Central Coast
Local Planning Panel

Central Coast
Local Planning Panel Meeting
Business Paper
14 March 2024

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Meeting Notice

The Local Planning Panel Meeting
of Central Coast
will be held remotely - online,
Thursday 14 March 2024 at 2.00 pm,
for the transaction of the business listed below:

1 Procedural Items

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3 Planning Reports

3.1 DA/1446/2021 - 77 Lake Road, Tuggerah - Earthworks and Associated Retaining Walls and Drainage Works 14

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4.1 DA/668/2022 - 55 Mullbong Road, Blackwall - Subdivision into 2 Residential allotments 259

4.2 DA/1809/2022 - 15-17 Coral Street, The Entrance - Construction of a 6 Storey Shop Top Housing development with Basement Level carparking 380

Jason Perica
Chairperson

Item No:	1.1
Title:	Disclosures of Interest
Department:	Governance

Central Coast
Local Planning Panel

14 March 2024 Local Planning Panel Meeting

Reference: F2020/02502 - D14205789

The NSW Local Planning Panel Code of Conduct states that all panel members must sign a declaration of interest in relation to each matter on the agenda before or at the beginning of each meeting.

Recommendation

That Panel Members now confirm that they have signed a declaration of interest in relation to each matter on the agenda for this meeting and will take any management measures identified.

Item No:	2.1
Title:	Confirmation of Minutes of Previous Meeting
Department:	Corporate Services

Central Coast
Local Planning Panel

14 March 2024 Local Planning Panel Meeting

Reference: F2020/02502 - D16094273
Author: Lisa Martin, Civic Support Officer Civic Support

Summary

The Minutes of the following Meeting of the Local Planning Panel, which have been endorsed by the Chair of that meeting, are submitted for noting:

- ***Local Planning Panel Meeting held on 15 February 2024***

Recommendation

That the minutes of the previous Local Planning Panel Meeting held on 15 February 2024 which was endorsed by the Chair of that meeting, are submitted for noting.

Attachments

1 MINUTES - Local Planning Panel - 15 February 2024 D16068475

Local Planning Panel

Minutes of the
Local Planning Panel Meeting
Held Remotely - Online
on 15 February 2024

Panel Members

Chairperson	Donna Rygate
Panel Experts	Mike Ryan Louise Menday
Community Representative/s	Glenn Watts

Central Coast Council Staff Attendance

Dr Alice Howe	Director Environment and Planning
Ryan White	Development Planner Consultant, Employment and Urban Release
Edward Hock	Unit Manager, Enterprise Risk Project
Louise Rampling	Principal Solicitor, Legal
Briony Stiles	Civic Support Officer
Lisa Martin	Civic Support Officer

The Chairperson, Donna Rygate declared the meeting open at 2:04pm and advised in accordance with the Code of Meeting Practice that the meeting was being recorded.

The Chair read an acknowledgement of country statement.

Apologies

The Panel noted that no apologies had been received.

Minutes of the Local Planning Panel Meeting 15 February 2024 contd

PROCEDURAL ITEMS

1.1 Disclosures of Interest

Panel Members confirmed that there were no conflicts of interest identified.

CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

2.1 Confirmation of Minutes of Previous Meeting

The Panel noted the minutes of Local Planning Panel Meetings held on 30 November 2023, 7 December 2023 and 14 December 2023 which were endorsed by the Chair of those meetings.

Public Forum

The following people addressed the Panel:

Item 3.1 – DA/4112/2022 – 15 Allfield Street Woy Woy - Demolition and construction of Multi Dwelling Housing (4 Dwellings)

1 **Andrew Self – Against**

The Local Planning Panel public meeting closed at 2:18pm.

The Panel moved into deliberation from 2:28pm.

PLANNING REPORTS

3.1 DA/4112/2022 - 15 Allfield Road WOY WOY

Site Orientation	Yes
Relevant Considerations	As per Council assessment report
Material Considered	• Documentation with application • Council assessment report • Submissions and comments from speaker at public meeting • Amended draft conditions
Council Recommendation	Approval
Panel Decision	***1 That the Local Planning Panel grant consent to DA/4112/2022 – 15 Allfield Road, Woy Woy – Lot 67 DP 6846 subject to the conditions attached to the assessment report and the additional condition below, and having regard to the matters for consideration detailed in Section 4.15 of the Environmental Planning and Assessment Act 1979.*** • ***Immediately notify Council of any unexpected finds which come to light during remediation, demolition or construction works which have the potential to alter previous conclusions about site contamination, acid sulfate soils and/or remediation.*** ***2 That Council advise those who made written submissions of the Panel's decision.***
Reasons	1) The Panel is satisfied that the provisions in the following State Environmental Planning Policies have been considered and are satisfied: *I.* *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004* *II.* Chapters 2 (Coastal Management) and 4 (Remediation of Land) of *State Environmental Planning Policy (Resilience and Hazards) 2021*

Minutes of the Local Planning Panel Meeting 15 February 2024 contd

III. State Environmental Planning Policy (Transport and Infrastructure) 2021

2) The Panel is satisfied that the provisions in clause 7.1 (Acid Sulfate Soils) and 7.6 (Essential Services) of *Central Coast Local Environmental Plan 2022* have been considered and satisfied.
3) The Panel is satisfied that the proposal is permissible in the land use zone, upholds the zone objectives, and complies with the relevant development standards in Part 4 of the *Central Coast Local Environmental Plan 2022*.
4) The Panel is satisfied that, as amended and conditioned, the proposal upholds the objectives of the *Central Coast Development Control Plan 2022*.
5) The Panel is satisfied that the relevant provisions of the environmental planning instruments, plans and policies that apply to the development have been considered in the assessment of the application.
6) The Panel is satisfied that the proposal, as amended and conditioned, will not have any non-compliant or unreasonable adverse impacts upon the amenity of the neighbouring properties or the locality.
7) The Panel is satisfied that the proposed development is considered satisfactory having regard for the matters for consideration provided in Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

Votes The decision was unanimous

PLANNING REPORTS - OUTSIDE OF PUBLIC MEETING

4.1 Land and Environment Court Proceedings Class 1 - Case 2023/00065846 - Appeal of Deemed Refusal - Central Coast Council ats CCS Design Pty Ltd - DA/3337/2022 - 16 Sydney Avenue Umina Beach

Material Considered
- Council report

Minutes of the Local Planning Panel Meeting 15 February 2024 contd

Council Recommendation	Note
Panel Decision	***1 That the Local Planning Panel note the receipt of a Class 1 appeal in the Land and Environment Court to the deemed refusal of Development Application DA/3337/2022.***
	2 In accordance with Section 2.20(8) of the Environmental Planning and Assessment Act 1979, the Local Planning Panel delegate to appropriate Council officers the ability to give legal instruction to Council's external legal counsel at any upcoming proceedings relating to the appeal, including any conciliation conference in accordance with Section 34 of the Land and Environment Court Act 1979.
Votes	The decision was unanimous

1.1 Land and Environment Court Proceedings Class 1 - Case 2023/00117090 - Appeal Refusal - Central Coast Council ats Kassem Khanafer - Application Class 1 2023/00117090 - DA/61592/2021 - 16 Warrah Street Ettalong

Material Considered	• Council report
Council Recommendation	Note
Panel Decision	***1 That the Local Planning Panel note the receipt of a Class 1 appeal in the Land and Environment Court to the refusal of Development Application DA/61592/2021.***
	2 In accordance with Section 2.20(8) of the Environmental Planning and Assessment Act 1979, the Local Planning Panel delegate to appropriate Council officers the ability to give legal instruction to Council's external legal counsel at any proceedings relating to the appeal, including any conciliation conference in accordance with Section 34 of the Land and Environment Court Act 1979.
Votes	The decision was unanimous

REPORTS

5.1 Supplementary Report - DA/60589/2020 - Dwelling House and Garage - 129 Alan Street, Niagara Park

Site Orientation	Yes
Relevant Considerations	As per Council assessment report
Material Considered	• Documentation with application • Council assessment report
Council Recommendation	Approval
Panel Decision	***That the matter be considered within the next fortnight by a Panel constituted of the same individuals who have been dealing with this matter for many months.***
Reasons	1. Despite being given the opportunity, Council has offered no reason why this application should be referred to a Panel made up of different people from those who have been dealing with it over a number of months and are very familiar with it.
Votes	The decision was unanimous

5.2 DA/1436/2023 - 52-54 Fishermans Parade, Daleys Point - Alterations & Additions

Site Orientation	Yes
Relevant Considerations	As per Council assessment report
Material Considered	• Documentation with application • Council assessment report
Council Recommendation	Approval

Minutes of the Local Planning Panel Meeting 15 February 2024 contd

Panel Decision

1. ***The Local Planning Panel is satisfied that the applicant's clause 4.6 written request adequately demonstrates that compliance with the Height of Buildings development standard is unnecessary in the circumstances of the case because of the minimal environmental impact that would result from the noncompliance with the Height of Buildings standard.***

2. ***Compliance with the Height of Buildings development standard would be unreasonable in the circumstances of this application because of the steep sloping nature of the block, and there are sufficient environmental planning grounds to justify contravening the development standard.***

   Further, the Panel considers the proposed development will be in the public interest because it is consistent with the objectives of the development standard and the objectives for development within the R2 Low Density Residential zone in which the development is proposed to be carried out.

3. ***The Local Planning Panel grant development consent to DA/1436/2023 – 52- 54 Fishermans Parade, Daleys Point to construct the alterations and additions subject to appropriate conditions as detailed in the schedule attached to the report and having regard to the matters for consideration detailed in Section 4.15 of the Environmental Planning and Assessment Act and other relevant issues.***

4. ***The Local Planning Panel assumes the concurrence of the Secretary of the Department of Planning to permit the non-compliance with the development standard under clause 4.6 of the Central Coast Local Environmental Plan 2022 in accordance with the provisions of clause 55 of the Environmental Planning and Assessment Regulation 2001.***

Reasons

The development application has been assessed having regard to the matters for consideration under Section 4.15 of the *Environmental Planning and Assessment Act 1979* and all relevant instruments, plans and policies. Following a thorough assessment of the relevant planning controls and the key issues identified in

this report it is considered that the application can be supported because:

1) The Panel is satisfied the requirements of clause 4.6 (3) and (4) of *Central Coast Local Environmental Plan 2022* have been satisfied and that variation to the maximum building height provisions of the *Central Coast Local Environmental Plan 2022* is warranted.

2) The Panel is satisfied that:

   a. The applicant's written request for a variation to development standards (height) adequately addresses the matters required to be addressed under clause 4.6 (3) of the *Central Coast Local Environmental Plan 2022*; and
   b. The development is in the public interest because it is consistent with the objectives for the particular standard and objectives for development in the zone; and
   c. The concurrence of the Secretary can be assumed.

3) The Panel is satisfied the application has been assessed against the requirements of Section 4.14 of the *Environmental Planning and Assessment Act 1979* in relation to bushfire prone land and is considered satisfactory.

4) The Panel is satisfied that the proposed development is satisfactory having regard to the matters for consideration provided in Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

5) The application has been assessed against the requirements of clause 61 of the *Environmental Planning and Assessment Regulation 2021* in respect of demolition and is considered satisfactory.

6) The Panel is satisfied that the provisions of *State Environmental Planning Policy (Resilience and Hazards) 2021*, Chapter 2 Coastal Management, sections 2.10, 2.11 and 2.15 have been considered and satisfied.

7) The Panel is satisfied that the proposed development is

consistent with the zone objectives as set out in the *Central Coast Local Environmental Plan 2022*.

8) The Panel is satisfied the proposed development meets the objectives related to the building height development standard contained in *Central Coast Local Environmental Plan 2022*.

9) The Panel is satisfied that the provisions of clause 7.1 Acid Sulfate Soils and 7.6 Essential Services of *Central Coast Local Environmental Plan 2022* have been considered and satisfied.

10) The Panel is satisfied that the relevant provisions of the environmental planning instruments, plans and policies that apply to the development have been considered in the assessment of the application.

11) Subject to the imposition of appropriate conditions, the proposed development is not expected to have any adverse environmental, social or economic impact.

Votes The decision was unanimous

Item No:	3.1
Title:	DA/1446/2021 - 77 Lake Road, Tuggerah - Earthworks and Associated Retaining Walls and Drainage Works
Department:	Environment and Planning

Central Coast Local Planning Panel

14 March 2024 Local Planning Panel Meeting

Reference: DA/1446/2021 - D15902676
Author: Ashley Warnest, Development Planner.Employment and Urban Release
Section Manager: Emily Goodworth, Section Manager Employment and Urban Release
Unit Manager: Andrew Roach, Unit Manager Development Assessment
Executive: Alice Howe, Director Environment and Planning

Summary

An application has been received for earthworks and associated retaining walls and drainage works at Lot 345 DP 616389, 77 Lake Road, Tuggerah. The application has been examined having regard to the matters for consideration detailed in Section 4.15 of the *Environmental Planning and Assessment Act 1979* and other statutory requirements with the issues requiring attention and consideration being addressed in the report.

The application is required to be determined by the Local Planning Panel as the matter requires a variation to the Wyong District Section 7.11 Contributions Plan. Council officers are not delegated to make this variation.

Applicant	PM Anderson Consulting Pty Ltd
Owner	Croscreh Pty Ltd
Application No	DA/1446/2021
Description of Land	LOT 345 DP 616389 77 Lake Road, TUGGERAH
Proposed Development	Earthworks and associated retaining walls and drainage works
Site Area	13,370m^2
Zoning	IN2 Light Industrial zone
Existing Use	Vacant
Employment Generation	No
Estimated Value	$120,000

Recommendation

1 That the Local Planning Panel grant consent to DA/1446/2021 at Lot 345 DP 616389, 77 Lake Road, Tuggerah for Earthworks and Associated Retaining Walls and Drainage Works, subject to the conditions detailed in the schedule attached to the report and having regard to the matters for consideration detailed in Section 4.15 of the Environmental Planning and Assessment Act 1979.

2 That the Local Planning Panel vary the drainage scheme identified in the Wyong District 7.11 Contributions Plan having regard to the matters for consideration detailed in the report and in accordance with the Environmental Planning and Assessment Act 1979.

Key Issues

- Contributions infrastructure

Precis:

Proposed Development	Earthworks and associated retaining walls and drainage works
Permissibility and Zoning	IN2 Light Industrial zone The earthworks and associated works are permissible in the IN2 zone.
Current Use	Vacant site
Integrated Development	No
Submissions	No submissions

Variations to Policies

The following variations are proposed to Council policy:

Section	**10.4.2 Tuggerah Industrial Estate Stage 3 Drainage**
Requirement	Provision of a wetland on the subject site (Wetland 2 as identified in Figure 16 of the Contributions Plan)
Contributions Plan	Wyong District Contributions Plan 2020
Departure basis	Wetland not proposed

The Site

The subject site is of a regular shape that has a frontage of 107m along Lake Road (Figure 1). The site has an average depth of 125m and an area of 13,370m^2. The topography of the site is generally flat, with a general fall towards the front. The site is currently vacant with a strip of vegetation along the front boundary. Vehicular access is gained along Lake Road.



Figure 1 – Locality Plan

Surrounding Development

Surrounding land uses are predominantly industrial in nature with a mix of industrial units, bulky goods showrooms and manufacturing and storage businesses in the broader locality along Lake Road and within the industrial area, and in Bryant Drive.

Along the northern side of Lake Road is the regional sporting facility, Pioneer Dairy wetlands, and an electricity substation.

Along the eastern boundary is an unconstructed paper road with dense vegetation in parts except for a cleared powerline easement about 50m wide running southward from the substation. The land immediately to the north and east is zoned C2 Environmental Conservation with RE1 Public Recreation zone to the north-west of the site on the opposite side of Lake Road.

The Proposed Development

The proposal is to undertake earthworks in the form of filling across the site to the level identified within the contributions plan (RL 3.40), and the construction of retaining walls which have a maximum height of 3.4m. Batter and drainage works are also proposed around the perimeter of the site (Figure 2).

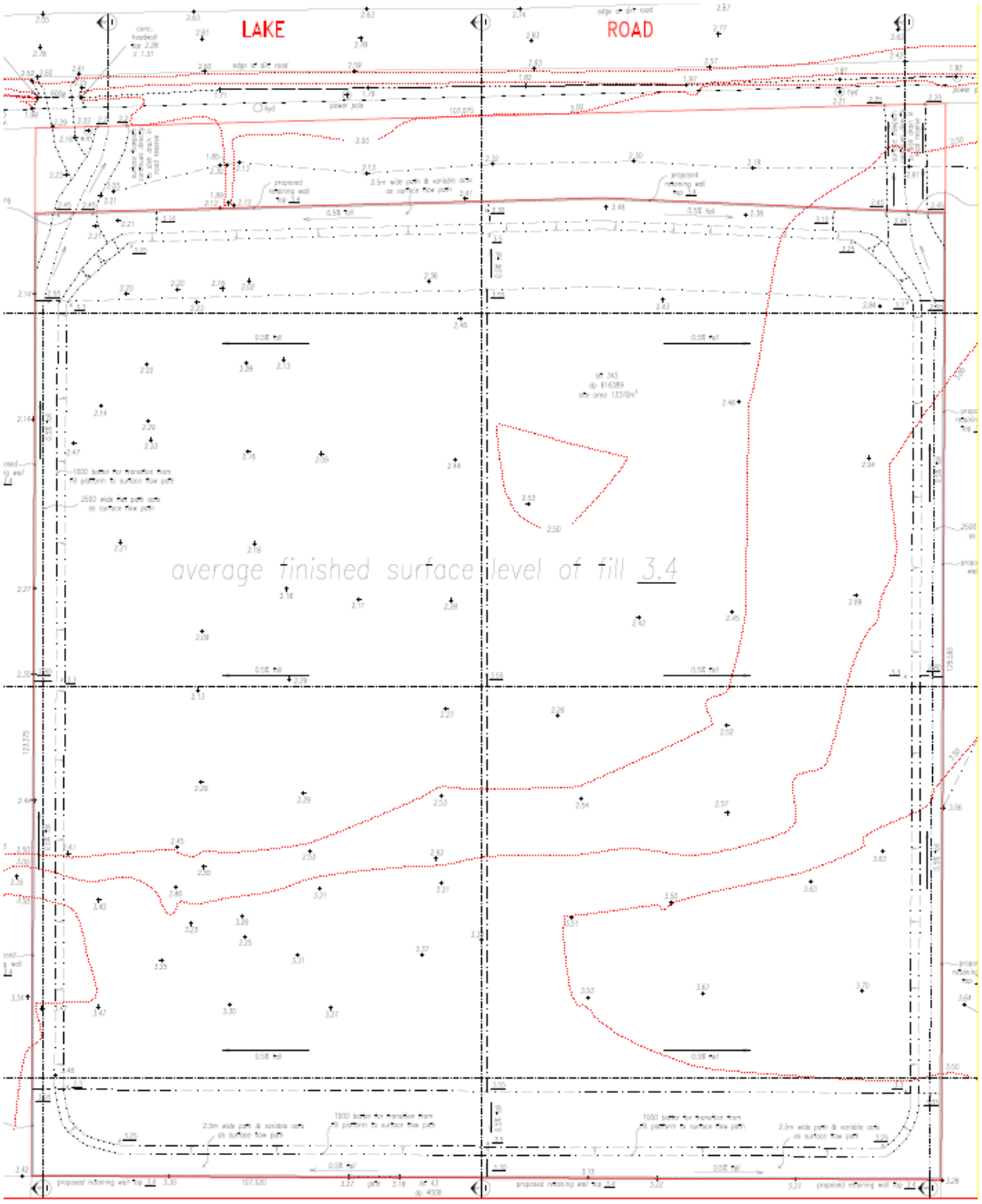


Figure 2: Site Stormwater Drainage Plan

History

- Complying Development Certificate CDC/345/2021

A CDC was issued by a private certifier on 13/5/2021 for the demolition of the existing on-site structures. The demolition works have been undertaken and the site is currently vacant.

An area of vegetation on the site was cleared in 2018 (NE corner of site) (see Figure 3) and there is no development consent for these works in Council's records. As such, the land is still mapped on the biodiversity values map and as having vegetation present on site, and a BDAR was requested accordingly. This matter is discussed in further detail within the report.



April 2018 October 2023

Figure 3: Extent of vegetation within subject site in 2018 and 2023

Application Background

The application was lodged 27 October 2021.

Prior to lodgement, clarification was requested regarding the proposed works. A site plan has been provided detailing potential building locations to demonstrate that future development could be accommodated on the site. No building works or use are proposed as part of this application.

During the assessment of the application Council requested additional information in relation to fill levels, flooding and biodiversity. This information was provided by the applicant.

A key matter for consideration in the assessment of the application was the proposed drainage arrangements. The *Wyong District Development Contributions Plan 2020* (WDDCP)

requires approximately half the subject site to be a man-made wetland, and the applicant requested that Council review this requirement of WDDCP.

Assessment staff have liaised with the relevant sections of Council to establish the necessity for the wetland identified as 'Wetland 2' on the subject site, as per Figure 16 of Section 10.4.2 Tuggerah Industrial Estate Stage 3 Drainage and water quality (reproduced here as Figure 4). Further investigation in relation to WDDCP has revealed that the drainage works within the WDDCP do not form part of Council's future work schedule in the foreseeable future and the wetland is no longer required. Furthermore, Council does not intend to acquire the private land for use as a wetland as part of the overall drainage scheme for the area and accordingly, the scheme will need to be revised as part of the review of WDDCP that is currently being undertaken.



Figure 4: Extract from Figure 16 showing Drainage and Water Quality -Tuggerah Industrial Estate and proposed wetland on subject site

The applicant has provided an alternative drainage scheme, which satisfies the objectives of the WDDCP, and Council intends to update drainage requirements for the area, which will include removal of 'Wetland 2' from the next iteration of WDDCP.

Assessment:

Having regard for the matters for consideration detailed in Section 4.15 of the *Environmental Planning and Assessment Act 1979* and other statutory requirements, Council's policies and Section 10.7 Certificate details, the assessment has identified the following key issues, which are elaborated upon for Council's information.

***Biodiversity Conservation Act 2016* (BC Act)**

The NSW Biodiversity Offsets Scheme applies to the development, and a *Biodiversity Development Assessment Report* (BDAR) has been provided. The BDAR outlines the assessment of the biodiversity values of the site and the impact of the proposed development in accordance with the Biodiversity Assessment Methodology (BAM).

The BDAR outlines that the proposed development requires clearing of 0.1522Ha of PCT 1723 "*Melaleuca biconvexa – Swamp Mahogany - Cabbage Palm swamp forest of the Central Coast*" containing the threatened tree species *Melaleuca biconvexa*. This includes 0.1Ha of vegetation cleared without approval in 2018.

The vegetation proposed to be retained has already been separated from the development area with a 2m high security fence (Figure 5). This is as per the recommendation of the previous (2021) Keystone Ecology report to fence this area. The BDAR states that the fence is 6m in from the surveyed property boundary (variable, marked by survey pegs). The area of vegetation to be retained qualifies as the Endangered Ecological Community Swamp Sclerophyll Forest on Coastal Floodplain and includes many *Melaleuca biconvexa*. The fence is to remain in place with no further development to impact this vegetation.



Figure 5: Location of existing chain wire fence and vegetation along Lake Road

The proposed northern retaining wall is proposed to be setback 10m from the property boundary. This area is proposed to be planted with a minimum 5m width buffer zone between the fence and the retaining wall with tube stock of *Melaleuca biconvexa* grown from seed collected on site. The seed has already been collected and tube stock are ready for planting as detailed in the BDAR.

The clearing, including the unauthorised clearing already undertaken, will generate an offset requirement of three ecosystem credits for PCT 1723 and two species credits for *Melaleuca biconvexa*. The development is not likely to have a serious and irreversible impact on biodiversity values and conditions have been recommended relating to the retirement of biodiversity credits and compliance with the recommendations and mitigation measures outlined in the BDAR.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 4 – Koala Habitat Protection 2021

Chapter 4 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* applies to Central Coast local government area. In accordance with Section 4.9, before a consent authority can grant consent, it must assess whether the development is likely to have any impact on koalas or koala habitat. In accordance with Section 4.9(5) consent may be granted where the applicant provides satisfactory information that demonstrates that the land subject of the development application is not core koala habitat.

The BDAR submitted with the application undertook an assessment to determine if the site was core koala habitat. Council's Ecologist reviewed the BDAR and was satisfied that the site is not core koala habitat. Having regard for the provisions of subsection 4.9(5) of the SEPP, the Panel, as the consent authority, can be satisfied the proposed development will have no impact on koalas or koala habitat.

State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 4 – Remediation of Land

In accordance with Section 4.6, a consent authority must not consent to the carrying out of development unless it has considered whether the land is contaminated, and if the land requires remediation to be made suitable for the development.

A Preliminary Contaminated Site Investigation (PSI), prepared by Geotest Services Pty Ltd, dated 28 July 2023, was submitted with the application. The site was identified to have been historically used as part of an airstrip in the south-eastern portion of the site from around 1942 until after World War II when the airstrip was converted into paddocks to support rural residential living. A light aircraft was understood to have made an emergency landing at the airstrip runway in 1950. Since 1950, the site appears to have been largely used for residential occupancy and is currently vacant with no structures on site.

Several disturbances and filling events are observed across the site based upon the 1966 to 2023 aerial imagery catalogue that has been reviewed, consisting of both localised (stockpiling) and relatively broad filling works. Based on the above findings within the PSI, Geotest Services prepared a Preliminary Conceptual Site Model (CSM). The CSM has further identified several potential Areas of Environmental Concerns (AEC) with associated Contaminates of Potential Concern (CoPCs). The PIS recommended that a Detailed Site Investigation (DSI) be prepared in accordance with the NSW EPA 2020 Guidelines for Consultants Reporting on Contaminated Land.

The applicant provided a DSI report whilst the application was under assessment. The DSI reviewed the AEC and previous reporting and found the site can be made suitable for future commercial or industrial land uses following the delineation, remediation, and validation of identified localised contamination. The DSI report recommended that a Remedial Action Plan (RAP) should be prepared for the site in order to facilitate and guide the known remediation and validation requirements including delineation. A RAP has been prepared and provided by the applicant to accompany the application.

The proposal, RAP and DSI report have been reviewed by Council's Environmental Health Officer, who is satisfied the proposed development is suitable for the intended use of the land.

The Panel can be satisfied that the proposed works can be undertaken and appropriately managed to reduce the risk of harm to human health or any other aspect of the environment. The provisions of Section4.6 have been appropriately addressed and consent can be granted for the proposed development.

Central Coast Local Environmental Plan 2022 (CCLEP 2022)

CCLEP 2022 was published on 24 June 2022 and commenced on 1 August 2022 and has been considered in the assessment of the application. However, in accordance with the savings provisions under clause 1.8A, this application has been lodged prior to the commencement of CCLEP 2022, and as such the provisions of the *Wyong Local Environmental Plan 2013* (WLEP 2013) continue to apply.

Under the published and adopted CCLEP 2022, the site is zoned E4 General Industrial and earthworks remain permissible within the E4 zone. There are no new or amended clauses or provisions warranting further discussion.

Wyong Local Environmental Plan 2013 (WLEP 2013)

Zoning and Permissibility

The site is zoned IN2 Light Industrial (Figure 6), and earthworks are a permissible development in the zone.

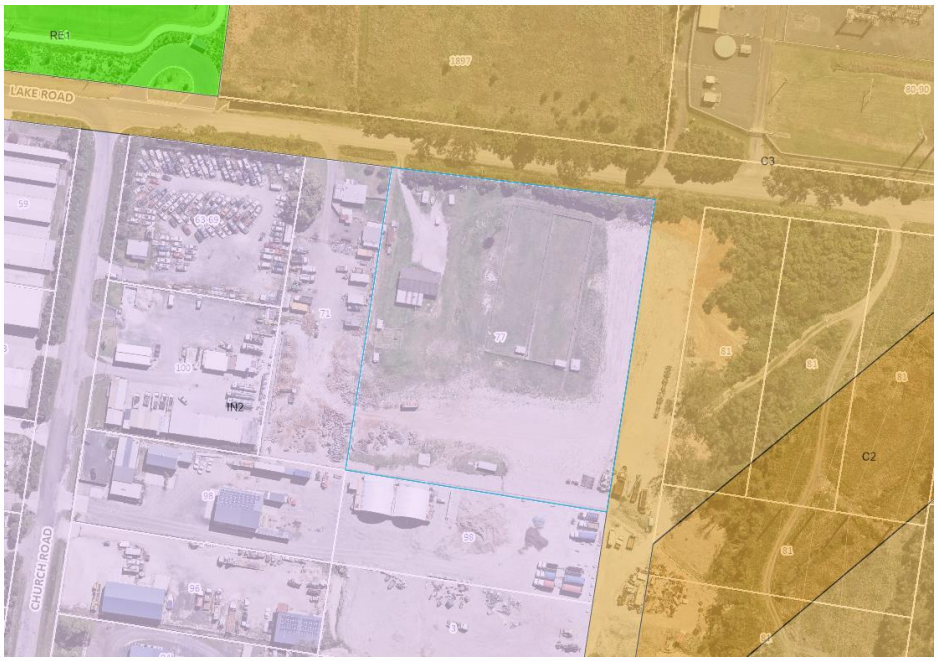


Figure 6: Zoning of the site and surrounding area

Earthworks are defined as follows under the WLEP 2013:

earthworks *means excavation or filling.*

Earthworks are a type of development as identified in the *Environmental Planning and Assessment Act 1979*.

Whilst the proposed earthworks are not associated with a use, the proposed works are in line with the works required under WDDCP. The proposed works will result in a building pad and fill that is required in the WDDCP This is discussed in further detail below.

Objectives of the zone

Subclause 2.3(2) of CCLEP 2022 requires the consent authority to have regard to the objectives for development in a zone when determining a development application. The objectives of the IN2 Light Industrial zone are as follows:

- *To provide a wide range of light industrial, warehouse and related land uses.*
- *To encourage employment opportunities and to support the viability of centres.*

- *To minimise any adverse effect of industry on other land uses.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.*
- *To support and protect industrial land for industrial uses.*

The proposed earthworks will comply with the building pad level nominated within the WDDCP and will provide a site that can appropriately accommodate future industrial development and employment opportunities. The proposal is considered to achieve the relevant objectives of the site.

Clause 5.21 Flood planning

The site is identified as flood prone land under clause 5.21 of WLEP 2013 as shown in Figure 7.

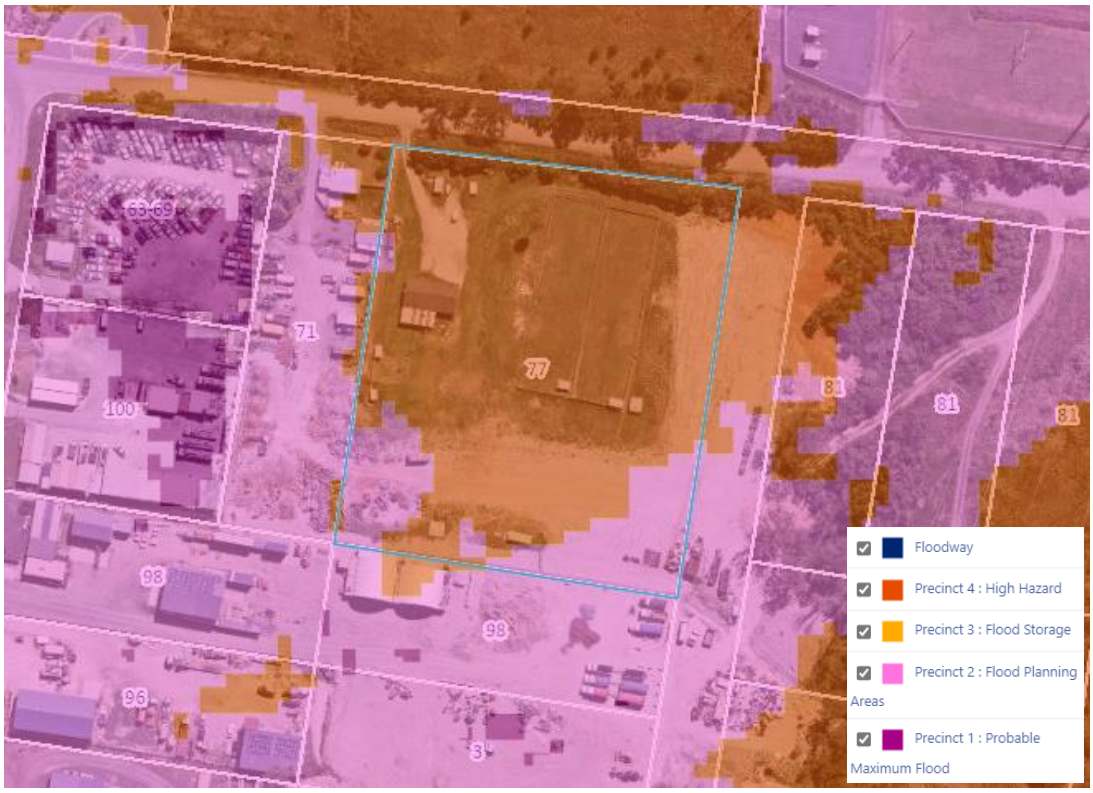


Figure 7: Flood Precinct

State Environmental Planning Policy Amendment (Flood Planning) 2021 (SEPP Flood Planning) removed clause 7.2 from the WLEP 2013 and introduced clause 5.21. The *Standard Instrument (Local Environmental Plans) Amendment (Flood Planning) Order 2021* (Flood Planning SI Order) did not include specific savings and transitional provisions to exempt pending development applications from the application of the new flood planning amendments. However, clause 8 of the *Standard Instrument (Local Environmental Plans) Order 2006* provides that changes made by an amending order do not apply to or in respect of any development application that was made, but not determined, before the start of the amending order.

This means that the new flood planning amendments that were introduced by the Flood Planning SI Order will not apply to any development application that has been made, but not finally determined, before the start of the Flood Planning SI Order (that is, 14 July 2021). This application was lodged in October 2021 and as such, the provisions of clause 5.21 apply.

In accordance with clause 5.21(2) development consent must not be granted to development on land within flood planning land unless the consent authority is satisfied the development:

(a) is compatible with the flood function and behaviour on the land, and
(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and
(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and
(d) incorporates appropriate measures to manage risk to life in the event of a flood, and
(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.

The site is identified as part of WDDCP for the Tuggerah Industrial Area Stage 3. The Technical Report for WDDCP states that this parcel of land may be filled up to 3.40m AHD. Council's Flood Engineer and Development Engineer have reviewed the proposal and have advised that the proposed filling will be consistent with other sites within this precinct that have developed in accordance with WDDCP. The nominated fill level of up to 3.40m AHD is considered appropriate and consistent with the finished levels envisaged under WDDCP.

The proposal is compatible with the intended flood function and behaviour of the land, and the implementation of WDDCP across the Tuggerah Industrial Area will result in improved drainage and minimise flood affectation for the site and adjoining properties identified within WDDCP.

It is noted that the required works identified within the drainage scheme for the Tuggerah Industrial Estate are undertaken site by site. It is considered the proposed works will not have detrimental flood affectation for other development or properties that have not yet undertaken works in accordance with WDDCP.

The site is currently vacant and no proposed use forms part of this application. The technical document that accompanies WDDCP has considered the flooding impacts as part of the study to ensure that the extent of development does not adversely affect (Ourimbah Creek to Wyong River) flood levels in the area.

A Sediment Erosion Control Plan has been prepared and reviewed by Council' Development Engineer and Environmental Health Officer. No concerns were raised, and relevant conditions have been prepared to ensure the proposal will not adversely affect the natural environment.

Clause 7.1 Acid Sulfate Soils

The site is identified as being affected by Class 3 acid sulfate soils. The clause identifies where works are more than 1m below the natural ground surface, or works are likely to lower the watertable more than 1m below the natural ground surface, an Acid Sulfate Soils Management Plan (ASSMP) must be prepared for the proposed development. The proposed works include the placement of fill throughout the site, and partial levelling at the southeast corner of the site. The proposed works are not expected to be more than 1m below the natural ground surface or to impact the watertable.

Regardless of the above, an ASSMP has been prepared based on the recommendations of the accompanying Detailed Site Investigation and Acid Sulfate Soils Assessment Report. The proposed development and relevant documentation, including the ASSMP, have been reviewed by Council's Environmental Health Officer who raised no concerns with the ASSMP.

The Panel can be satisfied that the relevant considerations of this clause have been satisfied and Acid Sulfate Soils can be appropriately managed on site.

Clause 7.9 Essential services

The proposal does not seek any use of the site. However, the building pad will provide opportunity for future development of the site and in this regard, there are adequate arrangements in place for vehicular access, electricity, and water supply. Satisfactory vehicle access to facilitate construction access has been proposed.

The site is currently unsewered. No wastewater requirements are applicable as part of this application and will be addressed with any future development of the site.

The Panel can be satisfied that adequate essential servicing can be made available to future development having regard for water, sewer, electricity, stormwater drainage, waste collection and vehicular access.

Central Coast Development Control Plan 2022 (CCDCP 2022)

CCDCP 2022 commenced on 1 August 2022. However, in accordance with the savings provisions under clause 1.1.4 of Chapter 1.1, this application has been lodged prior to commencement of CCDCP 2022 and as such the provisions of the WDCP 2013 continue to apply.

Wyong Development Control Plan 2013 (WDCP 2013)

Chapter 2.12 Industrial Development

An assessment has been undertaken in relation to the provisions of Chapter 2.12 WDCP 2013. This assessment against the requirements of this chapter is detailed in Attachment 3. The assessment of the proposal has found it to be compliant with the requirements of the Chapter.

Objectives of this Chapter are as follows:

- *To encourage employment generating developments*
- *To promote quality industrial development in Wyong Shire by identifying Council's expectations and requirements relating to design and construction; and*
- *To control environmental impacts arising from industrial development*

The proposed earthworks provide a building pad that achieves the requirements of the drainage scheme detailed within WDDCP. The proposed earthworks improve the drainage arrangement for the subject site and provide a functional building pad for future development that will meet the objectives of the Chapter.

The proposed retaining wall locations are situated to maximise retention and revegetation of the Endangered Ecological Community Swamp Sclerophyll Forest identified within the front setback and road reserve. The design and extent of the earthworks and associated retaining walls and drainage works are located to minimise impacts to the natural environment.

Chapter 3.1 - Site Waste Management

A Waste Management Plan was prepared to accompany the application however, the plan details upgrade of the existing waste collection on site which is not consistent with the scope of the current application being earthworks only. To ensure the proposed earthworks and associated waste generated is suitably disposed of a condition of consent has been imposed to store waste in a manner so that it does not pollute the environment and all waste generated on the premise must be transport to a facility which is licensed to receive that material. The requirements of Chapter 3.1 can be suitably satisfied.

Chapter 3.3 - Floodplain Management

The application is proposing permissible earthworks in Precinct 3 Flood Storage. The provisions of clause 3.1.4.1 require a performance-based assessment to be provided demonstrating that the proposed development is compatible with the flooding characteristics of the site. In this circumstance it is considered that a performance-based assessment is not required as the proposal is consistent with the technical documentation that informs WDDCP, Section 3.5 Drainage (Attachment 6).

Council's Flood Engineer has reviewed the proposal in terms of the flood planning controls and the requirements of WDDCP and associated drainage strategy, and provided the following comments:

> *"It is understood that the site was identified as part of an adopted Contributions Plan for the Tuggerah Industrial Area Stage 3. The Technical Report for this Contributions Plan states that this parcel of land may be filled up to 3.40m AHD (pg 76). As action on this Contributions Plan has already commenced, it is considered appropriate to allow filling up to 3.40m AHD.*
>
> *Filling of the site up to 3.40m AHD is supported for this development."*

The current proposal being for earthworks only it is not expected to result in additional people or vehicles on site. The proposal will not increase risk to human life or unreasonably impact upon the natural environment.

Chapter 3.6 - Tree and Vegetation Management

The provisions of Chapter 3.6 do not apply to the proposed development as it involves the removal of vegetation on land which is mapped on the Biodiversity Values Map and a BDAR is required under Section 6.4 of the B*iodiversity Conservation Act 2016*. The applicant has prepared a BDAR, which has been reviewed by Council's Ecologist and is discussed elsewhere in the report.

Chapter 6.14 Tuggerah Precinct

An assessment has been undertaken in relation to the provisions of Chapter 6.14 WDCP 2013. This assessment against the requirements this chapter is detailed in Attachment 4. The proposed earthworks comply with the relevant requirements and objectives of the chapter.

Environmental Planning and Assessment Regulation 2021

The *Environmental Planning and Assessment Regulation 2021* was commenced on 1 March 2022, however, the savings provisions under Schedule 6 Section 3 apply to this application as it was lodged prior to the commencement of the 2021 Regulation. Accordingly, the *Environmental Planning and Assessment Regulation 2000* continues to apply.

Environmental Planning and Assessment Regulation 2000

The *Environmental Planning and Assessment Regulation 2000* applies to all development applications regarding such items as application type, compulsory contributions, notification of development applications and a range of many other details regarding development application requirements. In regard to this application, there is no clause that warrants further discussion. It is noted that demolition of buildings on the site was carried out under complying development.

Likely Impacts of the Development:

Built Environment

A thorough assessment of the aspects of the proposed development on the built environment has been undertaken in terms of the relevant planning controls. The proposed earthworks are consistent with WDDCP and future development will achieve the intended outcome for the Tuggerah Industrial precinct. The proposed development is considered satisfactory regarding the built environment.

Natural Environment

The proposal will not result in a significant impact upon the natural environment beyond that anticipated in the development of the site consistent with the zoning. As previously discussed, the proposed development is considered suitable having regard for the natural environment.

Vegetation Impacts

The direct ecological impacts are anticipated to be minimal as the proposal is in an area of mostly cleared land. Vegetation along the northern boundary of the site is identified to contain *Melaleuca biconvexa*. The vegetation proposed to be retained has already been separated from the development area with a 2m high security fence.

A minimum 5m width buffer zone between the fence and the retaining wall will be planted with tubestock of *Melaleuca biconvexa* grown from seed collected onsite. The seed has already been collected and tubestock are ready for planting as detailed in the BDAR.

The clearing, including the unauthorised clearing already undertaken, will generate an offset requirement of three ecosystem credits for PCT 1723 and two species credits for *Melaleuca biconvexa*.

The Panel can be satisfied that the development will not have a serious and irreversible impact on biodiversity.

Suitability of the Site for the Development:

Having regard for the assessment above, and future economic and social benefits of future development of the site, the proposed development is considered suitable for the site.

The proposed development is in the public interest as it is consistent with the relevant development controls. The proposed works achieve the building pad fill level requirements as outlined in the WDDCP.

The proposed development has had suitable regard for the environmental impacts on the site and will support the management of vegetation north of the site to provide retention of important vegetation. It is considered that the proposed development will be in the public interest.

Submission

The application did not require notification under clause 2.3 (b) of Chapter 1.2 Notification of Development Proposals WDCP 2013. The proposed earthworks are not a nominated type of development within Appendix A of this Chapter and as discussed above, it is considered that the proposal will have little to no impact upon the environment.

Submissions from Public Authorities

No submissions from public authorities were received.

Internal Consultation

Development Engineer	Supported subject to conditions.
Ecologist	Supported subject to conditions.
Contributions	Supported subject to conditions.
Environmental Health	Supported subject to conditions.
Flood Engineer	Supported subject to conditions.

Ecologically Sustainable Principles:

The proposal has been assessed having regard to ecologically sustainable development principles and is considered to be consistent with the principles.

The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any endangered flora or fauna habitats and is unlikely to significantly affect fluvial environments.

Climate Change

The potential impacts of climate change on the proposed development have been considered by Council as part of its assessment of the application.

This assessment has included consideration of such matters as potential sea level; potential for more intense and/or frequent extreme weather conditions including storm events, bushfires, drought, flood, and coastal erosion; as well as how the proposed development may cope, combat, withstand these potential impacts. The proposed development is considered satisfactory in relation to climate change.

Other Matters for Consideration

Development Contribution Plan

The application falls under WDDCP. The following contributions are applicable:

- Tuggerah Industrial Estate Stage 3 drainage land and works
- Roads – Wyong Rd/Bryant Dr/Pacific Hwy/ Cobbs Rd
- Roads – Tuggerah Industrial Estate stage 3

The contributions have been calculated based on a total net developable area (NDA) of 13,367m^2 and a condition recommended accordingly.

Contributions Infrastructure

The currently adopted drainage strategy for the area is identified in Figure 16 of WDDCP. Wetland 2 is located within the eastern half of the subject site.

The current drainage strategy is 23 years old. A drainage concept plan for the industrial area was originally devised in 1990, with a study for Tuggerah Business Park Pty Ltd identifying further options to upgrade drainage facilities in the area to cater for the Ourimbah Creek overflow in 1995. A review of these studies was completed in March 2000 with the Revised Drainage Concept Design, to which Figure 16 of WDDCP relates, being finalised in October 2000.

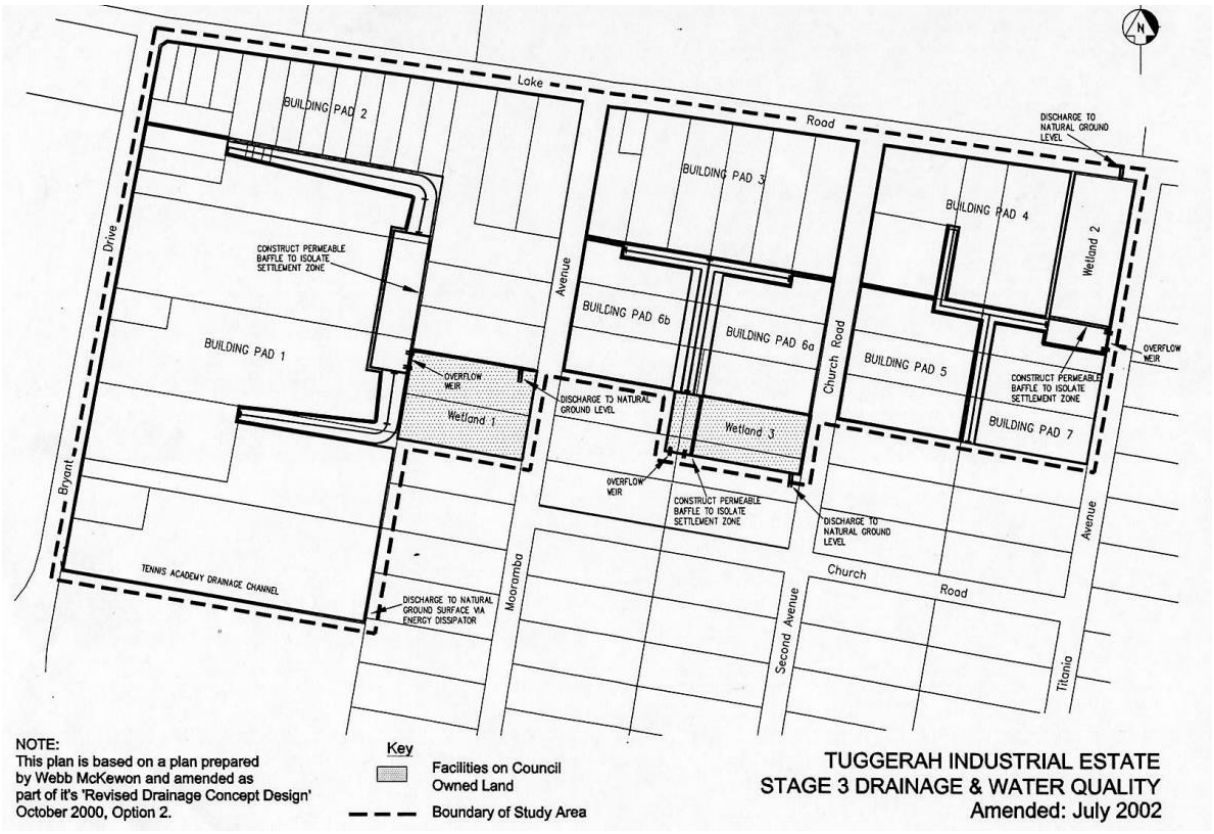


Figure 8: Extract of the contributions plan showing drainage strategy and Wetland 2 identified on subject lot

The drainage scheme for the Tuggerah Industrial Area provides for the construction of trunk drainage and water quality facilities to service several sites which will be filled to allow for the development of the land for industrial purposes. It is considered the current drainage design within WDDCP for the Lake Road precinct is no longer fit for purpose or required for the following reasons:

- The identified wetlands are not the best practice to treat runoff from industrial areas as originally envisaged in the contributions plan.

- The contributions plan for the area is outdated and would result in an unreasonable onerous asset type to create and maintain in the future.

- Wetland 2 is proposed on private property. Council does not intend to acquire the private land for the wetland and as such the scheme would need to be revised.

- Since the creation of the scheme a number of changes in the area have potentially impacted the scheme. The Regional Sporting Complex/Lake Road upgrade including drainage, was never envisaged, and the retention of important biodiversity that occurs in the location of Wetland 2 site is also important.

The contributions plan is collecting for the implementation of the entire drainage strategy. The applicant is obtaining additional development value out of that part of the land that would ordinarily be constrained and dedicated to the provision of drainage infrastructure under WDDCP.

It is anticipated that the currently designated wetland area will be removed at the next review of WDDCP.

Council staff will prepare a report to Council to seek a resolution to levy monetary contributions in the Tuggerah Industrial Estate rather than impose the scheme through Works in Kind and land dedication. This report is anticipated to be reported to Council by the end of 2024.

Based on the above, Council recommends that the Panel vary WDDCP to the extent identified within this report and the submitted plans.

Section 7.13 of the *Environmental Planning and Assessment Act 1979* provides the Panel with the authority to determine an application that applies the contributions plan in a varied form.

Planning Agreements

The proposed development is not subject to a planning agreement or draft planning agreement.

Conclusion/Recommendation

This development application has been considered in accordance with the requirements of the *Environmental Planning and Assessment Act 1979*, as outlined in this report. The potential constraints of the site have been assessed and it is considered that the site is suitable for the proposed development.

The proposal is consistent with the objectives of the IN2 zoning of the land and the development provides a building pad that achieves the required outcomes of WDDCP. Moreover, the proposed development is not likely to have a significant impact on any threatened species, populations or ecological communities, or their habitats, which are listed under the *Biodiversity Conservation Act 2016*.

Following a thorough assessment of the relevant planning policies and controls, it is considered the application is appropriate and can be supported for the following reasons:

- The Panel can be satisfied that the provisions of the following State Environmental Planning Policies have been considered and satisfied:

i) Chapter 4, subsection 4.9(2) of *State Environmental Planning Policy (Biodiversity and Conservation) 2021*.

ii) Chapter 4, subsection 4.6(4) of *State Environmental Planning Policy (Resilience and Hazards) 2021*.

- Having regard for the prerequisite conditions to the granting of consent under the *Wyong Local Environmental Plan 2013,* the Panel can be satisfied that:

    - Clause 5.21 – Flood Planning

      The proposed development:

      a) Is compatible with the flood function and behaviour on the land, and

      b) Will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and

      c) Will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and

      d) Incorporates appropriate measures to manage risk to life in the event of a flood and

      e) Will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.

    - Clause 7.1 - Acid sulfate soils

      An Acid Sulfate Soils Management Plan has been prepared in accordance with the Acid Sulfate Soils Manual (clause 7.1(3)(a)) and provided to the consent authority (clause 7.1(3)(b)). Any Acid Sulfate Soils that are encountered can be appropriately managed.

    - Clause 7.9 – Essential services

      All services essential for the proposed development are available and adequate arrangements are in place for the future development of the site.

- The Panel can be satisfied that the proposed drainage arrangements achieve the objectives and intended outcomes of the *Wyong District Development Contributions Plan* 2020 and associated drainage scheme.
- The Panel can be satisfied that the relevant provisions of the environmental planning instruments, plans and policies that apply to the development have been considered in the assessment of the application.

- The proposed development is considered satisfactory having regard for the matters for consideration provided in Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

Therefore, DA/1446/2021 for Proposed Earthworks and Associated Retaining Walls and Drainage Works at 77 Lake Road, Tuggerah NSW is recommended for APPROVAL pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979,* subject to the draft conditions attached to this report.

Attachments

1	Draft conditions - 77 Lake Road, TUGGERAH NSW 2259 - DA/1446/2021	D15957946
2	Architectural Plans	D15963857
3	Assessment against DCP 2013, Chapter 2.12 – Industrial Development	D15957927
4	Assessment against DCP 2013, Chapter 6.14 – Tuggerah Precinct	D15957929
5	Wyong_District_Development_Contributions_Plan	D15957939
6	Technical Report Wyong Contribution Plan	D15957940

Date:	20 November 2023
Responsible Officer:	Ashley Warnest
Location:	77 Lake Road, TUGGERAH NSW 2259 LOT 345 DP 616389
Owner:	Croscreh Pty Ltd
Applicant:	PM Anderson Consulting Pty Ltd
Date of Application:	7 October 2021
Application No:	DA/1446/2021
Proposed Development:	Earthworks
Land Area:	13370.00
Existing Use:	Vacant

PROPOSED CONDITIONS

1.PARAMETERS OF THIS CONSENT

Approved Plans and Supporting Documentation

1.1 Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Plan No.	Revision No.	Plan Title	Drawn By	Dated
010721 Sheet 2	B	Stormwater Drainage Plan	Stormwater Engineers Pty LTD	June 2023
010721 Sheet 3	B	Fill Cross Section	Stormwater Engineers Pty LTD	June 2023
010721 Sheet 4	B	Fill/Surface flow Path Cross Section	Stormwater Engineers Pty LTD	June 2023

Document Title	Report Ref.	Prepared by	Dated
Biodiversity Impact Assessment	REF: CCC 21-1150	Keystone Ecological	6/10/2021
Biodiversity Development Assessment Report	Revision 1	Anne Clements & Associates Pty Limited	2/9/2022
Targeted Contamination Assessment	P33184.1_R01	Geotest Services Pty Ltd.	14/4/2021
Preliminary Site	P34237.1_R01	Geotest Services Pty	28/07/2023

Investigation and Sampling and Analysis Plan		Ltd.	
Detailed Site Investigation and Acid Sulfate Soil Assessment	P34276.1_R02	Geotest Services Pty Ltd.	13/10/2023
Remediation Action Plan	P34276.1_R03	Geotest Services Pty Ltd.	13/11/2023
Acid Sulfate Soil Management Plan	P34276.2_R01(F01)	Geotest Services Pty Ltd.	13/11/2023
Sediment Erosion Control Plan. Rev B.	Drawing No. 010721	Stormwater Engineers Pty LTD	June 2023

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

1.2. Carry out all building works in accordance with the National Construction Code Series, Building Code of Australia, Volume 1 and 2 as appropriate.

2.PRIOR TO THE COMMENCEMENT OF ANY WORKS

2.1. All conditions under this section must be met prior to the Commencement of Works.

2.2. Trees and native vegetation proposed for retention must be clearly marked on all final plans. All native vegetation to be retained, and the buffer zone to be replanted between the fence and the retaining wall (Stormwater Drainage Plan, Stormwater Engineers Pty LTD, June 2023), must be clearly marked as "No Go Area" on all plans. The location of any threatened species and ecological communities as detailed in the Biodiversity Development Assessment Report (BDAR) must also be marked on all plans.

2.3. Submit an application to Council under section 305 of the Water Management Act 2000 for a section 306 Requirements Letter. The Application form can be found on Council's website centralcoast.nsw.gov.au. Early application is recommended.

The section 305 application will result in a section 306 letter of requirements which must be obtained prior to the Commencement of Works. The requirements letter will outline which requirements must be met prior to each development milestone e.g. prior to construction certificate, subdivision works certificate, occupation certificate and/or subdivision certificate.

2.4. Obtain a Roads Act Works Approval by submitting an application to Council for a Section 138 Roads Act Works Approval for all works required within the road reserve. The

application is to be lodged using an *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

The application is to be accompanied by detailed design drawings, reports and other documentation prepared by a suitably experienced qualified professional in accordance with Council's *Civil Works Specifications*.

Fees, in accordance with Council's Fees and Charges, will be invoiced to the applicant following lodgement of the application. Fees must be paid prior to Council commencing assessment of the application.

Design drawings, reports and documentation will be required to address the following works within the road reserve:

a) Construction of a suitable temporary construction access for the purposes of placing of engineered fill on-site.

b) Construction of street storm water drainage including tail out drainage.

c) Construction of any works required to transition new works into existing infrastructure and the surrounding land formation.

d) Installation of roadside furniture and safety devices as required by design e.g. fencing, signage, guide posts, chevrons, directional arrows, and/or safety barriers in accordance with Austroads Guides, NSW Transport Roads and Maritime Services Supplements and Australian Standards and manufacturers requirements.

e) Construction of a storm water drainage connection from the development site to Council's storm water drainage system within the road reserve.

The section 138 Roads Act Works Approval must be issued by Council and all conditions of that approval must be addressed prior to occupying and commencing any works in the road reserve.

2.5. Submit to Council a dilapidation report detailing the condition of all Council assets within the vicinity of the development. The report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, footpath, driveways, street trees, street signs, street lights or any other Council assets in the vicinity of the development. The dilapidation report will be required to be submitted to Council prior to the issue of the Section 138 Roads Act Works approval. The dilapidation report may be updated with the approval of Council prior to the commencement of works. The report will be used by Council to establish damage to Council's assets resulting from the development works.

2.6. Submit to the relevant authority for works within the development site detailed design drawings and design reports for the following engineering works:

a) Construction of driveways, ramps and car parking areas in accordance with the requirements of the current edition Australian Standard AS/NZS 2890: Parking Facilities and other applicable Australian Standards.

b) Construction of retaining walls where indicated on development approval documentation. Retaining wall design must not conflict with existing or proposed services or utilities. Retaining walls designs for wall greater than 600mm in height must be certified by a registered practising Civil or Structural engineer as being in accordance with Australian Standards.

Note: Construction retaining walls shall be wholly within the site.

Detailed design drawings and design reports acceptable to the Registered Certifier must be included in the Commencement of Works documentation.

2.7. Before the Commencement of Works, the applicant must pay the total contribution payable to Council under this condition. The total contributions are $272,141.10 as calculated at the date of this consent, in accordance with the Wyong District Section 7.11 Contributions Plan.

The full list of itemised contributions, is described in the table below.

Cobbs Area 1/2/3 Roads	$ 11,509.51
Tuggerah Industrial Stage 3 Drainage Land	$ 37,419.95
Tuggerah Industrial Stage 3 Drainage Works	$ 116,949.80
Tuggerah Industrial Stage 3 Roads	$ 106,261.84
Total	**$ 272,141.10**

The total amount payable may be adjusted at the time the payment is made, in accordance with the provisions of the Wyong District Section 7.11 Contributions Plan.

'Section 7.11 contributions may be satisfied by the value of works as part of a "Works in Kind" agreement with Council. Works in kind to be carried out shall be agreed to by Council in writing prior to the payment of the contributions and issue of a construction certificate (related to the works in kind). All such agreements shall be in accordance with Council's policies.'

A copy of the Contributions Plan may be inspected at the offices of Central Coast Council, 2 Hely Street Wyong or on Council's website: Development Contributions.

2.8. Like for Like (Ecosystem Credit Retirement)

a) Prior to commencement of any works, including any vegetation clearing works, the class and number of ecosystem credits in Table 1 must be retired to offset the residual biodiversity impacts of the development.

b) The requirement to retire ecosystem credits in Table 1 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the class and number of ecosystem credits, as calculated by the Biodiversity Conservation Fund Charge System.

c) Evidence of the retirement of ecosystem credits or payment to the Biodiversity Conservation Fund must be provided to the consent authority prior to commencement of any works, including prior to any vegetation clearing works.

Table 1. Ecosystem credits required to be retired – like for like

Impacted plant community type	**Number of ecosystem credits**	**HBT**	**IBRA sub-region**	**Plant community type(s) that can be used to offset the impacts from development**
1723 - Melaleuca biconvexa - Swamp Mahogany - Cabbage Palm swamp forest of the Central Coast	3	No	Wyong, Hunter, Pittwater and Yengo. or Any IBRA subregion that is within 100 kilometres of the outer edge of the impacted site.	Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions This includes PCT's: 837, 839, 926, 971, 1064, 1092, 1227, 1230, 1231, 1232, 1235, 1649, 1715, 1716, 1717, 1718, 1719, 1721, 1722, 1723, 1724, 1725, 1730, 1795, 1798

2.9. Like for Like (Species Credit Retirement)

a) Prior to commencement of any works, including any vegetation clearing works, the class and number of species credits in Table 1 below must be retired to offset the residual biodiversity impacts of the development.

b) The requirement to retire species credits outlined in Table 1 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the class and number of species credits, as calculated by the Biodiversity Conservation Fund Charge System

c) Evidence of the retirement of ecosystem credits or payment to the Biodiversity Conservation Fund must be provided to the consent authority prior to commencement of any works, including prior to any vegetation clearing works.

Table 1. Species credits required to be retired – like for like

Impacted species credit species	**Number of species credits**	**IBRA sub-region**
Melaleuca biconvexa Biconvex Paperbark	2	Any in NSW

2.10. Implement the impact mitigation measures in the approved *Biodiversity Development Assessment Report (BDAR)* by Anne Clements & Associates, dated 2 September 2022. Where these recommendations contained within the Biodiversity Development Assessment Report are inconsistent, the conditions of consent prevail.

2.11. Maintain the minimum two (2) metre high chain wire link security fence along the boundary of the area identified on the approved plan as being a Vegetation Management Zone. A lockable access gate must be provided for maintenance purposes. The fence must be sign posted at intervals of no less than thirty (30) metres to identify the conservation value of the land and discourage access.

2.12. Prepare a Construction Traffic and Pedestrian Management Plan (CTPMP) for all activities related to works within the site. The plan must be prepared and implemented only by persons with Roads and Maritime Service accreditation for preparing and implementing traffic management plans at work sites.

The CTPMP must describe the proposed construction works, the traffic impacts on the local area and how these impacts will be addressed.

The CTPMP must address, but not be limited to, the following matters:

- Ingress and egress of construction related vehicles to the development site.
- Details of the various vehicle lengths that will be used during construction and the frequency of these movement.
- Use of swept path diagrams to demonstrate how heavy vehicles enter, circulate and exit the site or Works Zone in a forward direction.
- Deliveries to the site, including loading / unloading materials and requirements for work zones along the road frontage to the development site. A Plan is to be included that shows where vehicles stand to load and unload, where construction plant will stand, location of storage areas for equipment, materials and waste, locations of Work Zones (if required) and location of cranes (if required).
- Works Zones if heavy vehicles cannot enter or exit the site in a forward direction.

- Control of pedestrian and vehicular traffic where pre-construction routes are affected.
- Temporary Road Closures.

Where the plan identifies that the travel paths of pedestrians and vehicular traffic are proposed to be interrupted or diverted for any construction activity related to works inside the development site an application must be made to Council for a Road Occupancy Licence. Implementation of traffic management plans that address interruption or diversion of pedestrian and/or vehicular traffic must only take place following receipt of a Road Occupancy Licence from Council or the Roads and Maritime Service where on a classified road.

Where a dedicated delivery vehicle loading and unloading zone is required along the road frontage of the development site a Works Zone Application must be lodged and approved by Council. A minimum of 3 months is required to allow Traffic Committee endorsement and Council approval.

The Construction Traffic and Pedestrian Management Plan must be reviewed and updated during construction of the development to address any changing site conditions.

A copy of the Construction Traffic and Pedestrian Management Plan must be held on site at all times and be made available to Council upon request.

2.13. Obtain Council approval of Soil and Water Management Plans prepared in accordance with Section 2.3 of the 'Blue Book' (Managing Urban Stormwater: Soils and Construction, Landcom, 2004). The plan shall be prepared by a suitably qualified environmental/civil consultant. Section 9.3 of the Blue Book provides guidance on preparing a Soil and Water Management Plan. (Note: A Soil and Water Management Plan is a more comprehensive document than an Erosion and Sediment Control Plan).

At a minimum, the following information must be included in the SWMP: -

a) a site survey which identifies contours and approximate grades and the direction(s) of fall;
b) locality of site and allotment boundaries;
c) location of adjoining road(s) and all impervious surfaces;
d) location of site within catchment including an estimate of flows through the site;
e) existing vegetation and site drainage;
f) nature and extent of clearing, excavation and filling;
g) diversion of run off around disturbed areas;
h) location and type of proposed erosion and sediment control measures;
i) location of site access and stabilisation of site access;
j) location of material stockpiles;
k) location and engineering details with supporting design calculations for all necessary sediment retention basins;

l) location and concept plans of proposed constructed wetlands/ gross pollutant traps, trash racks or trash collection / separator units;
m) proposed site rehabilitation and landscaping;
n) detailed staging of construction works (breaking down of catchment disturbed), and
o) maintenance program for erosion and sediment control measures.

All design criteria and calculations used to size soil and water control measures shall be shown, and construction standard drawings are to be provided on each type of soil and water control measure proposed.

2.14. Implement all erosion and sediment control measures and undertake works in accordance with the approved Soil and Water Management Plans. Update the plan as required during all stages of the construction or in accordance with the 'Blue Book' (Managing Urban Stormwater: Soils and Construction, Landcom, 2004).

2.15. Erect a temporary hoarding or temporary construction site fence between the work site and adjoining lands before the works begin and must be kept in place until after the completion of the works, if the works:

a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic, or
b) could cause damage to adjoining lands by falling objects, or
c) involve the enclosure of a public place or part of a public place.

Note 1: A structure on public land or on or over a public road requires the prior approval of the relevant authority under the *Local Government Act 1993* or the *Roads Act 1993*, respectively.

Note 2: The *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2011* contain provisions relating to scaffolds, hoardings and other temporary structures.

2.16. Provide or make available toilet facilities at the work site before works begin and maintain the facilities until the works are completed at a ratio of one toilet plus one additional toilet for every twenty (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.

2.17. Undertake any demolition involving asbestos in accordance with the *Work Health and Safety Act 2011*.

The person having the benefit of this consent must ensure that the removal of:

a) more than 10m^2 of non-friable asbestos or asbestos containing material is carried out by a licensed non-friable (Class B) or a friable (Class A) asbestos removalist, and
b) friable asbestos of any quantity is removed by a licensed removalist with a friable (Class A) asbestos removal licence.

The licensed asbestos removalist must give notice to the regulator before work commences in accordance with Clause 466 of the *Work Health and Safety Regulation 2011*.

2.18. Submit amendments to the approved plans to the Registered Certifier pursuant to the *Environmental Planning and Assessment Regulation 2000* that must detail:

a) The sediment erosion fence depicted on Sediment Erosion Control Plan Rev B, prepared by Stormwater Engineers Pty LTD, Dated June 2023 is to be relocated to the top of retaining wall and not within the vegetated area of the front setback.

2.19. Prior to the commencement of works, submit to the Registered Certifier for earthworks, design drawings detailing controlled filling to 3.4 metres Australian Height Datum (AHD). The detailed design drawings are to be endorsed by a suitably qualified civil or geotechnical engineer.

2.20. Obtain Council approval of a Construction Environmental Management Plan ('CEMP') for the proposed fill importation prepared by a suitably qualified civil engineer/environmental consultant. The Plan will need to detail, at a minimum, the controls required to manage potential environmental impacts during the bulk earthworks phase including acoustic (noise and vibration), air (dust), and land contamination (including methods of detecting, isolating, and disposing of non-compliant fill material), record keeping of truck transport logs and waste classification certificates as well as community consultation and a complaints policy. It is recommended that a site supervisor is appointed to oversee all fill importation and to ensure the implementation of the CEMP, if approved.

3.DURING WORKS

3.1. All conditions under this section must be met during works.

3.2. Maintain the protective fence around the retained vegetation. The fence must be maintained for the duration of works and ongoing.

3.3. Comply with mitigation measures in the approved Biodiversity Development Assessment Report *Biodiversity Development Assessment Report (BDAR)* by Anne Clements & Associates, dated 2 September 2022. Where these recommendations contained within the Biodiversity Development Assessment Report are inconsistent, the conditions of consent prevail.

The buffer zone between the fence and the retaining wall is to be weeded and planted with tubestock of *Melaleuca biconvexa* grown from seed collected onsite following the procedures detailed in the BDAR. The consultant Ecologist or bush regenerator is to provide certification to Councils Ecologist that the planting has been undertaken in accordance with the BDAR.

3.4. Building work, demolition or vegetation removal is only carried out between:

- 7.00 am and 5.00 pm on Monday to Saturday.

Building work, demolition or vegetation removal is not carried out on Sundays and public holidays, except where there is an emergency.

Unless otherwise approved within a construction site management plan, construction vehicles, machinery, goods or materials must not be delivered to the site outside the approved hours of site works.

Note: Any variation to the hours of work requires Council's approval.

3.5. While demolition or building work is being carried out, all such works must cease immediately if a relic or Aboriginal object is unexpectedly discovered. The applicant must notify the Heritage Council of NSW in respect of a relic and notify the Secretary of the Department of Planning, Industry and Environment and the Heritage Council of NSW in respect of an Aboriginal object. Building work may recommence at a time confirmed by either the Heritage Council of NSW or the Secretary of the Department of Planning, Industry and Environment.

In this condition:

"relic" means any deposit, artefact, object or material evidence that:
(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) is of State or local heritage significance; and

"Aboriginal object" means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and

includes Aboriginal remains. To ensure the protection of objects of potential significance

3.6. Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the relevant authority or an officer of Council. 3.7. Place all building materials, plant and equipment on the site of the development during the construction phase of the development so as to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure. Further, no construction work is permitted to be carried out within the road reserve unless the works are associated with a separate approval issued under the provisions of the *Roads Act 1993*.

3.8. Implement all erosion and sediment control measures and undertake works in accordance with the approved Erosion and Sediment Control Plan prepared by Leon Savage on behalf of Stormwater Engineers Pty Ltd, July 2021. Update the plan as required during all stages of the construction or in accordance with *the 'Blue Book' (Managing Urban Stormwater: Soils and Construction, Landcom, 2004)*.

3.9. No vegetation is to be removed to facilitate access into the site.

3.10. Keep accurate records of all fill material imported to the site, including truck transport logs and waste classification certificates. Provide to Council Officers on request.

3.11. Undertake works in accordance with the approved Construction Environmental Management Plan.

3.12. Prior to importing fill material to the site undertake the remedial actions recommended in the 'approved Remedial Action Plan'.

3.13. Following the completion of the remediation works required under the 'approved Remedial Action Plan' and prior to importing fill to the site obtain Council approval of a Validation Report, Environmental Management Plan and Ongoing Monitoring prepared by a suitably qualified contaminated land consultant. Such investigation must be undertaken in accordance with Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (1998) and NSW Environment Protection Authority's Contaminated Land Guidelines - Consultants Reporting on Contaminated Land 2020 and Contaminated Sites – Sampling Design Guidelines (2022).

3.14. Following the completion of the bulk earthworks and fill importation to the site obtain Council approval of the following:

a) A Preliminary Contaminated Site Investigation (PSI) and Sampling and Analysis Plan (SAP) prepared by a suitably qualified contaminated land consultant. Such investigation must be undertaken in accordance with Managing Land

Contamination – Planning Guidelines SEPP 55 – Remediation of Land (1998) and NSW Environment Protection Authority's Contaminated Land Guidelines - Consultants Reporting on Contaminated Land 2020 and Contaminated Sites – Sampling Design Guidelines (2022).

b) (If required) Submit to Council, and obtain approval from the Council, of a Detailed Contaminated Site Investigation and Site-Specific Risk Assessment and Modelling prepared by a suitably qualified contaminated land consultant. Such investigation must be undertaken in accordance with Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (1998) and NSW Environment Protection Authority's Contaminated Land Guidelines - Consultants Reporting on Contaminated Land 2020 and Contaminated Sites – Sampling Design Guidelines (2022).

c) (If required) Submit to Council, and obtain approval from the Council, of a Remedial Action Plan prepared by a suitably qualified contaminated land consultant. Such investigation must be undertaken in accordance with Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (1998) and NSW Environment Protection Authority's Contaminated Land Guidelines - Consultants Reporting on Contaminated Land 2020 and Contaminated Sites – Sampling Design Guidelines (2022).

d) (If required) Submit to Council, and obtain approval from the Council, of a Validation Report, Environmental Management Plan and Ongoing Monitoring prepared by a suitably qualified contaminated land consultant. Such investigation must be undertaken in accordance with Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (1998) and NSW Environment Protection Authority's Contaminated Land Guidelines - Consultants Reporting on Contaminated Land 2020 and Contaminated Sites – Sampling Design Guidelines (2022).

3.15. No soils to be imported to the subject site except for Virgin Excavated Natural Material (VENM) as defined in Schedule 1 of the Protection of the Environment Operations Act 1997 and/ or Excavated Natural Material (ENM) that meets the Resource Recovery Orders under Part 9, Clause 93 of the *Protection of the Environment Operations (Waste) Regulation 2014*.

3.16. Classify all excavated material removed from the site in accordance with NSW EPA (November 2014) Waste Classification Guidelines and/or the Resource Recovery Orders under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014.

3.17. Dust generated as result of the construction should adhere to the following:

a) Implement dust suppression measures on-site during bulk earthworks to suppress dust generated by vehicles and equipment. Dust must also be

suppressed at all other stages of construction in order to comply with the *Protection of the Environment Operations Act 1997*.

b) Implement dust control measures to ensure airborne dust particulates are abated and airborne movement of sediment blown from exposed disturbed areas is contained within the site.

4.UPON COMPLETION OF WORKS

4.1. All conditions under this section must be met upon the completion of works.

4.2. Complete the civil engineering works within the development site in accordance with the detailed design drawings and design reports plans prepared prior to commencement.

4.3. Complete construction of the stormwater management system in accordance with the Stormwater Management Plan and Australian Standard AS 3500.3-*Stormwater drainage systems*. Certification of the construction by a suitably qualified consultant must be provided to the relevant authority.

4.4. Achieve a minimum of 95% standard compaction for all lots filled in accordance with Australian Standard AS 1289: *Methods of testing soils for engineering purposes*. Certification by a practising Geotechnical Engineer that all lot fill has been inspected and tested to Level 1 Inspection and Testing requirements of AS 3798: *Guidelines on earthworks for Commercial and Residential Developments* and the minimum compaction has been achieved is to be provided to the relevant authority.

4.5. Complete construction of all works within the road reserve in accordance with the Roads Act Works Approval. Completion of works includes the submission and acceptance by Council of all work as executed drawings plus other construction compliance documentation and payment of a maintenance/defects bond to Council in accordance with Council's Fees and Charges.

