwater

Surface runoff from roof, and outdoor yard areas.

Air Pollution

The emission into the air of any air impurity including smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.

Preventative Maintenance

A series of routine procedures and activities, including adjustments, replacements and basic cleanliness, which forestall machine breakdowns. The purpose is to try to identify and resolve potential problems before they occur.

8.3 PROCEDURES

- This procedure applies to the following pollution control equipment and structures at the site:
 - ▶ Silo air filters, reverse pulse filter system and batching house dust extractor;
 - ▶ Stormwater and Wastewater management devices, including devices associated with the wash bay area and washout drying bay, such as oil/water separators and wastewater treatment pits, as well as gross sediment traps, and sediment controls drain covers;
 - ▶ Bunding and dangerous goods storage areas;
 - ▶ Spill kits;
 - ▶ Automated systems/alarms and Firefighting equipment;

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



- All pollution control equipment is to be regularly inspected, tested and maintained to ensure compliance with regulations and to minimise likelihood of contribution to a pollution incident. Maintenance intervals are to be as specified by the supplier of each item and an appropriately qualified technician must be employed where specified by the manufacturer.
- A Pollution Control Equipment Maintenance Schedule is to be implemented and maintained to ensure correct operation of equipment. This procedure must be updated with any changes in pollution control equipment or alterations in operation.
- Prompt repair or replacement of defective equipment found during routine maintenance inspections must be undertaken. A supply of spare parts for equipment that requires frequent repair will be maintained to ensure prompt attention. Any corrective actions required that cannot be undertaken immediately will be undertaken in accordance with the *Corrective and/or Preventative Actions Procedure* in the EMP. A sample Pollution Control Equipment Maintenance Schedule is provided in Section 8.5.
- Suitably trained personnel will carry out all maintenance and inspection operations. Site management will regulate the competency of such personnel.

8.3.1 Air Filter and Dust Extractor Systems

- Conduct regular visual inspections of all components to identify any abnormalities, potential malfunctions, or leaks.
- Conduct periodic testing of all components according to manufacturer's specifications.
- Ensure that all piping, filters and valves are adequately maintained in good working order according to manufacturer's specifications.
- Inspect all items for potential safety or environmental hazards.

8.3.2 Stormwater and Wastewater Management Devices

- Conduct regular visual inspections of all components of the wash bay area, including the oil and grease separator, and the washout drying bay, including the wastewater treatment pits with pumps and stirrers, to identify any potential malfunctions or leaks.
- Undertake visual inspections of all stormwater pollution control devices including any gross pollutant traps in stormwater drains for sediment, debris and litter. Ensure that these devices are free of these items.

8.3.3 Bunding & Dangerous Goods Storage Areas

- Conduct regular visual inspections of all components to identify cracks or leaks. This includes: bunding/hardstand of chemical storage areas, all piping, any self-bunded containers, and wash bay bunding.
- All bunding will be kept free of clutter, litter and other items.
- Should spillages or leaks be evident within bunding during regular inspections, these shall be cleaned up immediately using spill kits provided.
- Inspect all items for potential safety or environmental hazards.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



8.3.4 Spill Kits

Conduct regular visual inspections to ensure:

- Spill kits are in the correct locations as specified on the site emergency plan;
- Spill kits are not obstructed and are easily accessible;
- All items are available (spill kits are fully replenished); and
- Spill kits are clearly labelled.

8.3.5 Automated Systems/Alarms and Firefighting equipment

- Ensure that the Overfill Protection System and any Emergency shut down Systems, and associated alarms, are functioning correctly and are tested regularly.

8.4 RECORDS

Any issues or non-conformances noted during maintenance inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



8.5 POLLUTION CONTROL EQUIPMENT MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE			
EQUIPMENT NAME	RECOMMENDED FREQUENCY*	DUE DATE	CHECK COMPLETE (SIGN & DATE)
Silo air filters, reverse pulse filter system and batching house dust extractor			
Stormwater and Wastewater management devices in wash bay and washout drying bays			
Dangerous goods storage areas (bunding, etc.)			
Automated systems and alarms (e.g. emergency shut down and overfill protection)			
Firefighting equipment			
Air pumps / compressors			
Gross Pollutant Traps			
Spill Kits			

*Note: To reflect the manufacturer’s instructions for the specific equipment used at the site.

FAULTY ITEMS REQUIRING ATTENTION:

EXPECTED ACTION REQUIRED:

CAR Form No.(s):

Name : _____ **Signature :** _____ **Date:** _____

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



PROCEDURE NAME:	WORKPLACE INSPECTION	DATE:	December 21
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

9. WORKPLACE INSPECTION

9.1 PURPOSE

The purpose of this procedure is to ensure an adequate level of environmental management at the site is maintained. The procedure can help determine whether action needs to be taken, in order to rectify any identified issues with the potential to cause environmental harm.

9.2 DEFINITIONS

Workplace Inspections

Inspections conducted by the Environmental Officer using the environmental checklist provided to assess the housekeeping standard of the facility.

Environmental Harm

Any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above includes any act or omission that results in pollution. (Ref: POEO Act)

Due Diligence

The systematic identification of the environmental risks and liabilities associated with an organisation's sites and operations.

9.3 PROCEDURES

- An Inspection Checklist is provided overleaf to be completed and recorded on a daily basis. This information is used to ensure an adequate level of environmental management at the site is maintained. It is also used to determine whether action needs to be taken to rectify issues that have arisen that may have the potential to cause environmental harm.
- Appropriate action should be decided at the discretion of the Directors/Site Management.
- The Inspection Checklist must be updated as required. Management should update the checklist so it is more specific to each area.
- Any issues or non-conformances noted during workplace inspections must be recorded. Documentation for any corrective and preventative actions (e.g. CAR forms) must also be maintained, as described in the *Corrective and Preventative Actions* section of the EMP. Any other relevant records must also be kept for inspection by regulatory authorities.

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures

9.4 INSPECTION CHECKLIST

Inspected by:..... Inspection date & time:.....

AREAS	OBSERVATION (tick applicable boxes)	REMARKS
CONCRETE BATCHING PLANT	Is there any excessive noise from equipment or activities (or any noise complaints) from the plant?	
	Is there any excessive or unusual dust emissions or odour (or any complaints regarding dust) from the plant?	
	Are pollution control devices (e.g. dust extractor/water sprays) working appropriately?	
	Are concrete fines or any debris building up on hardstand areas, with the potential to generate dust?	
	Is there evidence of any spills of oil or fuel on any area of the site?	
	Is there any other emission being released from the plant?	
	Are all automated systems and alarms functioning appropriately?	
	Are there any areas or equipment that have not been maintained or inspected in accordance with the maintenance schedule?	
	Is any firefighting equipment out of date, damaged or obstructed from access?	
Other:		

Corrective Actions (if required):

WASH BAY AREA AND WASHOUT DRYING BAYS	Are pits and grates clear of blockage?	
	If wastewater is collected on site, are the collection pit and associated alarm functioning properly?	
	Is the oil/water separator functioning properly?	
	Is wash water being effectively contained within the wash bay?	
	Other:	

Corrective Actions (if required):

CARPARK / DRIVEWAY	Is hardstand free of debris, sediment, and litter?	
	Are stormwater pits free of debris build up?	
	Other:	

Corrective Actions (if required):

WASTE STORAGE AREA	Is waste storage area free of litter and dust/sediment?	
	Are waste bins maintained in appropriate working order (i.e. closed lids, in designated area)?	

Renita Developments Pty Ltd
Environmental Management Plan – Environmental Procedures



AREAS	OBSERVATION (tick applicable boxes)	REMARKS
	Other:	

Corrective Actions (if required):

POLLUTION CONTROL EQUIPMENT	Is all equipment in good working order?	
	Has all equipment being inspected/serviced in accordance with maintenance schedule?	
	Are spill kits located in high risk areas and readily accessible?	
	Other:	

Corrective Actions (if required):



DOC22/377182-3

Liverpool City Council
 Planning Team
 Locked Bag 7064
 LIVERPOOL BC NSW 1871
 Email: lcc@liverpool.nsw.gov.au

Attention: Planning Team

Response to s4.55(2) Modification of Integrated Development Consent, CNR-39395

Dear Planning Officer,

Thank you for consulting with the NSW Environment Protection Authority (EPA) about Concurrence and Referral (CNR) CNR-39395, Agency reference number A-46389 application to modify Development Consent at 4 Ash Road, Prestons 2170 (DA-264/2018/C).

The EPA notes that Development Consent DA-264/2018 was granted on 28 February 2019 consistent with the General Terms of Approval (GTA) specified by the EPA in Notice No. 1564424 dated 10 May 2018, and variation Notice No. 1573702 dated 21 December 2018.

The EPA understands a s4.55(1A) modification (DA-264/2018/A) to the consent was approved on 7 December 2020 and a further s4.55(1A) modification (DA-264/2018/B) to the consent was approved on 18 March 2021. The EPA made submissions to Council on DA-264/2018/A and DA-264/2018/B (EPA Refs: DOC20/854818-3 and DOC20/848938-2, respectively) noting it did not object to either modification.

The modification application DA-264/2018/B removed consent conditions relating to requirements for an Environment Protection Licence in response to amendments to Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA notes that whilst the activities undertaken at the premises (Concrete Batch Plant) do not require an Environment Protection Licence, the EPA will continue to be the Appropriate Regulatory Authority for the premises in accordance with cl. 118(1)(b) of the Protection of the Environment (General) Regulation 2021.

The current application seeks to modify condition 103 of the consent for DA-264/2018 to increase in the annual production capacity of concrete or concrete products from 200,000 tonnes per annum to 300,000 tonnes per annum.

The EPA has reviewed the Modification Application and supporting documents that were submitted on 12 May 2022, including:

- *Concrete Batching Plant Lot 8 DP 241916 No. 4 Ash Road, Prestons – Acoustic Report for the Environmental Impact Statement* (Sebastian Giglio, Ref: 2870-D25 dated 22 December 2021)

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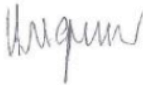
NSW 2150 Australia

- *Air Quality Impact Assessment for Renita Developments Pty Ltd 4 Ash Road, Prestons NSW* (Benbow Environmental, Ref: 171164-03_AQIA_Rev3 released 20 December 2021).

Based on the information provided the EPA does not object to the proposal to modify the consent.

If you have any questions please contact Larissa Borysko on 9995 6843 or via email at Larissa.Borysko@epa.nsw.gov.au

Yours sincerely,



7 June 2022

Hamish Campbell
Unit Head - Regulatory Operations
NSW Environment Protection Authority

Item Number:	3
Application Number:	DA-259/2022
Proposed Development:	3 Lot Torrens title subdivision with site remediation, tree removal, construction of roads and associated civil works. The application is integrated development requiring approval from the NSW Rural Fire Service Under the Rural Fires Act 1997
Property Address	430 Fifteenth Avenue, Austral
Legal Description:	Lot 416, DP2475
Applicant:	Fulya Karabacak
Land Owner:	Mustafa Mustafa & Gonul Mustafa
Cost of Works:	\$1,073,560.00
Recommendation:	Deferred Commencement
Assessing Officer:	Emily Lawson

1. EXECUTIVE SUMMARY

Council has received a Development Application seeking consent for a Torrens title subdivision to create three (3) super lots with removal of vegetation, site remediation and construction of roads at 430 Fifteenth Avenue, Austral. The application is Integrated Development requiring approval from the NSW Rural Fire Service under the Rural Fires Act 1997.

The development site is legally identified as Lot 415 in DP 2475 and is zoned R3 Medium Density Residential pursuant to State environmental Planning Policy (Precincts - Western Parkland City) 2021. The proposal is identified as subdivision, roads, and earthworks and is permissible with consent under the Western Parklands City SEPP 2021.

The development application was not required to be exhibited in accordance with Liverpool Community Participation Plan 2019. Notwithstanding, no submissions have been received.

The application has been assessed pursuant to the provisions of the Environmental Planning and Assessment Act 1979 and is generally consistent with the relevant provisions. Notwithstanding this, the proposal seeks a Clause 4.6 variation to Clause 4.1B – Residential Density, Appendix 4 of the SEPP (Precincts: Western Parkland City) 2021, requesting a variation of 90.12% to the minimum 25 dwellings per hectare (25dw/ha) mapped on the site. The proposal includes the retention of an existing dwelling on proposed Lot C, which is inconsistent with the objectives of Clause 4.1B. Accordingly, Council recommends the demolition of this dwelling as part of a deferred commencement, to resolve this issue prior to any consent for the proposal becoming operational.

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.

This report concludes, on balance, the proposal has sufficient merit to be recommended for approval by way of a Deferred Commencement by the Liverpool Local Planning Panel, subject to the conditions.

2. SITE DESCRIPTION AND LOCALITY

2.1 The site

The development site comprises one existing allotment, known as 430 Fifteenth Avenue, Austral, and is legally described as Lot 415 in DP 2475. The development site is a regular shaped allotment, with a frontage to Fifteenth Avenue of approximately 80.47m along its northern boundary. The site has a total area of 1.214ha.

The site is currently occupied by one dwelling house, with ancillary outbuildings, and features a hardstand driveway and parking area which enables access from Fifteenth Avenue. Existing vegetation is clustered towards the southwest portion of the site, with 37 trees in total identified across the site. The topography of the site falls towards the south, with a maximum RL of 76.6 at the northwest boundary and a minimum RL of 73.5 at the southeast boundary.



Figure 1 – Aerial view of the subject site (Source: SIX Maps)

2.2 The Locality

The site is situated within an emerging residential area within the Southwest Growth Centre of Austral. The land surrounding the subject allotment is currently characterised by large lot rural-residential development. Due to a number of approved subdivision developments, the locality is considered land in transition to urban residential neighbourhoods.

Fifteenth Avenue, a major east-west connection in the locality, adjoins the site at its northern boundary and has been identified as a future arterial road servicing the area and providing access to the future Western Sydney Airport.

The lands immediately surrounding the site are zoned R3 Medium density Residential, with a mix of R3 and R2 Low Density Residential zoned land occupying the lands beyond this. A pocket of land zoned B2 – Local centre, is located further to the east, currently characterised as a business park which features West Hoxton shopping Mall.



Figure 2: Aerial view of the locality (Source: SixMaps)

2.3 Site Constraints

<p>Are there any constraints or affectations on the site:</p> <ul style="list-style-type: none"> • Bushfire • 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 	<p>Site Constraints:</p> <ul style="list-style-type: none"> • The site is biodiversity certified under the Biodiversity Conservation Act NSW 2016. • The site features medium to highly saline soils. • The site features a high potential contamination risk. • The site is identified as an area of moderate Aboriginal Archaeological Sensitivity. • The site has a frontage to a classified road.
<p>Are there any restrictions on title?</p>	<p>There are no known restriction or easements on the title.</p>

3. BACKGROUND/HISTORY

A brief history of the development application is presented below:

Date	Details
7 March 2022	Development Application Lodged
1 September 2022	Initial Request for Information (RFI) issued to the applicant requesting engineering, planning, flooding, Aboriginal Heritage and Environmental Health comments to be addressed.
21 September 2022	NSW RFS Provide General Terms of Approval
12 January 2023	Applicant submits the following information to Council: <ul style="list-style-type: none"> • Revised Engineering/ Stormwater Management Plans • Aboriginal Heritage Due Diligence report • Preliminary Site Investigation, and Detailed Site Investigation • Salinity Assessment Report
20 March 2023	Further RFI issued to the applicant requesting additional comments from engineering, flooding, and environmental health to be addressed
8 June 2023	Applicant submits the following information to Council: <ul style="list-style-type: none"> • Revised Engineering Plans along with MUSIC model • Revised Stormwater Management Plan • Remedial Action Plan
27 June 2023	Applicant submitted a Clause 4.6 Report, and Building Envelope Plans to Council

4. DETAILS OF THE PROPOSAL

The development application seeks consent for Torrens title subdivision of land to create three (3) super lots, tree removal, construction of roads, and associated civil works.

It is important to note that the demolition of the existing dwelling and ancillary structures is not proposed as part of the development and will form part of a separate application.

Demolition

The proposed development includes the demolition of the existing hardstand driveway, and removal of gates and fencing located across the site. The existing dwelling and ancillary outbuildings are proposed to be retained and will be demolished under a separate application. In this regard, Council is recommending deferred commencement of this application until demolition has been undertaken and proposed Lot C can demonstrate it can achieve the density requirements under the SEPP. The applicant was advised of this approach and raised no objections.

Removal of Vegetation

The proposed development includes the removal of 37 trees to facilitate the construction of roads for the development.

Torrens Title Subdivision

The Development Application proposes Torrens title subdivision of the site to create 3 super-lots in accordance with the Indicative Layout Plan as follows:

Lot No.	Lot Area	Lot Length	Lot Depth
Lot 1	1,812sqm	57.8m	31.9m
Lot 2	1,994sqm	63.4m	31.9m
Lot 3	4,435sqm	137.4m	32.45m

Civil Works

The proposed civil works include construction of roads and footpaths in accordance with the Indicative Layout Plan. Earthworks are proposed to facilitate the construction of roads and the temporary OSD Basin.

The following roads are proposed with the development:

- **Road 1:** 16m wide North-South Local Street featuring maximum cut depth of 1.032m and maximum fill of 0.417m
- **Road 2:** 16m wide East-West Local Street requiring maximum cut depth of 0.621m and no fill
- **Road 3:** 13.5m wide East-West Access Street requiring no cut, and a maximum fill depth of 0.296m

Additional civil works include remediation, landscaping of road verges, and stormwater management system. The proposed stormwater management across the development includes the provision of a temporary on-site detention basin, to be constructed in proposed Lot 3.

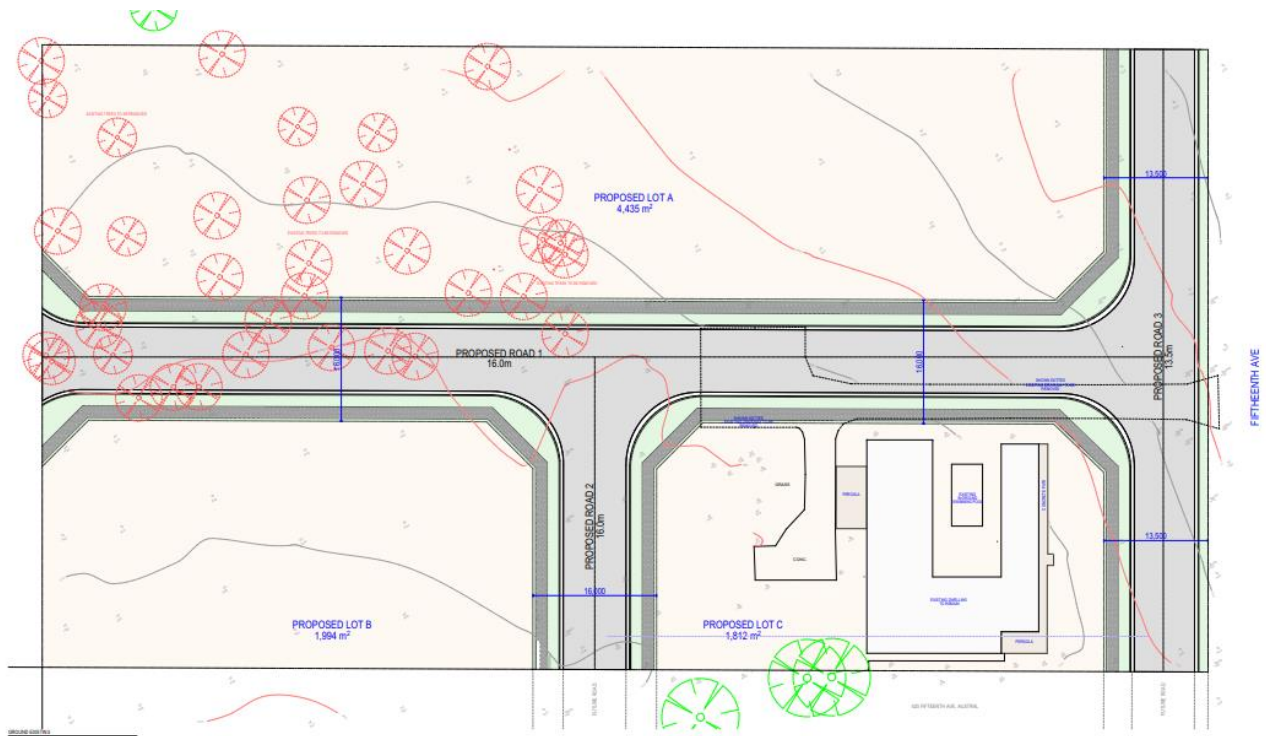


Figure 3. Extract of proposed Subdivision Plan

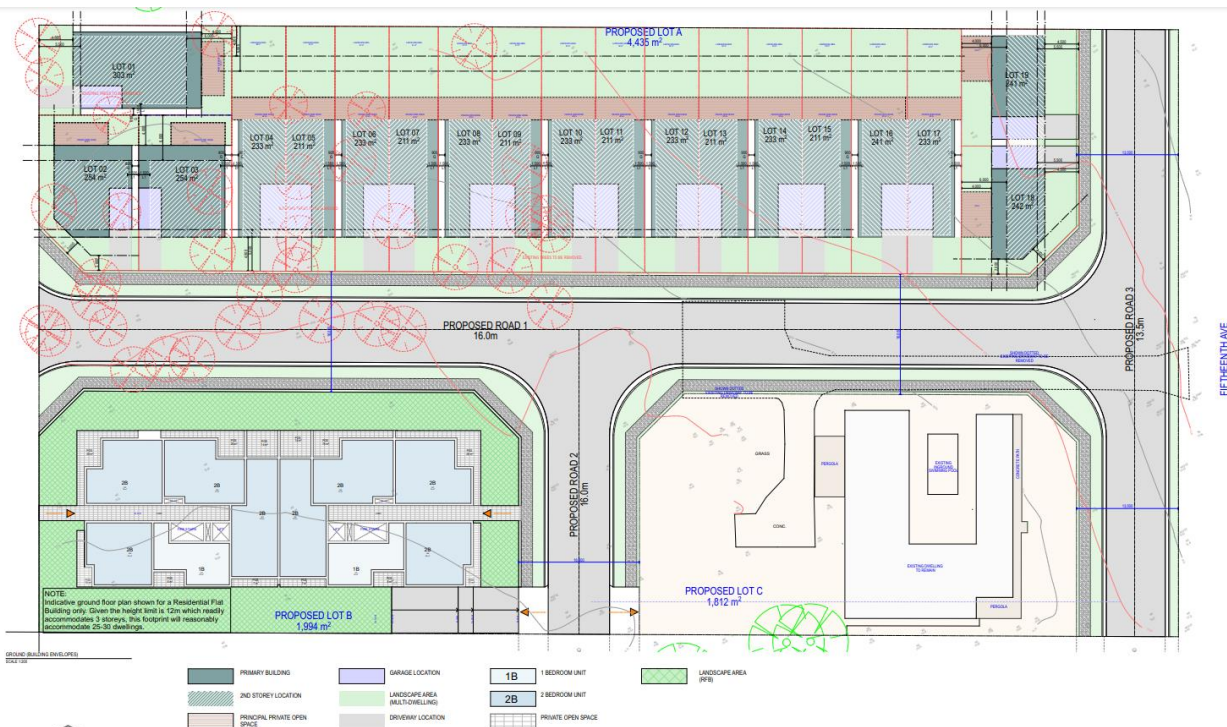


Figure 4. Extract of Indicative Building Envelope Plan

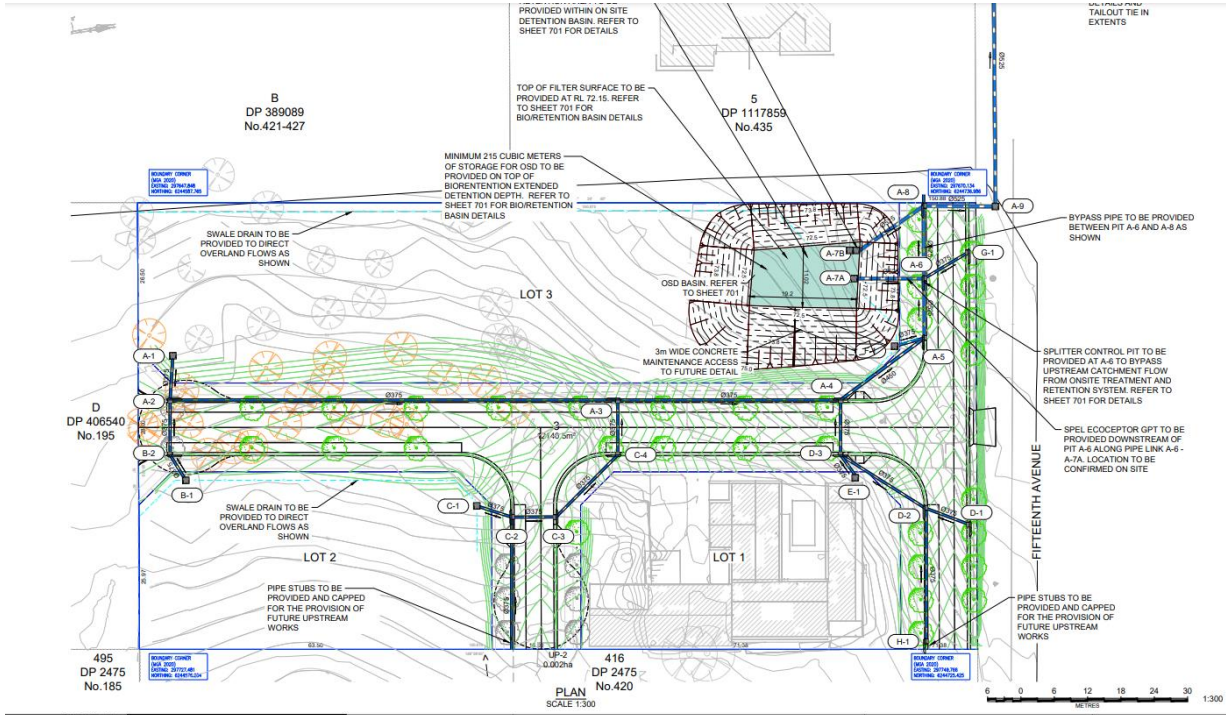


Figure 5. Extract of Stormwater Management Plan

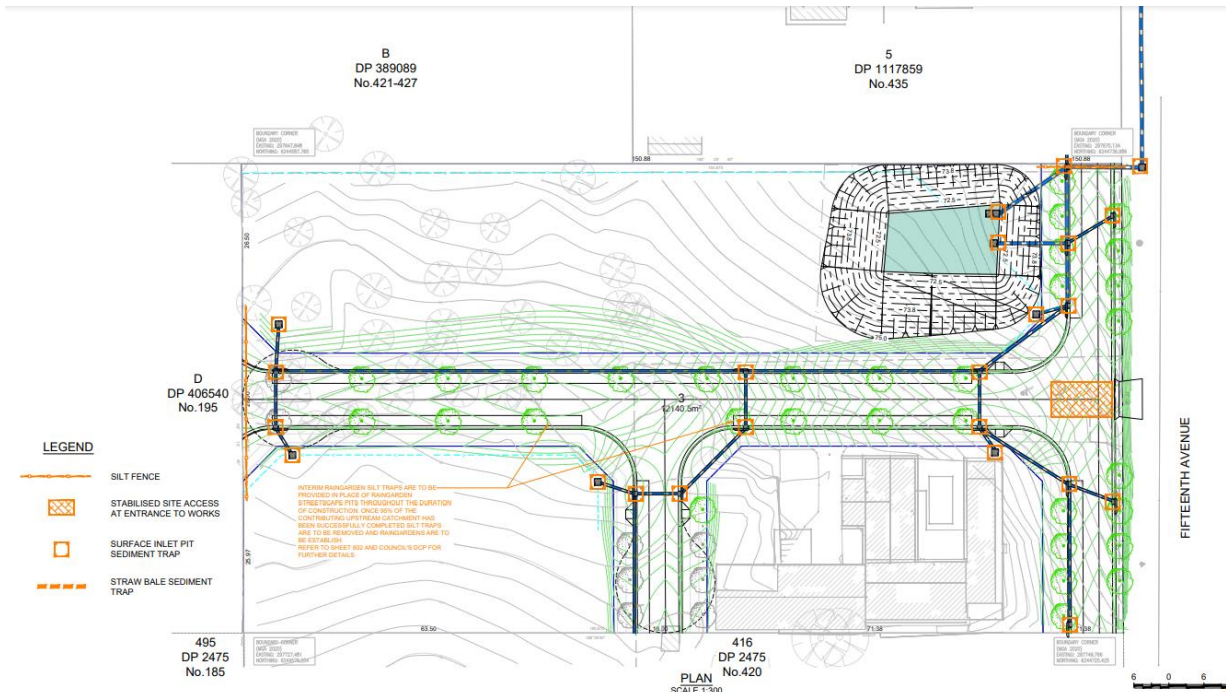


Figure 6. Extract of Erosion and Sediment Control Plan

5. STATUTORY CONSIDERATIONS

5.1 Relevant matters for consideration

The following planning instruments/policies applicable to the proposed development area as follows:

- State Environmental Planning Policy (Precincts: Western Parkland City) 2021
- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Biodiversity and Conservation) 2021
- Liverpool Growth Centre Precincts Development Control Plan (DCP) 2021.

Draft Environmental Planning Instruments

- No Draft Environmental Planning Instruments apply to the site.

Contributions Plans

- Liverpool Contributions Plan 2014 Austral and Leppington North applies to the subject development.

6. ASSESSMENT

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

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

State Environmental Planning Policy (Precincts – Western Parkland City) 2021 - Appendix 4 Liverpool Growth Centres Precinct Plan is the principal planning instrument applying to the site and proposed development.

(a) State Environmental Planning Policy State Environmental Planning Policy (Precincts – Western Parkland City) 2021

(i) Zoning

The development site is zoned R3 Medium Density Residential pursuant to State Environmental Planning Policy (Precincts – Western Parkland City) 2021 - Appendix 4 Liverpool Growth Centres Precinct Plan.

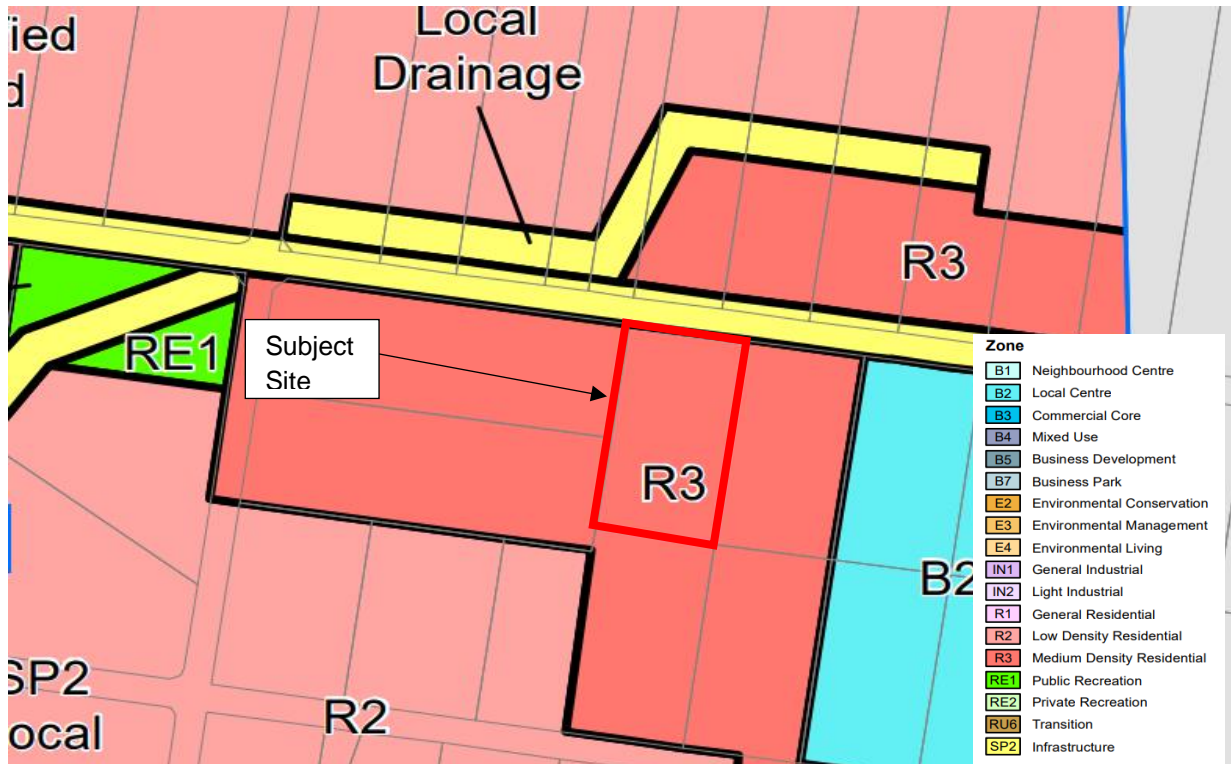


Figure 7. Zoning of the site (Source: SEPP (Western Parkland City) 2021 Land Zoning Map)



Figure 8. Indicative Layout Plan for site and surrounds (Source: Liverpool Maps)

(ii) Permissibility

The proposed development is defined as subdivision, roads, and demolition. The proposed subdivision and construction of roads involves earthworks and drainage works which are

considered incidental. Subdivision is permissible with consent pursuant to Clause 2.6 of the SEPP.

Roads are permissible with consent under the R3 Medium Density Residential land use table.

Demolition is permissible with consent pursuant to Clause 2.7 of the SEPP.

(iii) Objectives of the zones

Objectives of the R3 Medium Density Residential Zone are:

- *To provide for the housing needs of the community within a medium density residential environment.*
- *To provide a variety of housing types within a medium density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To support the well-being of the community by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a medium density residential environment.*

The proposed subdivision will create three super lots which will facilitate future residential development to meet the needs of the community within a medium density environment. The submitted indicative Building Envelope Plans demonstrate that a variety of housing types can be accommodated on the lots, which align with the desired medium density environment. The lots have the potential to accommodate additional land uses where compatible with residential development, to support the well-being of the future community.

(ii) Summary of Relevant SEPP State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Provisions

The State Environmental Planning Policy (Western Parkland City) 2021 contains a number of provisions which are relevant to the proposal. Assessment of the application against the applicable provisions is provided below. The proposal generally demonstrates compliance with these provisions.

Note: The Liverpool Local Environmental Plan 2008 does not apply to this site, as the land is located within a Growth Centre Precinct and the SEPP prevails over the LEP. The application is instead assessed against the SEPP and the Liverpool Growth Centre Precincts DCP 2021.

Clause	Provision	Proposed	Compliance
Permitted or Prohibited Developments			
2.6 Subdivision	Subdivision of land may only be carried out with development consent	The development proposes the subdivision of land to create 3 Torrens title lots to accommodate future residential development. Subdivision Plans have been	Complies

Clause	Provision	Proposed	Compliance
Permitted or Prohibited Developments			
		submitted in support of the application.	
2.7 Demolition	Demolition works may only be carried out with consent	Demolition of the existing hardstand area is proposed to facilitate the construction of roads in accordance with the ILP. Conditions of consent will be impose to ensure appropriate measures are undertaken throughout the demolition process	Complies (by condition)
4.1 Minimum Subdivision Lot Size	The site is not identified as having a minimum lot size requirement within the Southwest Growth Centre Lot Size Map	The site is not subject to minimum lot size controls. Proposed lots have the following site areas: Lot 1: 1,812sqm Lot 2: 1,994sqm Lot 3: 4,435sqm	N/A
4.1B Residential Density	The site is subject to a minimum dwelling density of 25dw/ha	Total site area = 1.21ha $25 \times 1.214 = 30.35$ dwellings required. 3 lots achieved over 1.214 ha = 2.47 dw/ha overall resulting in a 90.12% variation to the required density requirement A Clause 4.6 variation request has been submitted with the Development Application, requesting a variation to dwelling density. The DA proposes 3 lot subdivision of the site, to create the block level development in accordance	No (refer to Clause 4.6 below)

Clause	Provision	Proposed	Compliance
Permitted or Prohibited Developments			
		<p>with the ILP. No dwellings are proposed, however existing dwelling is to be retained.</p> <p>Indicative subdivision and Building Envelope Plans have been provided to demonstrate that the required dwelling density can be achieved through future Development Applications for subdivision and dwelling construction.</p> <p>See Clause 4.6 discussion below for further assessment.</p>	
4.3 Height of Buildings (as per HOB Map)	12m for this site	No buildings are proposed.	N/A
4.6 Exceptions to development standards	Provisions relation to exceptions to development standards	Clause 4.6 request to vary Clause 4.1B residential Density has been considered as part of this application	Yes
5.1 Relevant Acquisition Authority	Land to be acquired as identified on the Land Reservation Acquisition Map	The site is not identified as required for acquisition on the Land Reservation Acquisition map.	N/A
5.9 Preservations of trees or vegetation	Consent is required to remove trees or vegetation.	<p>The proposal is seeking consent for the removal of 37 trees at the site to facilitate the construction of roads in accordance with the ILP.</p> <p>An Arborist Report has been submitted with the application which concludes that the proposed development does not enable the trees at the site to be retained.</p>	Complies

Clause	Provision	Proposed	Compliance
Permitted or Prohibited Developments			
		The site is biodiversity certified, under the Biodiversity Conservation Act 2016, allowing the removal of vegetation for residential development.	
5.10 Heritage conservation	Conservation of environmental heritage and consent requirements	<p>The subject site is located in an area of moderate Aboriginal Archaeological Sensitivity.</p> <p>An Aboriginal Heritage Due Diligence Assessment has been submitted with the application.</p> <p>An internal referral to Council's City Design Heritage department determines the submitted report to be satisfactory, subject to conditions.</p>	Complies by condition
6.1 Public Utility Infrastructure	The consent authority must not grant development consent to development on land to which this Precinct Plan applies unless it is satisfied that any public utility infrastructure (supply of water, electricity and disposal/management of sewage) that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when required	<p>The application was referred to Sydney Water for assessment. Sydney Water has identified that wastewater servicing is not currently available on site. It is anticipated that wastewater servicing will be available from 2025/2026.</p> <p>Sydney Water have stated that critical infrastructure can be made available for development.</p> <p>Council will apply standard conditions regarding the supply of water, wastewater, telecommunications and electricity to be satisfied prior</p>	Complies by condition

Clause	Provision	Proposed	Compliance
Permitted or Prohibited Developments			
		to the issue of a Subdivision Certificate for each allotment. Sydney Water have stated that detailed requirements, including any potential extensions or amplifications, will be provided once the development is referred to Sydney Water for a Section 73 application.	
6.2 & 6.3 Development Controls – Native Vegetation Areas and Existing Native Vegetation	These controls relate only to the clearing of native vegetation within a native vegetation retention area.	The site is not identified within a native vegetation retention area on the Native Vegetation Protection Map, or within an existing native vegetation retention area on the Native Vegetation Protection Map.	N/A

Having regard to the above assessment, the proposal is permitted in the zone and is considered consistent with the objectives of the zone and relevant development standards in the SEPP.

Clause 4.6 – Exceptions to development standards (Variation to Clause 4.1B – Minimum Dwelling Density)

Clause 4.1B(3) of the SEPP (Precincts: Western Parkland City) 2021 - Appendix 4 Liverpool Growth Centres Precinct Plan states:

“The density of any residential development to which this section applies is not to be less than the density shown on the Residential Density Map in relation to that land.”

The minimum dwelling density standard applying to the subject land under clause 4.1B(3) of the SEPP provisions is 25 dwellings per hectare (25dw/ha) as shown in the extract from the Residential Density Map in Figure 9 below.