4.6. Certification from a Registered Surveyor is to be provided to the relevant authority in relation to the following:

a) The finished site levels are generally in accordance with those depicted in the Stormwater Drainage Plan Revision B, prepared by Stormwater Engineers Pty LTD, dated June 2023.
b) That the soils have been compacted in accordance with AS 3798-2007: Guidelines on Earthworks for Commercial and Residential developments.

5.ONGOING

5.1. Maintain all works associated with planting of tubestock for a minimum period of twelve (12) months from the date planting to ensure the survival and establishment of the landscaping.

Where the replacement tree dies or is substantially damaged within five (5) years of planting, it must be replaced and maintained to maturity.

The minimum two (2) metre high chain wire link security fence of the retained vegetation is not to be removed. Any damage is to be repaired.

5.2. The ongoing maintenance of all erosion and sediment controls, including the construction access, until the site is fully developed or revegetated accordingly.

5.3. Undertake works in accordance with the Acid Sulfate Soil Management Plan prepared by Geotest Services Pty Ltd, dated 13 November 2023.

PENALTIES

Failure to comply with this development consent and any condition of this consent may be a ***criminal offence***. Failure to comply with other environmental laws may also be a ***criminal offence***.

Where there is any breach Council may without any further warning:

- Issue Penalty Infringement Notices (On-the-spot fines);
- Issue notices and orders;
- Prosecute any person breaching this consent, and/or
- Seek injunctions/orders before the courts to retain and remedy any breach.

Warnings as to Potential Maximum Penalties
Maximum Penalties under NSW Environmental Laws include fines up to $1.1 Million and/or custodial sentences for serious offences.

ADVISORY NOTES

- All waste generated on the premise must be stored in a manner so that it does not pollute the environment.
- All waste generated on the premise must be transport to a facility which is licensed to receive that material.

- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.

- The following public authorities may have separate requirements in the following aspects:

  a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
  b) Jemena Asset Management for any change or alteration to the gas line infrastructure
  c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
  d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
  e) Central Coast Council in respect to the location of water, sewerage and drainage services.
- Carry out all work under this Consent in accordance with SafeWork NSW requirements including the *Workplace Health and Safety Act 2011 No 10* and subordinate regulations, codes of practice and guidelines that control and regulate the development industry
- Dial Before You Dig
  Underground assets may exist in the area that is subject to your application. In the interests 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 on 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 contacting 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.
- *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.
- Install and maintain backflow prevention device(s) in accordance with Council's WS4.0 Backflow Prevention Containment Policy. This policy can be found on Council's website:
  www.centralcoast.nsw.gov.au

  This condition only applies if installation / alteration of plumbing and / or drainage works are proposed (excludes stormwater drainage)

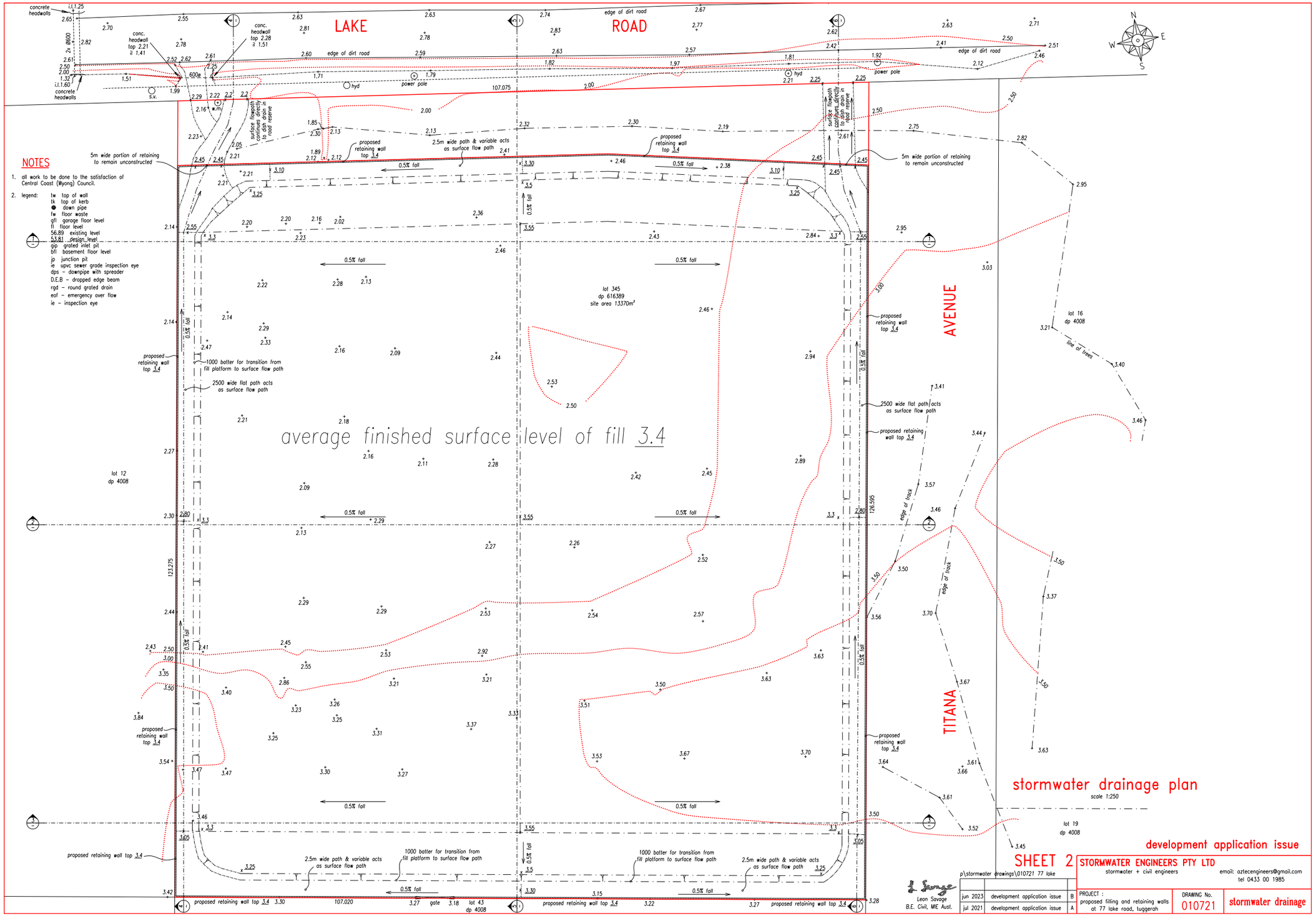
The staff responsible for the preparation of the report, recommendation or advice to any person with delegated authority to deal with the application have no pecuniary interest to disclose in respect of the application.

Ashley Warnest	XXXXX
Reporting Officer	Reviewing Officer

The staff authorised to determine the application have no pecuniary interest to disclose in respect of the application. The report is endorsed and the recommendation contained therein.

Approved/Refused:

Date:



NOTES

1. all work to be done to the satisfaction of Central Coast (Wyong) Council.
2. legend:
   - tw top of wall
   - tk top of kerb
   - dp down pipe
   - fw floor waste
   - gfl garage floor level
   - fl floor level
   - 56.89 existing level
   - 53.81 design level
   - gip grated inlet pit
   - bfl basement floor level
   - jp junction pit
   - ie upvc sewer grade inspection eye
   - dps – downpipe with spreader
   - D.E.B – dropped edge beam
   - rgd – round grated drain
   - eof – emergency over flow
   - ie – inspection eye

stormwater drainage plan
scale 1:250

development application issue

SHEET 2

STORMWATER ENGINEERS PTY LTD
stormwater + civil engineers
email: aztecengineers@gmail.com
tel 0433 00 1985

p:\stormwater drawings\010721 77 lake

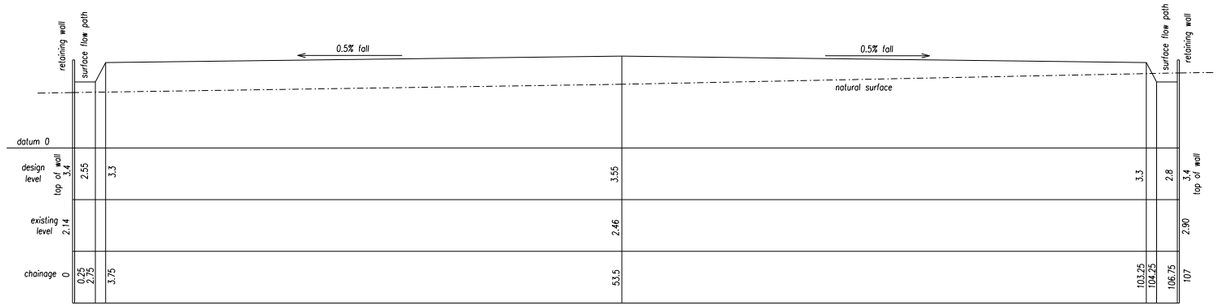
jun 2023	development application issue	B	
jul 2021	development application issue	A	

Leon Savage
B.E. Civil, MIE Aust.

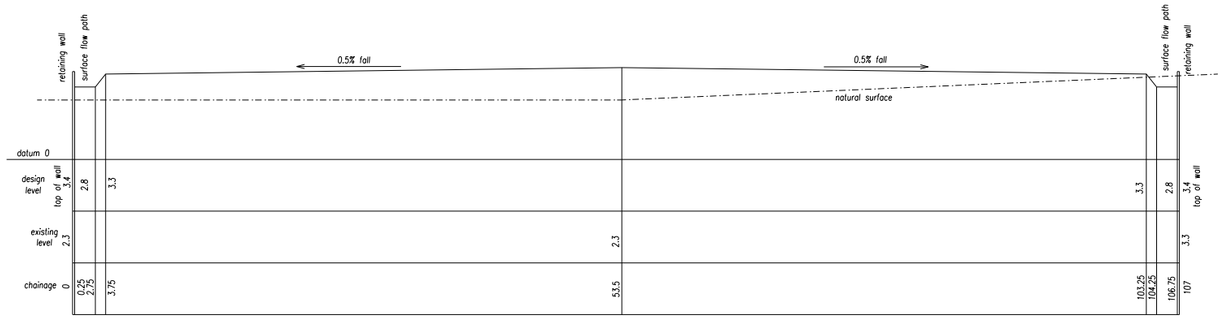
PROJECT :
proposed filling and retaining walls at 77 lake road, tuggerah

DRAWING No.
010721

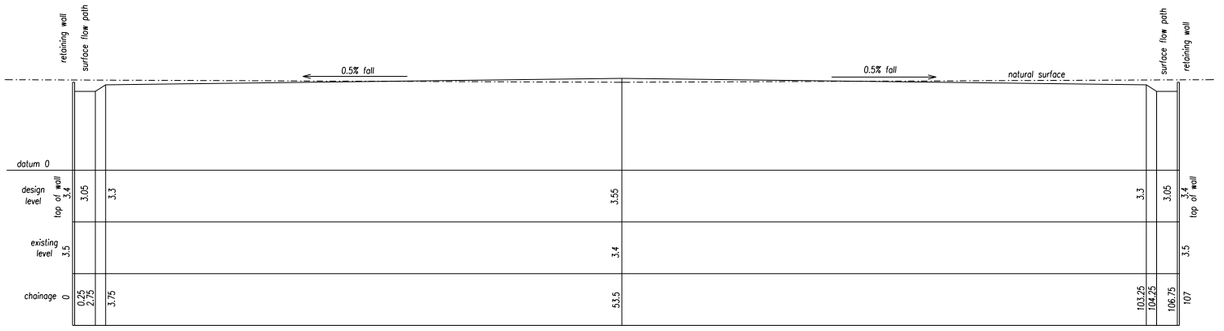
stormwater drainage



proposed fill cross section 1
scale hor 1:250 vert 1:100



proposed fill cross section 2
scale hor 1:250 vert 1:100



proposed fill cross section 3
scale hor 1:250 vert 1:100

development application issue

SHEET 3

p\stormwater drawings\010721 77 lake

jun 2023	development application issue	B
jul 2021	development application issue	A

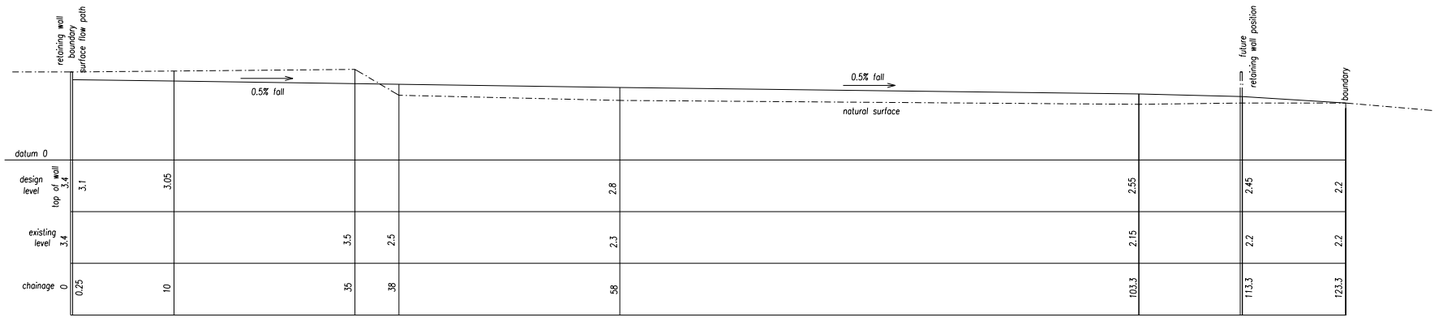
Leon Savage
B.E. Civil, MIE Aust.

STORMWATER ENGINEERS PTY LTD
stormwater + civil engineers
email: aztecengineers@gmail.com
tel 0433 00 1985

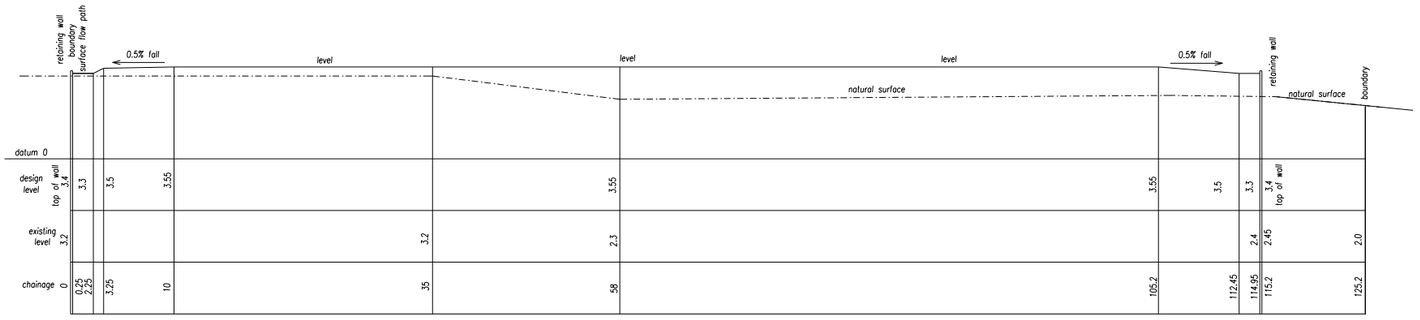
PROJECT : proposed filling and retaining walls at 77 lake road, tuggerah

DRAWING No. 010721

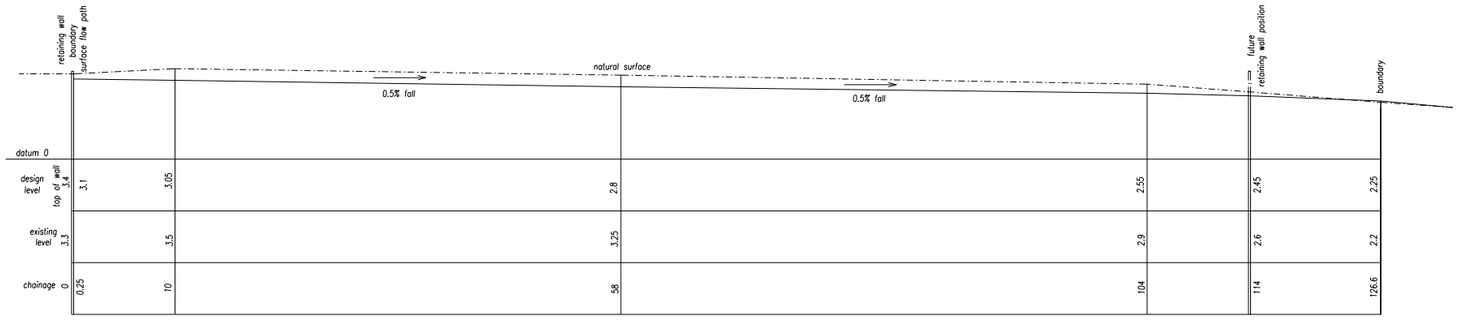
cross sections



proposed fill/surface flow path cross section 4
scale hor 1:250 vert 1:100



proposed fill cross section 5
scale hor 1:250 vert 1:100



proposed fill/surface flow path cross section 6
scale hor 1:250 vert 1:100

development application issue

SHEET 4

STORMWATER ENGINEERS PTY LTD
stormwater + civil engineers
email: oztecengineers@gmail.com
tel 0433 00 1985

Leon Savage
B.E. Civil, ME Aust.

p:\stormwater drawings\010721 77 lake

jun 2023	development application issue	B
jul 2021	development application issue	A

PROJECT : proposed filling and retaining walls at 77 lake road, tuggerah

DRAWING No. 010721

cross sections

Requirement	Proposed	Complies
2.0 Industrial Site Development Design Elements		
2.1 Floor Space Ratio		
Maximum FSR = 0.8:1	N/A – no building proposed	N/A
2.2 Site Coverage		
Maximum coverage of 50% for buildings on the site.	N/A	N/A
2.3 Setbacks		
Front: 10m any other road	N/A	
Minimum 5m wide landscape areas provided within the front setback.	N/A	
Side and Rear: Nil	N/A	
2.4 Design and Appearance of Buildings		
Acceptable bulk and scale	N/A	
Architecturally attractive	N/A	N/A
Suitably sited	Retaining walls have been sited to minimise impact on high value vegetation	Yes
Buildings constructed of suitable materials	N/A	N/A
Office components to be of masonry and glass	N/A	N/A
Miscellaneous appearance requirements	N/A	N/A
2.5 Car Parking and Manoeuvring		
Developments to comply with Chapter 2.11	Vehicle access is gained via an existing crossover	Yes
2.6 Off-street Loading/Unloading		
All loading/unloading to be within curtilage of the building and screened from the street.	N/A	N/A
2.7 Flooding and Stormwater Management		
To comply with Council's Civil Works – Design Guideline and Chapter 3.3	The proposed stormwater management arrangement has been reviewed by Council's Development Engineer who has not raised any concerns with the proposal.	Yes
2.8 Earthworks and Retaining Walls		
Full cut and fill details to be provided	The proposal seeks to fill the site to the level nominated within the drainage scheme of the Wyong District Development Contributions Plan (3.4RL).	Yes
Retaining walls greater than 900mm to be designed from qualified engineer	A condition of consent has been imposed for retaining walls greater than 600mm in height to be certified by a registered practising Civil or Structural engineer as being in accordance with Australian Standards.	Yes
2.9 Building Over and Adjacent to Sewer Mains		

Development designed to ensure no impact upon sewer main	N/A	
2.10 Thematic Links		
Consistent with overall theme of industrial estate developments	The proposed setback of the retaining wall and location and retention of existing vegetation within the road reserve is consistent with development in the vicinity.	Yes
2.11 Site Landscape Works		
Significant vegetation to be identified by an appropriately qualified person and incorporated into landscape design	Significant vegetation assessed as part of BDAR.	Yes
Landscape Design Report and associated plans to be submitted	BDAR prepared to accompany the application. The report provides recommendations to enhance the existing vegetation.	Yes
Development to retain existing vegetation where possible	High value vegetation to be retained and enhanced.	Yes
2.12 Storage Areas		
External storage areas are to be located and/or screened	N/A	N/A
2.13 Design for Safety		
CPTED principles incorporated	N/A	N/A
2.14 Security Fencing		
Details of security fencing to be provided	Existing 2m tall security fencing to be retained as part of this application.	Yes
Fencing to be integrated into landscaping and building design	The retention of the existing security fence is proposed to maximise protection to endangered vegetation.	Yes
2.15 Lighting		
Lighting details to be provided	N/A – no lighting proposed	N/A
2.16 Site Signs		
Signs suitably designed and located	N/A – No Signage proposed as part of this application	N/A
2.17 Encouraging Energy Efficient Construction and Development		
Energy efficient measures incorporated	N/A	N/A
2.18 Air Quality and Odour Control		
Development generating air pollution and odours located away from residential	Relevant dust control conditions have been imposed to ensure compliance with the *Protection of the Environment Operations Act 1997*.	Yes
2.19 Noise Generation		
Acoustic principles incorporated	N/A	
2.20 Fire Mitigation and Control		
Development adjacent to minimise risk from bushfire	No buildings or use forms part of the current application.	Yes
Access for emergency vehicles provided	Existing vehicle access is to be retained as part of the application.	Yes
Flammable material safely stored	No flammable materials are proposed to be stored onsite	Yes
2.21 Waste Minimisation and Disposal		

Waste management and storage in accordance with WMP	Appropriate conditions have been recommended in relation to waste classification and compliance with POEO waste regulation.	Yes
2.22 Contaminated Sites		
Risk and treatment from contaminated land is to be accurately determined	A Detailed Site investigation, RAP and ASSMP were carried out. These reports have been conditioned accordingly.	Yes
2.23 Disabled Access		
Disabled car parking to be provided	N/A	N/A
2.24 Internal Child Care Facilities		
Signposted that for use of industrial development	N/A	N/A
2.25 Communications Infrastructure		
Services to be underground where possible	N/A – servicing arrangement remains unchanged.	N/A
3.0 Use Specific Controls		
3.1 Car Related uses		
Not to generate traffic or parking demands not able to be met	N/A	N/A
3.2 Brothels and Restricted Premises		
Compliant with Chapter 2.14	N/A	N/A
3.3 Child Care Centres		
Located so as to minimise traffic, noise and safety conflicts	N/A	N/A
3.4 Commercial Recreation Facilities		
Encouraged within B6, B7 and IN2	N/A	N/A

Assessment against DCP 2013, Chapter 6.14 – Tuggerah Precinct

Requirement	Proposal	Complies
2.0 Development Principles – Applying Across Several Precincts		
2.1 Private Domain Controls		
2.1.1 Built Form		
Buildings and structures should be appropriately modulated and articulated in their façade in order to provide well proportioned elevations and human scale when viewed along the street. (s2.1.1a)	The retaining walls will not appear dominant and will contain the fill in an appropriate manner.	Yes
Important parts of the building such as corners, entrances, the building base and the roof should be articulated. (s2.1.1b)	N/A	
Large expanses of blank walls and curtain walling should be avoided. (s2.1.1c)	N/A	
Minor stepping of the street frontage and articulation of building facades is encouraged. The building entrance may be set back or brought forward for emphasis. (s2.1.1d)	N/A	
Building siting design and construction shall incorporate Ecologically Sustainable Development (ESD) principles and implement best practice approaches to water and energy efficiency including solar access. (s2.1.1e)	N/A	
2.1.2 General Design		
Car parking shall be provided in accordance with Chapter 2.11 – Parking and Access. (s2.1.2a)	N/A	
2.1.3 Flooding and Drainage		
The Tuggerah area is generally low-lying and potentially affected by flooding. Any development proposal is to consider the requirements of Chapter 3.3 Floodplain Management. (s2.1.3a)	The proposal achieves the requirements of the Wyong District Contributions Plan 2022 and the associated drainage strategy. This matter is further detailed in the report.	Yes
All developments shall comply with Council's Civil Works Design Guideline and Construction Specification. (s2.1.3b)	Council's Development Engineer has reviewed the proposal and is satisfied the proposal can achieve the Civil Works	Yes

(contd)

	Design Guideline and Construction Specification.	
2.1.4 Landscaping		
All development proposals shall include a landscape plan and details of all landscape works associated with the development. In most instances developments will require a landscape plan and landscape design report to be prepared by a suitably qualified landscape professional. Any Landscape Design Report shall also address the following matters: (i) a strategy for dealing with surface flood flow across the site; (ii) the integration of sediment pollution control into the landscape design; (iii) general planting themes within the site and indicative species; (iv) the proposed street tree theme for Wyong Road and integration of this theme with other sections of Wyong Road; (v) a thematic strategy for hard surface materials within the site including paving, terracing, ornaments, ponds, street furniture, lighting and the like; (vi) proposed protection measures of adjoining wetland and riparian systems; and (vii) protection and treatment of vegetation proposed to be retained on site. (s5.3a)	BDAR accompanied the application. The report provides recommendations to retain and enhance the existing vegetation. Landscaping of the site will be further addressed with any future application for development on the land.	Yes
2.1.5 Materials and Building Finishes		
Building materials should complement the predominant masonry construction of recent developments within the Tuggerah Precinct. A preference for high quality, durable, UV	N/A	

(contd)

stabilised/resistant building materials is favoured (s2.1.5a)		
2.1.6 Residential Development		
Mixed use development incorporating a residential component qualifies for a 0.05 FSR bonus where permissible and considered appropriate.	N/A	
2.1.7 Roofscape		
Structures such as masts, stacks, distilling towers, silos and the like shall not be permitted, except where; (a) they are appropriately integrated with the design of the building in the manner described above; and (b) they do not exceed twelve (12) metres in height.	N/A	
2.1.8 Servicing and Storage		
Where practical, loading and manoeuvring areas for service vehicles should be separated from car paring modules and pedestrian access. (s2.1.8a)	N/A	
2.1.9 Setbacks		
Other Public Roads: (i) a minimum of 10m to any internal road; (ii) a 5m landscaped area must be provided within the above setback, except for vehicle access. Suitable landscaping would comprise tree planting incorporating mulch beds in preference to often neglected grass lawns and poorly maintained shrubs. (s2.1.9f)	The proposed retaining wall and fill are proposed to be set back 10m from the property boundary. This area is planted with a minimum 5m width buffer zone.	Yes
Side and Rear Setbacks: (i) for all other cases, setbacks shall be in accordance with the provisions of the Building Code	Side and rear retaining walls proposed along the boundary. No building or structures proposed.	Yes

(contd)

of Australia. Where the side or rear boundary is likely to be less than 2.5m, the building should be set on the boundary unless appropriate provision is made for maintenance of landscaping and general upkeep of the area within the setback. (s2.1.9h)		
2.1.10 Signage		
Billboard Style Signage: (i) advertising signs will not be permitted in the setbacks to Wyong Road, or the Great Northern Railway; (ii) advertising signs will not be permitted in the setbacks to the Pacific Highway unless presented as a free-standing (totem) style sign which compliments and positively contributes to the streetscape. (iii) A maximum of one free-standing sign is permitted per existing allotment (existing consolidated or otherwise). The sign is to be made available to all businesses occupying that allotment for business identification, display or advertising purposes. (2.1.10a)	N/A	
Directory Signage: (i) Council will permit with development consent, directory or entry boards at the entry of estates or centres which are located on either private land or road reserve. (s2.1.10b)	N/A	
Sandwich-Board Style Signage: (i) Sandwich-board style signage is prohibited with the Tuggerah Precinct. (s2.1.10c)	N/A	

(contd)

3.0 Development Principles – Area Specific Controls		
3.3 Area C – Lake Road		
3.3.1 Area C1 – Lake Road South and Supa Centre Complex		
No access to Wyong Road. (s3.3.1a)	Existing vehicle access to Lake Road	Yes
Maximum FSR = 0.8:1 (s3.3.1b)	N/A	
Maximum site coverage (building only) = 50% (s3.3.1c)	N/A	
Council will consider the visual impact of the height, bulk and scale of a proposed building to ensure that a high quality appearance is achieved, particularly as viewed from Bryant Drive and Wyong Road. (s3.3.1d)	N/A	
Landscaping is to pay particular attention to providing an appropriate scale for the development. Buildings should not dominate the skyline and should include roof lines and facades which provide visual interest and an appropriate sense of scale. (s3.3.1e)	No buildings proposed as part of this application. Suitable landscaping works are recommended within the accompanying BDAR.	Yes

Wyong District Development Contributions Plan

April 2020

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1 Administration and Operation of this Plan

1.1 Introduction

The purpose of this Contributions Plan is to determine the contribution rates and means of providing the following public services and amenities necessary as a consequence of proposed development within the Wyong District and part of the Rural West area.

- Roads and Intersections
- Community Facilities
- Public Open Space
- Drainage and Water Quality
- Carparking
- Planning Studies

Contributions from the proposed development will not be used to address any backlog in the provision of works and services for the existing population, for development which has already obtained development consent at the date of preparation of this Plan, or for development not requiring consent.

This Plan has been prepared in accordance with the requirements of Section 7.11 of the Environmental Planning and Assessment Act.

1.2 Relationship to Other Plans

This Plan should be read in conjunction with Wyong Local Environmental Plan 2013, relevant Development Control Plans and Council's Codes and Policies.

This Plan replaces any requirements and details related to Section 7.11 Contributions that exists within any Development Control Plan previously prepared by Council for this area.

This Plan takes precedence over any of Council's Codes and Policies where there are any inconsistencies in relation to Section 7.11 Contributions.

1.3 Area of the Plan

This Plan covers the following:

1 All of the Wyong Social Plan District as shown in Figure 2 and includes:

- Medium density development within the Wyong area
- New Urban Release Area at Mardi
- A new commercial/retail area at Mardi
- A new Urban Release Area at Watanobbi

- A new Urban Release Area at West Wyong
- Tuggerah Industrial Area Stage 3

2 Two specific areas within the Rural West District:

- Rural residential development in the area of Hue Hue Road
- Urban development at Leewood Close, Yarramalong

1.4 List of Abbreviations / Terms

DU (Dwelling Unit) – see Section 2.1 for definition.

Ha (Hectares) – area used for contributions (see specific report detail for actual area included in calculation).

District – a District within a Social Plan District (see Figures 1 and 2).

Medium Density Development – see Section 2.1 for definition.

Committed Population – that population which relates to existing development being considered within the Plan and to approved development.

NDA (Net Developable Area – this is the total area of the residential lots within a land subdivision and is used to calculate contributions on an area basis. When referring to the drainage and water quality scheme for the Tuggerah Industrial Site 3 area, NDA refers to the total site area of land being developed

Secondary dwelling means 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.

A secondary dwelling shall be assessed as 0.52 DU for a one bedroom dwelling and 0.73 DU for a two bedroom dwelling.

1.5 Complying Development and Obligation of Accredited Certifiers

In accordance with Section 7.21(1) of the EP&A Act:

1 Accredited certifiers must in issuing a complying development certificate impose a condition under Section 7.11 that requires the payment of monetary contributions calculated in accordance with this development contributions plan. The condition of consent shall also require the payment to be made prior to the commencement of works where building works are involved or prior to the commencement of use where no building works are involved.

2 This plan authorises accredited certifiers to impose such a condition. The condition must include a notation that the contribution amounts are indexed on a quarterly basis.

3 The amount of contributions and timing of payment shall be strictly in accordance with the provisions of this contributions plan.

It is the responsibility of accredited certifiers to:

- accurately calculate the quantum of contributions or alternatively seek advice and assistance directly from Council; and
- apply the Section 7.11 condition correctly.

1.6 Construction Certificates and Obligation of Accredited Certifiers

In accordance with Clause 146 of the EP&A Regulation, a certifying authority must not issue a construction certificate for building work or subdivision work under a development consent unless it has verified that each condition requiring the payment of monetary contributions has been satisfied.

In particular, the certifier must ensure that the applicant provides a receipt(s) confirming that contributions have been fully paid and copies of such receipts must be included with copies of the certified plans provided to the Council in accordance with clause 142(2) of the EP&A Regulation. Failure to follow this procedure may render such a certificate invalid.

The only exceptions to the requirement are where a works in kind or dedication of land has been agreed by Council. In such cases, Council will issue a letter confirming that an alternative payment method has been agreed with the developer.

1.7 Deferred and Periodic Payments

Council will generally not accept arrangements for the periodic payment of contributions required under this plan. Notwithstanding this position, an application for periodic payments may be made to Council, and Council after giving consideration to it may in extenuating circumstances accede to such a request subject to conditions that it considers appropriate. Such conditions may include the confirmation of the payment schedule via a legal agreement and the payment of fee.

Council will generally only consider permitting the deferred payment of contributions in accordance with its "Deferred Payment of Section 94 Contributions Policy" current at the time of application.

1.8 Current Contribution Rates – Wyong District

The contribution rates contained within this plan are the "base" rates for the plan. Details of current indexed rates may be obtained from Council.

Figure 1 Social Planning Districts

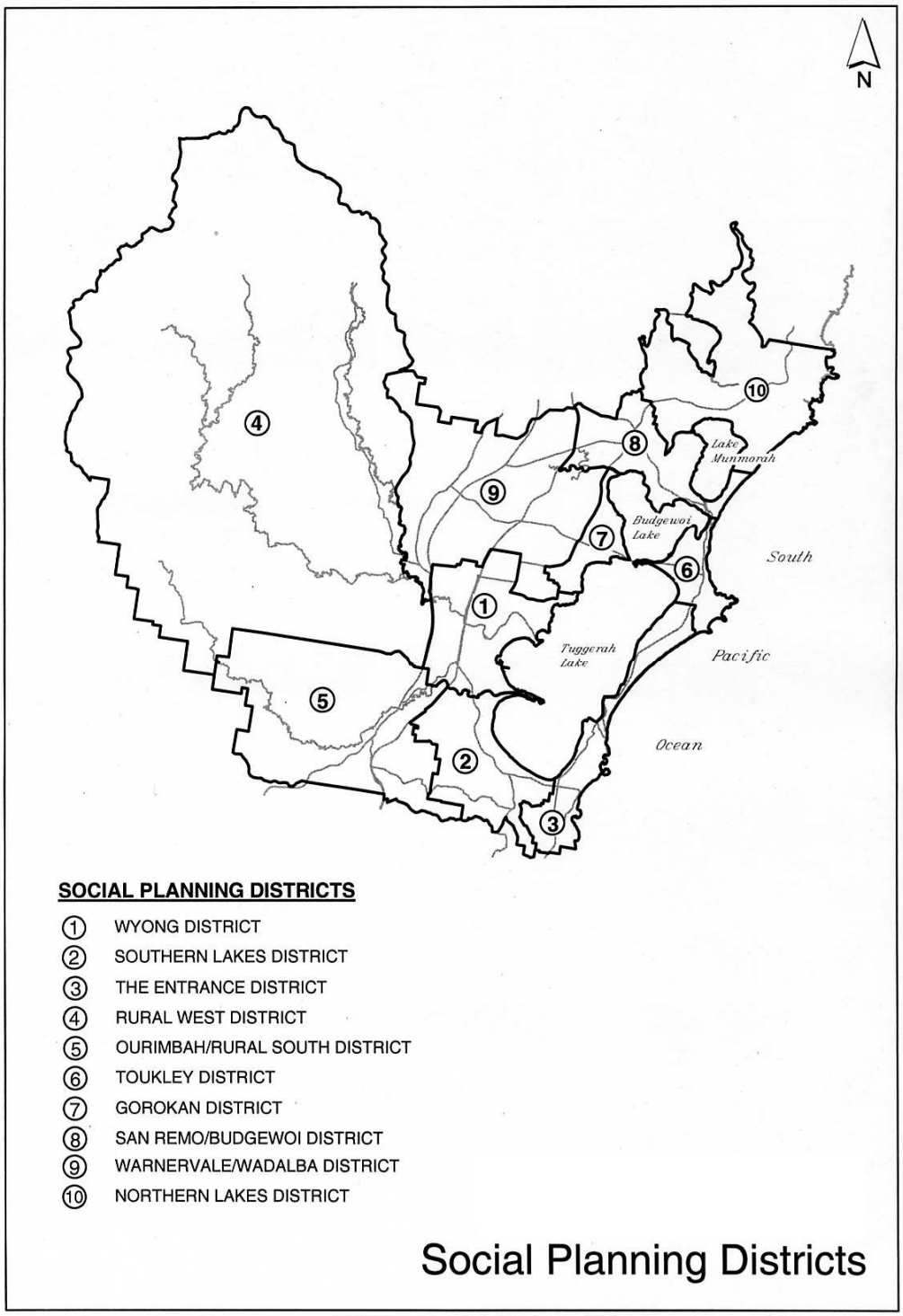
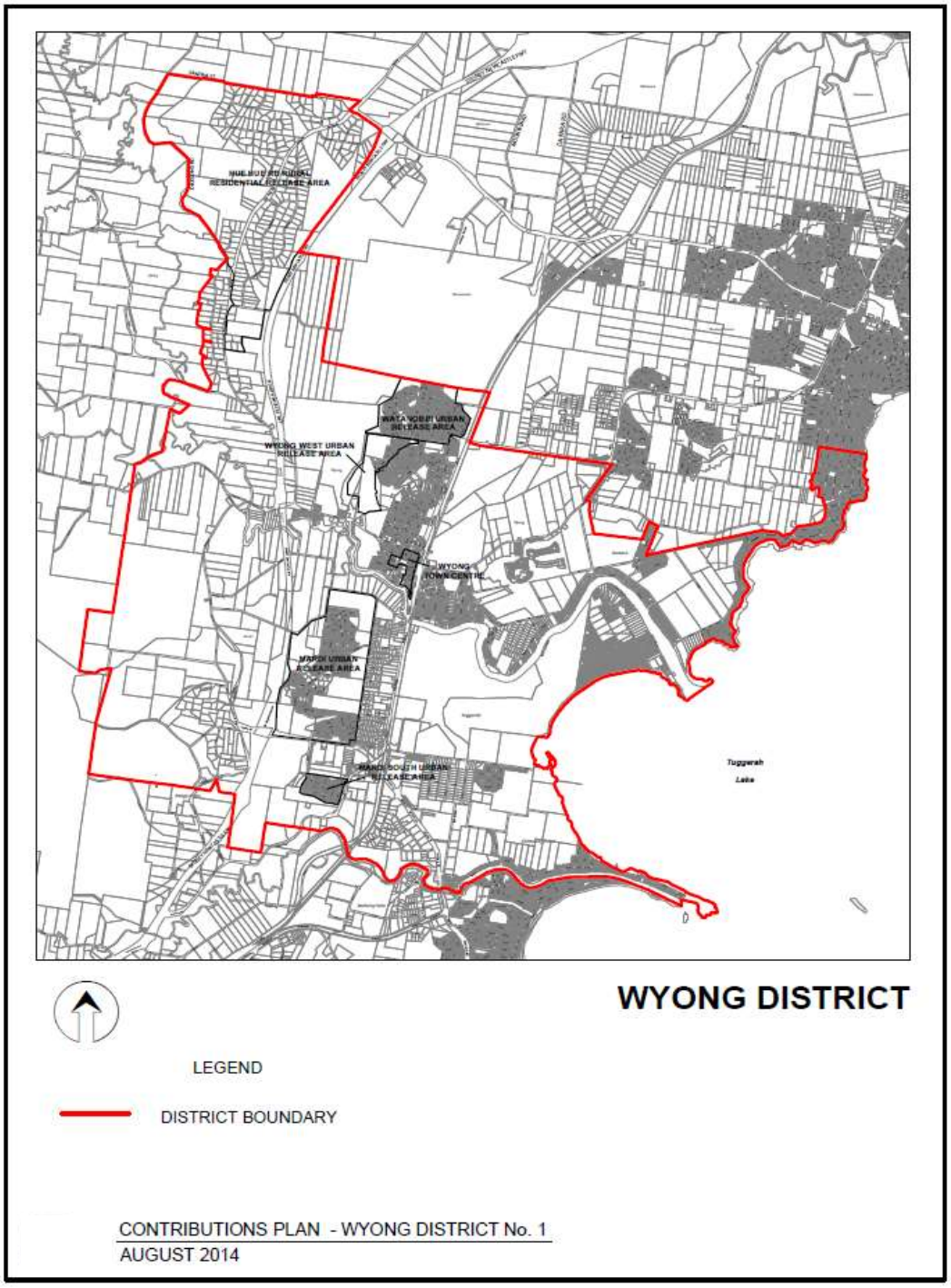


Figure 2 Wyong District Contributions Plan Area



1.9 Estimated Costs

The following points should be noted in regard to cost estimates contained in this Plan:

- Unless otherwise stated, cost details and contribution rates in this Plan are based on June 2002 values and will be adjusted periodically as detailed in Clause 12.
- Estimated costs for land components are based on:

  Existing serviced land: $180/square metre

  Englobo land: $20/square metre
- Where specific valuations are available, these values have been used.
- Full details of the cost estimates for works are contained in the relevant technical reports.

1.10 Timing of Works

Council is not able to bankroll works required as a consequence of development proposed under this Plan and will only be able to provide works and services when sufficient funds have been provided by way of contributions.

Priority spending of contributions may, however, be directed to particular items identified in this Plan and this has been considered in formulating works schedules.

In relation to the provision of any Plan requirements, the years shown in the Plan are indicative only. The provision of any item will be dependent on the threshold criteria established for the need for that item, and not necessarily the year shown in the Plan.

1.11 Works In Kind and Material Public Benefit

Developer contributions made in accordance with this plan will usually be in the form of monetary payments, however alternative "in kind" contributions may be accepted if they are deemed by Council to represent an "equivalent material public benefit". In the case of alternative payments being proffered, a developer is required to make prior written representations to Council at which time the proposal may be considered.

Where the value of a particular work exceeds the contributions due for that work, this excess value may (subject to Council's concurrence) be offset against other contributions due under this plan. This offset can only be applied where the funds are not required immediately to construct works to service the initial development, but can be delayed to a later stage when further development proceeds.

Alternatively, a credit may be granted to the developer which will be repaid upon uncommitted contribution funds becoming available.

The value of a particular work or land will be the value assigned to it under this contribution plan.

It may be feasible to provide temporary measures to service initial stages of a development in lieu of constructing major works upfront. Such proposals will need to be assessed at the time of application and provision of such works will be the sole responsibility of the particular applicant, except where any works form part of the final works identified in this contribution plan (in which case that part will be treated as works-in-kind).

The cost of any temporary works not recognised as works in kind cannot be offset against any other contributions required under this plan.

1.12 Dedication of Land

Subject to prior agreement with Council, land may be dedicated in lieu of making a contribution towards the acquisition of land and in some cases, where the value of land dedicated exceeds the contribution due for provision of this particular type of land, this excess value may (subject to Council's concurrence) be offset against other contributions in a similar manner to work in kind.

Council will only accept land dedication where that land is of a suitable nature for the purpose for which it is being dedicated. All land to be transferred to Council is to be free of any improvements, structures or other impediments which would restrict or hinder its future use or development for the purposes for which it is being acquired, unless otherwise agreed by Council. The land is also to be transferred in an appropriate state, free of any refuse, contamination, or the like, unless otherwise agreed by Council.

1.13 Timing and Method of Payment

General practice in relation to the timing of payments for Section 7.11 contributions is as follows:

- development applications involving subdivision prior to issue of a subdivision certificate at release of linen plans;
- development applications involving building works prior to the issue of a construction certificate; and
- development applications where no building approval is required at the time of development consent.

In regard to the latter case, the applicant may make a cash payment of contributions prior to issue of the development consent or alternatively lodge a suitable bank guarantee, also prior to issue of the consent. This bank guarantee will be called up upon commencement of the consent.

1.14 Method of Increasing Contributions

Increases to the contribution rate will apply in accordance with the following:

Cost Indexation Increase

For works, the Consumer Price Index will be used to increase contribution rates as follows:

Current Rate = Old Rate x (Current CPI ÷ Base CPI)

Where:

The **Base CPI** is the Consumer Price Index, Australia for Sydney as published by the Australian Bureau of Statistics used in the preparation of this plan.

The **Current CPI** is the Consumer Price Index, Australia for Sydney as published by the Australian Bureau of Statistics available at the time of review of the contribution rate.

1.15 Revision of Plan

This Plan may be revised if the extent or nature of the proposed development varies and these variations lead to a change in the demand for public services and amenities.

Costings of works identified in this Plan are based on preliminary designs and changes to cost estimates as a result of detailed design may also necessitate a revision to this Plan.

Any revision of this Plan will be carried out in accordance with the provisions of Section 7.11.

Table 1 Plan Amendments

Adoption Date	Effective Date	Nature of Revision
	September 1995	Amended
	October 1997	Amended
	August 1998	Amended
	February 2000	Amended
	August 2001	Amended
	March 2004	Amended
	11 January 2007	Amended
24 July 2013	7 August 2013	Insertion of specific clauses relating to complying development and deferred payment (and minor formatting changes)
24 July 2013	18 September 2013	Insertion of "Secondary Dwelling" clause
27 August 2014	29 October 2014	Inclusion of rural area within Wyong District catchment, and removal of areas included in other plans
27 April 2020	22 May 2020	Amend dwelling unit rate for secondary dwellings

1.16 Pooling of Funds

In accordance with Clause 27(3) of the Environmental Planning and Assessment Act Regulation, this clause authorises the pooling of funds by Council to provide priority works and land.

2 Urban Characteristics and Population

2.1 Population Predictions

The following table gives details of expected growth in resident population within the Wyong District:

Table 2 Population Growth Projections for Wyong District Urban Release Area

Year	Mardi	Mardi South	Watanobbi	West Wyong	Medium Density	Total
2002	3,210	787	2,762	0	202	6,961
2003	78	0	0	0	52	130
2004	78	0	0	0	52	130
2005	78	0	0	183	52	313
2006	79	0	0	183	52	314
2007	0	0	0	183	52	235
2008	0	0	0	183	52	235
2009	0	0	0	183	52	235
2010	0	0	0	0	52	52
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
TOTAL	**3,523**	**787**	**2,762**	**915**	**615**	**8,603**

A number of development consents have already been issued in the new release areas and the population figures for these consents have generally been excluded in determining contributions under this Plan. However, expenditure of the contributions made under these consents has been included in work schedules. A summary of committed and remaining development potential is shown in the following table.

Table 3 Population and Dwelling Unit Data for Wyong District

Area	Population			Dwelling Units		
	Committed	Remaining	Total	Committed	Remaining	Total
Medium Density	202	413	615	85	178	263
Urban Release Areas						
Mardi*	3,210	314	3,524	1003	101	1104
Mardi South	787	0	787	246	0	246
Watanobbi	2,762	0	2,762	863	0	863
West Wyong	0	915	915	0	286	286
TOTAL	**6,961**	**1,642**	**8,603**	**2,197**	**565**	**2,762**

**** Mardi URA includes rezoning of Lot 622 DP 877750 Woodbury Park Drive***

Notes:

- *A Dwelling Unit (DU) is the basic unit used for planning purposes for this Plan and is defined as a dwelling with an occupancy rate of 3.2 persons. Where other than three bedroom dwellings are proposed, an equivalent number of dwelling units will be calculated and used as the basis for determining needs and contributions. This will be calculated in accordance with Council's Policy.*
- *For the purposes of this Plan, Medium Density Development is defined as development that leads to a demand on works or services greater than that which would be required by a single dwelling unit on each existing lot (eg. dual occupancies, land subdivision, residential flat development, etc).*

3 Community Infrastructure and Contributions

3.1 Community Facilities

3.1.1 Introduction

This section considers the human service requirements generated as a result of the development in the area of this Plan.

3.1.2 General

The approach to establishing human services requirements for this area has been:

- identify existing community facilities and associated land;
- identify requirements to service existing population, future single dwelling development on existing allotments for which no contribution can be sought and developments for which consent has already been issued;
- from the above, determine if there is any spare capacity for future development;
- determine the additional community facilities and land requirements, if any, needed to service the future development being considered.

3.1.3 Guidelines

A report has been prepared by the Strategic Planning Department to review the Strategic Social Planning Framework and Guidelines used by Council in the planning, provision and development of community facilities.

The report titled 'Guidelines for the Planning and Provision of Community Facilities in Wyong Shire' - May 2000 (amended in July 2002) recommends the following amounts to be used as the basis for determining requirements for a basic level of provision:

- Land for Community Facilities: 5.6m² per DU
- Community Facilities Floor Space: 0.9m² per DU

This Plan is also based on Council's Social Plan (1984) with details specific to this area prepared by Council's Community Services Planner contained in Report No CF16 (1992).

Assessment of existing services indicates there is no spare capacity in these facilities to meet the need generated by the future development considered in the Plan. Therefore, additional community land and facilities will need to be provided to cater for the proposed population increase.

3.1.4 Area of the Scheme

For the purposes of Community Services planning this District has been divided into zones as follows:

- Zone 1: Mardi Urban Release Area;
- Zone 2: West Wyong and Watanobbi Urban Release Area;
- Zone 3: remaining area of the District.

For the purposes of determination of community facility requirements for development covered by this Plan, the following have been excluded:

- existing development;
- single dwelling development on existing residential lots; and
- developments for which consent has already been issued.

Population details are shown in Table 3.

3.1.5 Zone 1: Mardi Urban Release Area

Report Details

This Plan is also based on Council's Social Plan (1992) with details specific to this area prepared by Council's Community Services Planner contained in Report No CF3-1.

Assessment of existing services indicates there is no spare capacity in these facilities to meet the need generated by the future development considered in this zone. Therefore, additional community land and facilities will need to be provided to cater for the proposed population increase.

Figure 3 shows the area of this zone.

Determination of Community Facility Requirements

The projected number of additional DUs in the area of the Plan is 101 generated from a total additional population of 314.

Community facility requirements for this zone are as follows:

Land Requirements

For an additional 101 DU within the Urban Release Area; the land requirement is 564 square metres.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this area to be increased by 5,071 square metres making a total of 5,635 square metres of community land to be provided.

Community Facilities

For an additional 101 DU, a total of 91 square metres of floor space is required.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this floor space to be increased by an additional 106 square metres making a total of 196 square metres of floor space to be constructed.

Scheme Details

A total of 196 square metres of additional community facilities floor space is to be provided in accordance with needs identified within Council's Community Plan, and through ongoing community consultation.

Facilities are to be provided within the Social Planning District or to specifically meet the demands generated within the District. Community facility floor space will be utilised to provide Multi-purpose Community Centres incorporating such facilities such as neighbourhood centres, youth centres, senior citizens facilities, libraries and the like.

The timing of the provision of the floor space will generally be driven by the rate of future development in the locality and the demand generated by such.

Further details including costs are shown in Table C1.

Apportionment of Costs

Costs will be shared by all developments on a population basis with contribution rates being calculated on a per dwelling unit, or equivalent, basis.

Program for Works and Funding

Land

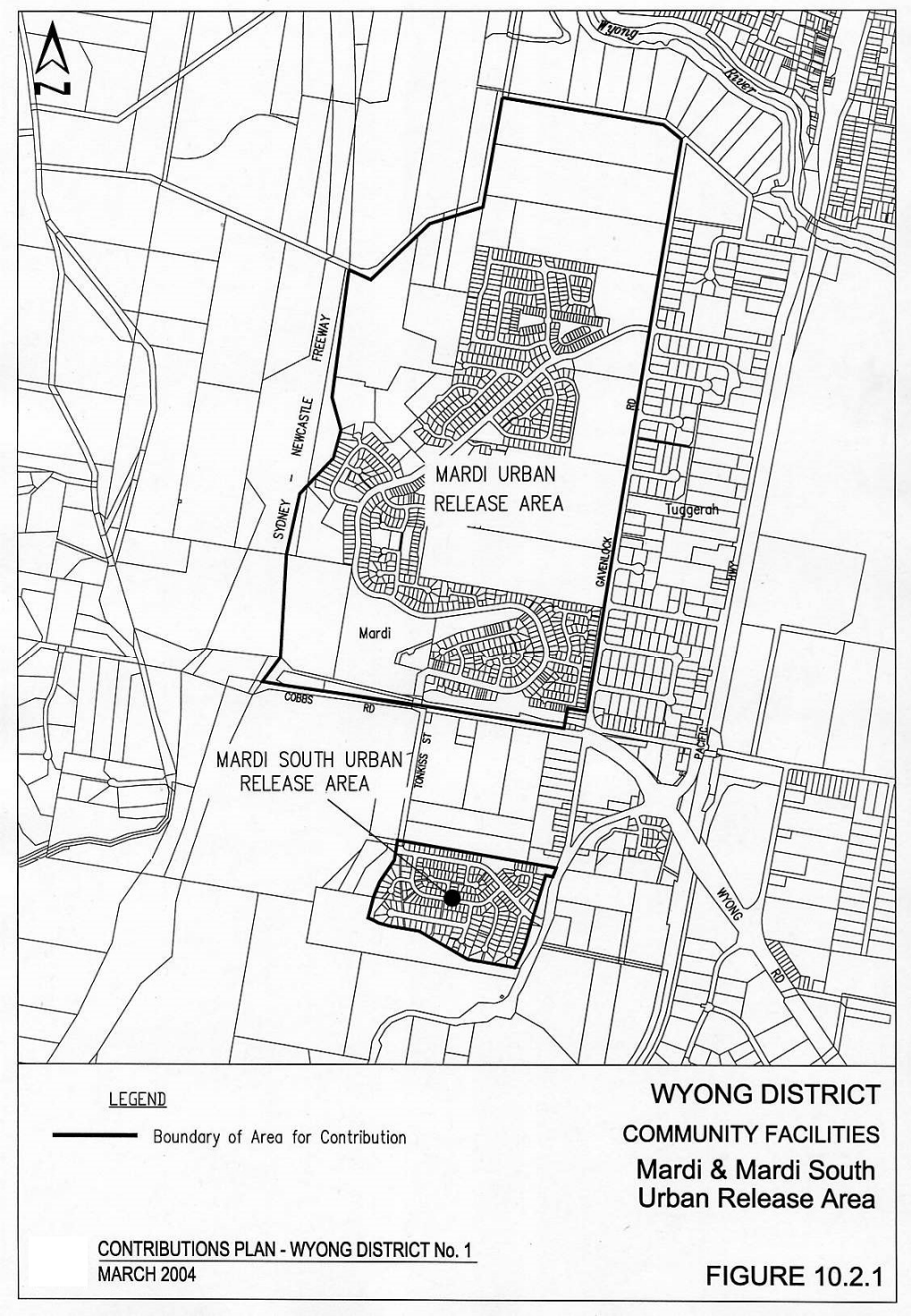
Table C1 shows an indicative time for land acquisition but the actual time will vary depending on the rate of development.

Facilities

An indicative time for the provision of each facility is shown in Table C1 although this may vary depending on the rate of development. The actual time for provision of the various facilities will be dictated by the following thresholds:

Community facility floor space to be provided at intervals of 30%, 65% and 100% of development.

Figure 3 Community Facilities – Mardi and Mardi South Urban Release Area



Contribution Rates

The contribution rate will be calculated by dividing the total estimated costs by the estimated number of dwelling units.

Land Component

Cost	=	564m² @ $20/m²
	=	$11,281
Contribution Rate	=	Cost ÷ No of NDAs
	=	$11,281 ÷ 3.2 NDA
	=	$3,525 per NDA

Works Component

Cost	=	91m² @ $2,793/m²
	=	$254,163
Contribution Rate	=	Cost ÷ No of DUs
	=	$254,163 ÷ 101
	=	$2,516 per DU

3.1.6 Zone 2: Watanobbi and West Wyong Urban Release Areas

Report Details

This Plan is based on Council's Social Plan (1992) with details specific to this area prepared by Council's Community Services Planner contained in Report No CF3-2).

Assessment of existing services indicates there is no spare capacity in these facilities to meet the need generated by the future development considered in the Plan. Therefore, additional community land and facilities will need to be provided to cater for the proposed population increase.

Figure 4 shows the area of this zone.

Determination of Community Facility Requirements

The projected number of additional DUs in the area of the Plan is 286 generated from a total additional population of 915

Community facility requirements for the area of this Plan are as follows:

Land Requirements

For a total of 286 DU within the Urban Release Area; the land requirement is 1,602 square metres.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this area to be increased by an additional 3,504 square metres making a total of 5,106 square metres of community land to be provided.

Community Facilities

For a total of 286 DU, a total of 257 square metres of floor space is required.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this floor space to be increased by an additional 87 square metres making a total of 344 square metres of floor space to be constructed.

Scheme Details

A total of 344 square metres of community facilities floor space is to be provided in accordance with needs identified within Council's Community Plan, and through ongoing community consultation.

Facilities are to be provided within the Social Planning District. Community facility floor space will be utilised to provide Multi-purpose Community Centres incorporating such facilities such as childcare, neighbourhood centres, youth centres, senior citizens facilities and the like.

The timing of the provision of the floor space will generally be driven by the rate of future development in the locality and the demand generated by such.

Further details including costs are shown in Table C2.

Apportionment of Costs

Costs will be shared by all developments on a population basis with contribution rates being calculated on a per dwelling unit, or equivalent, basis.

Program for Works and Funding

Land

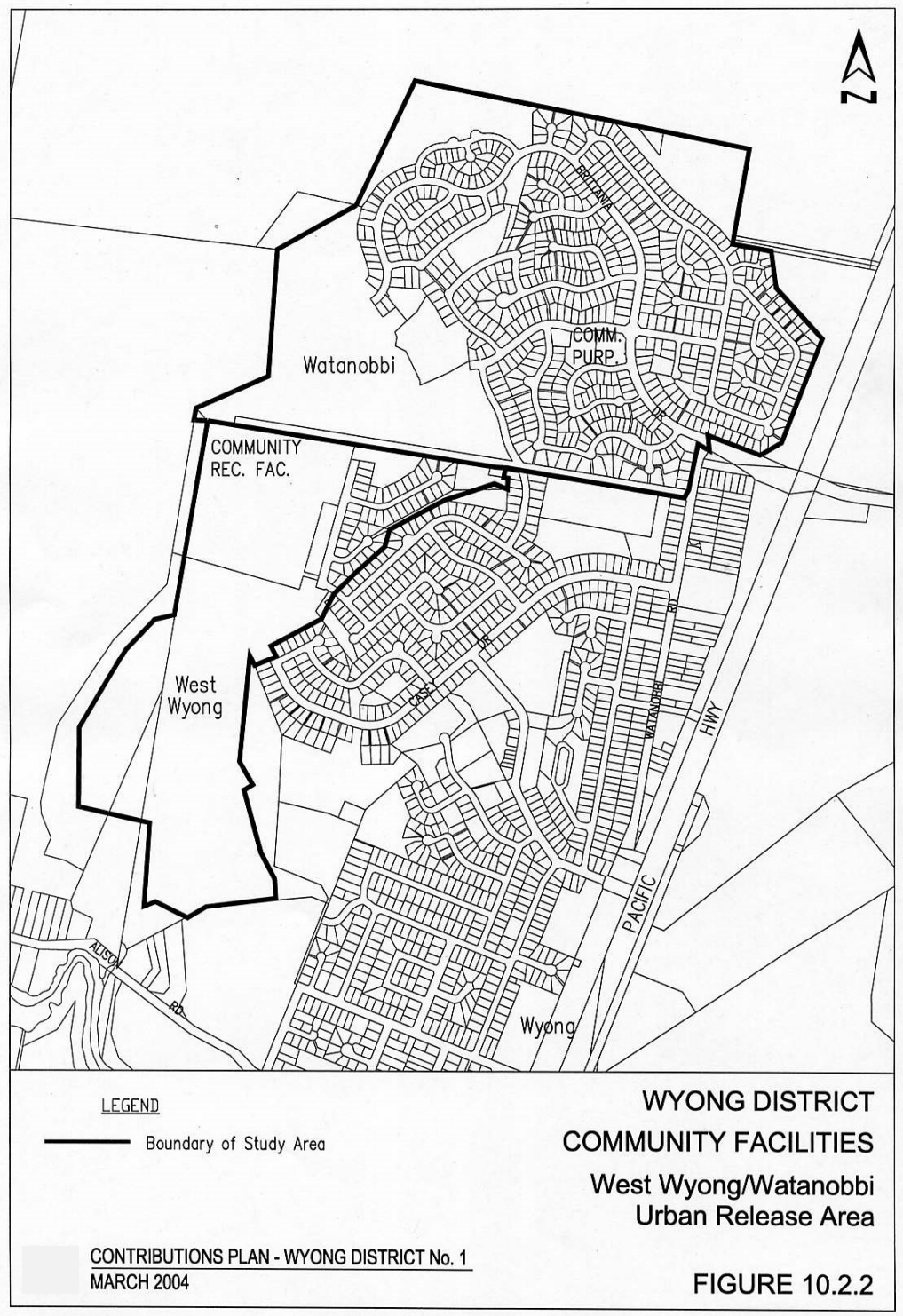
Table C2 shows acquisition of land in 1994/95 but actual time will depend on rate of development as later developments will be required to dedicate land.

Facilities

An indicative time for the provision of each facility is shown in Table C2 although this may vary depending on the rate of development. The actual time for provision of the various facilities will be dictated by the following thresholds:

Community facility floor space to be provided at intervals of 65%, 75% and 100% of development.

Figure 4 Community Facilities – West Wyong / Watanobbi Urban Release Area



Contribution Rates

The contribution rate will be calculated by dividing the total estimated costs by the estimated number of dwelling units.

Land Component

Cost = 1,602m² @ $20/m²
= $32,032

Contribution Rate = Cost ÷ No of DUs
= $32,032 ÷ 286
= $112 per DU

Works Component

Cost = 257m² @ $2,793m²
= $718,918

Contribution Rate = Cost ÷ No of DUs
= $718,918 ÷ 286
= $2,514 per DU

3.1.7 Zone 3: Remaining Area of the District

Area of the Scheme

The remaining area of the District includes all of the Wyong District except for Zones 1 and 2 above.

Report Details

This Plan is based on Council's Social Plan (1992) with details specific to this area prepared by Council's Community Services Planner contained in Report No CF3-3).

Assessment of existing services indicates there is no spare capacity in these facilities to meet the need generated by the future development considered in the Plan. Therefore, additional community land and facilities will need to be provided to cater for the proposed population increase.

Determination of Community Facility Requirements

The projected number of additional DUs in the area of the Plan is 178 generated from a total additional population of 413.

Community facility requirements for the area of this Plan are as follows:

Land Requirements

For an additional 178 DU, the land requirement is 997 square metres.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this area to be increased by an additional 200 square metres making a total of 1,197 square metres of community land to be provided.

Community Facilities

For an additional 178 DU, a total of 160 square metres of floor space is required.

Current contributions in hand and amounts committed in development consents issued prior to preparation of this Plan will enable this area to be increased by an additional 83 square metres making a total of 244 square metres of community land to be provided.

Scheme Details

A total of 244 square metres of community facilities floor space is to be provided in accordance with needs identified within Council's Community Plan, and through ongoing community consultation.

Facilities are to be provided within the Social Planning District. Community facility floor space will be utilised to provide Multi-purpose Community Centres incorporating such facilities such as neighbourhood centres, youth centres, senior citizens facilities and the like.

The timing of the provision of the floor space will generally be driven by the rate of future development in the locality and the demand generated by such.

Further details including costs are shown in Table C3.

Apportionment of Costs

Costs will be shared by all developments on a population basis.

Program for Works and Funding

Land

Table C3 shows an indicative time for land acquisition but the actual time will vary depending on the rate of development and acquisition opportunities.

Facilities

An indicative time for the provision of each facility is shown in Table C3 although this may vary depending on the rate of development. The actual time for provision of the various facilities will be dictated by the following thresholds: Community Centre (to be provided when development is completed).

Contribution Rates

The contribution rate will be calculated by dividing the total estimated costs by the estimated number of dwelling units.

Land Component

Cost	=	997m² @ $180/m²
	=	$179,424
Contribution Rate	=	Cost ÷ No of DUs
	=	$179,424 ÷ 178
	=	$1,008 per DU

Works Component

Cost	=	160m² @ $2,793/m²
	=	$447,438
Contribution Rate	=	Cost ÷ No of DUs
	=	$447,438 ÷ 178
	=	$2,514 per DU

3.2 Public Open Space

3.2.1 Introduction

This section considers the open space requirements generated as a result of the development in the area of this Plan.

3.2.2 General

The methodology adopted for this Plan is based on Council's Open Space Plan.

The approach to establishing requirements for this area has been:

- identify existing open space land and improvements;
- identify requirements to service existing population and future single dwelling development on existing allotments for which no contributions can be sought;
- determine land requirements, if any, needed for the future development;
- determine embellishment requirements, if any, needed for the future development.

3.2.3 Area of the Scheme

For the purposes of Open Space planning this District has been divided into zones as follows:

- Zone 1: Mardi Urban Release Area;
- Zone 2: Mardi South Urban Release Area;
- Zone 3: Watanobbi Urban Release Area;
- Zone 4: West Wyong Urban Release Area;
- Zone 5: the remaining area of the District.

3.2.4 Zone 1: The Mardi Urban Release Area

Proposed Development

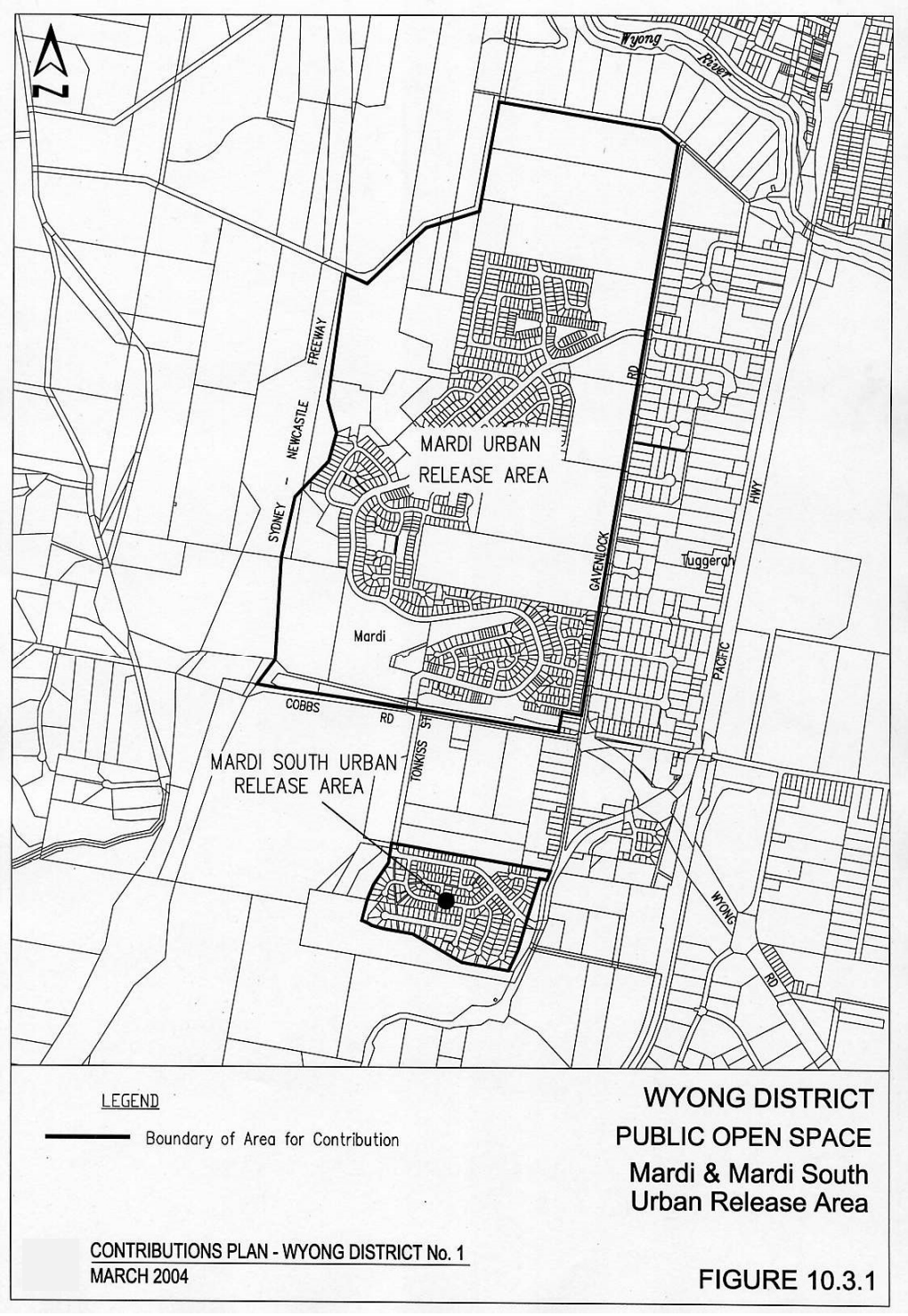
The proposed development covers development of the Mardi Urban Release Area and is predicted to yield a total population of 3523 as shown in Clause 5.0 of this Plan.

Figure 5 shows the area of this zone.

Report Detail

This Plan is based on Council's Open Space Plan with details specific to this area prepared by Council's Landscape Planner, contained in Report No POS 9-1 (September 1992).

Figure 5 Public Open Space – Mardi and Mardi South Urban Release Area



Determination of Open Space Requirements

Council's Open Space Plan requires a minimum provision of open space of 3.00 hectares per thousand people (as well as requirements relating to different types of open space, size, distribution, etc). For a population growth of 3523 people, a minimum area of 10.57 hectares would be required.

The Wyong Open Space Plan indicates the various categories of open space as a proportion of total open space requirements as shown in the table below:

Table 4 Categories of Open Space

Open Space Type	Notional Proportion (%)	Notional Area Required (Ha)
Small Park	20	2.11
Large Park	30	3.17
Semi-Natural Area	20	2.11
Courts	5	0.53
Sports Fields	25	2.65
TOTAL OPEN SPACE	**100**	**10.57**

Open Space requirements for the area of this Plan are as follows:

Land Requirements

For the following types of open space, assessment of existing open space land shows that there is an excess of land for the existing population and that there is no significant shortfall due to the requirements generated by future development:

- Courts; and
- Sports Fields.

There is therefore no requirement for provision of open space land for these types.

For the other types of open space there is a need for additional land to cater for the proposed development as follows:

- Semi-Natural;
- Small Park; and
- Large Park.

The notational area required (based on 3 ha/1,000 persons) exceeds that to be acquired as shown above. This is a result of the additional demand generated by rezoning of additional residential land in the later stages of the release area development.

The areas shown above are to be provided under the Section 7.11 process.

Additional land is also to be transferred to Council, at no cost, under the deed of agreement for the rezoning of additional residential land in the north of the precinct. This land will satisfy additional demand generated by development of rezoned areas and the development area as a whole and will perform a number of functions, including active and passive open space.

Land requirements for this zone are to be fully provided within the area of the zone.

Table S1 has been prepared on the basis of contributions in lieu of dedication of land. Any dedication of suitable land will be offset against these costs in a similar manner to works in kind.

Embellishment

While there is sufficient open space land within the Wyong District to meet some of the land requirements as identified above, the level of improvements on all types of open space is insufficient to cater for the future development being considered. Accordingly, contributions towards embellishment of existing open space for the future development area is justified. Cost estimates for embellishment of various types of open space have been calculated as follows:

- Large Parks: $24.82 per square metre
- Semi-Natural Areas: $10.34 per square metre
- Small Parks: $24.82 per square metre
- Courts: $103.42 per square metre
- Sporting Fields: $34.13 per square metre

(indexed December 1999)

An allowance for components of the embellishment of land to be dedicated on at the northern end of the release area is also included. These areas will have a benefit over the wider release area and an indicative costs estimate for the works has been provided at:

- Play structure $25,500
- Kickabout area $40,800

Cost estimates have also been applied to the area requirements in the table above to establish the total estimated costs shown in Table S1.

Apportionment of Costs

Future development being considered is expected to be spread throughout the zone and so all development will be required to share the costs for open space embellishment on a proportional basis.

Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table S1, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

- Small Parks: to be provided in stages at 25% and 60% of development;
- Large Parks: to be provided in stages at 25% and 60% of development;
- Courts: to be provided at 60% of development;
- Sports Fields: to be provided at 100% of development;
- Semi-Natural: to be provided at 30% of development;
- Land: to be provided in conjunction with the development.

Contribution Rates

Land Component

The contribution rate will be calculated by dividing the total estimated costs as shown in the attached tables by the estimated net developable area (NDA).

Contribution Rate = $469,000 ÷ 52.86ha NDA
= $8,872.50 per ha NDA

Works (Embellishment) Component

The contribution rates will be calculated by dividing the total estimated costs as shown in the attached tables by the estimated number of Dwelling Units as follows:

Contribution Rate = $1,636,281 ÷ 1104
= $1,483 per DU (indexed to June 2002)

3.2.5 Zone 2: The Mardi South Urban Release Area

Proposed Development

The proposed development covers development of the Mardi South Urban Release area and is predicted to yield a total population of 788 (equivalent to 284 DUs) as shown in Clause 6.0 of this Plan.

Figure 6 shows the area of this zone.

Report Detail

This Plan is based on Council's Open Space Plan with details specific to this area prepared by Council's Landscape Planner, contained in Report No POS 9-2 (September 1992).

Determination of Open Space Requirements

Council's Open Space Plan requires a minimum provision of open space of 3.00 hectares per thousand people (as well as requirements relating to different types of open space, size, distribution, etc). For a total population growth of 787 people, a minimum area of 2.36 hectares would be required.

Open Space requirements for the area of this Plan are as follows:

Land Requirements

For the following types of open space, assessment of existing open space land shows that there is an excess of land for the existing population and that there is no significant shortfall due to the requirements generated by future development:

- Courts; and
- Sports Fields.

There is therefore no requirement for provision of open space land for these types. However, for other types of open space there is a need for additional land to cater for the proposed development and this is shown in Table S2.