The intent of the proposed development in this DA, as stated in the DA documentation, is to subdivide the land into three allotments and construct associated civil works to create three ‘super lots’ which can then be developed for residential purposes at a future stage to achieve compliance with the minimum 25dw/ha density standard.

However, the subject DA intent is to create 3 residential lots which does not technically comply with the housing density of 25dw/ha. The application contravenes the minimum dwelling density standard of 25dw/ha by 90%, accordingly, the proposal seeks a variation to the minimum dwelling density standard under clause 4.6 of the SEPP (Precincts: Western

Parkland City) 2021 - Appendix 4 Liverpool Growth Centres Precinct Plan.

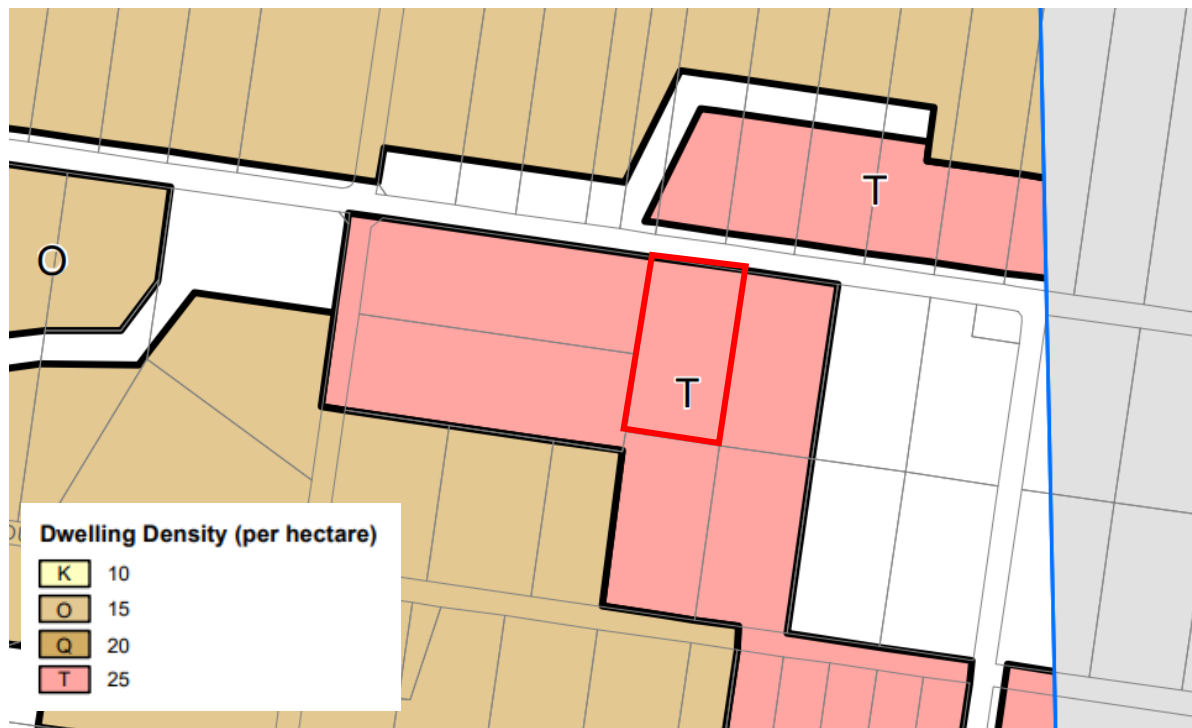


Figure 9. Extract of Residential Density Map SEPP (Precincts – Western Parkland City) 2021

Pursuant to Clause 4.6 of the SEPP (Precincts – Western Parkland City) 2021 - Appendix 4 Liverpool Growth Centres Precinct Plan, the applicant has submitted a written request seeking to justify a variation to the minimum dwelling density standard prescribed in Clause 4.1B.

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 applicant submitted a Clause 4.6 Variation Report to the Residential Density Development Standard, in order to justify the variation described above. The document provides the following justifications based on the merits of the proposal assessed against Clause 4.6 and the precedent in *Wehbe v Pittwater Council* [2007] NSWLEC 827.

- (i) **that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case**

Applicant Justification:

The proposed subdivision will facilitate the provision of super lots that can accommodate development as shown in the Indicative Building Envelopes Plan in Figure 4. This indicative dwelling layout would exceed the minimum dwelling yield prescribed in Clause 4.1B. The site will also have the capacity for infrastructure including new roads and services in accordance with the indicative layout plan for Austral and Leppington North precinct in the DCP.

Given new subdivisions are reliant on the roll out of mains sewer infrastructure to this part of the release area that has not yet been achieved, it is unreasonable for the proponent to be forced in to developing a larger lot subdivision where it has been demonstrated that future subdivision of the land is capable of complying with the density standard.

Strict compliance with the development standard is considered unnecessary in the circumstances of this proposal given the mains sewer infrastructure is not currently in place and the Indicative Dwelling Layout Plan confirms the residential density control is readily achievable for this site.

The underlying objectives of Clause 4.1B seek to ensure that residential development makes efficient use of land and infrastructure and contributes to the availability of new housing. The objective is therefore relevant to the development.

The Indicative Dwelling Layout Plan identifies compliance with and exceedance of the development control requiring a density of 25 dwellings per hectare on this site.

The purpose or underlying objective of the control is not defeated through provision of three super lots nor would it be defeated if compliance was required.

The Local Planning Panel approved DA-199/2021 at 250 Fourteenth Avenue, Austral that included significant non-compliance with the residential density control in Clause 4.1B of the SEPP. The SEPP control required the site to accommodate fifteen (15) dwellings and the DA approved one (1) dwelling. Note an indicative lot layout plan identifying capability for future residential density was considered within DA199/2021, consistent with the Plan for the subject site.

The R3 zoning of the site is not inherently unreasonable or inappropriate, however it should be acknowledged that sewer infrastructure servicing is not yet in place to

adequately accommodate significant medium density residential development of the R3 site or surrounding allotments.

Council assessment:

- The exceedance of the development standard is across the three proposed allotments and equates to a 90.12% non-compliance. The applicant has demonstrated future development on proposed Lot A and B is intended to accommodate high density residential development, which, if developed in this way, will satisfy the dwelling density development standard on these lots.
- It is important to note however, the retention of the existing dwelling on proposed Lot C would result in an unacceptable dwelling density and that it is not unreasonable or unnecessary to expect compliance with the development standard on that lot. By retaining the dwelling on Lot C as part of this DA, the applicant has also not proceeded to demonstrate how this lot may be able to achieve future compliance with the residential density desired under the SEPP.
- To address this issue, it is recommended that a deferred commencement condition be imposed for:
 - The demolition of the existing dwelling on proposed Lot C and;
 - An indicative subdivision plan demonstrating that proposed Lot C can be further subdivided to achieve compliance with the Minimum Density requirements under the SEPP.

It is worth noting, that proposed Lot C is likely to have the ability to be subdivided or developed in a way that would achieve the residential density requirement under the SEPP and can be resolved by way of deferred commencement provisions.

- Subject to conditions, the proposed development is considered to be consistent with the provisions of the relevant SEPPs, as previously demonstrated in this report, and the proposed subdivision pattern is consistent with the Indicative Layout Plan for precinct area, and as such is considered to be an orderly initial development of the site despite the variation request.

As a result of the assessment above, it is considered that subject to that recommended deferred commencement condition, compliance with the minimum lot size development standard is unreasonable and unnecessary.

- (ii) **That there are sufficient environmental planning grounds to justify contravening the development standard.**

Applicant Justification:

This Clause 4.6 justification confirms there are sufficient environmental planning grounds to justify contravening the development standard as there is capacity for compliance with the minimum residential density requirements as follows:

- *The development proposes the retention of 1 dwelling as existing within one of three proposed lots, however the proposed undeveloped area allows for future subdivision and dwellings that will comfortably achieve the 25 dwellings per hectare minimum. Refer to Figure 4 and Appendix A for confirmation.*
- *The remaining developable area is capable of accommodating a Residential Flat Building (Proposed Lot 2) containing 25-30 dwellings and an additional 18 lots. This equates to an indicative residential yield of 43-48 dwellings within the site which exceeds the Clause 4.1B control.*
- *Additionally, the lot containing the existing dwelling can be further subdivided in the longer-term or repurposed into a childcare centre with investigations and design progression currently underway for the latter.*
- *The siting and configuration of the dwelling on the existing allotment is capable of being contained on its own lot whilst enabling a future orderly and compliant subdivision over the remaining developable portion of the site (refer to submitted Subdivision Plans). The location of the dwelling will also enable the design and construction of future roads over the site which are consistent with the Indicative Layout Plan (ILP).*
- *The proposed development has been designed having regard to the future use of the land for residential purposes. This has been demonstrated by the Indicative Dwelling Layout Plan (refer Appendix A) for the remaining developable area outside of the existing dwelling footprint in proposed Lot 1.*

It has been established that the subject development does not compromise the site's ability to comply with the minimum residential density requirements for future development and it is considered that there are sufficient environmental planning grounds to justify contravening the development standard in this instance.

Council assessment:

Council considers there to be sufficient environmental planning grounds to justify contravening the development standard in this instance, for the following reasons:

- The development, subject to the deferred commencement condition, achieves the aims of the SEPP and Liverpool Growth Centre Precincts Development Control Plan, as it will facilitate varied residential lot sizes, which can accommodate different permitted developments at a future stage.
- The proposed development is focused on delivering the block level subdivision, and associated road network, in accordance with the Indicative Layout Plan for the Austral precinct. As the proposal is wholly consistent with the ILP, it is considered that the proposal does not reduce the ability for the site to meet future residential density targets once adequate infrastructure is available.
- The contravention of the development standard is unlikely to generate any adverse environmental impact in terms within the locality beyond what is envisaged under the SEPP.

(iii) **The proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives of the zoning**

Under Clause 4.6(4)(a)(ii) the consent authority must be satisfied the proposed development is in the public interest through demonstrating the development is consistent with the objectives of the standard and the zoning of the site.

Clause 4.6(4) prescribes:

“(4) Development consent must not be granted for development that contravenes a development standard unless—

(a) the consent authority is satisfied that—

(i) the applicant’s written request has adequately addressed the matters required to be demonstrated by subsection (3), and

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Planning Secretary has been obtained.”

Consistency with objectives of the Residential Density Development Standard

The objectives of the Residential Density Development Standard under the SEPP are as follows:

4.1B Residential density

(1) The objectives of this section are—

(a) to establish minimum density requirements for residential development, and

(b) to ensure that residential development makes efficient use of land and infrastructure, and contributes to the availability of new housing, and

(c) to ensure that the scale of residential development is compatible with the character of the precinct and adjoining land.

Applicant Justification:

The proposal is considered to satisfy the residential density objectives for the following reasons:

- The minimum density for residential development has been established at 25 dwellings per hectare on this site for the R3 zoning. Although, the proposed subdivision only involves 3 lots with the retention of one (1) existing dwelling, there is future capacity for an additional 18 lots (and subsequent dwellings) within proposed Lot 3 and an additional 25-30 dwellings in the Residential Flat Building indicatively proposed for Lot 2, as per the indicative subdivision layout plans attached.*
- As demonstrated on the indicative layout plans prepared by Mimar Building Design, the site has future capacity to reasonably accommodate 43-45 dwellings which will exceed the residential density requirement and will significantly contribute to the availability of new housing within Austral. The site will also have the capacity for*

infrastructure including new roads and services in accordance with the indicative layout plan for Austral and Leppington North precinct in the DCP.

- *The siting of the existing dwelling within one proposed lot enables a future orderly and compliant subdivision over the remainder of the site.*

Council assessment:

It is considered the proposed development would meet the objectives Development Standard 4.1B Residential Density, as listed below:

- The applicant has demonstrated through an indicative plan that Lots A and B are capable of accommodating future residential development which meets the minimum residential density objectives. Council recommends the DA be determined as a deferred commencement, requiring the applicant to demolish the dwelling on Lot C before any consent for the proposal can become operational, and to demonstrate, indicatively, how the lot will meet the dwelling density provisions.
- The retention of the existing dwelling onsite would not ensure that residential development is making efficient use of the land in a medium density zone or is compatible with the intended character of the precinct.
- The applicant has indicated a residential flat building and multi dwelling housing development as future uses of the proposed Lot A and Lot B, which would respond to a diverse range of housing needs in the locality.
- The development proposes the construction of the local road network in accordance with the Indicative Layout Plan. There are a number of internal surrounding roads which the future residential development will rely upon in terms of access, as temporary access from Fifteenth Avenue is granted, and will be removed once internal roads are constructed.

Consistency with objectives of the zone – R3 – Medium Density Residential

The objectives of the R3 Medium Density Residential Zone under the SEPP are as follows:

- *To provide for the housing needs of the community within a medium density residential environment.*
- *To provide a variety of housing types within a medium density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To support the well-being of the community by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a medium density residential environment.*

Applicant Justification:

Having regard for the current variation to density yield, the proposed development is considered to remain consistent with the zone objectives for the following reasons:

- *The proposed development will facilitate lots that can accommodate a range of housing including attached and detached dual occupancies, multi dwelling housing and a Residential Flat Building on Lot 2. This variety of housing types can provide for the diverse housing needs of the community.*

- *The design will also enable other services to be accommodated within the site, including a potential change of use that would allow the existing dwelling within proposed Lot 1 to function as a childcare centre.*

Council assessment:

The proposed development would meet the objectives of the R3 Medium Density Residential zone, as listed below:

- The proposed development, subject to the recommended deferred commencement conditions, meets the objectives of the zone as the proposed subdivision will enable future development of dwellings in a medium density residential environment and will enable the fulfilment of the housing needs of the community. The applicant has sufficiently demonstrated that an adequate supply of housing can be delivered in the future for Lot A and B, which will cater to diverse groups of residents.
- The proposed subdivision allows for other land uses that provide facilities or services to meet residents' daily needs. The site is located in close proximity to commercial zones, shopping centres, and public parks, ensuring residents have convenient access to a range of amenities.

(iv) Conclusion and Recommendation

As a result of the assessment above, and the recommended deferred commencement conditions, it is considered compliance with the minimum residential density development standard is unreasonable and unnecessary due to the circumstances of this application and that there are sufficient environmental planning grounds to justify contravening the development standard.

Accordingly, a degree of flexibility can be applied to the by the consent authority with regards to Clause 4.1B(3) of the SEPP.

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

The proposal has been assessed under the relevant provisions of SEPP (Resilience and Hazards) 2021, specifically Chapter 4 – Remediation of Land, as the proposal involves the development of land to accommodate a change of use with the potential under the former SEPP 55 guidelines to be a site that could be potentially contaminated.

The objectives of SEPP (Resilience and Hazards) 2021 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 SEPP, 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.

The site is identified as having a High Potential Contamination Risk within the Liverpool Growth Centres Precincts DCP, Schedule 1 – Austral and Leppington North Precinct.

A Stage 2 Detailed Site Investigation, prepared by Geotechnical Consultants Australia, dated 7 November 2022, has been submitted in support of the application. The DSI identified that asbestos contaminated fill material is located at the site, and therefore remediation of the land is required to make the site suitable for the development.

A Remediation Action Plan, prepared by Geotechnical Consultants Australia, dated 24 March 2023 recommended excavation and off-site disposal as the most appropriate remedial strategy for the site, and provides step by step guide which is required to be followed throughout the remedial works. An Environmental Management Plan was included within the RAP to provide guide the management of the remediation works for the development.

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	<p>The land is identified as having High Potential Contamination Risk within Schedule One – Austral and Leppington North Precinct.</p> <p>The Stage 1 Preliminary and Stage 2 Detailed Site Investigation submitted with the application concluded that asbestos contaminated fill is located at the site, and accordingly remedial works are required.</p>
(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	<p>The site requires remediation in order for the site to be suitable for future residential development. A Remedial Action Plan has been submitted with the application which details a step-by-step process to guide the remedial works.</p>

<p>(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.</p>	<p>Council is satisfied that following remedial works, the site will be suitable for future development. Conditions of consent will be imposed to ensure appropriate management strategies are followed throughout the remediation process</p>
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Based on the above assessment, the proposal is considered to satisfy the relevant objectives and provisions of Chapter 4 of the SEPP (Resilience and Hazards) 2021.

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

(Note: Chapters 7 – 12 of State Environmental Planning Policy (Biodiversity and Conservation) 2021 were repealed on 21 November 2022. However, the savings and transitional provisions in Part 6.6 of the SEPP (Biodiversity and Conservation) 2021 state these former repealed provisions of the SEPP continue to apply to a development application made, but not yet determined, before the date of the repeal.

Given that DA-259/2022 was lodged and not determined before the repeal date of 21 November 2022, the former Chapter 9 of the SEPP (Biodiversity and Conservation) 2021 applies to this DA.

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 Hawksbury River Catchment, Chapter 9 of the SEPP is applicable.

The proposed development involves the construction of a temporary on-site detention basin and connecting stormwater infrastructure.

The application was referred to Council’s Land Development Engineering Department who reviewed the stormwater management and drainage associated with the proposal. Land Development Engineering raises no objection to the proposed application, subject to conditions.

When a consent authority determines a development application, planning principles are to be applied. Accordingly, a table summarising the matters for consideration in determining development applications (Clause 9.4 and Clause 9.5), and compliance with such is provided below.

9.4 General Planning Considerations	Comment
(a) the aims of this Chapter,	This chapter aims generally to maintain and improve the water quality and river flows of the Hawkesbury-Nepean River and its tributaries.
(b) the strategies listed in the Action Plan of the Hawkesbury-Nepean Environmental Planning Strategy	The strategies are applied to this planning assessment in the table under Part 9.5.
(c) whether there are any feasible alternatives to the development or other proposal concerned	<p>The proposed development is consistent with the Indicative Layout Plan and the proposed drainage solutions are consistent with a number of similar developments within the Austral area.</p> <p>The proposed stormwater management system considers water quantity and water quality and is deemed satisfactory by Councils land development engineers. No alternatives are required to be considered.</p>
(d) the relationship between the different impacts of the development or other proposal and the environment, and how those impacts will be addressed and monitored	<p>The proposed development has been designed to reduce the likelihood of any adverse impacts on the environment or the Hawksbury-Nepean River Catchment.</p> <p>Council's Land Development engineers have reviewed the application and raise no objection, subject to appropriate conditions of consent.</p>
9.5 Specific Planning Policies and Recommended Strategies	Comment
(1) Total catchment management	Precinct Planning consideration through SEPP (Precincts – Western Sydney Parklands) 2021 has considered the impact of the residentially zoned land within the overall catchment.
(2) Environmentally sensitive areas	The site is not identified as an Environmentally Sensitive area.

(3) Water quality	<p>Stormwater management plans and erosion and sediment control details are submitted with the application.</p> <p>The proposed measures for managing the quality of stormwater discharge from the site is consistent with Council standards.</p> <p>The application has been referred to Council's land development engineers, who have supported the application subject to conditions of consent. Conditions will be imposed to with the aim to improve the quality of expected stormwater discharge from the site.</p>
(4) Water quantity	<p>Stormwater management plans are submitted with the application with measures for managing quantity of water discharge from the site consistent with Council standards.</p> <p>Council's land development engineers, and floodplain engineers have provided conditions of consent aimed to reduce the impact from the expected storm-water runoff and flow characteristics through the site, on down-stream aquatic ecosystems.</p>
(5) Cultural heritage	<p>The site is identified as a Moderate Archaeological Sensitivity Area within the Liverpool Growth Centre Precincts DCP.</p> <p>An Aboriginal Due Diligence Assessment has been submitted with the application, which determines the risk of uncovering Aboriginal Heritage Sites as being low.</p> <p>Best practice recommendations have been provided within the report, and Council's City Design Heritage have found the application to be satisfactory.</p>
(6) Flora and fauna	<p>The site is Biodiversity Certified under the <i>NSW Biodiversity Conservation Act</i>, allowing for the removal of vegetation to enable residential development. The site is cleared of most vegetation, remaining vegetation is not part of a wildlife corridor and not of high landscape value.</p>
(7) Riverine scenic quality	<p>Not applicable.</p>
(8) Agriculture/aquaculture and fishing	<p>Not applicable.</p>
(9) Rural residential development	<p>Not applicable.</p>

(10) Urban development	The site is zoned for residential purposes. The subdivision proposal provides variable lot sizes and is generally consistent with planning controls and guidelines for urban development including the controls for managing stormwater. The application has been referred to Council's land development engineers for assessment, who have supported the application, and provided conditions of consent to manage erosion and sediment erosion and improve the quality of expected stormwater discharge from the site.
(11) Recreation and tourism	Not applicable.
(12) Metropolitan strategy	The proposal is consistent with the Metropolitan Strategy by contributing to housing development in the Southwest Growth Centre.

It is considered the proposal satisfies the provisions of the SEPP (Biodiversity and Conservation) 2021 subject to appropriate sedimentation and erosion controls being implemented during construction. The proposal will have minimal impact on the Hawksbury River Catchment.

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

There are no draft Environmental Planning Instruments that apply to the site.

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

(a) Liverpool Growth Centre Precincts Development Control Plan 2021

The proposed development is subject to the Liverpool Growth Centre Precincts Development Control Plan 2021. The proposed subdivision has been assessed under the following Parts of the DCP:

- Part 2: Precinct Planning Outcomes
- Part 3: Neighbourhood and Subdivision Design

The proposal is considered to be consistent with the key controls outlined in the Liverpool Growth Centre Precincts Development Control Plan 2021. This assessment is provided within Attachment 3.

Overall, the proposal is considered to be consistent with the key controls outlined in the Liverpool Growth Centre Precincts DCP 2021.

6.4 Section 4.15(1)(a) (iia) – Planning Agreement or any 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

(a) 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.

(b) Built Environment

The retention of the existing dwelling on Lot C will inhibit future development of the lot which is not in line with the existing and future desired character of the area.

(c) Social Impacts and Economic Impacts

The proposed subdivision would result in a positive economic impact in the locality through the capital investment value of the development and is unlikely to generate any identifiable detrimental social impacts.

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

The site is considered to be suitable for the proposed development as it is zoned to permit the proposal, has a size and dimensions capable of accommodating future residential development, and has adequately satisfied the relevant environmental constraints.

6.8 Section 4.15(1)(d) - Any submissions made in accordance with the Act or Regulations.

(a) Internal Referrals

The following comments have been received from Council's Internal Departments:

DEPARTMENT	COMMENTS
Traffic	Supported, subject to conditions of consent
Environmental Health	Supported, subject to conditions of consent
Land Development Engineering	Supported, subject to conditions of consent
Flooding	Supported, subject to conditions of consent
City Presentation	Supported

Landscape	Supported
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(b) External Referrals

The following comments have been received from Council's Internal Departments:

EXTERNAL DEPARTMENT	COMMENTS
NSW Rural Fire Service	General Terms of Approval issued
Sydney Water	No objection subject to conditions
Endeavour Energy	No objection subject to conditions
TfNSW	<p>The application was referred to TfNSW under Clause 2.119 (Development with frontage to a classified Road).</p> <p>TfNSW has advised temporary access is only granted from Fifteenth Avenue, no permanent access is granted due to Fifteenth Avenue being converted into a major arterial road. The subdivision will need to rely on internal roads for permanent road access.</p> <p>In this regard, the applicant has provided temporary access, and this will be conditioned in line with TfNSW recommendation.</p>

(c) Community Consultation

The proposal was not required to be notified, in accordance with the Liverpool Community Participation Plan 2019. Notwithstanding, no submission have been received.

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

Approval of the proposed development is considered to be in the public interest. The development is consistent with the objectives of the R3 Medium Density Residential zones and may be conditioned to ensure full compliance with the provisions of the Liverpool Local Environmental Plan 2008 and Liverpool Development Control Plan 2008.

7. DEVELOPMENT CONTRIBUTIONS

Although Section 7.11 Development Contributions are applicable to the proposed development in accordance with the Liverpool Contributions Plan 2014 (Austral and Leppington North). As this development is for residue super lots to facilitate future residential development, Council's Contributions Accountant has confirmed that contributions will be levied as part of future development/s for residential purposes. Restrictions will apply to the super lots to ensure that future development includes the payment of 7.11 contributions. 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 Growth Centre Precincts DCP 2021, and the relevant codes and policies of Council.

This assessment has taken into consideration the submitted plans, Statement of Environmental Effects, all other documentation supporting the application and public submissions, and does not result in any unreasonable impacts on surrounding, adjoining, adjacent and nearby properties subject to the conditions contained within the recommendation.

Based on the assessment of the application, it is recommended the application be approved subject to the imposition of deferred commencement conditions.

9. RECOMMENDATION

That Development Application DA-259/2022 seeking approval for 3 Lot Torrens title subdivision with site remediation, tree removal, construction of roads and associated civil works, be approved subject to the deferred commencement conditions outlined within Attachment 4.

ATTACHMENTS

1. Attachment 1- Clause 4.6 Report
2. Attachment 2- Indicative Building Envelopes
3. Attachment 3 – Liverpool Growth Centres DCP
4. Attachment 4 - Draft Notice of Determination
5. Attachment 5 - Subdivision Plan
6. Attachment 6 - Civil Engineering Plans



Chris Mustafa

Clause 4.6 Variation – Residential Density

Proposed Three Lot Subdivision

430 Fifteenth Avenue, Austral

June 2023

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Project No.	210613
Author	BM
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Approved	BM

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1	Draft	15.06.2023	For review
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Table of Contents

1	Introduction.....	5
1.1	Location of Property	5
1.2	Proposed Development.....	6
1.2.1	Subdivision	6
1.3	Summary of Planning Instrument and Development Standard to be Varied	8
1.4	Nature of the Contravention.....	9
2	Clause 4.6 Assessment.....	10
2.1	Overview of Clause 4.6 Exceptions to development standards.....	10
2.2	Is compliance with the development standard unreasonable or unnecessary in the circumstances of the case?	12
2.2.1	Is a development which complies with the standard unreasonable or unnecessary in the circumstances of the case?.....	12
2.2.2	Is the underlying objective or purpose not relevant to the development with the consequence that compliance is unnecessary?	13
2.2.3	Would the underlying objective or purpose be defeated or thwarted if compliance was required?	13
2.2.4	Has the development standard been virtually abandoned or destroyed by Council's own actions departing from the standard?	13
2.2.5	Is the zoning of the land unreasonable or inappropriate?	13
2.3	Are there sufficient environmental planning grounds to justify contravening the development standard?	14
2.4	Is the proposed development in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out?	15
2.4.1	What are the Objectives of the Development Standard?	15
2.4.2	Objectives of the Zone	15
2.4.3	Objectives / Aims of the LEP.....	16
2.4.4	Whether contravention of the development standard raises any matter of significance for State or regional environmental planning?.....	16
2.4.5	Would the contravention raise any significant matter or hinder the attainment of the objects of the Act?.....	16
2.4.6	Is there public benefit in maintaining the development standard?	17
2.5	Is the objection well founded?.....	17
3	Conclusion	18

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List of Figures

Figure 1: Aerial Photo of Site (Nearmap Pty Ltd 2022)	5
Figure 2: Extract from Proposed Subdivision Plan	6
Figure 3: Extract from Proposed Subdivision Plan	7
Figure 4: Extract from Plan identifying indicative future layout	7
Figure 5: Residential Density Map extract (Source: SEPP)	8

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1 Introduction

This report has been prepared for Chris Mustafa to accompany a Development Application submitted to Council for the proposed three lot subdivision of the site including new roads and drainage.

In accordance with Clause 4.1B of the State Environmental Planning Policy (Precincts – Western Parkland City) 2021, a contravention of the residential density control is proposed.

This Clause 4.6 submission should be read in conjunction with the Statement of Environmental Effects prepared by Barker Ryan Stewart and the plans designed by Mimar Building Design.

1.1 Location of Property

The real property description is Lot 415 DP 2475 located at 430 Fifteenth Avenue, Austral.

The rectangular shaped site consists of former large lot residential land. Site topography generally falls towards the west to north-west, and also to the south-west with vegetation contained within the south east corner of the site as shown in Figure 1.

Total lot size area is 1.214ha.



Figure 1: Aerial Photo of Site (Nearmap Pty Ltd 2022)

220613 – 430 Fifteenth Avenue

Clause 4.6 Variation Report

1.2 Proposed Development

The proposed development involves the subdivision of Lot 415 DP 2475 to create three (3) Super Lots and associated road construction in accordance with the Indicative Layout Plan. These lots will accommodate larger development or be the subject of further subdivision to achieve minimum dwelling yields.

1.2.1 Subdivision

Proposed lots 1 – 3 will range from 1,804.5m² – 4,419.0m² in size as shown in Table 1.

An existing dwelling will be retained on Lot 1 until the time that further residential subdivision is proposed within Lots 1-3.

Table 1: Proposed Subdivision Indices

Lot Number	Size
Lot 1	1,804.5m ²
Lot 2	1,993.9m ²
Lot 3	4,419.0m ²

Extracts from the proposed Subdivision Plan is provided at Figures 3 and 4.

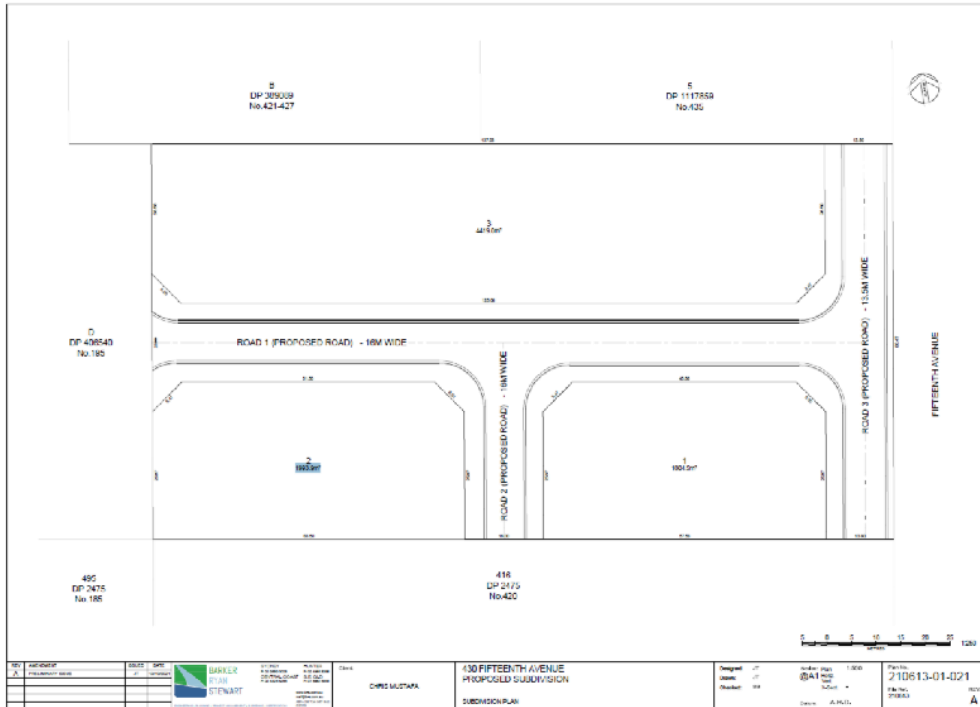


Figure 2: Extract from Proposed Subdivision Plan

220613 – 430 Fifteenth Avenue

Clause 4.6 Variation Report



Figure 3: Extract from Proposed Subdivision Plan

An Indicative Building Envelopes Plan identifying potential dwelling yield has been prepared and reproduced in Figure 4 below.



Figure 4: Extract from Plan identifying indicative future layout

1.3 Summary of Planning Instrument and Development Standard to be Varied

The development standard to be varied is Clause 4.1B (3) – Residential Density under Appendix 4 of the State Environmental Planning Policy (Precincts – Western Parkland City) 2021.

Clause 4.1B has been reproduced below as well as an extract from the Residential Density Map in Figure 5, outlining the site in red.

4.1B Residential density

- (1) The objectives of this section are—
- to establish minimum density requirements for residential development, and
 - to ensure that residential development makes efficient use of land and infrastructure, and contributes to the availability of new housing, and
 - to ensure that the scale of residential development is compatible with the character of the precinct and adjoining land.
- (2) This section applies to residential development of the kind referred to in section 4.1AB or 4.1AC that—
- is carried out on land to which this Precinct Plan applies that is shown on the [Residential Density Map](#), and
 - requires development consent, and
 - is carried out after the commencement of this Precinct Plan.
- (3) The density of any residential development to which this section applies is not to be less than the density shown on the [Residential Density Map](#) in relation to that land.
- (4) In this section—

density means the net developable area in hectares of the land on which the development is situated divided by the number of dwellings proposed to be located on that land.

net developable area means the land occupied by the development, including internal streets, but excluding land that is not zoned for residential purposes.

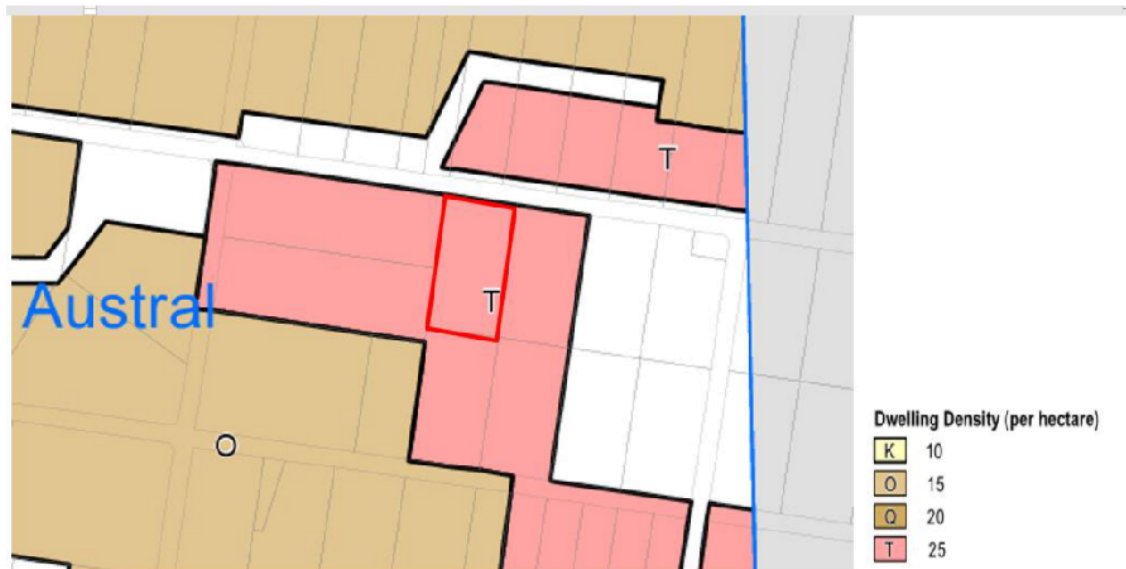


Figure 5: Residential Density Map extract (Source: SEPP)

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report**

EPI applicable	State Environmental Planning Policy (Precincts – Western Parkland City) 2021
Land Use Zoning:	Zone R3 Medium Density Residential
Development Standard to which the Objection Relates:	Residential Density under Clause 4.1B (Appendix 4)
Numeric Value of the Development Standard:	The SEPP identifies a minimum yield of 25 dwellings per hectare as per Figure 5.
Variation proposed:	As the site area is 1.22 hectares, the minimum yield from the site is required to be 30.5 dwellings. The development proposal retains one existing dwelling within three proposed super lots.

1.4 Nature of the Contravention

Clause 4.1B of the SEPP establishes minimum density requirements for residential development. Minimum residential density for the subject site is identified as 'T' - 25 dwellings per hectare as shown in Figure 5 above.

As the site area is 1.22 hectares, the minimum yield from the site is required to be 30.5 dwellings. The subdivision plan highlights a proposed 3 super lots designed to accommodate road construction in accordance with the Indicative Layout Plan. The larger lot is likely to accommodate further subdivision for multi dwelling housing (4,419.0m²) and the two smaller lots are likely to accommodate one Residential Flat Building and either smaller single dwelling lots or a child care centre. Refer to the Indicative Building Envelopes Plan provided in Appendix A and Figure 4 above which confirms the ability of the site to comfortably address the minimum density yield applicable in the SEPP.

This application has been prepared in accordance with the NSW Department of Planning guidelines and has incorporated relevant principles identified in the following NSW Land and Environment Court decisions:

- Winten Property Group Limited v North Sydney Council [2001] NSWLEC 46
- Wehbe v Pittwater Council [2007] NSWLEC 827
- Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 1009
- Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 90
- Four2Five Pty Ltd v Ashfield Council [2015] NSWCA 248
- Moskovich v Waverley Council [2016] NSWLEC 1015
- Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118
- Rebel/MH Neutral Bay Pty Ltd v North Sydney Council [2019] NSWCA 130
- SJD DB2 Pty Ltd v Woollahra Municipal Council [2020] NSWLEC 1112

2 Clause 4.6 Assessment

2.1 Overview of Clause 4.6 Exceptions to development standards

Clause 4.6(1) and (2) of State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Appendix 4 – Liverpool Growth Centres Precinct Plan) state:

- (1) *The objectives of this clause 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.*
- (2) *Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.*

Clause 4.6 requires that a consent authority be satisfied of three matters before granting consent to a development that contravenes a development standard (see *Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118, *RebelMH Neutral Bay Pty Limited v North Sydney Council* [2019] NSWCA 130, *Al Maha Pty Ltd v Huajun Investments Pty Ltd* (2018) 233 LGERA 170; [2018] NSWCA 245) at [23] and *Baron Corporation Pty Limited v Council of the City of Sydney* [2019] NSWLEC 61 at [76]-[80] and *SJD DB2 Pty Ltd v Woollahra Municipal Council* [2020] NSWLEC 1112 at [31]:

1. That the applicant has adequately demonstrated that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case [clause 4.6(3)(a)];
2. That the applicant has adequately demonstrated that there are sufficient environmental planning grounds to justify contravening the development standard [clause 4.6(3)(b)]; and
3. That the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out [clause 4.6(4)].

The decision of Chief Justice Preston in *Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118 (“Initial Action”) provides guidance in respect of the operation of clause 4.6 subject to the clarification by the NSW Court of Appeal in *Rebel MH Neutral Bay Pty Limited v North Sydney Council* [2019] NSWCA 130 at [1], [4] & [51] where the Court confirmed that properly construed, a consent authority has to be directly satisfied that an applicant’s written request has in fact demonstrated the matters required to be demonstrated by cl 4.6(3).

Initial Action involved an appeal pursuant to section 56A of the Land & Environment Court Act 1979 against the decision of a Commissioner.

In *Initial Action* Chief Justice Preston considered the proper interpretation of clause 4.6 and found that:

- Clause 4.6 does not require a proponent to show that the non-compliant development would have a neutral or beneficial test relative to a compliant development (at [87]);
- There is no requirement for a clause 4.6 request to show that the proposed development would have a ‘better environmental planning outcome for the site’ relative to a development that complies with the standard (at [88]); and
- One way of demonstrating consistency with the objectives of a development standard is to show a lack of adverse amenity impacts (at [95(c)]). That is, the absence of environmental harm is sufficient to show that compliance with the development standard is unreasonable or unnecessary.

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report**

This request also addresses the requirement for the concurrence of the Secretary as required by clause 4.6(4)(b).

The development standard in clause 4.2B of the SEPP is not excluded from the operation of clause 4.6 for this site by clause 4.6(8).

This submission to the residential density development standard addresses sequentially each of the following sub-clauses:

- (3) 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.*

- (4) Development consent must not be granted for development that contravenes a development standard unless—*
 - (a) the consent authority is satisfied that—*
 - (i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and*
 - (ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and*
 - (b) the concurrence of the Planning Secretary has been obtained.*

- (5) In deciding whether to grant concurrence, the Planning Secretary must consider—*
 - (a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
 - (b) the public benefit of maintaining the development standard, and*
 - (c) any other matters required to be taken into consideration by the Planning Secretary before granting concurrence.*

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report****2.2 Is compliance with the development standard unreasonable or unnecessary in the circumstances of the case?**

As found by Chief Justice Preston in *Initial Action*, compliance with the development standard will prima facie be unnecessary if it can be shown that there is an absence of environmental harm or adverse amenity impacts for the proposed development.

The Court has 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). It is important to note that:

- The requirement is to demonstrate that compliance is unreasonable **or** unnecessary. It does not need to be shown that compliance is both unreasonable and unnecessary;
- *Wehbe* identifies five ways of demonstrating that compliance is unreasonable or unnecessary, but the Courts have held that this list is not exhaustive (*Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118 at [22])

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;
2. The underlying objective or purpose is not relevant to the development with the consequence that compliance is unnecessary;
3. The objective would be defeated, thwarted or undermined (*Linfield Developments Pty Ltd v Cumberland Council* [2019] NSWLEC 131 at [24]) if compliance was required with the consequence that compliance is unreasonable;
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; and
5. The zoning of the land is unreasonable or inappropriate.

Note the Court confirmed **it is sufficient to satisfy only one (1) of the five tests** in order 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].

The proposed development is supported on grounds that the objectives of the development standard are achieved notwithstanding non-compliance with the standard. In this case, as outlined below, it is demonstrated that Test 1 and 3 have been met to varying degrees, with further assessment provided in Sections 2.2.1- 2.2.5 of this report.

2.2.1 Is a development which complies with the standard unreasonable or unnecessary in the circumstances of the case?

The proposed subdivision will facilitate the provision of super lots that can accommodate development as shown in the Indicative Building Envelopes Plan in Figure 4. This indicative dwelling layout would exceed the minimum dwelling yield prescribed in Clause 4.1B. The site will also have the capacity for infrastructure including new roads and services in accordance with the indicative layout plan for Austral and Leppington North precinct in the DCP.

Given new subdivisions are reliant on the roll out of mains sewer infrastructure to this part of the release area that has not yet been achieved, it is unreasonable for the proponent to be forced in to developing a larger lot subdivision where it has been demonstrated that future subdivision of the land is capable of complying with the density standard.

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report**

Strict compliance with the development standard is considered unnecessary in the circumstances of this proposal given the mains sewer infrastructure is not currently in place and the Indicative Dwelling Layout Plan confirms the residential density control is readily achievable for this site.

2.2.2 Is the underlying objective or purpose not relevant to the development with the consequence that compliance is unnecessary?

The underlying objectives of Clause 4.1B seek to ensure that residential development makes efficient use of land and infrastructure and contributes to the availability of new housing.

The objective is therefore relevant to the development.

2.2.3 Would the underlying objective or purpose be defeated or thwarted if compliance was required?

The underlying objective of Clause 4.1B is to ensure that residential development makes efficient use of land and infrastructure.

The Indicative Dwelling Layout Plan in Figure 4 identifies compliance with and exceedance of the development control requiring a density of 25 dwellings per hectare on this site.

The purpose or underlying objective of the control is not defeated through provision of three super lots nor would it be defeated if compliance was required.

2.2.4 Has the development standard been virtually abandoned or destroyed by Council's own actions departing from the standard?

The Local Planning Panel approved DA-199/2021 at 250 Fourteenth Avenue, Austral that included significant non-compliance with the residential density control in Clause 4.1B of the SEPP. The SEPP control required the site to accommodate fifteen (15) dwellings and the DA approved one (1) dwelling.

Note an indicative lot layout plan identifying capability for future residential density was considered within DA199/2021, consistent with the Plan for the subject site provided in Appendix A and reproduced in Figure 4.

2.2.5 Is the zoning of the land unreasonable or inappropriate?

The R3 zoning of the site is not inherently unreasonable or inappropriate, however it should be acknowledged that sewer infrastructure servicing is not yet in place to adequately accommodate significant medium density residential development of the R3 site or surrounding allotments.

2.3 Are there sufficient environmental planning grounds to justify contravening the development standard?

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 *Initial Action* the Court also confirmed that it is not necessary to show that there would be a better environmental planning outcome – this is not the test.

In *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 90, Pain 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, and whether they are 'sufficient'.

This Clause 4.6 justification confirms there are sufficient environmental planning grounds to justify contravening the development standard as there is capacity for compliance with the minimum residential density requirements as follows:

- The development proposes the retention of 1 dwelling as existing within one of three proposed lots, however the proposed undeveloped area allows for future subdivision and dwellings that will comfortably achieve the 25 dwellings per hectare minimum. Refer to Figure 4 and Appendix A for confirmation.
- The remaining developable area is capable of accommodating a Residential Flat Building (Proposed Lot 2) containing 25-30 dwellings and an additional 18 lots. This equates to an indicative residential yield of 43-48 dwellings within the site which exceeds the Clause 4.1B control.
- Additionally, the lot containing the existing dwelling can be further subdivided in the longer-term or repurposed into a child care centre with investigations and design progression currently underway for the latter.
- The siting and configuration of the dwelling on the existing allotment is capable of being contained on its own lot whilst enabling a future orderly and compliant subdivision over the remaining developable portion of the site (refer to submitted Subdivision Plans). The location of the dwelling will also enable the design and construction of future roads over the site which are consistent with the Indicative Layout Plan (ILP).
- The proposed development has been designed having regard to the future use of the land for residential purposes. This has been demonstrated by the Indicative Dwelling Layout Plan (refer Appendix A) for the remaining developable area outside of the existing dwelling footprint in proposed Lot 1.

It has been established that the subject development does not compromise the site's ability to comply with the minimum residential density requirements for future development and it is considered that there are sufficient environmental planning grounds to justify contravening the development standard in this instance.

2.4 Is the proposed development in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out?

2.4.1 What are the Objectives of the Development Standard?

The objectives of Clause 4.1B under the SEPP are:

- (a) to establish minimum density requirements for residential development, and*
- (b) to ensure that residential development makes efficient use of land and infrastructure, and contributes to the availability of new housing, and*
- (c) to ensure that the scale of residential development is compatible with the character of the precinct and adjoining land.*

The proposal is considered to satisfy the height objectives for the following reasons:

- The minimum density for residential development has been established at 25 dwellings per hectare on this site for the R3 zoning. Although, the proposed subdivision only involves 3 lots with the retention of one (1) existing dwelling, there is future capacity for an additional 18 lots (and subsequent dwellings) within proposed Lot 3 and an additional 25-30 dwellings in the Residential Flat Building indicatively proposed for Lot 2, as per the indicative subdivision layout plans attached.
- As demonstrated on the indicative layout plans prepared by Mimar Building Design, the site has future capacity to reasonably accommodate 43-45 dwellings which will exceed the residential density requirement and will significantly contribute to the availability of new housing within Austral. The site will also have the capacity for infrastructure including new roads and services in accordance with the indicative layout plan for Austral and Leppington North precinct in the DCP.
- The siting of the existing dwelling within one proposed lot enables a future orderly and compliant subdivision over the remainder of the site.

2.4.2 Objectives of the Zone

Under the provisions of the SEPP, the site is zoned R3 Medium Density Residential. The R3 zone objectives are as follows:

- *To provide for the housing needs of the community within a medium density residential environment.*
- *To provide a variety of housing types within a medium density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To support the well-being of the community by enabling educational, recreational, community, religious and other activities where compatible with the amenity of a medium density residential environment.*

Having regard for the current variation to density yield, the proposed development is considered to remain consistent with the zone objectives for the following reasons:

- The proposed development will facilitate lots that can accommodate a range of housing including attached and detached dual occupancies, multi dwelling housing and a Residential Flat Building on Lot 2. This variety of housing types can provide for the diverse housing needs of the community.
- The design will also enable other services to be accommodated within the site, including a potential change of use that would allow the existing dwelling within proposed Lot 1 to function as a child care centre.

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report****2.4.3 Objectives / Aims of the LEP**

The aims of the Liverpool Growth Centres Precinct Plan (SEPP) are:

- (a) to make development controls that will ensure the creation of quality environments and good design outcomes,*
- (b) to protect and enhance environmentally sensitive natural areas and cultural heritage,*
- (c) to provide for recreational opportunities,*
- (d) to provide for multifunctional and innovative development that encourages employment and economic growth,*
- (e) to promote housing choice and affordability,*
- (f) to provide for sustainable development,*
- (g) to promote pedestrian and vehicle connectivity.*

The proposed development, inclusive of non-compliance with the residential density control, is considered to be consistent with the relevant aims of Appendix 4 of the SEPP, for the following reasons:

- The proposed development will contribute to and promote the use of land for residential and other development.
- The development will maintain and enhance the existing amenity and quality of life of the local community by providing super lots that will accommodate future residential subdivision when mains sewer servicing is completed.
- The proposed development promotes bicycle use through the provision of a road and pathway network in accordance with the ILP.
- The development will promote future housing choice as per the indicative layout provided in Appendix A and Figure 5.
- The proposal is consistent with the requirements for ecologically sustainable development and can incorporate sustainable transport initiatives with lots designed to facilitate future natural lighting and ventilation.

2.4.4 Whether contravention of the development standard raises any matter of significance for State or regional environmental planning?

The proposed variation to the residential yield has been justified in relation to the environmental planning considerations in Section 2.3 and the development will not raise any matters of State or regional environmental planning significance.

2.4.5 Would the contravention raise any significant matter or hinder the attainment of the objects of the Act?

The objects of the Act are as follows:

- (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
- (c) to promote the orderly and economic use and development of land,*
- (d) to promote the delivery and maintenance of affordable housing,*
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*

220613 – 430 Fifteenth Avenue**Clause 4.6 Variation Report**

- (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*
- (g) to promote good design and amenity of the built environment,*
- (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,*
- (j) to provide increased opportunity for community participation in environmental planning and assessment.*

The proposed variation is consistent with a number of objects including:

- Promotion of the orderly and economic use and development of land is to be achieved through provision of future residential development, providing for the housing needs of the existing and future populations in the region; and
- Promotion of orderly subdivision design that can facilitate amenity of the built environment through future architectural responses to the site.

2.4.6 Is there public benefit in maintaining the development standard?

No. For the reasons outlined above, the proposal is considered to be designed with consideration of the site location and existing sewer servicing constraints and the development, as proposed, will not generate any adverse impacts on surrounding development, public spaces or the environment.

2.5 Is the objection well founded?

The objection to the contravention of the development standard has identified that the proposed the development does not compromise the site's ability to comply with the minimum residential density requirements for future development. It is therefore considered that there are sufficient environmental planning grounds to justify contravening the development standard in this instance

Accordingly, this objection is considered to be well founded and should be supported.

3 Conclusion

Strict compliance with the development standard is considered to be unnecessary in the circumstances of the proposed development given the Indicative Building Envelopes Plan identifying future indicative dwelling design confirms the density requirements can be readily achieved once sewer infrastructure servicing for the locality is completed.

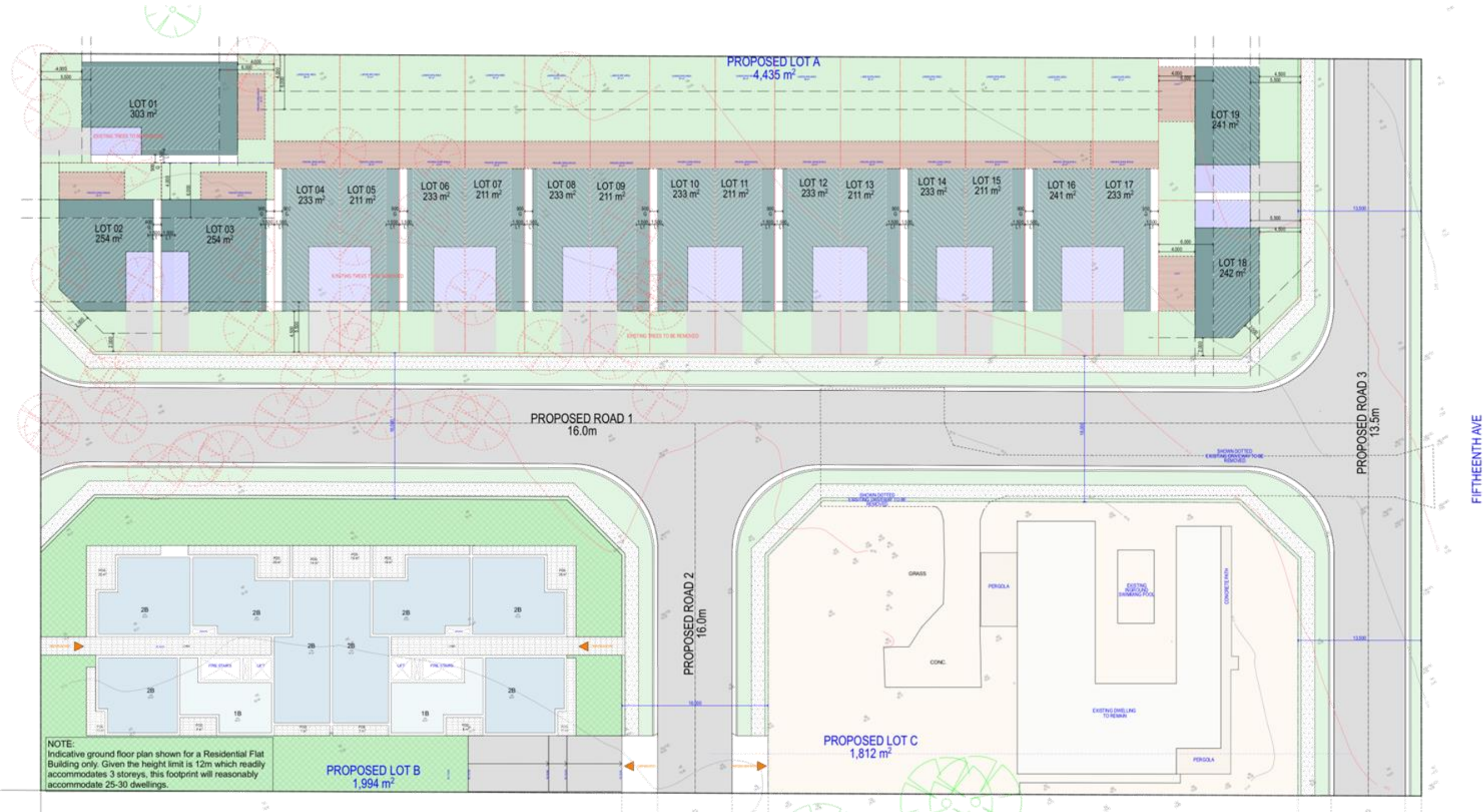
The siting and configuration of the dwelling on the existing allotment is capable of being contained on its own lot whilst enabling a future orderly and compliant subdivision over the remaining developable portion of the site (refer to submitted Subdivision Plans). The location of the dwelling will also enable the design and construction of future roads over the site which are consistent with the Indicative Layout Plan (ILP).

Based on the above it can be determined that the proposal complies with the objectives of the building Clause 4.1B provisions, specific zone objectives as well as the general objectives of the SEPP and Environmental Planning and Assessment Act 1979.

The consent authority can be assured that contravention of the residential density control will not result in any unreasonable environmental planning impacts and the request for variation to the control is therefore considered to be in the public interest.

Appendix A – Indicative Building Envelopes Plan

CONTRACTOR TO CONFIRM ALL UNDERGROUND SERVICES BEFORE COMMENCING WORKS REGARDLESS OF INFORMATION PROVIDED HEREIN



NOTE:
Indicative ground floor plan shown for a Residential Flat Building only. Given the height limit is 12m which readily accommodates 3 storeys, this footprint will reasonably accommodate 25-30 dwellings.

GROUND (BUILDING ENVELOPES)
SCALE 1:200

PRIMARY BUILDING	GARAGE LOCATION	1B 1 BEDROOM UNIT	LANDSCAPE AREA (RFB)
2ND STOREY LOCATION	LANDSCAPE AREA (MULTI-DWELLING)	2B 2 BEDROOM UNIT	
PRINCIPAL PRIVATE OPEN SPACE	DRIVEWAY LOCATION	PRIVATE OPEN SPACE	



BUILDING DESIGNER
BDA REGISTRATION: 6583
info@mimar.com.au
Ph: 0424 260 560
PO Box 420 Moorebank 1875

Project
PROPOSED NEW SUBDIVISION
430 Fifteenth Ave Austral NSW

Rev	Description	Drawn by	Date
A	INDICATIVE BUILDING ENVELOPES	FB	9/6/2023

Prepared For:
M & G Mustafa

Drawing Title
INDICATIVE BUILDING ENVELOPES

Scale
1:200
@A1 Sheet Size

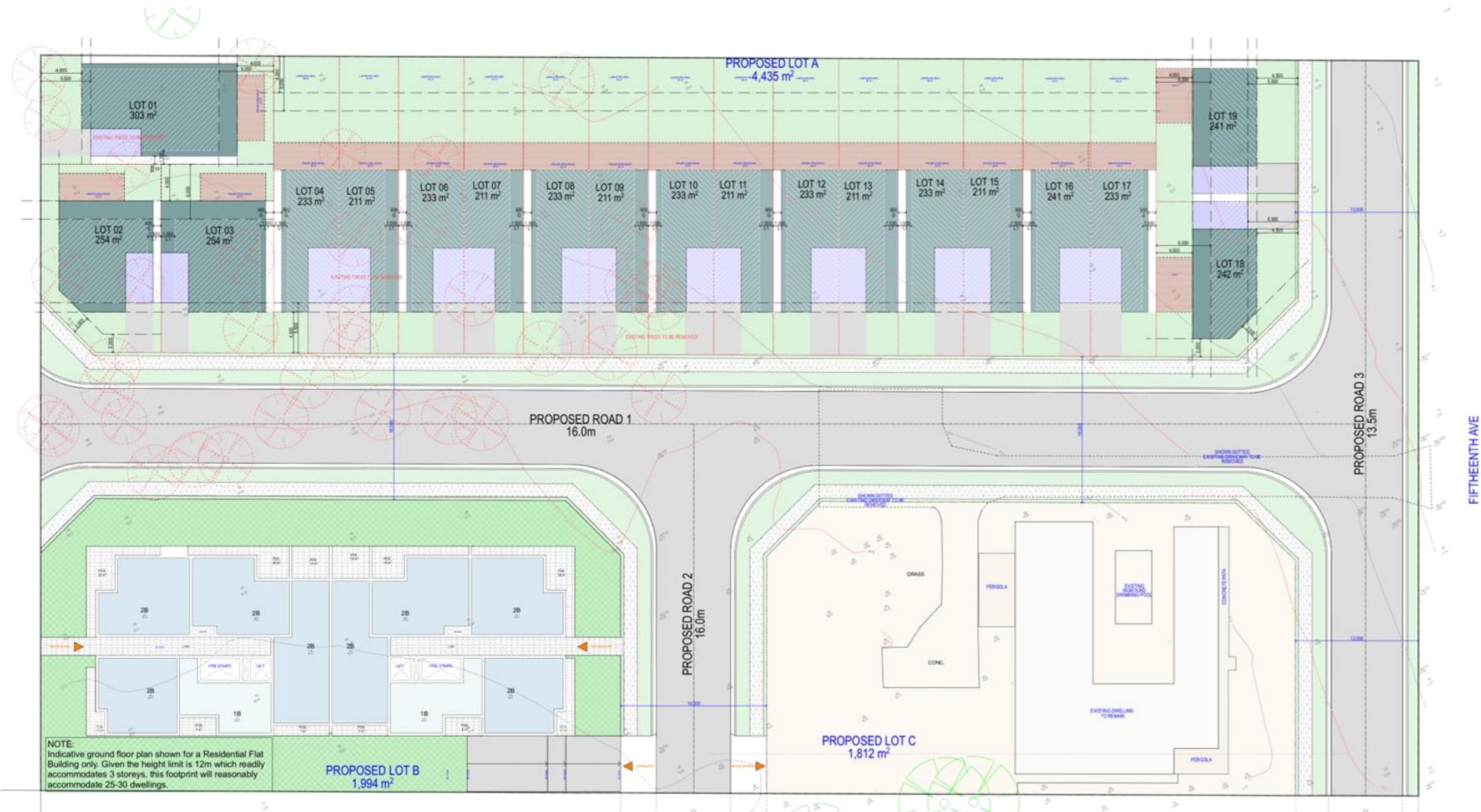
Project Number
2021-042

Drawing Number
DA-1002

Revision
A



CONTRACTOR TO CONFIRM ALL UNDERGROUND SERVICES BEFORE COMMENCING WORKS REGARDLESS OF INFORMATION PROVIDED HEREIN



NOTE:
Indicative ground floor plan shown for a Residential Flat Building only. Given the height limit is 12m which readily accommodates 3 storeys, this footprint will reasonably accommodate 25-30 dwellings.

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PRIMARY BUILDING	GARAGE LOCATION	1B 1 BEDROOM UNIT	LANDSCAPE AREA (RFB)
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Project
PROPOSED NEW SUBDIVISION
430 Fifteenth Ave Austral NSW

Rev	Description	Drawn by	Date
A	INDICATIVE BUILDING ENVELOPES	FB	9/6/2023

Prepared For: M & G Mustafa
Drawing Title: **INDICATIVE BUILDING ENVELOPES**

Scale: 1:200
@A1 Sheet Size

Project Number: 2021-042
Drawing Number: DA-1002
Revision: A



Liverpool Growth Centre Precincts Development Control Plan 2021

Part 2 Precinct Planning Outcomes			
Development Control	Provision	Comment	Compliance
2.2 The Indicative Layout Plan (ILP)	All development applications are to be generally in accordance with the Indicative Layout Plan.	The proposed subdivision and road layout is in accordance with the ILP.	Complies
2.3.1 Flooding	This section controls relating to development on flood prone land	The site is not identified to be affected by stormwater of overland flooding. The application was reviewed by Council's floodplain engineer, as the site is located within a tributary of Kemps Creek. The referral found the application to be supportable subject to conditions.	N/A
2.3.2 Water Cycle Management	This section contains controls relating to stormwater management.	The stormwater plans have been reviewed by Council's Land Development engineers, and Floodplain engineers, who have determined the application to be supportable, subject to conditions	Complies by condition
2.3.3 Salinity and Soil Management	This section contains controls relating to salinity and soil management.	<p>The site is identified as having medium to high potential salinity risk within the Liverpool Growth Centre Precinct DCP.</p> <p>A Soil Salinity Investigation Report prepared by Geotechnical Consultants Australia, dated 4th October 2022, has been submitted with the application. The investigation found the soils on the site to be generally slightly to moderately saline.</p> <p>The investigation recommends a post earthworks salinity assessment to be undertaken, which will be incorporated into</p>	Complies

Part 2 Precinct Planning Outcomes			
Development Control	Provision	Comment	Compliance
		the conditions of the consent.	
2.3.4 Aboriginal and European Heritage	This section contains controls relating to the management of Aboriginal heritage values and to ensure areas identified as European cultural heritage sites or archaeological sites are managed.	<p>No State or Local heritage items are located on, or within, the vicinity of the site.</p> <p>Part of the site is identified as a Moderate Archaeological Sensitivity Area on the Aboriginal Cultural Heritage Sites map contained in Schedule 1 of the DCP.</p> <p>The application is supported by an Aboriginal Due Diligence Report, which concludes that there is low potential that the site contains any heritage items or artefacts.</p> <p>The report recommends that general measures and unexpected finds protocols should be adopted throughout the development.</p> <p>Council's heritage team have reviewed the proposal and raise no objection, subject to conditions.</p>	Complies by condition
2.3.5 Native Vegetation and Ecology	This section contains controls relating to the conservation and rehabilitation of native vegetation.	<p>37 Trees are located at the site, largely clustered in the southern west portion of the site.</p> <p>An Arborist report has been submitted which states that 37 trees are to be removed, including 3 which are already dead.</p>	Complies

Part 2 Precinct Planning Outcomes			
Development Control	Provision	Comment	Compliance
		The removal of vegetation to facilitate residential development is considered acceptable as the site is located within a Biodiversity Certified area	
2.3.6 Bushfire Hazard Management	This section contains controls relating to development on bushfire prone land.	<p>The site is identified as bushfire prone land, with the majority of the lot categorised as Vegetation Category 3 and Vegetation buffer.</p> <p>The application is supported by a Bushfire Assessment Report, and NSW Rural Fire Service have provided their General Terms of Approval for the development</p>	Complies
2.3.7 Site Contamination	This section contains controls relating to development on potentially contaminated land.	<p>The land is identified as having High Potential Contamination Risk within Schedule One – Austral and Leppington North Precinct.</p> <p>The application is supported by a Stage 1 Preliminary, and Stage 2 Detailed Site Investigation Report, which concludes that remedial works are required to make the site suitable for the development.</p> <p>The Remedial Action Plan details step by step recommendations to undertake and manage the remediation process.</p> <p>The application was referred to Council's Environment Health</p>	Complies

Part 2 Precinct Planning Outcomes			
Development Control	Provision	Comment	Compliance
		<p>Officers, who are supportive of the application, subject to conditions.</p> <p>The consent authority is satisfied that the site can be made suitable for residential development.</p>	
2.3.8 Development on and adjacent to electricity and gas easements	This section contains controls relating to development on and adjacent to electricity and gas easements.	No electricity or gas easements are identified on site.	Complies
2.3.9 Noise	This section contains controls relating to ensuring acoustic privacy is achieved for future residential development.	<p>The site has an existing frontage to Fifteenth Avenue and is therefore identified as being impacted by road noise within Schedule 1 – Austral and Leppington North Precinct.</p> <p>An internal referral to Councils Environmental Health Department has requested that an acoustic report, which considers the impact of road noise to the site, and required noise attenuation measures, is required to be included in the conditions of the consent.</p>	Complies
2.3.10 Odour Assessment and Control	This section relates to land deemed by Council to be affected by an odour source.	The site is not identified as affected by odour	N/A
2.3.11	This section contains controls relating to preserving air quality in relation to	The DA is for subdivision of residential zoned land and does not propose industrial or employment development.	N/A

Part 2 Precinct Planning Outcomes			
Development Control	Provision	Comment	Compliance
Air Quality	industrial and/or employment development		
2.4 Demolition	This section contains controls relating to demolition of buildings	Demolition of the existing hardstand area is proposed to facilitate the construction of roads in accordance of the ILP. Conditions of consent will imposed to ensure appropriate measures are undertaken throughout the demolition process	Complies by condition
2.5 Crime Prevention Through Environmental Design	This section contains controls relating to the principles of CPTED.	The proposed development is consistent with the DCP controls and guidelines for a safe and secure neighbourhood and the principles of CPTED. The subdivision layout has been designed to allow for future dwellings to provide casual surveillance by overlooking streets.	Complies
2.6 Earthworks & Dam De-watering	This section contains controls relating to earthworks	The proposed development requires earthworks in order to make the site suitable for residential development. The application was referred to Council's Land Development Engineers, who raised no issues to the earthworks, subject to conditions.	Complies

Part 3 Neighbourhood and Subdivision Design															
Development Control	Provision	Comment	Compliance												
3.1.1 Residential Density	All applications for residential subdivision and the construction of residential buildings are to demonstrate that the proposal meets the minimum residential density requirements of the relevant Precinct Plan and contributes to meeting the overall dwelling target in the relevant Precinct.	Applicable dwelling density is 25dw/ha Total site area = 1.22ha $25 \times 1.22 = 30.5$ dwellings required. 3 lots are proposed with the Development Application. See 4.6 variation discussion above.	Considered acceptable												
3.1.2 Block and Lot Layout	Subdivision layout is to create a legible and permeable street hierarchy that responds to the natural site topography, the location	The variation to the road network as set out in the ILP, still enables a legible and permeable street hierarchy to be developed	Complies												
	Street blocks are to be generally a maximum of 250m long and 70m deep.	The three proposed street blocks all feature dimensions less than 250m long and 70m deep. <table border="1"> <thead> <tr> <th>Lot No.</th> <th>Lot Length</th> <th>Lot Depth</th> </tr> </thead> <tbody> <tr> <td>Lot 1</td> <td>57.8m</td> <td>31.9m</td> </tr> <tr> <td>Lot 2</td> <td>63.4m</td> <td>31.9m</td> </tr> <tr> <td>Lot 3</td> <td>137.4m</td> <td>32.45m</td> </tr> </tbody> </table>	Lot No.	Lot Length	Lot Depth	Lot 1	57.8m	31.9m	Lot 2	63.4m	31.9m	Lot 3	137.4m	32.45m	Complies
Lot No.	Lot Length	Lot Depth													
Lot 1	57.8m	31.9m													
Lot 2	63.4m	31.9m													
Lot 3	137.4m	32.45m													

Part 3 Neighbourhood and Subdivision Design			
Development Control	Provision	Comment	Compliance
	Minimum lot size of 300sqm for density band 25.	The proposed subdivision of land is for 3x super lots which all exceed 300sqm in area.	Complies
	Minimum frontage width of 7m for front loaded in 25 dw/ha.	The proposed lots have a minimum frontage greater than 7m.	Complies
	A range of residential lot types (area, frontage, depth, zero lot and access) must be provided to ensure a mix of housing types and dwelling sizes and to create coherent streetscapes with distinctive garden suburban, suburban and urban characters across a neighbourhood.	The development proposes subdivision of land to create 3 super lots in accordance with the ILP. The proposed subdivision enables a range of future residential lot types to be provided across the site. See Clause 4.6 discussion above.	Considered acceptable
	In areas with a minimum residential density of ≤ 20 dw/ha no more than 40% of the total residential lots proposed in any one street block may have a frontage of less than 10m wide.	All lots proposed are a minimum of 10m in width.	Complies
	Lots should be rectangular. Where lots are an irregular shape, they are to be large enough and oriented appropriately to enable dwellings to meet the controls in this DCP.	Lots are oriented in accordance with the road layout, and would be able to accommodate appropriate future dwelling development which meets the DCP controls.	Complies
3.1.3 Battle-axe Lots	Provides controls for Battle-axe lots	Not Applicable (none proposed)	N/A

Part 3 Neighbourhood and Subdivision Design			
Development Control	Provision	Comment	Compliance
3.1.4 Corner Lots	Corner lots, including splays and driveway location, are to be designed in accordance with AS 2890 and Council's Engineering Specifications.	This application has been reviewed by Council's Land Development Engineers who have raised no issues subject to conditions of consent.	Complies
	Corner lots are to be designed to allow dwellings to positively address both street frontages.	Future dwellings on corner lots will be required to address both street frontages.	Complies by condition
	Plans of subdivision are to show the location of proposed or existing substations, kiosks, sewer man holes and/or vents affecting corner lots.	The site is not identified as featuring future substations. No substations are proposed within the subject site.	Complies
3.1.5 Subdivision in the Environmental Living Zone	Provides controls for subdivision in E2 and E4 zones.	The site is zoned R3 - Medium Density Residential	N/A
3.2 Subdivision Approval Process	The land subdivision approval process is to be consistent with the requirements of Table 3-4.	The proposed development is for the subdivision of land into three residue lots, with no construction of dwellings proposed.	N/A
	Building Envelope Plans (BEPs) to provide appropriate details as listed in the DCP.	The proposed development is for the subdivision of land into three residue lots, with no construction of dwellings proposed. Concept Building Envelope Plans have been provided to demonstrate that appropriate dwelling densities can be achieved through future developments at the site.	N/A

Part 3 Neighbourhood and Subdivision Design			
Development Control	Provision	Comment	Compliance
	Public Domain Plan to show elements of the Public Domain including Street Trees, vehicular cross-overs, and indicative building footprints.	A Public Domain Plan will be required to be submitted with the application, which incorporates street tree pits in accordance with the Liverpool Growth Centres Precincts DCP 2021. Conditions of consent will be imposed on the application to ensure that the Public Domain Plan is submitted for the development prior to the issue of a construction certificate.	Complies by condition
3.3.1 Street Network Layout and Design	This section contains controls relating to street network layout and design, including requirements for street trees.	The DA is in accordance with the controls for the street network layout Road reserve widths set out in the ILP. Conditions of consent will be imposed to ensure that correct carriage way widths, verge widths and footpath widths are provided.	Complies by condition
3.3.2 Street Furniture	Provides controls for street furniture The spacing of street trees will relate to the subdivision lot widths, and street type, and shall be provided in accordance with Table 3-5.	Not applicable (none proposed)	N/A
3.3.3 Local Area Traffic	A Local Area Traffic Management (LATM) plan shall be submitted with any development which involves the opening	A LATM has not been submitted with the application. The LATM will be imposed as a condition of the consent.	Complies by condition

Part 3 Neighbourhood and Subdivision Design			
Development Control	Provision	Comment	Compliance
Management	of a new road(s), or modifications to existing roads. Design solutions shall conform to Austroads Guide to Traffic Management Part 8 (Local Area Traffic Management).		
3.3.4 Laneways	Provides controls for laneways	Not applicable (none proposed)	N/A
3.3.6 Pedestrian and Cycle Network	This section contains controls relating to the implementation of pedestrian and cycle networks.	The design of the pedestrian pathways is compliant with the requirements for local streets as set out in the DCP.	Complies
3.3.8 Access to arterial roads, sub-arterial roads and transit boulevards	Provides controls for Temporary Vehicular Access	Temporary vehicular access from Fifteenth Avenue is proposed to the site until the surrounding road network is developed to provide alternative access. A condition of consent will be imposed to ensure that vehicular access from Fifteenth Avenue is removed once alternative access is provided.	Complies
3.4 Construction Environmental Management	This section contains controls relating to the implementation of a construction environmental management plan.	Conditions of consent will be imposed on the application, ensuring that construction environmental management plan is implemented throughout the development.	Complies by condition

Attachment 4 – Draft Conditions of Consent**ATTACHMENT 1 – CONDITIONS OF APPROVAL**

Council has imposed the following conditions under the relevant planning instruments and policies.

PART 1**DEFERRED COMMENCEMENT**

Under section 4.18(1) of the EP&A Act, notice is given that the above development application has been determined by the granting of deferred commencement consent using the power in section 4.16(3) of the EP&A Act, subject to the conditions set out in this notice.

Relevant matters:

This consent does not operate and may not be acted on until the consent authority is satisfied of the following matter(s):

1. Evidence must be submitted to the satisfaction of Liverpool City Council which demonstrates that the existing dwelling on the newly created Lot C has been demolished with the appropriate approval.
2. Evidence must be submitted to the satisfaction of Liverpool City Council which demonstrates on the newly created Lot C is able to comply with the minimum density requires under the *State Environmental Planning Policy (Precincts -Western Sydney Parland City) 2021*. This can be demonstrated through the provision of an indicative subdivision plan.

Evidence of the above relevant matter(s) must be produced to the consent authority, within **24 months** of the date of the determination, otherwise the consent will lapse.

Under section 76(4) of the EP&A Regulation, the consent authority will notify you in writing if the matters above have been satisfied and the date from which this consent operates.

The conditions as stipulated in Part 2 below apply from the date that this consent operates.



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170
All correspondence to Locked Bag 7064 Liverpool BC NSW 1871
Call Centre 1300 36 2170 Email lcc@liverpool.nsw.gov.au
Web www.liverpool.nsw.gov.au NRS 13 36 77 ABN 84 181 182 471

PART 2 -**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.

(a) Subdivision Plans

Plan Name	Drawing No.	Revision	Date	Prepared By
Site Location & Analysis	DA-000	A	1/03/2022	Mimar Design Pty Ltd
Proposed Subdivision Plan	DA-1001	A	1/03/2022	Mimar Design Pty Ltd

(b) Civil Engineering Plans

Plan Name	Drawing No.	Revision	Date	Prepared By
Cover Sheet and Drawing Index	001	D	06/06/2023	Barker Ryan Stewart
General Notes	011	D	06/06/2023	Barker Ryan Stewart
Site Plan	021	D	06/06/2023	Barker Ryan Stewart
Engineering Plan	101	D	06/06/2023	Barker Ryan Stewart
Road Longitudinal Sections Sheet 1	201	D	06/06/2023	Barker Ryan Stewart
Road Longitudinal Sections Sheet 2	202	D	06/06/2023	Barker Ryan Stewart
Road Longitudinal Sections Sheet 3	203	D	06/06/2023	Barker Ryan Stewart
Road Longitudinal Sections Sheet 4	204	D	06/06/2023	Barker Ryan Stewart
Road Cross Sections Sheet 1	301	D	06/06/2023	Barker Ryan Stewart
Road Cross Sections Sheet 2	302	D	06/06/2023	Barker Ryan Stewart

Road Cross Sections Sheet 3	303	D	06/06/2023	Barker Ryan Stewart
Road Cross Sections Sheet 4	304	D	06/06/2023	Barker Ryan Stewart
Road Cross Sections Sheet 5	305	D	06/06/2023	Barker Ryan Stewart
Road Cross Sections Sheet 6	306	D	06/06/2023	Barker Ryan Stewart
Typical Sections and Details	311	D	06/06/2023	Barker Ryan Stewart
Stormwater Drainage Layout Plan	501	D	06/06/2023	Barker Ryan Stewart
Water Quality Catchment Plan	505	D	06/06/2023	Barker Ryan Stewart
External Catchment Plan	506	D	06/06/2023	Barker Ryan Stewart
Stormwater Management Plan	511	D	06/06/2023	Barker Ryan Stewart
Stormwater Longitudinal Sections Sheet 1	521	D	06/06/2023	Barker Ryan Stewart
Stormwater Longitudinal Sections Sheet 2	522	D	06/06/2023	Barker Ryan Stewart
5-Year and 10-Year Flood Calculation Sheet 1	531	D	06/06/2023	Barker Ryan Stewart
5-Year and 10-Year Flood Calculation Sheet 2	532	D	06/06/2023	Barker Ryan Stewart
5-Year and 10-Year Flood Calculation Sheet 3	533	D	06/06/2023	Barker Ryan Stewart
Typical Stormwater Sections and Details	701	D	06/06/2023	Barker Ryan Stewart
Erosion and Sediment Control Plan	801	D	06/06/2023	Barker Ryan Stewart

Erosion and Sediment Control Details	811	D	06/06/2023	Barker Ryan Stewart
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(c) Supporting Documentation

Report Name	Date	Reference	Prepared By
Waste Management Plan	28 February 2022	-	Chris Mustafa & Mimar Building Design
Traffic and Parking Impact Assessment	2 March 2022	21579	Varga Traffic Planning Pty Ltd
Remedial Action Plan	24 March 2023	E2363-1	Geotechnical Consultant Australia
Salinity Assessment	4 October 2022	G22466-1	Geotechnical Consultant Australia
Preliminary Site Investigation Report	29 September 2022	E22165-1	Geotechnical Consultant Australia
Targeted Detailed Site Investigation Report	7 November 2022	E22189-1	Geotechnical Consultant Australia
Due Diligence Aboriginal Archaeological Assessment	November 2022	-	AMAC Archaeological
Cost Estimate Report	31 January 2022	Q2021-CR244	QPC & C Pty Ltd
Bushfire Protection Assessment	16 February 2022	B213763	Australian Bushfire Protection Planners Pty Ltd
Aboricultural Impact Assessment and Tree Management Plan	1 December 2021	7572.2	Redgum Horticultural

NSW Rural Fire Service (RFS) General Terms of Approval (GTAs)

- The development is to demonstrate compliance with all relevant General Terms of Approval issued by the NSW Rural Fire Service, dated 21 September 2022 (Attachment 2).

Council Waste-Water Requirements

- 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 sewage systems.

Works at no cost to Council

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

EP&A Act Compliance

5. The requirements and provisions of the EP&A Act 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.

B. PRIOR TO ISSUE OF A SUBDIVISION WORKS CERTIFICATE

The following conditions are to be complied with or addressed prior to the issue of a Subdivision Works Certificate by the Principal Certifying Authority.

Site Development Work

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

Fee Payments

7. 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/Subdivision Works 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.
- (c) Long Service Levy – based on 0.25% of the cost of building work where the costing of the CC is \$250,000 or more.

These fees are reviewed annually and will be calculated accordingly.