Embellishment

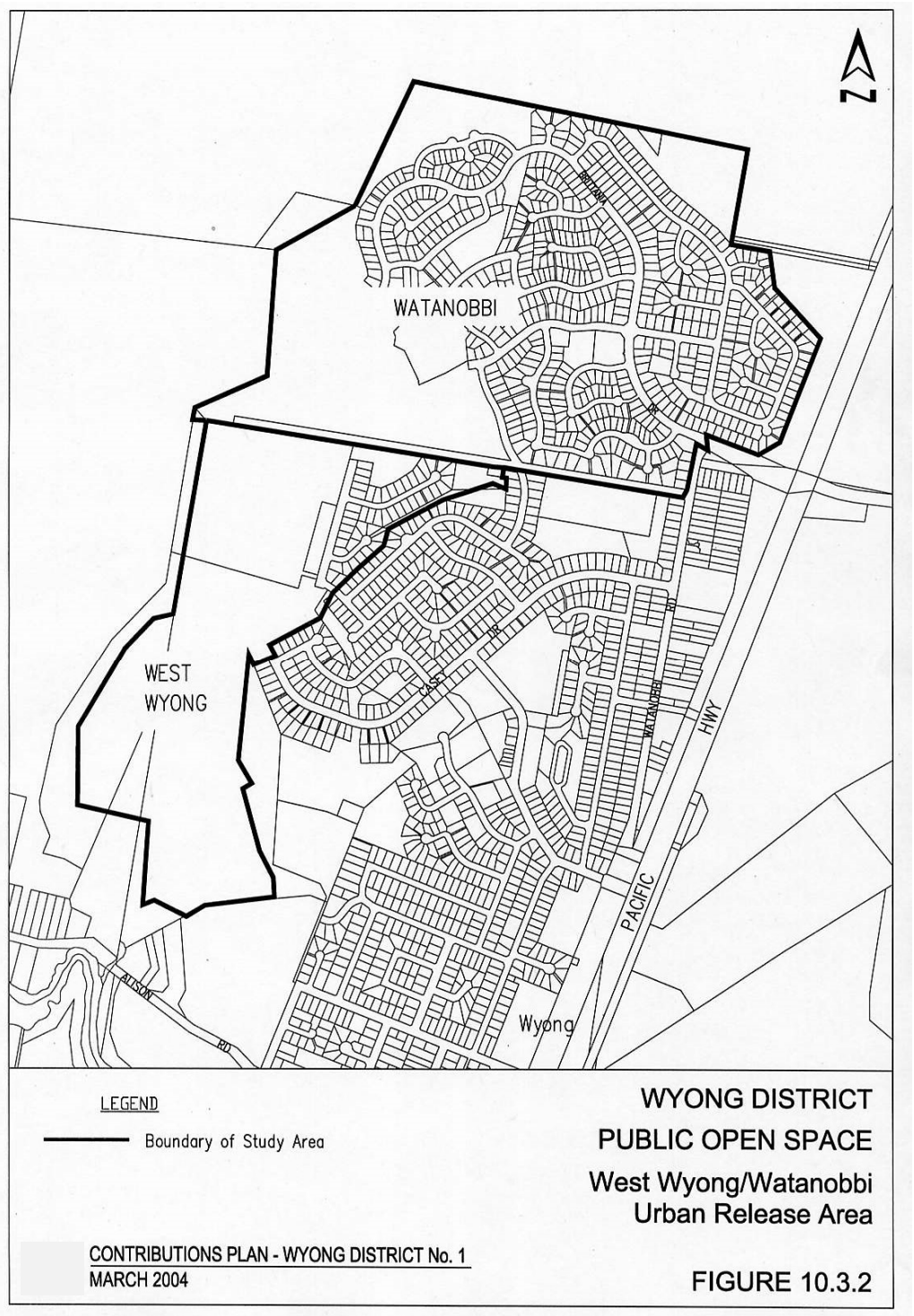
While there is sufficient open space land within the area of the zone to meet some of the land requirements as identified above, the level of improvements on all types of open space is insufficient to cater for the future development being considered. Accordingly, contributions towards embellishment of existing open space for this future development area reasonable.

Table S2 shows cost estimates for embellishment.

Apportionment of Costs

Future development being considered is expected to be spread throughout the zone and so all development will be required to share the costs for open space embellishment on a proportional basis.

Figure 6 Public Open Space – West Wyong / Watanobbi Urban Release Area



Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table S2, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

Land

To be dedicated as part of the development.

Embellishment

Works to be carried out at the completion of the development.

Contribution Rates

The contribution rates will be calculated by dividing the total estimated costs by the estimated number of Dwelling Units as follows:

Land Component

Contribution Rate = $331,000 ÷ 246
= $1,345 per DU

Works (Embellishment) Component

Contribution Rate = $321,969 ÷ 246
= $1,308 per DU

3.2.6 Zone 3: Watanobbi Urban Release Area

Proposed Development

The proposed development covers development of the Watanobbi Urban Release area and is predicted to yield a total population of 2,762 as shown in Clause 6.0 of this Plan.

Figure 6 shows the area of this zone.

Report Detail

This Plan is based on Council's Open Space Plan with details specific to this area prepared by Council's Landscape Planner, contained in Report No POS 3-2 (September 1992).

Determination of Open Space Requirements

Council's Open Space Plan requires a minimum provision of open space of 3.00 hectares per thousand people (as well as requirements relating to different types of open space, size, distribution, etc). However, development in this release area commenced some time ago prior to the use of the Open Space Plan and the Development Control Plan stipulates a standard of 2.83 hectares per thousand people. For a population growth of 2,762 people, a minimum area of 7.81 hectare would be required.

Open Space requirements for the area of this Plan are as follows:

Land Requirements

Assessment of existing open space land shows that there is an excess of land for the existing population and that there is no significant shortfall due to the requirements generated by future development for the following types of Open Space:

- Semi-Natural Areas;
- Courts;
- Sports Fields.

There is therefore no requirement for provision of open space land for these types. However, for other types of open space there is a need for additional land to cater for the proposed development as follows:

- Small Park 1.08 hectare
- Large Park 3.38 hectare

Development in the UDP area will be required to dedicate land sufficient to fulfill these requirements or to contribute towards acquisition of suitable land.

Table S3 has been prepared on the basis of contributions in lieu of dedication of land. Any dedication of suitable land will be offset against these costs in a similar manner to works in kind.

Embellishment

While there is sufficient open space land within the area of the zone to meet some of the land requirements as identified above, the level of improvements on certain types of open space is insufficient to cater for the future development being considered. Accordingly, contributions towards embellishment of existing open space for this future development area reasonable.

Table S3 shows details including cost estimates.

Apportionment of Costs

Future development being considered is expected to be spread throughout the zone and so all development will be required to share the costs for open space embellishment on a proportional basis.

Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table S3, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

Land

To be dedicated at various stages of development.

Embellishment

- Small Parks: to be provided in stages when 50% and 100% of development is released;
- Large Parks: to be provided in stages when 60% and 90% of development is released;
- Sports Fields: to be provided when 50% of development is released.

Contribution Rates

The contribution rates will be calculated by dividing the total estimated costs by the estimated number of Dwelling Units as follows:

Land Component

Contribution Rate = $892,000 ÷ 863
= $1,033 per DU

Works (Embellishment) Component

Contribution Rate = $572,946 ÷ 863
= $664 per DU

3.2.7 Zone 4: West Wyong Urban Release Area

Proposed Development

The proposed development covers development of all of the West Wyong Urban Release area and is predicted to yield a total population of 915 (equivalent to 286 DUs) as shown in Clause 5.0 of this Plan.

Figure 6 shows the area of this zone.

Report Detail

This Plan is based on Council's Open Space Plan with details specific to this area prepared by Council's Landscape Planner, contained in Report No POS 3-1 (September 1992).

Determination of Open Space Requirements

Council's Open Space Plan requires a minimum provision of open space of 3.00 hectares per thousand people (as well as requirements relating to different types of open space, size, distribution, etc). However, development in this release area commenced some time ago prior to the use of the Open Space Plan and the Development Control Plan stipulates a standard of 2.83 hectares per thousand people. For a population growth of 915 people, a minimum area of 2.59 hectare would be required.

Open Space requirements for the area of this Plan are as follows:

Land Requirements

Assessment of existing open space land shows that there is an excess of land for the existing population and that there is no significant shortfall due to the requirements generated by future development for the following types of Open Space:

- Semi-Natural Areas;
- Courts;
- Sports Fields.

There is therefore no requirement for provision of open space land for these types. However, for other types of open space there is a need for additional land to cater for the proposed development as follows:

- Small Park 1.65 hectare
- Large Park 0.60 hectare

Development in the UDP area will be required to dedicate land sufficient to fulfill these requirements or to contribute towards acquisition of suitable land.

Table S4 has been prepared on the basis of contributions in lieu of dedication of land. Any dedication of suitable land will be offset against these costs in a similar manner to works in kind.

Embellishment

While there is sufficient open space land within the area of the zone to meet some of the land requirements as identified above, the level of improvements on certain types of open space is insufficient to cater for the future development being considered. Accordingly, contributions towards embellishment of existing open space for this future development area is reasonable.

Table S4 shows details including cost estimates.

Apportionment of Costs

Future development being considered is expected to be spread throughout the zone and so all development will be required to share the costs for open space embellishment on a proportional basis.

Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table S4, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

Land

To be dedicated at various stages of development.

Embellishment

- Small Parks: to be provided in stages when 25% and 50% of development is released;
- Large Parks: to be provided when all of development is released;
- Sports Fields: to be provided when 70% of development is released.

Contribution Rates

The contribution rates will be calculated by dividing the total estimated costs by the estimated number of Dwelling Units as follows:

Land Component

Contribution Rate = $450,000 ÷ 286
= $1,573 per DU

Works (Embellishment) Component

Contribution Rate = $543,513 ÷ 286
= $1,900 per DU

3.2.8 Zone 5: Remaining Area of the District

Proposed Development

The remaining area of the District includes all of the Wyong District except for Zones 1 to 4 above.

The proposed development covers medium density development which is predicted to provide an additional population of 615 (equivalent to 263 DU). Single dwelling development in existing urban zones do not require development consent and are not covered by this Plan.

Report Detail

This Plan is based on Council's Open Space Plan with details specific to this area prepared by Council's Landscape Planner, contained in Report No POS 3-1 (September 1992).

Determination of Open Space Requirements

Council's Open Space Plan requires a minimum provision of open space of 3.00 hectares per thousand people (as well as requirements relating to different types of open space, size, distribution, etc). For a population growth of 615 people, a minimum area of an additional 1.85 hectares would be required.

Council's Open Space Plan indicates the various categories of open space as a proportion of total open space requirements as shown in the table below:

Table 5 Categories of Open Space

Open Space Type	Notional Proportion (%)	Notional Area Required (Ha)
Parks, Fields and Cycleways	75	1.38
Courts	5	0.09
Semi-Natural Area	20	0.37
TOTAL OPEN SPACE	**100**	**1.85**

Open Space requirements for the area of this Plan are as follows:

Land Requirements

Assessment of existing open space land shows that there is an excess of land for the existing population and that there is no significant shortfall due to the requirements generated by the future development. Further, there is no concentrated location for this future development for which specific open space sites can be provided. Hence, there will be no requirements for land due to the proposed development.

Embellishment

While there is sufficient open space land within the area of the zone, the level of improvements is not sufficient to cater for the future development being considered. Accordingly, contributions towards embellishment of existing open space for this future development are reasonable.

Cost estimates for embellishment of various types of open space have been calculated as follows:

- Courts: $103.42 per square metre
- Cycleways, Parks and Fields: 34.13 per square metre
- Semi-Natural Areas: $10.34 per square metre

These cost estimates have been applied to the area requirements in the table above to establish the contributions shown in Table S5.

Current Contributions

There are no current contributions in hand or amounts committed in development consents already issued prior to preparation of this Plan.

Apportionment of Costs

Future development being considered is expected to be spread throughout the zone and so all development will be required to share the costs for open space embellishment on a proportional basis.

Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table S5, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

- Court Improvements: to be provided when 25% of the future population is established;
- Embellishment of Semi-Natural Areas: to be provided when 25% of the future population is established;
- Embellishment of Cycleways, Parks & Fields: to be provided on completion of the future development.

Contribution Rates

The contribution rates will be calculated by dividing the total estimated costs as shown in the attached tables by the estimated number of Dwelling Units as follows:

Land Component

Nil.

Works (Embellishment) Component

Contribution Rate = $406,845 ÷ 178
= $2,286 per DU

3.3 Carparking – Wyong Town Centre

3.3.1 Area of Scheme

Development in the commercially zoned area of Wyong Town Centre may require provision of public carparking where all parking is not provided on site by developments. This Plan establishes the basis for payment of contributions for provision of public parking provided in lieu of on site parking in Wyong Town Centre.

3.3.2 Nexus and Apportionment of Cost

As the quantity of parking required cannot be determined in advance of development, the approach to identifying and apportioning costs for parking has been:

- identify land which may be acquired for parking on the fringe of the commercial area or adjacent to existing parking facilities in accordance with Council's parking development strategy;
- identify a land cost per parking space based on 30 square metres of land per space for parking, circulation and landscaping;
- where a range of values exist for fringe land it is assumed that cheaper land will be acquired in preference to more expensive land by a ratio of 3:1;
- allow $2,500 per space for construction.

3.3.3 Program for Works and Funding

Land acquisition for parking will be undertaken when sufficient funds are available from development and within a reasonable time of receipt of contributions, generally being for a minimum 20 space parking area.

Construction of the parking area will follow immediately after land acquisition.

3.3.4 Contribution Rate

The contribution rate will be calculated based on the average value per square metre for fringe land (including acquisition on costs of 10%) and a construction cost of $2,500 per space:

Contribution Rate = $195 x 30 + $2,500
= $8,350 per space
= $9,154 per space (June 2002)

Figure 7 Carparking Facilities – Wyong Town Centre



3.4 Local Roads and Intersections

3.4.1 Introduction

This section considers the road and intersection requirements generated as a result of the development in the area of this Plan.

3.4.2 General

The approach to establishing road and intersection requirements for this area has been:

- identify existing road hierarchy and traffic flows;
- predict future road hierarchy and traffic flows generated by existing development or existing zoned areas for which no contributions may be sought when development does proceed, but excluding the proposed development;
- identify road and intersection improvements necessary to cater for these predicted flows;
- predict future road hierarchy and traffic flows generated by all future development including the proposed development;
- identify additional road and intersection improvements necessary to cater for these predicted flows; and
- where necessary, apportion costs of improvements based on traffic flows.

3.4.3 Area of the Scheme

For the purposes of identifying road and intersection improvements this District has been divided into zones as follows:

- Zone 1: Mardi Urban Release Area and Westfield Site
- Zone 2: Watanobbi Urban Release Area
- Zone 3: West Wyong Urban Release Area
- Zone 4: Hue Hue Road Area
- Zone 5: Leewood Close Area, Yarramalong
- Zone 6: Mardi South Urban Release Area
- Zone 7: Wyong Road/Bryant Drive/Pacific Highway and Cobbs Road
- Zone 8: Tuggerah Industrial Estate Stage III

3.4.4 Zone 1: Mardi Urban Release Area (Westfield Area)

Area of the Scheme

This roads scheme relates to all of the Mardi Urban Release Area and to the proposed Westfield Shopping Centre site south of Cobbs Road, as shown in Figure 8.

Report Detail

The road and intersection requirements are based on a traffic report completed by Pak Poy and Kneebone and a technical report completed by Council's Design Section (Report No 363, June 1992).

The traffic study completed for this area indicated that the existing roads and intersections are adequate to cater for existing development and future single dwelling development on existing residential lots.

It also identified that upgrading of certain roads and intersections would be required to cater for the proposed development.

Revised costs for the Johnson Road and Gavenlock Road roundabout and the Johnson Road extension have been based on revised designs and cost estimates prepared by consultants and checked by Council's Development Design and Strategic Planning Engineers, dated January and February 2000.

Scheme Details

The proposed works are described below with further details shown in Table R1 and Figure 8:

1 Extension of Johnson Road west of Gavenlock Road, and the provision of a Roundabout at Johnson and Gavenlock Roads including the construction of the cycleway for the length of the Johnson Road extension, and the internal cycleway link adjoining the artificial wetland on the northern extremity of the release area.

2 Installation of traffic lights at the intersection of Johnson Road and Pacific Highway.

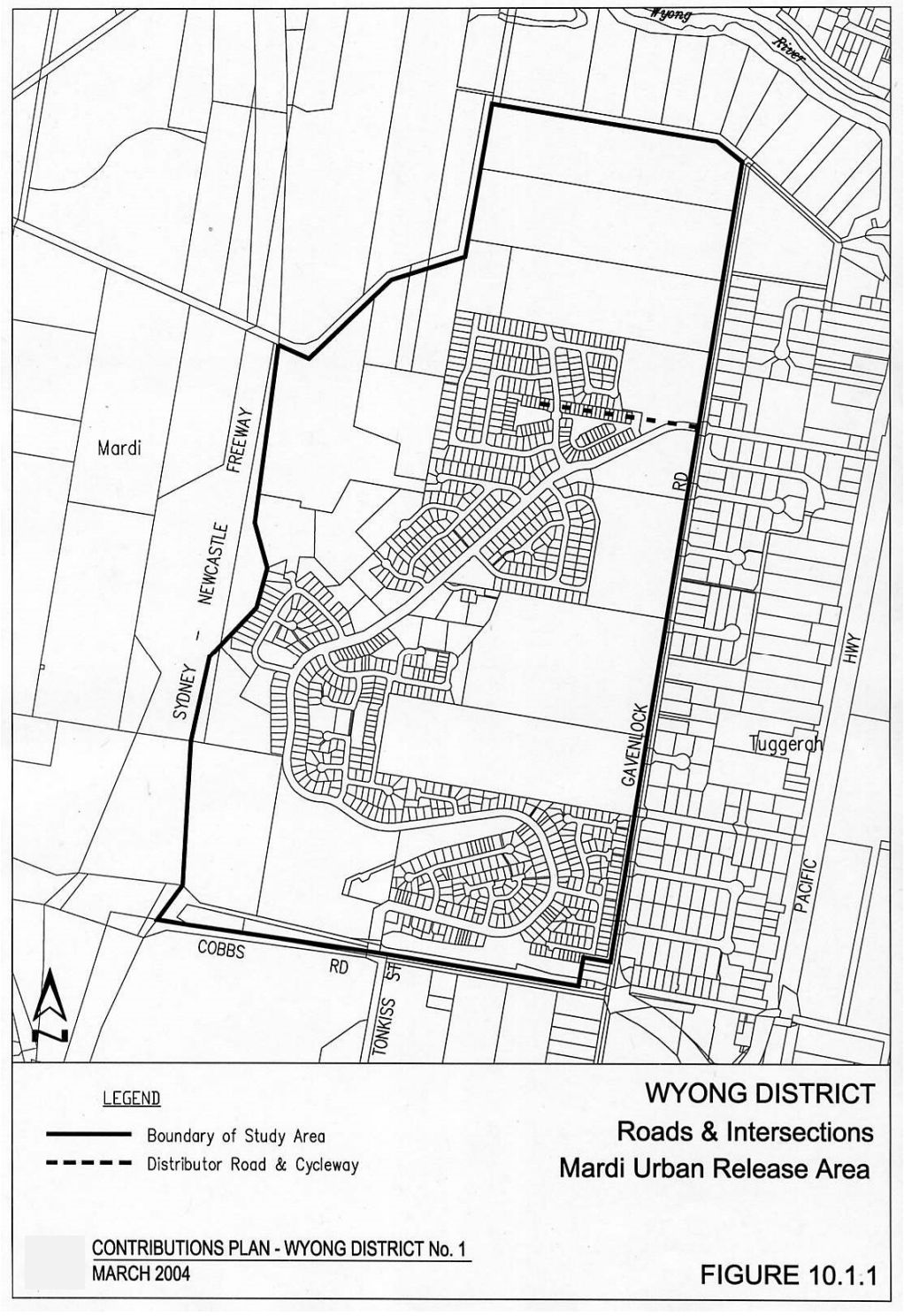
3 Construction of roundabout at the intersection of Tonkiss Street and Cobbs Road and the distributor road.

4 Construction of extra width to form the distributor road through the Mardi Release area.

5 Construction of cycleway from Tonkiss Street to Gavenlock Road.

6 Land for full width of section of distributor road identified in Item 1.

Figure 8 Roads and Intersections – Mardi Urban Release Area



Apportionment of Costs

Apportionment of costs will be on the basis of traffic generated and is summarised as follows (see Table R1 for details):

- Items 1, 4, 5: 100% to Mardi Urban Release Area;
- Item 2: 75% to Mardi Urban Release Area; 25% to Council/RTA;
- Item 3: 16% to Mardi Urban Release Area; 84% to Shopping Centre;
- Item 6: 100% to Mardi Urban Release Area.

Program for Works and Funding

An indicative time for provision of each improvement is shown in Table R1, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

- Johnson Road Extension and Roundabout at Johnson and Gavenlock Roads: to be provided when development of the northern section of the release area is undertaken;
- Johnson Road / Pacific Highway Intersection: to be provided when Johnson Road is completed;
- Tonkiss Street Roundabout: to be provided as part of the first stage of development accessing onto Cobbs Road;
- Distributor Road and Cycleways including Land: to be provided by each developer as development proceeds.

Contribution Rate

Based on the above, cost apportionments are as follows:

Shopping Centre

84% of Item 3	=	84% x $1,537,348
	=	$1,291,372

Council / RTA

25% of Item 2	=	25% x $258,266
	=	$64,567

Mardi Urban Release Area

100% of Items 4, 5 & 6		
+75% of Item 2		
+ 16% of Item 3	=	$1,260,886 (indexed June 2002)
+ 100% of Item 1	=	$771,677
	=	$1,260,886 + $771,677
	=	$2,032,563

Mardi Urban Release Area

Contribution Rate = $2,032,563 per ha NDA
= $2,032,563 ÷ 52.86ha NDA
= $38,452 per ha NDA (revised to June 2002)

3.4.5 Zone 2: Watanobbi Urban Release Area

Report Detail

The road and intersection requirements are based on a traffic report completed by Lyle Marshall & Associates and a technical report completed by Council's Design Section (Report No 431, July 1992).

It identified that upgrading of certain roads and intersections would be required to cater for the proposed development.

Scheme Details

The works identified consisted of construction of a two lane roundabout at the intersection of Britannia Drive and the Pacific Highway, together with part construction of Britannia Drive.

Further details are shown in Table R2 and Figure 9.

Apportionment of Costs

Apportionment of costs will be on the basis of traffic generated and is summarised as follows:

- New Development 82%
- Existing Development (funded by Council) 18%

As development throughout the release area will be similar in nature and will generate similar traffic volumes, contribution rates will be calculated on a dwelling unit, or equivalent basis.

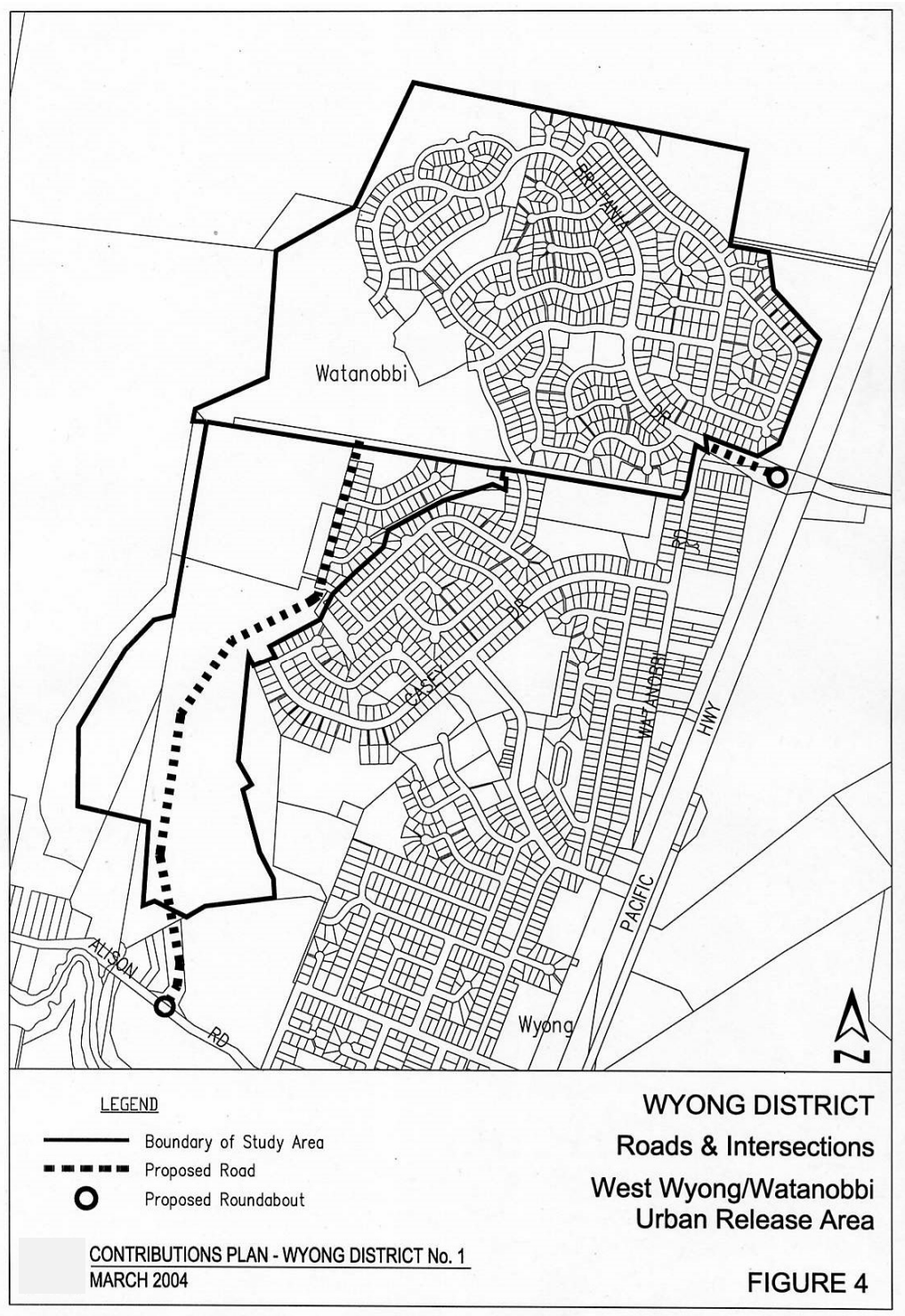
Program for Works and Funding

All works were constructed in 1991/92 as shown in Table R2.

Contribution Rate

Contribution Rate = Cost ÷ No of DUs
= 82% x $1,277,542 ÷ 863
= $1,214 per DU

Figure 9 Roads and Intersections – West Wyong / Watanobbi Urban Release Area



3.4.6 Zone 3: West Wyong Urban Release Area

Report Detail

The road and intersection requirements are based on a traffic report completed by Lyle, Marshall & Associates and a technical report completed by Council's Design Section (Report No 430, July 1992).

The traffic study completed for this area indicated that the existing roads and intersections are adequate to cater for existing development and future single dwelling development on existing residential lots.

It identified that upgrading of certain roads and intersections would be required to cater for the proposed development.

Scheme Details

The proposed works are described below with further details shown in Table R3 and Figure 9:

- additional construction width to local road to form distributor road;
- construction of distributor road in areas where there is no development fronting the road (ie. at drainage reserves, open space, etc);
- roundabout at the intersection of Alison Road and De L'Isle Drive;
- land for section of distributor road from Alison Road to commencement of development.

Apportionment of Costs

Apportionment of costs will be on the basis of traffic generated. However, as development throughout the release area will be similar in nature and will generate similar traffic volumes, contribution rates will be calculated on a dwelling unit, or equivalent basis.

Program for Works and Funding

An indicative time for provision of each improvement is shown in Table R3, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

- works for additional width to form distributor road together with parts of distributor road with no development: to be provided as part of the particular development;
- roundabout: to be provided when the first 150 lots have been released.

Contribution Rate

Contribution Rate = Cost ÷ No of DUs
= 1,701,191 ÷ 286
= $5,948 per DU

3.4.7 Zone 4: Hue Hue Road Area

Area of the Scheme

The area of the scheme is that part of the Hue Hue Road Rural Residential Release Area shown in Figure 10.

Report Detail

The road and intersection requirements are based on a technical report completed by Council's Design Section (Report No 427, July 1992).

It identified that upgrading of certain roads and intersections would be required to cater for the proposed development.

Scheme Details

The proposed works are described below with further details shown in Table R4 and Figure 10:

- upgrading of the intersection of St Johns Road and Hue Hue Road to a Type B "T" intersection;
- upgrading of the intersection of Holloway Drive and Hue Hue Road to a Type B four-way intersection;
- upgrading of the intersection of Sandra Street and Hue Hue Road to a Type B four way intersection.

Apportionment of Costs

Apportionment of costs will be on the basis of traffic generated. However, as development throughout the release area will be similar in nature and will generate similar traffic volumes, contribution rates will be calculated on a dwelling unit, or equivalent, basis. This will be converted to a lot basis, with contributions to be charged at time of subdivision for each additional lot.

Program for Works and Funding

An indicative time for provision of each improvement is shown in Table R4, although this may vary depending on the rate of development. The actual time for provision of the various improvements will be dictated by the following thresholds:

- upgrading of St Johns Road intersection to be provided prior to release of the first development requiring access off St Johns Road;
- upgrading of Holloway Drive intersection to be provided as part of the construction of the first section of Holloway Drive to the west;
- upgrading of Sandra Street intersection has already been completed.

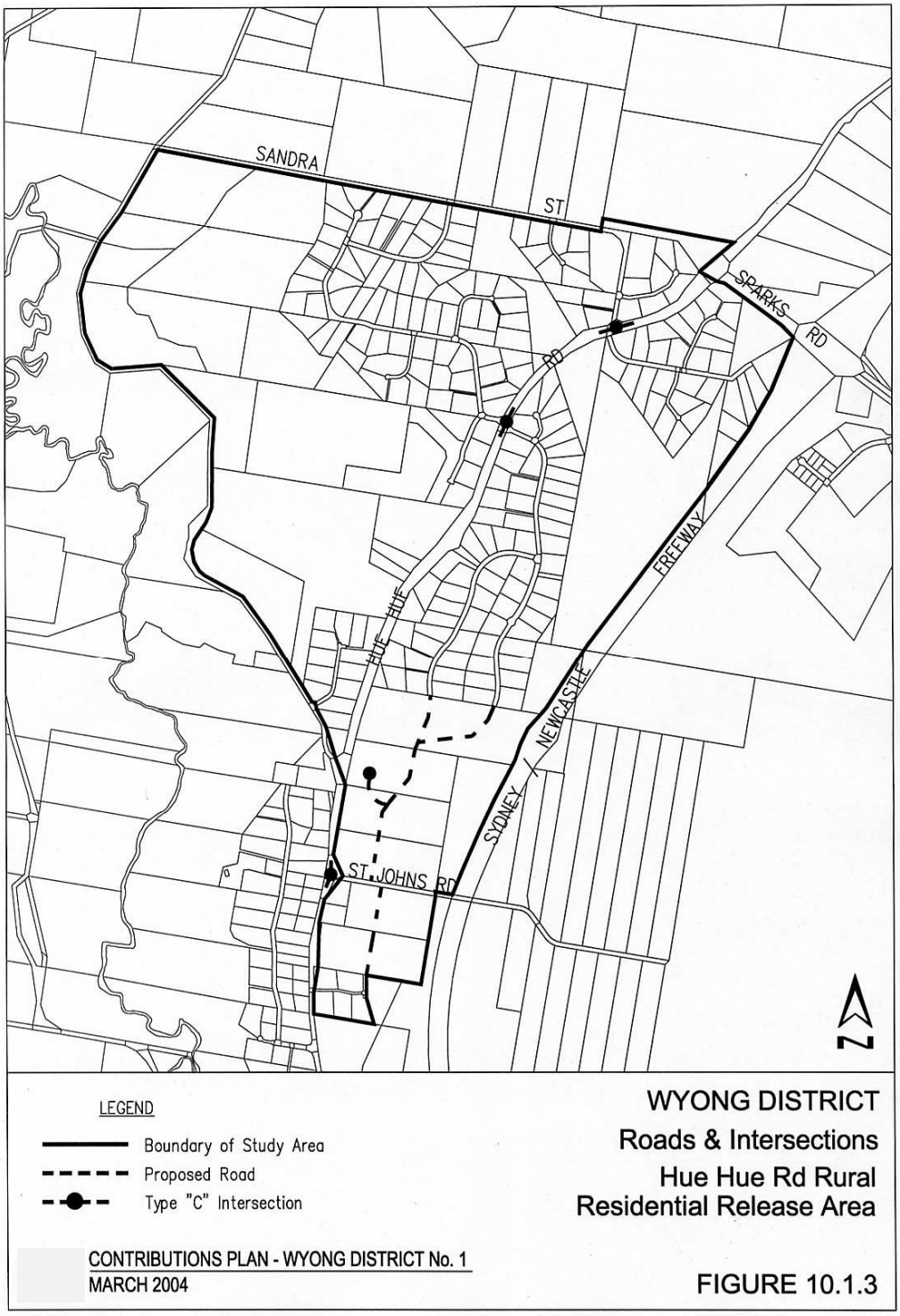
Contribution Rate

Based on traffic apportionment identified above, cost apportionments for the total works are as follows:

Contribution Rate	=	Cost ÷ No of lots
	=	$684,086 ÷ 155
	=	$4,414 per lot*

Note: *This rate applies to each additional lot to be created by subdivision.*

Figure 10 Roads and Intersections – Hue Hue Road Rural Residential Release Area



3.4.8 Zone 5: Leewood Close Area, Yarramalong

Report Detail

The road and intersection requirements are based on a technical report completed by Council's Design Section (Report No 444, August 1992).

Scheme Details

The proposed works are described as follows, with further details shown in Table R5 and Figure 11: construction of Leewood Close to a 6 metre width seal with kerb and gutter and associated drainage.

Apportionment of Costs

Apportionment of costs will be on the basis of traffic generated. However, as development throughout the release area will be similar in nature and will generate similar traffic volumes, contribution rates will be calculated on a dwelling unit, or equivalent basis.

Program for Works and Funding

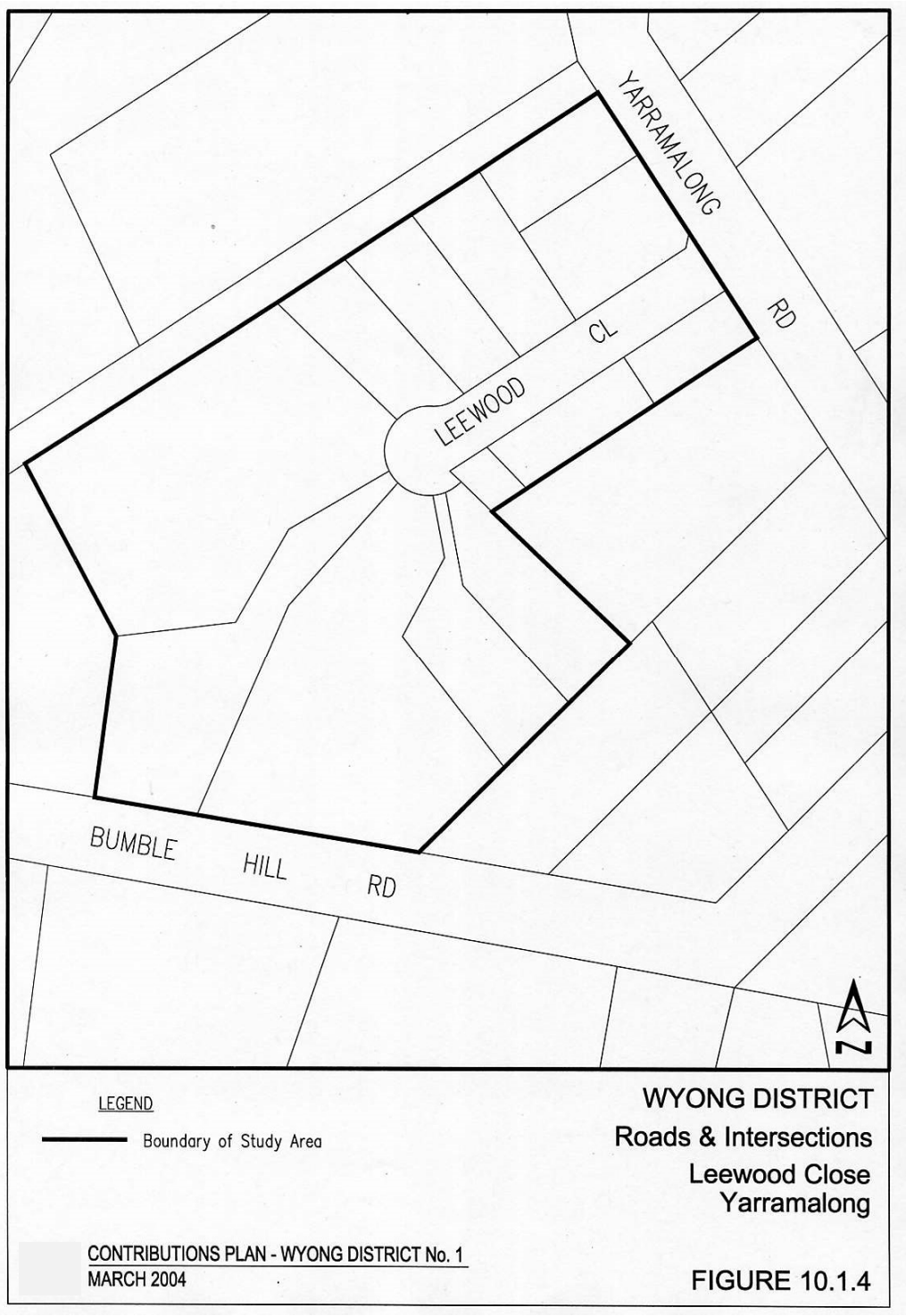
An indicative time for provision of each improvement is shown in Table R5, although this may vary depending on the rate of development.

Contribution Rate

Based on traffic apportionment identified above, cost apportionments for the total works are as follows:

Contribution Rate	=	Cost ÷ No of DUs
	=	$88,256 ÷ 16
	=	$5,516 per DU

Figure 11 Roads and Intersections – Leewood Close, Yarramalong



3.4.9 Zone 6: Mardi South Urban Release Area

Area of the Scheme

The area of the scheme is all of the area identified as Mardi South Urban Release Area in Figure 12.

Report Detail

The intersection requirements are based on a technical report completed by Council's Design Section (dated July 1993).

It identified that upgrading of the intersection at the Pacific Highway would be required to cater for the proposed development.

Scheme Details

The proposed works are described as follows with further details shown in Table R6: the provision of a T intersection at the junction of the Pacific Highway Tuggerah and the proposed distributor road into Mardi South Urban Release Area.

Apportionment of Cost

Apportionment of costs will be on the basis of traffic generated. However, as development throughout the release area will be similar in nature and will generate similar traffic volumes, contribution rates will be calculated on a dwelling unit, or equivalent basis.

Program for Works and Funding

An indicative time for the provision of each improvement is shown in Table R5, although this may vary depending on the rate of development.

Contribution Rate

The contribution rate will be calculated by dividing the total estimated costs by the estimated number of dwelling units:

Contribution Rate = Cost ÷ No of DU's
= $193,060 ÷ 246
= $785 per DU

Figure 12 Roads and Intersections – Mardi South Urban Release Area



3.4.10 Zone 7: Wyong Road and Bryant Drive and Pacific Highway, Wyong Road and Cobbs Road

Area of the Scheme

The area of the scheme relates to land zoned 4(d) Special Industrial Business generally bounded by Lake Road, Bryant Drive (north), Main Northern Railway Line, Ourimbah Creek, Wyong Road and Titania Avenue, Tuggerah. It also relates to part of land (8.7 hectares) contained within Portion 25 DP 755263, DP 206598 and Lot 11 DP 585324 and land zoned 4(a) General Industrial within Lots 1 and 2 DP 543729 and Portion 25 DP 755263.

Report Detail

The intersection requirements are based on Technical Report No 1652 completed by Council's Strategic Planning Department.

It has been identified that the upgrading of the intersection is required to cater for the proposed development in the Wyong/Tuggerah area as shown in the following plan.

The existing developments on DP 620891 and DP 654119 and part land zoned 4(a) in Lot 2 DP 543729 have been in existence for a considerable number of years. The previous intersection arrangements at Wyong Road/Bryant Drive and Pacific Highway/Wyong Road/Cobbs Road were adequate to cater for these developments.

Scheme Details

The required works are described below with further details in Technical Report No 1652.

1 Construction of a roundabout at the intersection of Wyong Road and Bryant Drive, Tuggerah: the cost of the roundabout works is the difference in cost between the roundabout (rigid pavement) and the previously proposed "sea-gull" type intersection. This is estimated at $430,199.

2 Construction of left turn slip lane from Pacific Highway (southbound traffic) to Wyong Road at Tuggerah: the estimate of cost for the left turn slip lane from Pacific Highway to Wyong Road is $420,733.

Apportionment of Costs

1 Wyong Road/Bryant Drive Roundabout

The cost of the roundabout at the intersection of Wyong Road and Bryant Drive is to apportioned between the proposed developments shown in Figure 13.

The apportionment of costs (based on predicted traffic generation) to be:

Tuggerah Business Park	52.4%
Supa Centre	19.7%
Other Development (Areas 1, 2 & 3)	27.9%

The cost to be apportioned is $430,199.

2 Left Turn Slip Lane from Pacific Highway to Wyong Road

The cost of the left turn slip lane from Pacific Highway to Wyong Road is to be apportioned between the Westfield's development and the proposed developments shown in Figure 13.

The apportionment of cost (based on predicted traffic generation) to be:

Westfield's Development	49.0%
Tuggerah Business Park	26.7%
Supa Centre	10.1%
Other Developments (Areas 1, 2 & 3)	14.2%

The cost to be apportioned is $420,733.

Program for Works and Funding

The timeframe for the works is:

1 Wyong Road/Bryant Drive Roundabout - constructed in 1995 concurrent with the Supa Centre.

2 Left Turn Slip Lane form Pacific Highway to Wyong Road - to be carried out concurrent with Wyong Road upgrading by Council/Roads Traffic Authority in 1997.

Contribution Rates

The contribution rates will be calculated as follows.

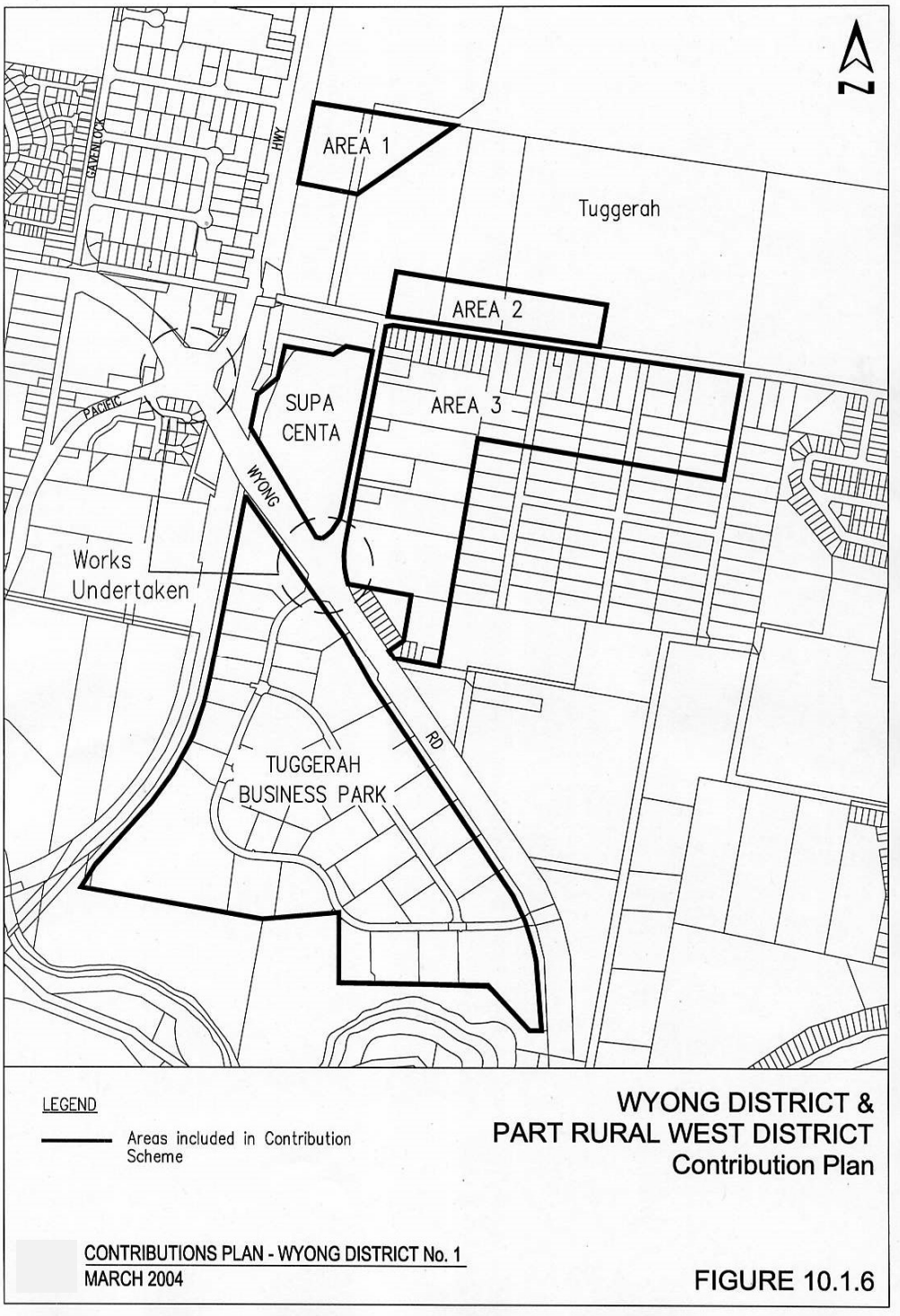
1 Wyong Road/Bryant Drive Roundabout:

Tuggerah Business Park	$225,875
Supa Centre	$84,916
Other Development	$120,266 ÷ 37.8ha
	$3,181 per ha NDA

2 Left Turn Slip Lane from Pacific Highway to Wyong Road:

Westfield's	$206,571
Tuggerah Business Park	$112,561
Supa Centre	$42,578
Other Development	$59,864 ÷ 37.8 ha
	$1,584 per ha NDA

Figure 13 **Roads and Intersections – Wyong Road / Bryant Drive / Pacific Highway and Wyong Road / Cobbs Road**



3.4.11 Zone 8: Tuggerah Industrial Estate Stage 3 – Roadworks

Area of the Scheme

The area covered by this scheme is that part of the district as shown in Figure 13.

General

In 1995, development of the Tuggerah Supa Centa initiated the need to construct the western side of Bryant Drive for the length of frontage to the Supa Centa. At that time, Council paid a contribution towards the construction of the eastern side of the road with a view to recouping the cost at a later stage when development of the land on the eastern side of Bryant Drive proceeded. The cost of the work attributable to the land on the eastern side of Bryant Drive has been included in this scheme. The construction of Lake Road for the frontage of the scheme area and part of Church Road and Mooramba Road is also included in this scheme.

Report Detail

The details of this scheme are included in Technical Report No 1991 completed by Council's Strategic Planning Department in October 2000.

Scheme Details

The scheme provides for the construction of road works to service the areas shown in Figure 13, which allow for the development of the land for industrial purposes. A table indicating the summary of costs associated with each catchment is set out below.

Table 6 Summary of Costs – Construction of Road Works

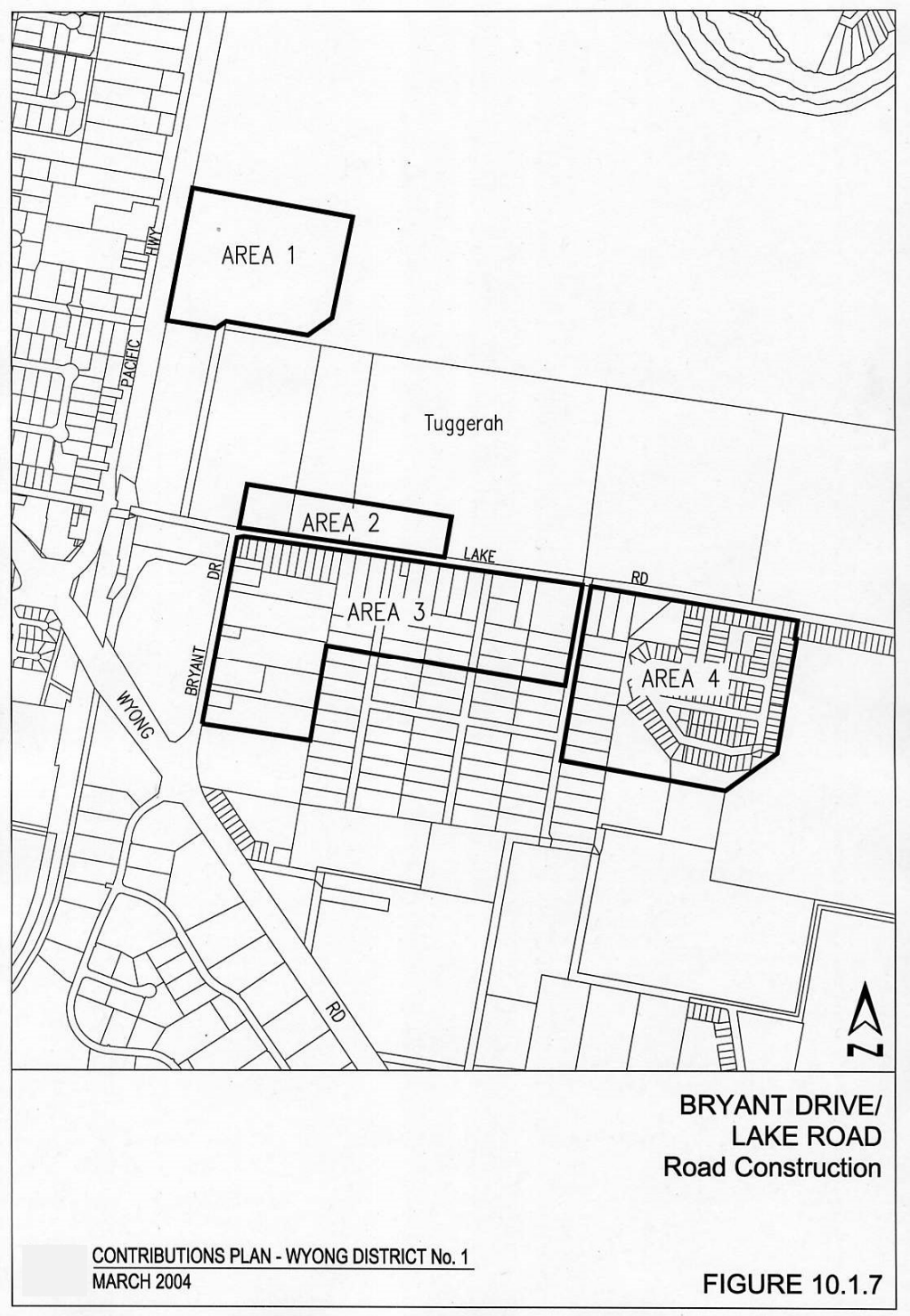
Component	Cost
Half Road Construction of Bryant Drive	$147,588
Construction of Lake Road and part of Church Road and Mooramba Ave	$2,104,392
TOTAL	**$2,251,980**

The total area of the land that will benefit from the scheme is 52.19/NDA hectares. A split of the total NDA is shown below.

Table 7 Total Area of Land to be Developed

Precinct	NDA
Area 1	12.24
Area 2	10.00
Area 3	21.02
Area 4	8.93
TOTAL	**52.19**

Figure 14 Road Construction – Bryant Drive / Lake Road



Apportionment of Costs

The total cost of the works is to be met by the area shown in Figure 13.

Program for Works and Funding

The construction of Bryant Drive has already occurred. The remaining works under this scheme will occur as development proceeds.

Contribution Rates

The cost of works associated with each component is divided by the net developable area of the scheme.

Contribution (in December 2000 dollars)

Contribution Rate	=	Total cost of works ÷ Net Developable Area
	=	$2,251,980 ÷ 52.19 NDA
	=	$43,149 per NDA

3.5 Drainage

3.5.1 Mardi Creek Drainage

Introduction

This section considers the drainage requirements generated as a result of the development in the area of this Plan.

Area of the Scheme

The area covered by this drainage scheme is that part of the District within the Mardi Creek catchment as shown in Figure 15.

It includes the following areas:

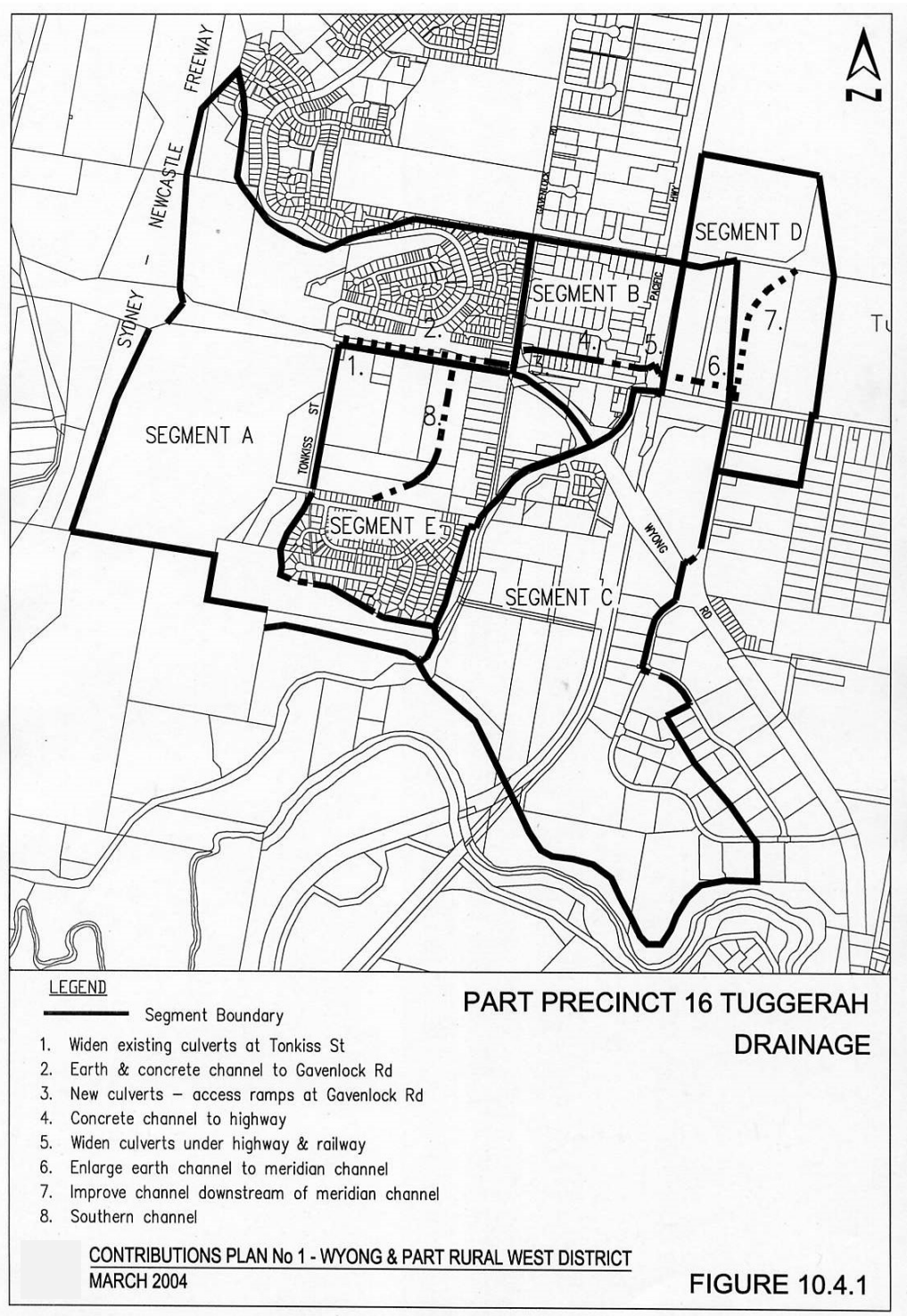
- part of the Mardi Urban Release Area;
- Mardi South Urban Release Area;
- proposed Westfield Shopping Centre;
- proposed Meridian Development;
- some existing areas of Mardi;
- proposed Tuggerah Industrial Area Stage 3;
- future development within the area bounded by Gavenlock, Mildon and Cobbs Roads, and the Pacific Highway.

General

The approach to establishing drainage requirements for this area has been:

- carry out a flood study to establish current flood levels for floods with various probabilities of occurrence (eg. 20%, 2%, 1%, etc.) based on existing levels of development;
- use this study to predict future flood flows and levels for floods within the same probability of occurrence based on existing levels of development and development of existing zoned areas, but excluding the proposed development;
- use the study to predict future flood flows and levels with full development of the catchment, including the proposed development;
- identify drainage improvements necessary to handle the predicted flows; and
- where necessary, apportion costs of improvements based on an area or fill volume basis or, where run off characteristics vary from area to area, on actual run-off flows from each area.

Figure 15 Drainage – Part Precinct 16, Tuggerah



Report Detail

The following reports form the basis for this scheme:

- Upper Wyong River Flood Study, February 1988 - Webb McKeown and Associates Pty Ltd;
- Mardi Creek Flood Study, June 1992 - Webb McKeown and Associates Pty Ltd;
- Lower Wyong River Flood Study Review, June 1992 - Webb McKeown and Associates Pty Ltd;
- Wyong River Flood Plain Management Study, June 1992 - Webb McKeown and Associates Pty Ltd;
- Estimates and Preliminary Designs of Components of "Westfield's Scheme B", April 1992 - Sinclair Knight and Partners;
- Comparison of Eight Proposed Schemes, August 1992 - Webb McKeown and Associates Pty Ltd;
- Mardi Creek, Tuggerah, Investigation and Concept Design of Flood Mitigation Works, May 1997 - Webb McKeown and Associates Pty Ltd;
- Revision of Mardi Drainage Scheme, August 1998 - Webb McKeown and Associates Pty Ltd.

The Mardi Creek Flood Study, June 1992, identifies the existing flood levels within the Tuggerah area due to flooding from Mardi Creek. A somewhat lower level of flooding of the same area can be due to flooding from Wyong River as shown in the Lower Wyong River Flood Study Review, June 1992, and the Upper Wyong River Flood Study, February 1988.

The worsening of flood levels due to various development proposals within Mardi Creek catchment is shown in the Wyong River Flood Plain Management Study, June 1992. This management study also identified feasible schemes of works to overcome these adverse affects and to make some improvement to the existing flood problem.

Due to the overriding flood affects possible from Wyong River, it is not feasible for works within Mardi Creek to protect existing development in that area against flooding from all 1% floods, nor to the 2% standard which are the Council's adopted standards for the area generally and for Tuggerah Industrial Area respectively.

However, the proposed works achieve protection to 5% level, and new development can be established above the 1% levels (with the use of fill in some locations).

The 1997 report provided some design details of downstream components of works and provided alternative items of works to achieve the desired results, notably the provision of a basin adjoining the F3 Freeway which is more economical and environmentally favourable solution.

Scheme Details

The proposed works are described below with further details shown in Table D1.

- culverts under Cobbs Road at Tonkiss Street intersection;
- earth channel between Tonkiss Street and Gavenlock Road;
- culverts and utilities adjustments at Gavenlock Road;
- concrete channel between Gavenlock Road and Pacific Highway;
- duplication of culverts under the Pacific Highway and the Railway;
- earth channel improvements downstream of the Railway;
- southern channel through Westfields;
- land acquisition;
- provision of a detention basin adjacent to the F3 Freeway.

Apportionment of Costs

The area of the scheme is divided into five segments of the Mardi Creek Catchment. These segments are shown on Figure 15.

Developments, both existing and proposed, within each of these five segments will contribute on an area basis to the cost of works within that segment and downstream of the segment, but not upstream of the segment.

This apportionment is consistent with earlier development approvals in the area and recognises the affect of developments on downstream flood levels.

In addition, works required to directly offset the impacts of site filling or any equivalent flood-storage displacement within the area bounded by Cobbs Road, Gavenlock Road, Mildon Road and the Pacific Highway, will be levied on a per cubic metre of fill basis.

Total cost for all works is estimated as $3.73 million (June 2002 dollars) made up as shown in Table 8 (further details see list of items in Figure 15).

Table 8 Value of Works in each Segment

Segment	Cost of Works Located in Segment	Apportionment of Costs to Segment
Segment A	$1,352,088	$1,438,345
Segment B	$1,297,057	$229,771
Segment C	$229,406	$138,112
Segment D	$314,846	$49,881
Segment E	$557,496	$1,894,786
TOTAL	**$3,750,894**	**$3,750,894**

Note: *This excludes the $910,000 towards additional works required to offset the impacts of filling within Segment B.*

Contribution Rates

Table 9 Segment A

Location	Gross Hectares
Mardi Urban Release Area (Area within Catchment Only)	17.7
Old Abattoirs Site west of Tonkiss Street	25.0
TOTAL	**42.7**

Contribution Rate = Cost ÷ Area
= $1,432,920 ÷ 42.7ha
= $33,558 per ha

Table 10 Segment B

Description	Amount
Existing Industrial and Commercial (WSC)	13.3 hectares
Total Cost to be borne by Council	$229,771
Future Development entailing site fill or equivalent building displacement (area bounded by Cobbs, Gavenlock, Mildon Roads and the Pacific Highway)	74,000 cubic metres
Specific works to offset impact of filling	$937,351 (June 2002)

Contribution Rate = Cost ÷ cubic metres of fill
= $937,351 ÷ 74,000
= $12.66 per cubic metre of fill or equivalent displacement

Table 11 Segment C

Location	Area
2(b) at Highway	2.1 hectares
Tuggerah Business Park	35.0 hectares
TOTAL	**37.1 hectares**

Contribution Rate = Cost ÷ Area
= $138,112 ÷ 37.1ha
= $3,723 per ha

Table 12 Segment D

Location	Area
Tuggerah Industrial Estate	25.0 hectares

Contribution Rate = Cost ÷ Area
= $49,881 ÷ 25
= $1,995 per ha

Table 13 Segment E

Location	Area
Mardi South Urban Release Area	15.7 hectares
Proposed Westfield Shopping Centre Site	17.3 hectares
Existing 2(b) in Gavenlock Road (WSC)	6.7 hectares
TOTAL	**39.7 hectares**

Contribution Rate = Cost ÷ Area
= $1,894,786 ÷ 39.7
= $47,728 per ha

10.4.2 Tuggerah Industrial Estate Stage 3 Drainage

Introduction

A drainage scheme incorporating trunk drainage and water quality facilities has been established to facilitate the development of industrial land in the Tuggerah Industrial Estate Stage III.

Area of the Scheme

The area covered by this drainage scheme is that part of the district within the Tuggerah Industrial Area Stage 3 as shown in Figure 16.

General

A drainage concept plan for the industrial area was originally devised in 1990 and presented in a report entitled "Conceptual Report - Tuggerah Industrial Estate - Stage III". A study for Tuggerah Business Park Pty Ltd in 1995 then identified options to upgrade drainage facilities in the area to cater for the Ourimbah Creek overflow.

A review of the previous studies with the aim of formalising the drainage strategies to allow development to proceed in an appropriate manner, was completed in March 2000. The review process established that major trunk drainage works presented some hydraulic and possible environmental problems and were not economically viable.

Consideration of a drainage scheme incorporating water quality facilities was recommended and a further study was initiated to review the key hydraulic and environmental concerns and formalise drainage strategies in order to:

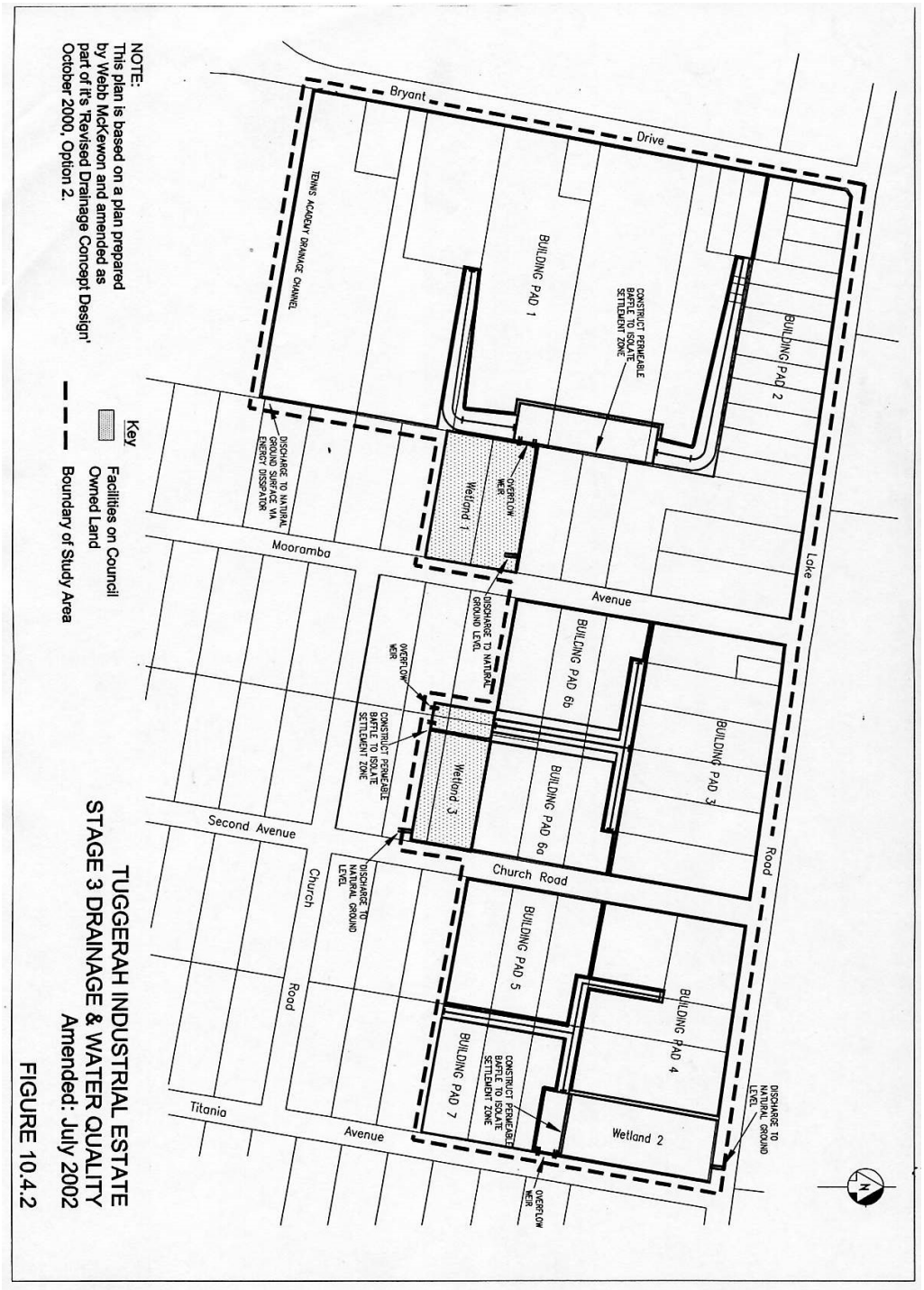
- provide a trunk drainage system for the industrial properties capable of containing the 20% AEP storm;
- treat runoff from industrial areas by provision of a wetland, or series of wetlands, to retain pollutants in accordance with Council's standard policies;
- prepare concept plans and cost estimates for the proposed drainage works to facilitate the compilation of a Section 7.11 Contribution Plan; and
- ensure that the extent of development does not adversely effect (Ourimbah Creek to Wyong River) flood levels in the area.

Report Detail

Tuggerah Station Industrial Area - Revised Drainage Concept Design - Webb McKeown - October 2000.

Valuation of Land - State Valuation Office - October 2000.

Figure 16 Drainage and Water Quality – Tuggerah Industrial Estate



Scheme Details

The scheme provides for the construction of trunk drainage and water quality facilities to service a number of "building pads" which will be filled to allow for the development of the land for industrial purposes. A table indicating the summary of costs is set out below:

Table 14 Trunk Drainage and Water Quality Facilities – Summary of Costs

Component	Total
Preliminaries and Temporary Works	$135,000
Wetlands Construction	$214,600
Drainage Channel Earthworks	$171,300
Structural Concrete	$42,500
Diversion of local (clean) runoff	$21,400
Service Relocation and Miscellaneous Items	$75,000
Design	$32,990
Project Management & Administration	$46,186
Contingencies	$95,980
Studies	$55,059
Sub Total	**$890,015**
Land	
Land Acquisition (including valuation costs)	$532,510
Sub Total	**$532,510**
TOTAL	**$1,422,525 (June 2000)**

Several components of the scheme are situated on Council owned operational land. The cost of land acquisition for these Council owned sections has been excluded from the scheme. The remaining area (channels, baffles and wetland No 2) have been included. The value for the land has been assessed as $231,000/ha. This figure includes a 5% margin for acquisition costs and valuations. A contingency of $30,000 has been included to cover the possibility of relocating wetland no. 2 to the northern side of Lake Rd.

"Building Pads" have been identified as areas suitable to be filled which will enable them to be developed. These "building pads" have a combined area of 19.03 NDA hectares.

Apportionment of Costs

The costs associated with the scheme will be apportioned over the land, as shown on Figure 16, which benefits from the works of the scheme.

Program for Works and Funding

The trunk drainage and associated water quality facilities are to be constructed as development of the area proceeds. Generally, water quality controls should be the first drainage elements constructed. Channels are to be progressively extended from downstream in conjunction with development phasing.

Contribution Rates

The contribution rate has been calculated separately for land acquisition and works. The cost of works associated with each component is divided by the net developable area of the building pads within the scheme.

Land

Contribution Rate = Total cost of land acquisition ÷ Net Developable Area
= $532,510 ÷ 19.03 NDA
= $27,988 per NDA

Works

Contribution Rate = Total cost of works ÷ Net Developable Area
= $910,565 (June 2002) ÷ 19.03 NDA
= $47,849 per NDA

3.6 Planning Studies

3.6.1 Introduction

Planning studies were undertaken by Council to enable development of an Environmental Study, Local Environmental Plan, Development Control Plan and this Contributions Plan.

3.6.2 Area of Scheme

These studies are specific to the Mardi Urban Release Area.

3.6.3 Scheme Details

The studies include:

- Traffic Study (Pak-Poy and Kneebone, 1990);
- Roadworks Design and Costing (Wyong Shire Council, 1991);
- Urban Capability Survey (Soil Conservation Service of New South Wales, 1991);
- Aesthetics (Land Systems EBC Pty Ltd, 1991); and
- Open Space Land Valuation (Robertson and Robertson, 1993).

3.6.4 Appointment of Costs

The studies relate to the full development of Mardi Urban Release Area and as all development within the Area will contribute on a proportional basis.

3.6.5 Program of Works

All studies have been completed.

3.6.6 Contribution Rate

The contribution rate will be calculated by dividing the total estimated costs as shown in Table P1 by the estimated net developable area (NDA).