8. 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

9. 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 contact is entered into for the work to be done by a different licensee, Council must be immediately informed.

Waste Management Plan

10. A Waste Management Plan is to be submitted to the PCA for approval prior to the issue of any Subdivision Works Certificate. The Waste Management Plan is to be in accordance with the provisions of the Liverpool Development Control Plan and is to include potential waste generation, including any excavation material details and/or volumes during the construction phase. The Waste Management Plan is to also take into account the on-going waste management for the future development.

S138 Roads Act – Minor Works in the public road

11. Prior to the issue of a Subdivision Works 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 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.

S138 Roads Act – roadworks requiring approval of civil drawings.

12. Prior to the issue of a Subdivision Works 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 Fifteenth Avenue.

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 Subdivision Works Certificate.

Road design criteria table

13. Prior to the issue of a Subdivision Works 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
Road 1 & Road 2,	16m	9.9m	3.05m	1.5m	3 x 10 ⁵
Road 3	13.5m	8.0m	3.6m (RHS) / 1.4m (LHS)	1.5m	3 x 10 ⁵

Access, Car Parking and Manoeuvring – General

14. Prior to the issue of a Subdivision Works Certificate the Certifying Authority shall ensure and certify that vehicle access, circulation, manoeuvring, pedestrian and parking areas associated with the subject development have been designed and are in accordance with AS2890.1, AS290.2, AS2890.6 and Council's Development Control Plan.

Bus Stops

15. Possible Bus Stop locations are to be discussed with the local bus companies and are to be designed in accordance with bus company requirements including incorporating the requirements of the Disability Discrimination Act 2002, Disability Standards for Accessible Public Transport and the Guidelines for assessing compliance of bus stops with the Disability Standards for Accessible Public Transport 2002.
16. Detailed design drawings of the subdivision roads, prepared in accordance with the revised DCP (2021) including the following to Council's Development Engineering Section for approval. It is to include:
1. intersection treatments,
 2. pram ramps,
 3. entry threshold, and
 4. other traffic calming devices as appropriate, including temporary turning heads.

The design needs to ensure the proposed temporary turning head can accommodate Council's largest waste collection trucks.

NOTE: Prior to preparing the associated plans, the applicant is advised to liaise with Council's Transport Management Section for input into the appropriate design.

Road Works

17. 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.

Street Lighting Upgrade

18. 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.

Consult Council's Traffic Management Section for streetlight upgrade requirement for infill developments in the existing established areas.

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.

Waste

19. Prior to issue of a Subdivision Works Certificate both Council and the Principal Certifying Authority must be advised in writing of the licenced waste facility to which all excavation and construction waste will be taken.

No Loading on Easements

20. Prior to the issue of a Subdivision Works 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.

Retaining Walls on Boundary

21. 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 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 Subdivision Works Certificate must be obtained prior to commencement of works on the retaining wall.

Inter-allotment drainage

22. 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.

Water Quality

23. Prior to the issue of a Subdivision Works 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 Subdivision Works Certificate must be supported by:

- Specification & installation details of the stormwater pre-treatment system
- 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 Subdivision Works Certificate issue.

Provision of Services – Sydney Water

24. Prior to the issue of a Subdivision Works 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.sydneywater.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 Subdivision Works Certificate.

Provision of Services – Endeavour Energy

25. 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 Subdivision Works Certificate.

Provision of Services – Telecommunications

26. Prior to the issue of a Subdivision Works 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.

Construction Environmental Management Plan (CEMP)

27. Prior to issue of a Subdivision Works 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, 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.

Subdivision Work Certificate

28. 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 prepared by Barker Ryan and Stewart, reference number 210613-02, revision D, dated 06.06.23 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.
1. The subdivision works may include but are not limited to the following:
 2. Public and private roads
 3. Stormwater drainage including water quantity and quality treatment measures
 4. Interallotment drainage
 5. Private access driveways
 6. Sediment and erosion control measures
 7. Overland flowpaths

8. Flood control measures
9. Traffic facilities including roundabouts, intersection treatments, car parks, bus stops, cycleways, pathways etc.
10. Earthworks
11. Bridges, culverts, retaining walls and other structures
12. Landscaping and embellishment works
13. All works required for conversion of the proposed sediment basin to a bio retention function
14. All works required for the decommissioning temporary OSD systems including pipe removal, basin filling and works to existing pit structures if required

The Subdivision Work Certificate must be supported by engineering plans, calculations, specifications and any certification relied upon.

Additional Flooding Conditions

29. A detailed stormwater drainage design prepared by a qualified practicing civil engineer must be provided for assessment. The design shall align with the Concept Engineering Plan for 430 Fifteenth Avenue, Austral, Rev D dated 06/06/2023 prepared by Barker Ryan Stewart 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:
 - Details of Splitter Control Pit (Pit A-6) to divert flows from the development site to the temporary on site detention basin,
 - Demonstrate that the site discharge can be discharged to the nominated point of discharge by gravity,
 - Provision to capture fully developed upstream catchment flows and convey to the nominated point of discharge.
30. The temporary on-site detention (OSD) basin shall provide adequate flow attenuation to ensure that the peak post-development flow does not exceed peak pre-development flow for the 20%, 5% and 1% storm events. The OSD basin shall not be removed without the Council's written consent.
31. Temporary on-site detention and water quality treatment basin shall be provided and maintained until regional Basin 17 and their associated trunk drainage systems are constructed and stormwater for the site is conveyed to Basin 17 via trunk drainage system. The temporary basin shall not be removed without Council's written consent.
32. The stormwater design shall incorporate interim streetscape silt trap devices at the location of proposed streetscape raingardens (ie, intersection of Road 1 and Road 2) as indicated in the the Liverpool Growth Centre Precincts Development Control Plan, June 2021. The DCP can be downloaded from the link below.

Additional Engineering Conditions

33. Extent proposed drainage line on Fifteenth Avenue to existing drainage swale.

34. 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 Subdivision Works Certificate.
35. If work is required on neighbouring land, a written consent from property owners shall be submitted to Council for approval.
36. Provide detail design of interim streetscape silt trap at the intersection of Road 1 and Road 2 as indicated in the the Liverpool Growth Centre Precincts Development Control Plan, June 2021.

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

37. Building work shall not commence prior to the issue of a Subdivision Works Certificate. Building work as defined under Section 1.4 of the EP&A Act 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.

Subdivision Works Certificates

38. Detailed engineering plans and specifications relating to the work shall be endorsed with a SWC, 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.
39. Any SWC 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.
40. Where this consent requires both engineering and building works to be undertaken, a separate Subdivision Works 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

41. The applicant shall advise Council of the name, address and contact number of the Accredited Certifier, in accordance with Section 6.12 of the EP&A Act.
42. 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.

43. 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.
 - (b) The notice shall be given seven (7) days prior to the commencement of work.
44. 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.

Construction Traffic Management Plan

45. 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.

Work Zone

46. A Works Zone application is required if on-street parking is affected with commuter parking and there is insufficient off-street parking space.

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

47. 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.

- [Road Occupancy Application Form](#)
- [Road Opening Application Form](#)

Notification of Commencement of Demolitions

48. At least one week before demolition work commences, written notice must be provided to Council and the occupiers of neighbouring premises of the work commencing. The notice must include:
1. name
 2. address,
 3. contact telephone number,
 4. licence type and license number of any demolition waste removal contractor and, if applicable, asbestos removal contractor, and
 5. the contact telephone number of council and
 6. the contact telephone number of SafeWork NSW (4921 2900).

Environmental Management

49. 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;
 - (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

50. 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

51. Work on the subdivision shall not commence until:
- (a) a Subdivision Works 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 EP&A Act and *Environmental Planning and Assessment Regulation 2021* 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.

Site Facilities

52. Adequate onsite temporary toilets, 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.

Facilities

53. 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

54. 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.

Erosion and sediment controls in place

55. Before any site work commences, Council 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 the NSW Department of Housing manual 'Managing Urban Stormwater: Soils and Subdivision Works Certificate' (the Blue Book) (as amended from time to time).

D. DURING CONSTRUCTION

The following conditions are to be complied with or addressed during construction:

Building Inspections

56. 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 Subdivision Works Certificate.
57. 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 Principal Certifying Authority, prior to proceedings to the subsequent stages of construction or finalisation of the works (as applicable).

Public Domain Works

58. 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'.

Public Domain Works – Street Lighting

59. Street lights are to be installed in accordance with the Endeavour Energy certified plans to their satisfaction.

Waste Management

60. All 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. Only materials noted as being re-used on site in the approved Waste Management Plan are to remain on site at the conclusion of the work.
61. All lightweight or granular demolition, excavation or construction waste, e.g. wrapping, packaging materials, bags, insulation, sand, soil etc., must be kept fully enclosed at all times to prevent it from becoming displaced by the wind in strong wind conditions or from washing into sewers, storm drains or creeks, or onto adjacent properties or public land during wet weather.

Erosion Control - Measures

62. Erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.

Erosion Control – Maintenance

63. Sediment and erosion control measures are to be adequately maintained during the works until the establishment of grass.

Erosion Control

64. 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.

Water Quality

65. 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.

Street Lighting in New Subdivisions

66. The developer shall engage an accredited service provider to submit a Public Lighting Design Brief to Council's Transport Management Section, to specify design requirements for the provision of street lighting on all new public roads dedicated to Council.

A street lighting design plan prepared by an accredited service provider is to be submitted to and approved by Council's Transport Management Section and the electricity service provider (currently Endeavor Energy), prior to construction.

The street lighting must comply with the electricity service provider Street Lighting Policy and illumination requirements and Council's Street Lighting policy.

Security Fence

67. A temporary security fence to SafeWork NSW 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

68. 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

Prior to the connection of private drainage to Council's drainage system, 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.

Refuse Disposal

69. 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.

Construction Noise and Vibration

70. Noise and vibration associated with excavation, demolition and construction activities shall comply with the management levels detailed within the 'Interim Construction Noise Guideline' published by the Department of Environment and Climate Change NSW (DECC 2009/265) dated July 2009 and acceptable vibration values prescribed within the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).
71. The approved site-specific Construction Noise, Vibration Assessment and Management Plan shall be implemented, adhered to and maintained at all times during the construction period.

Unidentified Contamination

72. 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.

Site Remediation Works

73. The site must be remediated in accordance with:
 1. Remediation Action Plan (E2363-1) prepared by Sarah Houlahan for Geotechnical Consultants Austraalia and reviewed by Toby Scriverner for Reditus, dated 24th March 2023;
 2. State Environmental Planning Policy (Resilience and Hazards) 2021;
 3. National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM, 1999 as amended 2013); and
 4. The guidelines in force under the Contaminated Land Management Act 1997.

A suitably qualified environmental consultant must be engaged to supervise all aspects of site remediation and validation works in accordance with the approved Remediation Action Plan.

Liverpool City Council must be informed in writing of any proposed variation to the remediation works. Liverpool City Council must approve these variations in writing prior to commencement/ recommencement of works.

Note: The 'suitably qualified environmental consultant' must be certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) Scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) Scheme.

Soil Management

74. While site work is being carried out, the principal certifier must be satisfied all soil removed from or imported to the site is managed in accordance with the following requirements:
1. 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 to the principal certifier.
 2. All fill material imported to the site must be:
 - i. Virgin Excavated Natural Material as defined in Schedule 1 of the Protection of the Environment Operations Act 1997, or
 - ii. a material identified as being subject to a resource recovery exemption by the NSW EPA, or
 - iii. a combination of Virgin Excavated Natural Material as defined in Schedule 1 of the Protection of the Environment Operations Act 1997 and a material identified as being subject to a resource recovery exemption by the NSW EPA.

Handling of Asbestos During Demolition

75. While demolition work is being carried out, any work involving the removal of asbestos must comply with the following requirements:
1. Only an asbestos removal contractor who holds the required class of asbestos Licence issued by SafeWork NSW must carry out the removal, handling and disposal of any asbestos material;
 2. Asbestos waste in any form must be disposed of at a waste facility licensed by the NSW Environment Protection Authority to accept asbestos waste; and

3. Any asbestos waste load over 100kg (including asbestos contaminated soil) or 10m² or more of asbestos sheeting must be registered with the EPA online reporting tool WasteLocate.

Imported Fill Material

76. 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

77. The following records of accepted waste derived fill material must be submitted to the Principal Certifying Authority at the completion of earth works: 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, Documentation confirming the results of the waste classification assessment carried out on the fill material used in the development, and the results of any chemical testing undertaken on fill material.

Removal of Dangerous and/or Hazardous Waste

78. 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.

Air Quality

79. 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.

Major Filling / Earthworks

80. 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.

Soil testing - Subdivisions

81. Soil Testing is to be carried out to enable each lot to be classified according to AS2870 "Residential Slabs and Footings".

Pollution Control – Site Operations

82. During construction the consent holder is to ensure 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 the discharge of materials into Council's stormwater drainage system.

Pollution Control – Truck Movements

83. 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.

Traffic Management

84. All works within the road reserve are to be at the applicant cost and all signage is to be in accordance with the RMS Traffic Control at Worksites Manual and the RMS Interim Guide to Signs and Markings.

85. If a works zone is required, an application must be made to Council's Transport Planning section. The application is to indicate the exact location required and the applicable fee is to be included. If parking restrictions are in place, an application to have the restrictions moved, will need to be made.

86. Notice must be given to Council's Traffic and Transport Section of any interruption to pedestrian or vehicular traffic within the road reserve, caused by the construction of this development. A Traffic Control Plan, prepared by an accredited practitioner must be submitted for approval, 48 hours prior to implementation. This includes temporary closures for delivery of material, concrete pours etc.

87. Applications must be made to Council's Transport Planning section for any road closures. The applicant is to include a Traffic Control Plan, prepared by a suitably qualified person, which is to include the date and times of closures and any other relevant information.

88. The endorsed Construction Traffic Management Plan is to be implemented during the entire construction phase.

Footpaths

89. 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.

Vegetation – Existing Vegetation

90. 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

91. No known environmental or noxious weeds or known invasive plant species shall be included in the landscaping/revegetation.

Vegetation - Mulch

92. 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

93. 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.

Natural Resources

94. No native vegetation shall be cleared from land that is not biodiversity certified.
95. 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.

General Site Works

96. Erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.
97. All disturbed areas shall be progressively stabilised and/or revegetated so that no areas remain exposed to potential erosion damage for a period of greater than 14 days.

98. Sediment and erosion control measures are to be adequately maintained during the works until the establishment of grass.
99. The development, including construction, shall not result in any increase in sediment deposition into any water body, wetland, bushland or environmentally significant land.
100. Dust screens shall be erected and maintained in good repair around the perimeter of the subject land during land clearing, demolition, and construction works.
101. 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.
102. The developer is to maintain all adjoining public roads to the site in a clean and tidy state, free of excavated "spoil" material.

Craning and Hoardings

103. 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.

Waste Management Plan

104. The approved Waste Management Plan 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

105. 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 Council, detailing the following:
 - i. The contact details of the person(s) who removed the waste
 - ii. The waste carrier vehicle registration
 - iii. The date and time of waste collection
 - iv. A description of the waste (type of waste and estimated quantity) and whether the waste is to be reused, recycled or go to landfill
 - v. The address of the disposal location(s) where the waste was taken
 - vi. 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.

Aboriginal Cultural Heritage – Unexpected Finds

106. 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 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.

Aboriginal Cultural Heritage – Staff and Contractors

107. 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 significant 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.
108. If Aboriginal object/s are identified during works, then all works in the immediate area must cease and the area secured. The Heritage NSW must be notified by ringing the Enviroline 131 555. No works are to commence until authorisation has been received from the Heritage NSW and the appropriate permits have been obtained.
109. 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.
110. 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.

Hours of work

111. Site work must only be carried out between the following times –

1. from 7am to 6pm Monday to Friday
2. from 8am to 1pm 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.

Implementation of the site management plans

112. 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.

Major Filling/ Earthworks

113. 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.

Additional Traffic Conditions

114. All works within the road reserve are to be at the applicant cost and all signage is to be in accordance with the TfNSW Traffic Control at Worksites Manual and the RMS Interim Guide to Signs and Markings.
115. If a works zone is required, an application must be made to Council's Transport Management Section. The application is to indicate the exact location required and the applicable fee is to be included. If parking restrictions are in place, an application to have the restrictions moved, will need to be made.
116. Notice must be given to Council's Transport Management Section of any interruption to pedestrian or vehicular traffic within the road reserve, caused by the construction of this development. A Traffic Control Plan, prepared by an accredited practitioner must be submitted for approval, 48 hours to prior to implementation. This includes temporary closures for delivery of materials, concrete pours etc.
117. Applications must be made to Council's Transport Management Section for any road closures. The applicant is to include a Traffic Control Plan, prepared by a suitably qualified person, which is to include the date and times of closures and any other relevant information.
118. The endorsed CTMP is to be implemented during the construction.
119. Council's on-street assets should be protected at all times. Any damages should be rectified to Council satisfaction.

E. PRIOR TO ISSUE OF SUBDIVISION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of a Subdivision Certificate by Council:

SPECIAL INFRASTRUCTURE CONTRIBUTION

120. 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

121. 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

122. Prior to the issue of a Subdivision Certificate for each stage, 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

123. 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 Subdivision Works 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),
 - (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:
 - a. Compaction reports for road pavement construction,
 - b. Compaction reports for bulk earthworks and lot regrading,
 - c. Soil classification for all residential lots, and
 - d. Statement of Compliance.

Linemarking and Signage

124. 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.

Stormwater Compliance

125. Prior to the issue of a Subdivision Certificate the Principal Certifying Authority shall ensure that the on-site detention and stormwater pre-treatment systems:
- Have been satisfactorily completed in accordance with the approved Subdivision Works 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 be 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

126. Prior to the issue of a Subdivision Certificate a restriction as to user and positive covenant relating to the On-site detention system/s and Stormwater pre-treatment system/s 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 Council's Design and Construction Guidelines and Construction Specification for Civil Works.

Rectification of damage

127. 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 Fifteenth Avenue will require a Roads Act application. The application is to be submitted and approved by Liverpool City Council prior to such works commencing.

Outstanding Works Bond for Temporary OSD/Stormwater Pre-Treatment Systems

128. Prior to the issue of the Subdivision Certificate an Outstanding Works Bond for the decommissioning of the temporary OSD/Water Quality systems including pipe removal, basin filling and works to existing pit structures shall be lodged with Liverpool City Council. The Outstanding Works bond will be refunded once the OSD/stormwater pre-treatment treatment system works have been decommissioned to Council's satisfaction and a separate Maintenance Bond has been lodged with Liverpool City Council. The value of the bonds shall be determined in accordance with Liverpool City Council's Bond Policy. The bond will be administered in accordance with this policy.

Bonds

129. 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 acceptance of final works.

Maintenance Bond

130. Prior to the issue of a Subdivision Certificate a maintenance bond is to be lodged with Liverpool City Council for road and drainage works. The value of the bond shall be determined in accordance with Liverpool City Council's Bond Policy. The bond will be administered in accordance with this policy.

Outstanding Works Bond for Temporary Access to Fifteenth Avenue

1. A management plan shall be prepared for the eventual closure of the temporary access provided from Fifteenth Avenue for the Three (3) subdivided lots and for all uses on Lot A, Lot B and C. The plan is to include the relocation of any temporary services and shall be signed off by the relevant service authorities. A schedule of works with quantities and estimates of construction and restoration, including any temporary services shall be provided.

The Outstanding Works bond will be refunded once an alternate public road access has been provided and the temporary access has been closed off for all uses to Council's satisfaction and a separate Maintenance Bond has been lodged with Liverpool City Council.

The value of the bonds shall be determined in accordance with Liverpool City Council's Bond Policy. The bond will be administered in accordance with this policy.

Linen Plans & 88B

131. 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 (where proposed).
132. The applicant shall pay the standard fee for purpose of Subdivision Certificate administration of plan checking and release.
133. The following restriction as to user must be placed over proposed Lot C. Details shall be submitted with the application for a Subdivision Certificate.
 - a) No Subdivision Works Certificate shall be issued for a building on the lot burdened until on site drainage detention has been designed in accordance with Council's On-Site Detention Policy and Construction Specification, and
 - b) No Occupation Certificate for a building shall be issued until the designed on-site detention system has been constructed on the subject lot and a licensed Surveyor prepares a "Work As Executed" plan and is certified as complying with the approved detention design by an appropriate accredited professional engineer. Details shall be submitted with the application for a Subdivision Certificate.
134. A Restriction as to User over Proposed Lot A, Lot B and Lot C is to be created under Section 88B of the Conveyancing Act 1919 in the following terms:
 - a) *No further development of the lot burdened is to take place unless it is approved by a Development Consent. Such approval is likely to require, but not be restricted to, construction of road and drainage works, the provision of lot fill, and payment of Section 7.11 Contributions and Special Infrastructure Contributions.*
 - b) *Any future development is subject to a minimum residential density of 25 dwellings per hectare.*

The Restriction as to User may not be extinguished or altered except with the consent of Liverpool City Council.

Note: The final wording of the recital of the Restriction as to User is to be to Council's satisfaction.

135. A restriction is imposed on the development in relation to no permanent access is allowed from Fifteenth Avenue to the proposed subdivided allotments. Any proposed access is temporary until alternative access is made available from future local roads.
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. 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 Instrument shall contain a provision that the easement may not be extinguished or altered without the written consent of Council.

Street Naming

138. 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.

Service Providers

139. 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. Council will not accept any temporary facilities to service the site, including pump-out wet-wells.
 - (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:
 - i. The requirements of the *Telecommunications Act 1997*;
 - ii. For a fibre ready facility, the NBN Co's standard specifications current at the time of installation; and

- iii. 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.

Validation Report

140. Before the issue of a subdivision certificate, a detailed validation report must be submitted to the certifier. The Report must be prepared in accordance with:
 1. NSW Contaminated Land Planning Guidelines (1998);
 2. Relevant EPA guidelines. In particular the Contaminated Land Guidelines – Consultants Reporting on Contaminated Land (NSW EPA 2020); and
 3. National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).

The Validation Report must be prepared or reviewed and approved by a suitably qualified environmental consultant. The report's cover or title page of the document must include a personalised electronic seal for either the CEnvP(SC) or CPSS CSAM scheme. The Validation report must verify that the land is suitable for the purposed use(s), and that the remediation and validation of the site has been undertaken in accordance with the approved Remediation Action Plan.

Note: The 'suitably qualified environmental consultant' must be certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) Scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) Scheme.

Dilapidation Report

141. Any rectification works required by Council regarding the condition of Council infrastructure shall be undertaken, at full cost to the developer.
142. 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.

Decommissioning of On-Site Sewage Management System's

143. Following the decommissioning of the on-site sewage management system and before the issue of a subdivision certificate, a certificate must be submitted to Liverpool City Council certifying that the system was decommissioned in accordance with NSW Health Advisory Note 3 – Destruction, Removal or Reuse of Septic Tanks, Collection Wells and Aerated Wastewater Treatment Systems (AWTS) and other Sewage Management Facilities (SMF). A template decommissioning certificate can be found on Councils website www.liverpool.nsw.gov.au

Linen Plans and 88B Instruments

144. 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 (where proposed).
145. The plan of subdivision prepared for subdivision certificate and registration with LPI Service is to include the easement for electricity and easement for water pipeline which currently existing on the site.
146. The applicant shall pay the standard fee for purpose of subdivision certificate administration of plan checking and release.

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 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 to a Development Application for Designated Development (including any State significant development that would be designated development by 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 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) 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 Emily Lawson on the abovementioned contact details.

William Attard
Manager Development Assessment
DEVELOPMENT ASSESSMENT



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170

All correspondence to Locked Bag 7064 Liverpool BC NSW 1871

Call Centre 1300 36 2170 **Email** lcc@liverpool.nsw.gov.au

Web www.liverpool.nsw.gov.au **NRS** 13 36 77 **ABN** 84 181 182 471

Attachment 2 - NSW Rural Fire Service – General Terms of Approval



Liverpool City Council
Locked Bag 7064
LIVERPOOL BC NSW 1871

Your reference: CNR-40770 DA-259/2022
Our reference: DA20220607008378-Original-1

ATTENTION: Peter Oriehov

Date: Tuesday 6 September 2022.

Dear Sir/Madam,

Integrated Development Application
s100B - Subdivision - Subdivision
430 Fifteenth Avenue Austral 2179, 415//DP2475

I refer to your correspondence dated 09/06/2022 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 to ensure ongoing protection from the impact of bush fires, the entire site 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 IPA 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; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and

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



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170

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Call Centre 1300 36 2170 **Email** lcc@liverpool.nsw.gov.au

Web www.liverpool.nsw.gov.au **NRS** 13 36 77 **ABN** 84 181 182 471

- leaves and vegetation debris should be removed

2. At the issue of a subdivision certificate, if the land immediately to the West and South of the subject site has not been developed for residential purposes and the bush fire hazard removed, a suitably worded instrument(s) must be created pursuant to section 88 of the Conveyancing Act 1919 over the lots which prohibit the construction of buildings other than class 10b structures within 12 metres of the West and South lot boundaries. 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.

Access - Public Roads

Intent of measures: to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.

3. Access roads must comply with the following general requirements of Table 5.3b of Planning for Bush Fire Protection 2019 and the following:

- property access roads are two-wheel drive, all weather roads;
- perimeter roads are provided for residential subdivisions of three or more allotments;
- 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;
- dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end;
- 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;
- one way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression;
- 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.

4. 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.

Landscaping Assessment

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.

5. 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;

2



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170
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- 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.

General Advice - Consent Authority to Note

Future development applications lodged on lots created within this subdivision may be subject to further assessment under the *Environmental Planning & Assessment Act 1979*.

For any queries regarding this correspondence, please contact Bryce Pascoe on 1300 NSW RFS.

Yours sincerely,

Nika Fomin
Manager Planning & Environment Services
Built & Natural Environment





BUSH FIRE SAFETY AUTHORITY

Subdivision - Subdivision
430 Fifteenth Avenue Austral 2179, 415//DP2475
RFS Reference: DA20220607008378-Original-1
Your Reference: CNR-40770 DA-259/2022

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.

Nika Fomin

Manager Planning & Environment Services
Built & Natural Environment

Tuesday 6 September 2022



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Attachment 3 - Endeavour Energy Requirements

Development Application and Planning Proposal Review NSW Planning Portal Concurrence and Referral



Authority	Authority's Reference	Agency Concurrence and Referral	Authority Contact	Authority Notification	Submission Due	Submission Made
Liverpool City Council	DA-259/2022	CNR-40770	Peter Oriehov	7/06/2022	28/06/2022	8/06/2022

Address	Land Title
430 FIFTEENTH AVENUE AUSTRAL 2179	Lot 415 DP 2475

Scope of Development Application or Planning Proposal
Proposed three lot subdivision and road construction.

As shown in the below site plan from Endeavour Energy's G/Net master facility model:
<p>There are:</p> <ul style="list-style-type: none"> No easements benefitting Endeavour Energy (active easements are indicated by red hatching). 33,000 volt / 33 kilovolt (kV) high voltage overhead power lines, overhead earth cables and overhead pilot cables (carrying protection signals or communications between substations) to the road verge / roadway. Low voltage overhead power lines coming from the opposite side of the road to a pole on the road verge from which there is an extended low voltage overhead service conductor going to a customer owned / private pole on the site providing the customer connection point for the existing dwelling.



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

endeavourenergy.com.au
ABN 11 247 365 823



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Relevant / applicable clause numbers from Endeavour Energy's standard conditions for Development Application and Planning Proposal Review indicated by ☒ .

Condition	Advice	Clause No.	Issue	Detail
<input type="checkbox"/>	<input type="checkbox"/>	1	Adjoining Sites	Adjoining or nearby development / use should be compatible with the use of Endeavour Energy's sites.
<input type="checkbox"/>	<input type="checkbox"/>	2	Asbestos	Area identified or suspected of having asbestos or asbestos containing materials (ACM) present in the electricity network.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	Asset Planning	Applicants should not assume adequate supply is immediately available to facilitate their proposed development.
<input type="checkbox"/>	<input type="checkbox"/>	4	Asset Relocation	Application must be made for an asset relocation / removal to determine possible solutions to the developer's requirements.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	Bush Fire	Risk needs to be managed to maintain the safety of customers and the communities served by the network.
<input type="checkbox"/>	<input type="checkbox"/>	6	Construction Management	Integrity of electricity infrastructure must be maintained and not impacted by vehicle / plant operation, excessive loads, vibration, dust or moisture penetration.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	Contamination	Remediation may be required of soils or surfaces impacted by various forms of electricity infrastructure.
<input type="checkbox"/>	<input type="checkbox"/>	8	Demolition	All electricity infrastructure shall be regarded as live and care must be taken to not interfere with any part of the electricity network.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	9	Dial Before You Dig	Before commencing any underground activity the applicant must obtain advice from the Dial Before You Dig 1100 service.
<input type="checkbox"/>	<input type="checkbox"/>	10	Dispensation	If a proposal is not compliant with Endeavour Energy's engineering documents or standards, the applicant must request a dispensation.
<input type="checkbox"/>	<input type="checkbox"/>	11	Driveways	For public / road safety and to reduce the risk of vehicle impact, the distance of driveways from electricity infrastructure should be maximised.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	12	Earthing	The construction of any building or structure connected to or in close proximity to the electrical network must be properly earthed.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	13	Easement Management	Preference is for no activities to occur in easements and they must adhere to minimum safety requirements.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	14	Easement Release	No easement is redundant or obsolete until it is released having regard to risks to its network, commercial and community interests.
<input type="checkbox"/>	<input type="checkbox"/>	15	Easement Subdivision	The incorporation of easements into multiple / privately owned lots is generally not supported.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	16	Emergency Contact	Endeavour Energy's emergency contact number 131 003 should be included in any relevant risk and safety management plan.
<input type="checkbox"/>	<input type="checkbox"/>	17	Excavation	The integrity of the nearby electricity infrastructure shall not be placed at risk by the carrying out of excavation work.
<input type="checkbox"/>	<input type="checkbox"/>	18	Flooding	Electricity infrastructure should not be subject to flood inundation or stormwater runoff.



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Condition	Advice	Clause No.	Issue	Detail
<input type="checkbox"/>	<input type="checkbox"/>	19	Hazardous Environment	Electricity infrastructure can be susceptible to hazard sources or in some situations be regarded as a hazardous source.
<input type="checkbox"/>	<input type="checkbox"/>	20	Modifications	Amendments can impact on electricity load and the contestable works required to facilitate the proposed development.
<input type="checkbox"/>	<input type="checkbox"/>	21	Network Access	Access to the electricity infrastructure may be required at any time particularly in the event of an emergency.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	22	Network Asset Design	Design electricity infrastructure for safety and environmental compliance consistent with safe design lifecycle principles.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	23	Network Connection	Applicants will need to submit an appropriate application based on the maximum demand for electricity for connection of load.
<input type="checkbox"/>	<input type="checkbox"/>	24	Protected Works	Electricity infrastructure without an easement is deemed to be lawful for all purposes under Section 53 'Protection of certain electricity works' of the <i>Electricity Supply Act 1995 (NSW)</i> .
<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	Prudent Avoidance	Development should avert the possible risk to health from exposure to emissions from electricity infrastructure such as electric and magnetic fields (EMF) and noise.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	26	Public Safety	Public safety training resources are available to help general public / workers understand the risk and how to work safely near electricity infrastructure.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	27	Removal of Electricity	Permission is required to remove service / metering and must be performed by an Accredited Service Provider.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	28	Safety Clearances	Any building or structure must comply with the minimum safe distances / clearances for the applicable voltage/s of the overhead power lines.
<input type="checkbox"/>	<input type="checkbox"/>	29	Security / Climb Points	Minimum buffers appropriate to the electricity infrastructure being protected need to be provided to avoid the creation of climb points.
<input type="checkbox"/>	<input type="checkbox"/>	30	Service Conductors	Low voltage service conductors and customer connection points must comply with the 'Service and Installation Rules of NSW'
<input type="checkbox"/>	<input type="checkbox"/>	31	Solar / Generation	Need to assess the performance of the generation system and its effects on the network and other connected customers.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	32	Streetlighting	Streetlighting should be reviewed and if necessary upgraded to suit any increase in both vehicular and pedestrian traffic.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	33	Sustainability	Reducing greenhouse gas emissions and helping customers save on their energy consumption and costs through new initiatives and projects to adopt sustainable energy technologies.
<input type="checkbox"/>	<input type="checkbox"/>	34	Swimming Pools	Whenever water and electricity are in close proximity, extra care and awareness is required.
<input type="checkbox"/>	<input type="checkbox"/>	35	Telecommunications	Address the risks associated with poor communications services to support the vital electricity supply network Infrastructure.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	36	Vegetation Management	Landscaping that interferes with electricity infrastructure is a potential safety risk and may result in the interruption of supply.



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Condition	Advice	Clause No.	Issue	Detail
			Other	

Endeavour Energy	
Completed by:	Decision
Cornelis Duba	Approve (with conditions)
Reason(s) for Conditions / Objection (If applicable)	
<ul style="list-style-type: none"> The Statement of Environmental Effects indicates 'An existing dwelling will be retained on Lot 1 until the time that further residential subdivision is proposed within Lots 1-3'. The Statement of Environmental Effects does not appear to address in detail whether the available electricity services are adequate for the proposed development. <p>4.3 State Environmental Planning Policy (Sydney Region Growth Centres) 2006</p> <p>Clause 6.1 Public utility infrastructure</p> <p>Clause 6.1 provides that the consent authority must not grant development consent to development on land to which this Precinct Plan applies unless it is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when required.</p> <p>In this clause, public utility infrastructure includes infrastructure for any of the following:</p> <ol style="list-style-type: none"> the supply of water; the supply of electricity; the disposal and management of sewage. <p>The subject site has the ability to be provided with electricity, water, sewer and communication infrastructure. Each allotment will be connected to this infrastructure as per Council and the Service Authority requirements, including any requirements for augmentation or extensions.</p> <ul style="list-style-type: none"> To ensure an adequate connection, the applicant will need to engage an Accredited Service Provider (ASP) of an appropriate level and class of accreditation to assess the electricity load and the proposed method of supply for the development. An extension and / or augmentation of the existing local network will be required. Whilst there are few pole mounted substations in the area which may have some spare capacity, they are not intended or capable of supplying a significant urban residential development. <p>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 the extent of any works required will not be determined until the final load assessment is completed.</p> <ul style="list-style-type: none"> Any required padmount substation/s will need to be located within the property (in a suitable and accessible location) and be protected (including any associated cabling) by an easement and associated restrictions benefiting and gifted to Endeavour Energy. Please refer to Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights'. Endeavour Energy's network asset design policy is to progressively underground all new urban residential developments. All new cabling / reticulation infrastructure must be of an underground construction type. Where existing overhead construction is present in proximity of the site, it will require undergrounding as the development proceeds. If a facilitating subdivision, the usual requirement to provide a separate customer connection point for each lot within the subdivision may be waived by Endeavour Energy's Customer Network Solutions Branch with the resulting lots to be identified / released as residue lots. 	



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Accordingly the notification of arrangement letter will identify the lots as residues and are being released unsupplied. The further proposed development of the lots will then be subject to Endeavour Energy's normal customer connection procedure and policies.

- The minimum required safety clearances and controls for working near overhead power lines must be maintained at all times. If there is any doubt whatsoever regarding the safety clearances to the overhead power lines, the applicant will need to have the safety clearances assessed by a suitably qualified electrical engineer / Accredited Service Provider (ASP).

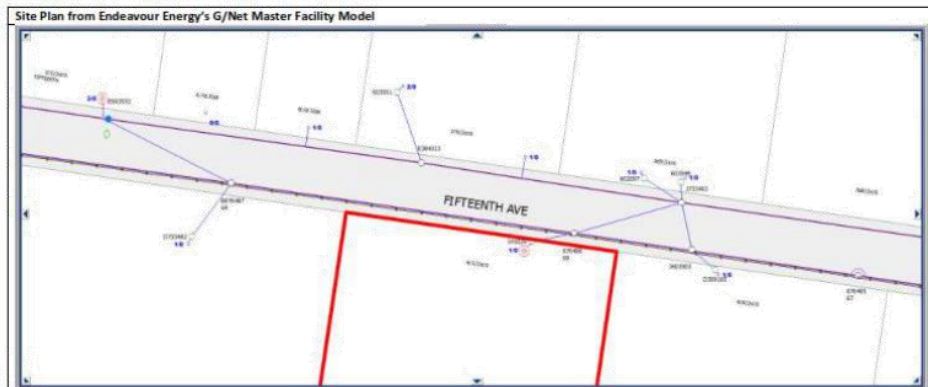
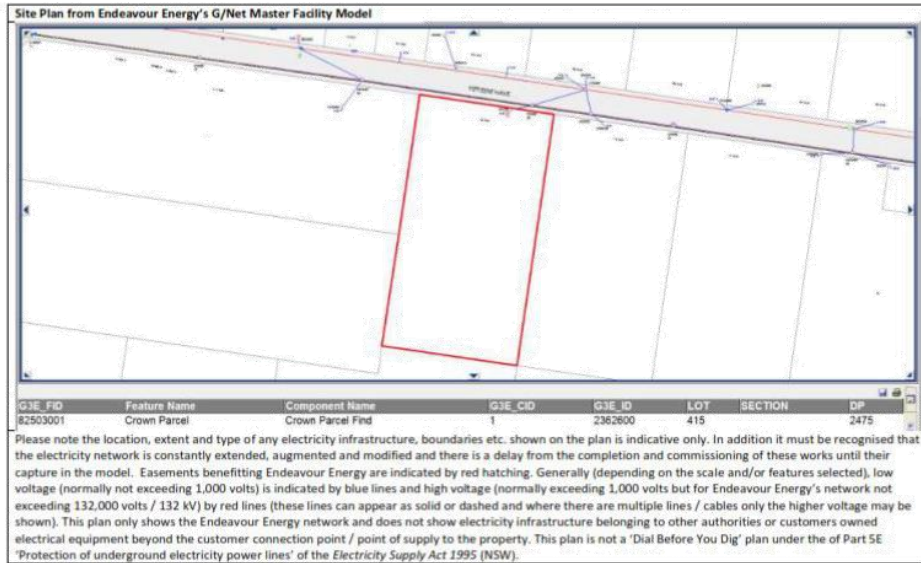
Even if there is no issue with the safety clearances to the building and structures, consideration must be given to WorkCover (now SafeWork NSW) 'Work Near Overhead Power Lines Code of Practice 2006' eg. ordinary persons must maintain a minimum safe approach distance of 3.0 metres to all voltages up to and including 132,000 volts / 132 kV.

- The planting of large / deep rooted trees to near electricity infrastructure is opposed by Endeavour Energy. Existing trees which are of low ecological significance in proximity of electricity infrastructure should be removed and if necessary replaced by an alternative smaller planting. The landscape designer will need to ensure any planting near electricity infrastructure achieves Endeavour Energy's vegetation management requirements.
- Not all the conditions / advice marked may be directly or immediately relevant or significant to the Development Application. 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.

Yours faithfully
Cornelis Duba
Development Application Specialist
Sustainability & Environment
M: 0455 250 981
E: cornelis.duba@endeavourenergy.com.au
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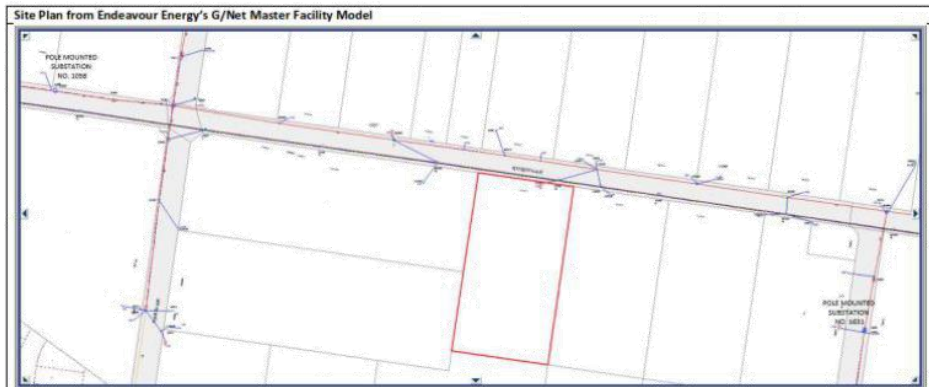


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Attachment 4- Sydney Water



10 June 2022

Peter Oriehov
Liverpool City Council
oriehovp@liverpool.nsw.gov.au

RE: Development Application DA-259/2022 at 430 Fifteenth Avenue, Austral

Thank you for notifying Sydney Water of DA-259/2022 at 430 Fifteenth Avenue, Austral, which proposes subdivision of the existing lot to create three super lots and associated road construction in accordance with the Austral and Leppington North Indicative Layout Plan. These lots are to accommodate larger development or be subject to further subdivision to achieve minimum dwelling yields. Sydney Water has reviewed the application based on the information supplied and provides the following comments to assist in planning the servicing needs of the proposed development.

Sydney Water notes development of the lots will occur under future development consents and that no residential subdivision is proposed at this time. An existing dwelling will be retained on Lot 1 until future residential subdivision is proposed within Lots 1-3.

Water Servicing

- Potable water servicing should be available via a 180mm PE watermain (laid in 2016) on Fifteenth Avenue.
- Amplifications, adjustments, and/or minor extensions may be required.

Wastewater Servicing

- Wastewater servicing is **currently unavailable to this property**.
- The development falls within an initial wastewater servicing area for Austral/Leppington, where Sydney Water is planning for services by the end of Q1 2023. The area however has a capacity constraint that limits the number of dwellings that can be connected to the system before FY 2025/2026 and this development is **not** within the allocated capacity.
- Sydney Water is planning to construct the Upper South Creek Advanced Water Recycling Centre (AWRC) to support population and economic growth in Western Sydney, and this facility and associated trunk infrastructure will have capacity to fully service this development. We anticipate this will be available by FY 2025/2026.
- Between now and FY 2025/2026, Sydney Water will actively seek opportunities to provide wastewater services above the capped limit and/or ahead of proposed timescales, where suitable. Therefore, we encourage all proponents to lodge an application with Sydney Water via the WSC process to ensure that we are fully aware of all developments and can endeavour to provide services as quickly as feasible and/or in line with the AWRC. A development staging plan should be provided to Sydney Water as part of their application.
- To keep up to date with any future opportunities, the proponent should continue to liaise with their case manager or lodge a Section 73 application with Sydney Water if they have not done so already.



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- Sydney Water will continue to communicate with Council and the development industry regarding timescales and potential future capacity uplifts where applicable. The Council account manager will keep you up to date on our timescales as we progress the AWRC. You can keep up-to date by visiting our AWRC projects page on our Sydney Water Talk projects website: [Upper South Creek Advanced Water Recycling Centre | Sydney Water Talk](#)

This advice is not formal approval of our servicing requirements. Detailed requirements, including any potential extensions or amplifications, will be provided once the development is referred to Sydney Water for a Section 73 application. More information about the Section 73 application process is available on our web page in the [Land Development Manual](#).

Further advice and requirements for this proposal are in Attachment 1. If you require any further information, please contact the Growth Planning Team at urbangrowth@sydneywater.com.au.

Yours sincerely,

Ishtar Malki

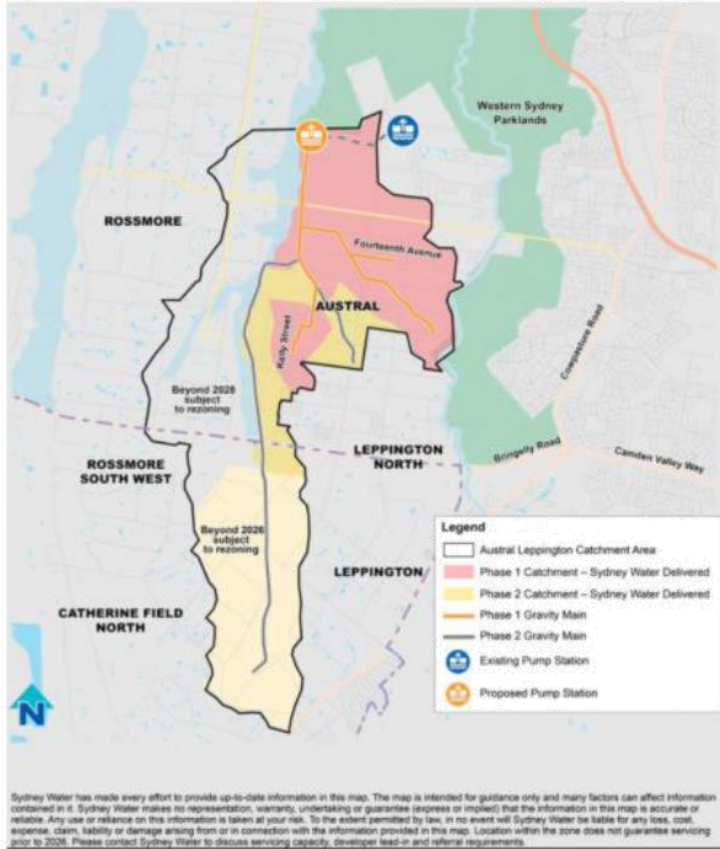
Ishtar Malki
A/Commercial Growth Manager
City Growth and Development, Business Development Group
Sydney Water, 1 Smith Street, Parramatta NSW 2150



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Attachment 1



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Attachment 2

Section 73 Compliance Certificate

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water.

The proponent is advised to make an early application for the certificate, as there may be water and wastewater pipes to be built that can take some time. This can also impact on other services and buildings, driveways or landscape designs.

Applications must be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Land development or telephone 13 20 92.

Building Plan Approval

The approved plans must be submitted to the Sydney Water [Tap in™](#) online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

The [Tap in™](#) service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's [Tap in™](#) online service is available at:

<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

Sydney Water recommends developers apply for Building Plan approval early as in some instances the initial assessment will identify that an Out of Scope Building Plan Approval will be required.



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Out of Scope Building Plan Approval

Sydney Water will need to undertake a detailed review of building plans:

1. That affect or are likely to affect any of the following:
 - Wastewater pipes larger than 300mm in size
 - Pressure wastewater pipes
 - Drinking water or recycled water pipes
 - Our property boundary
 - An easement in our favour
 - Stormwater infrastructure within 10m of the property boundary.
2. Where the building plan includes:
 - Construction of a retaining wall over, or within the zone of influence of our assets
 - Excavation of a basement or building over, or adjacent to, one of our assets
 - Dewatering – removing water from solid material or soil.

The detailed review is to ensure that:

- our assets will not be damaged during, or because of the construction of the development
- we can access our assets for operation and maintenance
- your building will be protected if we need to work on our assets in the future.

The developer will be required to pay Sydney Water for the costs associated with the detailed review.

Tree Planting

Certain tree species placed in close proximity to Sydney Water's underground assets have the potential to inflict damage through invasive root penetration and soil destabilisation. Sydney Water requires that all proposed or removed trees and vegetation included within the proposal adhere to the specifications and requirements within Section 46 of the Sydney Water Act (1994) and *Diagram 5 – Planting Trees* within our [Technical guidelines – Building over and adjacent to pipe assets](#). Please note these guidelines include more examples of potential activities impacting our assets which may also apply to your development.

If any tree planting proposed breaches our policy, Sydney Water may need to issue an order to remove every tree breaching the act, or directly remove every tree breaching the Act and bill the developer or Council for their removal.




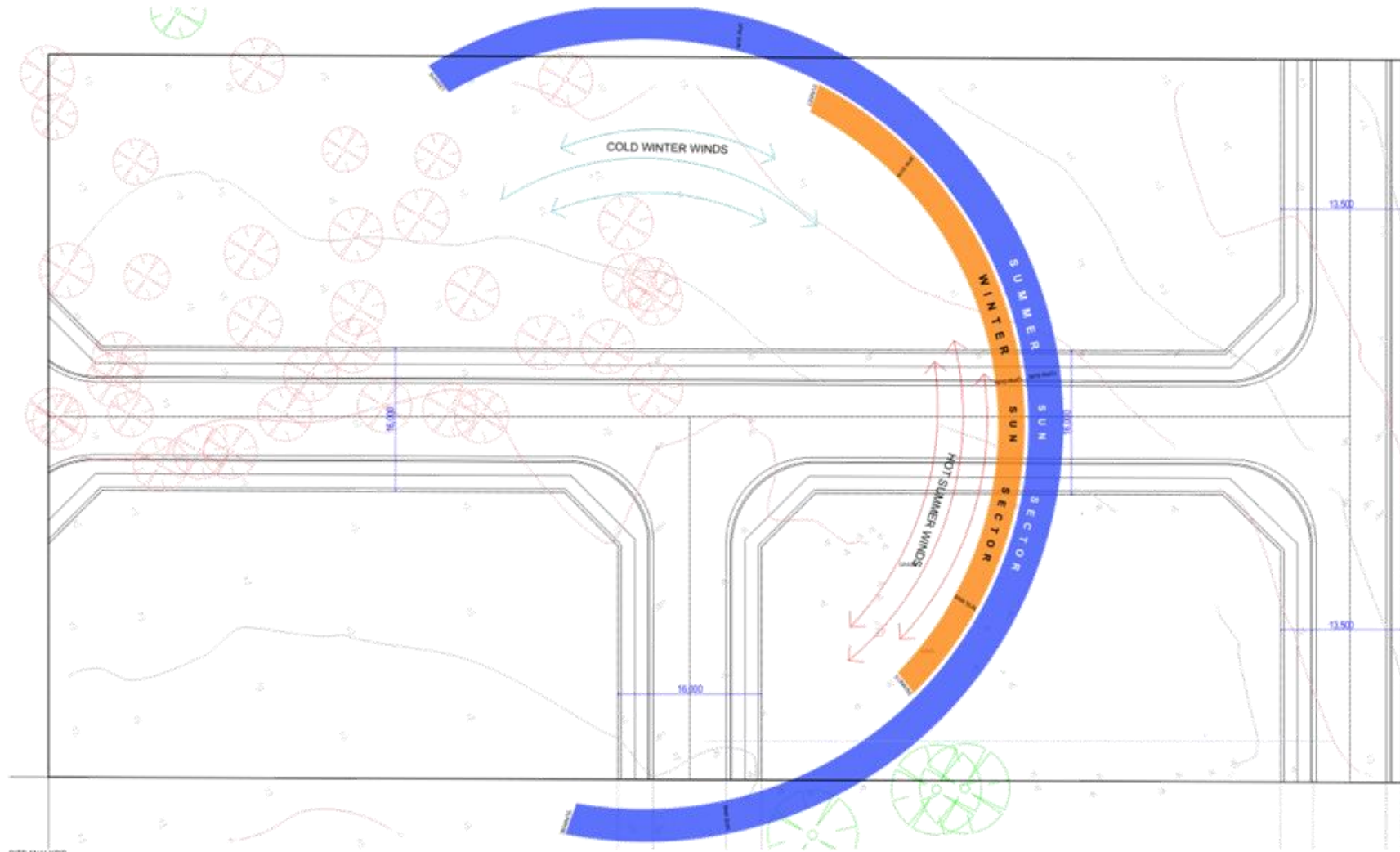
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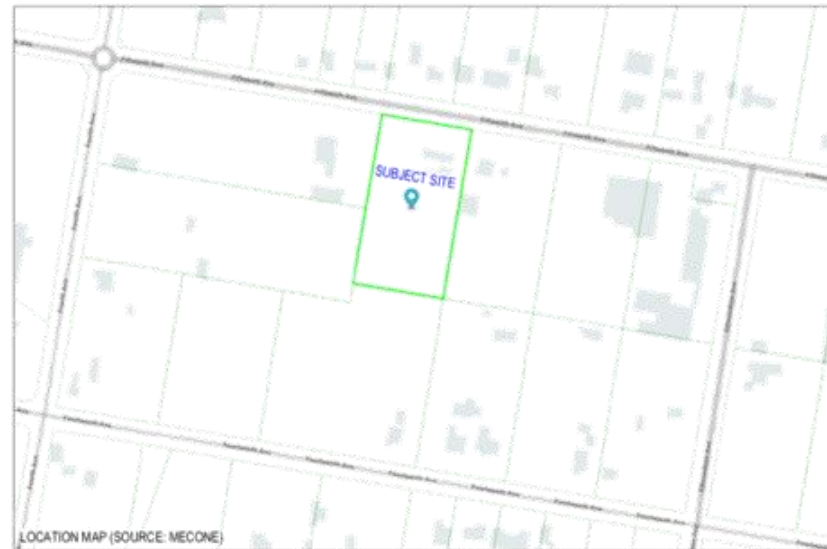
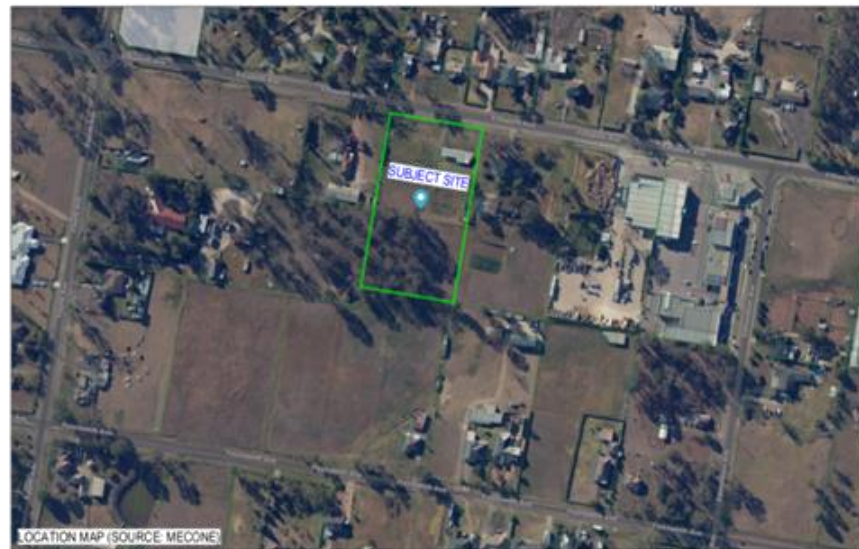
CONTRACTOR TO CONFIRM ALL UNDERGROUND SERVICES BEFORE COMMENCING WORKS REGARDLESS OF INFORMATION PROVIDED HEREIN. 



SITE ANALYSIS
SCALE 1:300

DRAWING SCHEDULE

SITE		
DA-0000	SITE LOCATION & ANALYSIS	A
DA-0001	GOOGLE STREET VIEWS	A
FLOOR PLANS		
DA-1001	PROPOSED SUBDIVISION PLAN	A



BUILDING DESIGNER
BDA REGISTRATION: 6563
info@mimar.com.au
Ph: 0404 260 560
PO Box 420 Murrebank 1875

Project
PROPOSED NEW SUBDIVISION
430 Fifteenth Ave Austral NSW

Rev	Description	Dwn by	Date
A	FOR DA APPLICATION	FB	1/03/2022

Prepared For:
M & G Mustafa

Drawing Title
SITE LOCATION & ANALYSIS

Scale
1:300
@A1 Sheet Size

Project Number
2021-042

Drawing Number
DA-0000

Revision
A



CONTRACTOR TO CONFIRM ALL UNDERGROUND SERVICES BEFORE COMMENCING WORKS REGARDLESS OF INFORMATION PROVIDED HEREIN.



BUILDING DESIGNER
BDA REGISTRATION: 6563
info@mimar.com.au
Ph: 0404 260 560
PO Box 420 Moorebank 1875

Project
PROPOSED NEW SUBDIVISION
430 Fifteenth Ave Austral NSW

Rev	Description	Dwn by	Date
A	FOR DA APPLICATION	FB	1/03/2022

Prepared For:
M & G Mustafa

Drawing Title
GOOGLE STREET VIEWS

Scale
@A1 Sheet Size

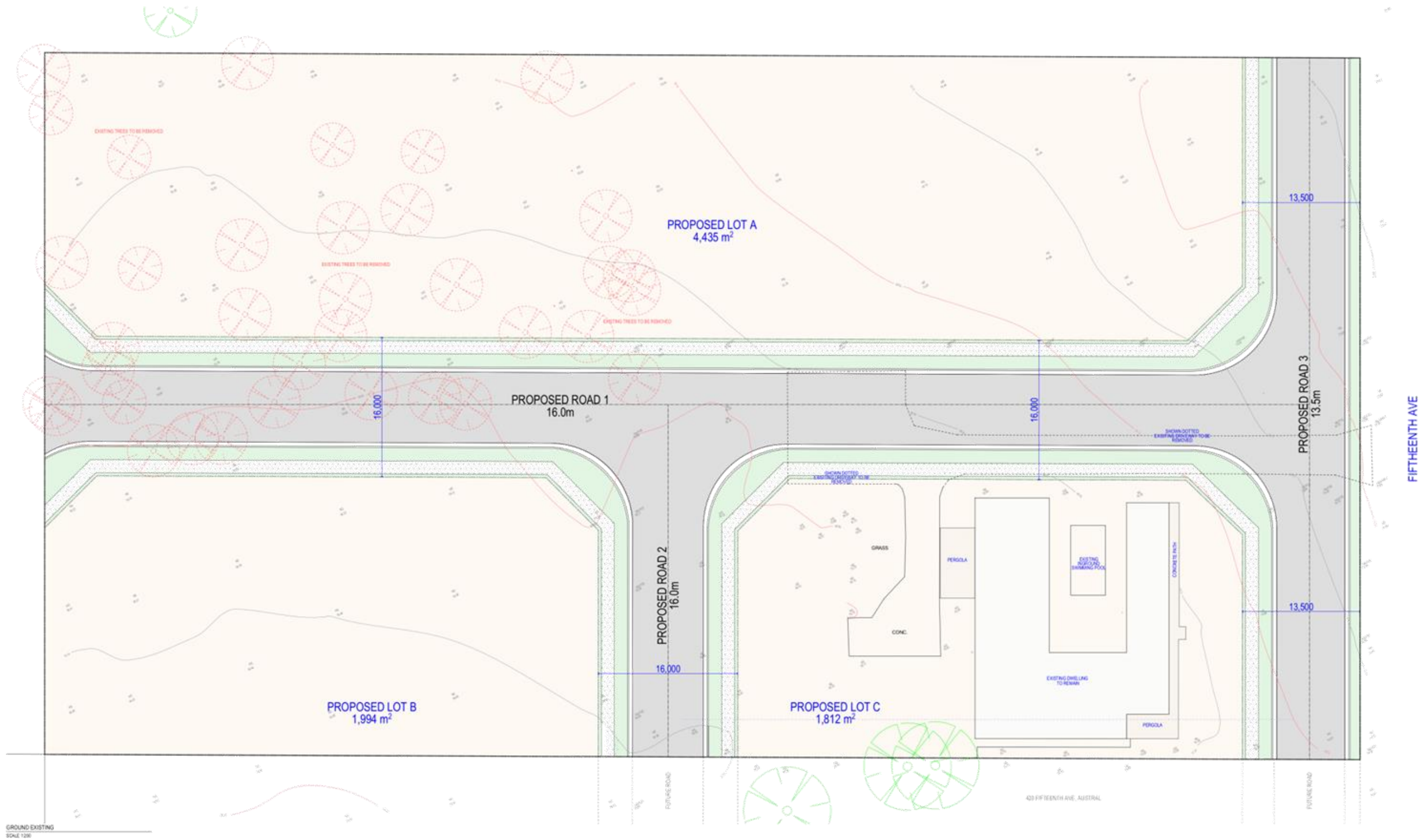
Project Number
2021-042

Drawing Number
DA-0001

Revision
A



CONTRACTOR TO CONFIRM ALL UNDERGROUND SERVICES BEFORE COMMENCING WORKS REGARDLESS OF INFORMATION PROVIDED HEREIN.



GROUND EXISTING
SCALE 1:200



BUILDING DESIGNER
BDA REGISTRATION: 6563
info@mimar.com.au
Ph: 0404 260 560
PO Box 420 Maitland NSW 1875

Project
PROPOSED NEW SUBDIVISION
430 Fifteenth Ave Austral NSW

Rev	Description	Dwn by	Date
A	FOR DA APPLICATION	FB	1/03/2022

Prepared For:
M & G Mustafa

Drawing Title
PROPOSED SUBDIVISION PLAN

Scale
1:200
@A1 Sheet Size

Project Number
2021-042

Drawing Number
DA-1001

Revision
A



LIVERPOOL CITY COUNCIL 430 FIFTEENTH AVENUE, AUSTRAL PROPOSED SUBDIVISION CIVIL ENGINEERING DESIGN FOR DEVELOPMENT APPLICATION



LOCALITY
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
001	COVER SHEET AND DRAWING INDEX
011	GENERAL NOTES
021	SITE PLAN
101	ENGINEERING PLAN
201	ROAD LONGITUDINAL SECTIONS SHEET 1
202	ROAD LONGITUDINAL SECTIONS SHEET 2
203	ROAD LONGITUDINAL SECTIONS SHEET 3
204	ROAD LONGITUDINAL SECTIONS SHEET 4
301	ROAD CROSS SECTIONS SHEET 1
302	ROAD CROSS SECTIONS SHEET 2
303	ROAD CROSS SECTIONS SHEET 3
304	ROAD CROSS SECTIONS SHEET 4
305	ROAD CROSS SECTIONS SHEET 5
306	ROAD CROSS SECTIONS SHEET 6
311	TYPICAL SECTIONS AND DETAILS
501	STORMWATER DRAINAGE LAYOUT PLAN
505	WATER QUALITY CATCHMENT PLAN
506	EXTERNAL CATCHMENT PLAN
511	STORMWATER MANAGEMENT PLAN
521	STORMWATER LONGITUDINAL SECTIONS SHEET 1
522	STORMWATER LONGITUDINAL SECTIONS SHEET 2
531	5-YEAR AND 10-YEAR FLOOD CALCULATION SHEET 1
532	5-YEAR AND 10-YEAR FLOOD CALCULATION SHEET 2
533	5-YEAR AND 10-YEAR FLOOD CALCULATION SHEET 3
701	TYPICAL STORMWATER SECTIONS AND DETAILS
801	EROSION AND SEDIMENT CONTROL PLAN
811	EROSION AND SEDIMENT CONTROL DETAILS

Prepared for: CHRIS MUSTAFA



GENERAL NOTES

- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DEVELOPMENT CONSENT AND THE LIVERPOOL CITY COUNCIL'S WORKS SPECIFICATIONS SUBDIVISIONS / DEVELOPMENTS AND / OR AS DIRECTED BY THEIR REPRESENTATIVE AND MUST INCLUDE ANY NECESSARY WORKS REQUIRED TO MAKE THE CONSTRUCTION EFFECTIVE. ALL WORKS AND PUBLIC UTILITY RELOCATION SHALL INCUR NO COST TO COUNCIL.
- THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST WHERE NECESSARY.
- ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE WORK HEALTH & SAFETY ACT 2017 AND ALL RELEVANT OCCUPATIONAL HEALTH & SAFETY POLICIES AND REGULATIONS.
- DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS. CLARIFICATION OF DIMENSIONS SHALL BE SOUGHT FROM THE SUPERINTENDENT OR REFERRED TO THE DESIGNER.
- SURVEY MARKS SHOWN THUS ▲ SHALL BE MAINTAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE ENGINEER SHALL BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
- ALL NEW WORK IS TO MAKE A SMOOTH JURDICTION WITH EXISTING CONDITIONS.
- THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN OR ON ADJACENT LANDS WITHOUT THE PRIOR APPROVAL OF THE SUPERINTENDENT AND THE WRITTEN PERMISSION OF THE OWNERS.
- THE CONTRACTOR SHALL MAINTAIN DUST CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE MINIMUM 24 HOURS NOTICE TO CERTIFIERS REPRESENTATIVE FOR ALL INSPECTIONS.
- ALL NATURAL SURFACE DATA HAS BEEN DETERMINED BY TERRAIN MODELLING. ALL CONSTRUCTION SITE WORKS MUST BE CARRIED OUT USING THE BENCH MARKS SHOWN ON THESE DRAWINGS.
- THE REUSE AND RECYCLING OF WASTE MATERIALS MUST BE MAXIMISED DURING CONSTRUCTION AND DEMOLITION. THE SEPARATION AND RECYCLING OF THE FOLLOWING WASTE MATERIAL: a) MASONRY b) TIMBER c) METALS d) CLEAN WASTE e) MIXED WASTE THIS CAN BE ACHIEVED BY CONSTRUCTING A MINIMUM OF FIVE TRADE WASTE COMPOUNDS ON-SITE. COPIES OF ACTUAL WEIGHBRIDGE RECEIPTS VERIFYING RECYCLING/DISPOSAL MUST BE KEPT AND PRESENTED TO COUNCIL OR NOMINATED AUTHORITY WHEN REQUIRED.
- A COPY OF THE STAMPED PLANS AND TRAFFIC CONTROL PLAN SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
- IF, DURING THE COURSE OF ANY WORKS, ANY EVIDENCE OF AN ABORIGINAL ARCHAEOLOGICAL SITE OR RELIC IS FOUND, ALL WORKS ON THE SITE ARE TO CEASE AND THE DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE AND THE NSW HERITAGE BRANCH ARE TO BE NOTIFIED IMMEDIATELY.
- IF, DURING THE COURSE OF ANY WORKS, ANY EVIDENCE OF A EUROPEAN ARCHAEOLOGICAL SITE OR RELIC IS FOUND, ALL WORKS ON THE SITE ARE TO CEASE AND THE NSW HERITAGE BRANCH CONTACTED IMMEDIATELY. ALL RELICS ARE TO BE RETAINED IN SITU UNLESS OTHERWISE DIRECTED BY THE NSW HERITAGE BRANCH.
- ANY NEW INFORMATION, WHICH COMES TO LIGHT DURING CONSTRUCTION WORKS, WHICH HAS THE POTENTIAL TO ALTER PREVIOUS CONCLUSIONS ABOUT SITE CONTAMINATION, SHALL BE IMMEDIATELY NOTIFIED TO COUNCIL.
- CONSTRUCTION INSPECTIONS ARE REQUIRED FOR THE ENGINEERING WORKS IN ACCORDANCE WITH THE RELEVANT LOCAL COUNCIL WORKS SPECIFICATION.
- SEDIMENT MEASURES SHALL BE IMPLEMENTED PRIOR TO SOIL DISTURBANCE IN KEEPING WITH THE 4th EDITION OF LANDCOM'S "SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER" MARCH 2004 TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE AND AS SHOWN IN THESE DRAWINGS.
- THE CONTRACTOR SHALL CLEAR AND DISPOSE OF ONLY THOSE TREES THAT ARE CONDEMNED BY THE PLANS. COUNCIL'S TREE PRESERVATION ORDER SHALL BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT PRIOR APPROVAL OF COUNCIL.

ROADWORKS NOTES

- GUIDE POSTS SHALL BE INSTALLED TO COUNCIL SPECIFICATION.
- ERECT STREET NAME SIGNS, CONDUIT WARNING SIGNS AND NO THROUGH ROAD SIGNS WHERE SHOWN OR WHERE DIRECTED BY COUNCIL'S REPRESENTATIVE.
- THE CONTRACTOR SHALL UNDERTAKE TRAFFIC CONTROL MEASURES TO THE COUNCIL'S SATISFACTION AND SHALL DISPLAY ALL APPROPRIATE WARNING SIGNS THROUGHOUT THE DURATION OF CONSTRUCTION.
- UNSATURATED MATERIALS AS DETERMINED BY THE COUNCIL'S REPRESENTATIVE SHALL BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING.
- PROVIDE VEHICULAR ENTRIES IN KERB AND GUTTER WHERE SHOWN OR DIRECTED BY THE SUPERINTENDENT.

EARTHWORKS NOTES

- CARE IS TO BE TAKEN DURING THE CONSTRUCTION OF THE PROPOSED WORKS TO ENSURE NATURAL VEGETATION AND TOPOGRAPHY ON THE SUBJECT SITE IS NOT UNNECESSARILY DISTURBED. ANY EXCAVATION MATERIAL NOT USED IN THE CONSTRUCTION OF THE SUBJECT WORKS IS TO BE REMOVED FROM THE SITE AND UNDER NO CIRCUMSTANCES IS TO BE DEPOSITED IN BUSHLAND AREAS.
- COUNCIL MUST BE NOTIFIED OF ANY DAMAGE TO THE PUBLIC INFRASTRUCTURE SUCH AS ROAD PAVEMENT, KERB AND GUTTER, CONCRETE FOOTPATHS, DRAINAGE STRUCTURES, UTILITIES AND LANDSCAPING FRONTING THE DEVELOPMENT.
- UNSATURATED MATERIALS AS DETERMINED BY COUNCIL'S REPRESENTATIVE SHALL BE REMOVED FROM ROADS AND LOTS PRIOR TO ANY FILLING.
- ALL SITE REGRADE AREAS SHALL BE GRADED TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE. THE CONTRACTOR SHALL TAKE LEVELS ON THE EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING ANY FILL OPERATIONS.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED OR DISPOSED OF IN ACCORDANCE WITH THE CONTRACT, OR AS DIRECTED BY THE SUPERINTENDENT.
- ALL SITE FILLING SHALL BE PLACED IN LAYERS NOT EXCEEDING COUNCILS AND GEOTECH REQUIREMENTS. FILL IS TO BE COMPACTED IN ACCORDANCE WITH GEOTECH SPECIFICATIONS AND BE TESTED AT THE REQUIRED INTERVALS BY AN APPROVED N.A.T.A. GEOTECHNICAL LABORATORY.
- MINIMUM 75mm THICK TOPSOIL SHALL BE SPREAD ON ALL BERMS, BATTERS AND SITE REGRADE AREAS. EXCESS TOPSOIL SHALL BE DISPOSED OF AS DIRECTED BY THE SUPERINTENDENT.
- ALL LAND DISTURBED BY EARTHWORKS SHALL BE TURFED TO ESTABLISH GRASS COVER. SEED MIXTURES ARE TO BE APPROVED BY COUNCIL PRIOR TO SPRAYING. ALL GRASSED AREAS SHALL BE REGULARLY WATERED AND MAINTAINED UNTIL EXPIRATION OF THE MAINTENANCE PERIOD.
- THE DISPOSAL / LANDFILL OF SURPLUS EXCAVATED MATERIAL, OTHER THAN TO A DECC LICENSED FACILITY, IS NOT PERMITTED WITHOUT FORMAL APPROVAL FROM COUNCIL PRIOR TO THE COMMENCEMENT OF WORKS. ANY UNAUTHORIZED DISPOSAL OF WASTE, WHICH INCLUDES EXCAVATED MATERIAL, IS A BREACH OF THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997 AND SUBJECT TO SUBSTANTIAL PENALTIES. UNLESS COUNCIL APPROVES AN ALTERNATIVE SITE, THEN ALL SURPLUS MATERIAL MUST BE DISPOSED OF AT A LICENSED WASTE FACILITY. COPIES OF ACTUAL WEIGHBRIDGE RECEIPTS VERIFYING RECYCLING / DISPOSAL MUST BE KEPT AND PRESENTED TO COUNCIL WHEN REQUIRED.
- THE ONLY WASTE DERIVED FILL MATERIAL THAT MAY BE RECEIVED AT THE DEVELOPMENT SITE IS: a) VIRGIN EXCAVATED NATURAL MATERIAL OR b) ANY OTHER WASTE-DERIVED MATERIAL THE SUBJECT OF A RESOURCE RECOVERY UNDER CLAUSE 51A OF THE PROTECTION OF THE ENVIRONMENT OPERATIONS (WASTE) REGULATION 2005 THAT IS PERMITTED TO BE USED AS FILL MATERIAL. ANY WASTE-DERIVED MATERIAL THE SUBJECT OF A RESOURCE RECOVERY EXEMPTION RECEIVED AT THE DEVELOPMENT SITE MUST BE ACCOMPANIED BY DOCUMENTATION AS TO THE MATERIAL'S COMPLIANCE WITH THE EXEMPTION CONDITIONS AND MUST BE PROVIDED TO THE PRINCIPAL CERTIFYING AUTHORITY ON REQUEST.

SERVICE NOTES

- THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST.
- BARKER RYAN STEWART DOES NOT ACCEPT ANY LIABILITY FOR INACCURACIES IN THE SERVICE INFORMATION SHOWN.
- THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO THE ADJOINING PROPERTIES.
- CARE SHALL BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION SHALL BE MADE OVER TELSTRA OR ELECTRICAL SERVICES, EXCAVATE BY HAND ONLY IN THESE AREAS.

ROADWORKS NOTES

- THE CONTRACTOR SHALL UNDERTAKE TRAFFIC CONTROL MEASURES TO COUNCIL'S SATISFACTION AND SHALL DISPLAY ALL APPROPRIATE WARNING SIGNS THROUGHOUT THE DURATION OF CONSTRUCTION.
- UNSATURATED MATERIALS AS DETERMINED BY THE COUNCIL'S REPRESENTATIVE SHALL BE REMOVED PRIOR TO FILLING.

DRAINAGE NOTES

- ALL PITS DEEPER THAN 1.2m SHALL HAVE STEP IRONS PROVIDED IN ACCORDANCE WITH COUNCIL'S STANDARDS.
- ALL DRAINAGE LINES SHALL BE BACKFILLED WITH SHARP SAND AND HAVE 30m OF AGRICULTURAL LINE WRAPPED IN AN APPROVED FILTER FABRIC, DISCHARGING INTO THE DOWNSTREAM PIT.
- SUBSOIL DRAINS SHALL BE CONSTRUCTED TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE.
- PRECAST KERB INLET LINTELS SHALL BE USED ON GULLY PITS. GRATES SHALL BE "WELDLOK" TYPE G5000 OR APPROVED EQUIVALENT.
- ON COMPLETION OF PIPE INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSED AREAS AND ROAD PAVEMENTS.
- TRENCH WIDTHS ARE TO BE KEPT TO A MINIMUM, CONSISTENT WITH LAYING AND BEDDING OF THE RELEVANT SERVICE AND CONSTRUCTION PERSONNEL ACCESS WAYS AND PITS. REFER TO AUTHORITIES STANDARDS FOR MINIMUM TRENCH WIDTHS. STANDARD TRENCH WIDTHS AND THE DIMENSIONS OF UNSUPPORTED TRENCHES. SUPPORT EXCAVATIONS TO THE REQUIREMENTS OF THE CONSTRUCTION SAFETY REGULATIONS 1950, UNDER THE CONSTRUCTION SAFETY ACT 1952 (AS AMENDED).
- PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AS3500.3.2003 PLUMBING AND DRAINAGE - STORMWATER DRAINAGE STANDARD UNLESS OTHERWISE SPECIFIED BY THE LOCAL COUNCIL OR AUTHORITY.
- PIT SIZES IN ACCORDANCE WITH AS3500.3.2003 AND/OR COUNCIL REQUIREMENTS.
- IF A PIT IS SHOWN ON THE KERB ALIGNMENT IT IS REQUIRED TO BE CONSTRUCTED AS A KERB INLET PIT UNLESS OTHERWISE NOTED.
- BACKFILL TRENCHES IN ACCORDANCE WITH COUNCIL REQUIREMENTS WITHOUT DELAY FOR THE SECTION OF PIPE THAT HAS BEEN COMPLETED AND APPROVED. IF POSSIBLE ON THE SAME WORKING DAY.

STRUCTURAL NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.
- CONCRETE QUALITY SHALL BE AS SPECIFIED AND SHALL BE VERIFIED BY TESTS.
- ALL CONCRETE UNLESS OTHERWISE NOTED SHALL HAVE A SLUMP OF 80mm AT POINT OF PLACEMENT. A MAXIMUM AGGREGATE SIZE OF 20mm AND STRENGTH AS SPECIFIED. NO WATER SHALL BE ADDED TO THE MIX PRIOR TO OR DURING THE PLACEMENT.
- ALL REINFORCEMENT SPECIFIED IS GRADE D500 UNLESS NOTED OTHERWISE.
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- TOP REINFORCEMENT IS TO BE CONTINUOUS ON SUPPORTS. BOTTOM REINFORCEMENT TO BE LAPPED AT SUPPORTS.
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON STRUCTURAL DRAWINGS.
- PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE ZONE OF CONCRETE COVER TO THE REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- ALL REINFORCING BARS AND FABRIC SHALL COMPLY WITH AS4671.
- REINFORCEMENT SYMBOLS:
 - N - GRADE 500H DEFORMED BAR (D500) NORMAL DUCTILITY
 - R - GRADE 250H PLAIN ROUND BAR (R250) NORMAL DUCTILITY
 - SL - GRADE 500L WELDED DEFORMED RIBBED MESH (D500) RECTANGULAR LOW DUCTILITY
 THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE NUMBER OF MILLIMETERS IN THE BAR DIAMETER.
 EXAMPLE:
 8 N12-250 DENOTES 8, GRADE 500H DEFORMED BARS, 12mm DIAMETER AT 250 CTS.
- FABRIC REINFORCEMENT TO BE LAPPED 1 COMPLETE SQUARE + 25mm UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON BAR CHAIRS SPACED AT A MAXIMUM OF 750mm CENTRES BOTH WAYS UNDER THE ROD AND FABRIC REINFORCEMENT. REINFORCEMENT SHALL BE TIED AT ALTERNATIVE INTERSECTIONS.

COUNCIL NOTE

- WORKS CARRIED OUT TO LIVERPOOL CITY COUNCIL'S STANDARDS AND SPECIFICATIONS.