Contribution Rate	=	$37,000 ÷ 52.86ha NDA
	=	$700 per ha NDA (June 1992)
	=	$771 (indexed June 2002)

Appendix A Schedule of Works

Table R1 Schedule of Works: Roads and Intersections – Mardi

Item	Est Cost ($ x 1000)	Forecast Development (Ha NDA) ($ x 1000) 0	5	11	16	21	26	32	37	42	48	53
Works Expenditure												
(June 1992 & Feb 2000 costs - all indexed to Dec 2001)												
1 Johnson Road Extension / RAB / assoc. cycleway	770	0	0	0	0	0	0	770	0	0	0	0
2 Johnson Road/Pacific Hwy Intersection (part)	258	0	0	0	0	0	0	0	0	0	0	258
3 Tonkiss Street Roundabout	1537	0	1537	0	0	0	0	0	0	0	0	0
4 Distributor Road	646	0	0	0	646	0	0	0	0	0	0	0
5 Cycleway - Tonkiss to Gavenlock	120	0	0	0	0	0	0	0	0	0	0	120
6 Land for Distributor Road	50	0	0	0	0	0	0	50	0	0	0	0
Total Expenditure	3382	0	1537	0	646	0	0	820	0	0	0	378
Income ($ x 1000)												
Developer Contributions Under This Plan	2029	0	203	203	203	203	203	203	203	203	203	203
Council Contribution Required	65	0	0	0	0	0	0	0	0	0	0	65
Other Income (interest/grants etc.)	1291	0	0	0	0	0	0	0	0	0	0	1291
Contributions on Hand (incl. old funds)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents	0	0	0	0	0	0	0	0	0	0	0	0
Total Income	3384	0	203	203	203	203	203	203	203	203	203	1559
Contribution Cash Flow		0	-1334	-1132	-1575	-1372	-1169	-1787	-1584	-1381	-1178	2
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-1334	-1132	-1575	-1372	-1169	-1787	-1584	-1381	-1178	2

Contribution Rate ('000s)	38.38
Current/Approved ha (if applic)	0
Remaining ha	52.86
Total Scheme ha	52.86

Table R2 Schedule of Works: Roads & Intersections - Watanobbi

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	86	173	259	345	432	518	604	690	777	863
Works Expenditure												
Roundabout and lead-in road	1275	0	1275	0	0	0	0	0	0	0	0	0
Total Expenditure	1275	0	1275	0	0	0	0	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan	1046	0	105	105	105	105	105	105	105	105	105	105
Council Contribution Required	224	0	0	0	0	0	0	0	0	0	0	224
Other Income (interest/grants etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents	0	0	0	0	0	0	0	0	0	0	0	0
Total Income	1270	0	105	105	105	105	105	105	105	105	105	329
Contribution Cash Flow		0	-1170	-1066	-961	-857	-752	-647	-543	-438	-334	-5
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-1170	-1066	-961	-857	-752	-647	-543	-438	-334	-5

Contribution Rate ('000s)	1.212
Current/Approved DU (if applic)	0
Remaining DU	863
Total Scheme DU	863

Table R3 Schedule of Works: Roads & Intersections - West Wyong

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	29	57	86	114	143	172	200	229	257	286
Works Expenditure (June 1992 Costs indexed to December 2001)												
De L'Isle Drive	977	0	977	0	0	0	0	0	0	0	0	0
Roundabout	623	0	0	0	623	0	0	0	0	0	0	0
Land	98	0	0	0	98	0	0	0	0	0	0	0
Total Expenditure	1698	0	977	0	721	0	0	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan	1698	0	170	170	170	170	170	170	170	170	170	170
Council Contribution Required	0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents	0	0	0	0	0	0	0	0	0	0	0	0
Total Income		0	170	170	170	170	170	170	170	170	170	170
Contribution Cash Flow		0	-807	-637	-1188	-1019	-849	-679	-509	-340	-170	0
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-807	-637	-1188	-1019	-849	-679	-509	-340	-170	0

Contribution Rate ('000s)	5.936
Current/Approved DU (if applic)	0
Remaining DU	286
Total Scheme DU	286

Table R4 Schedule of Works: Roads & Intersections - Hue Hue Road

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	16	31	47	62	78	93	109	124	140	155
Works Expenditure (June 1992 costs)												
St Johns Road Intersection	237	0	0	0	0	0	237	0	0	0	0	0
Holloway Drive Intersection	276	0	276	0	0	0	0	0	0	0	0	0
Sandra Street	170	0	0	170	0	0	0	0	0	0	0	0
Total Expenditure	683	0	276	170	0	0	237	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan	683	0	68	68	68	68	68	68	68	68	68	68
Council Contribution Required	0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents	0	0	0	0	0	0	0	0	0	0	0	0
Total Income	683	0	68	68	68	68	68	68	68	68	68	68
Contribution Cash Flow		0	-208	-309	-241	-173	-341	-273	-205	-137	-68	0
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-208	-309	-241	-173	-341	-273	-205	-137	-68	0

Contribution Rate ('000s)	4.405
Current/Approved DU (if applic)	0
Remaining DU	155
Total Scheme DU	155

Table R5 Schedule of Works: Roads & Intersections - Leewood Close

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	2	3	5	6	8	10	11	13	14	16
Works Expenditure (June 1992 costs)												
Construction of Leewood Close	88	0	0	0	0	0	88	0	0	0	0	0
Total Expenditure	88	0	0	0	0	0	88	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan	88	0	9	9	9	9	9	9	9	9	9	9
Council Contribution Required		0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)		0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)		0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents		0	0	0	0	0	0	0	0	0	0	0
Total Income		0	9	9	9	9	9	9	9	9	9	9
Contribution Cash Flow		0	9	18	26	35	-44	-35	-26	-18	-9	0
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	9	18	26	35	-44	-35	-26	-18	-9	0

Contribution Rate ('000s)	5.505
Current/Approved DU (if applic)	0
Remaining DU	16
Total Scheme DU	16

Table R6 Schedule of Works: Roads & Intersections - Mardi South

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	25	49	74	98	123	148	172	197	221	246
Works Expenditure												
"T" Intersection - Pacific Highway	193	0	0	0	193	0	0	0	0	0	0	0
Total Expenditure	193	0	0	0	193	0	0	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan		0	19	19	19	19	19	19	19	19	19	19
Council Contribution Required		0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)		0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)		0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents		0	0	0	0	0	0	0	0	0	0	0
Total Income		0	19	19	19	19	19	19	19	19	19	19
Contribution Cash Flow		0	19	39	-135	-116	-96	-77	-58	-39	-19	0
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	19	39	-135	-116	-96	-77	-58	-39	-19	0

Contribution Rate ('000s)	0.783
Current/Approved DU (if applic)	0
Remaining DU	246
Total Scheme DU	246

Table R6 Schedule of Works: Roads & Intersections - Wyong Road / Bryant Drive

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	4	8	11	15	19	23	26	30	34	38
Works Expenditure												
Wyong Rd/Bryant Dr RAB	430	0	430	0	0	0	0	0	0	0	0	0
Left Turn slip lane	421	0	421	0	0	0	0	0	0	0	0	0
Total Expenditure	851	0	851	0	0	0	0	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan	180	0	18	18	18	18	18	18	18	18	18	18
Council Contribution Required	0	0	0	0	0	0	0	0	0	0	0	0
Tuggerah Business Park	338	0	338	0	0	0	0	0	0	0	0	0
Supa Centa	127	0	127	0	0	0	0	0	0	0	0	0
Westfields	206	0	206	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)	0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents	0	0	0	0	0	0	0	0	0	0	0	0
Total Income	851	0	689	18	18	18	18	18	18	18	18	18
Contribution Cash Flow		0	-162	-144	-126	-108	-90	-72	-54	-36	-18	0
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-162	-144	-126	-108	-90	-72	-54	-36	-18	0

Contribution Rate ('000s)	4.76
Current/Approved NDA (if applic)	0
Remaining NDA	37.8
Total Scheme NDA	37.8

Table R6 Schedule of Works: Roads & Intersections - Tuggerah Industrial Area Stage 3

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	5	10	16	21	26	31	37	42	47	52
Works Expenditure												
Half Road Construction of Bryant Dr	147	0	147	0	0	0	0	0	0	0	0	0
Construction of Lake Rd & Part of Church Rd & Mooramba Ave	2100		210	210	210	210	210	210	210	210	210	210
Total Expenditure	2247	0	357	210	210	210	210	210	210	210	210	210
Income ($ x 1000)												
Developer Contributions Under This Plan	2248	0	225	225	225	225	225	225	225	225	225	225
Council Contribution Required		0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)		0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)		0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents		0	0	0	0	0	0	0	0	0	0	0
Total Income	2248	0	225	225	225	225	225	225	225	225	225	225
Contribution Cash Flow		0	-132	-117	-103	-88	-73	-58	-44	-29	-14	1
Council Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-132	-117	-103	-88	-73	-58	-44	-29	-14	1

Contribution Rate ('000s)	43.065
Current/Approved NDA (if applic)	0
Remaining NDA	52.19
Total Scheme NDA	52.19

Table C1A Schedule of Works: Community Facilities – Mardi

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000)										
				0	10	20	30	40	51	61	71	81	91	101
Works Expenditure (1992 costs indexed to Nov 1999)														
Community Centre Floorspace	196	2.793	547	0	0	0	547	0	0	0	0	0	0	0
Total Expenditure			547	0	0	0	547	0	0	0	0	0	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			254	0	25	25	25	25	25	25	25	25	25	25
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			137	0	137	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			157	0	157	0	0	0	0	0	0	0	0	0
Total Income			548	0	319	25	25	25	25	25	25	25	25	25
Contribution Cash Flow				0	319	345	-177	-152	-126	-101	-76	-50	-25	1
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	319	345	-177	-152	-126	-101	-76	-50	-25	1

Contribution Rate ('000s)	2.516
Current/Approved DU (if applic)	1003
Remaining DU	101
Total Scheme DU	1104

Table C1B Schedule of Works: Community Facilities Land - Mardi

Item	Area (m^2)	Rate (x 1000)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000)										
				0	0	1	1	1	2	2	2	3	3	3
Works Expenditure														
Community Facilities Land	5.635	20	113	0	0	0	0	0	113	0	0	0	0	0
Total Expenditure			113	0	0	0	0	0	113	0	0	0	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			11	0	1	1	1	1	1	1	1	1	1	1
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			87	0	87	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			15	0	15	0	0	0	0	0	0	0	0	0
Total Income			113	0	103	1	1	1	1	1	1	1	1	1
Contribution Cash Flow				0	103	104	105	107	-5	-4	-3	-2	-1	1
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	103	104	105	107	-5	-4	-3	-2	-1	1

Contribution Rate ('000s)	3.525
Current/Approved NDA(if applic)	49.66
Remaining NDA	3.2
Total Scheme NDA	52.86

Table C2A Schedule of Works: Community Facilities Works - Watanobbi & West Wyong

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	29	57	86	114	143	172	200	229	257	286
Works Expenditure (June 1992 costs)														
Community Centre Floorspace	344	2.793	961	0	0	0	961	0	0	0	0	0	0	0
Total Expenditure			961	0	0	0	961	0	0	0	0	0	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			719	0	72	72	72	72	72	72	72	72	72	72
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			4	0	4	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			239	0	239	0	0	0	0	0	0	0	0	0
Total Income			962	0	315	72	72	72	72	72	72	72	72	72
Contribution Cash Flow				0	315	387	-502	-430	-358	-286	-214	-143	-71	1
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	315	387	-502	-430	-358	-286	-214	-143	-71	1

Contribution Rate ('000s)	2.514
Current/Approved DU (if applic)	1052
Remaining DU	286
Total Scheme DU	1338

Table C2B Schedule of Works: Community Facilities Land - Watanobbi & West Wyong

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	29	57	86	114	143	172	200	229	257	286
Works Expenditure														
Community Facilities Land	5.106	20	102	0	0	0	0	0	0	0	0	0	102	0
Total Expenditure			102	0	0	0	0	0	0	0	0	0	102	0
Income ($ x 1000)														
Developer Contributions Under This Plan			32	0	3	3	3	3	3	3	3	3	3	3
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			52	0	52	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			18	0	18	0	0	0	0	0	0	0	0	0
Total Income			102	0	73	3	3	3	3	3	3	3	3	3
Contribution Cash Flow				0	73	76	80	83	86	89	92	96	-3	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	73	76	80	83	86	89	92	96	-3	0

Contribution Rate ('000s)	0.112
Current/Approved DU (if applic)	1052
Remaining DU	286
Total Scheme DU	1338

Table C3A Schedule of Works: Community Facilities Works - Remainder of District

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	16	33	49	66	82	98	115	131	148	164
Works Expenditure														
Community Centre Floorspace	224	2.793	626	0	0	0	0	0	0	0	0	0	0	626
Total Expenditure			626	0	0	0	0	0	0	0	0	0	0	626
Income ($ x 1000)														
Developer Contributions Under This Plan			412	0	41	41	41	41	41	41	41	41	41	41
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			177	0	177	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			37	0	37	0	0	0	0	0	0	0	0	0
Total Income			626	0	255	41	41	41	41	41	41	41	41	41
Contribution Cash Flow				0	255	296	338	379	420	461	503	544	585	1
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	255	296	338	379	420	461	503	544	585	1

Contribution Rate ('000s)	2.514
Current/Approved DU (if applic)	0
Remaining DU	164
Total Scheme DU	164

Table C3B Schedule of Works: Community Facilities Land - Remainder of District

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	16	33	49	66	82	98	115	131	148	164
Works Expenditure														
Community Facilities Land	1.096	180	197	0	0	0	0	0	0	0	0	0	0	138
Total Expenditure			197	0	0	0	0	0	0	0	0	0	0	138
Income ($ x 1000)														
Developer Contributions Under This Plan			165	0	17	17	17	17	17	17	17	17	17	17
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			20	0	20	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			12	0	12	0	0	0	0	0	0	0	0	0
Total Income			197	0	49	17	17	17	17	17	17	17	17	17
Contribution Cash Flow				0	49	65	82	98	115	131	148	164	181	59
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	49	65	82	98	115	131	148	164	181	59

Contribution Rate ('000s)	1.008
Current/Approved DU (if applic)	0
Remaining DU	164
Total Scheme DU	164

Table S1A Schedule of Works: Open Space Works - Mardi URA

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	110	221	331	442	552	662	773	883	994	1104
Works Expenditure														
Small Park (P1)	6000	0.011	66	0	0	66	0	0	0	0	0	0	0	0
Small Park (P3)	6000	0.01075	66	0	0	0	66	0	0	0	0	0	0	0
Small Park (P6)	6000	0.01075	66	0	0	0	66	0	0	0	0	0	0	0
Large Park (P2)	12000	0.005	61	0	0	0	0	61	0	0	0	0	0	0
Large Park (P4)	16000	0.001	18	0	0	0	0	18	0	0	0	0	0	0
Large Park (P7) - Playground			26	0	0	0	0	0	0	0	0	0	0	26
Large Park (P7) - Kickaround Area			41	0	0	0	0	0	0	0	0	0	0	41
Semi-natural (P5)	18000	0.0011	20	0	0	0	0	0	0	0	0	0	20	0
Courts	4207	0.103	476	0	0	0	0	0	0	0	0	0	0	476
Fields	23388	0.034	798	0	0	0	0	0	0	0	0	0	0	798
Total Expenditure			**1636**	0	0	66	132	79	0	0	0	0	20	1340
Income ($ x 1000)														
Developer Contributions Under This Plan			1637	0	164	164	164	164	164	164	164	164	164	164
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			**1637**	0	164	164	164	164	164	164	164	164	164	164
Contribution Cash Flow				0	164	261	293	378	542	705	869	1033	1177	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	164	261	293	378	542	705	869	1033	1177	0

Contribution Rate ('000s)	1.483
Current/Approved DU (if applic)	0
Remaining DU	1104
Total Scheme DU	1104

Table S1B Schedule of Works: Open Space Land - Mardi URA

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (Ha) ($ x 1000) 0	5	11	16	21	26	32	37	42	48	53
Works Expenditure														
Small Park (P1)	6000		15	0	0	0	0	0	0	15	0	0	0	0
Small Park (P3)	6000		22	0	0	0	0	0	22	0	0	0	0	0
Small Park (P6)	6000		52	0	52	0	0	0	0	0	0	0	0	0
Large Park (P2)	12000		26	0	0	0	0	0	26	0	0	0	0	0
Large Park (P4)	16000		15	0	0	0	15	0	0	0	0	0	0	0
Semi-Natural (P5)	18000		339	0	0	0	0	0	0	0	339	0	0	0
Total Expenditure			469	0	52	0	15	0	48	15	339	0	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			469	0	47	47	47	47	47	47	47	47	47	47
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			469	0	47	47	47	47	47	47	47	47	47	47
Contribution Cash Flow				0	-5	42	74	121	120	151	-141	-94	-47	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	-5	42	74	121	120	151	-141	-94	-47	0

Contribution Rate ('000s)	8.8725
Current/Approved ha (if applic)	0
Remaining ha	52.86
Total Scheme ha	52.86

Table S2A Schedule of Works: Open Space Works - Mardi South

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	25	49	74	98	123	148	172	197	221	246
Works Expenditure														
Small Park			56	0	0	0	0	56	0	0	0	0	0	0
Large Park			61	0	0	0	0	0	0	0	0	61	0	0
Courts			49	0	0	0	0	0	0	0	0	0	0	49
Sports Fields			156	0	0	0	0	0	0	0	0	0	0	156
Total Expenditure			321	0	0	0	0	56	0	0	0	61	0	205
Income ($ x 1000)														
Developer Contributions Under This Plan			321	0	32	32	32	32	32	32	32	32	32	32
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			321	0	32	32	32	32	32	32	32	32	32	32
Contribution Cash Flow				0	32	64	96	73	105	137	169	140	173	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	32	64	96	73	105	137	169	140	173	0

Contribution Rate ('000s)	1.306
Current/Approved DU (if applic)	0
Remaining DU	246
Total Scheme DU	246

Table S2B Schedule of Works:Open Space Land - Mardi South

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	25	49	74	98	123	148	172	197	221	246
Works Expenditure (June 1992 costs)														
Small Park	5000	0.02	100	0	0	0	0	100	0	0	0	0	0	0
Large Park	11548	0.02	231	0	0	0	0	0	0	0	0	231	0	0
Total Expenditure			331	0	0	0	0	100	0	0	0	231	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			331	0	33	33	33	33	33	33	33	33	33	33
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			331	0	33	33	33	33	33	33	33	33	33	33
Contribution Cash Flow				0	33	66	99	32	65	99	132	-66	-33	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	33	66	99	32	65	99	132	-66	-33	0

Contribution Rate ('000s)	1.345
Current/Approved DU (if applic)	0
Remaining DU	246
Total Scheme DU	246

Table S3A Schedule of Works: Open Space Works – Watanobbi

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	87	173	260	347	434	520	607	694	780	867
Works Expenditure														
Small Park	2000	0.0094	19	0	0	0	19	0	0	0	0	0	0	0
Small Park	4400	0.0068	30	0	0	0	0	0	30	0	0	0	0	0
Small Park	4400	0.0125	55	0	0	0	0	0	0	0	0	0	55	0
Large Park	15400	0.0019	29	0	0	0	0	29	0	0	0	0	0	0
Large Park	18400	0.0069	127	0	0	0	0	0	0	0	0	0	127	0
Sports Fields	23560	0.0124	292	0	0	0	0	0	0	0	0	0	0	292
Total Expenditure			552	0	0	0	19	29	30	0	0	0	182	292
Income ($ x 1000)														
Developer Contributions Under This Plan			553	0	55	55	55	55	55	55	55	55	55	55
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			553	0	55	55	55	55	55	55	55	55	55	55
Contribution Cash Flow				0	55	111	147	173	199	254	309	365	238	1
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	55	111	147	173	199	254	309	365	238	1

Contribution Rate ('000s)	0.638
Current/Approved DU (if applic)	0
Remaining DU	867
Total Scheme DU	867

Table S3B Schedule of Works: Open Space Land - Watanobbi

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	87	173	260	347	434	520	607	694	780	867
Works Expenditure														
Small Parks	10800	0.02	216	0	0	0	128	0	0	0	0	88	0	0
Large Parks	33800	0.02	676	0	0	0	0	308	0	0	0	0	368	0
Total Expenditure			892	0	0	0	128	308	0	0	0	88	368	0
Income ($ x 1000)														
Developer Contributions Under This Plan			892	0	89	89	89	89	89	89	89	89	89	89
Council Contribution Required				0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)				0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)				0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents				0	0	0	0	0	0	0	0	0	0	0
Total Income			892	0	89	89	89	89	89	89	89	89	89	89
Contribution Cash Flow				0	89	178	140	-79	10	99	189	190	-89	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	89	178	140	-79	10	99	189	190	-89	0

Contribution Rate ('000s)	1.029
Current/Approved DU (if applic)	0
Remaining DU	867
Total Scheme DU	867

Table S4A Schedule of Works: Open Space Works - West Wyong

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	29	57	86	114	143	172	200	229	257	286
Works Expenditure														
Small Park	5200	0.02482	129	0	0	0	129	0	0	0	0	0	0	0
Large Park	7800	0.02482	194	0	0	0	0	0	0	0	0	194	0	0
Sports Fields	6500	0.03413	222	0	0	0	0	0	0	0	0	0	0	222
Total Expenditure			545	0	0	0	129	0	0	0	0	194	0	222
Income ($ x 1000)														
Developer Contributions Under This Plan			543	0	54	54	54	54	54	54	54	54	54	54
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			543	0	54	54	54	54	54	54	54	54	54	54
Contribution Cash Flow				0	54	109	34	88	142	196	251	111	166	-2
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	54	109	34	88	142	196	251	111	166	-2

Contribution Rate ('000s)	1.897
Current/Approved DU (if applic)	0
Remaining DU	286
Total Scheme DU	286

Table S4B Schedule of Works: Open Space Land - West Wyong

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	29	57	86	114	143	172	200	229	257	286
Works Expenditure														
Small Park	16500	0.02	330	0	0	165	0	165	0	0	0	0	0	0
Large Park	6000	0.02	120	0	0	0	0	0	0	120	0	0	0	0
Total Expenditure			450	0	0	165	0	165	0	120	0	0	0	0
Income ($ x 1000)														
Developer Contributions Under This Plan			450	0	45	45	45	45	45	45	45	45	45	45
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			450	0	45	45	45	45	45	45	45	45	45	45
Contribution Cash Flow				0	45	-75	-30	-150	-105	-180	-135	-90	-45	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	45	-75	-30	-150	-105	-180	-135	-90	-45	0

Contribution Rate ('000s)	1.573
Current/Approved DU (if applic)	0
Remaining DU	286
Total Scheme DU	286

Table S5 Schedule of Works:Open Space Works - Remainder of District

Item	Area (m^2)	Rate ($ x 1000 $/sq m)	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	16	33	49	66	82	98	115	131	148	164
Works Expenditure														
Courts	600	0.10342	62	0	0	0	0	0	0	0	0	0	62	0
Parks, Fields and Cycleways	8800	0.03415	301	0	0	301	0	0	0	0	0	0	0	0
Semi-natural	2300	0.01034	24	0	0	0	0	0	0	0	0	0	0	24
Total Expenditure			386	0	0	301	0	0	0	0	0	0	62	24
Income ($ x 1000)														
Developer Contributions Under This Plan			385	0	38	38	38	38	38	38	38	38	38	38
Council Contribution Required			0	0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)			0	0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents			0	0	0	0	0	0	0	0	0	0	0	0
Total Income			385	0	38	38	38	38	38	38	38	38	38	38
Contribution Cash Flow				0	38	-224	-185	-147	-108	-70	-31	7	-16	-2
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	38	-224	-185	-147	-108	-70	-31	7	-16	-2

Contribution Rate ('000s)	2.345
Current/Approved DU (if applic)	0
Remaining DU	164
Total Scheme DU	164

Table D1 Schedule of Works: Drainage - Mardi Creek

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000) 0	16	32	47	63	79	95	110	126	142	158
Works Expenditure												
Tonkiss Street Culverts (Old Abattoirs Site)	235	0	0	0	0	0	0	0	0	0	0	0
Open Channel (Tonkiss-Gavenlock)	423	0	0	0	0	0	0	0	0	0	0	0
Culverts & Utility Adjustments - Gavenlock Rd	557	0	0	0	0	0	0	0	0	0	0	0
Open Channel (Gavenlock-Pacific Hwy)	910	0	0	0	0	0	0	0	0	0	0	0
Culverts at Pacific Hwy & Railway Line	374	0	0	0	0	0	0	0	0	0	0	0
Open Channel (Railway-Meridian Channel)	229	0	0	0	0	0	0	0	0	0	0	0
Meridian Channel	229	0	0	0	0	0	0	0	0	0	0	0
Southern Channel	557	0	0	0	0	0	0	0	0	0	0	0
Land Acquisition	13	0	0	0	13	0	0	0	0	0	0	0
Basin at F3 Freeway	694	0	0	0	0	0	0	0	0	0	0	694
Specialist Design & Study Costs	85	0	0	0	0	0	0	85	0	0	0	0
Additional culvert works - highway and r'way	937	0	0	0	0	0	0	0	0	0	0	937
Total Expenditure	5246	0	0	0	13	0	0	85	0	0	0	1632
Income ($ x 1000)												
Developer Contributions Under This Plan		0	430	430	430	430	430	430	430	430	430	430
Council Contribution Required		0	0	0	0	0	0	0	0	0	910	397
Other Income (interest/grants etc.)		0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)		45	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents		0	0	0	0	0	0	0	0	0	0	0
Total Income		45	430	430	430	430	430	430	430	430	1340	827
Contribution Cash Flow		45	475	904	1321	1751	2180	2524	2954	3383	4723	3918
Council Bankrolling		-45	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		-45	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	475	904	1321	1751	2180	2524	2954	3383	4723	3918

Contribution Rate ('000s)	27.2235	ave	multiple
Current/Approved ha (if applic)	0		catchments
Remaining ha	157.8		
Total Scheme ha	157.8		

Table P1 Schedule of Works: Planning Studies - Mardi URA

Item	Est Cost ($ x 1000)	Forecast Development (DU) ($ x 1000)										
		0	0	1	1	1	2	2	2	3	3	3
Works Expenditure (June 1992 estimates)												
Traffic Study	11	11	0	0	0	0	0	0	0	0	0	0
Urban Capability Study	6	6	0	0	0	0	0	0	0	0	0	0
Roadworks Design & Costing	7	7	0	0	0	0	0	0	0	0	0	0
Aesthetics	8	8	0	0	0	0	0	0	0	0	0	0
Land Valuations	5	0	5	0	0	0	0	0	0	0	0	0
Total Expenditure	37	32	5	0	0	0	0	0	0	0	0	0
Income ($ x 1000)												
Developer Contributions Under This Plan		0	0	0	0	0	0	0	0	0	0	0
Council Contribution Required		0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)		0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)		0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents		0	0	0	0	0	0	0	0	0	0	0
Total Income		0	0	0	0	0	0	0	0	0	0	0
Contribution Cash Flow		-32	-37	-37	-36	-36	-36	-36	-35	-35	-35	-35
Council Bankrolling		32	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling		0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling		32	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance		0	-37	-37	-36	-36	-36	-36	-35	-35	-35	-35

Contribution Rate ('000s)	0.757
Current/Approved ha (if applic)	49.66
Remaining ha	3.2
Total Scheme ha	52.86

Table P1 Schedule of Works: Drainage Tuggerah Stage 3

Item			Est Cost ($ x 1000)	Forecast Development (Ha) ($ x 1000) 0	2	4	6	8	10	12	14	16	18	19
Works Expenditure														
Land	2.3052	231	533	0	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53
Works			888		89	89	89	89	89	89	89	89	89	89
Total Expenditure			1421	0	142	142	142	142	142	142	142	142	142	142
Income ($ x 1000)														
Developer Contributions Under This Plan			1421	0	142	142	142	142	142	142	142	142	142	142
Council Contribution Required				0	0	0	0	0	0	0	0	0	0	0
Other Income (interest/grants etc.)				0	0	0	0	0	0	0	0	0	0	0
Contributions on Hand (incl. old funds)				0	0	0	0	0	0	0	0	0	0	0
Contributions From Existing Consents				0	0	0	0	0	0	0	0	0	0	0
Total Income			1421	0	142	142	142	142	142	142	142	142	142	142
Contribution Cash Flow				0	0	0	0	0	0	0	0	0	0	0
Council Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Developer Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Total Bankrolling				0	0	0	0	0	0	0	0	0	0	0
Adjusted Period Balance				0	0	0	0	0	0	0	0	0	0	0

Contribution Rate ('000s)	73.018
Current/Approved ha (if applic)	0
Remaining ha	19.46
Total Scheme ha	19.46

TECHNICAL REPORT

WYONG CONTRIBUTIONS PLAN

NOVEMBER 2000
REVIEW

Tuggerah Industrial Area Stage 3

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Tuggerah Station Industrial Area Trunk Drainage Works

Comments on the detailed cost estimates provided by Webb, McKeown & Associates Pty Ltd dated October 16 2000.

In general the rates used for calculation purposes would appear to be correct, however several items require mention and perhaps re-evaluation, these include:

1 Geotechnical investigations by Douglas & Partners indicate the presence of groundwater as high as .17m below natural surface level.

Therefore the question must be asked as to whether it would be a viable proposition to "lime stabilise" existing soil, at a cost of $\$5/m^2$ to provide an access track and hard stand area.

2 During wetland construction the process of treating the acid sulphate soils is costed at $\$8.00/m^3$ however, the same (or similar) process during channel construction has been rated at $\$5.00/m^2$. It is recommended that all volumes, depths and the process itself by analysed to confirm that the variance in the rates is appropriate.

3 Structural concrete (32mpa) has been costed at $\$160/m^2$ to supply, place, cure and test. Assuming a slab thickness of 175mm it is recommended that a figure of $\$270/m^3$ for estimating purposes be adopted.

G SINCLAIR
June 27 2001

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* Flooding Engineers Report (November 2000)
* Land Valuation - State Valuation Office (October 2000)

ROADS

Technical Report No 1991:

* Strategic Planning Department.
* Wyong Council (October 2000)

F00-2.
Catchment 2K.

WYONG SHIRE COUNCIL

TUGGERAH STATION INDUSTRIAL AREA
REVISED DRAINAGE CONCEPT DESIGN

OCTOBER 2000

WEBB, McKEOWN & ASSOCIATES PTY. LTD.

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TUGGERAH STATION INDUSTRIAL AREA
REVISED DRAINAGE CONCEPT DESIGN

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APPENDIX E: DETAILED COST ESTIMATES

1. INTRODUCTION

Webb, McKeown & Associates (WM) were commissioned by Wyong Shire Council in May 2000 to carry out further drainage concept investigations associated with the proposed development of land referred to as the Tuggerah Station Industrial Area.

A drainage concept plan for the industrial area was originally devised in 1990 and presented in a report entitled *"Conceptual Report - Tuggerah Industrial Estate - Stage III"* (Reference 1). A study for Tuggerah Business Park Pty Ltd in 1995 (Reference 2) then identified options to upgrade drainage facilities in the area to cater for Ourimbah Creek overflows.

A review of the previous studies was completed in March 2000. The aim was to formalise the drainage strategies into a Section 94 Contributions Plan and thus allow development to proceed in an appropriate manner. The review process established that major trunk drainage works presented some hydraulic problems (and possibly environmental problems) and were not economically viable.

Consideration of a minor drainage scheme incorporating water treatment facilities was recommended, and Wyong Shire Council initiated this study to review the key hydraulic and environmental concerns and formalise drainage strategies in order to:

- provide a trunk drainage system for the industrial properties capable of containing the 20% AEP storm,
- treat runoff from industrial areas by provision of a wetland, or series of wetlands, to retain pollutants in accordance with Council's standard policies,
- prepare concept plans and cost estimates for the proposed drainage works to facilitate the compilation of a Section 94 Contribution Plan,
- ensure that the extent of development does not adversely effect mainstream (Ourimbah Creek to Wyong River) flood levels for the 0.5% and 0.2% AEP flood events.

2. BACKGROUND

2.1 Study Area

The proposed Tuggerah Station Industrial Area (comprising 25 ha of land) is generally bounded by Bryant Drive, Lake Road and Titania Avenue road easement (see Figure 1). A number of residential dwellings and commercial premises are located on the immediate southern side of Lake Road between Bryant Drive and Church Road. The majority of the remaining land within the proposed industrial area is presently undeveloped and predominantly in its natural state. The topography of the land is very flat and low-lying with ground levels generally less than 4.0 mAHD.

Several of the roads shown within the proposed industrial area are currently unformed. These roads include Mooramba Avenue, Titania Avenue, Delamere Avenue and Second Avenue (Figure 1).

Wyong Sewage Treatment Works with its surrounding no development buffer zone occupies a large area of land to the south of the proposed industrial area. An odour buffer zone (Figure 1) also applies to those developable properties adjoining the main STW buffer land. The "Supacenta" commercial development is situated off Bryant Drive, immediately west of the proposed industrial area. The partially developed Tuggerah Business Park is located to the south, on the other side of Wyong Road. An open drain through the Tuggerah Business Park and Supacenta site has been formalised to drain local runoff, and the runoff from the largely undeveloped catchment to the west of the Main Northern Railway Line, and drains into Tuggerah Creek to join Mardi Creek.

The land to the immediate north of Lake Road is presently zoned rural and is undeveloped. A SEPP 14 wetland is located some 200-400 m to the north of the north-eastern extent of the proposed industrial area.

2.2 Flooding

There are a range of possible flood mechanisms which may influence flooding and drainage patterns within the study area. These mechanisms were previously discussed in the "Drainage Concept Review" (Reference 5) and include flooding from:

- local catchment runoff from the developing area and Tuggerah Creek,
- Mardi Creek,
- Wyong River,
- Ourimbah Creek overflows in large events.

2.3 Survey Data

The survey data used to define the existing topography within the study area comprised the following:

1. 1984 PWD spot level survey. The spot level data for the immediate study area (included on Figures 4 and 5) were digitised and supplied by Wyong Shire Council (floods.dxf). A wider coverage was also made available in hard copy form (Council Drawing Nos. 6982/3 and 8118-1).
2. Ground survey data obtained by Wyong Council in July 2000, survey reference No. S2409. These were also supplied in electronic (.dxf) format and a hard copy is included in this report as Appendix A.

The two survey data sets were subsequently combined to provide a unified ground survey model utilising the best available information. Where conflicting information occurred the most recent ground survey was used.

2.4 Soil Testing

The geomorphology of the study area and surrounding floodplain suggested there was a potential high risk of acid sulfate soils being present and a high groundwater table. Council engaged Douglas & Partners Pty Ltd (geotechnical consultants) to undertake soil testing of the area to establish the following:

- soil permeability,
- water table level,
- presence of acid sulfate soils.

A copy of the geotechnical investigations report is included as Appendix B.

Observation of the bore logs revealed that the soil comprises of a dark silty clay topsoil between 0.1 m - 0.15 m thick covering a stiff orange-brown/grey silty clay to the depth of investigations (2.3 m - 2.2 m).

Laboratory testing revealed:

1. Permeability was very low, 0.07 - 0.33 m/day absorption.
2. The water table was between 0.44 m - 0.17 m below ground surface (2.6 to 2.8 mAHD). Council undertook further monitoring of groundwater levels at the same sites and found groundwater to be between 0.65 m - 0.35 m below ground surface (2.4 to 2.6 mAHD).
3. The clay soils exhibited acidity after oxidation, indicating the presence of Potential Acid Sulfate Soils (PASS). There was no Actual Acid Sulfate Soils (AASS) found at the test bore locations.

The effects of and treatments for of Potential Acid Sulfate Soils are discussed further in Section 3.

2.5 Ecological Assessment

In order to better understand the potential environmental impact of the Tuggerah Station development, Wyong Council undertook an ecological assessment of the area in April 2000. The assessment identified and mapped the various types of habitat areas which occur in and around the site and discussed each in terms of habitat value for both flora and fauna.

The ecological assessment indicated several areas, including the recommended options, as appropriate locations for the placement of constructed wetlands. These areas were considered to be of relatively low habitat value but large trees and tree stands should be retained where possible. The report also recommended that drainage flows and nutrient levels into and out of the high value habitat areas, not be significantly increased or deceased to prevent a change in the floristic composition of the areas. A copy of the ecological assessment is included as Appendix C.

3. ACID SULFATE SOILS

3.1 Description

Acid sulfate soil (ASS) is the common name given to sediment and soil containing iron sulfides (principally iron pyrite or iron di-sulfide). The exposure of pyrite in these soils to oxygen by drainage or excavation, leads to the generation of sulfuric acid. If an acid sulfate soil develops to its acidic potential then local vegetation will be scalded or killed, leachate will kill fish and cause destruction of downstream flora. A highly corrosive environment is also created for engineering structures and will destroy local biodiversity.

Potential Acid Sulfate Soil (PASS) - is soil material which is waterlogged and contains oxidisable sulfur compounds, usually ferrous iron di-sulfide that has a field pH of 4 or more but will become acidic when oxidised.

Actual Acid Sulfate Soils (AASS) - is acidic soil material resulting from the oxidation of iron sulfides. The soil material has a pH < 4 when measured in dry season conditions and may be identified by one of the following:

- yellow mottles and coatings of jarosite,
- underlying Potential Acid Sulfate Soils(PASS),
- 0.05% or more water-soluble sulfate.

3.2 Assessment of ASS Presence

The Acid Sulfate Soils Planning or Risk Maps generally show the areas where there are known acid sulfate soils risks. The following geomorphic or site criteria are used to indicate whether acid sulfate soils are likely to be present:

- sediments of recent (Holocene) geological age,
- soil horizons not more that 5 m above high tide level,
- marine or estuarine settings,
- coastal wetlands, waterlogged areas or scalds,
- areas identified in geological descriptions or in maps bearing sulfide minerals.

Where ASS have developed some acidic potential the following indicators will be present:

- drain water or surface pond water with pH less than 4,
- unusually clear or milky green drain water,
- rust-coloured stains and deposits on drain surfaces and in drain water,
- yellow jarosite, a sulfur mineral produced in soil generating acid from iron sulfide, usually seen on drain spoil heaps, and in holes and cracks in the soil,
- soil cores with yellow or red mottling,
- corroded concrete or steel structures (e.g. floodgates, bridge pylons.)

Potential ASS (i.e. those which have not developed acidity) will have the following characteristics:

- waterlogged,
- mid to dark grey, to dark greenish-grey in colour,
- soft, buttery clay or estuarine silty sands,
- they may also give off a rotten egg gas odour (hydrogen sulfide).

In order to better determine if Actual or Potential Acid Sulfate Soils were present in the study area, a geotechnical investigation incorporating soil testing was commissioned by Council (refer Appendix B). The results of the laboratory testing confirmed that Actual and Potential ASS existed at both borehole sites located within the study area.

3.3 Management Measures

A variety of acid sulfate soils exist on the eastern seaboard. Different soils respond to different treatment techniques. Prior to determining the treatment procedure for any particular locality a specialist consultant should be engaged and the distribution of acid sulfate soils and potential acid sulfate soils should be mapped to assist in avoiding environmental damage. Some of the available management options include:

- Avoid land where acid sulfate soils occur.
- Avoid disturbing acid sulfate soils by:
  - allow only shallow soil disturbance so as not to disturb the acid sulfate soil,
  - avoid activities which results in fluctuations of groundwater, in particular the lowering of groundwater,
  - cover acid sulfate soils with clean fill material so as not to disturb the soils,
  - set aside acid sulfate soil areas to as not to disturb them,
  - set aside highest acid sulfate soil areas and disturb only the lowest.
- Prevent the oxidation of sulfide by:
  - stage projects to prevent oxidation,
  - place any excavated sulfide material immediately under water,
  - raise the water table to maintain potential acid sulfate soil in a saturated state,
  - cap the acid sulfate soil material.
- Oxidation of sulfide and neutralising acid as it is produced by:
  - oxidation of sulfide and neutralising using lime, magnesia, dolomite or other agents,
  - neutralising using the buffering capacity of estuarine water,
  - vertical mixing and neutralisation using the buffering capacity of the soil.
- Separate out and treat the sulfuric components.

With due consideration of the study area characteristics, drainage objectives and the above management measures, the following principles were applied to the development of drainage concepts to suit the current circumstances and information available:

- minimise deep excavation for drainage channels, i.e. where practical, channel inverts should follow existing surface gradients with side batters created by filling,

- wetland areas to maintain a suitable depth of water to ensure PASS soils are kept saturated,
- excavated soil material to be treated with lime and thence used as fill for the surrounding development area.

4. APPROACH ADOPTED

4.1 Hydrologic/Hydraulic Modelling

The proposed drainage concepts for detailed investigation were to incorporate minor drainage elements, comprising primarily open channels, as well as facilities for water treatment (wetland basins). The topography of the study area is relatively flat and expansive and as such an unsteady state hydraulic model is preferred over a steady state model in order to adequately simulate the storage characteristics of the floodplain with its attenuation of peak flows. The DRAINS model was considered the most appropriate tool to best meet both the hydrologic and hydraulic requirements of the study and it was therefore adopted.

Hydrology: The total catchment area draining through the proposed development area was sub-divided into significant identifiable parcels of land for contributing runoff to trunk drainage elements. These sub-catchments were apportioned to provide inflows at all relevant locations for the DRAINS model. The DRAINS model layouts developed for two alternative options (refer Section 5.2) are indicated on Figures 2 and 3. It should be noted that for modelling purposes, it is often necessary to place accumulated inflows at the key locations in the hydraulic model, whereas in reality the flows would be distributed more evenly.

The impervious area of the developed sites was considered to be 90% of the total area. Model parameters and rainfall intensities as outlined in Australian Rainfall & Runoff 1987 (ARR87 - Reference 4) were adopted for use in this study. The hydrologic parameters were:

Paved Area Initial Loss	=	2 mm
Grassed Area Initial Loss	=	10 mm
Soil Type	=	4
Moisture Condition	=	4
Times of Concentration:		
Paved areas	=	6 min
Grassed areas	=	6 min
Grassed lag	=	2 min

Hydraulics: The DRAINS model layout was established to reflect the general concept drainage plan for the development area. Local catchment inflows were directed to the head of each channel. The analysis did not allow for overflows from catchments outside the development area to enter the drainage scheme. Roughness values (Manning's 'n' co-efficients) for the main drainage system elements were assumed to be:

Channels	:	0.035
(concrete lined base, short grass banks)		
Pipes	:	0.015

Constructed wetlands were positioned at suitable locations within the proposed drainage scheme. The wetlands were modelled as detention basins with the main outlet control placed at the permanent pond level and with the weir overflow sufficiently elevated to facilitate detention storage in the 100% AEP (1y ARI) event. The analysis assumed the water level in the pond to be at the proposed normal level at the start of the storm and therefore the full detention potential was available. A sensitivity analysis assuming that the wetlands were full to the overflow weir level was also undertaken. As expected, it was found that significantly higher outflows would occur if detention capacity were to be ignored. The consequences of channel overflows are relatively minor as water will be able to drain overland to the surrounding open area. Therefore the drainage was designed assuming that full detention capacity within the wetlands would be available.

4.2 Drainage Concepts

The drainage concepts were developed based on practical considerations of the broad drainage needs for the development area, existing topography, water treatment requirements and the available land space. The trunk drainage channels were developed to accommodate the peak 20% AEP flow. An overall design consideration was the presence of potential acid sulfate soils and the need to ensure that soil disturbance and the risk of acidic runoff or leachate was minimised. It was also necessary to ensure that adequate drainage potential was available for all sites at the extremities of the development area. In this regard, it has been assumed that buildings would occupy a fair portion of the sites to be drained and therefore there would be adequate hydraulic head for most of the site runoff. Minimum surface levels based on hydraulic requirements (refer Diagram 3) were then estimated for a nominal portion of the surface area towards the outer limit of the site.

Wetland basins were sized to accommodate the 1y event with no emphasis given to detention characteristics for larger storm events. As a by-product of the water treatment facility requirements, attenuation of flood peaks would also be achieved for short duration storm events which occur less frequently. From a hydraulic viewpoint, the critical levels for the wetland basins are:

- the overflow weir level which primarily influences the upstream water levels for the minor drainage system and events,
- the top of embankment levels (relative to surrounding ground levels) which influence the passage of overland surface flooding, particularly, for the much larger events.

4.3 Water Treatment Facilities

Concept designs for the water treatment facilities were developed in accordance with the principles and procedures detailed in *"The Constructed Wetlands Manual"* (Reference 6) and *"Managing Urban Stormwater, Treatment Techniques"* (Reference 7). Council has established the following criteria for runoff treatment performance of new development:

Suspended Solids	90% removal
Nutrients	50% removal
Litter	100% >50 mm *
Coarse Sediment	100% >125 mm *
Hydrocarbons	no visible oils or greases *

* retention during flows up to 25% of the 1y ARI flow.

The *"zone sizing"* detailed method was used to determine the actual dimensions for the macrophyte and settlement zones of the wetland. For hydraulic design considerations as well as water quality provisions, it was assumed that a proprietary package treatment facility would be required on each site to remove litter, coarse sediment and hydrocarbons prior to discharge to the wetlands. This involved the provision of a 0.5 m hydraulic head allowance when determining minimum surface levels for drainage purposes.

4.4 Major Flooding

Aside from the need to provide drainage infrastructure for local minor storm events, it is also essential to ensure that provision is made for overland flow paths in much larger flood events. As mentioned in Section 2.2 (having been established in previous investigations) the study area can be affected by overflows (greater than 1% AEP) from Ourimbah Creek passing through to the Wyong floodplain. The previous drainage concept investigation (Reference 5) established a detailed RUBICON hydraulic model of the development area incorporating the surrounding floodplain and analysed the potential hydraulic impacts for the PMF event.

For the purposes of this investigation the intermediate events just greater than the 1% AEP (0.5% AEP and 0.2% AEP - 200y and 500y) were considered to be more appropriate for assessing potential impacts in major flood events. The base models and methodology outlined in Reference 5 were adopted for use in this study with Ourimbah Creek inflows for the relevant flood events obtained from separate investigations by Hyder Consulting Pty Ltd.

Further details of major flooding are discussed in Sections 5.6 and 6.2.

5. DRAINAGE CONCEPT DESIGN DETAILS

5.1 General

It was considered that the major trunk drainage schemes investigated in March 2000 (Reference 5) were not economically or practically viable. The aim of this present study was to reconsider the hydraulic, economic and environmental problems associated with the previous schemes by providing only a minor drainage system for local catchment runoff in the more frequent rainfall events.

5.2 Drainage System Layout

In order to maximise efficient usage of the developable area, channel works and wetland basins were to be located within the sewerage odour buffer zone wherever possible. This design philosophy is intended to ensure that land of lesser value is utilised for the drainage scheme as the odour buffer zone is not suitable for land usage which involves long term occupation by employees or visitors. Two alternative drainage system layouts were developed for detailed consideration.

Option 1 (refer Figure 4): This Option adopts one of the general channel arrangements of the previous investigations with the aim of providing a direct drainage service to the majority of properties while passing right through the development area and ultimately discharging into the existing channel north of Lake Road between Titania Avenue and Church Road. Two (2) larger size wetlands are proposed to retain and treat runoff from the 100% AEP (1 y ARI) storm event. Provision is made in the design concept for flows in excess of the wetland storage capacity to bypass the macrophyte treatment area and be diverted to the downstream channel.

The scheme layout provides two (2) drainage channels (progressively increasing in size) upstream of wetland 1 to service the needs of all properties in the areas of Building Pads 1 and 2. Wetland 1 is located within the odour buffer zone adjacent to Mooramba Road. The main channel then connects wetland 1 to wetland 2 and will follow the natural topography to also service the rear of the properties fronting Lake Road. Secondary channels draining the southern properties of Building Pads 5 and 6 feed in along the way. Wetland 2 is located at the corner of Lake Road and Titania Avenue and discharges into the existing channel draining north of Lake Road.

The two southernmost properties of Building Pad 1 are in common ownership (with development imminent) and it is assumed that there is ample opportunity for this area to drain into the channel placed along the northern boundary to service the smaller lot contained within and fronting Bryant Drive. A small private channel is to be provided by the developer along the southern boundary to facilitate drainage of the tennis academy.

Option 2 (refer Figure 5): The alternative Option 2 drainage scheme was developed with the primary objective of minimising drainage channel requirements so as to minimise land acquisition and disturbance of PASS and hence reduce overall scheme costs. The main differences compared with Option 1 include:

- three (3) main areas contributing to separate wetland basins,
- discharge (treated runoff and high flow bypass) from wetlands 1 and 3 will be directed initially to the south into the open space buffer zone. Water will then drain informally as overland surface flow following the natural drainage paths,
- as there are no constructed channels downstream, invert levels for the wetlands are controlled more by the existing surface levels near the outlet combined with satisfying depth requirements for the macrophyte zone. As a consequence the top of embankment and fill surface levels for the building pads are likely to be higher.

This option is also intended to facilitate independent development of the area in stages. The wetlands have been placed at strategic locations to collect and treat runoff from separate development areas and thus allow the scheme to be constructed in stages corresponding with the needs and timing for development of the different areas.

5.3 Channel Geometry

Sizing of the channel geometry requires consideration of:

- hydraulic performance (waterway area, slope and lining),
- land acquisition costs,
- required flow capacity (contributing catchment area) and downstream controls,
- prevailing topographic conditions,
- potential maintenance issues (sedimentation, erosion and cleaning),
- overall cost.

As a general rule a grass-lined trapezoidal channel is recommended where conditions permit. The existing topography (ground slope) through the study area is very flat with consequent implications for hydraulic capacity and long term maintenance. Where channel gradients are flat, the flow velocities are low which often results in the deposition of silt and sediments providing ideal conditions for the growth of weed vegetation which reduces the hydraulic performance.

For the purposes of establishing the broader drainage requirements for this conceptual study, the general details presented in Table 1 have been adopted for modelling and costing purposes. An overall easement width of 10 m or 20 m is typically assumed for land acquisition purposes. A freeboard allowance of 300 mm above the flow depth for the 20% AEP storm event is also assumed.

Table 1: Channel Geometry Details

Channel Description	Concrete Lined Base Width (m)	Grass Lined Batters	Longitudinal Grade (%)	Average Depth (Inc. Freeboard) (m)
Main	2	1:5	0.2	0.9
Secondary	1	1:5	0.2	0.7

A minimum grade of 0.2% was specified by Council as acceptable and the channels have been designed such that the invert of the channel approximately follows the existing ground level. Embankments will generally need to be constructed to form the channel side batters. The water level attained in the channels is primarily influenced by the water level in each of the wetlands downstream. There would be no real hydraulic advantage in placing the channels at a greater depth, and excavation of the existing ground surface would increase risks associated with disturbance of the acid sulfate soils. Table 2 indicates the existing ground levels and proposed channel inverts at various locations shown on Figures 4 and 5 for Options 1 and 2 respectively.

Table 2: Proposed Channel Invert Details

Reference Location (refer Figures 4 & 5)	Existing Ground Level (mAHD)	Option 1 Invert (mAHD)	Option 2 Invert (mAHD)
A	3.80	3.46	3.76
B	3.35	3.12	3.42
C	3.20	3.00	3.30
D	3.75	3.36	3.66
E	3.25	3.12	3.42
F	2.90	2.76	n/a
G	2.85	2.68	n/a
H	2.90	2.26	n/a
I	2.20	n/a	1.80
J	2.40	2.00	1.91
K	3.00	2.49	2.84
L	2.70	2.63	2.70
M	2.80	2.12	2.05

5.4 Wetlands

As indicated in Section 4.3, Council's design criteria for constructed wetlands is for the removal of 90% annual suspended solids, 50% of the annual nutrient load and 100% of coarse sediments during flows up to 25% of the 1y ARI flows. A sieve grading analysis of the channel sediment would be required to ensure the sediment and suspended solid criteria were properly met. For the purposes of this study it has been assumed that a particle size of 0.05 mm diameter would be

removed within the settlement zone of the wetlands. Areas and volumes established by the detailed *"zone sizing"* calculation method of Reference 6 were also checked using the generic curve method to ensure that the assumptions were reasonable. The percentage catchment area method (recommended for preliminary feasibility assessment in the Constructed Wetlands Manual) suggests a wetland surface area of approximately 2% to 3% of the contributing catchment area. The surface areas obtained from the more detailed calculation methods actually equate to a value of around 7%. While this difference may appear to be significant, the manual does acknowledge the limitations of the percentage method compared with the more scientific basis of the other methods.

Each wetland was designed to incorporate a settlement zone containing a high flow bypass weir, and a macrophyte zone containing a low flow discharge control pit (refer to Diagram 1). The settlement zone would be separated from the macrophyte zone by a permeable baffle to minimise the effects of higher flow velocities damaging the macrophytes or disturbing retained pollutants. Low flows would enter the settlement area then pass through the baffles and be filtered through the macrophytes prior to being discharged. High flows would enter the settlement zone and slowly fill the whole wetland. The overflow weir level arrangement is set above normal water level such that the macrophytes would only be subjected to excessive water depths for relatively short periods of time (typically 1 to 3 days) while water drains through the discharge control pit. Detention over the whole wetland area (incorporating both the settlement and macrophyte zones) was necessary in order to retain the runoff volumes generated in the 100% AEP (1 y ARI) storm events. Separate detention storage within the area set aside for the wetland basins may be possible to achieve with a re-assessment of key design criteria and/or assumptions at the detailed design stage. Such variations are not expected to significantly affect the basic conclusions and outcomes presented in this report.

In establishing the wetland invert and normal water levels, the potential groundwater regime was considered so as to minimise the possible risk of the macrophyte zone drying out and exposing acid sulfate soils. The need to provide for mosquito control (raising and lowering of water levels by 300 mm) was also considered. The key dimensions and controlling levels assumed for each of the wetlands are summarised in Tables 3 and 4. It is envisaged that these figures may be refined by the detailed design process.

Table 3: Wetland Dimensions Required for Water Quality Purposes

Wetland	Option 1					Option 2				
	Settlement Zone			Macrophyte Zone		Settlement Zone			Macrophyte Zone	
	L (m)	W (m)	Area A_s (m^2)	Area A_m (m^2)	Volume (m^3)	L (m)	W (m)	Area A_s (m^2)	Area A_m (m^2)	Volume (m^3)
Wetland 1	58	19	1100	7200	4350	58	19	1100	7200	4350
Wetland 2	70	23	1600	9200	6450	52	17	900	2500	1500
Wetland 3	-	-	-	-	-	45	15	700	2500	1500

Notes: (1) L, W and Area represent the nominal dimensions inside the batters.
(2) The volumes required for water quality treatment in the macrophyte zone represent the difference in level from the basin invert to the normal water level (refer Table 4 and Diagram 2).
(3) Detention storage volume occurs over both the settlement and macrophyte zones up to the high flow weir level.

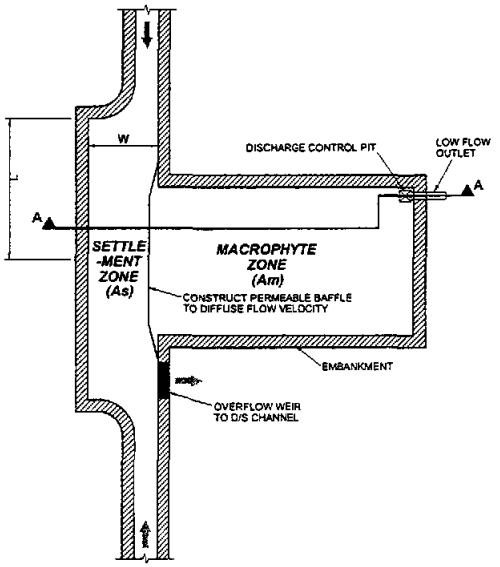


Diagram 1: Wetland 1 - Typical Layout

Table 4: Reduced Levels for Wetlands (mAHD)

Point No.(1)	Description	Option 1		Option 2		
		Wetland 1	Wetland 2	Wetland 1	Wetland 2	Wetland 3
1	High Flow Weir Level	3.8	2.8	4.1	2.7	3.6
2	Top of Embankment Settlement Zone	4.1	3.1	4.4	3.0	3.9
3	Invert Settlement Zone	1.5	0.5	1.8	0.5	1.4
4	Average Invert Macrophyte Zone	2.4	1.3	2.7	1.4	2.3
5	Top of Embankment Macrophyte Zone	4.1	3.1	4.4	3.0	3.9
6	Discharge outlet Level	2.7	1.7	3.0	1.7	2.6
7	Normal Water Level	3.0	2.0	3.3	2.0	2.9
8	Natural Surface (u/s end)	3.3	2.2	3.3	2.2	2.7
	Natural Surface (d/s end)	3.0	2.1	3.0	2.1	2.7

Note: (1) refer Diagram 2 for details of point no. locations

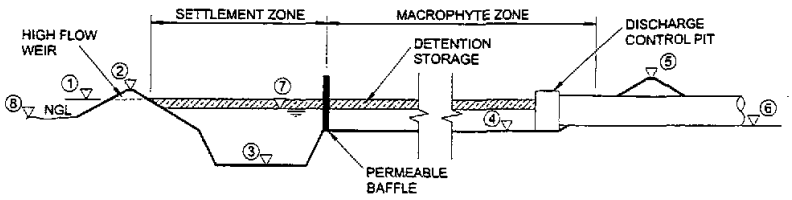


Diagram 2: Typical Wetland Cross-Section AA

5.5 Development Surface Levels

The provision of adequate drainage for the development areas is dependent on the availability of adequate hydraulic head (elevation) at the upstream limit of the area to be drained. In order to achieve this, given the flat nature of the study area, filling of the development sites will be required. Minimum surface levels based on hydraulic considerations are presented on Figures 4 and 5 for Option 1 and Option 2 respectively. The establishment of these levels is based on the following key criteria as shown schematically in Diagram 3:

- the critical 20% AEP water level attained in the channel nearby,
- allowance of 0.5 m hydraulic head requirement for proprietary GPT package systems incorporated into the site drainage systems,
- provision for 300 mm freeboard and/or cover requirements.

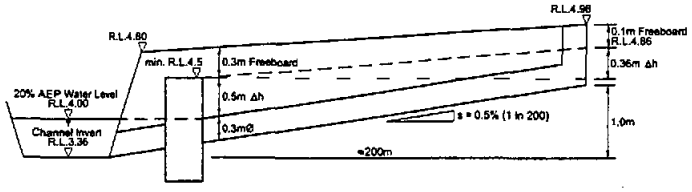


Diagram 3: Typical Hydraulic Considerations for Development Surface Levels

In setting the surface levels around the extremities of the various building pads it has been assumed that a significant proportion of the area will be drained via roof drainage systems with adequate of hydraulic head. Therefore only a nominal head allowance will be required for the critical pits draining smaller surface area portions around the outside edges. The levels shown are therefore the minimum required for hydraulic purposes, and nominally higher levels (up to 200 mm or 300 mm) may be required to satisfy surface grading or other needs. It is difficult to precisely define these details at this feasibility stage as they will ultimately be dependent on the development layout and drainage requirements proposed for the site. Allowances for such nominal increases in surface levels have therefore been incorporated in the hydraulic modelling of the major flood events. Provided these levels are not exceeded to any significant extent then the impacts should be limited to those discussed in Section 6.2.

5.6 Major Flooding

The channel dimensions have been sized to primarily allow for drainage of local runoff in a 20% AEP event. During storms of greater magnitude, the minor drainage system capacity will be exceeded. Stormwater runoff and overland flows from the south will be diverted in a north-easterly direction around the development area. This will particularly be the case if floodwaters from Ourimbah Creek overtop Wyong Road. In such a situation floodwaters entering the study area will need to drain (escape) to the north and east via the road reserves of Mooramba Avenue, Church Road and Titania Avenue. As discussed later in Section 6.2, Ourimbah Creek overflows are not expected to enter this study area for flood events less than the 0.2% AEP (1 in 500 ARI). Filling of the area for development and drainage purposes potentially restricts the through passage of floodwaters in the large to extreme flood events escaping from Ourimbah Creek and flowing through to the Wyong River floodplain. It is therefore essential that provision for overland flow paths be maintained through the developing area. In this regard, Council planning policies require a minimum side setback of 5 m between buildings and boundaries. At least 3 m of these set back areas should be maintained at the existing ground levels and free of any obstructions or landscaping to allow the through passage of floodwaters.

The main natural flow path (and floodplain storage), generally draining in a north-easterly direction from the Wyong Road/Bryant Drive intersection area through to around Lake Road/Titania Avenue, is not directly obstructed by the development building pads. The embankment levels of Wetland 2 and adjoining ground levels along Titania Avenue road reserve are also lower which should enable any significant Ourimbah Creek overflows to pass through.

6. RESULTS

6.1 Minor Trunk Drainage System

The DRAINS model was run for a full range of storm durations (5, 10, 15, 20, 25, 30, 45 mins and 1, 1.5, 2, 3, 4.5, 6, 9, 12, 18, 24 hour) for event frequencies of 100% AEP (1 y ARI) and 20% AEP (5 y ARI). Such a large range was necessary to ensure the critical duration was established for both the upstream channels receiving peak sub-catchment runoff as well as the channel sections downstream of the volume dependent (longer duration) wetlands. The 100% AEP events were used to assess the storage performance of the wetland basins while the general drainage system capacity was determined from the 20% AEP results. Table 5 summarises the critical peak flows obtained from the various development sub-catchments modelled.

Table 5: Peak Sub-Catchment Flows (m^3/s)

Catchment[1]	Area (ha)	20% AEP Flow (m^3/s)	Critical Storm Duration	100% AEP Flow (m^3/s)	Critical Storm Duration
A1	6.2	2.4	25 min	1.4	25 min
A2	6.0	2.4	25 min	1.4	25 min
A3	1.2	0.5	25 min	0.3	25 min
Wetland 1	0.7	0.3	25 min	0.2	25 min
B1	5.8	2.3	25 min	1.3	25 min
C1 (inc. Wet. 2)	4.8	1.8	25 min	1.0	2 hour
Bypass	28.2	3.5	2 hour	1.7	6 hour

Note: (1) The model sub-catchments are indicated on Figure 2 for Option 1 and the sub-catchments for Option 2 are similar (refer Figure 3).

Table 6 summarises the peak flows and water levels attained for each option in the 20% and 100% AEP events. The result locations are indicated on Figures 4 and 5 for Options 1 and 2 respectively.

Table 6: Hydraulic Results

Location	Option 1						Option 2					
	20%			100%			20%			100%		
	Water Level mAHD	Flow m^3/s	Critical Storm Duration	Water Level mAHD	Flow m^3/s	Critical Storm Duration	Water Level mAHD	Flow m^3/s	Critical Storm Duration	Water Level mAHD	Flow m^3/s	Critical Storm Duration
A	4.22	2.4	25 min	4.06	1.4	25 min	4.39	2.3	25 min	4.24	1.4	25 min
B	3.93		12 hour	3.75		12 hour	4.24		12 hour	4.07		12 hour
		2.8	25 min		1.6	25 min		2.8	25 min		1.6	25 min
C	3.92		12 hour	3.75		12 hour	4.24		12 hour	4.07		12 hour
(wetland 1)		5.4 (in)	25 min		3.1 (in)	25 min		5.4 (in)	25 min		3.1 (in)	25 min
		0.3 (out)	12 hour		0.3 (out)	12 hour		0.3 (out)	12 hour		0.3 (out)	12 hour
		1.3 o'flow	12 hour		0.0 o'flow	-		1.5 o'flow	12 hour		0.0 o'flow	-
D	4.00	2.4	25 min	3.86	1.4	25 min	4.30	2.4	25 min	4.16	1.4	25 min
E	3.93		12 hour	3.75		12 hour	4.24		12 hour	4.07		12 hour
		2.4	25 min		1.4	25 min		2.4	25 min		1.4	25 min
F	3.31	1.7	12 hour	2.98	0.3	24 hour	-	-	-	-	-	-
G	3.22	1.7	12 hour	2.85	0.3	24 hour	-	-	-	-	-	-
H	3.00		9 hour	2.80		24 hour	-	-	-	-	-	-
		2.3	25 min		1.3	25 min	-	-	-	-	-	-
I	2.96		9 hour	2.80		24 hour	2.72		9 hour	2.42		9 hour
(wetland 2)		3.9 (in)	25 min		2.2 (in)	2 hour		1.8 (in)	25 min		1.0 (in)	2 hour
		0.4 (out)	12 hour		0.3 (out)	24 hour		0.3 (out)	9 hour		0.1 (out)	9 hour
		1.8 o'flow	12 hour		0.0 o'flow	-		0.1 o'flow	9 hour		0.0 o'flow	-
J	-	-	-	-	-	-	2.72		9 hour	2.42		9 hour
	-	-	-	-	-	-		1.8	25 min		1.0	2 hour
K	-	-	-	-	-	-	3.66		12 hour	3.51		9 hour
	-	-	-	-	-	-		2.2	25 min		1.3	25 min
L	-	-	-	-	-	-	3.66		12 hour	3.51		9 hour
(wetland 3)	-	-	-	-	-	-		2.2 (in)	25 min		1.3 (in)	25 min
	-	-	-	-	-	-		0.3 (out)	12 hour		0.2 (out)	9 hour
	-	-	-	-	-	-		0.5 o'flow	12 hour		0.0 o'flow	-

A schematic of the DRAINS model layout incorporating the results of Tables 5 and 6 is included in Appendix C.

6.2 Major Flooding

Earlier investigations for Ourimbah Creek flooding had suggested that for events greater than the 1% AEP overflows would occur through the study area to the Wyong River floodplain. The previous investigation for the study area (Reference 5) undertook a preliminary assessment of impacts for the extreme PMF scenario and suggested that consideration of intermediate large events (i.e. less than the PMF but just greater than the design 1% case) would be more relevant to assessing potential impacts for large events. The 0.5% and 0.2% AEP events (1 in 200 and 1 in 500 ARI) were therefore selected for this purpose.

In a PMF event, the Ourimbah Creek modelling identified the proportions of total overflows which pass through the Wyong Road bridge opening (for railway overpass and Tuggerah Creek), and that which surcharges the roadway near the Bryant Drive intersection. The recent modelling undertaken for this study (Hyder Consulting) has found that in the 0.5% and 0.2% AEP Ourimbah overflow events, floodwaters only flow through the bridge opening and do not actually surcharge Wyong Road near the Bryant Drive intersection. The subject development area is therefore primarily affected by local runoff with the Ourimbah Creek overflow travelling west of the Supacenta along Tuggerah Creek.

Flood level results for the existing and post development conditions in the 0.5% and 0.2% AEP flood scenarios are present in Table 7.

Table 7: 0.5% and 0.2% AEP Flood Level Results (mAHD)

Location	Gridpoint (1)	0.5% AEP (1 in 200y)		0.2% AEP (1 in 500y)		PMF	
		Existing	Developed	Existing	Developed	Existing	Developed
Tuggerah Creek Channel (300 m south of Lake Road)	GDRN1200	4.9	4.9	5.3	5.3	7.0	7.0
Bryant Drive (300 m south of Lake Road)	GBRY3	4.2	5.1	4.2	5.2	5.5	6.0
Bryant Drive (130 m south of Lake Road)	GBRY4	4.0	5.1	4.1	5.2	5.5	5.9
Church Road (20 m south of Lake Road)	GIND24	3.2	3.2	3.2	3.2	5.1	5.1
Titania Avenue (50 m south of Lake Road)	GIND12	3.2	3.2	3.2	3.2	5.1	5.1

Note: (1) Gridpoint locations are the same as those shown on Figure 4 of Reference 5.

The results indicate that the estimated flood levels in Bryant Drive would be increased significantly. Such a result is to be expected as the adjoining properties to the east are to be filled and the available flow area would effectively become contained within the Bryant Drive road reserve. The provision of side set backs at ground level (refer Section 5.6) is recommended to facilitate overland flow paths to the open areas in the east and minimise impacts. It should also be noted that the developed flood levels are still less than the existing floor level of RL 5.4 mAHD for the Supacenta.

7. DRAINAGE SCHEME COSTS

Construction costs for the various works investigated have been estimated on the basis of unit rates from previous contracts, rates published by Rawlinsons, and information provided by Council. The cost estimate is complete with allowance for Preliminaries (Establishment Charges), Design, Management, Contingencies and land easement acquisition, but excludes compensation costs and similar. The results are summarised in Table 8 with the detailed estimates included in Appendix D.

In developing the cost estimates, the following assumptions have been made:

(4) The estimates for any works or structures are based on reasonable assumptions regarding structural dimensions and the foundation conditions as ascertained from the data available. The ultimate structural form and cost will depend on detailed design considerations.

(5) Unit rates associated with land easement acquisition costs were provided by Council. The rates were shown to vary from $\$5/m^2$ to $\$50/m^2$ depending on the current zoning, usage and potential commercial value. Where no specific information was available, an average rate of around $\$25/m^2$ was applied.

(6) The nett ramifications for overall construction and project management costs associated with the introduction of the Goods and Services Tax (GST) is presently unclear. In order to provide for this aspect the standard rate of 10% has been applied to the overall costs.

Table 8: Estimated Drainage Scheme Costs

Description	Estimated Construction Cost	Land Acquisition	Contingencies, Design and Administration	Provision for GST	Total (nearest $10,000)
Option 1	$800,000	$1,070,000	$176,000	$205,000	**$2,250,000**
Option 2	$598,000	$861,000	$132,000	$159,000	**$1,750,000**

The costs associated with filling the building pads themselves are considered to be a development cost and are therefore not included as part of the drainage scheme. It is important to note however, that the cost of filling can be significant. Assuming a unit rate of $\$20/m^3$ for imported material, the cost can equate to approximately $20 000/ha for every 0.1 m incremental depth of fill. Filling the entire 25ha of development area to a depth of 0.3 m would correspond to $1.5 million.

8. DISCUSSION

Based on the results and assessment of issues presented in this report it would appear that either of the Options investigated would be hydraulically feasible for the provision of minor drainage and water treatment facilities. There are however, several other factors which also need to be considered when determining the optimum solution. These include cost, finished surface levels and potential impacts in larger flood events as well as environmental impacts. A brief summary of the issues is provided below.

Option 2 involves less land acquisition and channel works and the drainage scheme costs are therefore less. The reduced channel works would also require less disturbance of the acid sulfate soils but similarly would require a greater depth of filling with potentially greater impacts in the large events (0.5% to 0.2% AEP or 200 y to 500 y ARI and the PMF) and increased overall costs to development. The informal (uncontrolled) discharge from the Option 2 wetlands would however, be more likely than Option 1 to have some form of impact on the flora/fauna areas and issues identified in the ecological assessment (refer Appendix B). From a practical implementation viewpoint, Option 2 also provides greater flexibility with the staging of construction to suit the timing needs associated with development of the different areas.

Converse to the above, Option 1 would involve greater landtake and disturbance of the acid sulfate soils to provide a single controlled drainage system but with reduced fill level requirements.

It should be emphasised that the main objectives of this investigation were to :

(7) establish the feasibility of a minor trunk drainage system capable of incorporating water treatment facilities,

(8) develop concept details sufficient to ensure a feasible design,

(9) estimate scheme costs to assist with the formulation of a Section 94 Plan.

In this regard, the calculations, results and system dimensions presented in this report are of a preliminary "concept" nature to demonstrate the feasibility of the minor drainage system incorporating water treatment facilities.

Initially it was preferred that separate detention storage be provided to store the 1 y ARI event before release to prevent excessive inundation of the macrophyte zone and possible problems with the nitrification/de-nitrification process. However, preliminary model results indicated that a significant storage volume would be required which would potentially involve doubling the land take with consequent implications for the scheme costs. The wetlands design manual (Reference 6) suggests that detention storage within the macrophyte zone is acceptable. Further refinement of the concept layout and basin details at the detailed design stage could achieve a better detention/wetland arrangement.

It is also envisaged that other elements of these design concepts may be changed or refined with further detailed investigation and/or design, but in broad terms, the drainage schemes and cost estimates presented are considered adequate for the intended purpose.

9. REFERENCES

1. **Conceptual Report - Tuggerah Industrial Estate - Stage III**
1990.

2. Paterson Consultants Pty Ltd
Lake Road, Tuggerah - Review of Drainage Options
Draft, June 1995.

3. Paterson Consultants Pty Ltd
Proposed Closure of Railway Culvert Assessment of Flood Impacts
May 1997.

4. Institution of Engineers, Australia
Australian Rainfall and Runoff
1987.

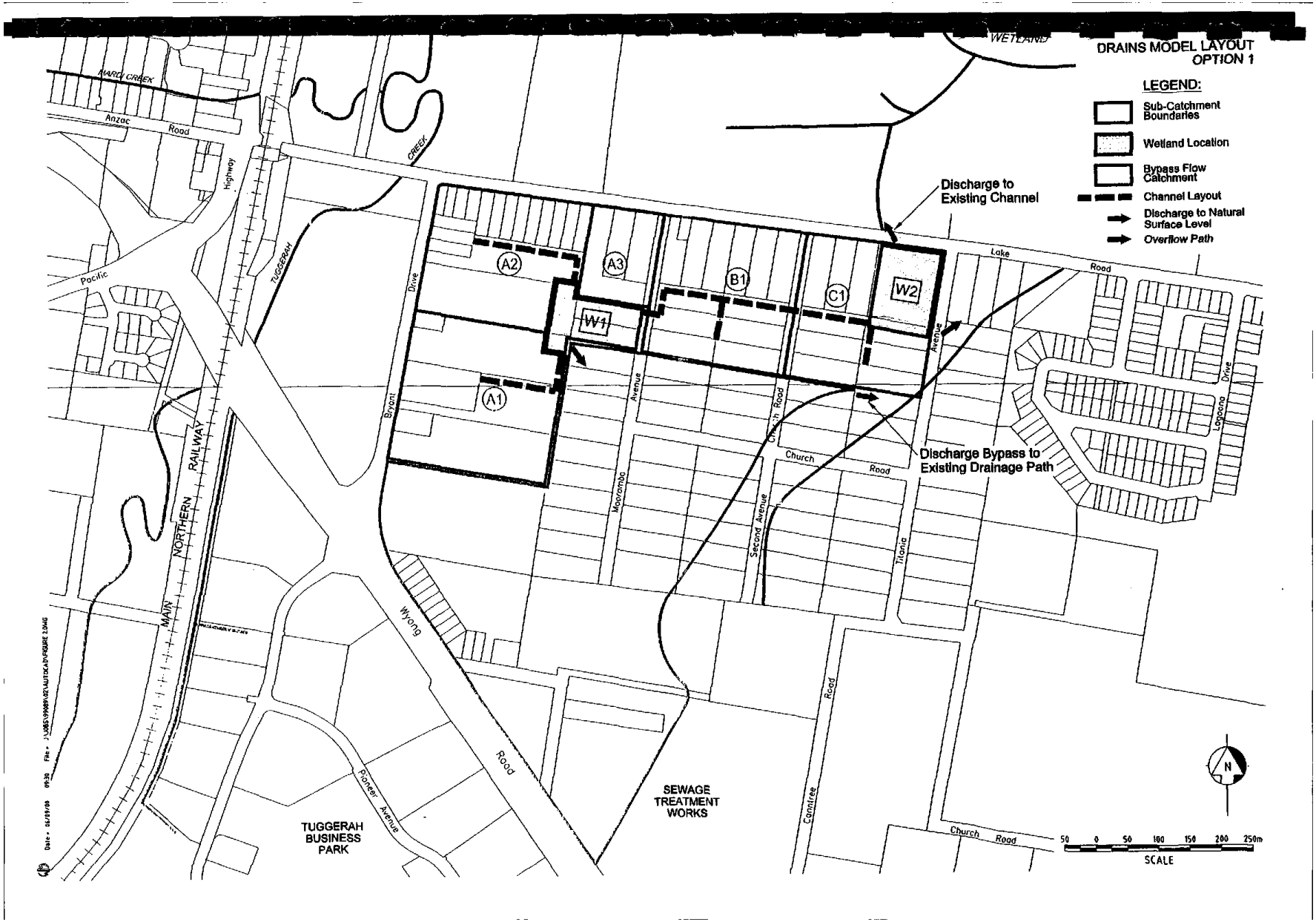
5. Webb, McKeown & Associates Pty Ltd
Tuggerah Station Industrial Area - Drainage Concept Review
March 2000.

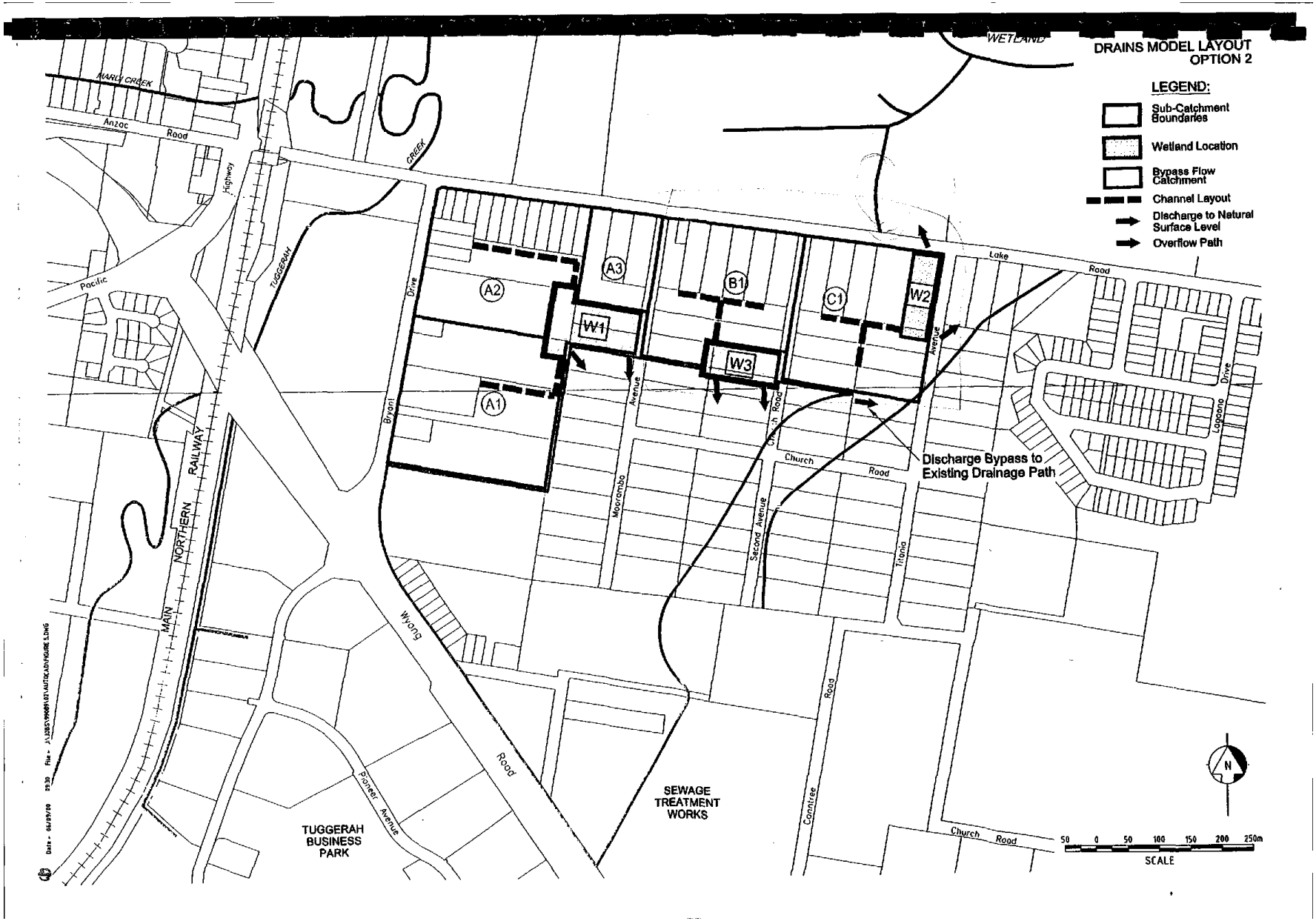
6. Department of Land and Water Conservation, New South Wales
The Constructed Wetland Manual
1998.

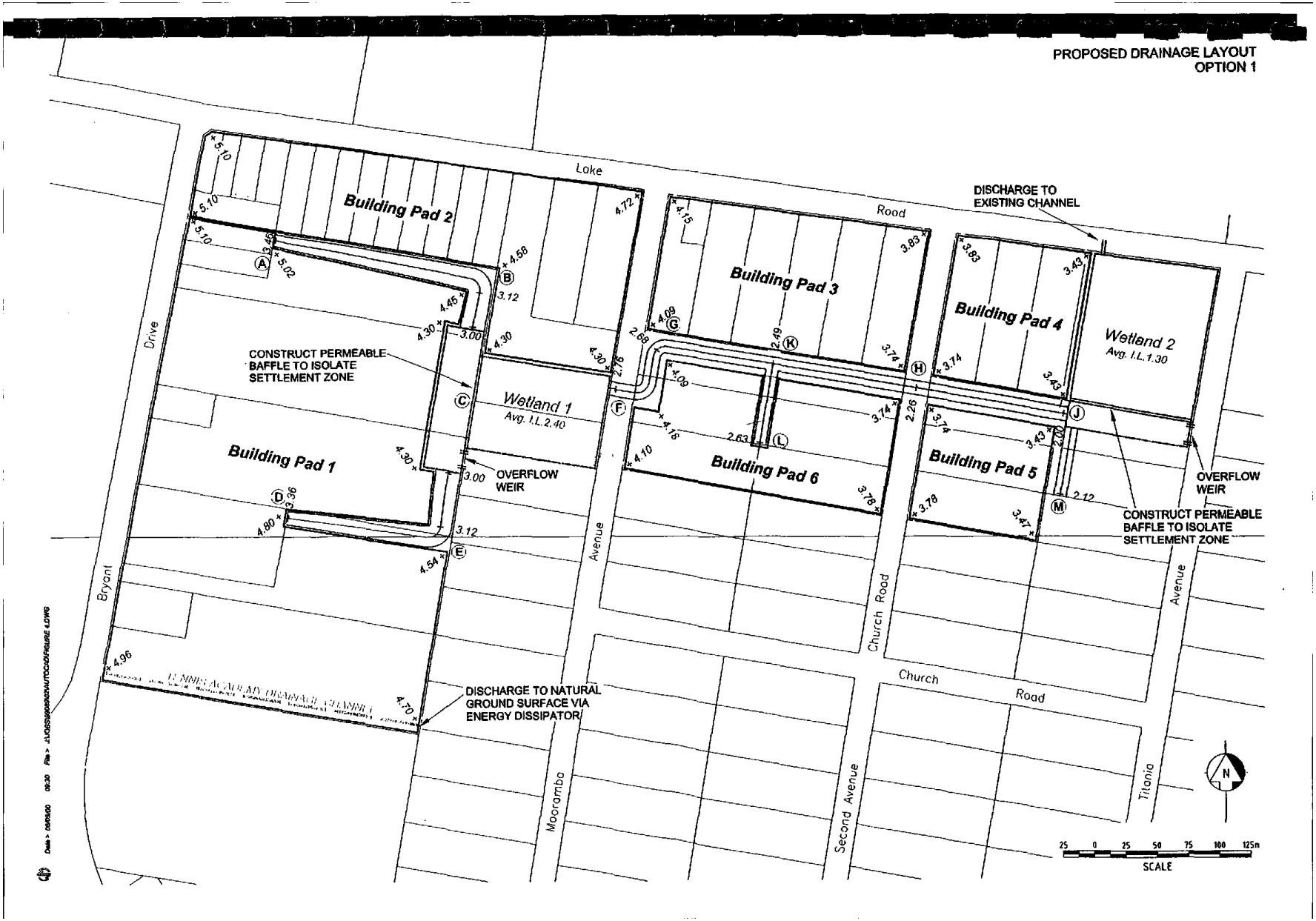
7. Environmental Protection Authority
Managing Urban Stormwater - Treatment Techniques
November 1997.

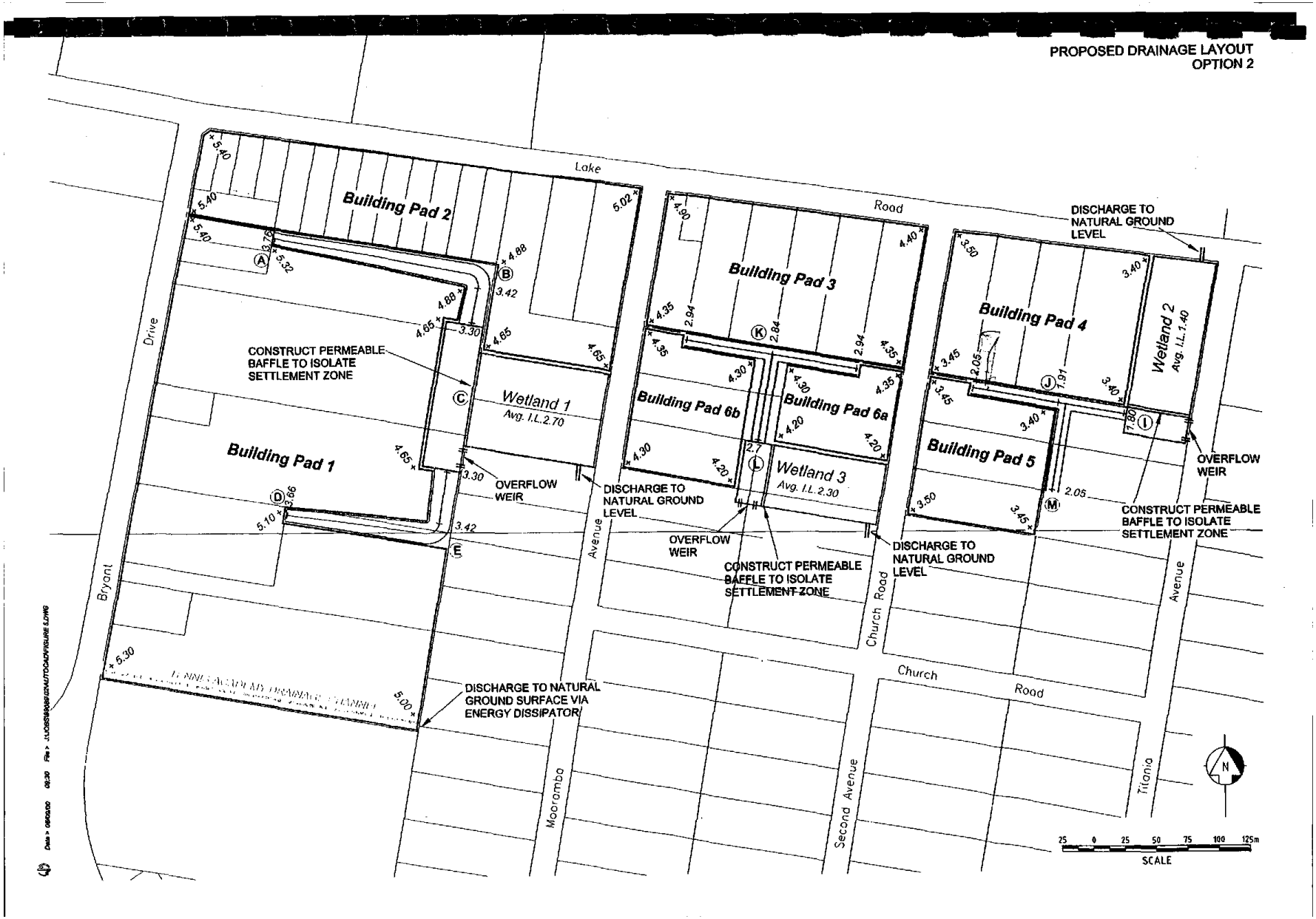
FIGURES


STUDY AREA
SEPP 14
WETLAND
MARDI
CREEK
Anzac
Road
TUGGERAH
CREEK
PROPOSED TUGGERAH STATION
INDUSTRIAL AREA
ODOUR BUFFER
Lake
Road
Drive
Bryant
SUPACENTA
WYONG ROAD
OVER BRIDGE
Pacific
Highway
Fowler
Road
CONSTRUCTED DRAIN
Moorambo
Avenue
Second
Avenue
Church
Road
Church
Road
Tilania
Avenue
Lagoon
Drive
Wyong
Road
OVERFLOW
BRANCH
TUGGERAH
BUSINESS
PARK
SEWAGE
TREATMENT
WORKS
RAISED EARTH
EMBANKMENT
Pioneer
Avenue
Road
Conntree
Church
Road
LEVEE
Reliance
Drive
LEVEE
OURIMBAH
CREEK
Hereford
Road
MAIN
NORTHERN
RAILWAY
Geoffrey
Road
N
100 0 100 200 300 400 500m
SCALE

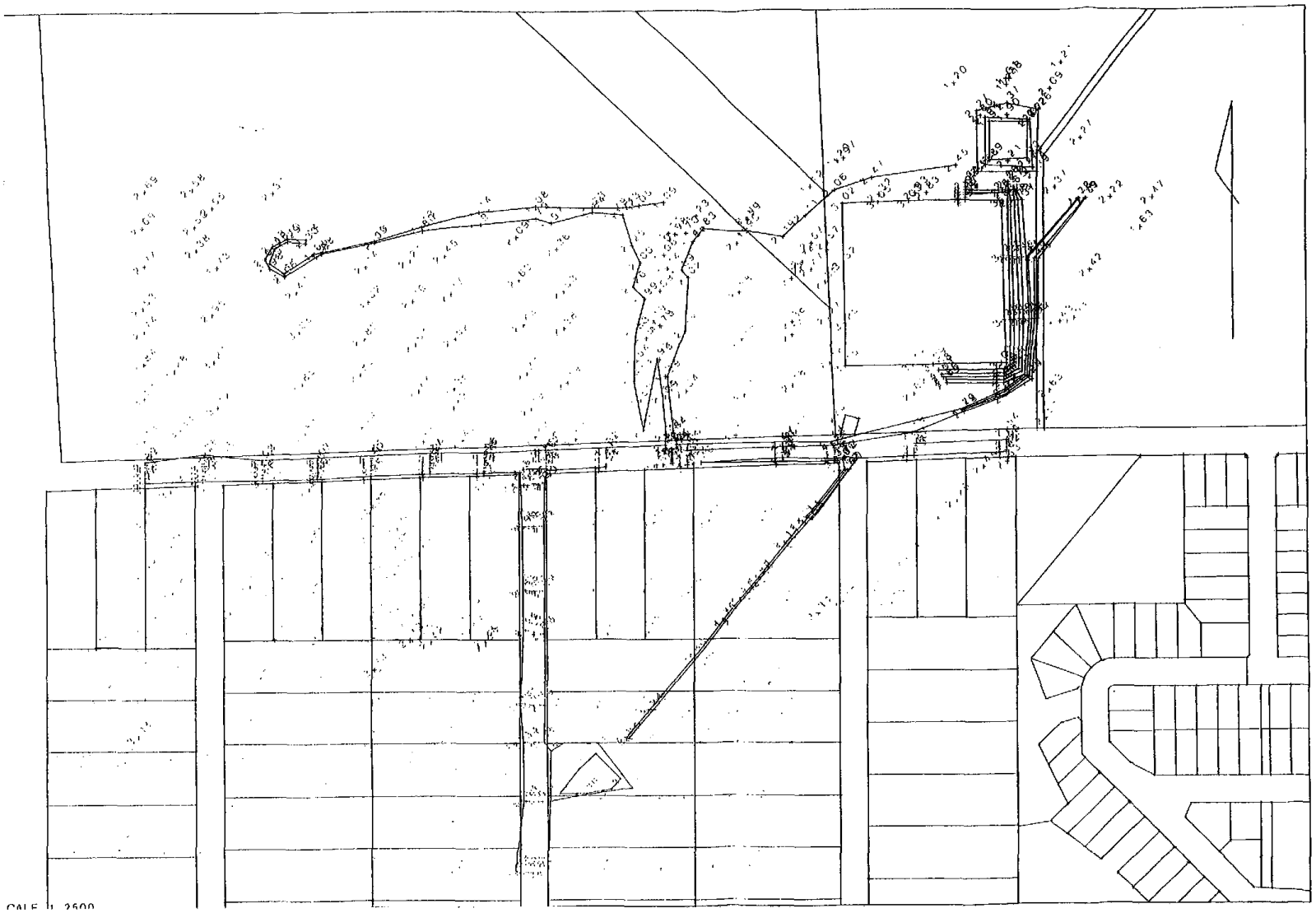

DRAINS MODEL LAYOUT
OPTION 1
LEGEND:
Sub-Catchment Boundaries
Wetland Location
Bypass Flow Catchment
Channel Layout
Discharge to Natural Surface Level
Overflow Path
Discharge to Existing Channel
Discharge Bypass to Existing Drainage Path
A1
A2
A3
B1
C1
W1
W2
WETLAND
MARDI CREEK
Anzac Road
Highway
Pacific
TUGGERAH
CREEK
Bryant Drive
Lake Road
Church Road
Mooramba Avenue
Second Avenue
Titania Avenue
Lagoona Drive
Wyong Road
Pioneer Avenue
Canntree Road
MAIN NORTHERN RAILWAY
TUGGERAH BUSINESS PARK
SEWAGE TREATMENT WORKS
N
50 0 50 100 150 200 250m
SCALE


DRAINS MODEL LAYOUT
OPTION 2
LEGEND:
Sub-Catchment Boundaries
Wetland Location
Bypass Flow Catchment
Channel Layout
Discharge to Natural Surface Level
Overflow Path
WETLAND
MARLI CREEK
Anzac Road
Highway
Pacific
TUGGERAH
CREEK
Bryant Drive
A1
A2
A3
B1
C1
W1
W2
W3
Lake Road
Church Road
Moorambo Avenue
Second Avenue
Titania Avenue
Lagoona Drive
Discharge Bypass to Existing Drainage Path
MAIN NORTHERN RAILWAY
Wyong Road
Pioneer Avenue
Conntree Road
TUGGERAH BUSINESS PARK
SEWAGE TREATMENT WORKS
N
50 0 50 100 150 200 250m
SCALE


PROPOSED DRAINAGE LAYOUT
OPTION 1
Lake
Road
Building Pad 1
Building Pad 2
Building Pad 3
Building Pad 4
Building Pad 5
Building Pad 6
Wetland 1
Avg. I.L. 2.40
Wetland 2
Avg. I.L. 1.30
CONSTRUCT PERMEABLE BAFFLE TO ISOLATE SETTLEMENT ZONE
OVERFLOW WEIR
DISCHARGE TO EXISTING CHANNEL
DISCHARGE TO NATURAL GROUND SURFACE VIA ENERGY DISSIPATOR
Bryant Drive
Avenue
Church Road
Church Road
Second Avenue
Mooramba
Titania
SCALE


PROPOSED DRAINAGE LAYOUT
OPTION 2
Lake
Road
Building Pad 1
Building Pad 2
Building Pad 3
Building Pad 4
Building Pad 5
Building Pad 6a
Building Pad 6b
Wetland 1
Avg. I.L.2.70
Wetland 2
Avg. I.L.1.40
Wetland 3
Avg. I.L.2.30
CONSTRUCT PERMEABLE BAFFLE TO ISOLATE SETTLEMENT ZONE
OVERFLOW WEIR
DISCHARGE TO NATURAL GROUND LEVEL
DISCHARGE TO NATURAL GROUND SURFACE VIA ENERGY DISSIPATOR
Bryant Drive
Avenue
Church Road
Second Avenue
Moorumba
Titania
SCALE

APPENDIX A: SURVEY DATA - JULY 2000



APPENDIX B: GEOTECHNICAL INVESTIGATION

Douglas Partners
Geotechnics · Environment · Groundwater

REPORT on GEOTECHNICAL INVESTIGATION

TUGGERAH INDUSTRIAL AREA FLOOD STUDY

Prepared For:
WYONG SHIRE COUNCIL

Project 26449
July 2000

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Douglas Partners
Geotechnics · Environment · Groundwater

PH:sd
Project 26449
27 July 2000

REPORT ON GEOTECHNICAL INVESTIGATION
TUGGERAH INDUSTRIAL AREA
FLOOD STUDY

1. INTRODUCTION

This report presents the results of a geotechnical investigation carried out as part of a flood study being conducted by other within the Tuggerah Industrial Area. The work was commissioned by Mr. T. Wallace, Design Engineer (Flooding) for Wyong Shire Council.

The purpose of the investigation was to provide data on subsurface conditions, soil permeability and testing for the presence of acid sulphate soils in two locations within the industrial area.

The investigation comprised two test bores together with sampling and testing of typical soils. The installation of a groundwater monitoring piezometer at each test bore location was also undertaken. It is understood that interpretation of the results of the work is to be carried out by others, therefore only the factual aspects of the work are presented in this report.

2. SITE DESCRIPTION & REGIONAL GEOLOGY

2.1 Site Description

The Tuggerah Industrial Area is located to the east of the main Northern Railway at Tuggerah and generally is bounded by Lake Road in the north, Church Road to the east and Wyong Road to the south. The area is virtually flat and that part of the Industrial Area which is subject to this report is to the east and west of Mooramba Avenue and has been cleared to grassland. The locations tested have been designated Area 'A' and Area 'B' by Wyong Shire Council.

2.2 Regional Geology

Reference to the Geological Survey of New South Wales 1:250 000 Series Sheet for Sydney indicates that the site is underlain by Quaternary Alluvium which generally comprises gravel, sand, silt and clay.

3. FIELD WORK

3.1 Methods

The field work for the investigation comprised two test bores. TB1 within Area 'A' and TB2 within Area 'B' were drilled with a 50 mm diameter dynamic push tube to depths of 2.3 m and 2.2 m. The test bore locations were selected by Mr. S. Murray of Wyong Shire Council.

Groundwater monitoring piezometers were installed at each test bore location. The piezometers were encased in a filter sock and the bore holes were backfilled with 'pea' gravel and sealed with bentonite.

The soil cores were returned to the laboratory for identification and testing purposes. The attached Drawing No. 1 indicates the test bore and piezometer locations.

In addition to the above a falling head permeability test, in accordance with Australian Standard AS 1547- 1994 Appendix B (Ref.1) was carried out at each test bore location.

3.2 Results

The test bore report sheets together with notes defining classification methods and descriptive terms are attached.

The subsurface profiles identified by the test bores are broadly summarised below:-

TOPSOIL	Dark brown silty sandy clay encountered in test bores TB1 and TB2 to depths of 0.15 m and 0.1 m respectively, overlying
SILTY CLAY	Very stiff orange brown and grey silty clay encountered in TB1 and TB2 to the limit of the investigation at depths of 2.3 m and 2.2 m respectively

Groundwater levels were measured 24 hours after the completion of the field work and found to be 0.44 m and 0.17 m below the existing surface level in TB1 and TB2 respectively. However it should be noted that groundwater levels are transient and affected by climatic conditions.

Equation B5.1(1) of AS 1547 has been used to calculate soil permeability from the falling hed tests. The results indicate a 'P' value of 0.07 m/day at location 'A' and 0. 33 m/day at location 'B'.

4. LABORATORY TESTING

Nine samples were screened in the laboratory for potential acid sulphate soil (PASS). This work comprised pH measurement of the soil followed by oxidation using hydrogen peroxide (H_2O_2) and another pH measurement. The results are presented in the following Table 1.

Table 1 - Potential Acid Sulphate Soil Screening

Test Bore No.	Depth (m)	Material Description	Soil pH	pH after oxidation with H_2O_2
TB1	0.4	Silty Clay	4.75	3.16
TB1	0.6	Silty Clay	4.38	3.31
TB1	1.4	Silty Clay	4.15	3.10
TB1	1.7	Silty Clay	4.58	3.57
TB1	0.2	Silty Clay	5.09	3.03
TB2	0.1	Silty Sandy Clay	4.97	2.70
TB2	0.6	Silty Clay	4.94	3.52
TB2	0.8	Silty Clay	4.69	3.64
TB2	1.8	Silty Clay	4.41	3.87

Following this work four samples were submitted to Sydney Analytical Laboratories for Peroxide Oxidation Combined Acidity and Sulphate (POCAS) testing. The results of this work are presented in the following Table 2.

Table 2 - Summary of Results of Peroxide Oxidation Combined Acidity & Sulphate Testing (POCAS)

Test Bore No.	Depth (m)	TAA (mol/tonne)	TPA (mol/tonne)	SPOS (%)	TSA (mol/tonne)	Comments
1	0.4	20	45	0.05	25	Actual & PAS Soil
1	1.4	40	70	0.05	30	Actual & PAS Soil
2	0.1	20	45	0.05	25	Actual & PAS Soil
2	1.8	45	65	0.04	20	Actual & PAS Soil

TAA = Total Actual Acidity
TPA = Total Potential Acidity
SPOS = Sulphur %
TSA = Total Sulphuric Acidity

DOUGLAS PARTNERS PTY LTD

Reviewed by:

Ian G Piper
Associate

Michael J Thom
Principal

Attachments:

General Notes
Test Bore Report Sheets

References:

1. Australian Standard AS 1547 - 1994: *Disposal Systems for Effluent from Domestic Premises*, Standards Association of Australia

2. NSW Acid Sulphate Soil Management Advisory Committee - *Acid Sulphate Soil Manual* - August 1998

APPENDIX C: ECOLOGICAL ASSESSMENT

ɜived Event (Event Succeeded)
ɜ: 5/9/00 Time: 1:30 PM
es: 9 Fax Number:
09/05 '00 13:35 ☎043511096 HEALTH & BLDG 005

Wyong Shire Council

RECONNAISSANCE ECOLOGICAL ASSESSMENT

LAKE ROAD AREA, TUGGERAH

DRAINAGE OPTIONS INVESTIGATIONS

Strategic Planning Department
April 2000

ed Event (Event Succeeded)
5/9/00 Time: 1:30 PM
9 Fax Number:
09/05 '00 13:35 ☎043511096 HEALTH & BLDG 006

INTRODUCTION

A brief reconnaissance inspection of the habitats which occur in the study area was conducted over two consecutive 2 hour periods on March 31 2000 and April 3 2000. The report identifies the vegetation assemblages which are present and the main ecological constraints which exist to assist with the development of a drainage strategy for the Tuggerah area. The assessment identifies the habitat areas which are considered to have the potential to support threatened flora and fauna.

METHODOLOGY

Prior to conducting a brief field inspection of the study area, a review of the records of threatened flora and fauna species was undertaken within the locality (i.e. 10 kilometre radius of the study area). This involved a review of records which are held by the NSW National Parks and Wildlife Service records on the NSW Wildlife Database. These are held at Council and are updated four times a year.

As a result of this review, a number of threatened flora and fauna species were identified as occurring within within the locality. However, many of the habitats which occur on the site and which were identified by the 10 kilometre radial database search would not support many of these species. As a consequence, I have identified those threatened species which I would regard to have a reasonable liklihood of occurring in the different vegetation assemblages which occur in the study area on the basis of known habitat relationships from various local conservation assessments and research.

The objective of the reconnissance inspection was to determine (on the basis of ecological attributes) the most appropriate sites for locating water treatment facilities for future industrial development in Bryant Drive and Lake Road, Tuggerah. This assessment comprised an extremely cursory examination of habitats which were present in the area. Consequently, this assessment will not negate the need to conduct future flora and fauna survey work to satisfy the requirements of the *Threatened Species Conservation Act, 1995*.

RESULTS AND DISCUSSION

The study area includes substantial areas of cleared land and some remnant vegetation which are in the process of regenerating. Large areas of high quality Tall Lowland Blackbutt Forest (equivalent Code Qa6) and Low Swamp Mahogany Forest (Equivalent Code Qa12) occur in the study area. Equivalent vegetation codes were assigned to these vegetation stands to accord with the vegetation mapping of Wyong Shire which was produced by Payne and Duncan (1999). These areas were remapped in greater detail and are shown on the attachment. A number of other areas are also identified which are in the process of regenerating or have experienced previous disturbance. Areas of *Melaleuca biconvexa* have also been plotted. Equivalent Code Qa3 in the 1999 report by Payne and Duncan is described as Low Forest/Forest Woodland (Treed Swamp Forest/Woodland dominated by Paperbark and Swamp Oak).

From the field assessment, I have identified a number of areas which have a reasonable potential to support threatened flora and fauna species. I have included a brief discussion on each.

ɜived Event (Event Succeeded)
ɜ: 5/9/00 Time: 1:30 PM
es: 9 Fax Number:
09/05 '00 13:37 ☎043511096 HEALTH & BLDG ☑007

1 HABITAT TYPE QA6: TALL BLACKBUTT FOREST

Floral Attributes

Most of the lowland examples of this plant community have been removed within the region and are not represented within the regional reservation system to any significant extent. Most of this habitat type occurs in the study is in good condition.

This vegetation type is best described as tall forest dominated by *Eucalyptus pilularis* with *occasional Eucalyptus resinifera* and *Angophora floribunda*. The understorey is dominated by *Acacia spp, Melaleuca nodosa, Daviesia ulicifolia, Lomandra longifolia* and *Pteridium esculentum*. The main species which have the potential to occur in this plant assemblage which are listed on the TSC Act 1995 are *Caledenia tesselata* (terrestrial orchid species which has been found in similar habitats on the Wyong River) and *Melaleuca biconvexa* which would occur in wet drainage lines and oxbows within this plant community.

Faunal Attributes

This plant community contains a number of mature trees and contains a substantial number of tree hollows due to the old age of many of the trees which occur within the investigation area. Habitat attributes exist for a wide range of microchiropteran bats which are listed on the TSC Act 1995. Many of these species forage and some would utilise roosting hollows in this habitat type. This vegetation type could also provide roosting and foraging resources for the Osprey, Powerful Owl, Masked Owl and Sooty Owl. Wetter areas within this plant community may provide habitat for the Green thighed Frog *Littoria brevipalmata* (opportunities are largely limited to areas which fringe into Qa12).

2 HABITAT TYPE QA12: LOW SWAMP FOREST

Floral Attributes

This plant community is the most significant winter flowering community in Wyong Shire and substantial losses have already occurred in Wyong Shire.

This vegetation type is best described as low swamp forest which is dominated by Swamp Mahogany *Eucalyptus robusta, Melaleuca linariifolia, Melaleuca biconvexa, Eucalyptus longifolia* and *Casuarina glauca*. A range of shrubs occur in the understorey such *as Acacia longifolia, Melaleuca ericifolia* and *Leptospermum juniperium*. Common understorey species include: *Restio tetraphyllus, Gahnia clarkei, Baumea articulata, Lomandra longifolia, Entolasia marginata* and *Hemarthria unanata*.

This plant community provides habitat for the following plant species which are listed on the TSC Act ,1995. These include *Melaleuca biconvexa* (I mapped this where I could find them when I was out on site) and the ground orchid *Caledenia tesselata*.

Faunal Attributes

Much of this plant community contains pock marked inundations which provides a significant breeding habitat for amphibians such as the Green thighed Frog. This type of habitat has also been known to provide habitat for the Wallum Froglet both of which are listed on the TSC Act, 1995

Habitat attributes exist for a wide range of microchiropteran bats which are listed on the TSC Act 1995 (note NP&WS records in the immediate vicinity of the site). Many of these species forage and

d Event (Event Succeeded)
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utilise roosting hollows in a wide range of forest habitats. The vegetation type could also provide roosting and foraging resources for the Osprey, Powerful Owl, Masked Owl and Sooty Owl. Records of the Regent Honeyeater have also been made around the sewage treatment ponds which are likely to use the Swamp Mahogany forests as a winter food resource. The known usage of these habitats by the Regent Honeyeater makes the area particularly significant, as there have been few sightings of this species on the Central Coast.

A SEPP 44 Habitat Assessment would be required if future development proposals impact upon this plant community, as it contains more than the required 15% threshold of koala habitat trees. Consequently any development proposal which was to occur in Qa12 would require a potential koala habitat assessment.

3 REGROWTH, DISTURBED HABITATS AND PASTURE

A substantial amount of land within the study area has been cleared for grazing and currently consists of introduced pasture species, *Carex spp* and various exotic weeds. Occasional stands of *Eucalyptus longifolia*, *Eucalyptus robusta* and *Melaleuca biconvexa* also occur within this area. Modified vegetation is generally characterised by reduced structural floristic diversity. Many of the resoruces which are available within this area do not possess high values for threatened fauna or flora, except for some of the larger stands of *Eucalyptus longifolia* which are present in some scattered locations.

RECOMMENDATIONS

The following development principles should be established as part of any drainage and development strategy in the area:

◊ No habitat losses within plant community Qa6 and Qa12.

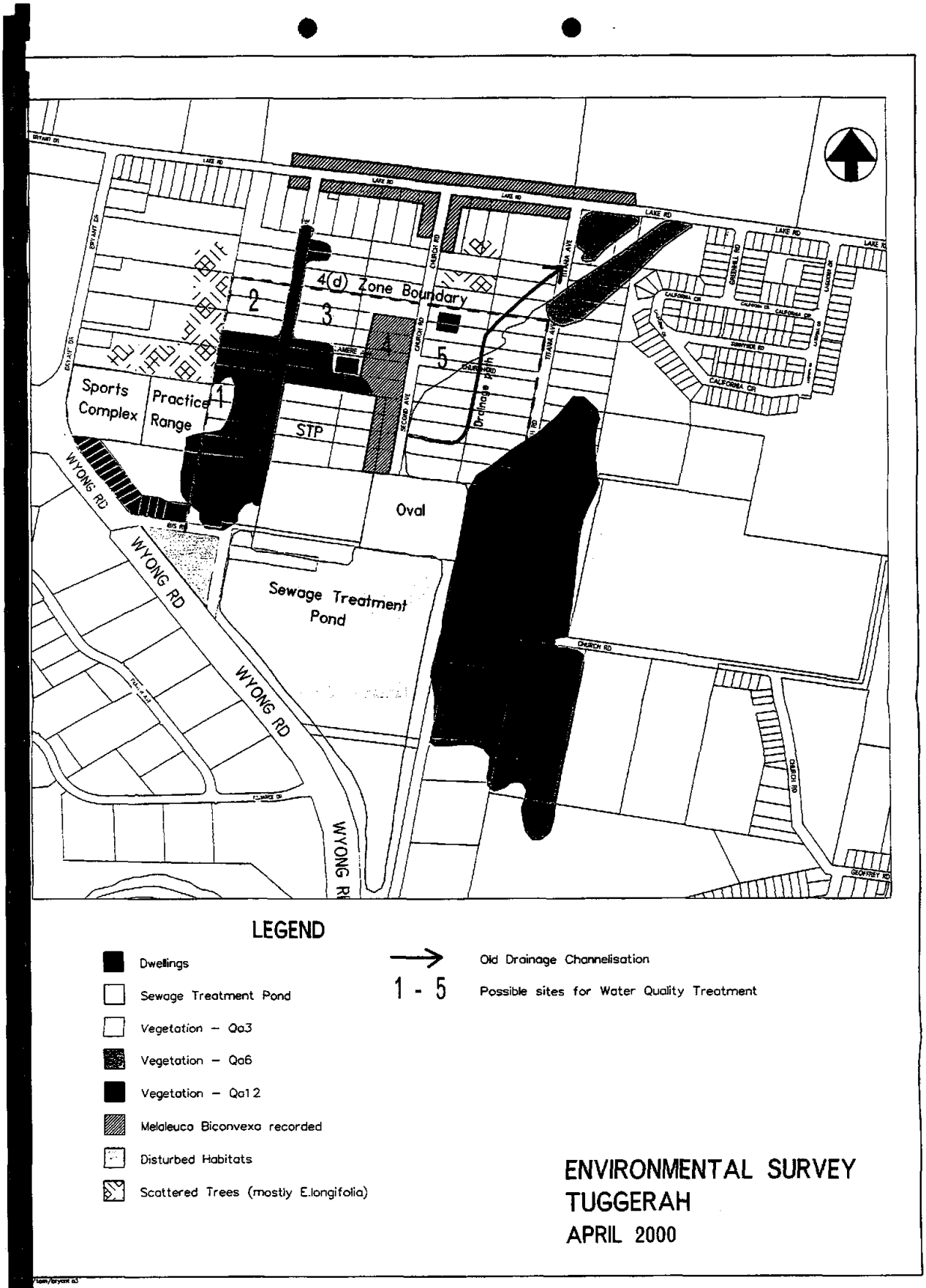
◊ Large trees and tree stands should be retained in other locations where possible.

◊ Future filling for industrial development should not be conducted to the boundary of either plant community Qa6 or Qa12 and it is recommended that a 20 metre buffer area be established to separate future industrial areas from conservation areas.

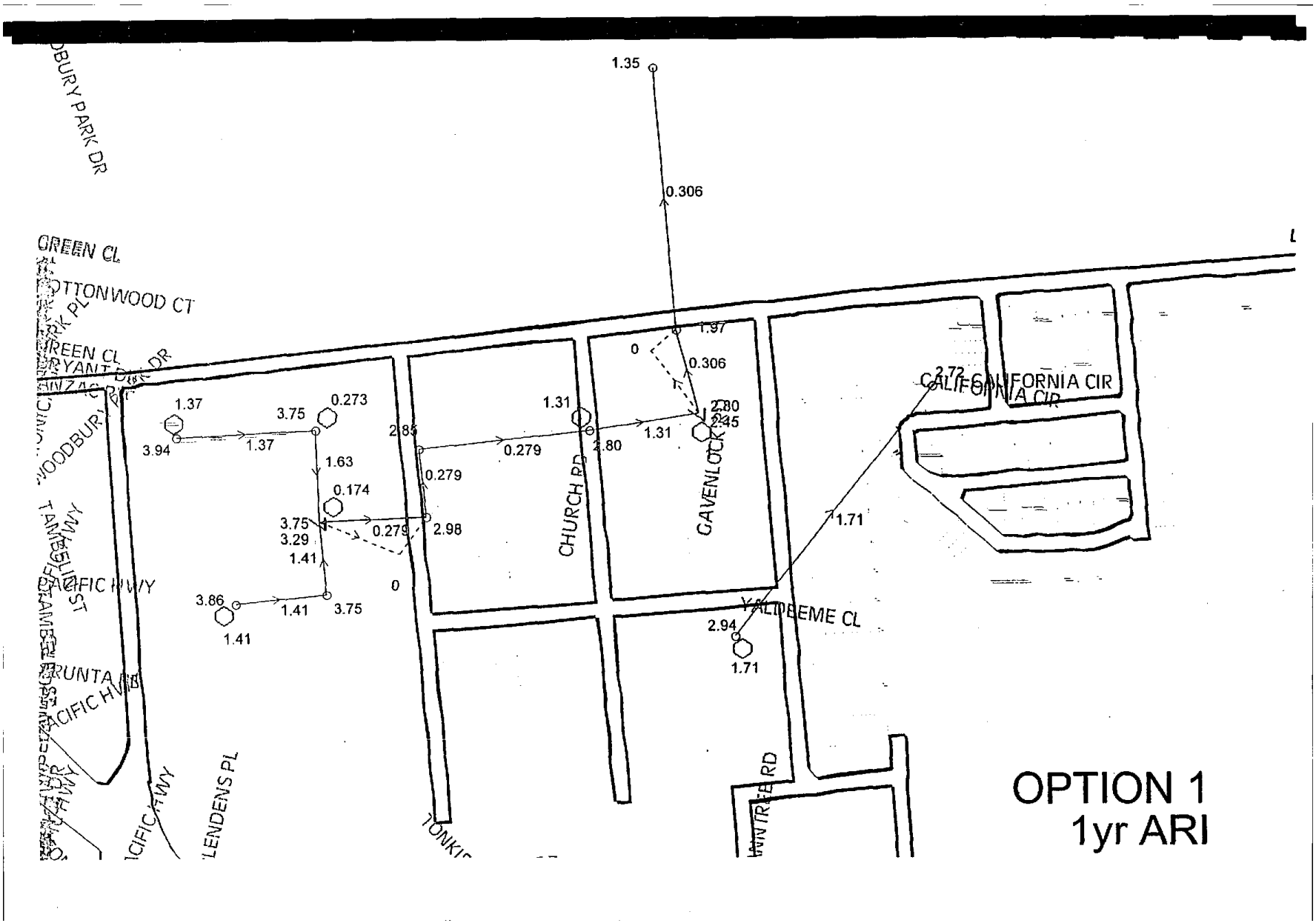
◊ Investigate suitability of drainage options to establish purpose built wetlands at either Sites 1,2, 3, 4 or 5 which are identified on the attached plan depending on hydraulic constraints.

◊ That additional drainage flows not be significantly increased by using drains which would have the effect of draining the adjoining Swamp Mahogany vegetation near the sewage treatment plant buffer area. Additionally, it is also important to ensure that water flows into plant community Qa12 are not substantially increased as the increased frequency, permanency and depth of inundation into this area could result in dieback of Swamp Mahogany trees and a change the floristic composition of understorey species.

◊ That nutrient control devices be used and integrated into future development proposals to maintain water quality in downstream wetland habitats and thereby ensure that the conservation values of these habitats are not diminished.


4(d) Zone Boundary
Sports Complex
Practice Range
STP
Oval
Sewage Treatment Pond
WYONG RD
LAKE RD
CHURCH RD
1
2
3
4
5
LEGEND
Dwellings
Sewage Treatment Pond
Vegetation – Qa3
Vegetation – Qa6
Vegetation – Qa12
Melaleuca Biconvexa recorded
Disturbed Habitats
Scattered Trees (mostly E.longifolia)
Old Drainage Channelisation
1 - 5
Possible sites for Water Quality Treatment
ENVIRONMENTAL SURVEY
TUGGERAH
APRIL 2000

APPENDIX D: DRAINS MODEL OUTPUT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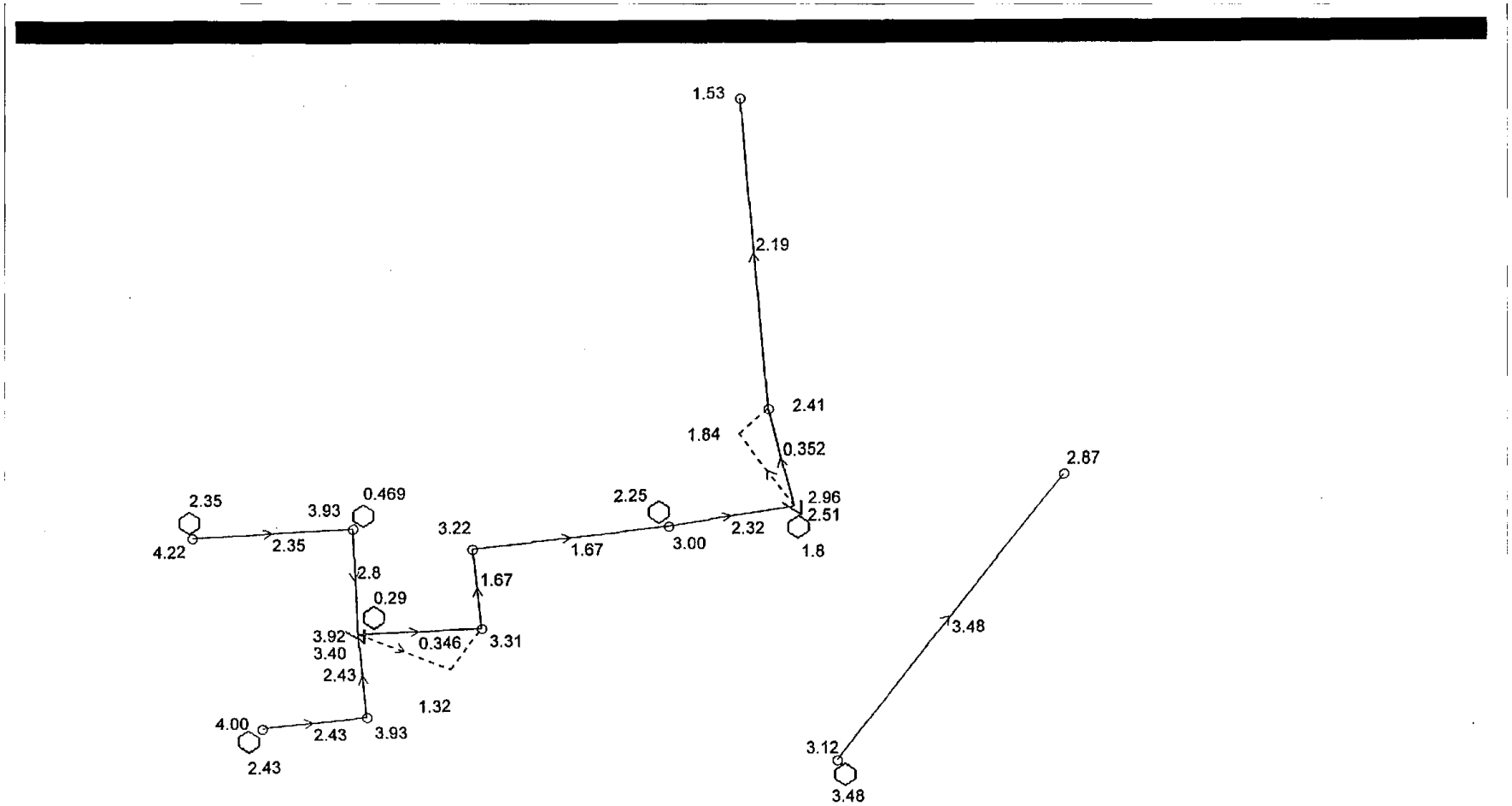
0.306
1.97
0
0.306
2.80
2.45
1.31
2.80
1.31
0.279
2.85
0.279
2.98
0.279
0
1.37
3.75
0.273
3.94
1.37
1.63
0.174
3.75
3.29
1.41
3.86
1.41
3.75
1.41
1.71
2.94
1.71
2.72
CHURCH RD
GAVENLOCK
CALIFORNIA CIR
YALDEEME CL
GREEN CL
OTTONWOOD CT
WOODBURY PARK DR
PACIFIC HWY
LENDENS PL
OPTION 1
1yr ARI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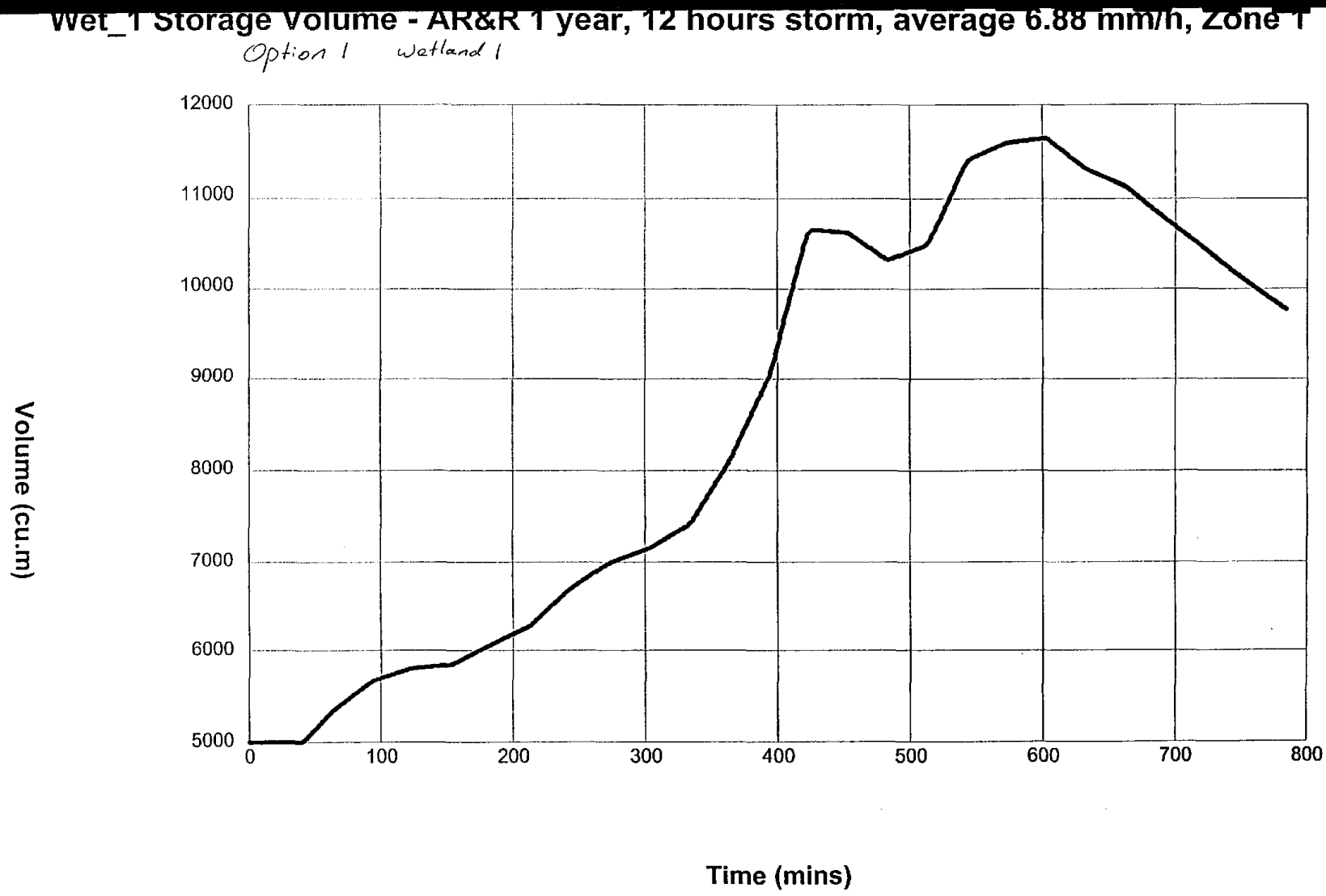
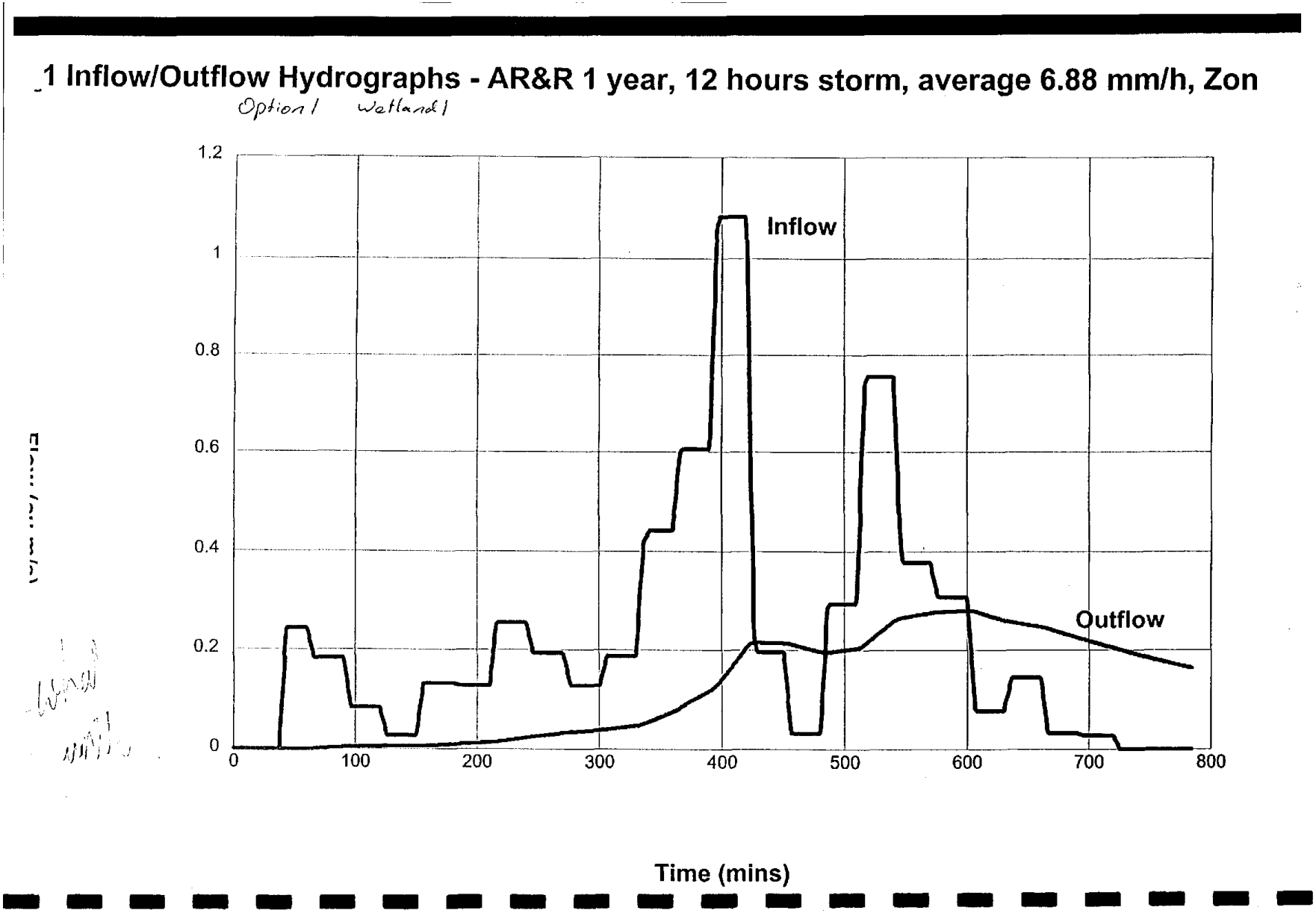
2.19
2.41
1.84
0.352
2.87
2.35
3.93
0.469
2.25
2.96
2.51
4.22
2.35
3.22
1.67
3.00
2.32
1.8
2.8
1.67
0.29
3.92
3.40
0.346
3.31
2.43
1.32
3.48
4.00
2.43
3.93
3.12
2.43
3.48
OPTION 1
5yr ARI

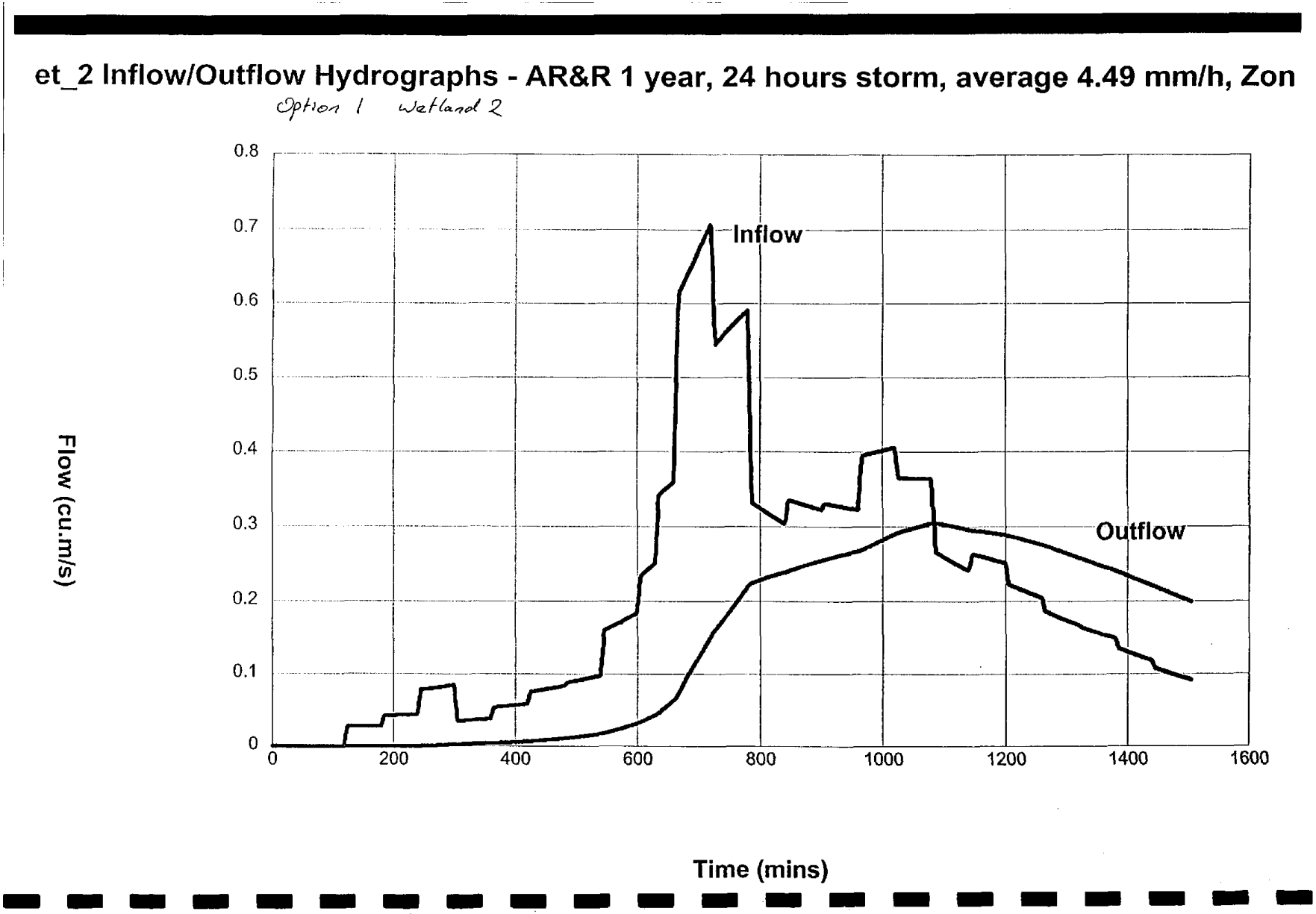
[redacted]

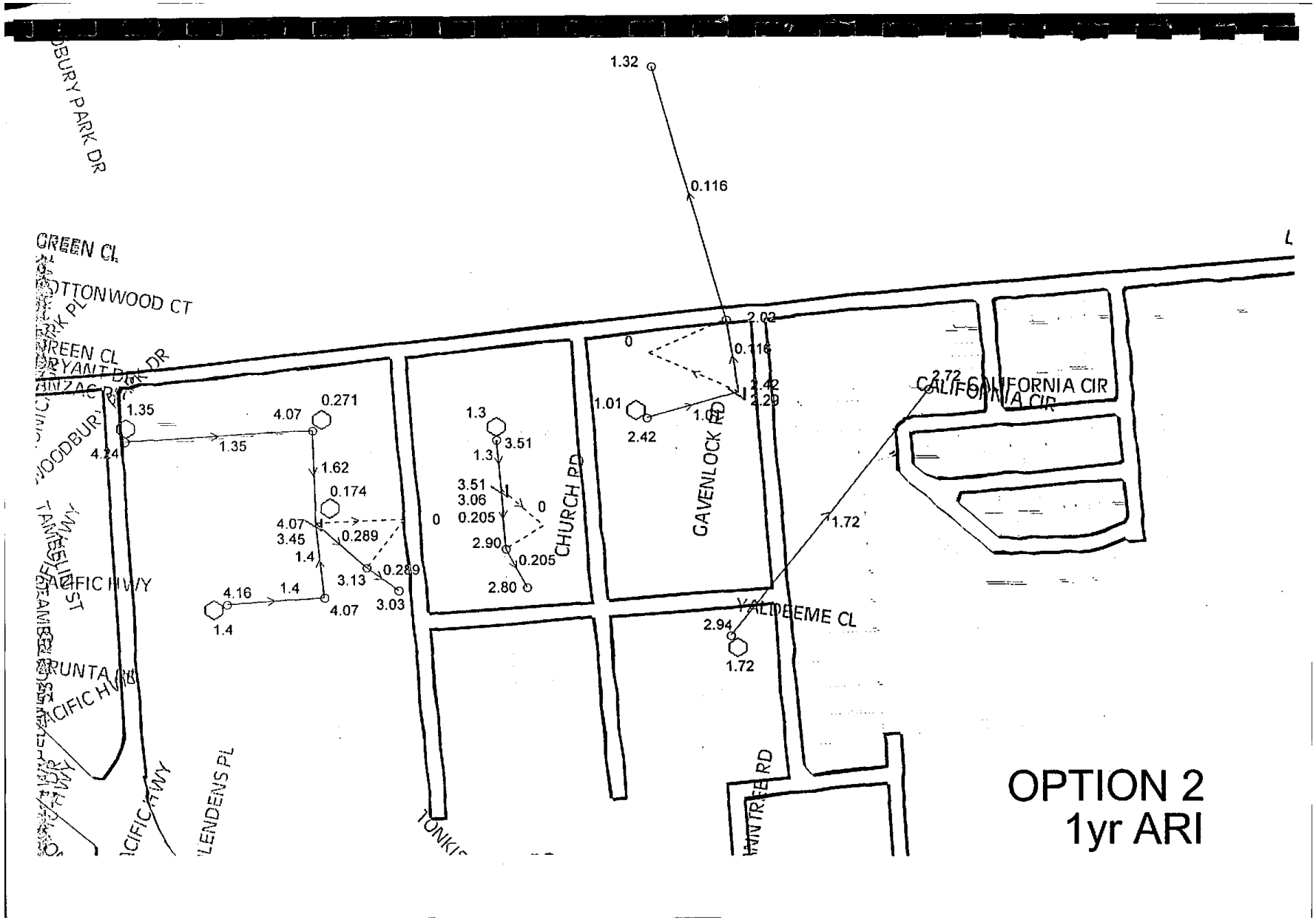

Wet_1 Storage Volume - AR&R 1 year, 12 hours storm, average 6.88 mm/h, Zone 1
Option 1 Wetland 1
Volume (cu.m)
12000
11000
10000
9000
8000
7000
6000
5000
0
100
200
300
400
500
600
700
800
Time (mins)

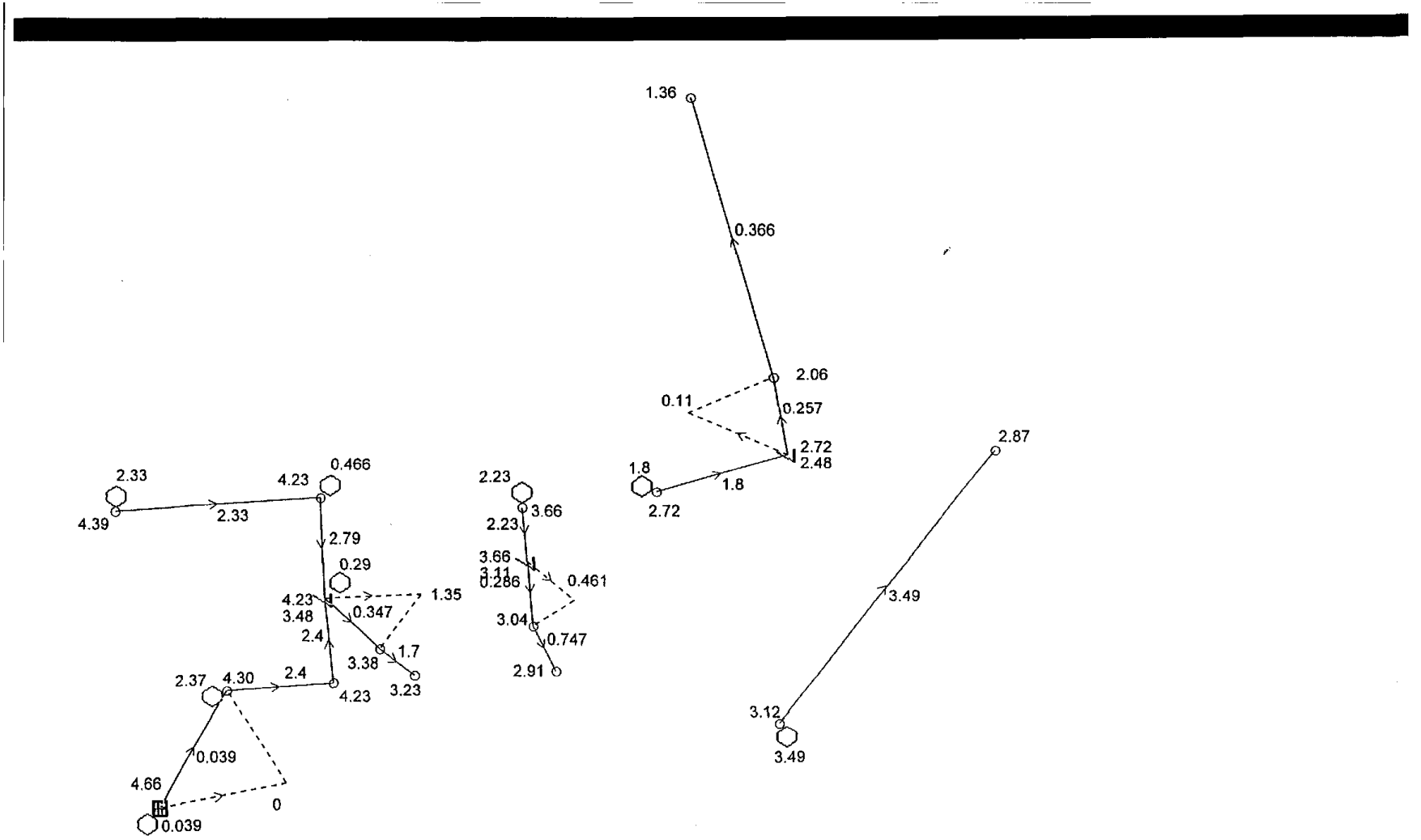

1 Inflow/Outflow Hydrographs - AR&R 1 year, 12 hours storm, average 6.88 mm/h, Zon
Option 1 Wetland 1
1.2
1
0.8
0.6
0.4
0.2
0
0
100
200
300
400
500
600
700
800
Inflow
Outflow
Time (mins)

[redacted]

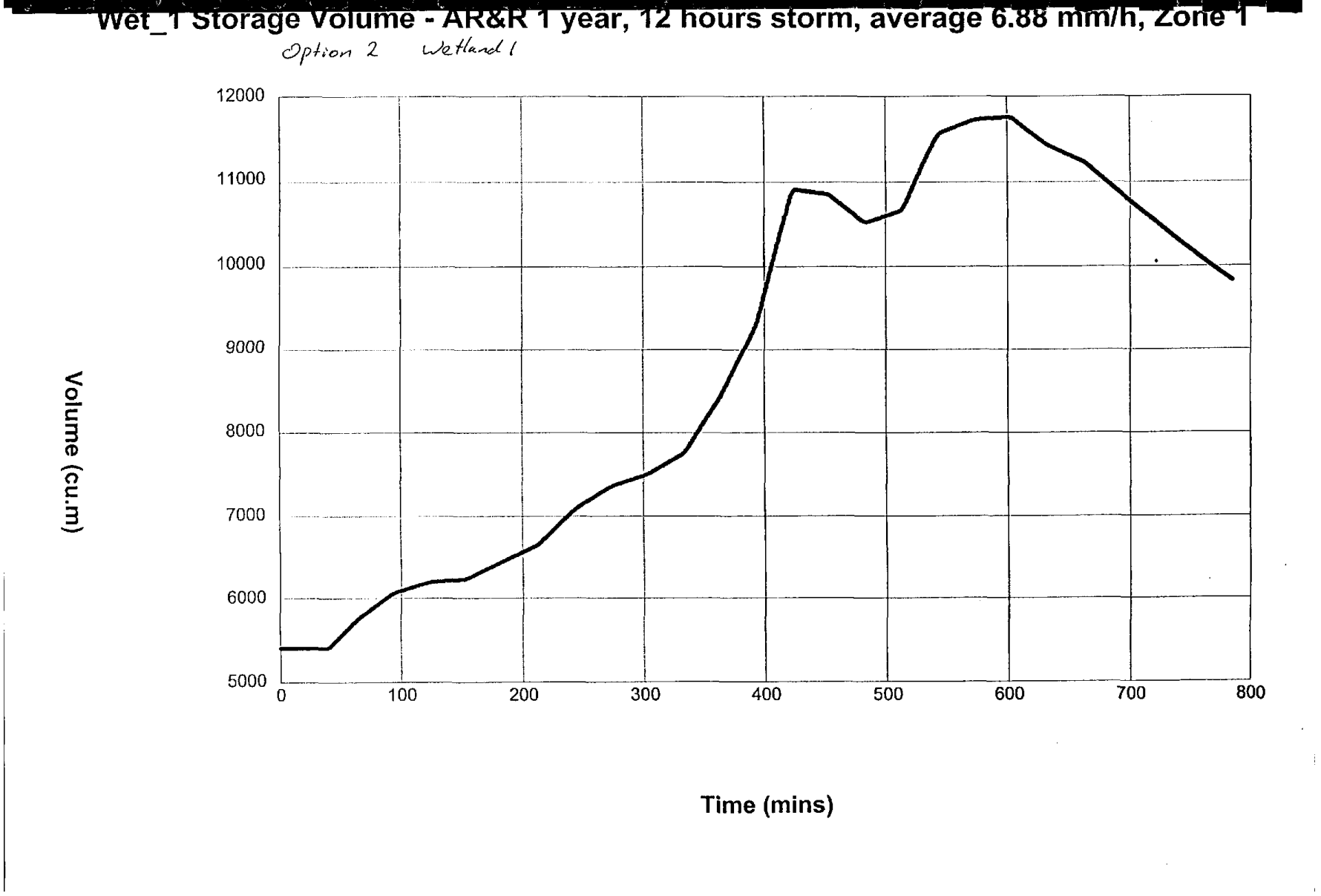

Wet_2 Storage Volume - AR&R 1 year, 24 hours storm, average 4.49 mm/h, Zone 1
Option 1 Wetland 2
Volume (cu.m)
13000
12000
11000
10000
9000
8000
7000
6000
5000
0
200
400
600
800
1000
1200
1400
1600
Time (mins)


et_2 Inflow/Outflow Hydrographs - AR&R 1 year, 24 hours storm, average 4.49 mm/h, Zon
Option 1 Wetland 2
Inflow
Outflow
Flow (cu.m/s)
Time (mins)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
200
400
600
800
1000
1200
1400
1600


1.32
0.116
2.02
0
0.116
2.42
2.29
1.01
2.42
1.0
2.72
CALIFORNIA CIR
1.72
1.35
4.24
1.35
4.07
0.271
1.62
0.174
4.07
3.45
0.289
1.4
0.289
4.16
1.4
1.4
3.13
4.07
3.03
1.3
3.51
1.3
3.51
3.06
0
0.205
0
2.90
0.205
2.80
CHURCH RD
GAVENLOCK RD
YALDEEME CL
2.94
1.72
OPTION 2
1yr ARI

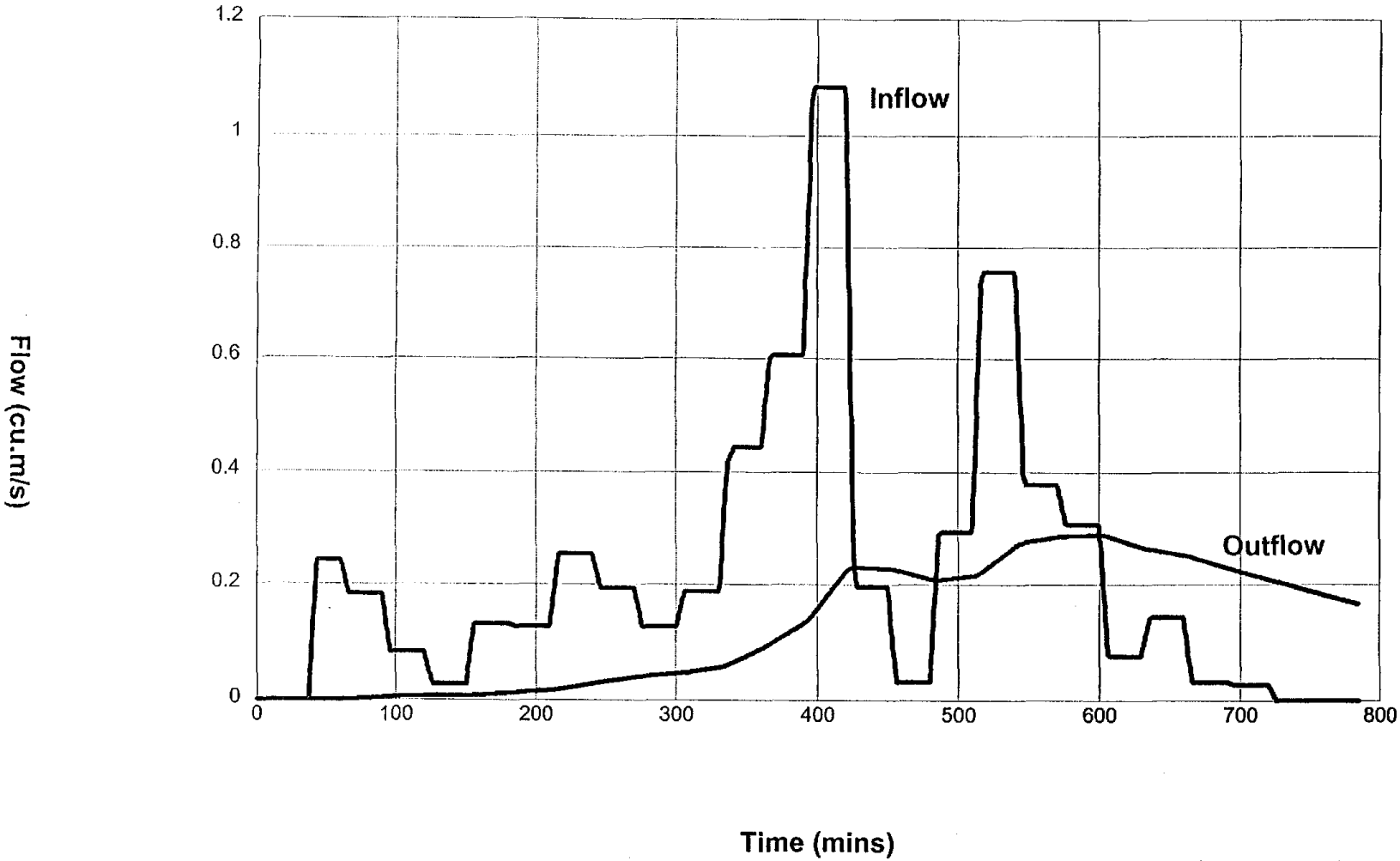

1.36
0.366
2.06
0.11
0.257
2.72
2.48
1.8
1.8
2.72
2.87
3.49
3.12
3.49
2.23
3.66
2.23
3.66
3.11
0.286
0.461
3.04
0.747
2.91
2.33
4.23
0.466
2.33
4.39
2.79
0.29
4.23
3.48
1.35
0.347
2.4
1.7
3.38
3.23
2.37
4.30
2.4
4.23
0.039
4.66
0
0.039
OPTION 2
5yr ARI

[redacted]


Wet_1 Storage Volume - AR&R 1 year, 12 hours storm, average 6.88 mm/h, Zone 1
Option 2 Wetland 1
Volume (cu.m)
12000
11000
10000
9000
8000
7000
6000
5000
0
100
200
300
400
500
600
700
800
Time (mins)

et_1 Inflow/Outflow Hydrographs - AR&R 1 year, 12 hours storm, average 6.88 mm/h, Zon