LEGEND

DESCRIPTION	LEGEND	
	EXISTING	PROPOSED
ROOF DRAINAGE LINE		
DRAINAGE LINE		
CONTOUR		
FIELD INLET		
JUNCTION PIT		
HEADWALL		
PIT LABEL (LINE / No)		
SUBSOIL		
150mm KERB & GUTTER		
ROLL KERB		
KERB ONLY		
FLUSH KERB		
RETAINING WALL		
ROAD PAVEMENT		
FOOTPATH		
TREE TO BE REMOVED		
BATTERS		
LIMIT OF WORKS		
ELECTRICITY		
EFFLUENT		
WATER		
COMMUNICATIONS		
TELSTRA		
GAS		
SEWER		
SHALLOW WALE DRAIN		
CATCHMENT BOUNDARY		

REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



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Client:
CHRIS MUSTAFA

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

GENERAL NOTES

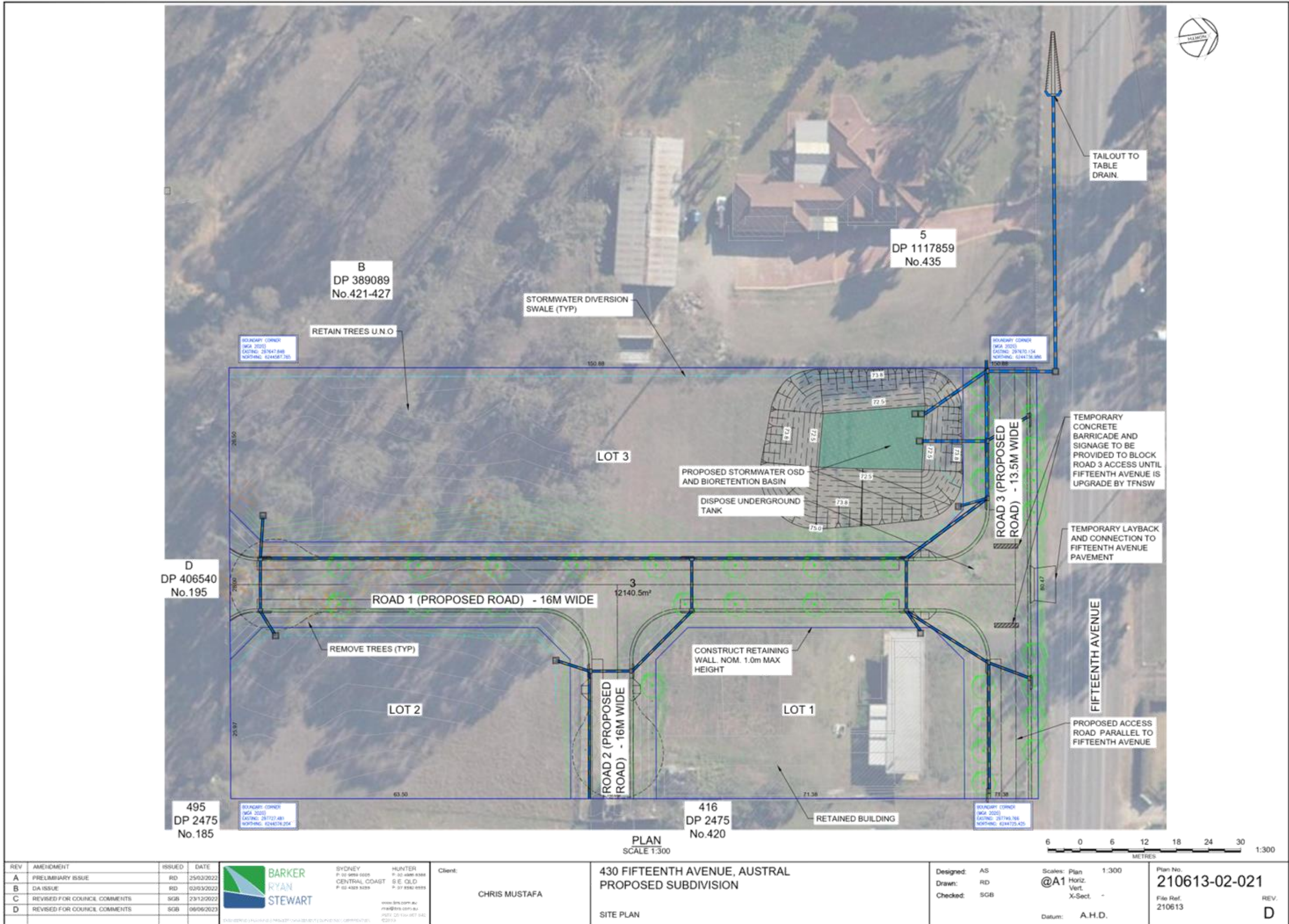
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Checked: SGB

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@A1 Horiz. -
Vert. -
X-Sept. -

Datum: A.H.D.

Plan No.
210613-02-011
File Ref.
210613

REV.
D



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART
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 HUNTER P. 02 4986 6366
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 www.barker-ryan-stewart.com.au
 P:\BARKER\RYAN\BA\157120\15A-RET-242\22013

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

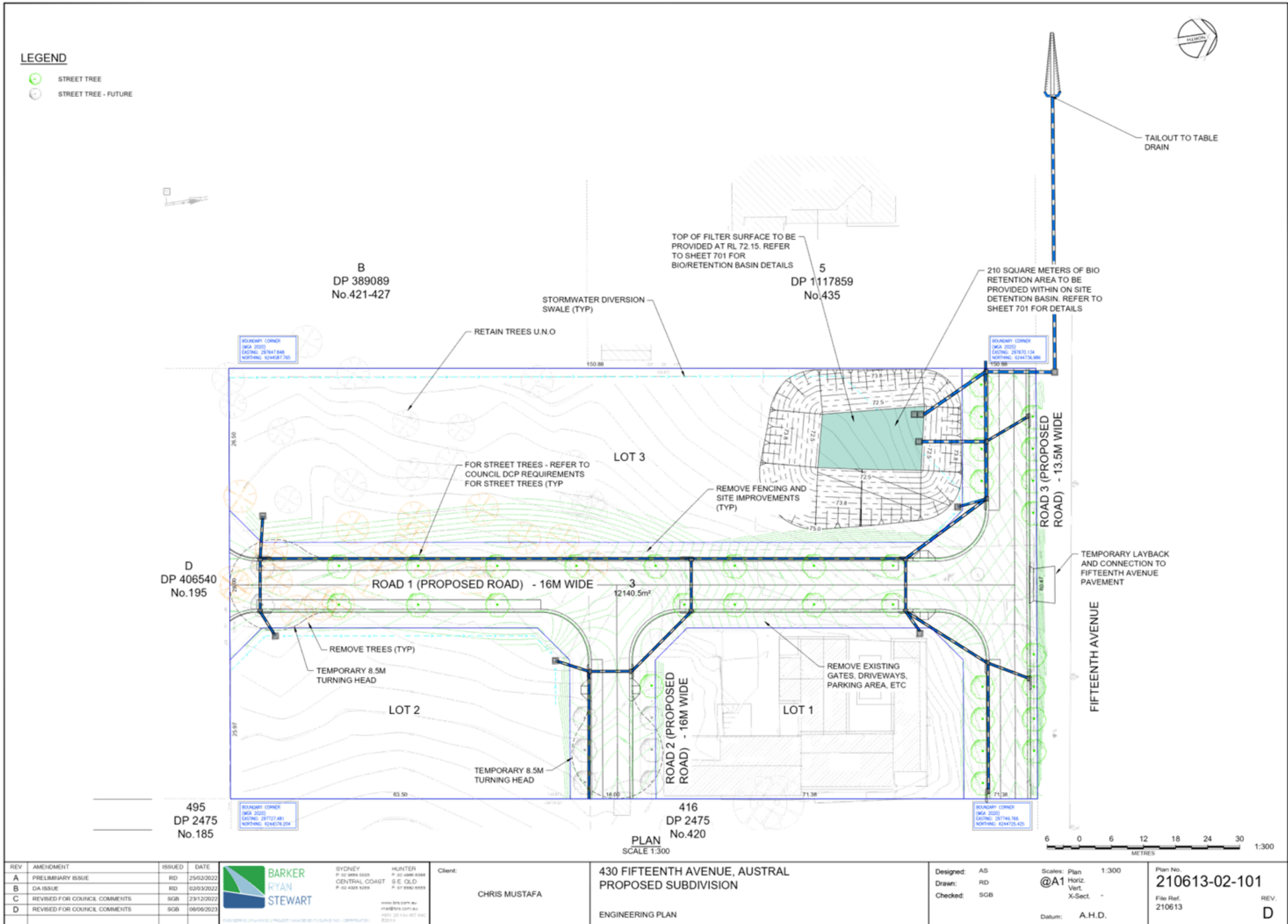
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 Vert. X-Sect. -

Datum: A.H.D.

Plan No. **210613-02-021**
 File Ref. 210613
 REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART

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62013

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

ENGINEERING PLAN

Designed: AS
Drawn: RD
Checked: SGB

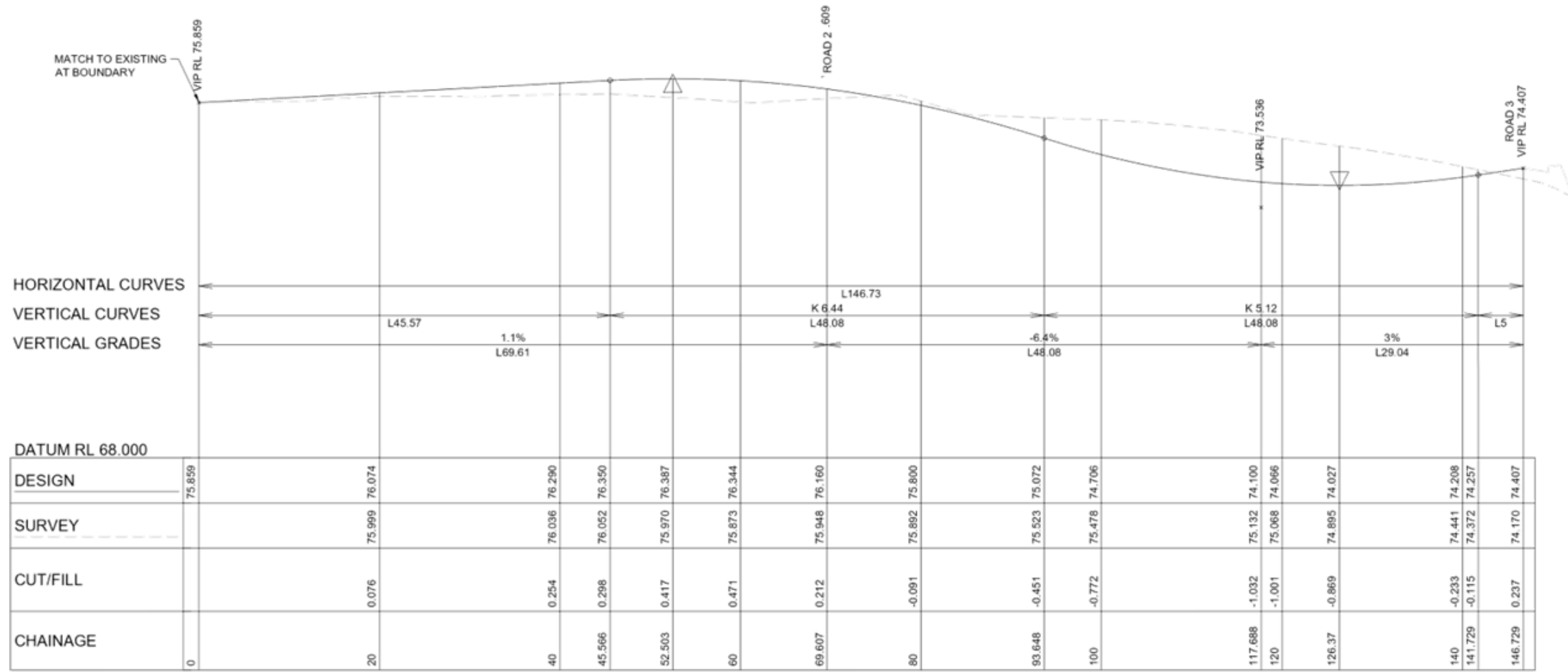
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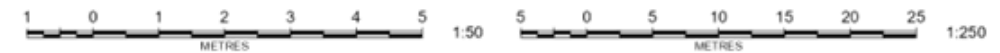
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File Ref. 210613

REV. **D**



MC01 - LONGITUDINAL SECTION
HORZ SCALE 1:250
VERT SCALE 1:50



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
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C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART

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HUNTER P: 02 4986 4369
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02/13

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

ROAD LONGITUDINAL SECTIONS SHEET 1

Designed: AS
Drawn: RD
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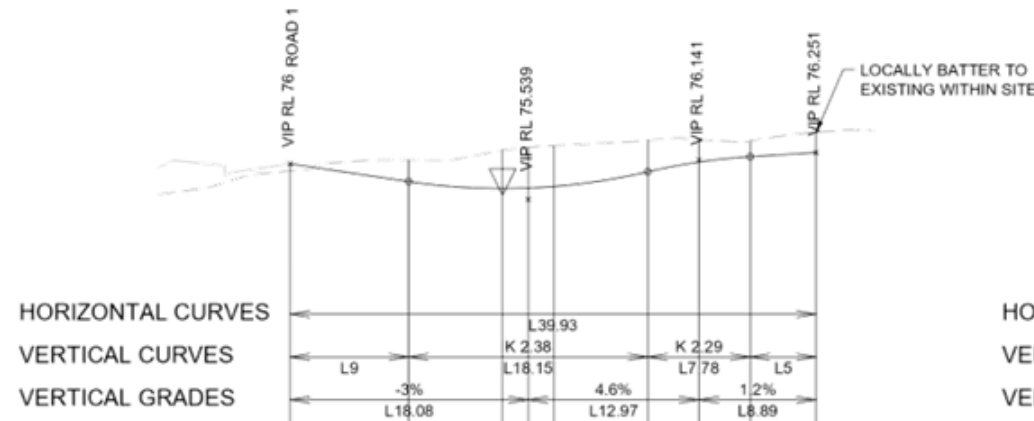
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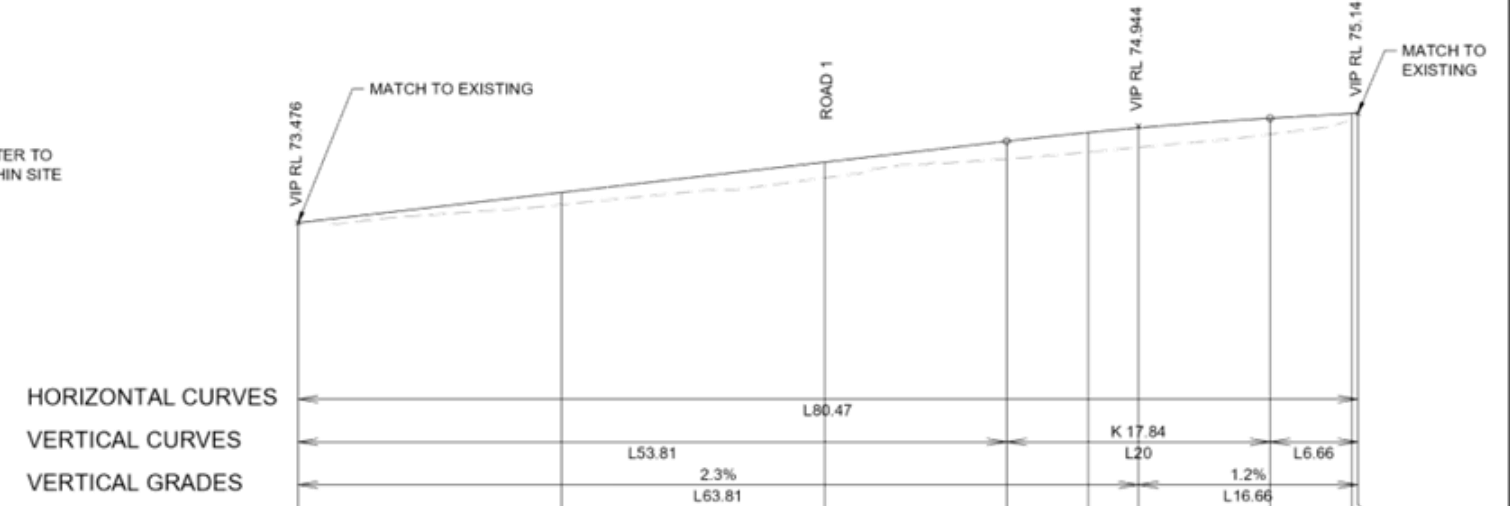
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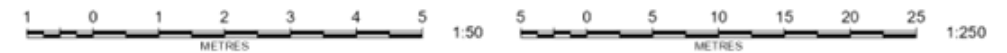
REV. **D**



MC02 - LONGITUDINAL SECTION
HORZ SCALE 1:250
VERT SCALE 1:50



MC03 - LONGITUDINAL SECTION
HORZ SCALE 1:250
VERT SCALE 1:50



REV	AMENDMENT	ISSUED	DATE
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C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

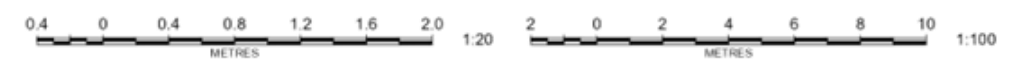
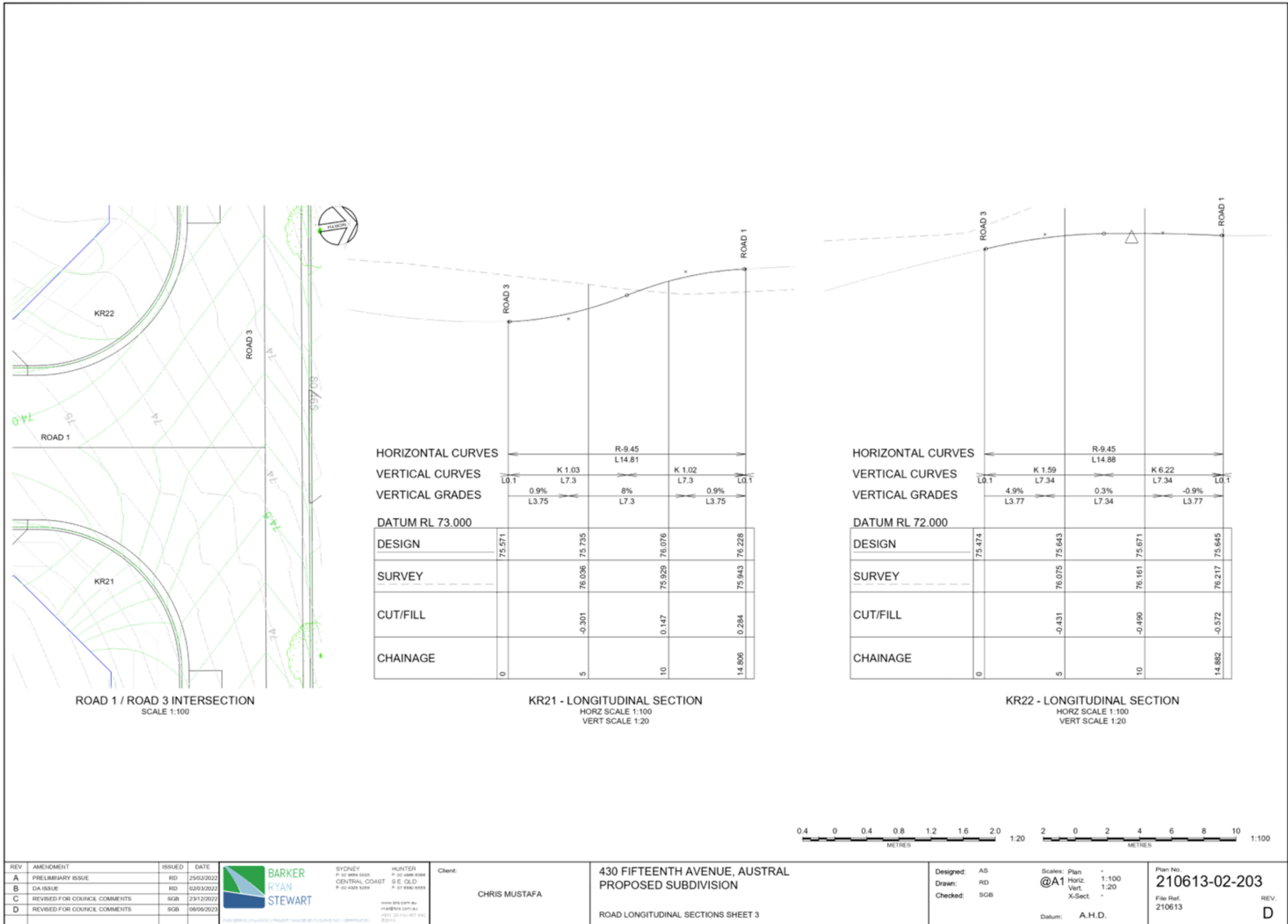
BARKER RYAN STEWART
SYDNEY P: 02 9554 0205
CENTRAL COAST P: 02 4339 5255
HUNTER P: 02 4336 4363
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02/13

Client: **CHRIS MUSTAFA**

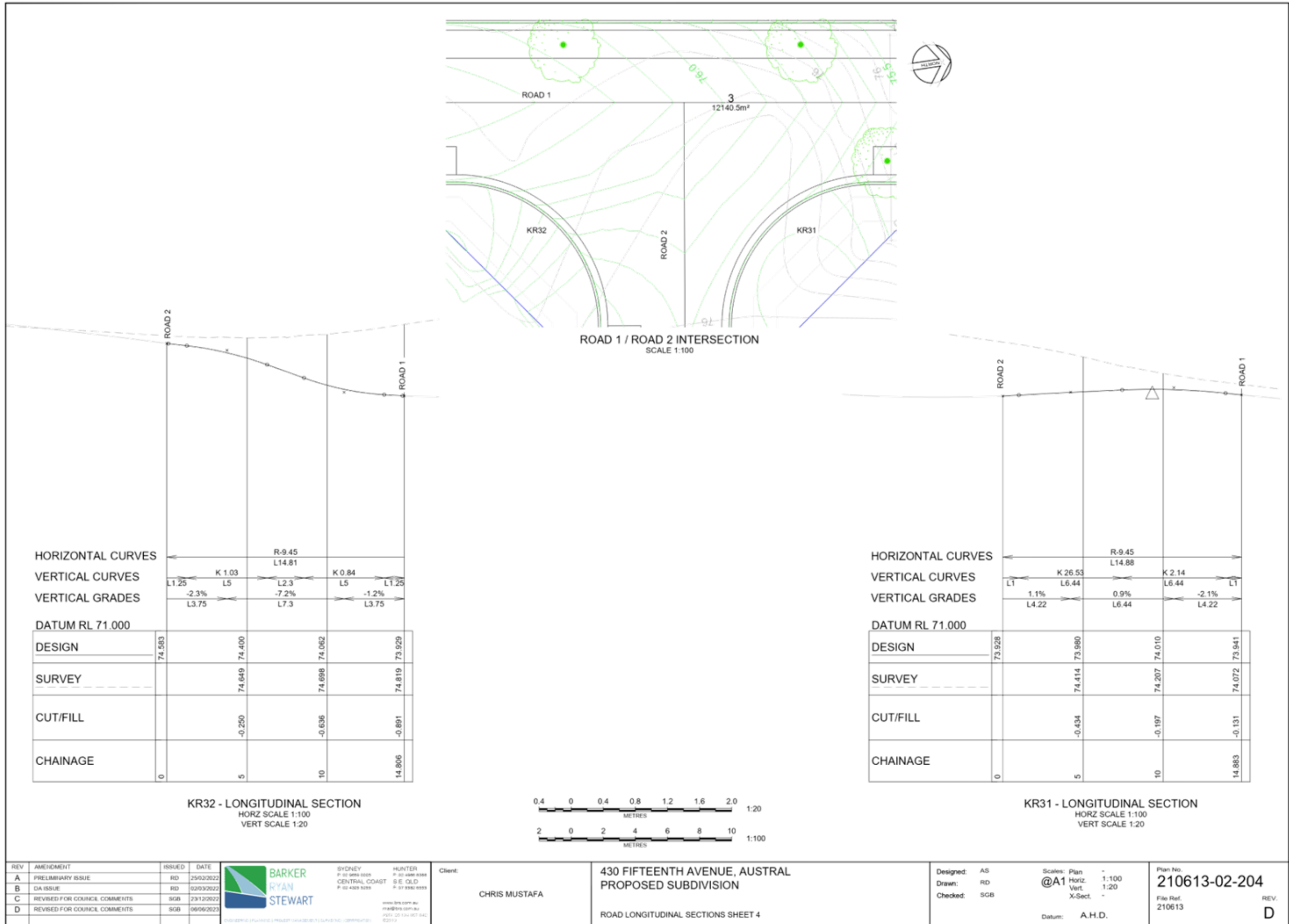
**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**
ROAD LONGITUDINAL SECTIONS SHEET 2

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@A1 Horiz. 1:250
Vert. 1:50
X-Sect. -
Datum: A.H.D.

Plan No. **210613-02-202**
File Ref. 210613
REV. **D**



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HORIZONTAL CURVES
VERTICAL CURVES
VERTICAL GRADES

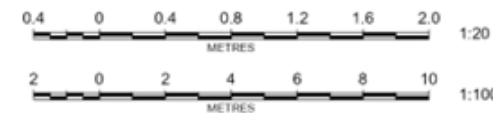
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DESIGN	74.583	74.400	74.062	73.929
SURVEY		74.649	74.698	74.819
CUT/FILL		-0.250	-0.636	-0.891
CHAINAGE	0	5	10	14.806

KR32 - LONGITUDINAL SECTION
HORZ SCALE 1:100
VERT SCALE 1:20

HORIZONTAL CURVES
VERTICAL CURVES
VERTICAL GRADES

DATUM RL 71.000				
DESIGN	73.928	73.980	74.010	73.941
SURVEY		74.414	74.207	74.072
CUT/FILL		-0.434	-0.197	-0.131
CHAINAGE	0	5	10	14.883

KR31 - LONGITUDINAL SECTION
HORZ SCALE 1:100
VERT SCALE 1:20



REV	AMENDMENT	ISSUED	DATE
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C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

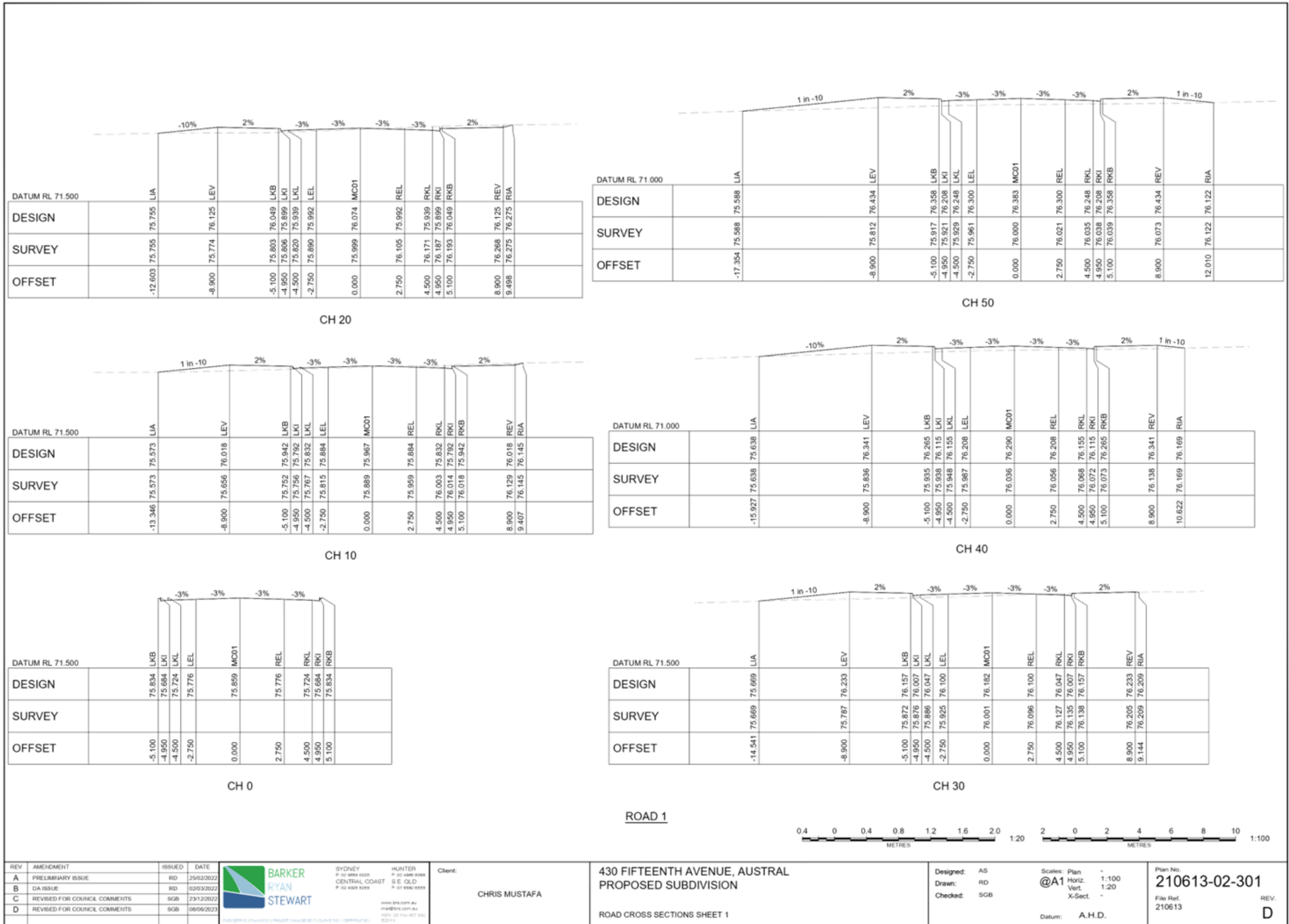
BARKER RYAN STEWART
SYDNEY P: 02 9559 2222
CENTRAL COAST P: 02 4329 5255
HUNTER P: 02 4995 4369
S.E. QLD P: 07 5392 8553
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174-181/183-185, 187-191
10/11-20/13A-187/191C
6201/3

Client: **CHRIS MUSTAFA**

430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION
ROAD LONGITUDINAL SECTIONS SHEET 4

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. 1:100
Vert. 1:20
X-Sect. -
Datum: A.H.D.

Plan No. **210613-02-204**
File Ref. 210613
REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

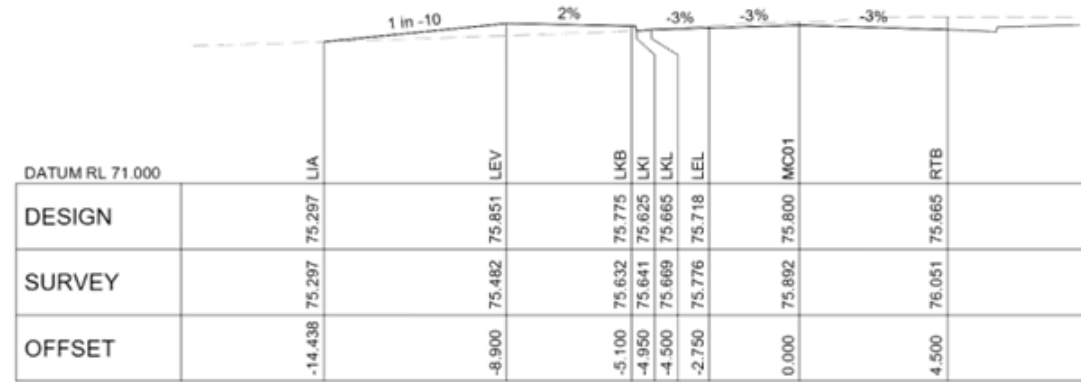
BARKER RYAN STEWART
SYDNEY P. 02 9554 0200
CENTRAL COAST P. 02 4333 5255
HUNTER P. 02 4885 4388
S.E. OLD P. 07 5382 0533
www.brs.com.au
72-82/15-020-02
REV. 20/10/2023
02013

Client: **CHRIS MUSTAFA**

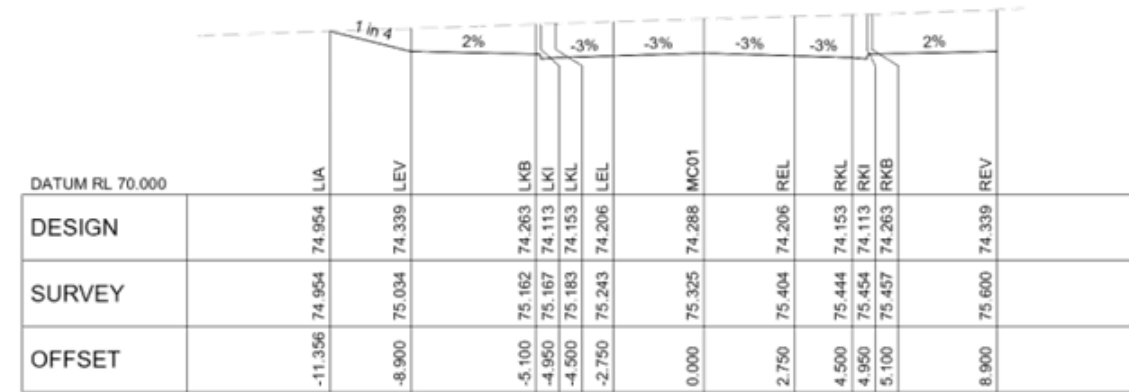
**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**
ROAD CROSS SECTIONS SHEET 1

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. 1:100
Vert. 1:20
X-Sept. -
Datum: A.H.D.

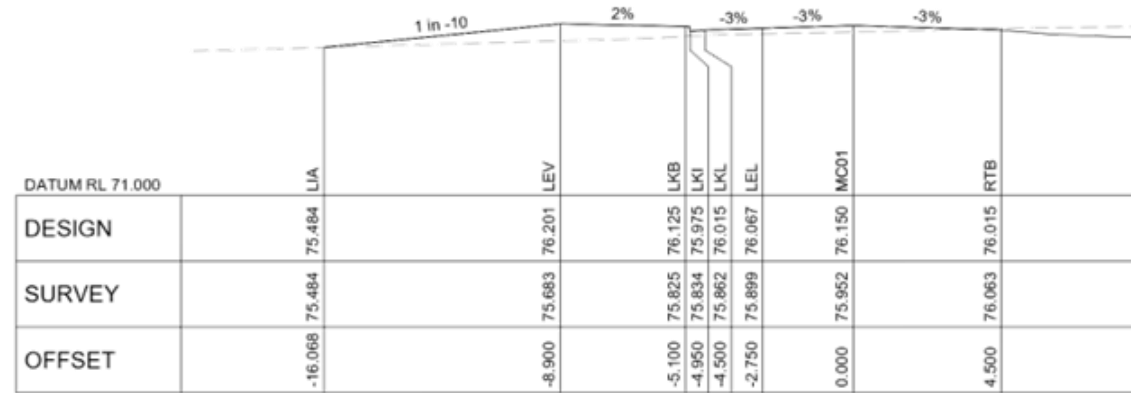
Plan No. **210613-02-301**
File Ref. **210613**
REV. **D**



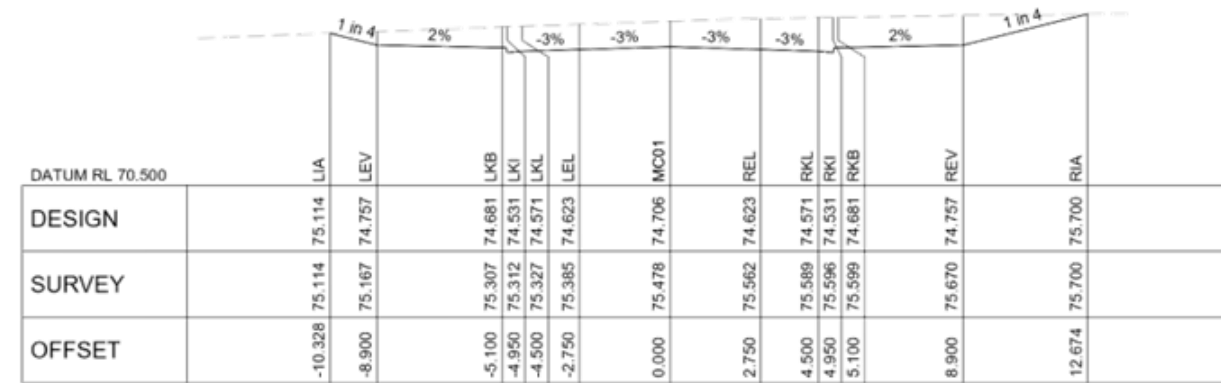
CH 80



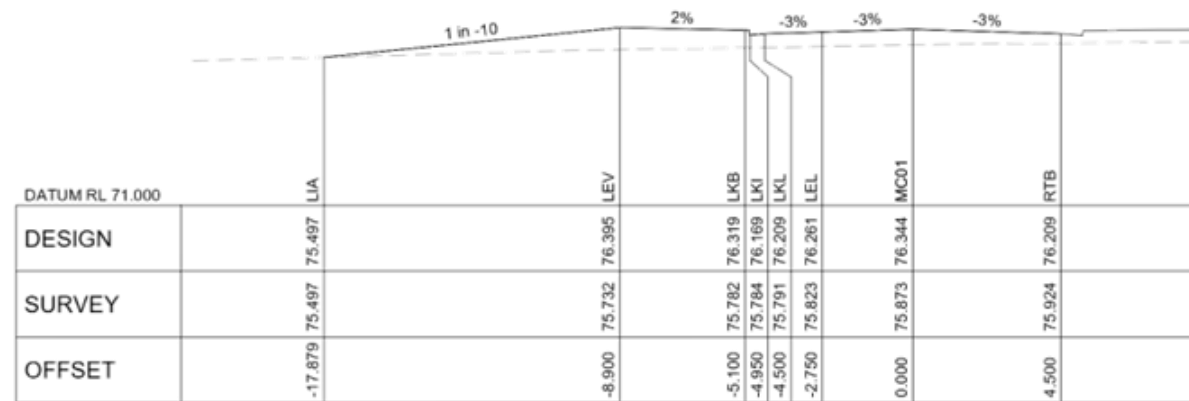
CH 110



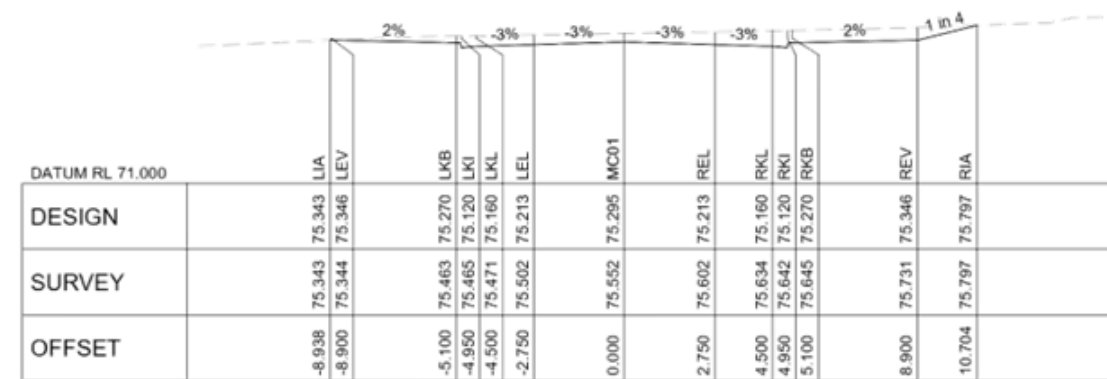
CH 70



CH 100



CH 60



CH 90

ROAD 1



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



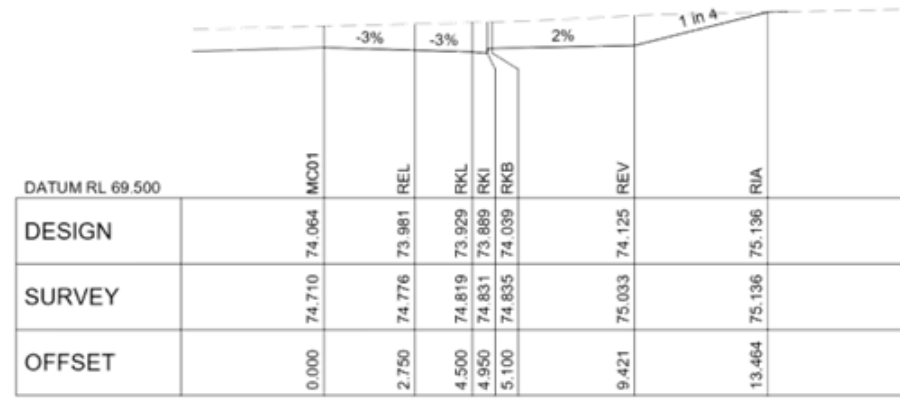
SYDNEY P: 02 9554 0200
CENTRAL COAST P: 02 4339 5295
HUNTER P: 02 4986 0369
S.E. QLD P: 07 5392 0513

Client: CHRIS MUSTAFA

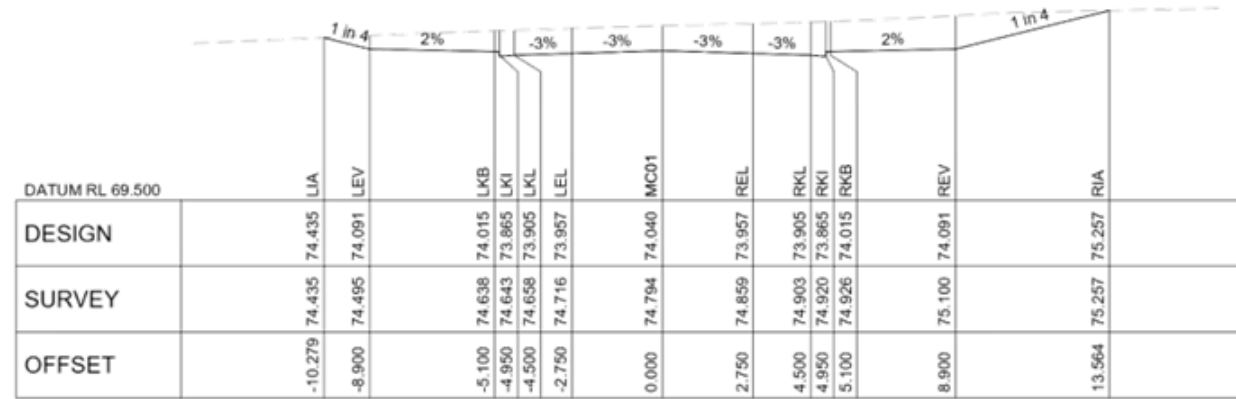
430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION
ROAD CROSS SECTIONS SHEET 2

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. 1:100
Vert. 1:20
X-Sept. -
Datum: A.H.D.

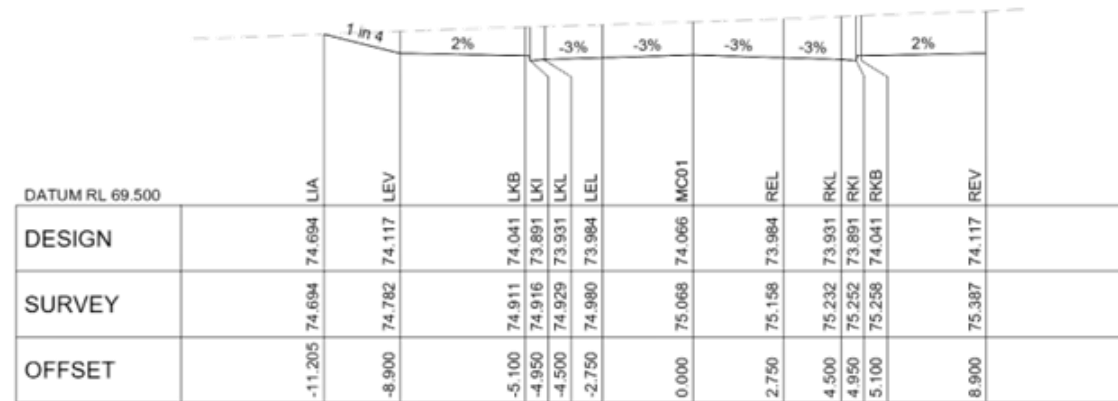
Plan No. 210613-02-302
File Ref. 210613
REV. D



CH 132.536



CH 130



CH 120

ROAD 1



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



SYDNEY
P. 02 9554 0200
CENTRAL COAST
P. 02 4329 5255

HUNTER
P. 02 4985 4369
S.E. QLD
P. 07 5362 0513

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02/13

Client:
CHRIS MUSTAFA

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

ROAD CROSS SECTIONS SHEET 3

Designed: AS
Drawn: RD
Checked: SGB

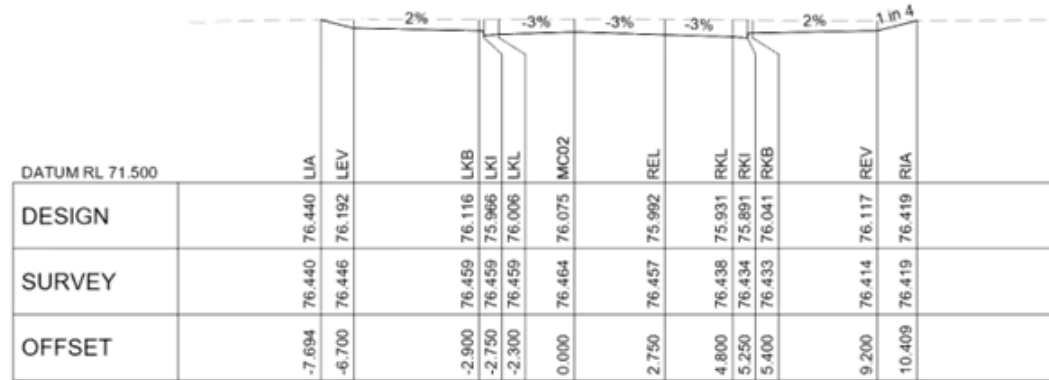
Scales: Plan -
@A1 Horiz. 1:100
Vert. 1:20
X-Sect. -

Datum: A.H.D.

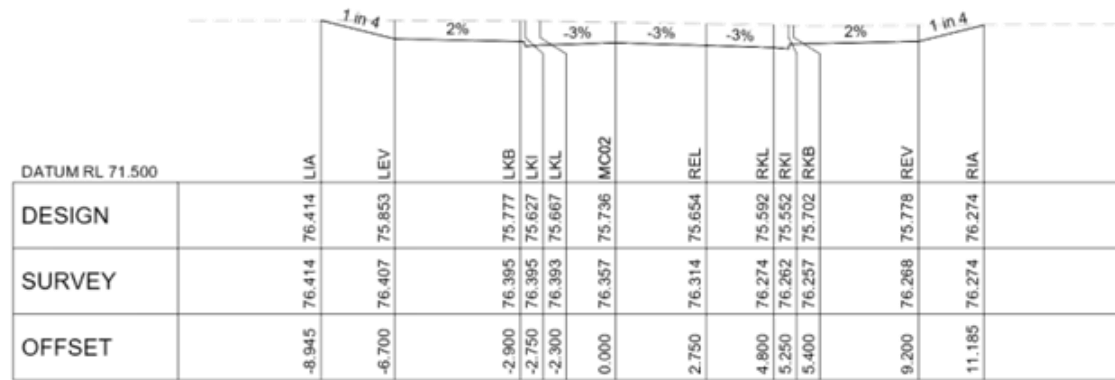
Plan No.
210613-02-303

File Ref.
210613

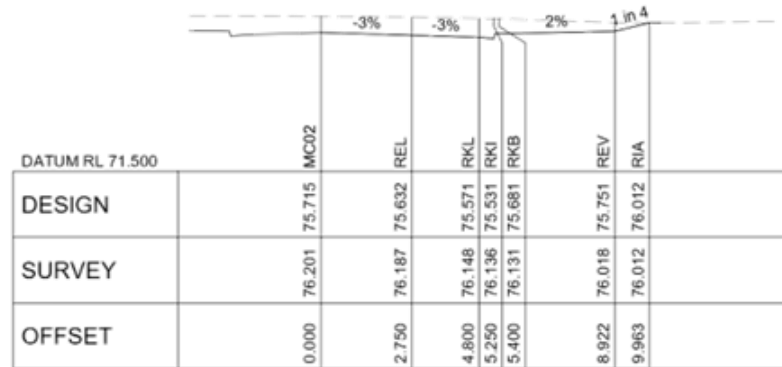
REV.
D



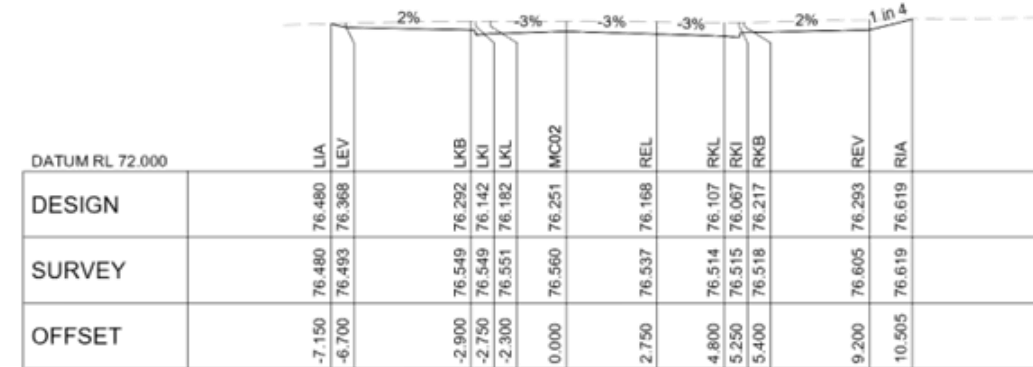
CH 30



CH 20



CH 13.892



CH 39.931

ROAD 2



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



SYDNEY
P. 02 9554 2022
CENTRAL COAST
P. 02 4329 5229

HUNTER
P. 02 4985 4333
S.E. QLD
P. 07 5392 0533

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174-181-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

Client: CHRIS MUSTAFA

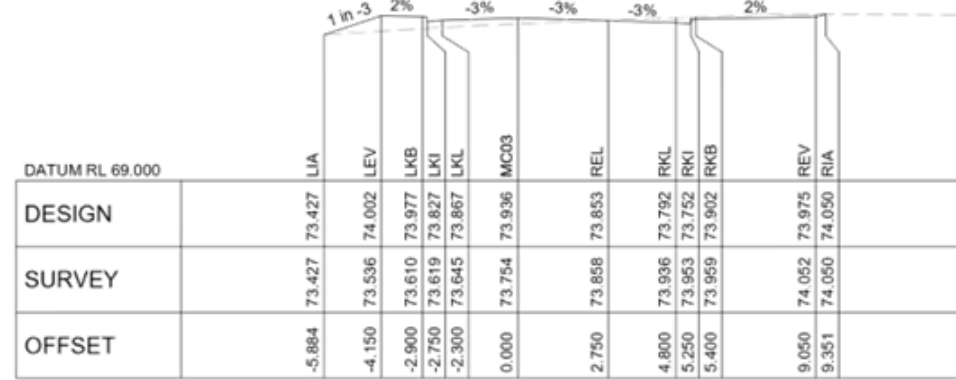
430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION

ROAD CROSS SECTIONS SHEET 4

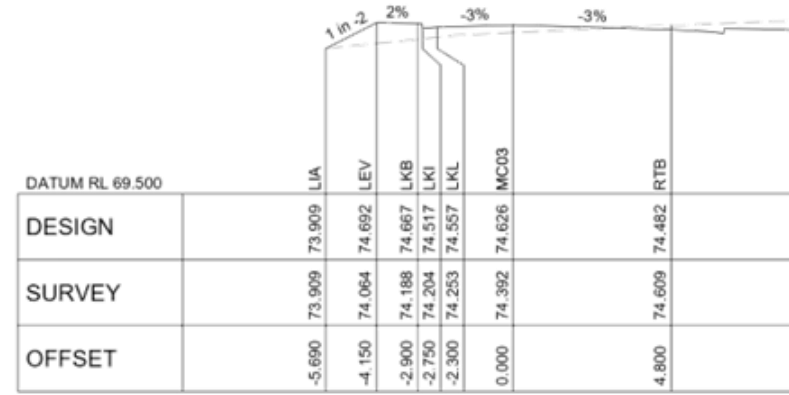
Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:250
@A1 Horiz 1:100
Vert 1:20
X-Sect -
Datum: A.H.D.

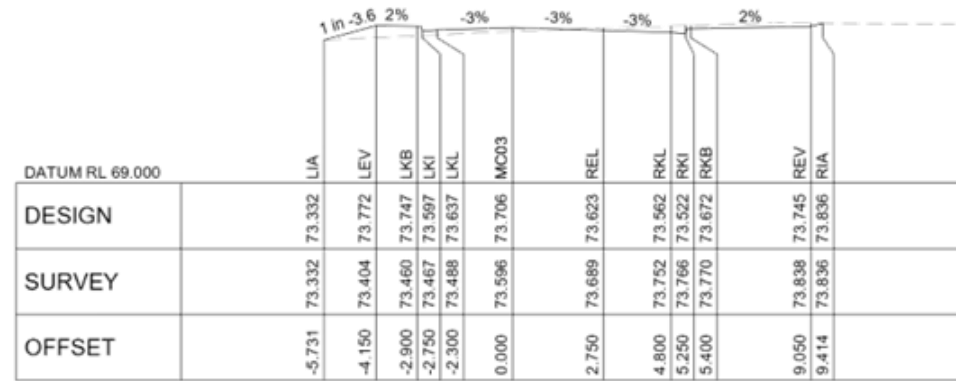
Plan No. 210613-02-304
File Ref. 210613
REV. D



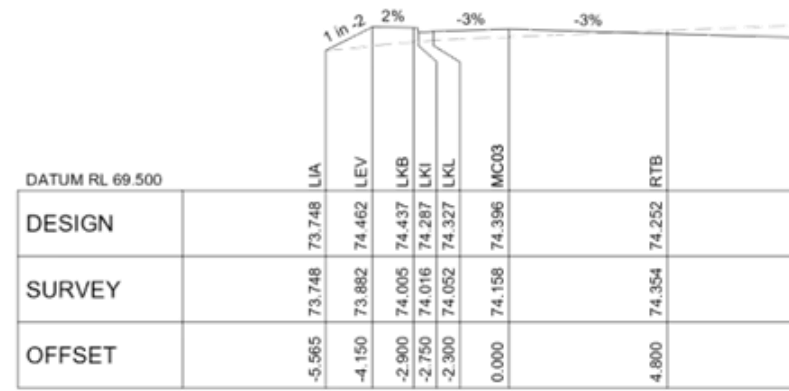
CH 20



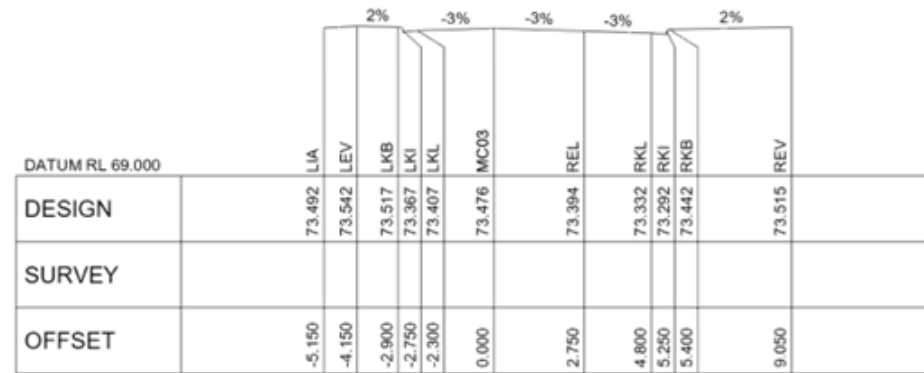
CH 50



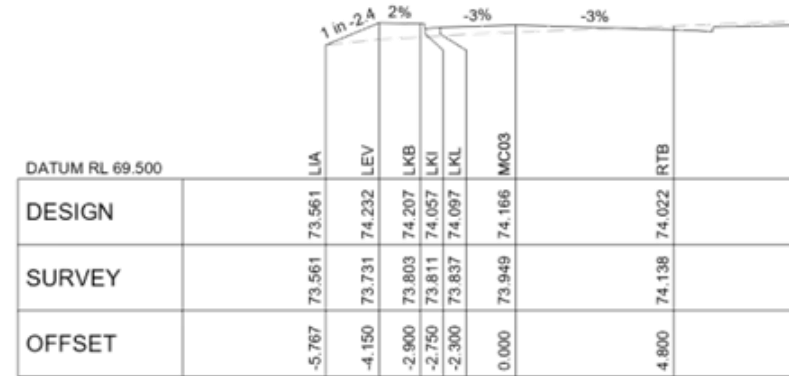
CH 10



CH 40



CH 0



CH 30

ROAD 3



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART
SYDNEY P: 02 9554 0200
CENTRAL COAST P: 02 4329 5295
HUNTER P: 02 4985 4369
S.E. QLD P: 07 5362 0553

Client: **CHRIS MUSTAFA**

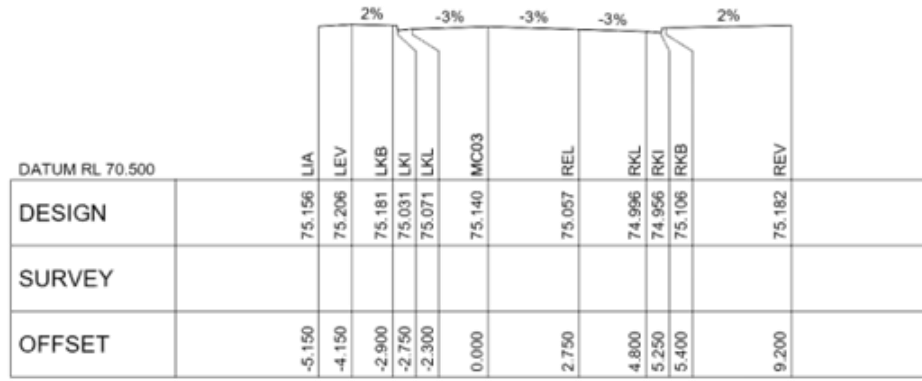
**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

ROAD CROSS SECTIONS SHEET 5

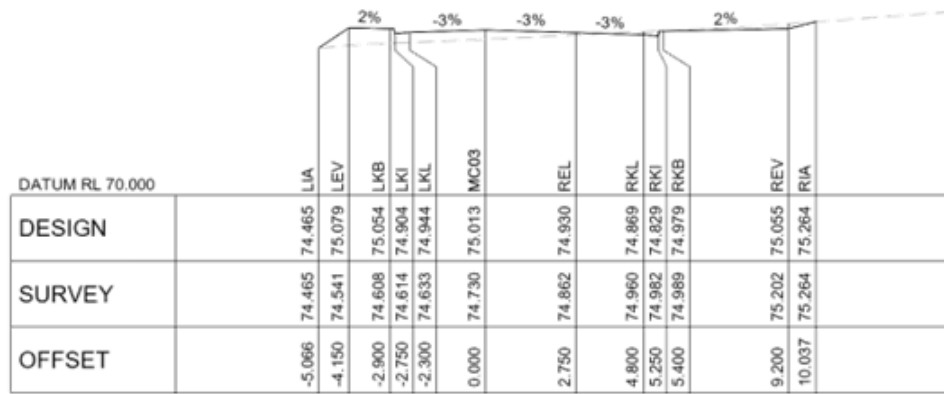
Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:250
@A1 Horiz 1:100
Vert 1:20
X-Sect -
Datum: A.H.D.

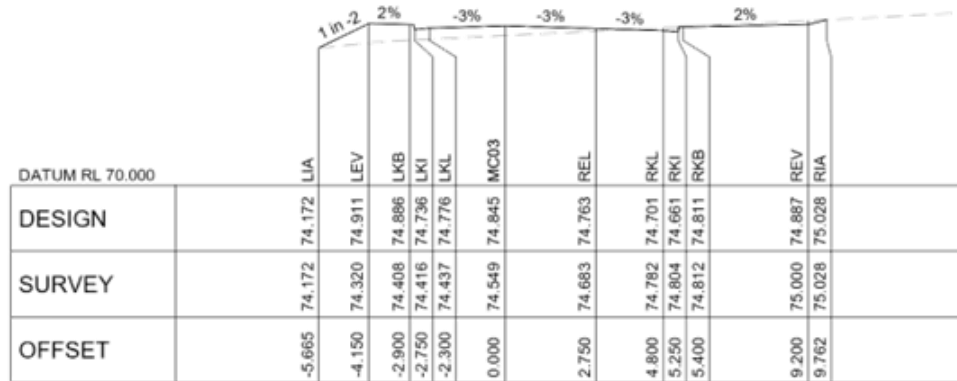
Plan No. **210613-02-305**
File Ref. 210613
REV. **D**



CH 80.467



CH 70



CH 60

ROAD 3



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART

SYDNEY P: 02 9554 0205
CENTRAL COAST P: 02 4329 5255

HUNTER P: 02 4985 0369
S.E. QLD P: 07 5362 0553

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Client: **CHRIS MUSTAFA**

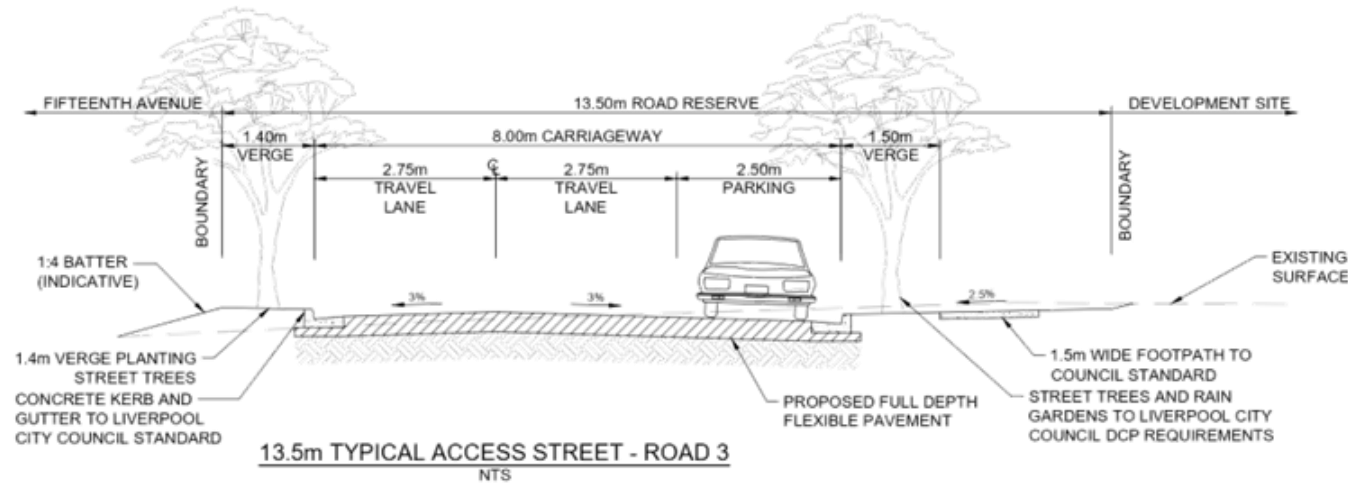
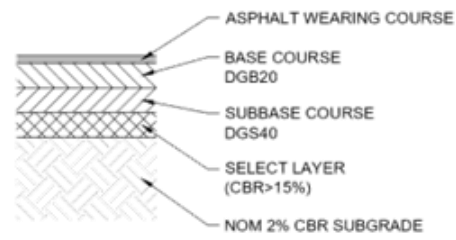
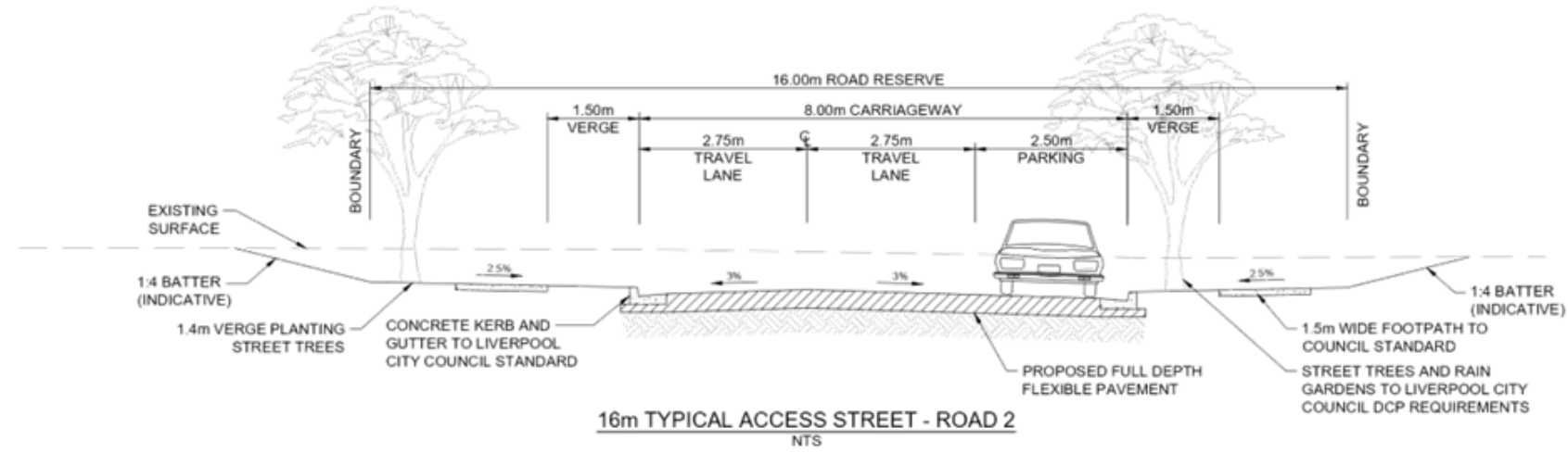
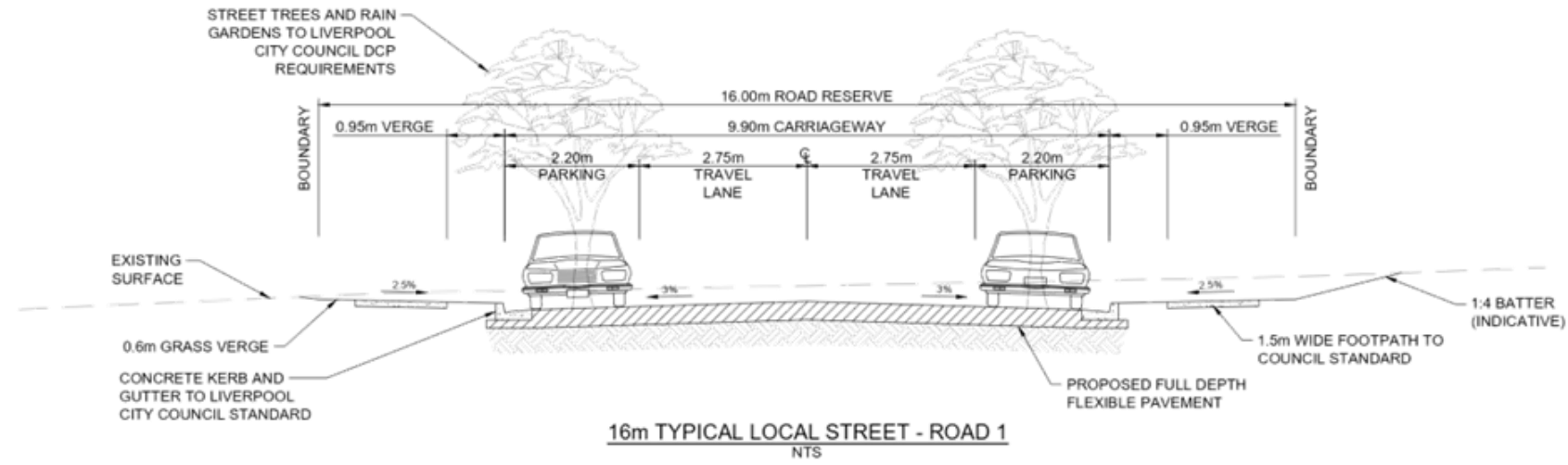
**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

ROAD CROSS SECTIONS SHEET 6

Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:250
@A1 Horiz 1:100
Vert 1:20
X-Sect -
Datum: A.H.D.

Plan No. **210613-02-306**
File Ref. 210613
REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



SYDNEY P: 02 9554 0205
CENTRAL COAST P: 02 4329 5295
HUNTER P: 02 4986 4369
S.E. QLD P: 07 5362 0513

Client: CHRIS MUSTAFA

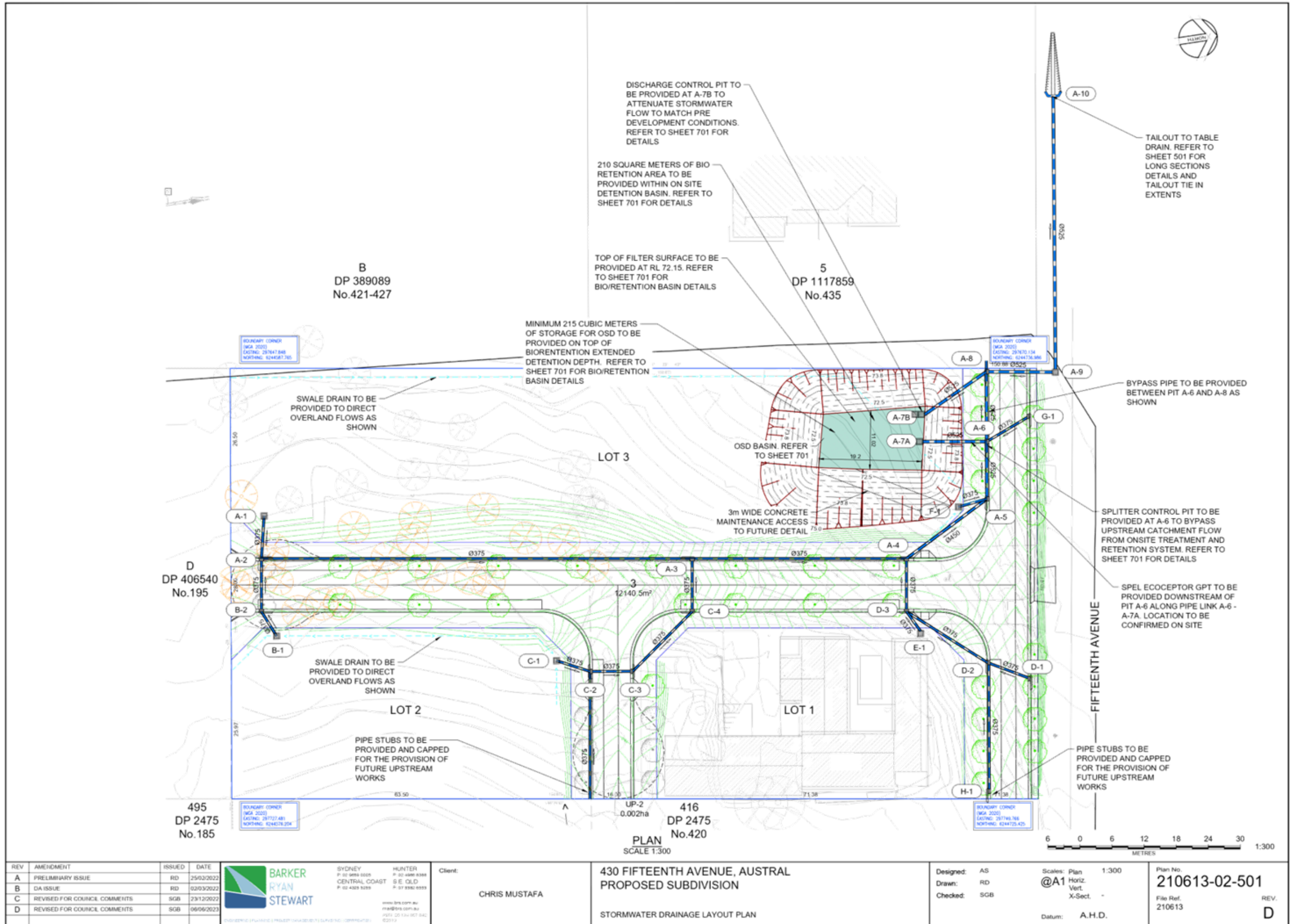
430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION
TYPICAL SECTIONS AND DETAILS

Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -

Datum: A.H.D.

Plan No. 210613-02-311
File Ref. 210613
REV. D





EXISTING WATER QUALITY CATCHMENT PLAN
SCALE 1:500



PROPOSED WATER QUALITY CATCHMENT PLAN
SCALE 1:500



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGR	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGR	06/06/2023



BARKER RYAN STEWART
SYDNEY P: 02 9554 0205
CENTRAL COAST P: 02 4329 5329
HUNTER P: 02 4946 4369
S.E. QLD P: 07 5562 6559
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174 St Georges Street, St. George
NSW 2250 (401 387 340)
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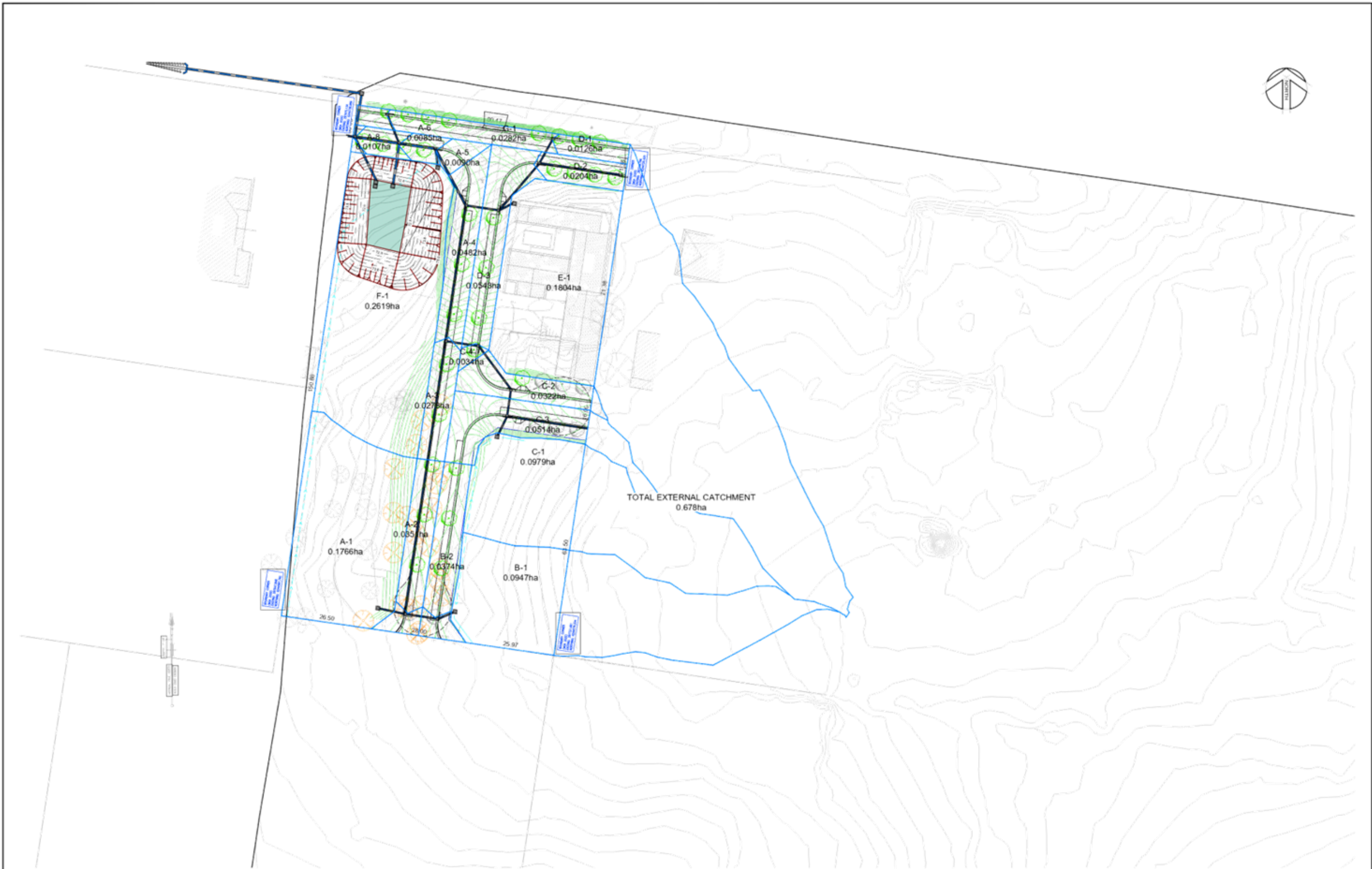
Client: **CHRIS MUSTAFA**

430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION
WATER QUALITY CATCHMENT PLAN

Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:500
@A1 Horiz.
Vert.
X-Sept. -
Datum: A.H.D.

Plan No. **210613-02-505**
File Ref. 210613
REV. **D**



PLAN
SCALE 1:750



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGR	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGR	06/06/2023

BARKER RYAN STEWART

SYDNEY P: 02 9554 0200
CENTRAL COAST P: 02 4322 5355

HUNTER P: 02 4945 4300
S.E. QLD P: 07 5362 0500

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Client: CHRIS MUSTAFA

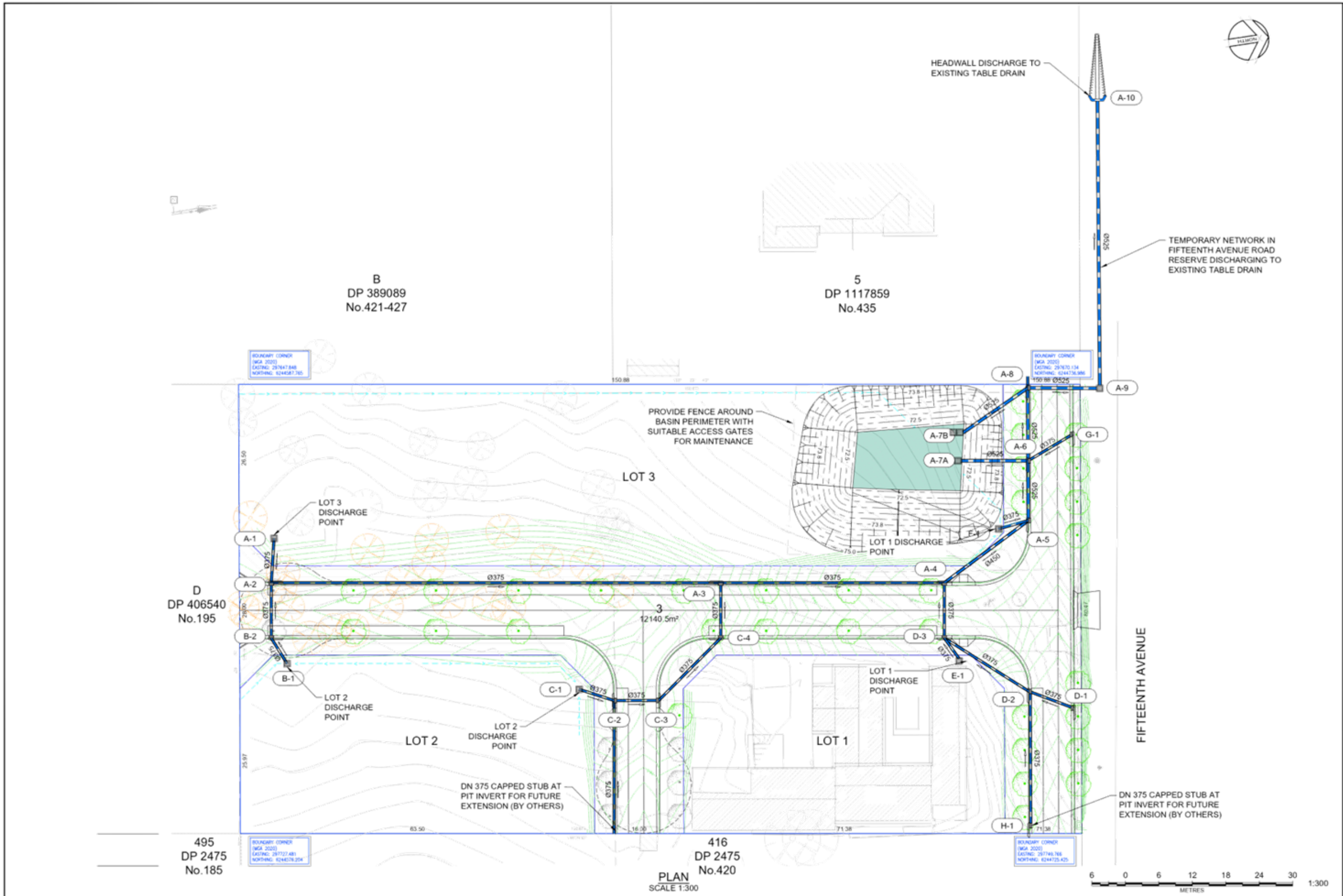
430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION

EXTERNAL CATCHMENT PLAN

Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:750
@A1 Horiz.
Vert. -
X-Sect. -
Datum: A.H.D.