Option 2 Wetland 1



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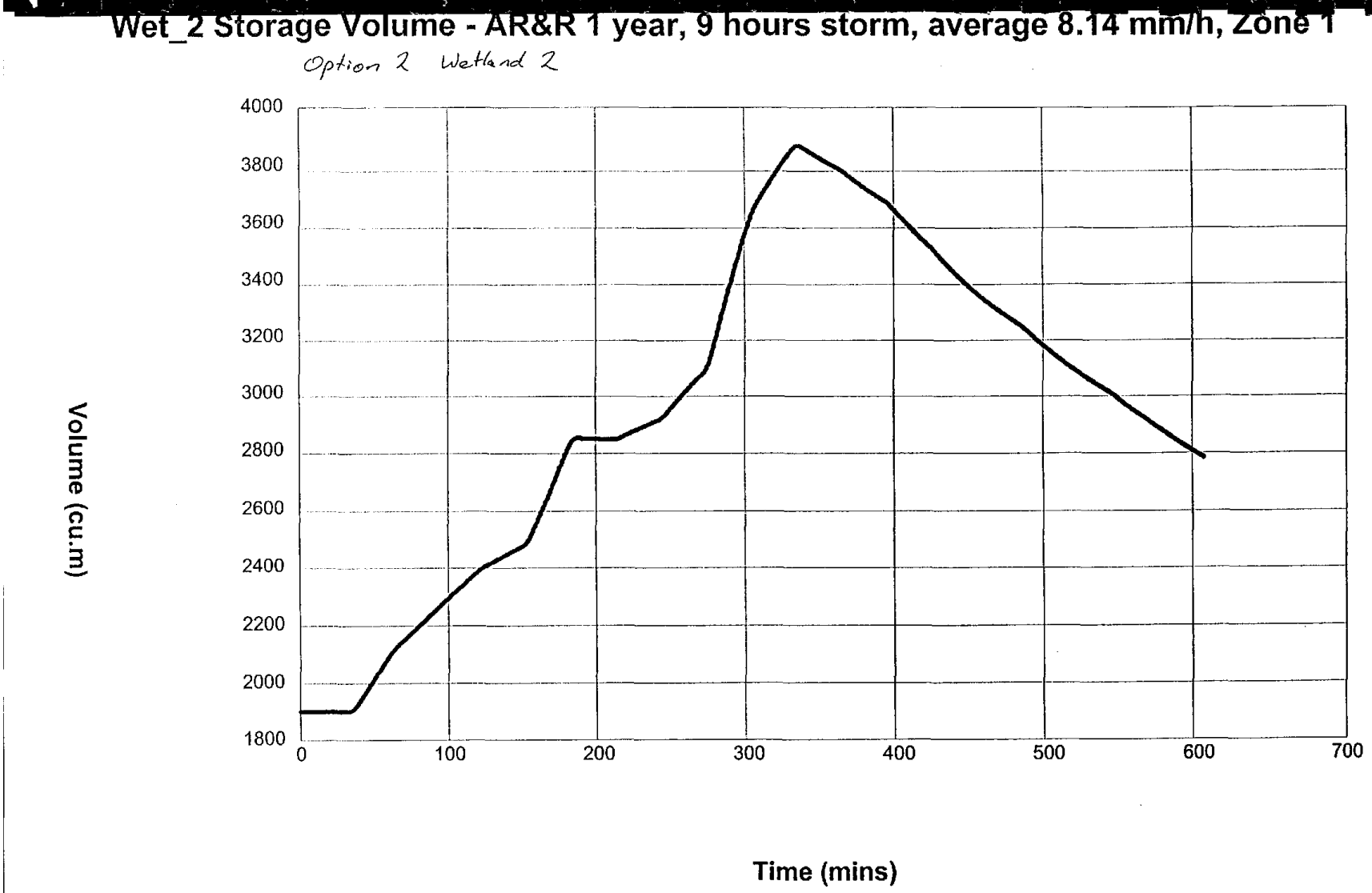
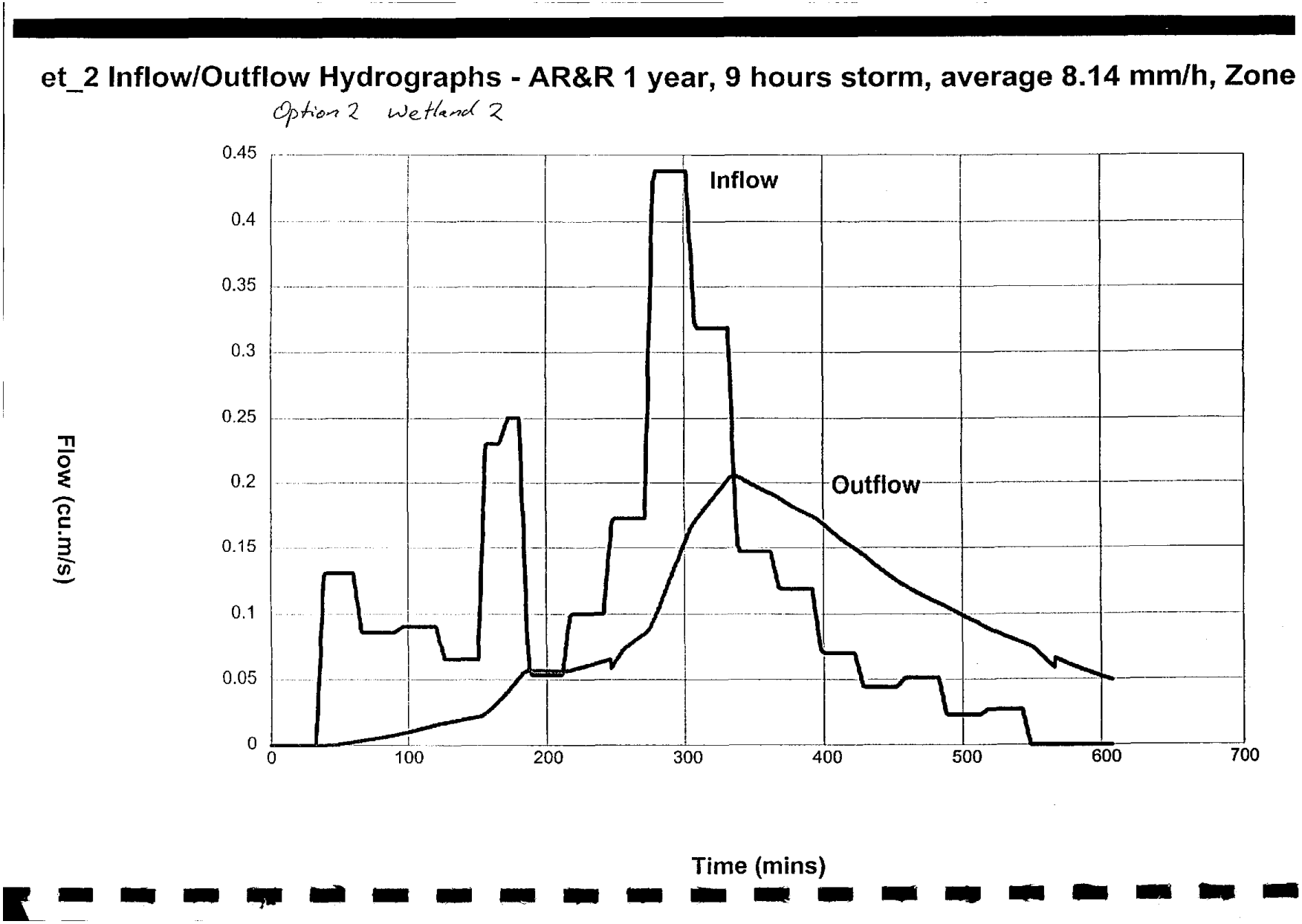
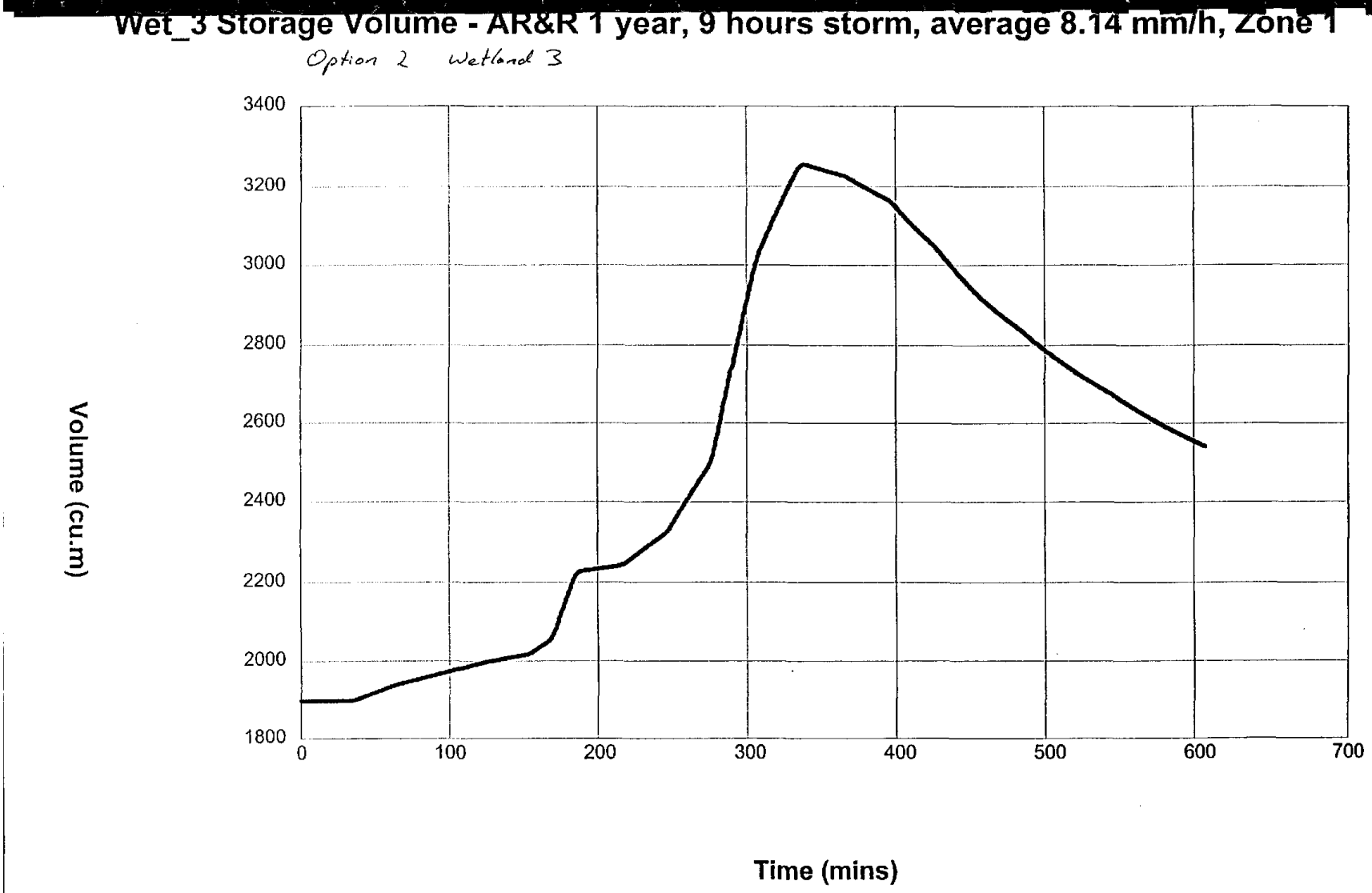
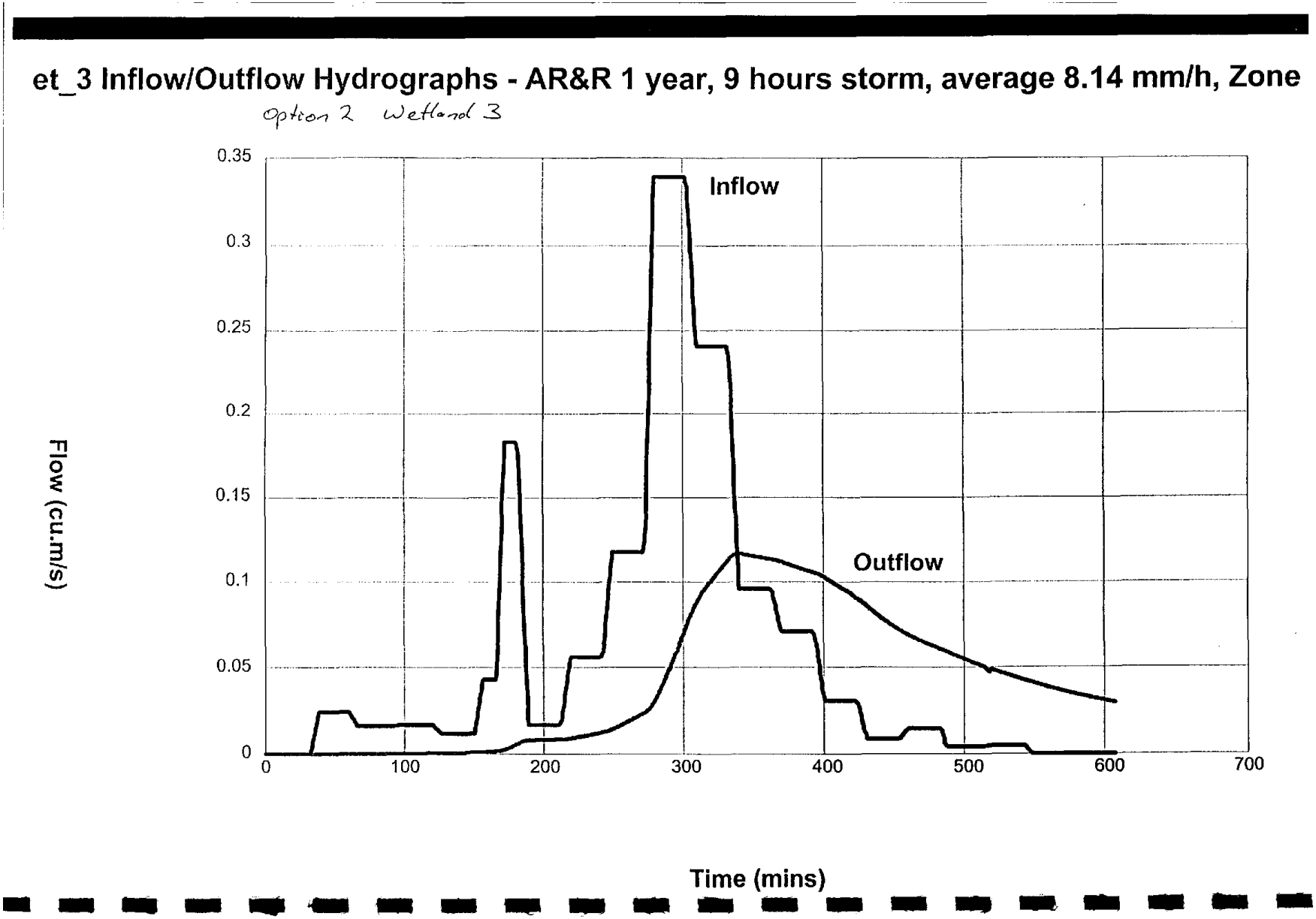

Wet_2 Storage Volume - AR&R 1 year, 9 hours storm, average 8.14 mm/h, Zone 1
Option 2 Wetland 2
Volume (cu.m)
4000
3800
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
0
100
200
300
400
500
600
700
Time (mins)


et_2 Inflow/Outflow Hydrographs - AR&R 1 year, 9 hours storm, average 8.14 mm/h, Zone
Option 2 Wetland 2
Inflow
Outflow
Flow (cu.m/s)
Time (mins)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
100
200
300
400
500
600
700

[redacted]


Wet_3 Storage Volume - AR&R 1 year, 9 hours storm, average 8.14 mm/h, Zone 1
Option 2 Wetland 3
Volume (cu.m)
3400
3200
3000
2800
2600
2400
2200
2000
1800
0
100
200
300
400
500
600
700
Time (mins)


et_3 Inflow/Outflow Hydrographs - AR&R 1 year, 9 hours storm, average 8.14 mm/h, Zone
Option 2 Wetland 3
Inflow
Outflow
Flow (cu.m/s)
Time (mins)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
100
200
300
400
500
600
700

APPENDIX E: DETAILED COST ESTIMATES

TUGGERAH STATION INDUSTRIAL AREA
DETAILED COST ESTIMATE
TRUNK DRAINAGE WORKS AND TREATMENT FACILITIES
OPTION 1

CHANNEL 1 DIMENSIONS		CHANNEL 2 DIMENSIONS	
bank slope 1 in x	5	bank slope 1 in x	5
bottom width (m)	2	bottom width (m)	1
depth (m)	0.9	depth (m)	0.7
length (m)	520	length (m)	365

DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
PRELIMINARIES				
Site establishment	1	item	$ 20,000.00	$20,000
Sedimentation and erosion control	1	item	$ 15,000.00	$15,000
Environmental Testing	1	item	$ 30,000.00	$30,000
TEMPORARY WORKS				
Access Track & Hard Stand Area	4000	m^2	$ 5.00	$20,000
- lime stabilise existing soil				
WETLANDS CONSTRUCTION				
Clearing and Grubbing	23000	m^2	$ 2.00	$46,000
Excavation & Disposal to adjacent properties	13500	m^3	$ 4.00	$54,000
Drain Acid Sulphate soils and treat runoff	13500	m^3	$ 2.00	$27,000
Treatment of Acid Sulphate soil material	13500	m^3	$ 8.00	$108,000
Planting of Macrophytes	9840	m^2	$ 5.00	$49,200
Provision for Zone Separation (Baffles)	175	m	$ 100.00	$17,500
Construct Hydraulic Outlet Controls	2	item	$ 4,000.00	$8,000
DRAINAGE CHANNEL EARTHWORKS				
Clearing and Grubbing	8640	m^2	$ 1.50	$13,000
Acid Sulphate treatment ($^1/_4$ the cleared Area)	2160	m^2	$ 5.00	$10,800
Excavation and disposal to adjacent properties	1000	m^3	$ 4.00	$4,000
Trim and compact subgrade	1405	m^2	$ 2.00	$2,800
Import Clean Fill Material	6001	m^3	$ 18.00	$108,000
Construct drainage berms	6001	m^3	$ 3.50	$21,000
Channel sides turfed, laid rolled and watered	7235	m^2	$ 7.50	$54,300
STRUCTURAL CONCRETE				
32MPa concrete - supply, place, cure & test	250	m^3	$ 160.00	$40,000
Reinforcement - F72 mesh	1405	m^2	$ 8.00	$11,200
ROADWORKS & ASSOCIATED DRAINAGE				
Box culverts 3600x600x2 (Church Street)	40	m	$ 840.00	$33,600
Installation of culverts - labour & plant	40	m	$ 500.00	$20,000
Pipe culverts for basin outlets (Lake Rd, Moramba Ave)	40	m	$ 120.00	$4,800
- Supply and Place				
DIVERSION OF LOCAL (CLEAN) RUNOFF				
Channel through high point to allow drainage to east (Approx 100m in length)				
Clearing and Grubbing	2000	m^2	$ 1.50	$3,000
Acid Sulphate treatment ($^1/_4$ the cleared Area)	500	m^2	$ 5.00	$2,500
Excavation and disposal to adjacent properties	0	m^3	$ 4.00	$0
Trim and compact subgrade	220	m^2	$ 2.00	$400
Import Clean Fill Material	405	m^3	$ 18.00	$7,300
Construct drainage berms	405	m^3	$ 3.50	$1,400
Channel sides turfed, laid rolled and watered	900	m^2	$ 7.50	$6,800
SERVICES RELOCATION				
High Pressure Gas Main 150mm dia	1	each	$ 40,000.00	$40,000

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TUGGERAH STATION INDUSTRIAL AREA
DETAILED COST ESTIMATE
TRUNK DRAINAGE WORKS AND TREATMENT FACILITIES
OPTION 1

DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
ISCELLANEOUS ITEMS				
ennis Academy Drainage	1	item	$ 5,000.00	$5,000
rovision to drain Bryant Rd beyond Channel	3	each	$ 5,000.00	$15,000
Construction Sub-Total				$800,000
ESIGN	$800,000	%	5%	$40,000
ROJECT MANAGEMENT & ADMINISTRATION	$800,000	%	7%	$56,000
ONTINGENCIES	$800,000	%	10%	$80,000
Project On-Cost Sub-Total				$176,000
AND ACQUISITION				
roperty types 1 - 2	11250	m^2	$ 20.00	$225,000
roperty types 3	0	m^2	$ 50.00	$0
roperty types 4 - 5	4000	m^2	$ 25.00	$100,000
roperty types 6 - 7	4600	m^2	$ 25.00	$115,000
rea not costed on Council provided information	23100	m^2	$ 25.00	$577,500
nformed Roads	400	m^2	$ 5.00	$2,000
egal and Administration Costs	$1,019,500	%	5%	$50,975
Land Acquisition Sub-Total				$1,070,475
ROVISION FOR GST	$2,046,475	%	10%	$205,000
PROJECT TOTAL				**$2,250,000**

SUMMARY TABLE

PRELIMINARIES & TEMPORARY WORKS	$	85,000
WETLANDS CONSTRUCTION	$	310,000
DRAINAGE CHANNEL EARTHWORKS	$	214,000
STRUCTURAL CONCRETE	$	51,000
ROADWORKS & ASSOCIATED DRAINAGE	$	58,000
DIVERSION OF LOCAL (CLEAN) RUNOFF	$	21,000
SERVICES & MISCELLANEOUS	$	60,000
Construction Sub-Total	$	800,000
LAND ACQUISITION	$	1,070,000
DESIGN, PROJECT MANAGEMENT & CONTINGENCIES	$	176,000
Project On-Cost Sub-Total	$	1,246,000
PROVISION FOR GST	$	205,000
PROJECT TOTAL		**$ 2,250,000**

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TUGGERAH STATION INDUSTRIAL AREA
DETAILED COST ESTIMATE
TRUNK DRAINAGE WORKS AND TREATMENT FACILITIES
OPTION 2

CHANNEL 1 DIMENSIONS		CHANNEL 2 DIMENSIONS	
bank slope 1 in x	5	bank slope 1 in x	5
bottom width (m)	2	bottom width (m)	1
depth (m)	0.9	depth (m)	0.7
length (m)	245	length (m)	515

DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
PRELIMINARIES				
Site establishment	1	item	$ 20,000.00	$20,000
Sedimentation and erosion control	1	item	$ 15,000.00	$15,000
Environmental Testing	1	item	$ 30,000.00	$30,000
TEMPORARY WORKS				
Access Track & Hard Stand Area	4000	m^2	$ 5.00	$20,000
- lime stabilise existing soil				
WETLANDS CONSTRUCTION				
Clearing and Grubbing	22000	m^2	$ 2.00	$44,000
Excavation & Disposal to adjacent properties	8000	m^3	$ 4.00	$32,000
Drain Acid Sulphate soils and treat runoff	8000	m^3	$ 2.00	$16,000
Treatment of Acid Sulphate soil material	8000	m^3	$ 8.00	$64,000
Provision for Zone Separation (Baffles)	175	m	$ 100.00	$17,500
Planting of Macrophytes	4620	m^2	$ 5.00	$23,100
Construct Hydraulic Outlet Controls	3	item	$ 6,000.00	$18,000
DRAINAGE CHANNEL EARTHWORKS				
Clearing and Grubbing	6815	m^2	$ 1.50	$10,200
Acid Sulphate treatment ($^1/_4$ the cleared Area)	1700	m^2	$ 5.00	$8,500
Excavation and disposal to adjacent properties	500	m^3	$ 4.00	$2,000
Trim and compact subgrade	1005	m^2	$ 2.00	$2,000
Import Clean Fill Material	4508	m^3	$ 18.00	$81,100
Construct drainage berms	4508	m^3	$ 3.50	$15,800
Channel sides turfed, laid rolled and watered	5810	m^2	$ 7.50	$43,600
STRUCTURAL CONCRETE				
32MPa concrete - supply, place, cure & test	190	m^3	$ 160.00	$30,400
Reinforcement - F72 mesh	1005	m^2	$ 8.00	$8,000
ROADWORKS & ASSOCIATED DRAINAGE				
Box culverts 3600x600x2 (Church Street)	0	m	$ 840.00	$0
Installation of culverts - labour & plant	0	m	$ 500.00	$0
Pipe culverts for basin outlets (Lake Rd, Moramba Ave)	0	m	$ 120.00	$0
- Supply and Place				
DIVERSION OF LOCAL (CLEAN) RUNOFF				
Channel through high point to allow drainage to east (Approx 100m in length)				
Clearing and Grubbing	2000	m^2	$ 1.50	$3,000
Acid Sulphate treatment ($^1/_4$ the cleared Area)	500	m^2	$ 5.00	$2,500
Excavation and disposal to adjacent properties	0	m^3	$ 4.00	$0
Trim and compact subgrade	220	m^2	$ 2.00	$400
Import Clean Fill Material	405	m^3	$ 18.00	$7,300
Construct drainage berms	405	m^3	$ 3.50	$1,400
Channel sides turfed, laid rolled and watered	900	m^2	$ 7.50	$6,800
SERVICES RELOCATION				
High Pressure Gas Main 150mm dia	1	each	$ 40,000.00	$40,000

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TUGGERAH STATION INDUSTRIAL AREA
DETAILED COST ESTIMATE
TRUNK DRAINAGE WORKS AND TREATMENT FACILITIES
OPTION 2

DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
ISCELLANEOUS ITEMS				
ennis Academy Drainage	1	item	$ 5,000.00	$5,000
rovision to drain Bryant Rd beyond Channel	3	each	$ 5,000.00	$15,000
rovision for dispersion works at Wetland discharges	3	each	$ 5,000.00	$15,000
Construction Sub-Total				$598,000
ESIGN	$598,000	%	5%	$30,000
ROJECT MANAGEMENT & ADMINISTRATION	$598,000	%	7%	$42,000
ONTINGENCIES	$598,000	%	10%	$60,000
On-Cost Sub-Total				$132,000
AND ACQUISITION				
roperty types 1 - 2	11250	m^2	$ 20.00	$225,000
roperty types 3	0	m^2	$ 50.00	$0
roperty types 4 - 5	2050	m^2	$ 25.00	$51,300
roperty types 6 - 7	4000	m^2	$ 25.00	$100,000
rea not costed on Council provided information	19375	m^2	$ 25.00	$484,400
nformed Roads	0	m^2	$ 5.00	$0
egal and Administration Costs	$860,700	%	5%	$43,035
Land Acquisition Sub-Total				$860,700
ROVISION FOR GST	$1,590,700	%	10%	$159,000
PROJECT TOTAL				**$1,750,000**

SUMMARY TABLE

PRELIMINARIES & TEMPORARY WORKS	$	85,000
WETLANDS CONSTRUCTION	$	215,000
DRAINAGE CHANNEL EARTHWORKS	$	163,000
STRUCTURAL CONCRETE	$	38,000
ROADWORKS & ASSOCIATED DRAINAGE	$	-
DIVERSION OF LOCAL (CLEAN) RUNOFF	$	21,000
SERVICES & MISCELLANEOUS	$	60,000
Construction Sub-Total	$	598,000
LAND ACQUISITION	$	861,000
DESIGN, PROJECT MANAGEMENT & CONTINGENCIES	$	132,000
On-Cost Sub-Total	$	993,000
PROVISION FOR GST	$	159,000
PROJECT TOTAL		$ 1,750,000

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STAFF MEMORANDUM

TRW
F40/02055

November 2 2000

Mrs B Rumbel - Acting Director Strategic Planning

TUGGERAH STATION AREA - FLOOD AND DRAINAGE STUDY

RECOMMENDATION

1 That the area be developed with a drainage scheme as outlined in the consultant's report of October 2000 and modified as shown on Drawings 12136-1,2 subject to the outcome of the exhibition of the Amended Wyong District Contributions Plan.

2 That endorsement be given to the action taken to exhibit the Contributions Plan.

3 That the consultant's report and this report be included in the material exhibited with the Contributions Plan.

The consultants, Webb McKeown and Associates Pty Ltd, have submitted the report "Tuggerah Station Area Revised Drainage Concept Design" (F00-2) dated October 2000 following an earlier report "Tuggerah Station Area Drainage Concept Review" (F00-1) in March 2000. The March report found that it was not economically feasible to revise the pre-existing drainage concept for the area and to incorporate stormwater treatment facilities.

The October report has presented a feasible drainage concept which:

1 Keeps within environmental constraints; and

2 Incorporates water treatment facilities; but

3 Involves considerable development costs both for community works and for land filling; and

4 Has effect on floods of 200-year average recurrence interval but not smaller floods;

5 Requires land acquisition for drains and for one of the constructed wetlands;

6 Requires Council land for the other constructed wetland(s); and

7 Requires the developable land to be filled approximately 1 metre, mainly to provide additional slope on this very flat land, and partly to raise the eastern portion of the land above 100 year ARI flood levels from Wyong River.

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Page 2

The report includes estimated costs for all the works and land acquisitions required for the Section 94 (Developer Contribution) Plan needed for the area, and sets out levels required for filling. This was done for two options. They are shown on the attached Drawings Nos 12136-1,2 and are compared below in Table 1. Option 2 involves three separate constructed wetlands from which low flows discharge independently to the adjoining land, whereas Option 1 involves two wetlands which are connected by a constructed channel and have their low flows discharge at a common point. The fill required for Option 1 is approximately 0.3 m lower than for Option 2.

TABLE 1			
	Option 1	**Option 2**	
Area of developable land (ha)	19.5	20.1	
Cost of Works and Land per report ($M)	2.25	1.75	
Adjusted cost of Works and Land ($M)	1.59	1.24	
Average cost per hectare for Sec 94 Plan ($)	$81,758	**$61,692**	
Fill height above natural surface (m)	0.7	1	Estimate only
Average cost of fill per ha (@ $10/cu.m)	$ 70,000	$ 100,000	
Total cost per ha for Fill plus Sec 94 Plan	$ 151,758	**$ 161,692**	

The estimated costs given in the consultant's report have been adjusted in Table 1 to :-

a Remove GST which is not to be applied to developer contribution plans;

b Relocate two of the proposed wetlands onto Council's land; and

c Adjust the land costs to conform to recently obtained Valuers estimates.

The adjustments were made in detail to Option 2 and then Option 1 was adjusted by the same factor.

Council's endorsement is sought of the action taken to place on exhibition an amendment to the Wyong District Contribution Plan (the Section 94 Plan) which was prepared on the basis of Option 2.

Despite the fact that Option 1 may be slightly less expensive (subject to final fill volumes and cost), Option 2 is favoured because it involves three separate wetlands which:

a Are better for staging of the development; and

b More closely resemble the natural flow paths in that they each discharge independently to the adjoining floodplain.

The flood-related features of the scheme are set out below. (Both options have similar features).

It should be noted that the study area is in a part of the shire which is subject to complex behaviour of floods coming from any of : direct rainfall on the study area; overflow from Tuggerah Creek which passes through Tuggerah Business Park and the Supa Centre; overspill or backup of floodwater from Wyong River and Tuggerah Lake; or, overflow into Tuggerah Creek from Ourimbah Creek for floods larger than 100 year ARI.

EVENTS UP TO 1 YEAR AVERAGE RECURRENCE INTERVAL (1 YEAR ARI)

All runoff is contained in the drains and passes through temporary storage and then the constructed wetlands for treatment, before discharge onto the adjoining land close to the existing drainage paths and thence towards the SEPP14 wetland and the lakes without adverse effect. It could be that the minor diversion of flow near the developed land could require Council to later redirect some water from the basin outlets for the purpose of maintaining moisture levels near areas of vegetation identified in the environmental investigation.

EVENTS UP TO 5 YEAR ARI

All runoff is contained within the drains but overtops the temporary storage capacities and discharges to the natural flow paths.

EVENTS UP TO 100 YEAR ARI

a In the study area:

Runoff above 5 year ARI overtops the drains at designated locations and discharges to the natural flow paths.

b In Wyong River or Tuggerah Lakes:

Most of the study area exists above these flood levels and the proposed fill puts the remainder above them also. The existing levels of Lake Road near the eastern section of the study area are approximately 0.8m [i] below these flood levels.

c In Ourimbah Creek:

No overflow from Ourimbah Creek is expected up to 100 year ARI events.

EVENTS ABOVE 100 YEAR ARI UP TO 500 YEAR ARI

a In the study area:

The proposed fill in Bryant Drive would tend to confine these very rare events to the road reserve and nearby carpark at the Supa Centre. In that area flood levels would be raised by approximately 0.9m [ii] up to a level about 0.3m [iii] deep in the middle of the carpark but approximately 0.3m below the floor of the Supa Centre.

b In Wyong River or the lakes:

This has not been studied. The effects would be almost shire-wide and would not be worsened by this proposed development.

c In Ourimbah Creek:

There would be significant overflow from Ourimbah Creek, but for events up to 500 year ARI the overflow is expected to not enter the study area. The overflow is expected to be confined to the Tuggerah Business Park and the Supa Centre sites.

Page 4

PROBABLE MAXIMUM FLOOD (PMF)

In a PMF event the overflow from Ourimbah Creek would severely effect many areas including Berkeley Vale Industrial Area, Tuggerah Business Park and the Supa Centre and this study area. Wyong Road would be cut at the Bryant Drive intersection to a depth of approximately 1m [iv]. The proposed development would cause flood levels in the study area to be 0.5 m [v] deeper than otherwise, but this should be considered in light of the extreme rarity of such an event and the severe effects of a PMF event even if this development did not proceed.

T R Wallace
DESIGN ENGINEER (FLOODING)

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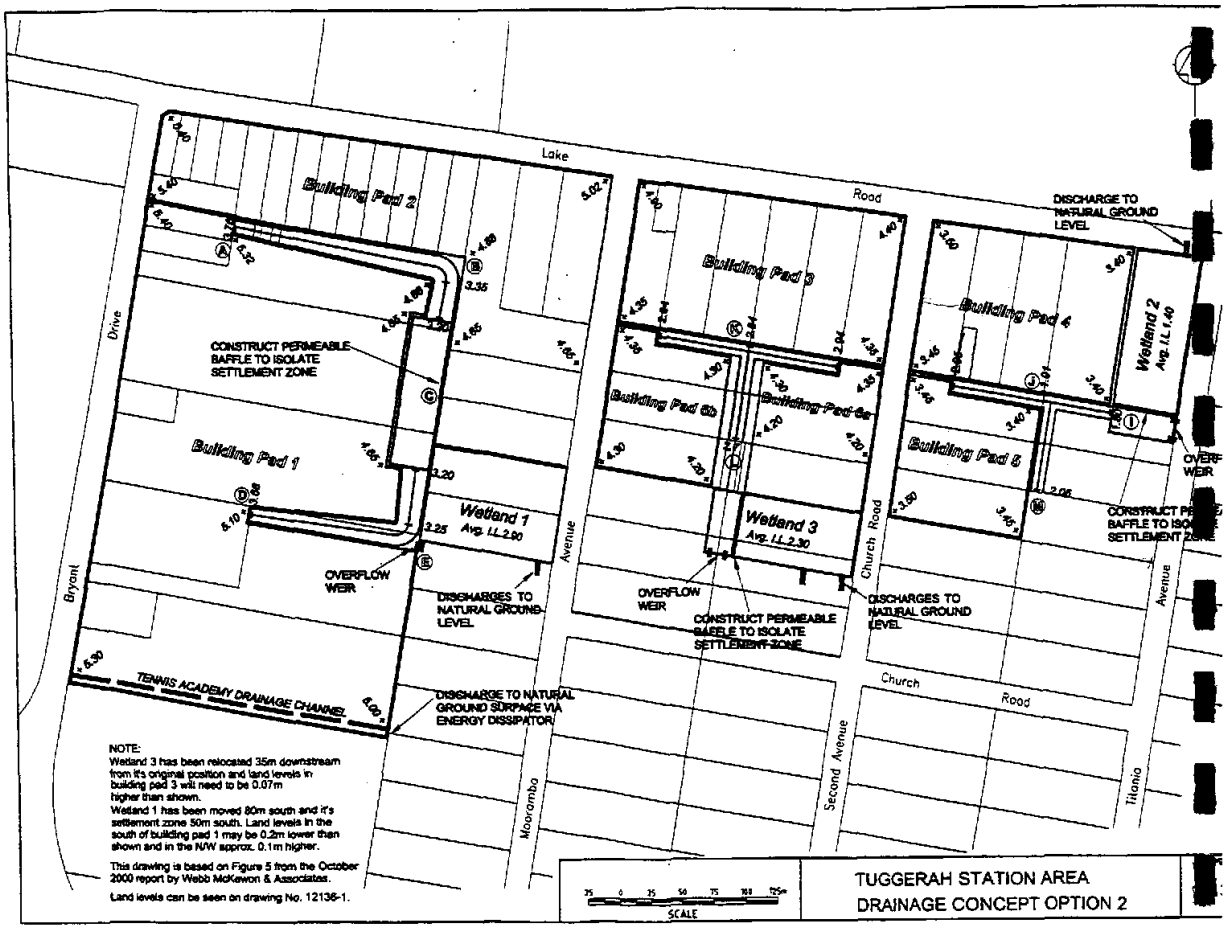
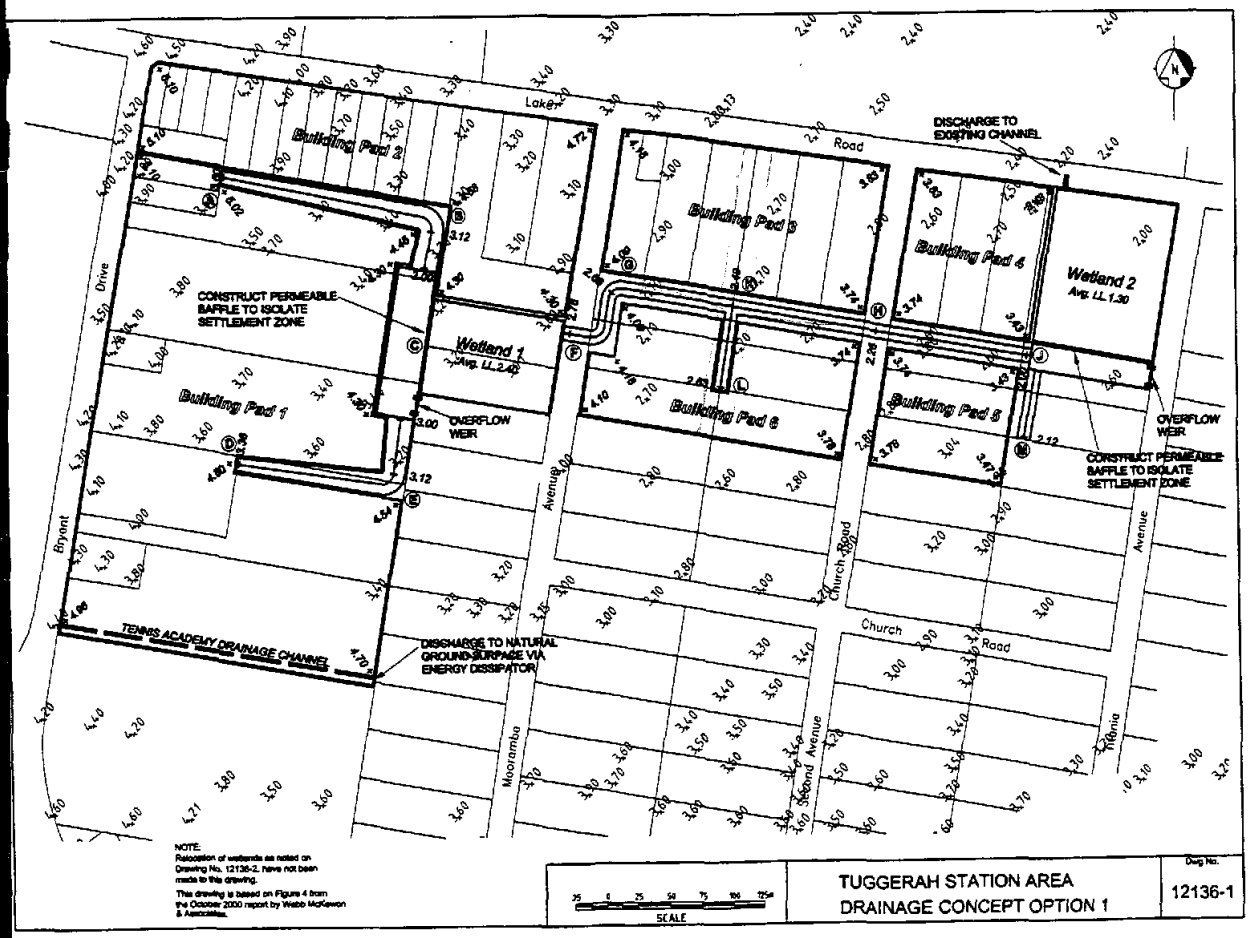
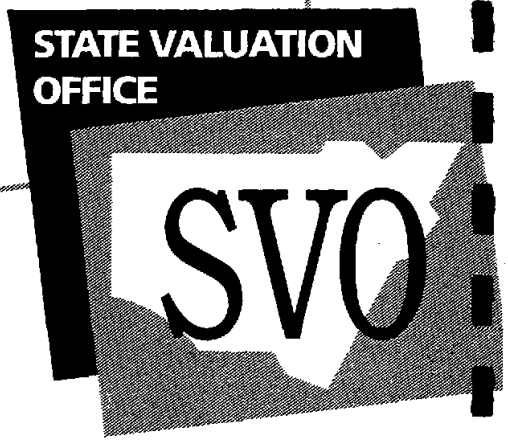

Lake
Road
Building Pad 2
Building Pad 1
Building Pad 3
Building Pad 4
Building Pad 5
Building Pad 6a
Building Pad 6b
Wetland 1
Avg. I.L 2.90
Wetland 2
Avg. I.L 1.40
Wetland 3
Avg. I.L 2.30
CONSTRUCT PERMEABLE BAFFLE TO ISOLATE SETTLEMENT ZONE
OVERFLOW WEIR
DISCHARGES TO NATURAL GROUND LEVEL
DISCHARGE TO NATURAL GROUND LEVEL
DISCHARGE TO NATURAL GROUND SURFACE VIA ENERGY DISSIPATOR
TENNIS ACADEMY DRAINAGE CHANNEL
Bryant Drive
Avenue
Church Road
Second Avenue
Titania
Moorambo
NOTE:
Wetland 3 has been relocated 35m downstream from it's original position and land levels in building pad 3 will need to be 0.07m higher than shown.
Wetland 1 has been moved 80m south and it's settlement zone 50m south. Land levels in the south of building pad 1 may be 0.2m lower than shown and in the N/W approx. 0.1m higher.
This drawing is based on Figure 5 from the October 2000 report by Webb McKeown & Associates.
Land levels can be seen on drawing No. 12136-1.
SCALE
TUGGERAH STATION AREA
DRAINAGE CONCEPT OPTION 2


Lake Road
Building Pad 1
Building Pad 2
Building Pad 3
Building Pad 4
Building Pad 5
Building Pad 6
Wetland 1
Wetland 2
Avg. LL 2.40
Avg. LL 1.30
CONSTRUCT PERMEABLE BAFFLE TO ISOLATE SETTLEMENT ZONE
OVERFLOW WEIR
DISCHARGE TO EXISTING CHANNEL
TENNIS ACADEMY DRAINAGE CHANNEL
DISCHARGE TO NATURAL GROUND SURFACE VIA ENERGY DISSIPATOR
Bryant Drive
Mooramba Avenue
Church Road
Second Avenue
Avenue
NOTE:
Relocation of wetlands as noted on Drawing No. 12136-2, have not been made to this drawing.
This drawing is based on Figure 4 from the October 2000 report by Webb McKeown & Associates.
SCALE
TUGGERAH STATION AREA
DRAINAGE CONCEPT OPTION 1
Dwg No.
12136-1

State Valuation Office



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REPORT FOR

WYONG SHIRE COUNCIL

CURRENT MARKET VALUE

INDUSTRIAL 4(D) LAND

AT TUGGERAH.

OUR REFERENCE: AA 13806
YOUR REFERENCE: T40/08900

TABLE OF CONTENTS

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DATE OF INSPECTION 1
DATE OF VALUATION 1
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TOWN PLANNING 1
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MARKET EVIDENCE 2
RATIONALE 3
BASIS OF VALUATION 3
DISCLAIMER 3
VALUATION 4
REPORT PREPARED BY: 4

ANNEXURES

Annexure 1 ..... Location Map
Annexure 2 ..... Site Plan

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INSTRUCTIONS

The Wyong Shire Council, in a letter of instruction dated 16th October, 2000, request a current market value of the Industrial 4(d) – Special Industrial Business Zone land at Tuggerah to establish a drainage contribution rate for future development of land in this area. The market value of the land shall be provided as a rate per square metre.

DATE OF INSPECTION

23rd October, 2000.

DATE OF VALUATION

23rd October, 2000.

LOCATION

Lake Road and Church Road, Tuggerah.

LAND DESCRIPTION

The land is generally level, with a tendency to be low lying. Much of the land is either open or covered by a light regrowth of Coastal Heath.

All of this area is subject to flooding with regard to the 1:100 year flood level.

TOWN PLANNING

The majority of the land is zoned Industrial 4(d) – Special Industrial Business Zone and the remainder is zoned Special Uses 5(a) – Sewerage Buffer Zone under the Shire of Wyong Local Environmental Plan, 1991, as amended, Government Gazetted 15th February, 1991.

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SERVICES

There is town water supply to Lake Road and part of Church Road. The surrounding area has both electricity and telephone services. This area lacks sewerage.

MARKET EVIDENCE

Industrial land at Tuggerah:

1) Lake Road, Tuggerah.
Lots 10 & 11 DP 4008.
$185,000. C. 05/11/99. Area 8,644m².
Vacant land. Corner of Church Road. Fenced. Tar sealed road. Flood liable . Shows $21.40/m².

2) Lot 65 Church Road, Tuggerah.
Lot 65 DP 4008.
$67,500. C. 23/03/99. Area 4,047m².
Vacant land. Fenced. Tar sealed road. Flood liable. Shows $16.70/m².

3) Lot 66 Church Road, Tuggerah.
Lot 66 DP 4008.
$60,000. C. 29/09/99. Area 4,047m².
Vacant land. Fenced. Tar sealed road. Flood liable. Shows $14.88/m².

4) 3 – 7 Bryant Road, Tuggerah.
$625,000 C. 13/08/99 Area 3.31 hectares.
Vacant land. Opposite "Supa Centa". Level. Tar sealed road. Flood affected. Shows $18.8/m².

Flood affected land with no building right:

5) 62 Dulwich Road, Erina.
Lot 15 Section 11 DP 2163.
$10,000. C. 05/04/00. Area 518.5m².
Vacant land. Flood liable. Purchased by Gosford Council. Shows $19.2/m².

6) 105 Maliwa Road, Narara.
Lot 32 DP 239044.
$8,000. C. 11/05/00. Area 531.1m².
Vacant land. Tar sealed road. Flood liable. Purchased by Gosford Council. Shows $15/m².

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7) Taylor Road, Lisarow.
Lot 2 DP 869708.
$120,000. C. 24/07/98. Area 1.136 hectares.
Adjoining owner sale. All flood liable and land locked. Shows $10.50/m².

8) Orchard Road, Ourimbah.
Lot 26 DP 2877.
$115,000. C. 16/02/99. Area 3.9 hectares.
Cleared. Level. Half subject to flooding. No building right. Shows $3/m².

RATIONALE

The sales evidence indicates a strong rise in the market for land zoned 4(d) in the Tuggerah area over the past 2 years. The most recent sales indicate a market rate of $22/m² for a 8,644m² site. This rate appears reasonable as it is only half the rate on similar land in Joule Place Tuggerah West sold over the same period. Therefore a rate of $22/m² appears reasonable for this class of land.

The unzoned roads that adjoin the 4(d) land should gain a similar rate. Where the adjoining zone is Special Uses 5(a) – Sewerage Buffer a rate of $7.50/m² is considered reasonable in reference to the limited sales evidence listed above.

BASIS OF VALUATION

This valuation is made on the assumption of the fee simple of the land given vacant possession.

DISCLAIMER

This valuation is for the use of the Wyong Shire Council to whom it is addressed and for no other purpose. No responsibility is accepted to any third party who may use or rely on the whole or any part of the content of this valuation.

VALUATION

As at the date of valuation, 23rd October, 2000, the current market value of various zoned land at Tuggerah for the establishment of a drainage contribution rate for future development of the area, as a rate per square metre, is assessed as follows:

1) Land zoned Industrial 4(d).
   Twenty Two Dollars Per Square Metre ($22/m²).

2) Land currently unzoned roadway.
   Seven Dollars and Fifty Cents Per Square Metre ($7.50/m²).

REPORT PREPARED BY:

Mike Nicholson AAPI (Val)
Certified Practising Valuer
Registered Valuer No. 2883
For the General Manager

STATE VALUATION OFFICE SVO
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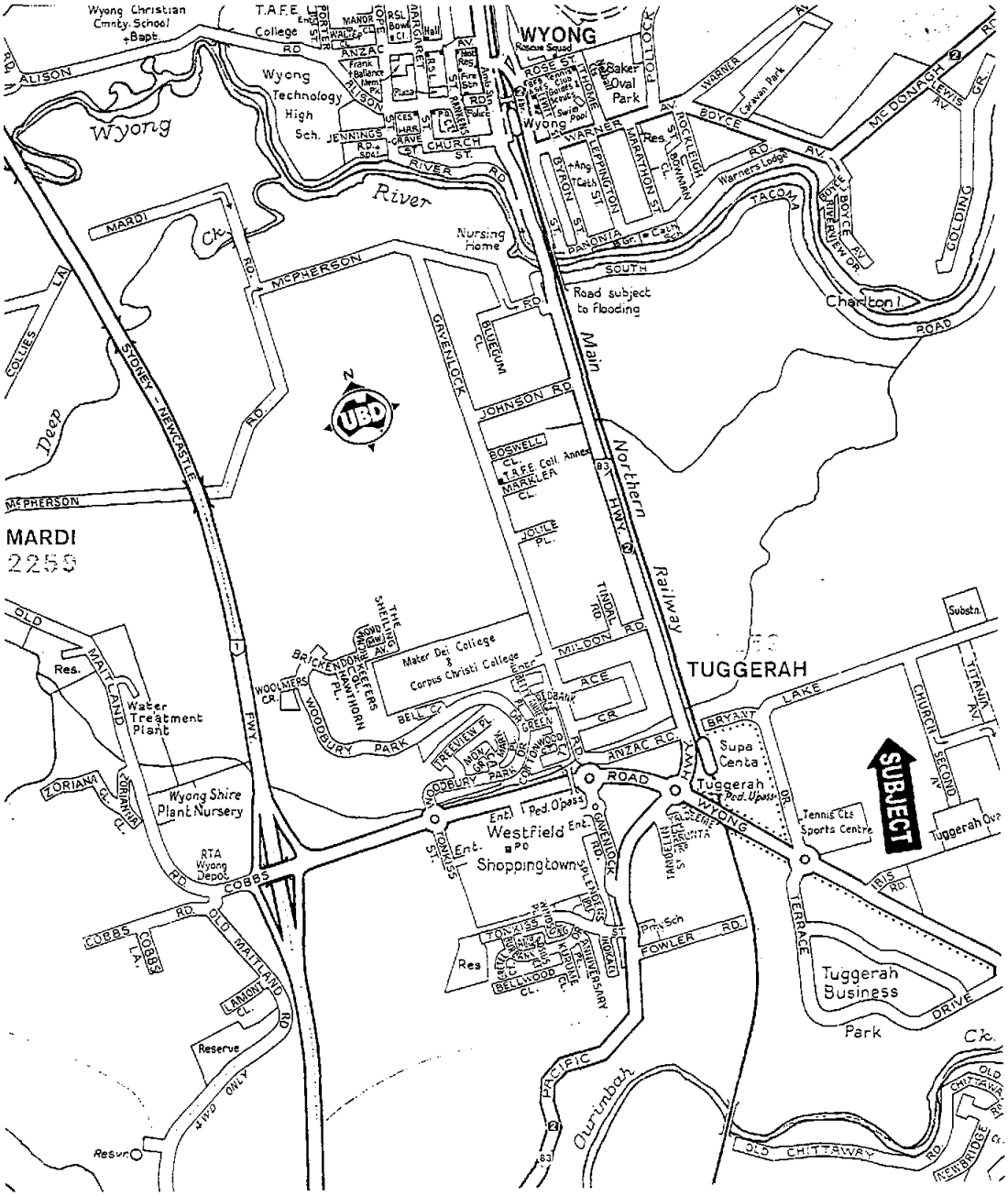
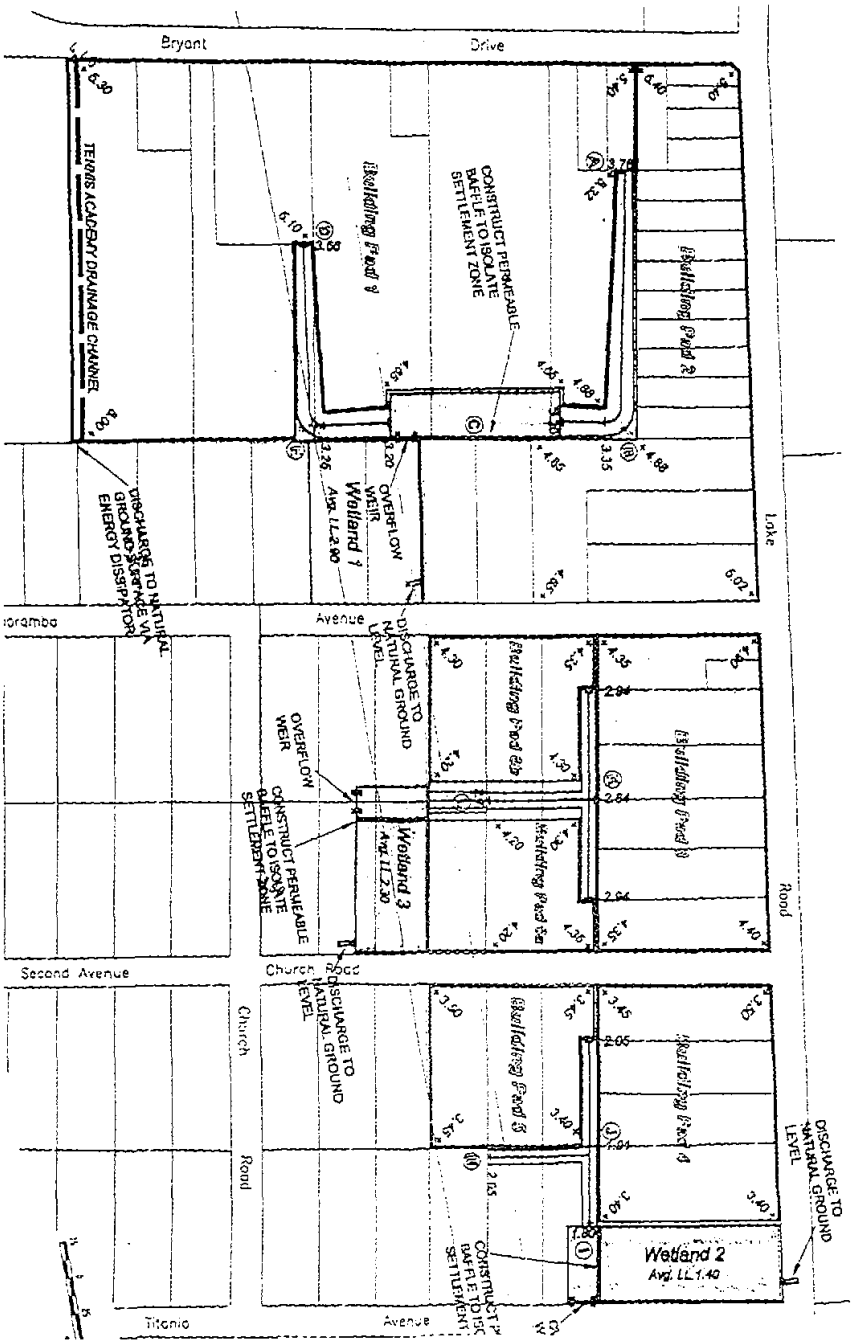
State Valuation Office AA 13806

ANNEXURE 1
LOCATION MAP


WYONG
TUGGERAH
MARDI
2259
Wyong
River
Deep Ck.
Main Railway
Northern Hwy 83
Sydney - Newcastle Fwy
Road subject to flooding
Charlton Road
Wyong Christian Cmnty School +Bapt.
T.A.F.E. College
Wyong Technology High Sch.
Nursing Home
Baker Oval Park
Warners Lodge
Mater Dei College & Corpus Christi College
T.A.F.E. Coll. Annex
Water Treatment Plant
Wyong Shire Plant Nursery
RTA Wyong Depot
Reserve
Westfield Shoppingtown
Supa Centa
Tuggerah Ped. Upass
Tennis Cts Sports Centre
Tuggerah Business Park
Tuggerah Ov
Substn.
SUBJECT
Ourimbah
Pacific
Old Chittaway Rd
Old Maitland Rd
Cobbs Rd
Anzac Rd
Lake
Bryant
Church
Second
Terrace
Fowler Rd
Ibis Rd
Tonkiss St
Gavenlock Rd
Johnson Rd
McPherson Rd
Mardi Ck.
Mildon Rd
Tindal Rd
Ace
Bosnell Cl.
Markley Cl.
Joule Pl.
Bluegum Cl.
Woodbury Park
Freeview Pl.
Bell Cr.
Green Cl.
Townwood Cl.
Brickendon Cl.
Woolmers Cr.
Collies Ln.
Sydney - Newcastle Rd
Rose St.
Warner Av.
Boyce Rd
Mc Donagh Av.
Colding Gr.
Byron St.
Pandora Cr.
Tacoma Cr.
Rockleigh Cl.
Bowman Cl.
Marathon St.
Lethington St.
Riverview Dr.
Lewis Gr.
Titania Av.
Zoriana Gl.
Coriander Gl.
Lamond Cl.
Cobbs La.
Bellwood Cl.
Tonkiss Cl.
Kirkwood Cl.
Anniversary Cl.
Tanglewood Pl.
Gumnut Cl.
Jennings Rd.
Church St.
River Rd
Alison Rd
Anzac Rd
Ellis Rd
Frank Ballance Memorial Pk
Rotary Park
Rsl Bowl
Rsl Hall
Manor Cl.
Hope St.
Pioneer Park
Wyong Rescue Squad
Wyong Swim Pool
Wyong Tennis Club
Wyong Bowling Club
Wyong Netball Courts
Wyong Skate Park
Wyong Public Sch
Wyong Rsl Sub-Br.
Wyong Rsl Club
Wyong Rsl Sports Club
Wyong Rsl Bowling Club
Wyong Rsl Memorial Pk
Wyong Rsl Memorial Hall
Wyong Rsl Memorial Cl.
Wyong Rsl Memorial Av.
Wyong Rsl Memorial Gr.
Wyong Rsl Memorial Dr.
Wyong Rsl Memorial Pl.
Wyong Rsl Memorial Ct.
Wyong Rsl Memorial Rd.
Wyong Rsl Memorial Ln.
Wyong Rsl Memorial Tce.
Wyong Rsl Memorial Wy.
Wyong Rsl Memorial Cr.
Wyong Rsl Memorial Sq.
Wyong Rsl Memorial Pk.

ANNEXURE 2
SITE PLAN



Client: Wyong Shire Council

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Queanbeyan NSW 2620
(PO Box 1931) (All mail to PO Box)

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Area Manager: Ray Jones
Phone: (02) 4224-8444
Fax: (02) 4224-8448
Level 2 Bailey Place
310 Crown Street
Wollongong NSW 2500
(PO Box W5 Wollongong West 2500)

TECHNICAL REPORT No. 1991
CONTRIBUTIONS PLAN No. 1 - WYONG DISTRICT
ROADS AND INTERSECTIONS

October 2000

1 Scope of Report

Preliminary designs and cost estimates have been prepared as a basis for levying contributions towards the reconstruction of Lake Road and parts of Mooramba Avenue and Church Road, Tuggerah in accordance with Section 94 of the Environmental Planning and Assessment Act. The area covered by this report is shown in Figure 10.1.7.

2 Objectives

The objectives of this report are:

- To identify the roadworks required to cater for future development;
- To provide preliminary cost estimates for these works based on typical designs; and
- To determine the basis for an apportionment of cost to Council and future developments.

3 Scheme Details

The roadworks identified in this report are required to provide access to future industrial developments in the area east of Bryant Drive, Tuggerah. The required roadworks are listed below and include kerb and gutter and stormwater drainage :

I Half-road reconstruction of Lake Road east of Bryant Drive.

II Full width reconstruction of Mooramba Avenue from Lake Road 230 metres south.

III Full width reconstruction of Church Road from Lake Road 230 metres south.

4 Design Criteria

The design standards for road reconstruction and stormwater drainage adopted in this report are Wyong Council's "Engineering Requirements for Development" for industrial developments.

Pavement details adopted are:

Wearing Course	50 mm AC (14)
Base Course	150 mm DGB 20
Sub-base Course	150 mm DGS 20
Subgrade	300 mm washed sand

5 Cost Estimates

The total cost of the works identified in this report is $1,152,748.

The cost estimates for the works are based on Wyong Council unit rates current at October 2000 and include the following:

Site Establishment (8%)
Survey, investigation and design (10%)
Supervision (10%)
Contingencies (20%)

A detailed cost estimate sheet is included in the report as Figure 2.

R J Day
ASSISTANT TRANSPORTATION ENGINEER

eliasson-K:\TRNSPORT\KEEP\CONTRPL\TECH1991.DOC\2
02/11/2000

WYONG COUNCIL ESTIMATE

Job Name: LAKE ROAD, CHURCH ROAD & MOORAMBA AVE, TUGGERAH. File No:
Job No.: Disc No:

Estimator : R.DAY Date: 20-Oct-00

ITEM	DESCRIPTION	QUANTITY		UNIT	RATE	AMOUNT
1	Provision for traffic			item		$10,000.00
3	Supply & lay re-inf. conc. pipes					
3l	375 mm size class 4		800	m	$148.40	$118,720.00
5	Supply & lay subsoil drainage		1240	m	$20.00	$24,800.00
12c	Double grate with < = 1.8 E.K.I		20	each	$900.00	$18,000.00
14a	Excavation O.T.R		6883	cu.m	$4.00	$27,532.00
16	Haulage to spoil site km	5	8950	cu.m	$3.88	$34,713.63
16a	Spread spoil at spoil site		59650	sq.m	$0.50	$29,825.00
18	Trim & compact subgrade		10590	sq.m	$0.80	$8,472.00
20	Supply select fill - 300mm sand		3177	cu.m	$30.00	$95,310.00
21	Spread & compact select fill		10590	sq.m	$0.90	$9,531.00
22	Bidim A24 Geotextile		10590	sq.m	$1.60	$16,944.00
27a	Supply gravel-Blue	34	1588	cu.m	$32.78	$52,054.64
27di	Supply BLUE 2% triblend	34	1588	cu.m	$42.57	$67,601.16
28	Spread-compact gravel 100-150mm		21180	sq.m	$0.90	$19,062.00
31	Final trim & compaction		10590	sq.m	$0.80	$8,472.00
32b	Kerb & gutter >250M		1240	m	$52.00	$64,480.00
36	Footpath filling & trim		5950	sq.m	$3.30	$19,635.00
52	Prime seal		9185	sq.m	$1.35	$12,399.75
53b	A.C Paving = 50 mm		9185	sq.m	$11.00	$101,035.00
58	Supply & lay turf		5950	sq.m	$2.00	$11,900.00
60	**SUB TOTAL**					**$750,487.18**
61	Establishment 8%					$60,038.97
62	Survey, Investigation & Design 10%			item		$75,048.72
62a	Supervision 10%			item		$75,048.72
63	Contingencies 20%					$192,124.72
65	**TOTAL**					**$1,152,748**

k:\trnsport\forms\estimate\lake.xls 20/10/20

FIGURE 2.

R A I A ' S P R E M I E R

TUGGERAH BUSINESS PARK

FAXED

WYONG SHIRE COUNCIL
Doc. No.
REC'D. 24 APR 1996
ACT | INFO | DEPT | FILE No.

22 April 1996

Wyong Shire Council
PO Box 20
WYONG NSW 2259

Attention: **Mr D. Cathers**

Dear Sir,

RE: BRYANT DRIVE, TUGGERAH - CONTRIBUTION TO ROADWORKS

We refer to your letter of 13 March 1996, ref: CB:D/0C0915 confirming contributions by Council for the referred to works.

We believe all outstanding matters have been resolved, and request payment by Council to Tuggerah Business Park Pty Ltd the sum of $146,792.00 in settlement of these contributions.

Please contact the undersigned by telephone (02) 532 5470 should you need to discuss this matter.

Yours faithfully,

PATRICK R. HOULAHAN
Project Management Consultant

Copies: S Samuels
B Goldberg
VPN Group Pty. Ltd. Mr M. Mathivanar

F:\Home\WSC\3

TUGGERAH BUSINESS PARK PTY. LTD.
ACN 003 658 473
PHONE: (043) 52 2770 FAX: (043) 52 2977
P.O.BOX 156, BERKLEY VALE 2261. CNR WYONG AND BRYANT ROADS, TUGGERAH, CENTRAL COAST. N.S.W. 2

CB:D/000915
C Broadfoot

March 13, 1996

MPN Group Pty Ltd
PO Box 443
MILSONS POINT, NSW 2061

Attention Matty Mathivanar

Dear Sir,

BRYANT DRIVE, TUGGERAH - CONTRIBUTION TO ROADWORKS

On the basis of information provided within your Draft document dated February 21, 1996 detailing construction costs for Bryant Drive and with regard to Council's letters dated September 25, 1995 and January 22, 1996 it is confirmed that Council will contribute towards the cost of works as follows:-

a) For the widening of the pavement in Bryant Drive by 4m a contribution of $100,000.

b) For the further widening and kerbing and guttering a contribution of $46,792.

Payment will not be made until such time as finalisation and acceptance of works has occurred and upon submission to Council of satisfactory information and plans outlined in your facsimile to Natcon Pty Ltd dated February 7, 1996 a copy of which was provided to Council.

Yours faithfully,

14/3

D Cathers
DIRECTOR ENGINEERING SERVICES

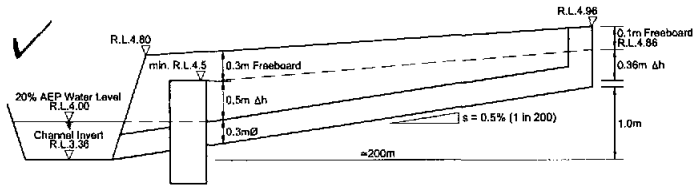


Diagram 3: Typical Hydraulic Considerations for Development Surface Levels

In setting the surface levels around the extremities of the various building pads it has been assumed that a significant proportion of the area will be drained via roof drainage systems with adequate of hydraulic head. Therefore only a nominal head allowance will be required for the critical pits draining smaller surface area portions around the outside edges. The levels shown are therefore the minimum required for hydraulic purposes, and nominally higher levels (up to 200 mm or 300 mm) may be required to satisfy surface grading or other needs. It is difficult to precisely define these details at this feasibility stage as they will ultimately be dependent on the development layout and drainage requirements proposed for the site. Allowances for such nominal increases in surface levels have therefore been incorporated in the hydraulic modelling of the major flood events. Provided these levels are not exceeded to any significant extent then the impacts should be limited to those discussed in Section 6.2.

5.6 Major Flooding

The channel dimensions have been sized to primarily allow for drainage of local runoff in a 20% AEP event. During storms of greater magnitude, the minor drainage system capacity will be exceeded. Stormwater runoff and overland flows from the south will be diverted in a north-easterly direction around the development area. This will particularly be the case if floodwaters from Ourimbah Creek overtop Wyong Road. In such a situation floodwaters entering the study area will need to drain (escape) to the north and east via the road reserves of Mooramba Avenue, Church Road and Titania Avenue. As discussed later in Section 6.2, Ourimbah Creek overflows are not expected to enter this study area for flood events less than the 0.2% AEP (1 in 500 ARI). Filling of the area for development and drainage purposes potentially restricts the through passage of floodwaters in the large to extreme flood events escaping from Ourimbah Creek and flowing through to the Wyong River floodplain. It is therefore essential that provision for overland flow paths be maintained through the developing area. In this regard, Council planning policies require a minimum side setback of 5 m between buildings and boundaries. At least 3 m of these set back areas should be maintained at the existing ground levels and free of any obstructions or landscaping to allow the through passage of floodwaters.

6.2 Major Flooding

Earlier investigations for Ourimbah Creek flooding had suggested that for events greater than the 1% AEP overflows would occur through the study area to the Wyong River floodplain. The previous investigation for the study area (Reference 5) undertook a preliminary assessment of impacts for the extreme PMF scenario and suggested that consideration of intermediate large events (i.e. less than the PMF but just greater than the design 1% case) would be more relevant to assessing potential impacts for large events. The 0.5% and 0.2% AEP events (1 in 200 and 1 in 500 ARI) were therefore selected for this purpose.

In a PMF event, the Ourimbah Creek modelling identified the proportions of total overflows which pass through the Wyong Road bridge opening (for railway overpass and Tuggerah Creek), and that which surcharges the roadway near the Bryant Drive intersection. The recent modelling undertaken for this study (Hyder Consulting) has found that in the 0.5% and 0.2% AEP Ourimbah overflow events, floodwaters only flow through the bridge opening and do not actually surcharge Wyong Road near the Bryant Drive intersection. The subject development area is therefore primarily affected by local runoff with the Ourimbah Creek overflow travelling west of the Supacenta along Tuggerah Creek.

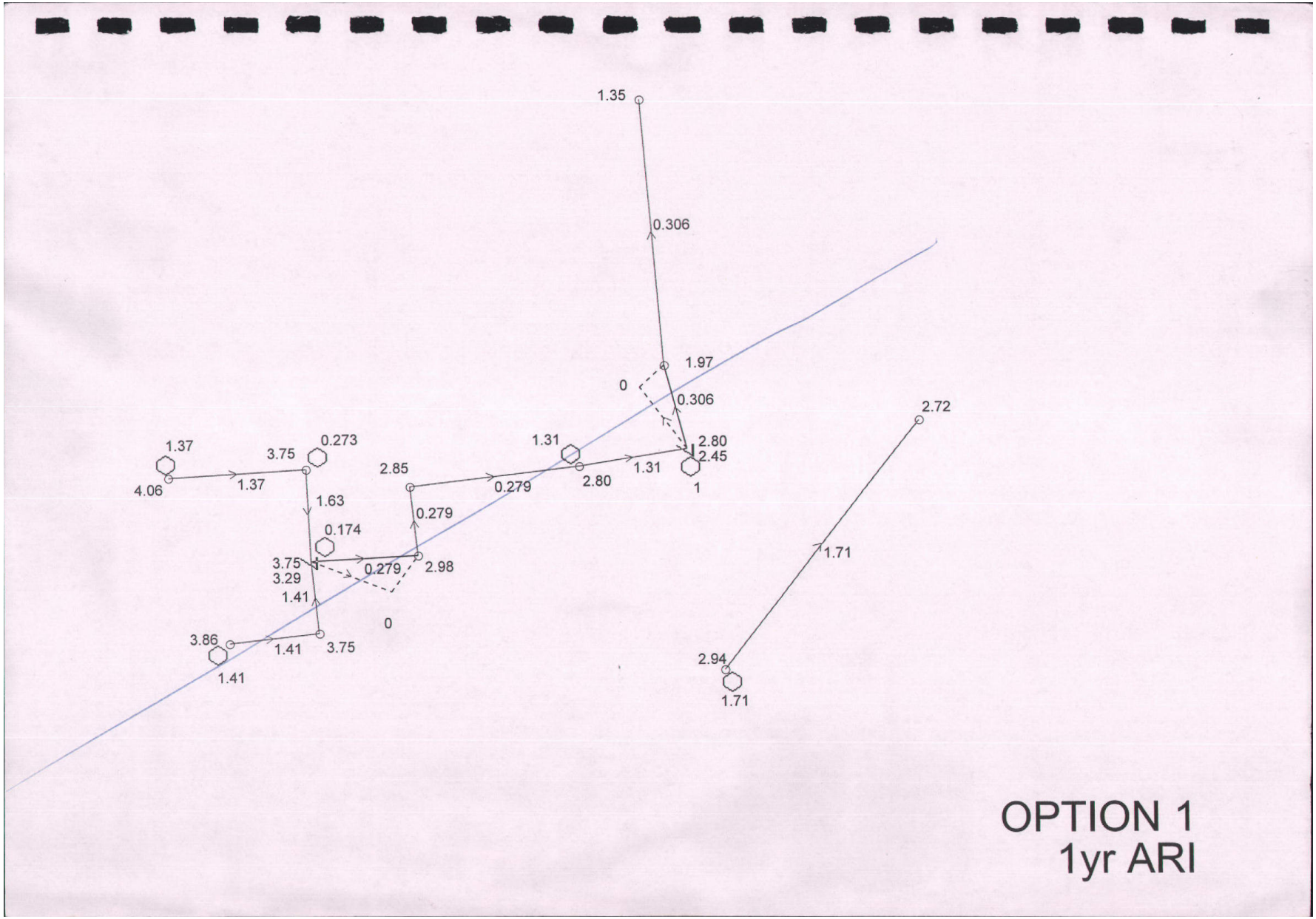
Flood level results for the existing and post development conditions in the 0.5% and 0.2% AEP flood scenarios are present in Table 7.

Table 7: *0.5% and 0.2% AEP Flood Level Results (mAHD)*

Location	Gridpoint (1)	0.5% AEP (1 in 200y)		0.2% AEP (1 in 500y)		PMF	
		Existing	Developed	Existing	Developed	Existing	Developed
Tuggerah Creek Channel (300 m south of Lake Road)	GDRN1200	4.9	4.9	5.3	5.3	7.0	7.0
Bryant Drive (300 m south of Lake Road)	GBRY3	4.2	5.1	4.2	5.2	5.5	6.0
Bryant Drive (130 m south of Lake Road)	GBRY4	3.2	3.2	3.2	3.2	5.5	5.9
Church Road (20 m south of Lake Road)	GIND24	3.2	3.2	3.2	3.2	5.1	5.0
Titania Avenue (50 m south of Lake Road)	GIND12	4.0	5.1	4.1	5.2	5.1	5.1

Note: (1) Gridpoint locations are the same as those shown on Figure 4 of Reference 5.