Plan No. 210613-02-506
File Ref. 210613
REV. D



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART

SYDNEY P. 02 9559 5225
CENTRAL COAST P. 02 4329 5225

HUNTER P. 02 4996 6369
S.E. QLD P. 07 5362 0553

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174@brs.com.au
15/11 20 134 307 310
02013

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

STORMWATER MANAGEMENT PLAN

Designed: AS
Drawn: RD
Checked: SGB

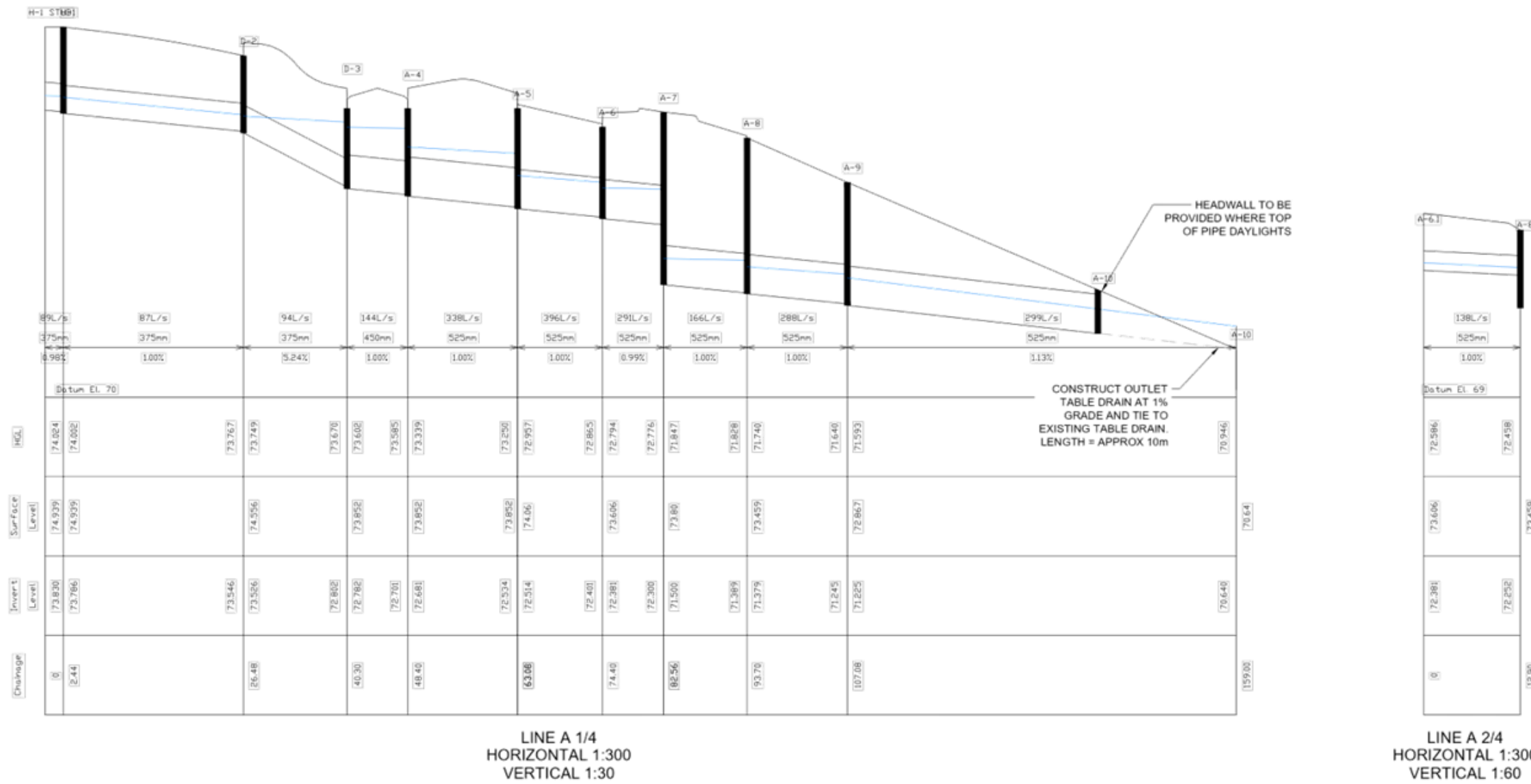
Scales: Plan 1:300
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Vert. X-Sect. -

Datum: A.H.D.

Plan No. **210613-02-511**

File Ref. 210613

REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

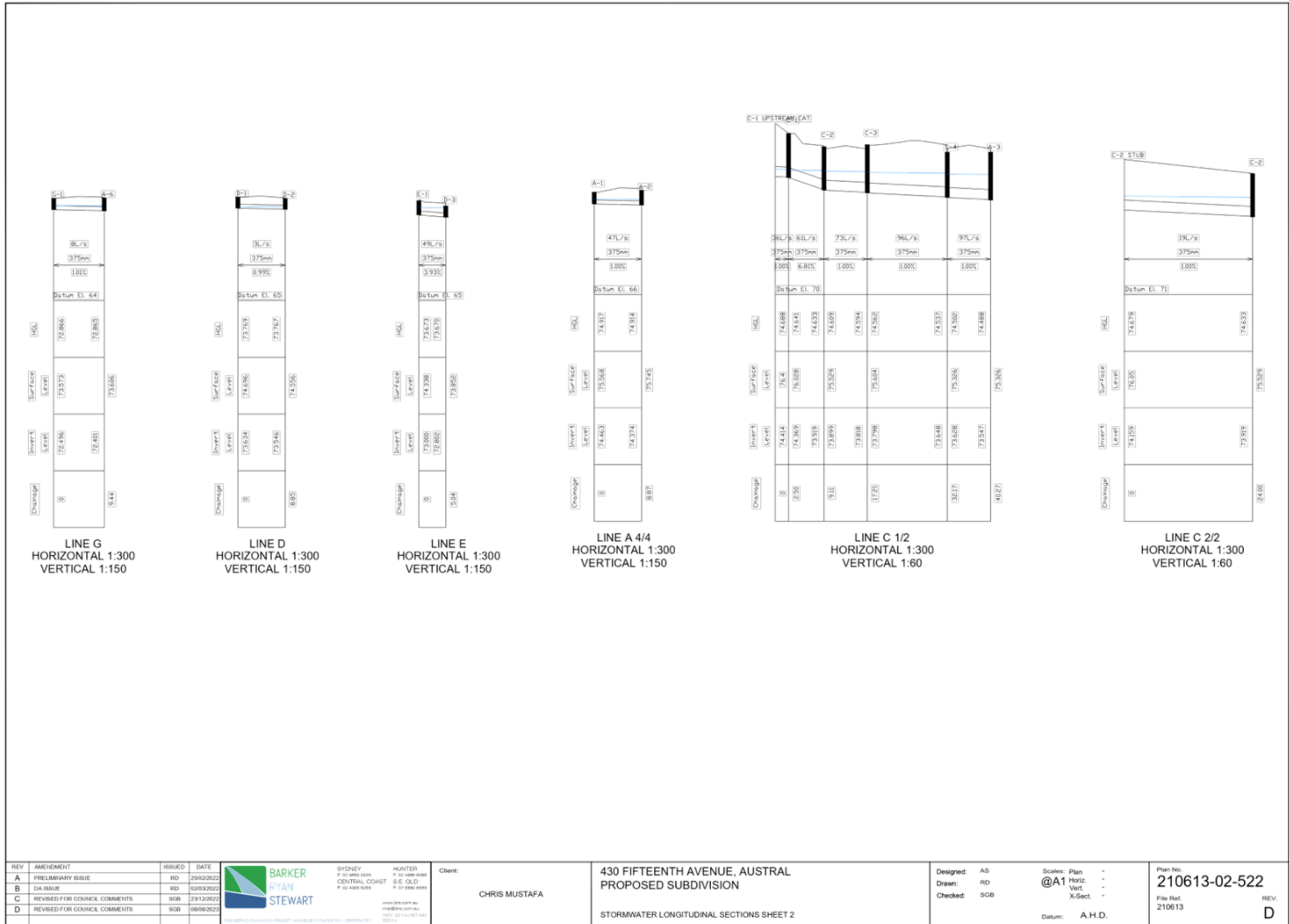
BARKER RYAN STEWART
 SYDNEY P. 02 9554 0200
 CENTRAL COAST P. 02 4333 5255
 HUNTER P. 02 4985 4388
 S.E. QLD P. 07 5362 0553
 www.brs.com.au
 72-88-83 GLEN BA
 10/11 20/14/107/140
 22/13

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**
 STORMWATER LONGITUDINAL SECTIONS SHEET 1

Designed: AS
 Drawn: RD
 Checked: SGB
 Scales: Plan -
 @A1 Horiz. -
 Vert. -
 X-Sect. -
 Datum: A.H.D.

Plan No. **210613-02-521**
 File Ref. 210613
 REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

BARKER RYAN STEWART
SYDNEY P: 02 9551 0200
CENTRAL COAST P: 02 4329 5295
HUNTER P: 02 4886 0388
S.E. OLD P: 07 3362 0553
www.brs.com.au
74-85-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**
STORMWATER LONGITUDINAL SECTIONS SHEET 2

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -
Datum: A.H.D.

Plan No. **210613-02-522**
File Ref. **210613**
REV. **D**

ILSAX CALCULATION SUMMARY SHEET

DRAINS results prepared from Version 2023.02.8437.28953

Soil Type: User to enter
AMC: User to enter

Entire Catchment Area
Paved: 2.434 ha (65.3%)
Supplementary: 0 ha (0%)
Grassed: 1.293 ha (34.6%)
Total Area: 3.728 ha

LOCATION AND LAND-USE				TIME AND RUNOFF				INLET DESIGN				PIPE SYSTEM DESIGN										FIT RESULTS												
Design AEP	Pit Name	Sub-Catchment Area (ha)	Land-Use	Percentage	Constant Flow Time (minutes)	Kinematic Formula Length (m)	Wave or Friends Slope (%)	Parameters Roughness n	Total Time (minutes)	Peak Sub-Catchment Flowrate (m³/s)	Origin of Approach Flows	Overflows Flowrate (m³/s)	Approaching Pit Flow Width (m)	Depth x Velocity (m/s)	Inlet Family	Inlet Size	Total Approach Flow (m³/s)	Bypass Flow (m³/s)	Overflow Leaving Pit Flow Width (m)	Depth x Velocity (m³/s)	Peak Flow in Pipe (m³/s)	Reach Length (m)	Pipe Slope (m)	Pipe Diameter (mm)	US Pipe Invert Level (m)	DIS Pipe Invert Level (m)	US HGL in Pipe (m)	DIS HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. Ku	Water Surface Elevation (m)	Surface Level (m)	Free-board (m)	Pit Name
20%	A-1	0.1766	Paved	80.0	5				5.00	0.048					GSP	900x900 GSP	0.048	0	0	0	0.047	8.866	1.00	375	74.463	74.374	74.917	74.914	0.43	3.5	74.94	75.568	0.63	A-1
1%	A-1	0.1766	Grassed	20.0	10	as above			10.00	0.065						0.065	0.037	8.80	0.01	0.077						75.781	75.772	0.70	3.5	75.83	75.568	0.00	A-1	
20%	A-2	0.0351	Paved	80.0	5				5.00	0.010					Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.01	0	0	0	0.124	80.655	1.00	375	74.354	73.547	74.792	74.488	1.13	2.5	74.91	75.745	0.83	A-2
1%	A-2	0.0351	Grassed	20.0	10	as above			10.00	0.019						0.019	0.038	8.85	0.01	0.183						75.638	75.303	1.65	2.5	75.77	75.745	0.00	A-2	
20%	A-3	0.0278	Paved	80.0	5				5.00	0.008					Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.008	0.000	0.63	0.02	0.196	44.602	1.85	375	73.527	72.701	74.158	73.585	1.78	2.0	74.49	75.326	0.84	A-3
1%	A-3	0.0278	Grassed	20.0	10	as above			10.00	0.015						0.015	0.000	0.91	0.04	0.245						74.849	74.062	2.22	2.0	75.30	75.326	0.02	A-3	
20%	A-4	0.0482	Paved	80.0	5				5.00	0.013	A-3	0.010	0.63	0.02	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 2.4 m inlet	0.013	0.000	0.31	0.02	0.338	14.66	1.00	525	72.681	72.534	73.339	73.250	1.56	2.0	73.59	73.852	0.27	A-4
1%	A-4	0.0482	Grassed	20.0	10	as above			10.00	0.026	A-3	0.021	0.91	0.04		0.086	0.000	0.43	0.02	0.421						73.726	73.604	1.95	2.0	74.06	73.852	0.00	A-4	
20%	A-5	0.0090	Paved	80.0	5				5.00	0.002	A-4	0.002	0.31	0.02	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.002	0.000	0.29	0.02	0.396	11.332	1.00	525	72.514	72.401	72.957	72.865	2.03	1.8	73.25	73.852	0.60	A-5
1%	A-5	0.0090	Grassed	20.0	10	as above			10.00	0.005	A-4	0.005	0.43	0.02		0.005	0.000	0.41	0.02	0.515						73.111	72.957	2.38	1.8	73.60	73.852	0.25	A-5	
20%	A-6	0.0085	Paved	80.0	5				5.00	0.002	A-5	0.002	0.29	0.02	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.002	0	0	0	0.291	8.162	0.99	525	72.381	72.300	72.794	72.776	1.59	1.8	72.87	73.606	0.74	A-6
1%	A-6	0.0085	Grassed	20.0	10	as above			10.00	0.005	A-5	0.004	0.41	0.02		0.005	0	0	0	0.330						72.876	72.858	1.56	1.8	72.96	73.606	0.65	A-6	
20%	D-1	0.0126	Paved	80.0	5				5.00	0.003					Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.003	0.000	0.53	0.03	0.003	8.846	0.99	375	73.634	73.546	73.769	73.767	0.09	4.0	73.77	74.696	0.93	D-1
1%	D-1	0.0126	Grassed	20.0	10	as above			10.00	0.007						0.007	0.000	1.14	0.05	0.020						74.539	74.539	0.19	4.0	74.54	74.696	0.16	D-1	
20%	D-2	0.0204	Paved	80.0	5				5.00	0.006	H-1	0.005	0.45	0.03	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.006	0.000	0.19	0.03	0.094	13.824	5.24	375	73.526	72.802	73.749	73.670	1.37	1.3	73.77	74.556	0.79	D-2
1%	D-2	0.0204	Grassed	20.0	10	as above			10.00	0.011	H-1	0.011	1.01	0.04		0.011	0.000	1.58	0.05	0.179						74.370	74.229	1.62	1.3	74.54	74.556	0.02	D-2	
20%	D-3	0.0543	Paved	80.0	5				5.00	0.015	D-2	0.004	0.19	0.03	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 2.4 m inlet	0.015	0	0	0	0.144	8.101	1.00	450	72.782	72.701	73.602	73.585	0.91	2.0	73.67	73.852	0.18	D-3
1%	D-3	0.0543	Grassed	20.0	10	as above			10.00	0.029	D-2	0.011	0.74	0.02		0.058	0.060	16.59	0.01	0.230						74.095	74.062	1.45	2.0	74.23	73.852	0.00	D-3	
20%	E-1	0.1804	Paved	80.0	5				5.00	0.049					GSP	900x900 GSP	0.049	0	0	0	0.049	5.036	3.93	375	73.000	72.802	73.673	73.670	0.44	4.0	73.70	74.338	0.64	E-1
1%	E-1	0.1804	Grassed	20.0	10	as above			10.00	0.097						0.097	0	0	0	0.096							74.237	74.229	0.87	4.0	74.32	74.338	0.02	E-1
20%	F-1	0.2619	Paved	80.0	5				5.00	0.072					GSP	900x900 GSP	0.072	0	0	0	0.071	4.924	2.48	375	72.656	72.534	73.256	73.250	0.65	4.0	73.32	74.188	0.87	F-1
1%	F-1	0.2619	Grassed	20.0	10	as above			10.00	0.140						0.14	0	0	0	0.140							73.630	73.604	1.27	4.0	73.91	74.188	0.28	F-1
20%	G-1	0.0282	Paved	80.0	5				5.00	0.008	D-1	0.007	0.53	0.03	Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0.008	0	0	0	0.008	9.435	1.01	375	72.496	72.401	72.866	72.865	0.07	4.0	72.87	73.573	0.71	G-1
1%	G-1	0.0282	Grassed	20.0	10	as above			10.00	0.015	D-1	0.015	1.14	0.05		0.015	0	0	0	0.015							72.958	72.957	0.13	4.0	72.96	73.573	0.61	G-1
20%	H-1		Paved												Hornsby Council Inlets (KI+grate), 3% crossfall, all grades	Hornsby 1.8 m inlet	0	0.000	0.45	0.03	0.087	24.04	1.00	375	73.786	73.546	74.002	73.767	1.33	1.5	74.02	74.939	0.92	H-1
1%	H-1		Grassed			as above										0	0.000	1.01	0.04	0.167						74.761	74.539	1.51	1.5	74.94	74.939	0.00	H-1	

REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGR	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGR	06/06/2023



**BARKER
RYAN
STEWART**

SYDNEY P: 02 9554 6555
CENTRAL COAST P: 02 4329 5359

HUNTER P: 02 4966 4366
S.E. QLD P: 07 5562 6553

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62013

Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

5-YEAR AND 100-YEAR FLOOD CALCULATION SHEET 1

Designed: AS
Drawn: RD
Checked: SGR

Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -

Datum: A.H.D.

Plan No. **210613-02-531**

File Ref. **210613**

REV. **D**

ILSAX CALCULATION SUMMARY SHEET																																			
DRAINS results prepared from Version 2023.02.8437 28953																																			
Soil Type		User to enter		Entire Catchment Area																															
AMC		User to enter		Paved 2.434 ha (65.3%) Supplementary 0 ha (0%) Grassed 1.293 ha (34.6%) Total Area 3.728 ha																															
LOCATION AND LAND-USE			TIME AND RUNOFF				INLET DESIGN					PIPE SYSTEM DESIGN										PIT RESULTS													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Design AEP	Pit Name	Sub-Catchment Area (ha)	Land-Use	Percentage	Constant Flow Time (minutes)	Kinematic Wave Formula Length (m)	Wave Slope (%)	Friends Parameters Roughness n	Total Time t _c (minutes)	Peak Sub-Catchment Flowrate (m ³ /s)	Origin of Flows	Overflows Flowrate (m ³ /s)	Approaching Pit Flow Width (m)	Depth x Velocity (m ² /s)	Inlet Family	Inlet Size	Total Approach Flow (m ³ /s)	Bypass Flow (m ³ /s)	Overflow Leaving Pit Flow Width (m)	Pit Depth x Velocity (m ² /s)	Peak Flow in Pipe (m ³ /s)	Reach Length (m)	Pipe Slope (m)	Pipe Diameter (mm)	US Pipe Invert Level (m)	D/S Pipe Invert Level (m)	US HGL in Pipe (m)	D/S HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. K _u	Water Surface Elevation (m)	Surface Level (m)	Free-board (m)	Pit Name	
20%	C-3	0.0320	Paved	80.0	5				5.00	0.009	C-2	0	0	0	Hornsby Council Inlets (KI-grate), 3% crossfall, all grades	Hornsby 2.4 m Intel	0.009	0.000	0.85	0.03	0.096	14.952	1.00	375	73.798	73.648	74.562	74.537	0.87	1.5	74.59	75.604	1.01	C-3	
1%	C-3	0.0320	Grassed	20.0	6				6.00		C-2	0	0	0			0.018	0.000	1.27	0.05	0.137						75.492	75.402	1.24	1.5	75.61	75.604	0.00	C-3	
20%	C-4	0.0034	Paved	80.0	5				5.00	0.001					Hornsby Council Inlets (KI-grate), 3% crossfall, all grades	Hornsby 1.8 m Intel	0.001	0.000	0.74	0.02	0.097	8.107	1.00	375	73.628	73.547	74.502	74.488	0.87	1.5	74.54	75.326	0.79	C-4	
1%	C-4	0.0034	Grassed	20.0	10				10.00								0.002	0.029	1.37	0.08	0.131						75.332	75.303	1.58	1.5	75.40	75.326	0.00	C-4	
20%	C-2	0.0510	Paved	80.0	5				5.00	0.015	C-1	0	0	0	Hornsby Council Inlets (KI-grate), 3% crossfall, all grades	Hornsby 2.4 m Intel	0.015	0	0	0	0.073	8.101	1.00	375	73.899	73.818	74.609	74.594	0.96	1.0	74.63	75.529	0.90	C-2	
1%	C-2	0.0510	Grassed	20.0	6				6.00		C-1	0	0	0			0.029	0	0	0	0.122						75.647	75.608	1.10	1.0	75.71	75.529	0.00	C-2	
20%	C-1	0.0979	Paved	80.0	5				5.00	0.027					GSP	900x900 GSIP	0.027	0	0	0	0.061	6.612	6.81	375	74.369	73.919	74.641	74.633	0.71	3.5	74.68	76.028	1.35	C-1	
1%	C-1	0.0979	Grassed	20.0	8				8.00								0.053	0	0	0	0.116						75.737	75.709	1.05	3.5	75.93	76.028	0.10	C-1	
20%	B-1	0.0947	Paved	80.0	5				5.00	0.026					GSP	900x900 GSIP	0.026	0	0	0	0.065	5.908	3.52	375	74.683	74.475	74.959	74.950	0.74	3.5	75.01	76.13	1.12	B-1	
1%	B-1	0.0947	Grassed	20.0	10				10.00								0.051	0	0	0	0.126						75.859	75.828	1.54	3.5	76.09	76.13	0.04	B-1	
20%	B-2	0.0374	Paved	80.0	5				5.00	0.010					Hornsby Council Inlets (KI-grate), 3% crossfall, all grades	Hornsby 1.8 m Intel	0.01	0	0	0	0.072	8.1	1.00	375	74.455	74.374	74.924	74.914	0.66	1.5	74.95	75.745	0.79	B-2	
1%	B-2	0.0374	Grassed	20.0	10				10.00								0.02	0.064	9.49	0.01	0.106						75.789	75.772	0.96	1.5	75.83	75.745	0.00	B-2	
20%	A-6	0.0107	Paved	80.0	5				5.00	0.003	A-6	0	0	0	Hornsby Council Inlets (KI-grate), 3% crossfall, all grades	Hornsby 1.8 m Intel	0.003	0	0	0	0.288	13.381	1.00	525	71.379	71.245	71.740	71.640	1.81	1.2	71.83	73.459	1.63	A-6	
1%	A-6	0.0107	Grassed	20.0	10				10.00		A-6	0	0	0			0.006	0	0	0	0.448						72.219	72.074	2.07	1.2	72.48	73.459	0.98	A-6	
20%	A-9		Paved												GSP	900x900 GSIP	0				0.299	51.919	1.13	525	71.225	70.640	71.593	70.946	2.28	2.0	71.64	72.867	1.23	A-9	
1%	A-9		Grassed														0				0.448						71.669	71.064	2.39	2.0	72.07	72.867	0.79	A-9	
20%	A-7		Paved														0	0	0	0															A-7
1%	A-7		Grassed														0	0	0	0															A-7

REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGR	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGR	06/06/2023



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Client: CHRIS MUSTAFA

430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION

5-YEAR AND 100-YEAR FLOOD CALCULATION SHEET 2

Designed: AS
Drawn: RD
Checked: SGR

Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -

Datum: A.H.D.

Plan No.
210613-02-532

File Ref.
210613

REV.
D

NOTES

This sheet presents results from a pipe system model using ILSAX, the rational method, extended rational method (ERM), or initial loss - continuing loss (I-CL) model implemented in the DRAINS program (www.watercom.com.au) involving considerable calculations with multiple rainfall patterns, and complex hydraulic computations. Therefore, unlike older rational method calculation sheets, this sheet does not portray hand calculations. It presents the key model inputs and outputs of interest to reviewers.

Depending on inputs, the table may show results for a minor storm, a major storm, or both. There may be multiple rows for up to three overflow routes coming to a pit. You can edit headings or delete columns or rows.

The contents of each column are discussed below

- Column 1: Design annual exceedance probability (AEP) values for minor storms, major storms or both may be displayed. Numerical values are not available for the rational method, but users can enter these.
- Column 2: Pit Name from DRAINS (The connecting sub-catchment, downstream pipe and overflow route are assumed to have similar names, so they do not need to be entered in the table.)
- Column 3: Sub-Catchment Area (ha)
- Column 4: Land-Use Type: paved, supplementary and grassed areas (in different rows) for ILSAX, impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 5: Percentages of paved, supplementary and grassed areas for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 6: Constant flow times for the paved, supplementary and grassed areas (minutes) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 7: Lengths of paved, supplementary and grassed area flow path segments (m) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 8: Slopes of paved, supplementary and grassed area flow path segments (%) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 9: Roughnesses of paved, supplementary and grassed area flow path segments (Manning's values) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model.
- Column 10: Total flow times for the paved, supplementary and grassed areas (minutes) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the I-CL model. For the rational method, it is the total catchment time of concentration.
- Column 11: Peak Sub-Catchment Flowrate (m³/s). For the rational method, the output indicates whether this is a full catchment or partial area estimate.
- Column 12: Origin of Overflows, the names of any pits or nodes from which overflows come to the pit.
- Column 13: Peak Overflows from upstream pits or nodes (m³/s), which may include flows from the sub-catchment through which they flow. - not outputted for the rational method.
- Column 14: Approach Flow Width (m) - not outputted for the rational method.
- Column 15: Approach Flow Depth x Velocity (m²/s) - not outputted for the rational method.
- Column 16: Inlet Family, in the DRAINS classification.
- Column 17: Inlet Size, in the DRAINS classification.
- Column 18: Total Approach Flow (m³/s), local sub-catchment runoff plus overflows directed to the pit.
- Column 19: Bypass Flow (m³/s), the overflow occurring because of lack of inlet capacity or overflowing of the pipe system.
- Column 20: Overflow Width (m) just downstream of the pit - not outputted for the rational method, inspect the DRAINS model for this information.
- Column 21: Overflow Route Depth x Velocity (m²/s) just downstream of the pit - not outputted for the rational method, inspect the DRAINS model for this information.
- Column 21a: Baseflow or Direct Inflow Peak (m³/s), if present in the model; otherwise this column does not appear.
- Column 22: Flow in Pipe (m³/s).
- Column 23: Pipe Length (mm).
- Column 24: Pipe Slope (%).
- Column 25: Pipe Diameter (mm) or Box Dimensions (m).
- Column 28: Upstream Pipe Hydraulic Grade Line Level (inside the pipe) (m AHD).
- Column 29: Downstream Pipe Hydraulic Grade Line Level (m AHD).
- Column 30: Pipe Flow Velocity (m/s), for full or part-full flow.
- Column 31: Pit Pressure Change Coefficient, the Ku value applying to the main line through the pit.
- Column 31a: Chart Structure Number. If the QUDM method for determining Ku is applied, the number of the Chart in QUDM (2008) that is used to determine pit pressure change K factors is displayed. If this is given as 'H-OL', the equations in a paper by Hare and O'Loughlin are used.
- Column 31b: Ratios used to define a K value from the appropriate QUDM chart, if the QUDM method is applied.
- Column 32: Water Surface Elevation (m AHD).
- Column 33: Surface or Kerb and Channel (Kerb and Gutter) Overt Level (m AHD).
- Column 34: Freeboard (m), the difference between the levels in the two previous columns.
- Column 35: Pit Name (repeated).

REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023



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02/13

Client: CHRIS MUSTAFA

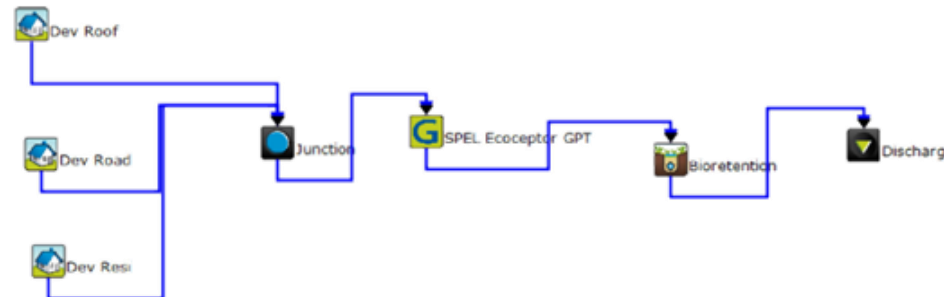
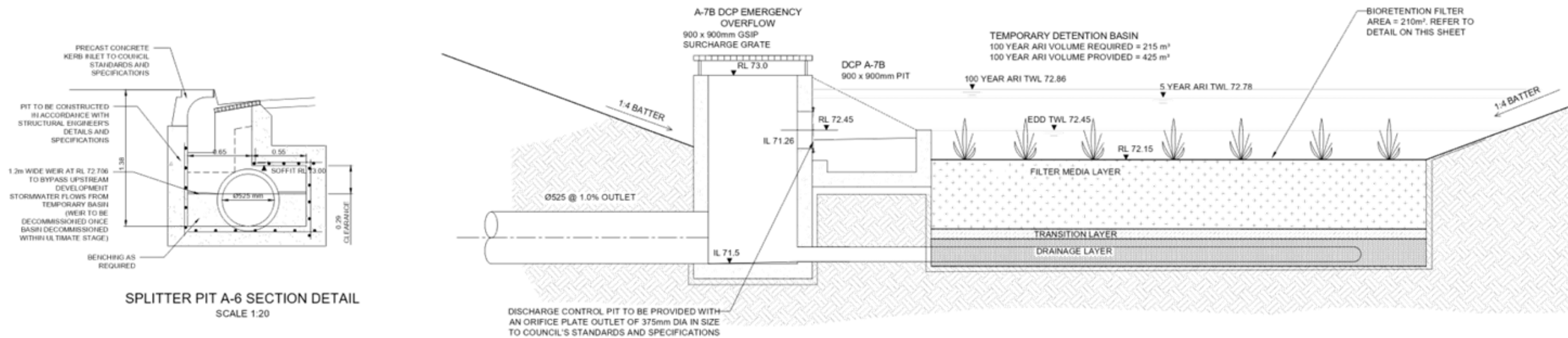
430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION
5-YEAR AND 100-YEAR FLOOD CALCULATION SHEET 3

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -
Datum: A.H.D.

Plan No. 210613-02-533
File Ref. 210613
REV. D

OSD BASIN RESULTS					
STORM EVENT	MAX WL (mAHD)	MAX VOL (m³)	MAX Q TOTAL (m³/s)	MAX Q PIPE (m³/s)	MAX Q WEIR (m³/s)
20% AEP	72.78	185	0.166	0.166	0
5% AEP	72.82	210	0.203	0.203	0
1% AEP	72.86	215	0.224	0.224	0

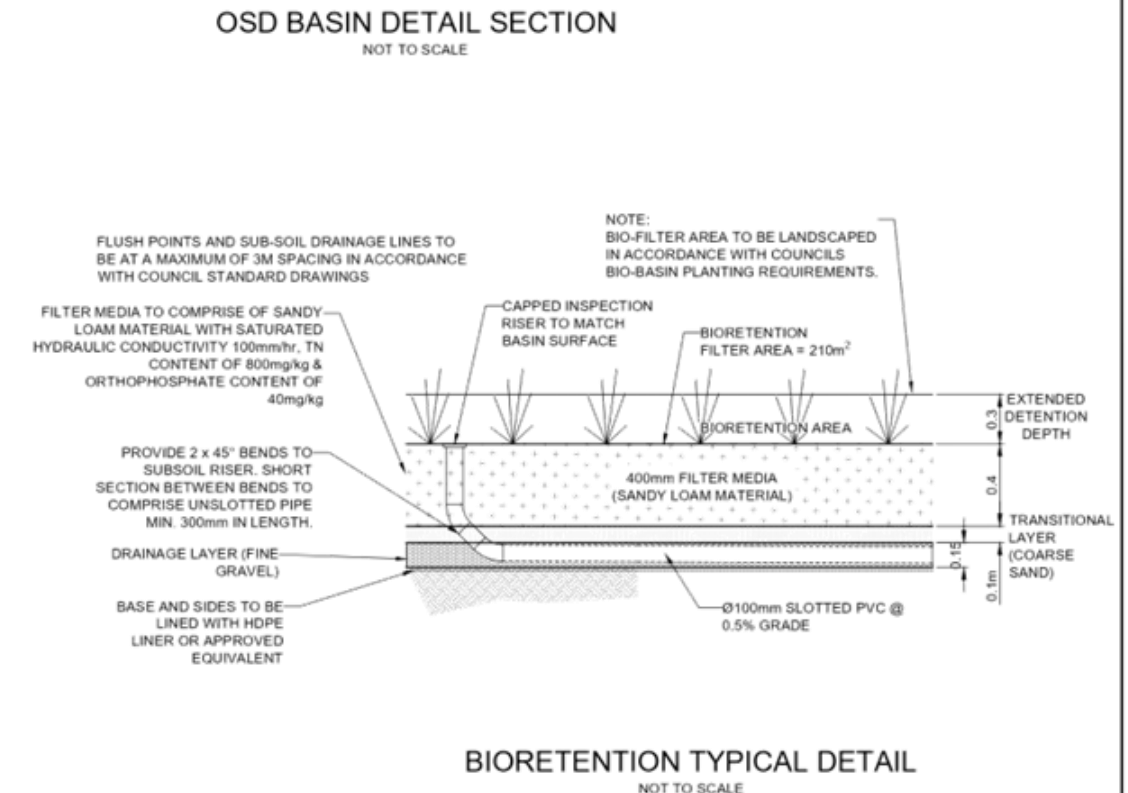
STORMWATER SUMMARY			
STORM EVENT	PRE-DEVELOPMENT DISCHARGE (m³/s)	POST-DEVELOPMENT DISCHARGE (m³/s)	MEETS COUNCIL REQUIREMENTS?
20% AEP	0.356	0.289	Yes
5% AEP	0.542	0.398	Yes
1% AEP	0.744	0.512	Yes



MUSIC MODEL

	Sources		Residual Load		Percent Reduction	
	Junction	Bioretention	Junction	Bioretention	Junction	Bioretention
Flow (ML/yr)	7.546	7.546	7.546	7.139	0	5.392
Total Suspended Solids (kg/yr)	1593.991	1593.991	1593.991	64.859	0	95.931
Total Phosphorus (kg/yr)	2.637	2.637	2.637	0.922	1.684E-14	65.045
Total Nitrogen (kg/yr)	16.752	16.752	16.752	5.49	-2.121E-14	67.226
Gross Pollutants (kg/yr)	209.346	209.346	209.346	0.897	0	99.571

MUSIC RESULTS



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

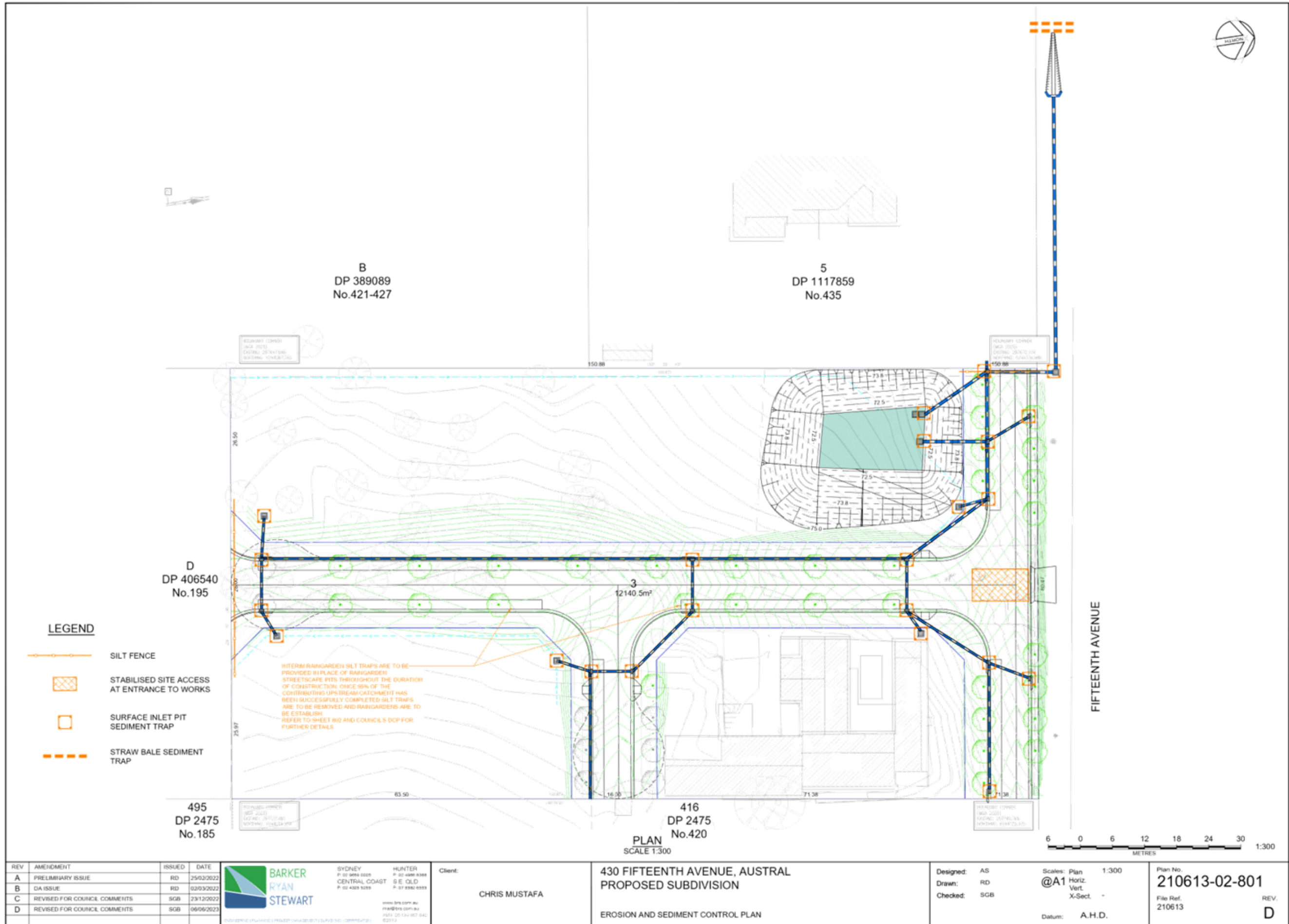
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Client: **CHRIS MUSTAFA**

430 FIFTEENTH AVENUE, AUSTRAL PROPOSED SUBDIVISION
TYPICAL STORMWATER SECTIONS AND DETAILS

Designed: AS
Drawn: RD
Checked: SGB
Scales: Plan -
@A1 Horiz. -
Vert. -
X-Sect. -
Datum: A.H.D.

Plan No. **210613-02-701**
File Ref. 210613
REV. **D**



REV	AMENDMENT	ISSUED	DATE
A	PRELIMINARY ISSUE	RD	25/02/2022
B	DA ISSUE	RD	02/03/2022
C	REVISED FOR COUNCIL COMMENTS	SGB	23/12/2022
D	REVISED FOR COUNCIL COMMENTS	SGB	06/06/2023

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Client: **CHRIS MUSTAFA**

**430 FIFTEENTH AVENUE, AUSTRAL
PROPOSED SUBDIVISION**

EROSION AND SEDIMENT CONTROL PLAN

Designed: AS
Drawn: RD
Checked: SGB

Scales: Plan 1:300
@A1 Horiz. 1:300
Vert. -
X-Sect. -

Datum: A.H.D.

Plan No. **210613-02-801**

File Ref. 210613

REV. **D**