The results indicate that the estimated flood levels in Bryant Drive would be increased significantly. Such a result is to be expected as the adjoining properties to the east are to be filled and the available flow area would effectively become contained within the Bryant Drive road reserve. The provision of side set backs at ground level (refer Section 5.6) is recommended to facilitate overland flow paths to the open areas in the east and minimise impacts. It should also be noted that the developed flood levels are still less than the existing floor level of RL 5.4 mAHD for the Supacenta.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0.306
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1.37
3.75
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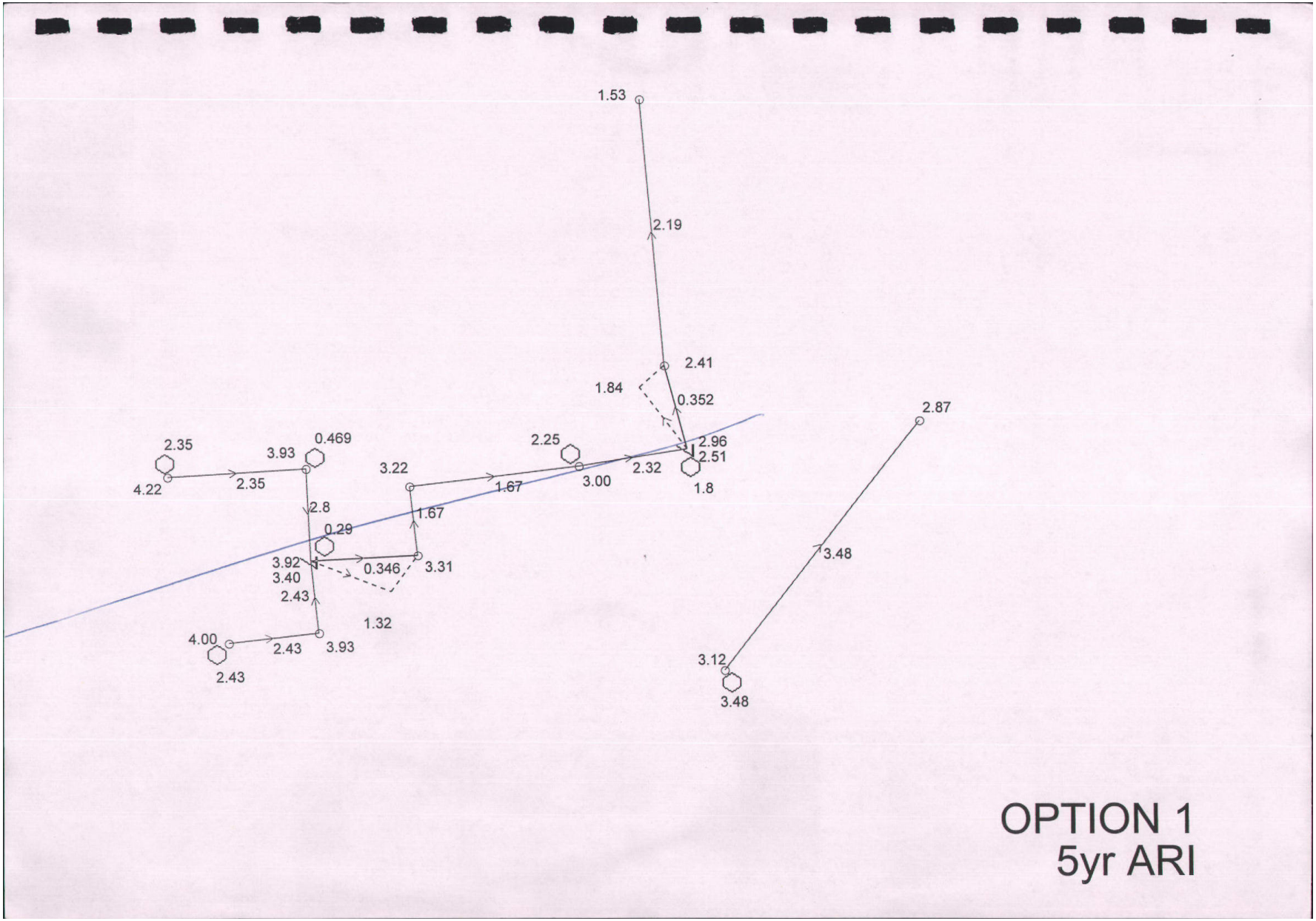
2.80
2.45
2.85
1.31
4.06
1.37
0.279
2.80
1
1.63
0.279
0.174
3.75
0.279
2.98
3.29
1.41
0
1.71
3.86
1.41
3.75
2.94
1.41
1.71
OPTION 1
1yr ARI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3.00
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2.8
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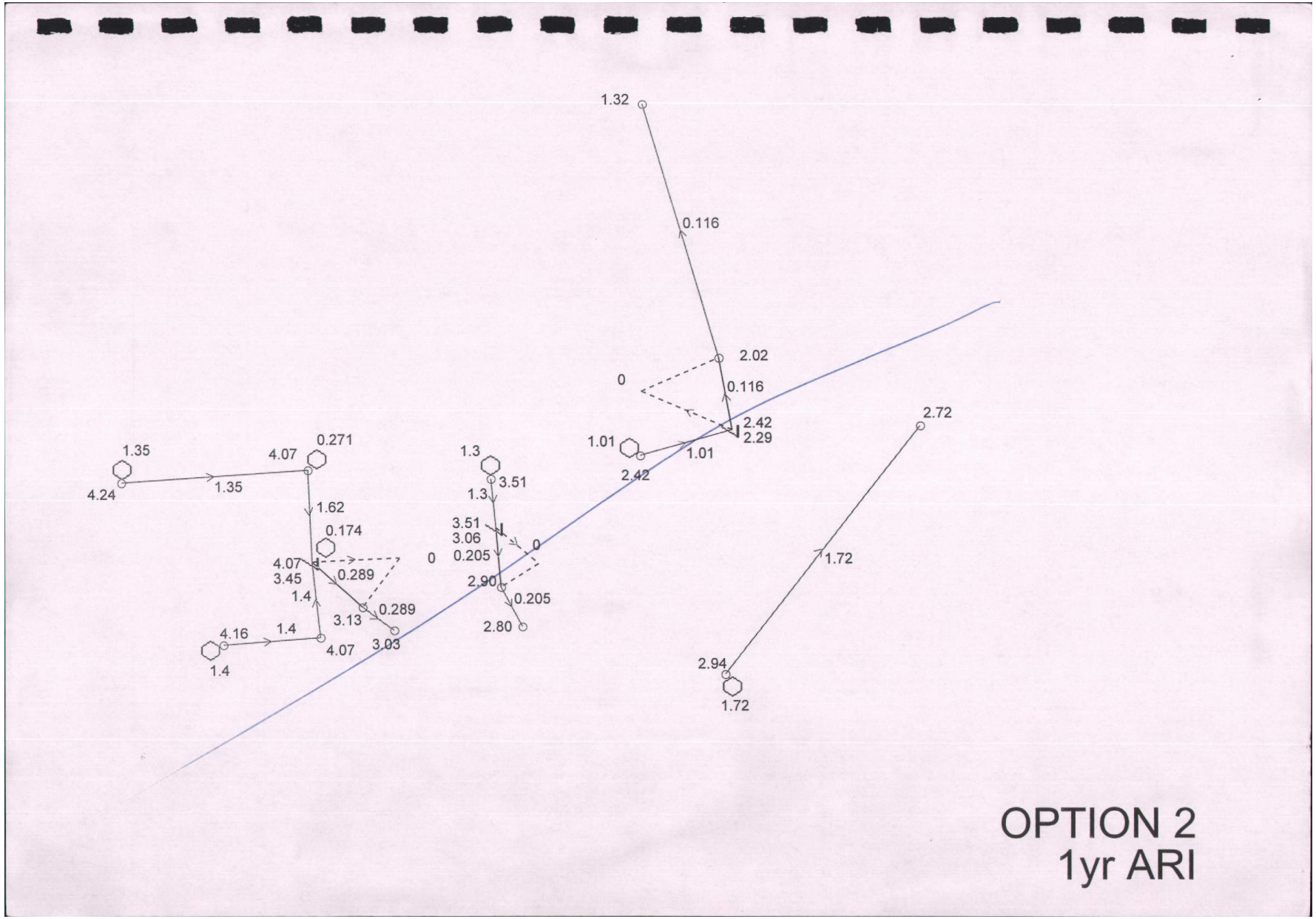
5yr ARI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3.03
4.16
1.4
4.07
1.4
1.3
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1.3
3.51
3.06
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0.205
2.80
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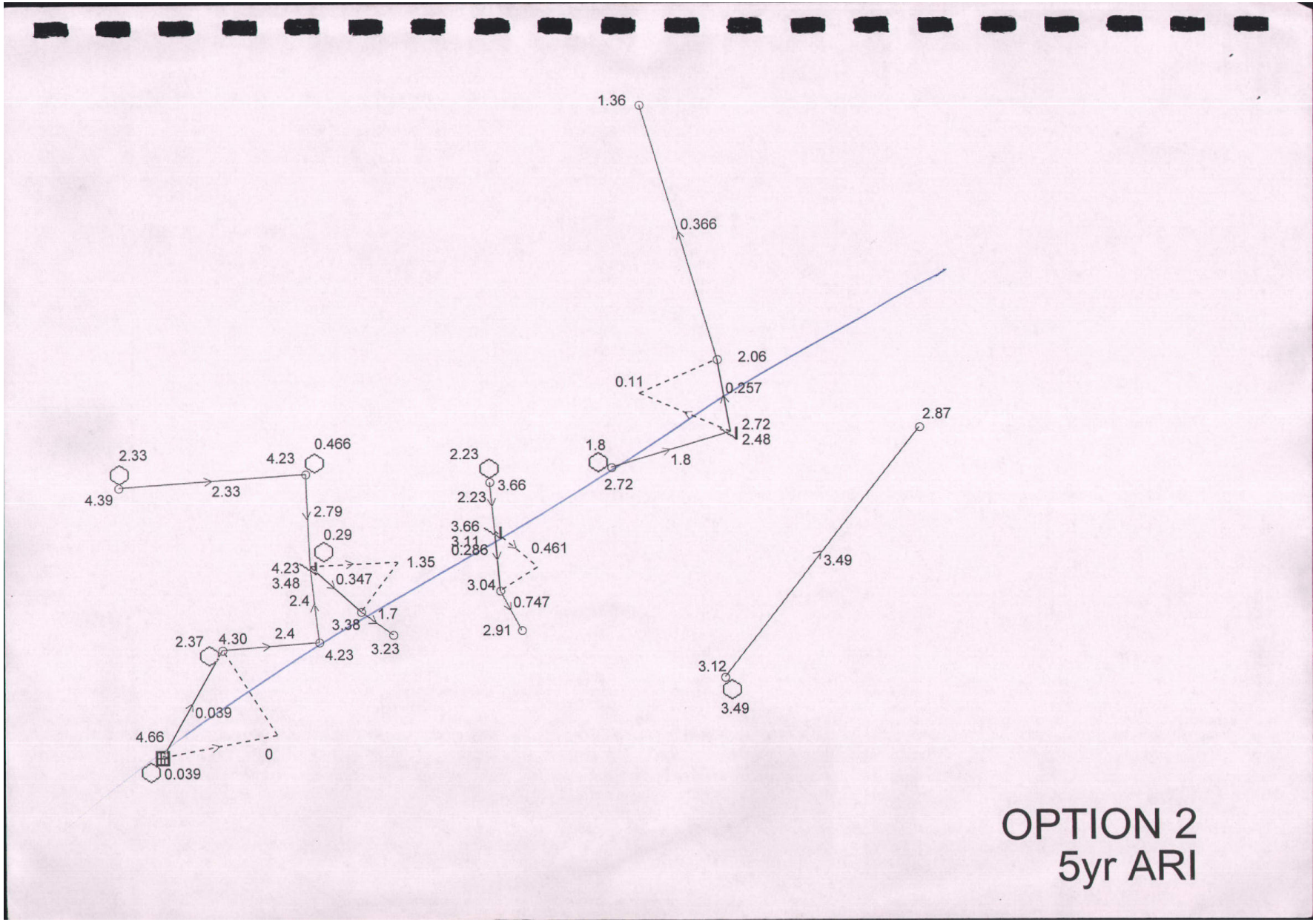
OPTION 2
1yr ARI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2.72
2.33
4.23
0.466
4.39
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2.23
3.66
2.23
2.79
3.66
3.11
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0.461
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4.23
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1.35
0.347
3.04
0.747
2.4
1.7
2.91
3.38
3.49
2.37
4.30
2.4
3.23
4.23
3.12
3.49
0.039
4.66
0
0.039
OPTION 2
5yr ARI

Item No:	4.1
Title:	DA/668/2022 - 55 Mullbong Road, Blackwall - Subdivision into 2 Residential allotments
Department:	Environment and Planning

Central Coast Local Planning Panel

14 March 2024 Local Planning Panel Meeting

Reference: DA/668/2022 - D15973999
Author: K. Singh, Senior Development Planner.Residential Assessments
Section Manager: Ailsa Prendergast, Section Manager. Residential Assessments
Unit Manager: Andrew Roach, Unit Manager Development Assessment
Executive: Alice Howe, Director Environment and Planning

Summary

Council is in receipt of Development Application Number DA/668/2022, seeking development consent for the proposed Subdivision of of Lot A DP 378115 No 55 Mullbong Road, Blackwall into two (2) residential allotments, having proposed site areas of 450m^2 (proposed lot 1) and 578m^2 (proposed lot 2).

The application has been examined having regard to the matters for consideration detailed in Section 4.15 of the *Environmental Planning and Assessment Act 1979* and other statutory requirements with the issues requiring attention and consideration being addressed in the report.

This application was lodged prior to the *Central Coast Local Environmental Plan 2022* (CCLEP 2022) coming into effect on 1 August 2022 and has therefore been assessed under *Gosford Local Environmental Plan 2014* (GLEP 2014).

The application is required to be referred to the Local Planning Panel for determination as the proposed development is accompanied by a *Clause 4.6 Variation Request* as proposed lot 1 does not comply with the Principal Development Standards associated with the subdivision of land, as prescribed by clause 4.1(3) of GLEP 2014.

The application is recommended for approval, subject to conditions.

Applicant	Clare Walker c/ Clarke Dowdle & Associates
Owner	Clare Walker
Application No	DA/668/2022
Description of Land	Lot A DP378115 No 55 Mullbong Road Blackwall
Proposed Development	Subdivision into 2 Residential allotments
Site Area	1,018.0m^2
Zoning	R2 Low Density Residential
Existing Use	Dwelling House
Employment Generation	No
Estimated Value	$50,000.00

Recommendation

1 ***The Panel agrees that the applicant's clause 4.6 written request demonstrates that compliance with the Principal Development Standards associated with the subdivision of land, as prescribed by clause 4.1(3) of the Gosford Local Environmental Plan 2014, would be unreasonable and unnecessary in the circumstances because the proposed development meets the underlying intent of the control of the development standard and is a compatible form of development that does not result in unreasonable environmental amenity impacts, and that there are sufficient environmental planning grounds to justify contravening that development standard.***

Further, the Panel considers that the proposed development will be in the public interest because it is consistent with the objectives of the development standard and the objectives for development within the R2 Low Density Residential zone in which the development is proposed.

2 ***That the Local Planning Panel grant consent to DA/668/2022 for the proposed subdivision of Lot A DP 378115 No 55 Mullbong Road, Blackwall into Two (2) Residential Allotments, subject to the conditions detailed in the schedule attached to the report and having regard to the matters for consideration detailed in Section 4.15 of the Environmental Planning and Assessment Act 1979.***

3 ***That Council advise relevant external authorities of the Panel's decision.***

Key Issues

- Clause 4.6 variation to minimum Subdivision allotment size requirement – GLEP 2014
- Variation to minimum Subdivision allotment size and width requirement – GDCP 2013 Chapter 3.5 - Residential Subdivision
- Allotment shape, size and configuration
- Existing pattern of subdivision in immediate locality

- Character and scenic quality

Precis:

Proposed Development	Subdivision - Two (2) Torrens Title Residential Allotments
Permissibility and Zoning	The proposed development constitutes a Subdivision which is permissible within the prescribed zone with the consent of Council, pursuant to the statutory provisions of Clause 4.13 of *Gosford Local Environmental Plan 2014* (GLEP 2014). The subject site is zoned R2 Low Density Residential under *Gosford Local Environmental Plan 2014* (GLEP 2014).
Current Use	Dwelling House
Integrated Development	Yes – Proposal requires Bush Fire Safety Authority from the NSW Rural Fire Service
Submissions	Nil

Variations to Policies

Clause	Clause 4.1(3) of *Gosford Local Environmental Plan 2014* (GLEP 2014) Clause 3.5.3.2 (b) (i) of *Gosford Development Control Plan (GDCP) 2013 Chapter 3.5 – Residential Subdivision*
Standard	Minimum Subdivision Allotment Size Minimum Subdivision Allotment Width
LEP/DCP	GLEP 2014 - Minimum Subdivision Allotment Size GDCP 2013 Chapter 3.5 Residential Subdivision – Minimum Subdivision Allotment Size and Minimum Subdivision Allotment Width
Departure basis	GLEP 2014 - 18.1% To Minimum Subdivision Allotment Size GDCP 2013 Chapter 3.5 Residential Subdivision - 18.1% To Minimum Subdivision Allotment Size and 11.4 % to Minimum Subdivision Allotment Width

The Site

The subject site is legally identified as Lot A DP 378115 No 55 Mullbong Road Blackwall and has a site area of 1,018m^2. The allotment concerned is irregular in shape and are located on the northern side of Mullbong Road. The allotment concerned is gently sloping and the land falls from the Mullbong Road to the Orange Grove Road.

The subject site currently occupied by a two storey dwelling house and garage that has frontage to Mullbong Road. The subject site also has the added advantage of being a dual frontage allotment, in that the allotment concerned is bounded by Mullbong Road and Orange Grove Road (Figure 1).



Figure 1 - Site and Locality Plan (Subject Site is in Blue)

Mullbong Road and Orange Grove Road are both sealed roads which currently provide access to the residents of this immediate area. The main services of power, water supply and telecommunications are available for connection. The subject site is fully serviced with all essential infrastructure.

The site is identified as being "bushfire prone land" on Council's bushfire maps. The proposal is accompanied by a Bushfire Hazard Assessment Report which was referred to the NSW Rural Fire Service for assessment, as the proposal is defined as Integrated Development within the meaning of the *Environmental Planning and Assessment Act 1979*.

The NSW Rural Fire Service has by correspondence dated 17 August 2022, granted a Bushfire Safety Authority under Section 100B of the *Rural Fires Act 1997*, subject to conditions.

The site is not identified as being affected by the 1% AEP Flood Event.

Surrounding Development

Surrounding development in the immediate vicinity of the subject site is zoned R2 Low Density residential and is predominantly residential in nature. Surrounding developments generally comprises a combination of single and two storey residential developments of varying ages and architecture, all surrounded by well-established trees, and landscaped gardens.

The Proposed Development

Council is in receipt of Development Application Number DA/668/2022, seeking development consent for the proposed subdivision of Lot A DP 378115 No 55 Mullbong Road, Blackwall, into two residential (2) allotments of land, each proposing a site area of 450m^2 (proposed lot 1) and 578m^2 (proposed lot 2) respectively, pursuant to the statutory provisions of Clause 4.1(3) of GLEP 2014 (refer to Figure 2)**.**

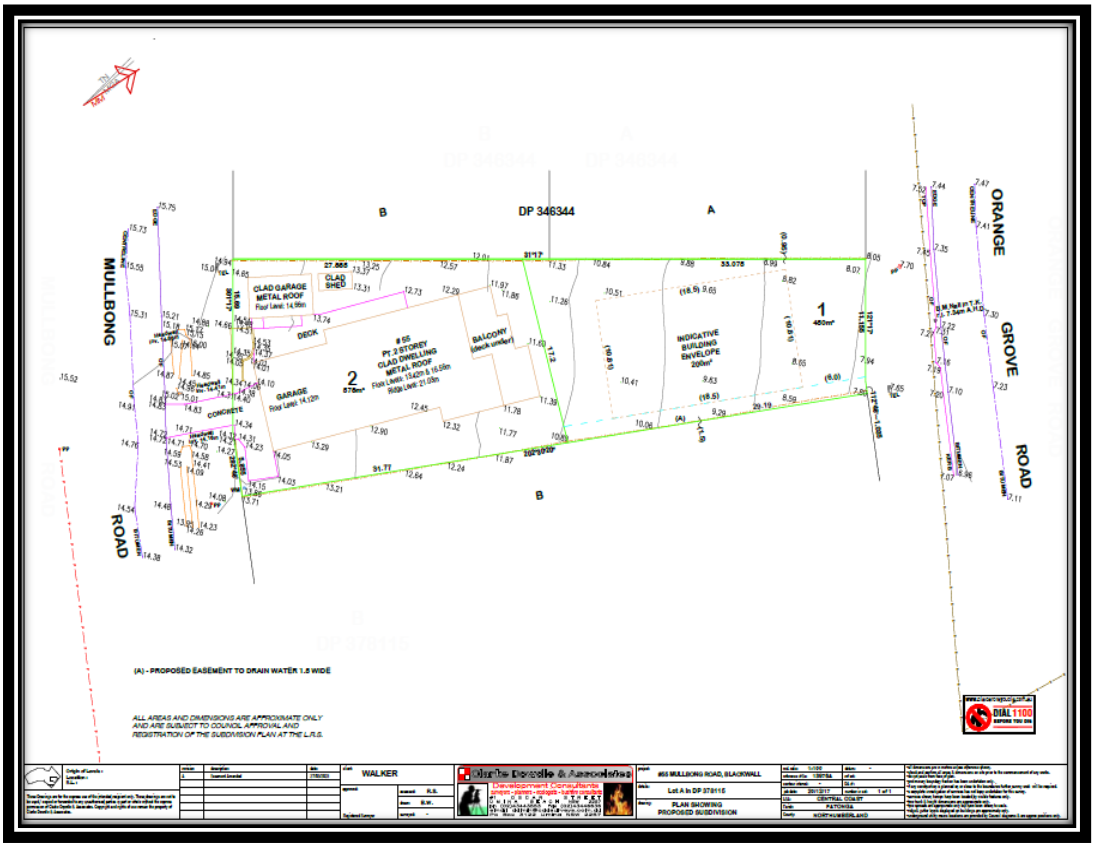


Figure 2 – Plan of Proposed Subdivision

There is presently no numerical development standard contained in GLEP 2014 specifying a minimum width requirement associated with the subdivision of land (unlike the requirements of *GDCP 2013* Chapter 3.5 – Residential Subdivision.)

The summary table depicted provides an overview of the proposal in relation to site area, access provisions and improvements.

GLEP 2014 Summary Table

Lot	Lot Size	Access Provisions	Improvements
1	450m^2	Orange Grove Road	Vacant
2	578m^2	Mullbong Road	Dwelling House

The GLEP 2014 Summary Table indicates that proposed lot 2 complies with the Principal Development Standards associated with the subdivision of land [Minimum Subdivision Lot Size] as prescribed by clause 4.1(3) of GLEP 2014, which in this instance is mapped at 550m^2 per allotment.

However, proposed lot 1 does not comply with the Principal Development Standards associated with the subdivision of land as this allotment proposes a site are of 450m^{2,} and the proposal is accompanied by a *Clause 4.6 Variation Request*, which is further discussed in the body of this report.

Vehicular ingress and egress provisions associated with the existing dwelling house on proposed lot 2 remains unchanged as a result of the proposed Subdivision and will continue to service the existing dwelling house to and from Mullbong Road. The proposed subdivision incorporates a suitable easement for drainage, as depicted on the proposed plan of subdivision in Figure 2.

The general scope of civil construction works that are required in conjunction with the subdivision, are summarized as follows:

Works in the Road Reserve:

a) Construction of concrete footpath 1.5m wide for the full street frontage of the development in Orange Grove Road.
b) Construction of the road verge/footway formation graded at +2% from the top of existing kerb to the property boundary across the full frontage of the site in Orange Grove Road. Construction to include transitions to existing formation either side of the site.
c) Construction of a storm water drainage connection from the development site to Council's storm water drainage system within the road reserve.

Works within the Private Property

a) Construction of interallotment stormwater drainage where stormwater from individual allotments cannot be discharged directly into the proposed street drainage system or existing street drainage system.
b) Construction of storm water drainage connection all existing buildings, structures and impervious areas to the proposed stormwater systems.

History

A Pre-DA Consultation Meeting (Pre DA-Meeting) was conducted on 1 March 2018, involving Council's Technical Assessment staff and the applicant's Town Planning Consultant. A copy of the Pre DA-Meeting Minutes is included as Attachment 6.

ASSESSMENT

Having regard for the matters for consideration detailed in Section 4.15 of the *Environmental Planning and Assessment Act 1979* and other statutory requirements, the assessment has identified the following key issues, which are elaborated upon for the information of the Local Planning Panel.

State Environmental Planning Policy (Resilience and Hazards) 2021

On 1 March 2022 the provisions of the *State Environmental Planning Policy (Coastal Management) 2018* and *SEPP Policy No 55—Remediation of Land* were repealed and incorporated into *State Environmental Planning Policy (Resilience and Hazards) 2021* in accordance with Schedule 3 Transfer of Provisions. The relevant provisions of the SEPP are addressed as follows:

Chapter 2 – Coastal Management

The site is located within the Coastal Use Area and the Coastal Environment Area and is therefore subject to the provisions of subsections 2.10 and 2.11 of Chapter 2 – Coastal Management of *State Environmental Planning Policy (Resilience and Hazards) 2021* ('SEPP RH').

The development is not likely to have an adverse impact on the matters referred to in either Section 2.10 or Section 2.11. The development is not considered likely to cause increased risk of coastal hazards on the site or other land and the site is not subject to the coastal management program for the purposes of Division.5. A summary of considerations is included below.

Section 2.10 - Development on land within the coastal environment area

In accordance with clause 2.10(1) development consent must not be granted unless the consent authority has considered whether the proposed development is likely to cause an adverse impact (see table on following page for considerations).

Section 2.10 SEPP RH considerations

Matters for Consideration	Compliance
(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment	The proposal is not likely to cause adverse impacts on the biophysical, hydrological, or ecological environment.
(b) coastal environmental values and natural coastal processes	The proposal will not impact on the geological and geomorphological coastal processes.
(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014, in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1	The proposal will not result in an adverse impact on the water quality of the marine estate and does not drain to a sensitive lake contained in Schedule 1.
(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms	The proposal will not result in an adverse impact on native vegetation or fauna, undeveloped headlands, and rock platforms.
(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,	The site does not have frontage to any foreshore, beach, headland or waterways.
(f) Aboriginal cultural heritage, practices and places	There are no identified aboriginal cultural heritage items on the site.
(g) the use of the surf zone.	Not Applicable. No frontage to any beach/surf zone.

The assessment of the proposal concludes that there have been no adverse impacts identified in the consideration of subsection 2.10(1) that would engage the further considerations under subsection 2.10(2).

Section 2.11 Development on land within the coastal use area

Consent must not be granted unless the consent authority has considered the following:

Section 2.11 SEPP RH Considerations

Matters for Consideration	Compliance
(a) whether the proposed development is likely to cause an adverse impact on the following: *i. existing, safe access to and along the foreshore, beach, headland or rock*	The site does not have frontage to any foreshore, beach or waterway and is not visible from any foreshore or beach. The proposal will not cause an adverse impact on access, overshadowing, wind

Matters for Consideration	Compliance
platform for members of the public, including persons with a disability, *ii. overshadowing, wind funnelling and the loss of views from public places to foreshores,* *iii. the visual amenity and scenic qualities of the coast, including coastal headlands,* *iv. Aboriginal cultural heritage, practices and places,* *v. cultural and built environment heritage,*	funnelling or view loss form public places to any foreshore. The proposal does not impact the visual amenity or scenic quality of the coast. There are no known objects, areas, or items of heritage significance on the land, and no potentially adverse impacts on cultural or environmental heritage have been identified.
(b) is satisfied that *i. the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or* *ii. if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or* *iii. if that impact cannot be minimised—the development will be managed to mitigate that impact,*	There have been no adverse impacts identified in the consideration of ss2.11(1) that would engage the further considerations under ss2.11(2).
(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development	The proposed subdivision is consistent with previously approved Subdivisions in the immediate locality and is considered satisfactory in terms of siting and location.

Chapter 4 – Remediation of Land

The provisions of SEPP Resilience and Hazards - Chapter 4 (Remediation of Land) have been considered in the assessment of the development application.

Section 4.6 of SEPP RH requires consent authorities to consider whether the land is contaminated, and 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.

A review of the land use history, aerial photographs and an inspection of the site has not revealed any evidence of potentially contaminating land uses being carried out on the site. The subject site is located within a residential zone and the current use of the site is for domestic residential purposes. There are no known previous uses that would lead to the site being contaminated or unsuitable for the proposed use.

The development and the land is not otherwise mentioned in subsection 4.6(4) and accordingly the provisions of subsection 4.6(2) are not engaged by the proposal and consent may be granted. The proposal is considered consistent with the provisions of Chapter 4 of the SEPP.

The Panel can be satisfied that the proposed development complies with the provisions of Chapter 4 Remediation of Land of *State Environmental Planning Policy (Resilience and Hazards) 2021*.

Gosford Local Environmental Plan 2014

Zoning and Permissibility

The subject sites are zoned R2 Low Density Residential under GLEP 2014. The proposed development constitutes a Subdivision which is permissible within the prescribed zone with the consent of Council, pursuant to the statutory provisions of clause 4.1(3) of GLEP 2014).

Zone Objectives

The subject site is zoned R2 Low Density Residential under GLEP 2014.

The objectives for the R2 Low Density Residential zone are:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents. To ensure that development is compatible with the desired future character of the zone.*
- *To encourage best practice in the design of low-density residential development.*
- *To promote ecologically, socially and economically sustainable development and the need for, and value of, biodiversity in Gosford.*
- *To ensure that non-residential land uses do not adversely affect residential amenity or place demands on services beyond the level reasonably required for low-density housing.*

Assessment of the application concludes that the proposed development meets the objectives of the zone.

Principal Development Standard

The subject site is zoned R2 Low Density Residential under GLEP 2014 and the proposal has been assessed in accordance with the relevant development standards of GLEP 2014.

The proposal constitutes a subdivision and the Principal Development Standards associated with the subdivision of land is prescribed by clause 4.1(3) of GLEP 2014. Clause 4.1(3) of GLEP 2014 states that the size of any lot resulting from a subdivision of land to which this

clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land, which in this instance is mapped at 550.0m^2 per allotment.

There is presently no numerical development standard contain in GLEP 2014 specifying a minimum width requirement associated with the subdivision of land (unlike the requirements of GDCP 2013 Chapter 3.5 – Residential Subdivision).

The GLEP 2014 summary table depicted provides an overview of the proposal in relation to site area.

Table 1 - Site Area

Proposed Lot	Area Proposed	Area Required	Compliance	% Variation
1	450m^2	550m^2	No	18.1%
2	578m^2	550m^2	Yes	Nil

The GLEP 2014 Summary Table indicates that proposed lot 1 does not comply with the Principal Development Standards associated with the subdivision of land, as prescribed by clause 4.1(3) of GLEP 2014.

Clause 4.1(3) of GLEP 2014 states that the size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land, which in this instance is mapped at 550m^2 per allotment.

Proposed lot 1 proposes a site area that is 18.1% or 100m^2 less than the prescribed minimum development standard contained in clause 4.1(3) of the GLEP.

The applicant has submitted a written request, under the provisions of clause 4.6 of the GLEP 2014, seeking to justify the identified departure from the development standard, and has identified how compliance with this development standard is unreasonable or unnecessary.

Applicant's Clause 4.6 Exceptions to Development Standards Submission

Under the provisions of clause 4.6 - Exceptions to Development Standards, Council has the ability to grant consent to a development application where the variation to a development standard can be adequately justified and where the objectives of clause 4.6(1) are satisfied, being:

> *"(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."*

The application has submitted a written request seeking variation to the minimum subdivision lot size development standard contained within clause 4.1(3) of GLEP 2014, pursuant to

clause 4.6 Exception to Development Standard provisions contained in GLEP 2014. Details of the applicant's request is summarised as follows:

The Gosford LEP 2014 includes clause 4.6 Exceptions to Development Standards. The clause 4.6 of the Standard Instrument LEP is effectively the successor to SEPP 1, as it aims to enable development standards (such as height, FSR and minimum lot size) in the relevant LEP to be varied where appropriate. It allows flexibility in the application of development standards, in order to achieve overall better planning outcomes.

In this case, given the unique location it is considered that the lot area non-compliance will not be detrimental to the appearance of the dwelling-houses (existing and proposed) when viewed from the adjoining properties or from the public domain. As demonstrated, the lot area would not create any further amenity impacts beyond that associated with a compliant lot area. Furthermore, it is considered that lot areas provide for a sustainable, orderly use of the site given that a low density scale is maintained within the R2 – Low Density Residential Zone.

The key tests or requirements arising from recent judgements are that:

- *The consent authority be satisfied the proposed development will be in the public interest because it is "consistent with" the objectives of the development standard and zone. It is not a requirement to "achieve" those objectives. It is a requirement that the development be compatible with the objectives, rather than having to 'achieve' the objectives.*

- *Establishing that 'compliance with the standard is unreasonable or unnecessary in the circumstances of the case' does not always require the applicant to show that the relevant objectives of the standard are achieved by the proposal (Wehbe "test". Other methods are available as per the previous 5 tests applying to SEPP 1, set out in Wehbe v Pittwater 2007*

- *When pursuing a clause 4.6 variation request it is appropriate to demonstrate environmental planning grounds that support any variation; and*

- *The proposal is required to be in 'the public interest'.*

This clause 4.6 variation demonstrates that the proposed lot sizes:

- *Satisfies the relevant objectives of the lot size standard;*
- *Satisfies the objectives of the R2 – Low Density Residential Zone under Gosford LEP 2014;*
- *Provides for a better planning outcome;*
- *Has sufficient environmental planning grounds to permit the variation; and*
- *Is in the public interest*

The relevant clause therein the GLEP sought to be varied:

4.1(2) Minimum subdivision lot size states:

The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

The Nature of the Development Standard sought to be varied and details of the variation:

Proposed lot 1 would be 450m^2 and proposed lot 2 would be 578m^2. Subsequently proposed lot 1) does not meet the numerical minimum lot size of 550m2 in accordance with the minimum lot size map within the Gosford LEP 2014. As such the proposal entails a numerical variation of 18.1%. Notwithstanding the numerical non-compliance with the development standard, the variation is justified on planning grounds and is discussed below.

In Wehbe v Pittwater Council [2007] NSW LEC 827 Preston CJ set out a new 5-part test and as such outlined below is an assessment of the variation against the development standard.

1. Consistency with the Objectives of the Minimum Lot Size Standard notwithstanding non-compliance with the development standard

The objective of the development standard are:

(a) to reflect State, regional and local planning strategies relating to the provision of various sizes of land,

(b) to ensure that the subdivision of land is compatible with the desired future character of the area,

(c) to promote the ecologically, socially and economically sustainable subdivision of land,

(d) to ensure that the creation of parcels of land for development occurs in a manner that protects the physical characteristics of the land, does not create potential physical hazard or amenity issues for neighbours, can be satisfactorily serviced and will, through its potential cumulative effects, not create capacity problems for existing infrastructure.

In relation to the underlying objective outlined are the reasons of compliance with the set object based on environmental planning grounds:

- *The proposal to allow the creation of an additional lot within the Woy Woy Peninsula area is consistent with the directions outlined within the Central Coast Regional Plan 2036. The regional plan identifies a requirement to construct and additional 41,500 homes by 2036.*

- *The proposed lots would be commensurate with the lot sizes located within the adjoining and surrounding cadaster. Subsequently the proposal would not be consistent with the established density and character as discussed above and would not be setting precedence in this regards.*

- *The proposed subdivision will have no ecological impacts to the subject land and surrounds. Given the site is located within close proximity of the Woy Woy and Ettalong Town Centres, public transport, essential infrastructure, the proposed development represents a socially, environmentally and economically suitable form of residential subdivision that maintains low density lots.*

- *The proposal allows the creation of a new allotment and dwelling-house would balance the social needs of the peninsula area (new lots and dwelling-houses) that are essentially more substantial that the typical secondary dwellings that are becoming established on suburban sized allotments – including appropriate land tenure with the provision of all required services and infrastructure required for the creation of Torrens Title lots in an efficient and orderly fashion.*

2. <u>The underlying objective or purpose of the standard of not relevant to the development and therefore compliance is unnecessary.</u>

The underlying objectives of the development standard are relevant and as outlined above it is considered that the proposal adheres the underlying objectives of the development standard; in this instance the minimum lot size provision.

<u>3. The underlying object of purpose would be defeated or thwarted if compliance was required and therefore compliance is unreasonable.</u>

As discussed in detail above the development adheres to the objectives of the development standard and therefore the concept of compliance with the objects of the development standard would actually contravene the concept of having these overarching merit based statements (overarching requirements) accompanying the prescriptive measures.

<u>4. The development standard has been virtually abandoned or destroyed by Council's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable.</u>

All the surrounding lots are around the 450m^2 mark. As such the development standard in the locality has been abandoned and found that the 450m^2 to be an acceptable lot area for the area. And as such compliance with the development standard is unnecessary and unreasonable, in this instance.

<u>5. The compliance with the development standard is unnecessary or inappropriate due to the existing use of land and current environmental character of the particular</u>

parcel of land. That is, the particular parcel of land should not have been included in the zone.

The subject lot remains in the existing R2 Low Density Residential zone.

Consistency with the Objectives of the Zone

The NSW legislation website indicates the subject site is currently zoned R2 – Residential Under the LEP the objectives of the R2 Residential zone are:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To ensure that development is compatible with the desired future character of the zone.*
- *To encourage best practice in the design of low-density residential development.*
- *To promote ecologically, socially and economically sustainable development and the need for, and value of, biodiversity in Gosford.*
- *To ensure that non-residential land uses do not adversely affect residential amenity or place demands on services beyond the level reasonably required for low-density housing.*

Comment:

- The proposed use falls under the definitions of 'subdivision' and under the LEP and is permissible subject to consent.

- The proposed area and dimensions of the lots are commensurate with the area and width of many foreshore lots that are located within the immediate vicinity and surrounds within the lower foreshore area of Blackwall and Orange Grove.

- The surrounding cadastre has no established or regularised 'standard' lot size and width. As such the proposal would not be creating precedence to breaking a regularised cadastre pattern along the coastal locale.

- As demonstrated in the plan and the character statement, the proposal would be compatible with the surrounding intensity of low density residential development within the immediate area.

- The proposal would allow the continuation of residential development that would facilitate the incorporation of landscaping that is compatible with the residential zone.

- As addressed within the Statement of Environmental Effects, the proposed dwellings would comply with the prescriptive measures and objectives within relevant chapters of GDCP 2013 and is compatible with the desired future character of the zone.

- The proposal would not be detrimental to the residential amenity and place overbearing demands on services that would be commensurate for low density housing

- The subject site is located within walking distance of public transport and public and private recreational facilities.

- The subject site includes the essential utilities, including reticulated water, sewer, power and telecommunications.

- The development caters for additional lots and dwelling-house in accordance with the *Draft Central Coast Regional Plan* released in November 2015.

Consistency with State and Regional Planning Policies

The proposed development would be in line with Draft Central Coast Regional Strategy that is the NSW Government's long term land use plan for the region, which covers the Gosford City and Wyong Shire Local Government Areas. The Regional Strategy contains policies and actions designed to cater for the region's projected housing and employment growth over next 20 years. Greater housing choice is prioritised to satisfy the community's desire for smaller households.

The plan places emphasis on providing new housing in existing and committed growth areas. To meet the projected housing demands over the next 20 years, an average of 1,980 new homes will need to be constructed each year. This is 590 more homes than the average annual housing production of 1,390 dwellings over the 19 years to 2014-15.The proposed subdivision and dwelling-house development would allow for more 'affordable dwellings' that is consistent with the policies and strategic actions outlined in the strategy.

The Variation in the Public Interest

The proposal is considered to be in the public interest due to the superior use of the land and subsequent land tenure that would be provided as opposed to secondary dwellings or villas within the low density area. Subsequently the proposal provides a more appropriate use of the land whist maintaining the low density character and housing scale and density within the Woy Woy Bay locale.

Conclusion

For the reasons outlined above the clause 4.6 variation is provided in support of the variation to the minimum lot size at 55 Mullbong Street, Blackwall as detailed above, in this instance the proposal is supported for the following reasons:

- *The proposed non-compliance does not raise any matter of significance for State or regional environmental planning as it is peculiar to the creation of a new lot is not readily transferrable to any other site in the immediate locality, wider region of the State and the scale or nature of the proposed development does not trigger requirements for a higher level of assessment.*

- *As the proposed development is in the public interest because it complies with the objectives of the development standard and the objectives of the zone there is no significant public benefit in maintaining the numerical development standard.*

- *There are no other matters required to be taken into account by the secretary before granting concurrence.*

On the basis outlined above, the proposal satisfies all the requirements of clause 4.6 of the GLEP 2014 with the exception to the development standard providing sufficient environmental planning justification to warrant the proposed lot size to be acceptable in this case."

Town Planning Assessment - Clause 4.6 Variation

Clause 4.6 of GLEP 2014 provides the applicant with the appropriate statutory planning mechanism to vary the minimum subdivision lot size standard prescribed within clause 4.1(3) of GLEP 2014.

The *Clause 4.6 Variation Request* submitted by the applicant has addressed why strict compliance with the development standard is unreasonable or unnecessary in this instance, having regard to the relevant Land and Environment Court decisions that have been cited and how there are sufficient environmental planning grounds to justify the non- compliance with the development standard in question.

Clause 4.6 (2) – Exceptions to Development Standards allows development consent to be granted even though the development would contravene a development standard imposed by GLEP 2014, or any other environmental planning instrument.

Clauses 4.6(3), 4.6(4) and 4.6(5) as reproduced below, sets out the tests for establishing if the variation to a development standard is 'well founded' and requires the consent authority to be satisfied in relation to the following matters:

"(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 Secretary has been obtained.

(5) In deciding whether to grant concurrence, the 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 Secretary before granting concurrence.

In accordance with clause 4.6(4)(b), development consent must not be granted for a development that contravenes a development standard, unless the concurrence of the Planning Secretary has been obtained.

Planning Circular PS 20-002 issued 5 May 2020, states that Council may assume the concurrence of the [now] Secretary of the NSW Department of Planning and Environment when considering exceptions to development standards under clause 4.6.

The Secretary's concurrence may not be assumed by a delegate of council if the development contravenes a numerical standard by greater than 10%; however, this restriction does not apply to decisions made by independent hearing and assessment panels. The Local Planning Panel is therefore empowered to determine the application. The concurrence from the Secretary is however now no longer required, under recent directions.

Approaches relating to contravention to a development standard are well documented and demonstrated in case law taken from decisions of the Land and Environment Court and the NSW Court of Appeal, which include:

- Wehbe v Pittwater Council [2007] NSWLEC 827;
- Four2Five Pty Ltd v Ashfield Council [2015] NSWLEC 1009;
- Moskovitch v Waverley Council [2016] NSWLEC 1015 and
- Randwick City Council v Micaul Holdings Pty Ltd [2016] NSWLEC 7

Having regard to the Land and Environment Court case law as outlined, and in considering the requirements of clause 4.6, the following additional matters have been considered in the assessment of the current application and elaborated as follows:

1. *Clause 4.6(3)(a) - Whether compliance with the development standard is unreasonable or unnecessary in the circumstances of the case*

   Comment - Whilst it was prepared in relation SEPP 1, the Land and Environment Court judgment Wehbe v Pittwater Council [2007] NSWLEC 827 (21 December 2007), is referred to in the Four2Five judgment and remains relevant to the consideration of concept of compliance being unreasonable or unnecessary and outlines the following 5 part test used in Wehbe:

   1. The objectives of the standard are achieved notwithstanding noncompliance with the standard;

   2. The underlying objective or purpose of the standard is not relevant to the development and therefore compliance is unnecessary;

   3. The underlying object of purpose would be defeated or thwarted if compliance was required and therefore 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 compliance with the standard is unnecessary and unreasonable;

5. The compliance with development standard is unreasonable or inappropriate due to existing use of land and current environmental character of the particular parcel of land. That is, the particular parcel of land should not have been included in the zone.

Having regard to the assessment criteria established in Wehbe, the following Town Planning comments are provided:

i. The variation as proposed, still enables the objectives of the standard to be achieved and does not compromise the future construction of a dwelling-house and ancillary structures on proposed Lot 1.

ii. The underlying objective or purpose of the standard is relevant to the development proposal and compliance is unnecessary given the circumstances of the case.

iii. The underlying objective or purpose is not compromised in this instance.

iv. The development standard has not been abandoned, but has been varied by council, having regard to Council's approach of assessing Development Application(s) on its merits.

v. The land subject of the current proposal is zoned correctly and therefore point 5 of the Wehbe test is not applicable in this instance.

2 *Clause (3)(b) – whether there are sufficient environmental planning grounds to justify contravening the development standard.*

Comment- The existing site area of the current allotment does not permit compliance with the minimum subdivision lot size standard prescribed within clause 4.1(3) of GLEP 2014. The variation of the minimum subdivision lot size standard amounting to 18.1% or 100m^2 in relation to proposed Lot 1, whilst seemingly large in numerical terms is however considered justifiable form a Town Planning perspective, given the context of the clause 4.6 as discussed in the Town Planning report.

It is considered that the site area of the existing allotment in its present form is considered to be an underutilized resource. In view of the above, it is considered that there are sufficient environmental planning grounds, specifically related to the subject site that warrants contravention of the minimum subdivision lot size standard.

3 *Clause (4)(a)(ii) – whether 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*

Comment -The proposal will be consistent with the stated objectives of minimum subdivision lot size standard and the objectives of the R2 Low Density Residential zone. The proposal is attempting to efficiently utilize the land for which it is zoned for and provides for the orderly and proper development of land, consistent with the objects of the *Environmental Planning and Assessment Act 1979*.

4 *Clause 5(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning.*

Comment - The variation of the minimum subdivision lot size standard is justifiable in numerical terms from a Town Planning perspective, and does not raise any issues at a regional or state level.

5 *Clause 5 (b) the public benefit of maintaining the development standard.*

Comment - For the reasons outlined about there is no public benefit in maintaining the minimum subdivision lot size standard. There will be public benefits in allowing a variation, as a better planning outcome will be achieved which facilitates the better utilization of land. This is particularly evident by the existing pattern of subdivision immediately to the east and west of the subject site, which have been subdivided in a generally similar manner.

On balance, it is considered that the clause 4.6 variation has been considered in context of the aims and objectives of the zone and in this instance, the variation is supported for the following reasons:

1 Proposed lot 1, which is the allotment subject of the minimum site area variation, has sufficient site area and width to satisfactorily accommodate the future construction of a dwelling house, associated ancillary structures and private recreation and garden spaces, as demonstrated on the proposed plan of subdivision.

2 Proposed lot 2, which is in compliance with the minimum site area requirement, has sufficient site area, width and depth to accommodate the existing dwelling-house and associated ancillary structures given the existing land characteristics of the site and as demonstrated on the proposed plan of subdivision.

3 The variation to proposed lot 1 whilst high in numerical terms, is, however, considered justifiable and acceptable, as the variation still enables the objectives of the applicable R2 Low Density Residential zone to be achieved, notwithstanding the numerical departure to the development standard in question.

4 The variation would not create an undesirable precedence, taking into account the merit-based approach to the assessment of development applications.

5 The proposal is consistent with the aims and objectives of GDCP 2013 Chapter 2.1 – Character, Chapter 3.1 – Dwelling Houses and Ancillary structures and Chapter 3.5 – Residential Subdivision.

6 The site area of the existing allotment in its present form is considered to be an under-utilised resource and the proposal is attempting to utilize the land/existing holding in an efficient manner.

7 The proposal provides for allotments of a satisfactory shape, size, configuration and utility.

8 The proposal is generally consistent with the existing pattern of subdivision in the immediate locality.

9 The subject site also has the added advantage of being a dual frontage allotment, in that the allotment concerned is bounded by Mullbong Road and Orange Grove Road. This advantage negates the requirement for the proposal to construct and provide for Rights of Access burdening a specific allotment for vehicular access purposes, as well a providing for a reduction in hardstand areas associated with such means of vehicular access.

10 The proposal provides for the orderly and proper development of land, consistent with the objects of the *Environmental Planning and Assessment Act 1979*, as specified in Section 1.3 therein.

The assessment concludes that the clause 4.6 variation to the minimum subdivision lot size standard prescribed within clause 4.1(3) of GLEP 2014, is well founded and is worthy of support.

Clause 5.10 Heritage Conservation – GLEP 2014

The proposal occurs on an existing, landscaped residential lot and will not impact upon any items of Heritage listed under Schedule 5 of GLEP 2014.

Clause 7.1 Acid Sulfate Soils- GLEP 2014

This land has been identified as being affected by the Acid Sulfate Soils Map and the matters contained in clause 7.1 of GLEP 2014 have been considered. In this instance, the proposal is not considered to impact on Acid Sulfate Soils.

Clause 7.2 Flood Planning – GLEP 2014

The land has not been classified as being under a "flood planning level" and is therefore not subject to the imposition of a minimum floor level. The proposal is therefore satisfactory with respect to clause 7.2 of GLEP 2014.

Gosford Development Control Plan 2013 (GDCP 2013)

The relevant controls of GDCP 2013 are considered below:

Chapter 2.1 Character

The requirements of GDCP 2013 Chapter 2.1 –Character is relevant in the assessment of the application and clause 2.1.3 provides for the following objectives:

1. *Protect and enhance environmental character that distinguishes Gosford City's identity, and*
2. *Enhance the City's identity by development that displays improved standards of scenic, urban and civic design quality.*

The subject site is located within the Blackwall Character Precinct 3 –Parkland Hillsides. The desired character statements for this locality are described as follows (summarized):

"These should remain leafy low-density residential hillsides, retaining the streetscape and scenic qualities of existing lush hillside gardens that surround each dwelling.

Minimise disturbance to natural slopes and existing trees that are visually-prominent features of any hillside or street frontage by appropriate siting of new structures, plus low-impact construction such as suspended floors and decks rather than extensive cut-and-fill. Complement the established tree canopy by planting additional trees and shrubs throughout each garden as well as along street verges. Facing the street, emphasise a leafy garden character by avoiding wide driveways and terraces, tall fences or multiple retaining walls.

Avoid the appearance of a continuous wall of development along any street or hillside. Locate new buildings behind front setbacks that are similar to their surrounding properties. Provide at least one wide side setback or step the shape of front and rear facades.

Minimise the scale and bulk of buildings by stepping floor-levels to follow natural slopes and by using irregular floorplans to create well-articulated forms. For example, divide floorspace into linked pavilions that are capped by individual roofs and separated by courtyards. Front or rear facades that are taller than neighbouring dwellings should be screened by balconies, verandahs, stepped forms or extra setbacks.

Minimise the scale of prominent facades by using extensive windows and verandahs plus a variety of materials and finishes rather than expanses of plain masonry. All dwellings should display a traditional "street address" with verandahs or decks, and living rooms or front doors that are visible from the roadway. Avoid wide garages

that would visually-dominate any front façade or block views from a dwelling to the street. Locate and screen all balconies or decks to maintain the existing levels of privacy and amenity that are enjoyed by neighbouring dwellings."

The resulting increase in density comprising one additional allotment of land is considered relatively minor from a planning perspective and will not result in any adverse impacts on the character of the immediate locality, given the context, setting and the allotment sizes that are proposed. The resulting increase in density still enables the proposal to provide for a satisfactory buffer between the subject site and the adjoining developments, given the residential nature of the immediate locality.

In relation to density provisions the proposal (with the exception of proposed lot 1), complies with the minimum Subdivision site area requirement prescribed by clause 4.1(3) of GLEP 2014, as previously outlined.

In relation to bushfire risk, the NSW Rural Fire Service has by correspondence dated 17 August 2022 advised that it is prepared to grant a Bushfire Safety Authority under Section 100B of the *Rural Fires Act 1997*, subject to conditions.

No new dwelling house is proposed in conjunction with the current subdivision proposal. There would, however, be a reasonable expectation that a dwelling house would be constructed within the proposed vacant allotment within the subdivision at some point following registration of the plan of subdivision.

The future construction of the proposed future dwelling house and any ancillary structures will be subject to a merit- based assessment, having regard to the applicable planning controls at the time of lodgement.

The proposal provides for allotments of suitable size, shape and configuration, as well as providing for allotments of suitable utility and amenity. The proposal will have a satisfactory relationship to the adjoining developments given the allotment sizes that are proposed and the degree of spatial separation between the proposed allotments and adjoining developments, which is consistent with other residential dwelling houses in the immediate locality.

The site area of the existing allotment in its present form is considered to be an underutilized resource. It is considered that the proposal is attempting to efficiently utilize the land for which it is zoned for and provides for the orderly and proper development of land, consistent with the objects of the *Environmental Planning and Assessment Act 1979*.

The proposal is consistent with the provisions of GDCP 2013 Chapter 2.1 – Character.

Chapter 2.2 - Scenic Quality

The proposal is located within the Peninsular Geographic Unit encompassing the landscape units of Woy Woy, Umina, Woy Woy Bays. The principle aim of the scenic quality statement is to provide guidelines for the interpretation and management of the scenic quality of the area and provides for the following objectives:

1. *"to provide a detailed assessment of Gosford's landscape character which highlights the diversity between and within landscape units;*
2. *to detail the components of that landscape character;*
3. *to provide a comparative ranking of the landscapes; and*
4. *to develop appropriate guidelines for the management of the landscape character*

The relevant matters specified by GDCP 2013 Chapter 2.2 –Scenic Quality are summarised as follows:

i. **Absorption Capacity**

In relation to the absorption capacity of the Peninsular Landscape Unit, the DCP in question states:

"For Woy Woy Bays – Low. For Woy Woy/Umina – High."

Statement of Significance

In relation to the of the Statement of Significance for the Peninsular Landscape Unit, the DCP in question states:

"The Woy Woy Bays Landscape Unit is of regional scenic value because of the mixture of natura l and culturalelements, the visibility of the area to tourists and commuters and the importance of the area to the history of railwaydevelopment.

The Woy Woy/Umina Landscape Unit is of local scenic value only. It is an example of low cost Early suburban and beach retreat development on Brisbane Water. The Brisbane Water Escarpment provides a significant backdrop to Woy Woy/Umina."

As previously outlined, the subject site is located within a well-established residential neighbourhood predominantly characterised by low density residential development and the resulting increase in density is considered relatively minor from a planning perspective given the context, setting and the allotment sizes that are proposed. It is therefore considered that the proposal will not result in any adverse impacts on the scenic quality of the immediate locality, given the absorption capacity of the landscape unit.

It is considered that the locality has the ability to absorb the minor increases in density and still retain the attributes of the zone whilst still providing for a satisfactory buffer between the subject site and adjoining allotments, given the allotment sizes that are proposed.

The proposal maintains the character and scenic quality of the area while considering the desired and likely future character of the area.

The proposal is consistent with the provisions of GDCP 2013 Chapter 2.2 – Scenic Quality.

Chapter 3.5 - Residential Subdivision

The objectives of Chapter 3.5 in relation to residential subdivision are specified in clause 3.5.1.3 and are reproduced as follows:

- *To ensure that residential land developed for subdivision is done so in an efficient and or derly manner.*
- *To o ensure that all lots created are satisfactorily serviced by infrastructure.*
- *To maximise development potential of residential land whilst retaining any significant environmental characteristics that may occur on the land.*
- *To ensure that geotechnical constraints are taken into consideration.*
- *To encourage a variety of allotments to cater for differing housing needs.*

The provisions of clause 3.5.3.2 (a) (i) and clause3.5.3.2 (b) (i) of GDCP 2013 Chapter 3.5 - Residential Subdivision is applicable in the merit assessment of the proposal and requires the minimum site area and width associated with any allotment within a proposed subdivision to be increased in respect to slope.

The minimum allotment size and width requirement associated with the Subdivision of residential land as specified by clause 3.5.3.2 (a) (i) and clause3.5.3.2 (b) (i) of the abovementioned DCP, is 550.0m^2 (minimum allotment size) and 15.0m (minimum allotment width) respectively per allotment.

Summary Table 2 and Summary Table 3 summarises the assessment of the application against the numerical standards prescribed by the Development Control Plan in question.

Table 2 - Site Area

Proposed Lot	Area Proposed	Area Required	Compliance	% Variation
1	450m^2	550m^2	No	18.1%
2	578m^2	550m^2	Yes	Nil

Table 3 – Width

Proposed Lot	Width Proposed	Width Required	Compliance	% Variation
1*	13.28m	15.0m	No	11.4 %
2	21.54m	15.0m	Yes	Nil

Note: * The minimum width associated with Proposed Lot 1 has been measured at the building line, in accordance with clause 3.5.3.2 (a) (i) of GDCP 2013 Chapter 3.5 - Residential Subdivision.

The summary table indicates that proposed lot 2 complies with the requirements of Chapter 3.5 - Residential Subdivision.; however, proposed lot 1 does not comply with the minimum site area and width requirement specified by clause 3.5.3.2 (b) (i) of GDCP 2013 Chapter 3.5 - Residential Subdivision.

The variation that is proposed by the applicant in relation to the minimum site area and width requirement as outlined in Summary Table 2 and Summary Table 3, has been considered in context of the aims and objectives of the abovementioned DCP and the variation is supported in this instance, for the following reasons:

1 The variation to proposed lot 1 in relation to the minimum site area requirement has been adequately canvassed in the assessment of the clause 4.6 variation in the body of the Town Planning Report.

2 There is presently no numerical development standard contain in GLEP 2014, specifying a minimum width requirement associated with the subdivision of land.

3 The variation to the minimum allotment width requirement associated with proposed lot 1 amounting to 11.4 % or a 1.7m shortfall, is not considered excessive from a Town Planning perspective and from a numerical point of view. It is considered that the variation that is proposed still enables the objectives of the applicable R2 Low Density Residential zone to be achieved, notwithstanding the numerical departure.

4 Proposed lot 1, which is the allotment subject of the minimum site area and width variation has sufficient site area and width to satisfactorily accommodate the future construction of a dwelling house, associated ancillary structures and provides for adequate private recreation and garden spaces.

The variation in question does not compromise on the amenity of developments internal and external to the site and is largely attributed to the siting of the existing dwelling house on the allotment.

5 The proposal is consistent with the aims and objectives of Gosford Development Control Plan (DCP) 2013 Chapter 3.5 - Residential Subdivision.

6 The proposal is consistent with the aims and objectives of GDCP 2013 Chapter 2.1 - Character and of GDCP 2013 Chapter 2.2 -Scenic Quality.

7 The site area of the existing allotment in its present form is considered to be an under-utilised resource.

8 The proposal provides for allotments of a satisfactory shape, size, configuration and utility.

9 The proposal is generally consistent with the existing pattern of subdivision in the immediate locality.

10 The proposal provides for the orderly and proper development of land, consistent with the objects of the *Environmental Planning and Assessment Act 1979*, as specified in Section 1.3 therein.

For the reasons outlined, the variation that is proposed by the applicant to the minimum site area and width requirement, as specified by GDCP 2013 Chapter 3.5 – Residential Subdivision and as indicated in Summary Table 2 and Summary Table 3, is supported from a Town Planning perspective.

Chapter - 6.3 Erosion and Sediment Control

The requirements of GDCP 2013 Chapter 6.3 – Erosion and Sediment Control is relevant in the merit assessment of the application and clause 6.3.3 provides for the following objectives:

- *To prevent land from being degraded by soil erosion or unsatisfactory land and water management practices.*
- *To protect streams and waterways from being degraded by erosion and sediment caused by unsatisfactory land and water management practices.*
- *To promote and protect biodiversity*

Given the extent of civil engineering works that are proposed, suitable conditions of consent have been imposed in relation to the proposed Subdivision requiring the implementation of appropriate Erosion and Sedimentation Control measures in accordance with the requirements of GDCP 2013 Chapter 6.2 – Erosion and Sediment Control.

The assessment concludes that the proposal is consistent with the objectives of Chapter 6.3 of GDCP 2013.

Chapter 6.6 – Preservation of Trees

The objectives of Chapter 6.6 are specified in clause 6.6.1.4 and provides for the following aims and objectives in relation to tree preservation and vegetation management:

a. *To preserve the amenity of the Gosford City Local Government Area through the Preservation of trees and other vegetation.*
b. *To define Council's responsibilities and requirements with respect to the protection, Retention, and replacement of trees and native vegetation.*
c. *To ensure proper consideration is given to trees and vegetation in planning, designing and constructing development.*
d. *To minimise unnecessary injury to, or destruction of, trees and vegetation.*
e. *To facilitate the removal of undesirable exotic plants, noxious weeds, dangerous trees and other inappropriate plantings.*
f. *To specify the requirements for the submission of sufficient and relevant information by those who wish to ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation.*

No tree removal is proposed in conjunction with the proposed subdivision. The assessment concludes that the proposal is consistent with the objectives of Chapter 6.6 of GDCP 2013.

The assessment concludes that the proposal is consistent with the objectives of Chapter 6.6 of GDCP 2013.

Chapter 6.7 - Water Cycle Management

Chapter 6.7 seeks to minimise the impact of development on the natural predevelopment water cycle. This will lead to more sustainable outcomes that will protect the environment.

The objectives of Chapter 6.7 are specified in clause 6.7.3 and provides for the following objectives in relation to water cycle management:

- *Provide direction and advice to applicants in order to facilitate WSUD,IWCM and Flood Mitigation within the development application process*
- *Provide design principles that will assist development to meet the purpose of this chapter of the DCP.*
- *Provide objectives and performance targets for specific water management elements including water conservation, retention / detention, stormwater quality, and flooding caused by Local Overland Flooding, Mainstream Flooding or Storm Surge.*

The proposal has been assessed by Council's Senior Development Assessment, who has advised that no objections are raised to the proposal. subject to the imposition of suitable engineering conditions of consent.

The assessment concludes that the proposal is consistent with the objectives of Chapter 6.7 of GDCP 2013.

Chapter 7.2 - Waste Management

The requirements of GDCP 2013 Chapter 7.2 –Waste Management is relevant in the merit assessment of the application and clause 7.2.3.2 provides for the following objectives in relation to waste management:

a. *To assist applicants in planning for sustainable waste management, through the preparation of a waste management plan.*
b. *To assist applicants to develop systems for waste management that ensure waste is transported and disposed of in a lawful manner.*
c. *To provide guidance in regards to space, storage, steep narrow allotments, amenity and management of waste management facilities.*
d. *To ensure waste management systems are compatible with collection services.*
e. *To minimise risks associated with waste management at all stages of development*

In relation to domestic waste disposal, existing waste collection available to the subject property is considered adequate to service the proposed development. Household and recycling bins are provided to manage waste disposal for collection and can be contained within the curtilage of the dwelling without nuisance to surrounding land, other than on designated domestic waste and recycling collection days.

A suitable condition of consent has been imposed in relation to the proposal requiring compliance with GDCP Chapter 7.2 Waste Management, given the scope of Civil works that are proposed in conjunction with the proposal.

The assessment concludes that the proposal is consistent with the objectives of Chapter 7.2 of GDCP 2013.

THE LIKELY IMPACTS OF THE DEVELOPMENT - Section 4.15(1)(b):

The relationship to the regional and local context and setting.

The subject site is zoned R2 Low Density Residential under GLEP 2014. The proposed development constitutes a Subdivision, which is permissible within the prescribed zone with the consent of Council. The proposal is in keeping with the character of the local area.

The access, transport and traffic management measures.

The resulting increase in density comprising one additional allotment of land as a result of the proposed subdivision is considered relative minor from a planning perspective and the existing road network system in the immediate locality is able to accommodate this minor increase in

density. The proposed subdivision will not create any adverse effect on access, transport and traffic measures within the local area.

The impact on the public domain (recreation, public open space, pedestrian links).

The locality is adequately provided with recreation, public open space and pedestrian links to cope with the maximum population density available within the local area, therefore the proposed subdivision will not impact on the public domain.

The impact on utilities supply.

The proposed subdivision will not impact on the existing utilities supply of the local area.

The effect on heritage significance.

There is no heritage significance on this lot.

Any effect on other land resources.

The proposed subdivision will not have any effect on any other land resources.

Any impact on the conservation of water.

The proposed subdivision will be subject to the requirements of GDCP 2013 Chapter 6.7 – Water Cycle Management.

Any effect on the conservation of soils or acid Sulfate soils.

This has previously been discussed in the report associated with the proposed subdivision and this aspect on the conservation of soils or acid sulfate soils, has been assessed as being manageable and to not cause environmental damage.

Any effect on quality of air and microclimate conditions.

There may be some effect on the air quality during the construction stage associated with the proposed subdivision. However, it is considered that it would be minimal and of short duration.

Any effect on the flora and fauna.

This has previously been discussed in this report with the proposed subdivision has been assessed as being manageable in terms of the maintenance of biodiversity.

The provision of waste facilities.

Existing waste collection facility is available to the subject property and is considered adequate to service the proposed subdivision and future dwelling houses. Future household and recycling bins will be provided to manage waste disposal for collection and will be contained within the curtilage of the future dwelling houses dwellings, without nuisance to surrounding land.

Whether the development will be energy efficient.

Future dwelling houses will be required to obtain a compliant Basix Certificate achieving energy efficient objectives.

Whether the development will cause noise and vibration.

The civil works proposed in conjunction with the proposed Subdivision during the construction works/phase will be managed through the inclusion of suitable conditions of consent for hours of construction, protection of adjoining land and or assets, and dilapidation as applicable.

Any risks from natural hazards (flooding, tidal inundation, bushfire, subsidence, slip etc).

Flooding

The subject site is not affected by flooding for events up to the 1% AEP recurrence interval.

Bushfire

The site is identified as being "bushfire prone land" on Council's bushfire maps. The proposal is accompanied by a Bushfire Hazard Assessment Report, which was referred to the NSW Rural Fire Service for assessment, as the proposal is defined as Integrated Development within the meaning of the *Environmental Planning & Assessment Act 1979*.

The NSW Rural Fire Service has by correspondence dated 17 August 2022, granted a Bushfire Safety Authority under Section 100B of the Rural Fires Act 1997, subject to conditions.

Any risks from technological hazards.

There are no risks from any technological hazards that would impose on the proposed development.

Whether the development provides safety, security and crime prevention.

No issues to report.

Any social impact in the locality.

The resulting increase in density is considered modest from a planning perspective and the proposed development will contribute to the supply of additional land and housing stock in the locality and is considered to be satisfactory from an economic perspective.

No unreasonable social impacts will arise from the approval of this residential subdivision. Accordingly, it is considered that the proposed Subdivision will provide a positive social impact for the immediate locality and will successfully integrate with the existing community including access to public open space, transport and support facilities.

Any economic impact in the locality.

The proposed subdivision will impact positively on the local economy by providing additional land and housing stock in the locality and is considered to be satisfactory from an economic perspective.

Any impact of site design and internal design.

No issues to report.

Any impacts of construction activities (construction site management, protection measures).

The site is easily accessible with car parking available on site and within the adjacent roadway during construction. Appropriate sedimentation, storm water disposal and building controls will be implemented as necessary and forms part of the development consent conditions.

It is unlikely that there would be any adverse impacts of construction activities.

Any cumulative impacts.

It is considered that the proposed subdivision will not have any adverse cumulative impacts.

THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT - Section 4.15(1)(c):

Whether the proposal fits in the locality.

The proposal is for the subdivision of land and the proposal is generally consistent with the existing patter of subdivision in the in the locality in terms of shape configuration and site area. The proposal is compatible with the surrounding area.

Whether the site attributes are conducive to development.

The subject site is conducive to development and does not impact adversely on any critical habitats or threatened species.

ANY SUBMISSION MADE IN ACCORDANCE WITH THIS ACT OR REGULATIONS - Section 4.15(1)(d):

Any submission from the public.

The proposal was formally notified in accordance with GDCP 2013 Chapter 7.3 - Notification of Development Proposals between 20 May 2022 and 3 June 2022.

No public submission was received in relation to the development proposal during the notification period.

THE PUBLIC INTEREST - Section 4.15(1)(e):

Any Federal, State and Local Government interests and community interests.

The proposed development in the local context, is seen to be in the public interest and will impact positively on the local economy by providing additional land and housing stock in the locality, as well as providing assurance that the subject land is able to be developed in accordance with the density provisions prescribed by GLEP 2014.

Internal Consultation

The following internal consultation was undertaken:

Senior Development Engineer	Supported subject to Conditions 3.2 to 3.5, 4.2 to 4.3, 5.2 and 7.2 to 7.7
Water and Sewer	Supported subject to Conditions 3.2 and 7.2

External Consultation

The following external consultation was undertaken:

NSW Rural Fire Service	Supported subject to Conditions 7.6 (b), 9.1 and advice

Ecologically Sustainable Principles:

The proposal has been assessed having regard to ecologically sustainable development principles and is considered to be consistent with the principles.

The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any

endangered flora or fauna habitats and is unlikely to significantly affect fluvial environments.

Climate Change

The potential impacts of climate change on the proposed development have been considered by Council as part of the assessment of the application.

This assessment has included consideration of such matters as potential for more intense and/or frequent extreme weather conditions including storm events, bushfires, drought, flood and coastal erosion; as well as how the proposed development may cope, combat, withstand these potential impacts. The proposed development is considered satisfactory in relation to climate change.

Other Matters for Consideration:

i) Rural Fires Act 1997 - Bushfire Assessment

The proposed Subdivision is deemed to be classified as an *Integrated Development* within the meaning of the *Environmental Planning & Assessment Act 1979* and was accordingly referred to the NSW Rural Fire Service for comment.

The NSW Rural Fire Service has by correspondence dated 17 August 2022, advised that the Service is prepared to grant a Bushfire Safety Authority under Section 100B of the Rural Fires Act 1997, subject to conditions.

The determining body can be satisfied that the development is consistent with Division 4.8 – Integrated Development provisions of the *Environmental Planning and Assessment Act 1979* and Section 100B of the *Rural Fires 1997* and that the application meets the requirements of *Planning for Bushfire Protection 2019*, subject to compliance with the general terms of approval provided by the NSW Rural Fire Service.

The comments of the NSW Rural Fire Service are noted and have been included as suitable conditions of consent.

ii) Senior Development Assessment Engineer Comments

The proposal has been assessed by Council's Senior Development Assessment, who has provided commentary advising that no objections are raised to the proposal. subject to the imposition of suitable engineering conditions of consent.

The comments from Council's Senior Development Assessment Engineer are noted and, have been included as suitable conditions of consent.

iii) Development Engineer – Water Assessment Comments

Council's Development Engineer – Water Assessment has advised that no objections are raised to the proposal and has provided the following comments (summarized):

"A section 307 certificate is required prior to subdivision certificate. Separate water & sewer services are required for the proposed allotments."

The comments from Council's Development Engineer – Water Assessment are noted and have been included as suitable conditions of consent.

iv) Essential Services

In relation to the provision of essential services, the following services that are essential for the proposed development are available or can be made available when required –

(a) the supply of water,
(b) the supply of electricity,
(c) the disposal and management of sewage,
(d) stormwater drainage or on-site conservation,
(e) suitable vehicular access,
(f) the collection and management of waste.

The application makes adequate arrangements for the essential services required for the development. The Panel can be satisfied that all of the above services are available to the land to service the development.

v) Allotment Shape, Size and Configuration

A review of Deposited Plans in the immediate locality has indicated that the locality is generally characterised by allotments of varying size, configuration and shape.

The existing allotment is regular in shape. The proposed subdivision provides for allotments that are also irregular in shape and configuration, which is mainly attributed to the proposal accommodating the existing dwelling house and ancillary structures.

A review of the Deposited Plans immediately to the east of the subject site being DP 400014, DP832761, DP844061, DP832761, DP416917 and immediately west of the subject site being DP554275, DP513921, DP444570 and DP346344, has revealed that existing properties on both sides of the subject site as described above have been subdivided into two residential allotments, generally similar in manner to that proposed by the current subdivision application (refer Figure 3).

In addition, there are also similar subdivided allotments immediately further to the east of the subject site, bounded by Orange Grove Road, Booker Bay Road and Baldwin Close, as indicated by Figure 3.

The review of the Deposited Plans and Goecortex concludes that the proposal is considered to be generally consistent with the existing patter of subdivision in the immediate locality. The plan of proposed subdivision demonstrates that the proposal provides for allotments of suitable size, shape and configuration, as well as providing for allotment with suitable utility and amenity.

Planning Agreements

The proposed development is not subject to a planning agreement / draft planning agreement.

Development Contribution Plan

Section 7.11 Contributions

The subject site is located within the Peninsular Development Contribution Plan No. 31A to 31D inclusive, where subdivision developments are subject to Section 7.11 contributions. The applicable contribution amount has been calculated and imposed as a standard condition of consent requiring the contribution to be paid prior to the issue of any Subdivision Certificate.

Section 7.12 Contributions

The subject site is located within Development Contribution Plan Central Coast Regional Section 7.12 Contributions Plan 2019.

Contributions are applicable to development which is subject to Central Coast Regional Section 7.12 Contributions Plan. Development contributions are only levied where the proposal meets the cost of works thresholds, increase floor area and not subject to any exemption under this plan.

However, in light of the applicability of the Section 7.11 contributions as outlined, the proposal is not subject to Section 7.12 contributions, having regard to the requirements of clause 7.12 (2) of the *Environmental Planning and Assessment Act 1979*, which stipulates that:

"A consent authority cannot impose as a condition of the same development consent a condition under this section as well as a condition under section 7.11."

Accordingly, no Section 7.12 contributions are applicable to the proposal.

Political Donations

During assessment of the application there were no political donations were declared by the applicant, applicant's consultant, owner, objectors and/or residents.

Public Submissions

The development has been notified in accordance with the provisions of GDCP 2013. There were no submissions received in relation to this proposal.

Conclusion

This application has been assessed in accordance with Section 4.15 of the *Environmental Planning and Assessment Act 1979* and all relevant instruments and policies. The proposed development is considered suitable for the site despite the listed variation, for the following reasons:

1 The Panel can be satisfied that the proposed development is satisfactory having regard to the matters for consideration specified in Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

2 The Panel can be satisfied that the development is consistent with Division 4.8 – Integrated Development provisions of the *Environmental Planning and Assessment Act 1979* and Section 100B of the *Rural Fires 1997* and that the application meets the requirements of *Planning for Bushfire Protection 2019*, subject to compliance with the general terms of approval provided by the NSW Rural Fire Service.

3 The Panel can be satisfied that the provisions of the following State Environmental Planning Policies have been considered and met:

   a. Chapter 2, Section 2.10 and 2.11 of *State Environmental Planning Policy (Resilience and Hazards) 2021*.
   b. Chapter 4, Section 4.6(4) of *State Environmental Planning Policy (Resilience and Hazards) 2021*.

4 Assessment of the application has concluded the proposed development is permitted within the current R2 – Low Density Residential zone under the provisions of the *Gosford Local Environmental Plan 2014* and meets the objectives for the zone.

5 Assessment of the application has concluded the proposed development meets the underlying objective(s) related to the minimum subdivision allotment size development standard contained in *Gosford Local Environmental Plan 2014*.

6 Assessment of the application has concluded the requirements of clauses 4.6 (3) and (4) of *Gosford Local Environmental Plan 2014* have been satisfied and that variation to the

minimum subdivision allotment size development standard provisions of *Gosford Local Environmental Plan 2014* is warranted.

7 The Panel can be satisfied that the provisions of clause 4.6(4) have been met and has concluded that:

a. The applicant's written request for a variation to development standards (minimum subdivision allotment size) adequately addresses the matters required to be addressed under clause 4.6(3) of *Gosford Local Environmental Plan 2014*.
b. The development is in the public interest because it is consistent with the objectives for development in the zone.
c. The concurrence of the Secretary can be assumed.

8 The Panel can be satisfied that the provisions of clause 7.1 Acid Sulfate Soils of *Gosford Local Environmental Plan 2014* have been considered and the proposal is not considered to impact on Acid Sulfate Soils.

9 The Panel can be satisfied that the proposed development is within an established residential area and is satisfied that all essential services are available to the subject site or can be made available when required, to service the proposal.

10 The Panel can be satisfied that the proposed development is consistent with the zone objectives, as set out in *Gosford Local Environmental Plan 2014*.

11 The Panel can be satisfied that the relevant provisions of the environmental planning instruments, plans and policies that apply to the development have been considered in the assessment of the application.

12 Subject to the imposition of appropriate conditions, the proposed development is not expected to have any adverse environmental, social or economic impact.

The site area of the existing allotment in its present form, is considered to be an underutilized resource. It is considered that the proposal is attempting to efficiently utilize the land for which it is zoned for and provides for the orderly and proper development of land, consistent with the objects of the *Environmental Planning and Assessment Act 1979*.

The proposed development is not expected to have any adverse social or economic impact. It is considered that the proposed development will complement the locality and meet the desired future character of the area.

Accordingly, the application is recommended for APPROVAL, pursuant to Section 4.16 of the *Environmental Planning & Assessment Act 1979*.

Attachments

1	Draft conditions - 55 Mullbong Road BLACKWALL NSW 2256 - DA/668/2022	D15975280
2	Final Plan of Proposed Subdivision No 55 Mullbong Road Blackwall DA 668 of 2022	D15907088
3	PUBLIC Updated Statement of environmental effects - 55 MULLBONG ROAD BLACKWALL 2256 - DA/668/2022.pdf	D15146051
4	PUBLIC Bushfire report - 55 MULLBONG ROAD BLACKWALL 2256 - PAN-204387 - DA/668/2022.pdf	D15078506
5	NSW RFS Bush Fire Safety Authority Determination Letter	D15973243
6	RECORD OF PRE-DEVELOPMENT ADVICE - 55 MULLBONG ROAD BLACKWALL 2256 - PAN-204387 - DA/668/2022.pdf	D15078512
7	Clause 4.6 - No 55 Mullbong Rd Blackwall DA/668/2022	D16094714

PROPOSED CONDITIONS

Application No: DA/668/2022

Location: 55 Mullbong Road, BLACKWALL NSW 2256
Lot A DP 378115

Proposed Development: Subdivision Into Two (2) Residential Allotments - Integrated Development

1.PARAMETERS OF THIS CONSENT

1.1 **Approved Plans and Supporting Documentation**

Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Plan No.	Revision No.	Plan Title	Drawn By	Dated
#GO13976A	A	Plan of Proposed Subdivision	Clarke Dowdle & Associates	27/03/2023

Document Title	Version No.	Prepared by	Dated
Statement of Environmental Effects	_	Clarke Dowdle & Associates	March 2022
Bush Fire Assessment Report	_	Clarke Dowdle & Associates	February 2022
Professional Consultation Meeting (Pre – DA Minutes)	_	Central Coast Council	1 March 2018

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

1.2. Comply with the General Terms of Approval from the Authorities as listed below and attached as a schedule of this consent.

Government Agency / Department / Authority	Description	Ref No	Date
NSW Rural Fire Service	Bush Fire Safety Authority	DA20220511007719-Original-1	17 August 2022

2.PRIOR TO ISSUE OF ANY CONSTRUCTION CERTIFICATE

No Conditions

3.PRIOR TO ISSUE OF ANY SUBDIVISION WORKS CERTIFICATE

3.1. All conditions under this section must be met prior to the issue of any Subdivision Works Certificate.

3.2. Submit an application to Council under section 305 of the Water Management Act 2000 for a section 307 certificate of compliance. The Application form can be found on Council's website centralcoast.nsw.gov.au. Early application is recommended.

The section 305 application will result in a section 306 letter of requirements which must be obtained prior to the issue of any Construction Certificate. The requirements letter will outline which requirements must be met prior to each development milestone eg. prior to construction certificate, subdivision works certificate, occupation certificate and/or subdivision certificate.

3.3. Submit to Council a dilapidation report detailing the condition of all Council assets within the vicinity of the development. The report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, footpath, driveways, street trees, street signs, street lights or any other Council assets in the vicinity of the development. The dilapidation report will be required to be submitted to Council prior to the issue of the Section 138 Roads Act Works approval or the issue of any construction certificate for works on the site. The dilapidation report may be updated with the approval of Council prior to the commencement of works. The report will be used by Council to establish damage to Council's assets resulting from the development works.

3.4. Obtain a Roads Act Works Approval by submitting an application to Council for a Section 138 Roads Act Works Approval for all works required within the road reserve. The application is to be lodged using an *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

The application is to be accompanied by detailed design drawings, reports and other documentation prepared by a suitably experienced qualified professional in accordance with Council's *Civil Works Specifications*.

Fees, in accordance with Council's Fees and Charges, will be invoiced to the applicant following lodgement of the application. Fees must be paid prior to Council commencing assessment of the application.

Design drawings, reports and documentation will be required to address the following works within the road reserve:

a) Construction of concrete footpath 1.5 metres wide for the full street frontage of the development in Orange Grove Rd.
b) Construction of the road verge/footway formation graded at +2% from the top of existing kerb to the property boundary across the full frontage of the site in Orange Grove Rd. Construction to include transitions to existing formation either side of the site
c) Construction of a storm water drainage connection from the development site to Council's storm water drainage system within the road reserve.

The section 138 Roads Act Works Approval must be issued by Council and all conditions of that approval must be addressed prior to occupying and commencing any works in the road reserve.

3.5. Submit an application to Council or an Registered Certifier for a Subdivision Works Certificate under the *Environmental Planning and Assessment Act 1979*. Where this application is being submitted to Council use an *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

The application is to be accompanied by detailed design drawings, reports and other documentation prepared by a suitably experienced qualified professional in accordance with Council's *Civil Works Specifications*.

Where the application is submitted to Council, fees in accordance with Council's adopted fees and charges will be invoiced to the applicant following lodgement of the application. Fees must be paid prior to Council commencing assessment of the application.

Design drawings, reports and documentation will be required to address the following works and any related works:

a) Construction of interallotment stormwater drainage where stormwater from individual allotments cannot be discharged directly into the proposed street drainage system or existing street drainage system.
b) Construction of storm water drainage connection all existing buildings, structures and impervious areas to the proposed stormwater systems.

All detailed design drawings and design reports addressing the above construction items must form part of the Subdivision Works Certificate application. Subdivision Works must not commence until Council as the Principal Certifier has received a *Notice*

of Intention to Commence Subdivision, Roads and Stormwater Drainage Works and a pre-commencement meeting with Council, the Developer and their Contractor has taken place.

3.6. Submit a Waste Management Plan to the principal certifier in accordance with the requirements of Gosford Development Control Plan 2013 Chapter 7.2 - Waste Management.

4.PRIOR TO COMMENCEMENT OF ANY WORKS

4.1. All conditions under this section must be met prior to the commencement of any works.

4.2. Prepare a Construction Traffic and Pedestrian Management Plan (CTPMP) for all activities related to works within the site. The plan must be prepared and implemented only by persons with Roads and Maritime Service accreditation for preparing and implementing traffic management plans at work sites.

The CTPMP must describe the proposed construction works, the traffic impacts on the local area and how these impacts will be addressed.

The CTPMP must address, but not be limited to, the following matters:

- Ingress and egress of construction related vehicles to the development site.
- Details of the various vehicle lengths that will be used during construction and the frequency of these movement.
- Use of swept path diagrams to demonstrate how heavy vehicles enter, circulate and exit the site or Works Zone in a forward direction.
- Deliveries to the site, including loading / unloading materials and requirements for work zones along the road frontage to the development site. A Plan is to be included that shows where vehicles stand to load and unload, where construction plant will stand, location of storage areas for equipment, materials and waste, locations of Work Zones (if required) and location of cranes (if required).
- Works Zones if heavy vehicles cannot enter or exit the site in a forward direction.
- Control of pedestrian and vehicular traffic where pre-construction routes are affected.
- Temporary Road Closures.

Where the plan identifies that the travel paths of pedestrians and vehicular traffic are proposed to be interrupted or diverted for any construction activity related to works inside the development site an application must be made to Council for a Road Occupancy Licence. Implementation of traffic management plans that address interruption or diversion of pedestrian and/or vehicular traffic must only take place following receipt of a Road Occupancy Licence from Council or the Roads and Maritime Service where on a classified road.

Where a dedicated delivery vehicle loading and unloading zone is required along the road frontage of the development site a Works Zone Application must be lodged and approved by Council. A minimum of 3 months is required to allow Traffic Committee endorsement and Council approval.

The Construction Traffic and Pedestrian Management Plan must be reviewed and updated during construction of the development to address any changing site conditions.

A copy of the Construction Traffic and Pedestrian Management Plan must be held on site at all times and be made available to Council upon request.

4.3. Submit to Council a completed *Notice of Intention to Commence Subdivision, Roads and Stormwater Drainage Works* form with supporting documentation prior to the commencement of any Subdivision Works Certificate works, Roads Act Works Approval works, or Section 68 Local Government Act Stormwater Drainage Works Approval works. These works are not to commence until a pre-commencement site meeting has been held with Council.

4.4. Provide or make available toilet facilities at the work site before works begin and maintain the facilities until the works are completed at a ratio of one toilet plus one additional toilet for every twenty (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.

4.5. Install run-off and erosion controls to prevent soil erosion, water pollution or the discharge of loose sediment on the surrounding land by:

- erecting a silt fence and providing any other necessary sediment control measures that will prevent debris escaping into drainage systems, waterways or adjoining properties, and
- diverting uncontaminated run-off around cleared or disturbed areas, and
- preventing the tracking of sediment by vehicles onto roads, and
- stockpiling top soil, excavated materials, construction and landscaping supplies and debris within the lot.

4.6. Erect a sign in a prominent position on any work site on which building, subdivision or demolition work is being carried out. The sign must indicate:

a) The name, address and telephone number of the Principal Certifier for the work; and

b) The name of the principal contractor and a telephone number at which that person can be contacted outside of working hours; and
c) That unauthorised entry to the work site is prohibited.
d) Remove the sign when the work has been completed.

4.7. Erect a temporary hoarding or temporary construction site fence between the work site and adjoining lands before the works begin and must be kept in place until after the completion of the works, if the works:

a) could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic, or
b) could cause damage to adjoining lands by falling objects, or
c) involve the enclosure of a public place or part of a public place.

Note 1: A structure on public land or on or over a public road requires the prior approval of the relevant authority under the *Local Government Act 1993* or the *Roads Act 1993*, respectively.

Note 2: The *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2011* contain provisions relating to scaffolds, hoardings and other temporary structures.

5.DURING WORKS

5.1. All conditions under this section must be met during works.

5.2. Arrange with the relevant service provider / Authority (eg. Ausgrid, Jemena, NBN or other communications provider) for the supply of services concurrently with the engineering works required by this consent. Arrangements must include, where required, any relocation of existing mains and services, and dedication of easements for mains and services.

5.3. The principal certifier must ensure that building work, demolition or vegetation removal is only carried out between:

7.00 am and 5.00 pm on Monday to Saturday.

The principal certifier must ensure building work, demolition or vegetation removal is not carried out on Sundays and public holidays, except where there is an emergency.

Unless otherwise approved within a construction site management plan, construction vehicles, machinery, goods or materials must not be delivered to the site outside the approved hours of site works.

Note: Any variation to the hours of work requires Council's approval.

5.4. While building work is being carried out and where no noise and vibration management plan is approved under this consent, the applicant is to ensure that any noise caused by demolition, vegetation removal or construction does not exceed an LAeq (15 min) of 5dB(A) above background noise, when measured at any lot boundary of the property where the construction is being carried out.

5.5. While demolition or building work is being carried out, all such works must cease immediately if a relic or Aboriginal object is unexpectedly discovered. The applicant must notify the Heritage Council of NSW in respect of a relic and notify the Secretary of the Department of Planning, Industry and Environment and the Heritage Council of NSW in respect of an Aboriginal object. Building work may recommence at a time confirmed by either the Heritage Council of NSW or the Secretary of the Department of Planning, Industry and Environment.

In this condition:

"relic" means any deposit, artefact, object or material evidence that:
(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) is of State or local heritage significance; and

"Aboriginal object" means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains. To ensure the protection of objects of potential significance

5.6. Place all building materials, plant and equipment on the site of the development during the construction phase of the development so as to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure. Further, no construction work is permitted to be carried out within the road reserve unless the works are associated with a separate approval issued under the provisions of the *Roads Act 1993*.

5.7. Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the Principal Certifier or an officer of Council.

5.8. Implement and maintain all erosion and sediment control measures at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.

5.9. Do not place filling or debris within any watercourse, waterway or drain.

5.10. Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

6.PRIOR TO ISSUE OF ANY OCCUPATION CERTIFICATE

No Conditions

7.PRIOR TO ISSUE OF ANY SUBDIVISION CERTIFICATE

7.1. All conditions under this section must be met prior to the issue of any Subdivision Certificate.

7.2. Obtain the Section 307 Certificate of Compliance under the Water Management Act 2000 for water and sewer requirements for the development from Central Coast Council as the Water Supply Authority, prior to issue of the Subdivision Certificate.

All water supply and sewer works for the development must be completed and all other conditions of the Section 306 letter satisfied. Completion of works includes the submission and acceptance by Council of all work as executed drawings plus other construction compliance documentation and payment of a maintenance / defects bond to Council in accordance with Council's adopted fees and charges.

7.3. Submit to the Council/Principal Certifier certification prepared by a Registered Surveyor certifying that all construction has been affected within the appropriate property, easement boundaries and rights of carriageway. The certification must be accompanied by a copy of the proposed subdivision plan, with the distances from the boundaries to the edges of these structures endorsed in red and signed by the surveyor.

7.4. Repair any damage to Council's infrastructure and the road reserve as agreed with Council. Damage not shown in the dilapidation report submitted to Council before the development works had commenced will be assumed to have been caused by the development works unless the Developer can prove otherwise.

7.5. Complete construction of all works within the road reserve in accordance with the Roads Act Works Approval. Completion of works includes the submission and acceptance by Council of all work as executed drawings plus other construction compliance documentation and payment of a maintenance/defects bond to Council in accordance with Council's Fees and Charges.

7.6. Include on the Deposited Plan (DP) an Instrument under the *Conveyancing Act 1919* for the following restrictive covenants; with Council having the benefit of these covenants and having sole authority to release and modify. Wherever possible, the extent of land affected by these covenants must be defined by bearings and distances shown on the plan. The plan and instrument must:

a) Create an easement to drain water 1.5 metre wide as indicated on the approved plans.
b) Create a 'Restriction on the use of Land' to ensure that the entirety of the proposed residential lots must be managed as an inner protection area (IPA) in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019* and in accordance with the criteria specified by the condition firstly referred to in the NSW Rural Fire Service Bush Fire Safety Authority dated 17 August 2022, with the Reference DA20220511007719-Original-1.

Note: Standard wording, acceptable to Council, for covenants can be obtained by contacting Council Subdivision Certificate Officer.

7.7. Submit, and have approved, an application for a Subdivision Certificate to Council / Certifying Authority. The Subdivision Certificate application is to satisfy all of the requirements of the *Environmental Planning and Assessment Regulation 2000* **OR** *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021,* as appropriate.

7.8. Contact Council's Land Information Officer or email ask@centralcoast.nsw.gov.au for the allocation of street addressing for inclusion on Deposited Plan.

7.9. The existing dwelling house on proposed Lot 2 must be upgraded to improve ember protection by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

Written verification from a suitably qualified bush fire consultant shall be submitted with the subdivision certificate attesting to the completion of such works.

7.10. Pursuant to Section 7.11 of the *Environmental Planning and Assessment Act 1979*, pay to Council a total contribution amount of **$18,876.00**, that may require adjustment at the time of payment, in accordance with the relevant Council Contribution Plans No. 31A, 31B, 31C & 31D - Peninsula.

Roadwork - Capital	B	(Key No 789)	$1,204.00
Open Space - Land	C	(Key No 791)	$3,430.00
Open Space - Embellishment	C	(Key No 790)	$10,992.00
Community Facilities - Land	D	(Key No 793)	$$167.00
Community Facilities - Capital	D	(Key No 792)	$3,083.00
Drainage - Land	A	(Key No 787)	$0.00
Drainage - Capital	A	(Key No 788)	$0.00
TOTAL AMOUNT			**$18,876.00**

The total amount must be indexed each quarter in accordance with the Consumer Price Index (All Groups Index) for Sydney issued by the Australian Statistician as outlined in the contributions plan.

Contact Council's Contributions Planner on (02) 4306 7900 for an up-to-date contribution payment amount.

Any Subdivision Certificate must not be issued until the developer has provided the Certifier with a copy of a receipt issued by Council that verifies that the contributions have been paid. A copy of this receipt must accompany the documents submitted by the certifying authority to Council under Clause 104/160(2) of the *Environmental Planning and Assessment Regulation 2000* **OR** Section 59 *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021,* as appropriate.

A copy of the Contribution Plan may be inspected at the office of Central Coast Council, 2 Hely Street Wyong or on Council's website: Development Contributions - former Gosford LGA

8.PRIOR TO OCCUPATION OF THE MANUFACTURED HOME

No Conditions

9.ONGOING

9.1. Management of the Inner Protection Area (IPA),as required by the NSW Rural Fire Service.

10.PENALTIES

Failure to comply with this development consent and any condition of this consent may be a ***criminal offence***. Failure to comply with other environmental laws may also be a ***criminal offence***.

Where there is any breach Council may without any further warning:

- Issue Penalty Infringement Notices (On-the-spot fines);
- Issue notices and orders;
- Prosecute any person breaching this consent, and/or
- Seek injunctions/orders before the courts to retain and remedy any breach.

Warnings as to Potential Maximum Penalties
Maximum Penalties under NSW Environmental Laws include fines up to $1.1 Million and/or custodial sentences for serious offences.

ADVISORY NOTES

- The following public authorities may have separate requirements in the following aspects:

  a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
  b) Jemena Asset Management for any change or alteration to the gas line infrastructure
  c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
  d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
  e) Central Coast Council in respect to the location of water, sewerage and drainage services.

- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.

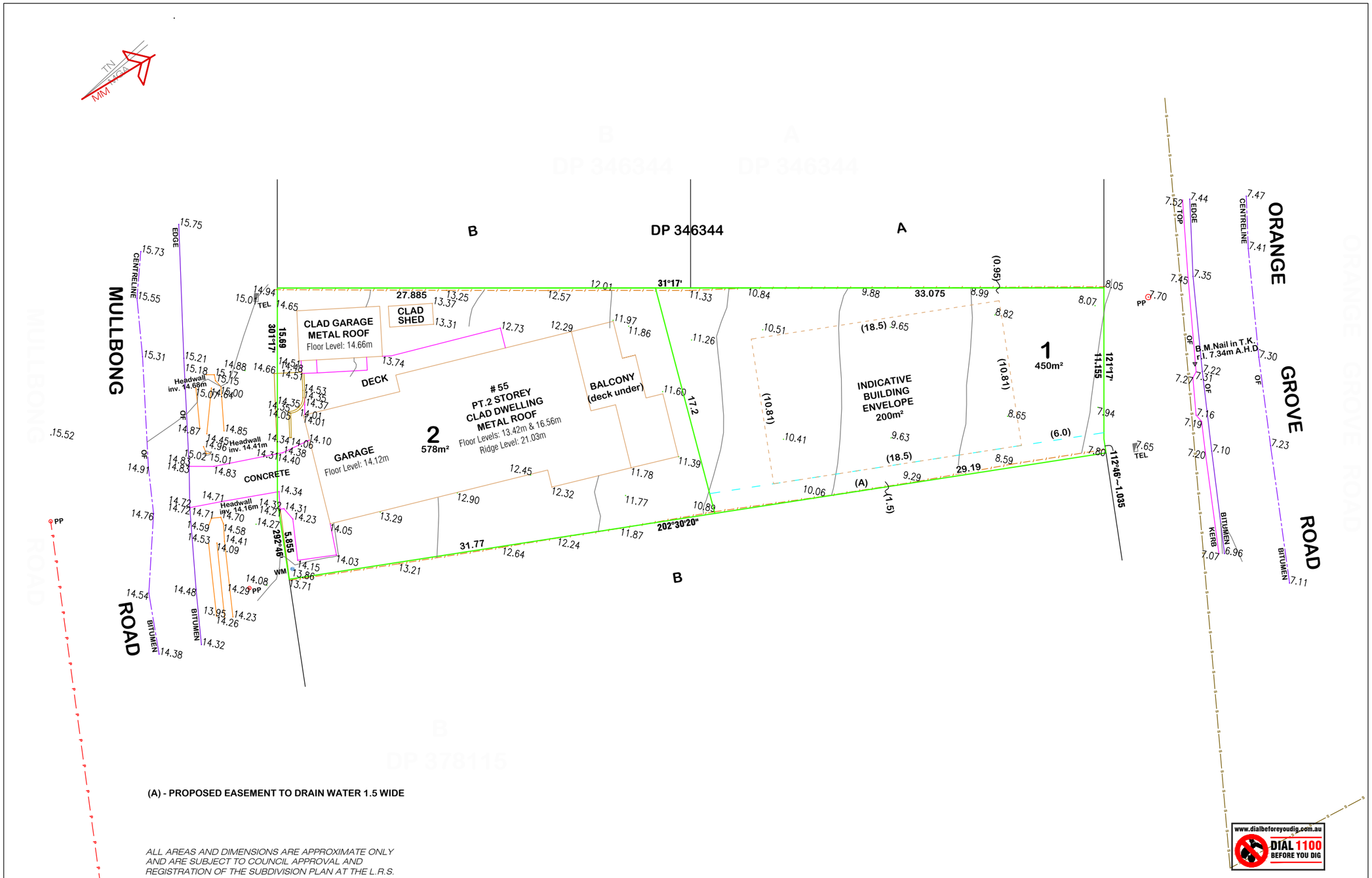
- Dial Before You Dig
  Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures. (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting 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.

- *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.

- Install and maintain backflow prevention device(s) in accordance with Council's WS4.0 Backflow Prevention Containment Policy. This policy can be found on Council's website:
  www.centralcoast.nsw.gov.au

This condition only applies if installation / alteration of plumbing and / or drainage works are proposed (excludes stormwater drainage)

- Future development applications lodged on lots created within this subdivision may be subject to further assessment in relation to the relevant version of Planning for Bush Fire Protection 2019 or its equivalent.



Origin of Levels :
Location :
R.L. :

These Drawings are for the express use of the intended recipient only. These drawings are not to be used / copied or forwarded to any unauthorised parties in part or whole without the express permission of Clarke Dowdle & Associates. Copyright and rights of use remain the property of Clarke Dowdle & Associates.

revision	description:	date:
A	Easement Amended	27/03/2023

client: **WALKER**

approved:
Registered Surveyor

assessed: **R.S.**
drawn: **B.W.**
surveyed: -

Clarke Dowdle & Associates
surveyors - planners - ecologists - bushfire consultants
#1 OSCAR STREET
UMINA BEACH NSW 2257
ph (02)43443553 fax (02)43446636
email admin@cdasurveys.com.au
Po Box 3122 Umina NSW 2257

project: **#55 MULLBONG ROAD, BLACKWALL**
details: **Lot A in DP 378115**
drawing: **PLAN SHOWING PROPOSED SUBDIVISION**

red. ratio:	1:100	datum:	-
reference #Go:	13976A	ref ext:	
contour interval:	-	DA #:	
job date:	20/12/17	number in set:	1 of 1
LGA:	CENTRAL COAST		
Parish:	PATONGA		
County:	NORTHUMBERLAND		

-all dimensions are in metres unless otherwise shown.
-check and confirm all areas & dimensions on site prior to the commencement of any works.
-do not scale from face of plan.
-preliminary boundary fixation has been undertaken only.
-if any construction is planned on or close to the boundaries further survey work will be required.
-a complete investigation of services has not been undertaken for this survey.
-services shown hereon have been located by visible features only.
-tree trunk & height dimensions are approximate only.
-tree spreads are approximate only but have been drawn to scale.
-ridge& gutter levels displayed on buildings are approximate only.
-underground utility mains locations are provided by Council diagrams & are approx positions only.

CLARKE DOWDLE & ASSOCIATES

DEVELOPMENT CONSULTANTS

SURVEYORS • PLANNERS • ECOLOGISTS • BUSHFIRE CONSULTANTS

Statement of Environmental Effects

Residential subdivision of one (1) lot into two (2)

Lot A in DP 378115

55 Mullbong Road, Blackwall

Our Ref: 13976

CLARKE DOWDLE & ASSOCIATES

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Prepared by Ravi Sharma
Town Planner

B.A., Grad Dip URP (MPIA)
Dip. Surveying, Dip. Building Surveying

REPORT DISCLAIMER

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1.0 Introduction

This Statement of Environmental Effects is part of a development application submission to Central Coast Council for approval for the residential subdivision of one (1) allotment into two (2) at 55 Mullbong Road, Blackwall.

This application has been prepared on behalf of the owners of the land and based on the plans and information provided in the relevant Titles and survey information prepared by *Clarke Dowdle and Associates*. An on-site inspection has been undertaken and a photographic record of the inspection is provided in the document (figure 1). The surveyors for the project have supplied all the relevant information required for the preparation of this document.

In preparation of this Statement of Environmental Effects, consideration has been given to the provisions contained in the following documents:

- *The Environmental Planning and Assessment Act 1979*
- *State Environmental Planning Policy 55 – Remediation of Land*
- *State Environmental Planning Policy – Coastal Management*
- *Gosford Local Environmental Plan 2014*
- *Gosford Development Control Plan 2013*

1.1 Pre-DA Meeting

Prior to the lodgement of this DA a pre-DA meeting was undertaken with Council's Senior Town Planner – Mr Kuldip Singh and Senior Development Engineer - Mr John Noakes. No issues were raised by the assessment, subject to addressing the relevant planning controls – namely Gosford LEP and DCP. This application addresses the relevant controls for assessment in accordance with s.4.15 of the EPA Act 1979.

2.0 Site Location and Description

The subject allotment is legally described as Lot A in Deposited Plan 378115 and is known as 55 Mullbong Road, Blackwall. The allotment has an area of 1018m^2 and experiences a slight fall from the north to the south. The site includes a two storey dwelling-house that is located towards the northern end of the site that fronts Mullbong Road with the vacant portion of the land having direct street frontage to the lower lying Orange Grove Road.

The surrounding residential development is characterised by an eclectic blend of one and two storey dwelling-houses, ranging from modest, post-war design to dwelling-houses of a contemporary appearance within newly created subdivisions, all surrounded by well-established trees and landscaped areas.

The site is surrounded by existing residential development and the lots proposed from this lot reflect the already established subdivision pattern existing in this vicinity. (refer to Appendix A)

Mullbong Road and Orange Grove Road are sealed roads providing access to the residents of this immediate area. The main services of power, water supply and telecommunications are available for connection .It would appear that many of the original parcels in this area have already been subdivided. Appendix A is an excerpt from the NSW Lands Information depicting the surrounding cadastral lot boundaries in this vicinity, which again highlights this fact. The property is not within a heritage conservation area, or contains threatened flora or fauna.



Figure 1. Aerial Photograph of the Site and surrounds LPI March 2022

The site is classified as bushfire prone on Council's Bushfire Maps. The relevant legislation to ascertain whether a development application is integrated is the *Rural Fires Act 1997*. Section 4.1 - *Bushfire Safety Authorities* of the act stipulates:

> *(1) The Commissioner may issue a bush fire safety authority for:*
> *(a) a subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes, or*
> *(b) development of bush fire prone land for a special fire protection purpose.*

Comment:

Included with the development application is a Bushfire Assessment Report that assessed the two (2) lot subdivision with no objections being raised. Given that that the site constraints

and potential impacts in relation to bushfire impacts are already addressed in the previous report and would be assessed by the NSW Rural Fire Service who in turn would provide the final determination and associated recommendations it is considered that the Bushfire Report addresses the applicable heads of consideration within the appropriate bushfire legislation.



Figure 3. Photograph of the site – Mullbong Rd Frontage CDA March 2022



Figure 3. Photograph of the site – Orange Grove Rd Frontage CDA March 2022

2.1 Utility Services

All utility services are available to each lot, which includes water, sewerage, electricity and telephone / internet.

2.2 Metropolitan Context

The site is located within the Local Government Area of Gosford and is located within close proximity of the Woy Woy and Ettalong Beach Town Centers . The area is characterised by a residential of development and small scale commercial, retail, medical and educational establishments of varying height, bulk and scale. The site is located near public bus transport, recreational reserves, retail facilities, medical centers / hospitals and sporting grounds. It is considered that the proposal is in keeping with the existing and likely future development of the surrounding area.

3.0 Description of the Staged Proposal

The development involves the residential subdivision of one (1) lot into two (2).
Lot Areas:

Proposed Lot 1: 450m^2

Proposed Lot 2: 578m^2

The subdivision would include the retention of the dwelling-house on lot 2 and the provision of services and drainage.

4.0 Environmental Planning Controls and Consideration

The relevant Statutory Planning Controls include:

- *The Environmental Planning and Assessment Act 1979*
-
- *State Environmental Planning Policy - Resilience and Hazards*
- *Gosford Planning Local Environmental Plan 2014*
- *Gosford Development Control Plan 2013*

4.1 Objectives of the Environmental Planning and Assessment Act 1979

It is considered that the development satisfies the objectives of the *The Environmental Planning and Assessment Act 1979.*

The objects of the act are:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(iii) the protection, provision and co-ordination of communication and utility services,

(iv) the provision of land for public purposes,

(v) the provision and co-ordination of community services and facilities, and

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development, and

(viii) the provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

Comment:

The subdivision design would not result in any adverse environmental, amenity, social or economic impacts to the site and surrounding area. The proposal provides for increased density that would be compatible with the intention and rationale outlined in the Department of Planning's planning publication '*The Metropolitan Strategy'* which is further outlined in the '*Central Coast Regional Strategy*'.

The use of the land would not adversely impact on the surrounding properties and would allow the existing environment to be adequately protected whilst allowing suitable and appropriate development to proceed. The use of the land for residential subdivision is considered to be orderly and economic use of the subject land, whilst reflecting the character of the locality and the environment.

The subdivision design would be consistent with the established residential subdivision pattern in the locality and meets the objectives outlined of the act and would be in the public interest.

4.2 Statutory and Policy Compliance – Section 4.15

The provision of:

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

(a) the provisions of:

(i) any environmental planning instrument, and

(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and

(iii) any development control plan, and

(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,

(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979*), that apply to the land to which the development application relates,*

The Environmental Planning Instruments that are relevant to the proposal are duly considered in the preparation of this development proposal and application.

4.2.1 State Environmental Planning Policy (Resilience and Hazards)

Chapter 2 Coastal Management

Under the SEPP the site is identified as being located within a Coastal Environment Area (CEA) and is also located within the coastal use area. Any development on land identified as a CEA is required to be in accordance with Clause 2.11 Development on land within the coastal environment area of the above SEPP. The proposal will incorporate appropriate nutrient control in regards to stormwater and thus will not have an impact upon the coastal environment and is therefore consistent with the requirements of the SEPP.

Chapter 4 Remediation of Land

The objective of this chapter within the SEPP is to provide a state-wide planning approach to the remediation of contaminated land for the purpose of reducing risks to human health and the environment. The use of the area of the land to be utilised for residential purposes has been for residential use and there are no known previous uses that would lead to the site being contaminated or unsuitable for the proposed use for residential purposes.

5.0 Gosford Local Environment Plan 2014

The Gosford Local Environmental Plan 2014 (GLEP 2014) is currently Council's primary planning control for development in the Gosford Local Government Area and establishes the requirements for the use and development of within the municipality. The LEP provides objectives, zones and principal development standards including minimum lot sizes, floor space ratios, densities and height of buildings.

5.1 GLEP 2014 - Clause 2.1 Land Use Zones

The zoning maps provided by Gosford City Council's website indicate the subject site is currently zoned R2 – Residential. The proposed use falls under the definition of a 'subdivision' under the LEP and is permissible subject Council consent.

Under the LEP the objectives of the R2 Residential zone are:

> • *To provide for the housing needs of the community within a low density residential environment.*
>
> • *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
>
> • *To ensure that development is compatible with the desired future character of the zone.*
>
> • *To encourage best practice in the design of low-density residential development.*
>
> • *To promote ecologically, socially and economically sustainable development and the need for, and value of, biodiversity in Gosford.*
>
> • *To ensure that non-residential land uses do not adversely affect residential amenity or place demands on services beyond the level reasonably required for low-density housing.*

Comment:

- The proposal would be commensurate with the low density subdivision cadaster in the locality and would cater for the housing needs for the local population within the Gosford LGA.
- The proposal would be compatible with the surrounding land uses and allows the construction of additional dwellings in line with the needs of the community.
- The proposal would allow the continuation of residential development that would facilitate the incorporation of landscaping that is compatible with the low density residential zone.

- The proposal is consistent with the objectives of the LEP and the objectives of the zone.

5.2.1 – GLEP 2014 – Clause 4.1 - Minimum Subdivision Lot Size

The GLEP 2014 mapping indicates that the minimum lot size for the subject land is 550m^2. Lot 2 complies with the minimum lot size, with lot 1 being 450m^2 does not comply with the provision. Accompanying this report is a variation to the minimum lot size provision sought under cl.4.6 of the GLEP 2014 (appendix A).

5.2.2 – GLEP 2014 - Clause 7.1 Acid sulfate soils

The site is within a low (class 5) acid sulphate zone in accordance with Council's Acid Sulphate Soils Map. Generally Acid Sulphate Soils are found lower than 1 metre Australian Height Datum (AHD) and often 0-0.3 metre AHD. The site is approximately 1.4 metres AHD and therefore significant acid sulphate soils would be not likely to be encountered. Additionally there would be minimal excavation in relation to the construction for the subdivision. Should acid sulphate soils be encountered during construction works, Council would be notified immediately and an Acid Sulphate Soils Management Plan, written in accordance with the NSW Acid Sulphate Soil Manual 1998 would be to be submitted to Council.

5.2.3 Draft Environmental Planning Instruments

The application has been assessed under the provisions of the Draft Central Coast Local Environmental Plan 2018 and Draft DCP 2018 that have been adopted by council. In regards to the land use and development standards the proposal is consistent with the *Draft Central Coast Local Environment Plan 2018* including the minimum lot size mapped for the locality being 450m^2. The proposed development is therefore consistent with the aims and requirements of the draft Central Coast LEP.

5.3 Gosford DCP 2013

Along with the Gosford Local Environment Plan 2014, Council's Development Control Plan 2013 outlines overarching objectives and prescriptive measures in relation to development standards and the use of land within the Gosford LGA. In this instance the proposed multi-unit development is assessed as having regard to the relevant performance and prescriptive design standards within relevant chapters within the GDCP 2013 including;

- Chapter 2.1 – Character
- Chapter 2.2 – Scenic Quality
- Chapter 3.1 – Dwelling-houses and ancillary structures
- Chapter 6.3 Erosion Sedimentation Control
- Chapter 6.6 Preservation of Trees or Vegetation
- Chapter 6.7 Water Cycle Management
- Chapter 7.1 Car Parking

- Chapter 7.2 Waste Management

5.3.1 Development Control Plan 2013 Chapter 2.1 – Character

The subject allotment is located in the suburb of Blackwall and is classified as being located within Place 5: *Parkland Bungalows*.

> *The desired character of the area is to "remain low-density residential neighbourhoods where the scenic quality of the existing tree canopy is maintained, and where new buildings complement the architectural character of mid-Twentieth Century bungalows that are distinctive features of the Woy Woy Peninsula's streetscapes.*
>
> *Surround each dwelling with a leafy garden to conserve existing bushland remnants and trees that are visually-prominent, particularly any corridors or clusters along back fences and street verges. New trees should be mostly-indigenous to enhance the established canopy.*
>
> *Ensure that new structures complement the siting of surviving traditional bungalows nearby. Maintain street setbacks that are similar to neighbouring properties. Avoid the appearance of a continuous wall of buildings along any street or laneway by providing at least one wide side setback or by stepping the shape of front and rear facades.*
>
> *For new dwellings and additions to existing dwellings, reflect the modest scale and simple articulation of traditional mid-Twentieth Century bungalows. Roofs should be simple hips, gables or skillions without elaborate articulation, gently-pitched to minimise the height of ridges, and flanked by wide eaves to disguise the scale and bulk of exterior walls. Use stepped floorplans, or divide floorspace into linked pavilion structures that are capped by individual roofs and separated by landscaped courtyards. Any facades that are taller or longer than those of neighbouring dwellings should be screened by an extra setback or by balconies and verandahs. Preferably, provide parking as open carports or in detached garages that are screened by shady trees..*

Comment:

The proposed subdivision and a future dwelling-house would have the ability to retain the low density setting within the area. Although the allotment does not meet the numerical measures for the minimum lot size it has been demonstrated in the plans provided that the lots would allow sufficient landscaping opportunities to maintain the leafy character as desired within the character statement.

5.3.2 Development Control Plan 2013 Chapter 2.2 – Scenic Quality

This chapter of the DCP identifies the areas within the Gosford LGA with the following general objectives:

1. *to provide a detailed assessment of Gosford's landscape character which highlights the diversity between and within landscape units;*
2. *to detail the components of that landscape character;*

3. *to provide a comparative ranking of the landscapes; and*
4. *to develop appropriate guidelines for the management of the landscape character.*

The subject site is within the East Brisbane Water Geographic Unit in Landscape Unit. The Green Point / Saratoga Landscape Unit is includes an urbanised area of essentially flatland surrounded by the Brisbane Water. The locale includes older style dwellings, beach huts, beachcomber style shacks plus contemporary dwellings with recent infill redevelopment.

The development objectives for the geographic unit include:

1. *Maintain broad patterns of land use within area to ensure protection of landscape diversity and in particular Environmental/Conservation and Scenic Protection zoned areas.*
2. *Retain current subdivision standards in Environmental/Conservation and Scenic Protection zoned areas to ensure continuing dominance of landscape features over built environment.*
3. *Opportunities for increases in densities and scale are available in urban areas, not subject to visibility constraints or other physical constraints. Visually constrained land includes land viewed from main roads, waterfront areas and land on higher slopes.*
4. *Uses of a retail and commercial nature and associated signage permitted in scenic protection zoned areas to be, where achievable, of a style and scale which reflects the rural nature of the area in which it is located.*
5. *Restrict zoning density of development to current levels on higher visible slopes in urban areas, particularly in steep land zoned areas.*
6. *Continue to attempt to secure lands identified for inclusion in the Coastal Open Space System as part of the visual landscape.*
7. *Proposals for residential and retail/commercial rezonings be preferred where the result will be the consolidation of existing residential and retail/commercial areas rather than the extension of these areas as ribbon development or as incremental extensions into adjoining areas.*
8. *Recognise importance of privately owned Environmental/Conservation zoned land in providing a complimentary land system to and a buffer area for COSS lands.*

As outlined above the proposed subdivision is considered as minor development that merely seeks to provide an additional allotment in accordance with Council's planning controls and maintaining the low density character and landscaping within the area.

5.3.3 GDCP 2014 – Chapter 3.1- Dwelling- House and ancillary structures

The proposed development is assessed as having regard to the relevant performance and prescriptive design standards within Council's LEP 2014 and DCP 2013 - Chapter 3.1 – Single Dwelling and Ancillary Structures.

The following table sets out the assessment of proposal against the relevant prescriptive standards of the planning instruments.

Dwelling-House on Lot 2

Control	Requirement	Proposal	Complies
Floor Space Ratio	0:5:1	0.42:1	Yes
Max Building Height	8.5m	9.03m (no change)	n/a
Open Space	40%(min)	>40%	Yes
Building Envelope	Within envelope (no change)		Yes
Setbacks			
Front	6.0m	1.9m (no change)	Yes
Side - west	0.9m	1.7m (no change)	Yes
Side - east	0.9m	3.55m (no change)	Yes
Rear	3m GF 6m FF	1.53m – 3.64m (deck) 5.2m - 6.82m (wall)	No – refer to discussion below
Access	via public road with acceptable grades	via public road with acceptable grades	Yes
Carparking	2 spaces Behind building line	2 spaces Behind building line	Yes

The application has been assessed against the prescriptive measures outlined in GDCP 2013 Chapter 3.1 – Dwelling House and Ancillary Structures. As detailed in the above table, the proposed development complies with the numerical measures outlined in the chapter other than the rear setback of the shed and is discussed below.

Rear Setback

The common boundary would entail a rear setback of 1.53m – 3.64m from the existing rear deck and 5.2m - 6.82m to the wall of the dwelling house located upon lot 2 that does not comply with the 6m measure for 2 story dwellings.

Notwithstanding the numerical departure, the rear deck includes obscure balustrading to alleviate the overlooking from the rear deck towards the lower lying lot. The upper floor deck is elevated to a height that would simply have view lines over the roof top of a future dwelling house due to the imposition of a positive covenant that would restrict lot 1 to have a ridge height of 16.5m. The depth of the rear allotment would allow sufficient physical separation to provide visual and acoustic attenuation and along with the implementation of landscaping to assist with this matter on each side of the common boundary would further alleviate overlooking.

5.3.4 GDCP 2014 – Chapter 3.5 – Residential Subdivision

Chapter 3.5 – Residential Subdivision outlines the prescriptive measures and objectives in relation to the development standards for the creation of new allotments with the overarching purpose "*so that residential areas provide and maintain an acceptable level of amenity for the existing and future residents*." Below is a discussion of the proposal addressing the applicable developments standards set out in the chapter.

Clause 3.5.1.2 Purpose of this Chapter

The purpose of the chapter is:

> *"to provide a basis for the subdivision of residential property within the City of Gosford so that residential areas provide and maintain an acceptable level of amenity for the existing and future residents."*

Comment:

As outlined within this report the proposed subdivision is designed in a manner to continue to provide an acceptable level of visual and acoustic amenity that is commensurate to low density residential locale.

Clause 3.5.1.3 Objectives of the Chapter

The objectives of the chapter are as follows:

a. *To ensure that residential land developed for subdivision is done so in an efficient and orderly manner.*
b. *To ensure that all lots created are satisfactorily serviced by infrastructure.*
c. *To maximise development potential of residential land whilst retaining any significant environmental characteristics that may occur on the land.*
d. *To encourage a variety of allotments to cater for differing housing needs.*

Comment:

The proposed two (2) lot subdivision would incorporate efficient subdivision design allowing orderly land use to continue in a fashion that is commensurate with the subdivision pattern in the residential zone. The site would incorporate regular shaped and sized allotments that would cater for future dwelling-houses and ancillary structures that would comply with the numerical and performance measures with *GDCP – Chapter 3.1 – Dwelling Houses and Ancillary Structures.*

Clause 3.5.2. Location

The clause outlines hazards that may be applicable to the land including:

- *bushfire*
- *soil, sub-soil and slope instability*
- *mainstream flooding*
- *nuisance flooding*
- *coastal erosion and storm damage*
- *unhealthy building land*

Comment:

The subject land is mapped as bushfire prone, however is located on the edge of the 'buffer' zone.

The relevant legislation to ascertain whether a development application is integrated is the *Rural Fires Act 1997*. Section 4.1 - *Bushfire Safety Authorities* of the act stipulates:

> *(2) The Commissioner may issue a bush fire safety authority for:*
> *(a)a subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes, or*
> *(b) development of bush fire prone land for a special fire protection purpose.*

Comment:

Included with the development application is a Bushfire Assessment Report prepared by Clarke Dowdle & Associates that assessed the two (2) lot subdivision with no objections being raised. Given that that the site constraints and potential impacts in relation to bushfire impacts are already addressed in the previous report and would be assessed by the NSW Rural Fire Service who in turn would provide the final determination and associated recommendations it is considered that the Bushfire Report addresses the applicable heads of consideration within the appropriate bushfire legislation. The land has a gentle grade to allow a future dwelling house to be sited on the lower lying lot 1 and is not flood prone.

Slope

The subject allotment has relatively gentle grades that would be most congenial to constructing a dwelling-house on the lot fronting Orange Grove Road.

Clause 3.5.3 Arrangement of Lots

The objectives outlined within this clause are:

1. *To provide sufficient area and dimensions to enable the construction of dwellings, ancillary outbuildings, private open space, vehicle access and parking.*
2. *To ensure that allotments and the resulting residential development is in character with the locality and specific landform features of the site such as slope, aspect, vegetation, and position in relation to adjacent building.*
3. *To ensure that elements of the site including size, slope, orientation, etc. provide maximum opportunities for future building design, privacy, orientation, solar access and useable outdoor living space on site.*
4. *To encourage a variety of allotments to cater for the different housing needs within the community.*

To demonstrate the appropriateness of the allotment layout included with the draft subdivision plan is the existing dwelling-house and a building envelope on lot 1 that demonstrates that:

- the existing dwelling-house would easily fit within the front allotment with sufficient setbacks for dwelling-house separation to cater for amenity impacts, curtilage, construction of services and landscaping.
- Open spaces that could be established and have direct connectivity to the living areas of a future dwelling-house.
- Appropriate setbacks to alleviate privacy and solar access impacts
- Car parking would be located behind the building line in accordance with the GDCP.

On the basis demonstrated in the plan the proposed arrangement of allotments is consistent with the established allotment layout surrounding the land and meets the objective outlined clause 3.5.3 – Arrangement of allotments within the residential chapter.

Clause 3.5.3.2 Allotment Size

Clause 3.5.3.2 Allotment Size provides a set of numerical measures in relation to the creation of new allotments within the residential zones within the LGA: In regards to subdivision within the R2 Low Density Residential zone the clause specifies:

a. *Zone R2 Low Density Residential (unless otherwise mapped under Gosford LEP 2014):*

- *550m2 minimum area*
- *15m minimum width at building line*

b. *The minimum allotment sizes as indicated are increased in respect to sites having the following characteristics or locations, to provide sufficient area to accommodate the additional requirement for batters, retaining walls, cut/fill, setbacks etc.*

i Slope

Control	Slope	Minimum Area	Minimum width
Requirement	<15%	550m^2	15m
Lot 1	10%	450m^2	13.3m – 16.5
Lot 2	10%	578m^2	16.5 – 21.5m

As indicated in the table the gradient of the land is amenable for a dwelling house to be retained on both lots. However as discussed above the proposed lot areas do not fully comply with the minimum lot size requirements. Subsequently an application is sought utilising the provisions of cl 4.6 of the GLEP 2014 accompanies this statement which seeks to justify the contravention of the minimum lot size development standard.

Clause 3.5.4 Orientation

Clause 3.5.4 outlines the appropriate allotment orientation in regards to energy efficient design. In this instance the allotment would be oriented in a north-south orientation which allows for excellent solar access during the winter months and inversely minimised the impacts of shadowing from dwellings as the sun passes over the allotments from the east to the west. North-South axis is ideal for solar access and energy efficient design for new dwellings, will be further enhanced by State Environmental Planning Policy (SEPP) (BASIX).

3.5.4.5(c) Erosion and Sediment Controls

This proposed subdivision and the erection of a dwelling-house will require some excavation and filling to take place upon the land. Potential impacts of these works will be designed so as to minimise any soil disturbance on and stopped from leaving the site. The design of such erosion and sedimentation control measures will be in accordance with Gosford City Council's Code of Practice for Erosion and Sedimentation Control.

These erosion and sedimentation controls will be used to minimise soil movement away from the site. Plans showing these works will form part of construction drawings and be implemented in accordance with Councils consent conditions.

5.3.5 GDCP 2014 – Chapter 6.7 Water Cycle Management

The intent of Water Cycle Management is to minimise the impact of development on the natural water cycle. In this instance the small scale subdivision development would relate this plan in relation to storm water re-use and stormwater discharge. The proposed two (2) lot development would have the ability to incorporate water retention and reuse measures that

would be designed to maintain stormwater discharge rates to pre-development flows in accordance with councils' conditions of consent that would be designed by a suitably qualified professional, in accordance with Council's Civil Works Specification. Nutrient / pollution control measures would also be designed in accordance with Council's DCP 2013 Chapter 6.7 - Water Cycle Management along with a nutrient / pollution control report including an operation and maintenance plan must accompany the design. It is noted that lot two (2) would be benefited by being connected to an interallotment easement over lot one (1) that allows overflow from tanks to discharge to the public stormwater system.

5.3.6 GDCP 2014 – Chapter 7.2 Waste Management

The proposed subdivision and future dwelling-houses will have access to the existing street waste collection system from the street. Both the allotments would allow sufficient area to locate MGB's behind screen areas that would allow easy access for transportation to the street for collection. The proposal would be consistent with the provisions of the waste management collection in the area, with waste collection bins to be collected from the street frontage. In accordance with chapter 7.2 within the GDCP 2013 a Waste Management Plan has been prepared and is attached with this application.

6.0 Social and Economic Impacts

The development provides a positive effect as it will provide the opportunity to provide the LGA with an additional lot and subsequent future dwelling-house to cater for the demand for additional housing in the LGA. The proposal will contribute to positive economic outcomes by providing short term construction employment and long term multiplier effects to local retail and business operators.

7.0 Suitability of the Site for the development

The site is of sufficient size and dimensions to accommodate the creation of new allotments. The allotment design caters for the proposed dwelling-house to have the ability to be designed within the environmental capacity to the land and in accordance with the relevant planning instruments / codes. The site is well served by public transport and is located within close proximity of various services such as shops, schools, recreational parks and medical facilities. In view of the fact that the site is located within an established residential area and that all utility services would be available for the site, the proposed development would not infringe on these established services.

8.0 The Public Interest

The public interest is well served by the proposed development. In view of the careful nature of the design it is considered that the health and safety of the public will not be affected. The proposal provides the local area with a new allotment on a site that is inherently suitable for such development. The proposal will allow an additional dwelling resource which reinforces and supports the planning objectives of the low density residential zone.

9.0 Conclusion

As detailed within this report, the proposed subdivision development at 55 Mullbong Road, Blackwall is consistent with the objectives, planning strategies and controls applicable to the site. The creation of an additional allotment and dwelling-house would not result in any

adverse environmental, amenity, social or economic impacts to the site and surrounding area.

The proposal provides for increased density that would be compatible with the intention and rationale outlined in the NSW Department of Planning's strategic plans including the *Central Coast Regional Plan 2036*. Given the consistency of the proposed allotment size to that of the established subdivision pattern and the absence of adverse environmental, social or economic impacts the application is worthy of favorable consideration by Council.

5.2.4 Clause 4.6 Exception to a Development Standard – GLEP 2014 – cl 4.1(2) Minimum Lot Size

1. Introduction

The application includes the subdivision of one (1) lot into two (2) of the property known as 55 Mullbong Street, Blackwall. Proposed lot one (1) would be 450m^2 and proposed lot two (2) would be 578m^2. Subsequently proposed lot one (1) does not meet the numerical minimum lot size of 550m^2 in accordance with the minimum lot size map within the Gosford LEP 2014.

2. Gosford LEP 2014 - Clause 4.6 Exceptions to Development Standards

Clause 4.6 Exceptions to Development Standards states:

4.6 Exceptions to development standards

(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.

(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 Secretary has been obtained.

(5) In deciding whether to grant concurrence, the 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 Secretary before granting concurrence…

Assessment:

The Gosford LEP 2014 includes clause 4.6 Exceptions to Development Standards. The clause 4.6 of the Standard Instrument LEP is effectively the successor to SEPP 1, as it aims to enable development standards (such as height, FSR and minimum lot size) in the relevant LEP to be varied where appropriate. It allows flexibility in the application of development standards, in order to achieve overall better planning outcomes. In this case, given the unique location it is considered that the lot area non-compliance will not be detrimental to the appearance of the dwelling-houses (existing and proposed) when viewed from the adjoining properties or from the public domain. As demonstrated in the dwelling-house plans the lot area would not create any further amenity impacts beyond that associated with a compliant lot area. Furthermore, it is considered that lot areas provide for a sustainable, orderly use of the site given that a low density scale is maintained within the R2 – Low Density Residential Zone.

The proposed variation to the minimum lot size development standard has been considered in light of the evolving methodology and "tests" established by the NSW Land & Environment Court (the Court) including the following cases:

- *Winten Developments Pty Ltd v North Sydney Council [2001]*
- *Wehbe v Pittwater Council [2007]*
- *Four2Five Pty Ltd v Ashfield Council [2015]*
- *Randwick City Council v Micaul Holdings Pty Ltd [2016]*
- *Moskovich v Waverley Council [2016]*
- *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118*

The key tests or requirements arising from recent LEC Judgements are that:

- The consent authority be satisfied the proposed development will be in the public interest because it is "*consistent with*" the objectives of the development standard and zone. It is not a requirement to "achieve" those objectives. It is a requirement that the development be compatible with the objectives, rather than having to 'achieve' the objectives.

- Establishing that 'compliance with the standard is unreasonable or unnecessary in the circumstances of the case' does not always require the applicant to show that the relevant objectives of the standard are achieved by the proposal (Wehbe "test" 1). Other methods are available as per the previous 5 tests applying to SEPP 1, set out in Wehbe v Pittwater 2007

- When pursuing a clause 4.6 variation request it is appropriate to demonstrate environmental planning grounds that support any variation; and

- The proposal is required to be in 'the public interest'.

This clause 4.6 variation demonstrates that the proposed lot sizes:

- Satisfies the relevant objectives of the lot size standard;
- Satisfies the objectives of the R2 – Low Density Residential Zone under Gosford LEP 2014;
- Provides for a better planning outcome;
- Has sufficient environmental planning grounds to permit the variation; and
- Is in the public interest

3. The relevant clause therein the GLEP sought to be varied:

4.1(2) Minimum subdivision lot size states:

The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

4. The Nature of the Development Standard sought to be varied and details of the variation:

Proposed lot one (1) would be 450m^2 and proposed lot two (2) would be 578m^2. Subsequently proposed lot one (1) does not meet the numerical minimum lot size of 550m^2 in accordance with the minimum lot size map within the Gosford LEP 2014. As such the proposal entails a numerical variation of 18.2%. Notwithstanding the numerical non-compliance with the development standard, the variation is justified on planning grounds and is discussed below.

In Wehbe v Pittwater Council [2007] NSW LEC 827 Preston CJ set out a new 5-part test and as such outlined below is an assessment of the variation against the development standard.

1. **Consistency with the Objectives of the Minimum Lot Size Standard notwithstanding non-compliance with the development standard**

The objective of the development standard are:

(a) to reflect State, regional and local planning strategies relating to the provision of various sizes of land,

(b) to ensure that the subdivision of land is compatible with the desired future character of the area,

(c) to promote the ecologically, socially and economically sustainable subdivision of land,

(d) to ensure that the creation of parcels of land for development occurs in a manner that protects the physical characteristics of the land, does not create potential

physical hazard or amenity issues for neighbours, can be satisfactorily serviced and will, through its potential cumulative effects, not create capacity problems for existing infrastructure.

In relation to the underlying objective outlined are the reasons of compliance with the set object based on environmental planning grounds:

- The proposal to allow the creation of an additional lot within the Woy Woy Peninsula area is consistent with the directions outlined within the Central Coast Regional Plan 2036. The regional plan identifies a requirement to construct and additional 41,500 homes by 2036.

- The proposed lots would be commensurate with the lot sizes located within the adjoining and surrounding cadaster. Subsequently the proposal would not be consistent with the established density and character as discussed above and would not be setting precedence in this regards.

- The proposed subdivision will have no ecological impacts to the subject land and surrounds. Given the site is located within close proximity of the Woy Woy and Ettalong Town Centres, public transport, essential infrastructure, the proposed development represents a socially, environmentally and economically suitable form of residential subdivision that maintains low density lots.The proposal allows the creation of a new allotment and dwelling-house would balance the social needs of the peninsula area (new lots and dwelling-houses) that are essentially more substantial that the typical secondary dwellings that are becoming established on suburban sized allotments – including appropriate land tenure with the provision of all required services and infrastructure required for the creation of Torrens Title lots in an efficient and orderly fashion.

2. The underlying objective or purpose of the standard of not relevant to the development and therefore compliance is unnecessary.

The underlying objectives of the development standard are relevant and as outlined above it is considered that the proposal adheres the underlying objectives of the development standard; in this instance the minimum lot size provision.

3. The underlying object of purpose would be defeated or thwarted if compliance was required and therefore compliance is unreasonable.

As discussed in detail above the development adheres to the objectives of the development standard and therefore the concept of compliance with the objects of the development standard would actually contravene the concept of having these overarching merit based statements (overarching requirements) accompanying the prescriptive measures. Further the underlying object of purpose would be defeated or thwarted if compliance was required as this would result in the development not proceeding until such time as the draft Central Coast LEP is finalised at which point would comply with the minimum lot size requirement.

4. The development standard has been virtually abandoned or destroyed by council's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable.

All the surrounding lots are around the 450m^2 mark. As such the development standard in the locality has been abandoned and council have found that the 450m^2 to be an acceptable lot area for the area. Further councils' own action in reducing the minimum lot size from 550m^2 to 450m^2 as indicated in the draft Central Coast LEP further compounds the fact that compliance with the development standard is unnecessary and unreasonable.

5. The compliance with the development standard is unnecessary or inappropriate due to the existing use of land and current environmental character of the particular parcel of land. That is, the particular parcel of land should not have been included in the zone.

The subject lot should remain in the exisitng R2 Low Density Residential zone.

6. Consistency with the Objectives of the Zone

The NSW legislation website indicates the subject site is currently zoned R2 – Residential

Under the LEP the objectives of the R2 Residential zone are:

• *To provide for the housing needs of the community within a low density residential environment.*

• To enable other land uses that provide facilities or services to meet the day to day needs of residents.

• To ensure that development is compatible with the desired future character of the zone.

• To encourage best practice in the design of low-density residential development.

• To promote ecologically, socially and economically sustainable development and the need for, and value of, biodiversity in Gosford.

• To ensure that non-residential land uses do not adversely affect residential amenity or place demands on services beyond the level reasonably required for low-density housing.

Comment:

• The proposed use falls under the definitions of 'subdivision' and under the LEP and is permissible subject Council consent.

- The proposed area and dimensions of the lots are commensurate with the area and width of many foreshore lots that are located within the immediate vicinity and surrounds within the lower foreshore area of Blackwall and Orange Grove.

- The surrounding cadaster has no established or regularised 'standard' lot size and width. As such the proposal would not be creating precedence to breaking a regularised cadaster pattern along the coastal locale.

• As demonstrated in the plans and the character statement, the proposal would be compatible with the surrounding intensity of low density residential development within the immediate area.

• The proposal would allow the continuation of residential development that would facilitate the incorporation of landscaping that is compatible with the residential zone.

- As addressed within the SEE, the proposed dwellings would comply with the prescriptive measures and objectives within relevant chapters of the GDCP 2013 and is compatible with the desired future character of the zone.

- The proposal would not be detrimental to the residential amenity and place overbearing demands on services that would be commensurate for low density housing

- The subject site is located within walking distance of public transport and public and private recreational facilities.

- The subject site includes the essential utilities, including reticulated water, sewer, power and telecommunications.

- The development caters for additional lots and dwelling-house in accordance with the *Draft Central Coast Regional Plan released in November 2015*.

7. Consistency with State and Regional Planning Policies

The proposed development would be in line with Draft Central Coast Regional Strategy that is the NSW Government's long term land use plan for the region, which covers the Gosford City and Wyong Shire Local Government Areas. The Regional Strategy contains policies and actions designed to cater for the region's projected housing and employment growth over next 20 years. Greater housing choice is prioritised to satisfy the community's desire for smaller households. The plan places emphasis on providing new housing in existing and committed growth areas. To meet the projected housing demands over the next 20 years, an average of 1,980 new homes will need to be constructed each year. This is 590 more homes than the average annual housing production of 1,390 dwellings over the 19 years to 2014-15.The proposed subdivision would allow additional housing that is consistent with the policies and strategic actions outlined in the strategy.

6. The Variation in the Public Interest

The proposal is considered to be in the public interest due to the superior use of the land and subsequent land tenure that would be provided as opposed to secondary dwellings or villas within the low density area. Subsequently the proposal provides a more appropriate use of the land whist maintaining the low density character and housing scale and density within the Woy Woy Bay locale.

7. Conclusion

For the reasons outlined above the clause 4.6 variation is provided in support of the variation to the minimum lot size at 55 Mullbong Street, Blackwall as detailed above, in this instance the proposal:

- The proposed non-compliance does not raise any matter of significance for State or regional environmental planning as it is peculiar to the creation of a new lot is not readily transferrable to any other site in the immediate locality, wider region of the State and the scale or nature of the proposed development does not trigger requirements for a higher level of assessment.

- As the proposed development is in the public interest because it complies with the objectives of the development standard and the objectives of the zone there is no significant public benefit in maintaining the numerical development standard.

- There are no other matters required to be taken into account by the secretary before granting concurrence.

On the basis outlined above, the proposal satisfies all the requirements of clause 4.6 of the GLEP 2014 with the exception to the development standard providing sufficient environmental planning justification to warrant the proposed lot size to be acceptable in this case.

CLARKE DOWDLE & ASSOCIATES
DEVELOPMENT CONSULTANTS
SURVEYORS • PLANNERS • ECOLOGISTS • BUSHFIRE CONSULTANTS

BUSH FIRE ASSESSMENT REPORT













For the Proposed Two Lot Subdivision at

55 MULLBONG ROAD, BLACKWALL, NSW
(LOT A IN DP 378115)

February 2022

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DOCUMENT TRACKING

Project Location	55 Mullbong Road, Blackwall
Date	17/02/22
Prepared by	Ashley Dowdle
Reviewed by	Kristan Dowdle
Approved by	Kristan Dowdle
Status	FINAL
Version	2

1.0 INTRODUCTION

Clarke Dowdle & Associates has been engaged to conduct a Bush Fire Assessment Report on the property located at 55 Mullbong Road, Blackwall. The proposal is for the subdivision of the current allotment to form two separate allotments.

This Bush Fire Assessment Report serves to identify issues relating to the condition of the site as part of the level of assurance required for consent by Central Coast Council to the Development Application (DA) pertaining to the proposed subdivision on the site. A Bushfire Assessment is required as the site falls within a Bushfire Prone Area as identified by Central Coast Council. As the proposed development involves a subdivision it is classified as integrated under Section 4.46 (1) of the *Environmental Planning and Assessment Act*. Under Section 100B of the *Rural Fires Act* therefore, the development application must be submitted to the Commissioner of the Rural Fires Services for approval and issue of a 'Bushfire Safety Authority'. The issue of a 'Bushfire Safety Authority' authorises development to the extent that it complies with standards regarding setbacks, provision of water supply and other matters considered by the Commissioner to be necessary to protect persons, property or the environment from danger that may arise from a bushfire.

The assessment was performed in February 2022 and was conducted in accordance with the procedures and methods recommended in the NSW Rural Fire Service published document '*Planning for Bushfire Protection, 2019'* (PBP). This report will form the basis for providing an assessment of the bushfire protection requirements for the development and will provide recommendations on the provision of Asset Protection Zones, accessibility, water supplies and preliminary comments on construction standards of future developments within the site.

1.1 Proposed Development

The proposed development will involve the subdivision of an existing residential allotment to form two (2) separate allotments. The proposal will form;

- Proposed lot 1 (450m^2) - vacant
- Proposed lot 2 (578m^2) – which contains an existing dwelling

Figure 1 provides a site plan of the proposed development.



Figure 1: Proposed Subdivision Site Plan

2.0 OBJECTIVES AND SCOPE OF THE ASSESSMENT

The primary objectives of this report are to:

- Outline the degree of bushfire hazard currently affecting the site;
- Outline the degree to which any identified bushfire hazard can be managed;
- Indicate the potential of the site to provide a safe development;
- Provide recommendations for the provision of Asset Protection Areas and Construction standards;
- Review the accessibility of the site; and
- Identify any pre-existing bushfire protective measures such as roads and creeks.

In order to achieve the above objectives, the following work was conducted:

- Compilation and review of site information including a site detail plan, topographic map, aerial photograph and site photographs;
- Review of appropriate guidelines including Australian Standard AS3959-2018 '*Construction of buildings in Bushfire Prone Areas'* and PBP;
- Inspection of the proposed development site and surrounding areas to assess the topography, slopes, aspect, drainage vegetation and adjoining land usage;
- Identification of any existing bushfire protection advantages such as roads, creeks and sporting ovals; and
- Visual appraisal of bushfire hazard and risk to the site.

3.0 LEGISLATION

This report has been prepared in accordance with the following legislation and planning requirements:

- *Environmental Planning and Assessment Act, 1979*
- *Rural Fires Act, 1997 (Amended), Sections 63 (1) ,63 (2) and 100B*
- *Rural Fires Regulation 2013*
- *Planning for Bushfire Protection, 2019.*

4.0 SITE IDENTIFICATION AND DESCRIPTION

4.1 Site Identification and Location

The subject site is currently known as 55 Mullbong Road, Blackwall, NSW (Lot A in DP 378115). The site is in the Local Government Area (LGA) of Central Coast Council (Fire Danger Index-100).



Figure 2: Aerial Photograph of the site (bordered in blue)
Source: Nearmap, 2022

The subject site is a residential allotment that contains an existing dwelling on the southern portions of the site. Lands within the site comprise of managed lawns and landscaped gardens throughout the property. The site is provided dual access via Mullbong Road to the south and Orange Grove Road to the north.

The site is connected to the town reticulated supply of water and to the main electrical grid.

4.2 Bushfire Prone Mapping

The land is mapped by Central Coast Council as being bushfire prone. The site has been mapped as being wholly within the bushfire buffer (yellow) of Category 1 (red) vegetation. The following extract from the Department of Planning Bushfire Mapping outlines this.



Figure 3: Bushfire Prone Mapping (site highlighted in yellow)
Source: Department of Planning, 2022

5.0 BUSHFIRE HAZARD ASSESSMENT

5.1 Surrounding Vegetation

The following hazardous vegetation was calculated for a distance of at least 140m from the proposed site boundaries (See Figures 4 & 5).

5.1.1 North & East

The surrounding land on these aspects contains managed lands associated with developed residential allotments and therefore these aspects are deemed not to contain a bushfire hazard.

5.1.2 South

To the south beyond the site, Mullbong Road and a row of developed residential allotments is a narrow strip of vegetation that has been mapped as containing *Narrabeen Coastal Blackbutt Forest.* Due to the short potential fire run directly towards the site (<50m), this narrow strip meets with Section *A1.11.1 Simplified approach* of PBP for assessing remnant bushland and narrow vegetation corridors. As result, this area will be assessed as equivalent to a **Rainforest.**

5.1.3 West

To the west beyond the site and Mullbong Road ais vegetation that has been mapped as containing *Narrabeen Coastal Blackbutt Forest*. This vegetation meets with the Keith (2004) description of a 'wet sclerophyll forest' and therefore, in accordance with Appendix 1 in PBP, the vegetation will be assessed as a **Forest.**



Figure 4: Vegetation mapping (Yellow circle is ~140m radius from the site)
Source: Central Coast Council, 2022



1.



2.



3.



4.



5.



6.

Note: See figure 5 for photograph location and direction.

5.2 Effective Slope

PBP states in A1.5 that the effective slope is;

'The slope of the land under the classified vegetation has a direct influence on the rate of fire spread, the intensity of the fire and the ultimate level of radiant heat flux.

The effective slope is the slope of the ground under the hazard (vegetation). It is not the slope between the vegetation and the building (slope located between the asset and vegetation is the site slope).'

In regards to the proposal the following effective slopes are applicable (See Figure 5).

- **South: 5-10° Down Slope**
- **South-West: 10-15° Down Slope**
- **West: Flat/Up Slope**

6.0 BUSHFIRE RISK ASSESSMENT

6.1 Background Information

This bushfire assessment follows the methods and procedures recommended in PBP. This document provides concepts for (via a NSW State variation to the BCA) Class 1, 2, 3 buildings, Class 4 parts of buildings, some Class 10 structures and Class 9 buildings that are Special Fire Protection Purposes (SFPP) (AS3959-2018) in bushfire prone areas and gives guidance on planning and development control processes in relation to bushfire protection measures. The document also provides a methodology for determining setback and Bushfire Attack Levels (BAL) required in development for residential purposes that are found to fall in areas designated as bushfire-prone.

6.2 Asset Protection Zones

Appendix 1 of PBP provides a methodology for determining the Asset Protection Zone (APZ) required for any given proposed development. APZ's describe the distance between the proposed development (the asset) and the hazard (the bushland) and vary according to topography and vegetation type. PBP states that the primary purpose of an APZ is to ensure that a progressive reduction of bushfire fuels occurs between the bushfire hazard and any habitable structures within the development.

A summary of the APZ's required for each aspect of the proposed developments is provided in Table 1.

6.3 Bushfire Attack Level (BAL)

Following on from the subdivision stage, any future construction is subject to Section 4.14 of the *EP&A Act* or the code's SEPP (Clause 1.19). *AS3959*-2018 is not applied until building construction stage.

The bushfire risk to a property depends on the vegetation type, slope and proximity of vegetation to the proposed development, and can be classified as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL FZ as outlined in AS3959-2018. AS3959-2018 provides two methods to determine complying Bushfire Attack Levels, these are the Simplified Procedure-Method 1 (deemed-to-satisfy) and Detailed Method for Determining the Bushfire Attack Level-Method 2.

Table 2: Asset Protection Zone Summary (Proposed Lots 1 & 2)

Aspect	Vegetation[1] within 140m of development	Effective Slope of Land	Required APZ[2]
North & East	Managed Lands	-	-
West	Forest	Flat/Up Slope	24m
South-West	Forest	10-15° Down Slope	45m
South	Rainforest (Remnant)	5-10° Down Slope	18m

Notes for Table 1:

- (1) Refer to Keith (2004) and Appendix 1 in *PBP*
- (2) Refer to A1.12.1 in PBP for Residential Subdivision Development

The minimum APZ's detailed in Table 1 can be accommodated and/or exceeded by the existing land usage. Although no new dwellings are proposed as part of this application, any new dwelling in proposed lot 1, can and do provide APZ's that equates to any dwelling not exceeding 29 kW/m2.

6.4 Aboriginal and Environmental Considerations

No aboriginal artefacts/cultural surveys were conducted as part of the subdivision.

No ecological surveys were conducted as part of the proposed subdivision however impacts associated with bushfire protection is seen as minimal.

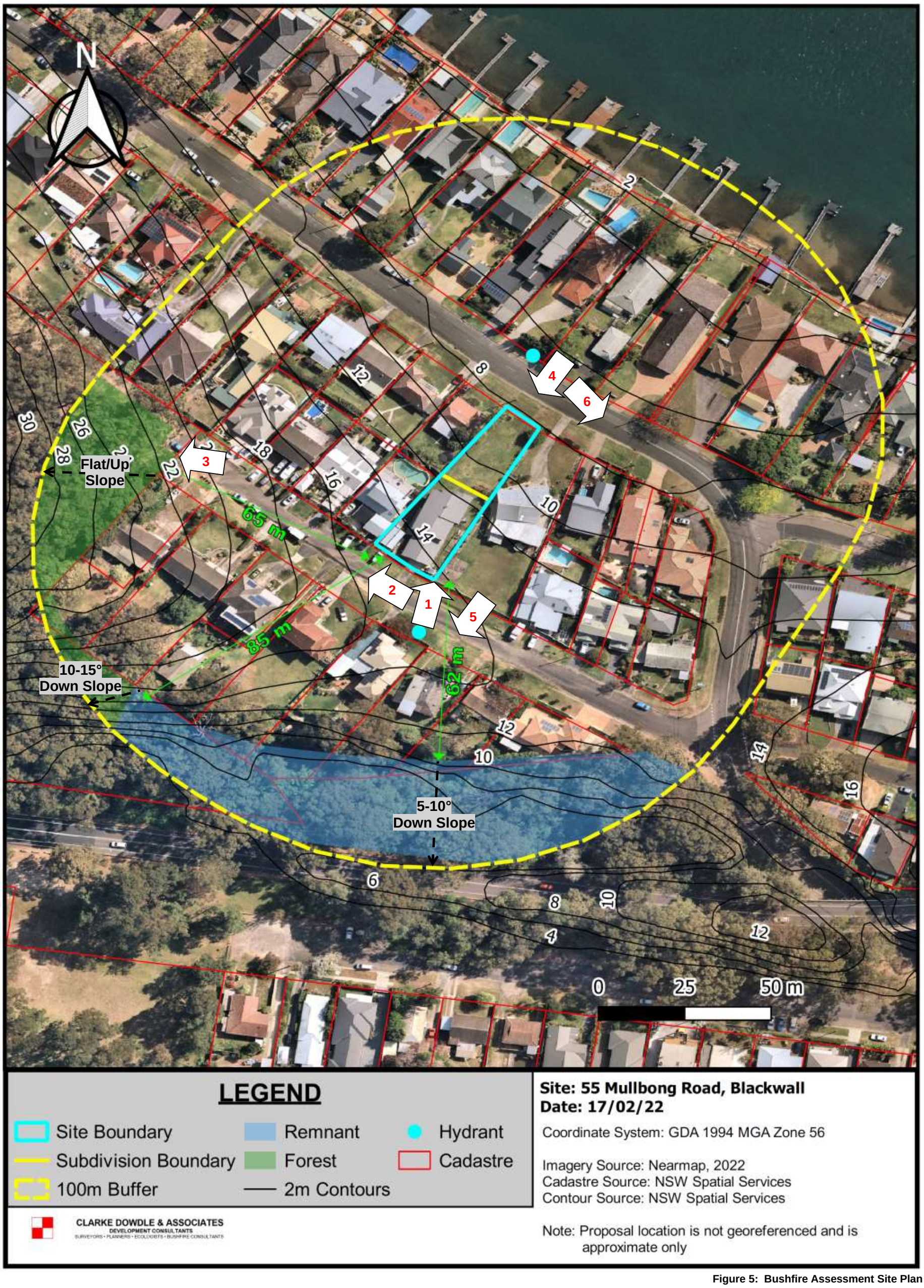

Figure 5: Bushfire Assessment Site Plan

7.0 PERFORMANCE CRITERIA COMPLIANCE

The following table outlines the proposed subdivision's compliance or otherwise with each of the performance requirements and acceptable solutions provided in Section 4.2 of PBP.

7.1 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.*

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
ASSET PROTECTION ZONES	potential building footprints must not be exposed to radiant heat levels exceeding 29 kW/m² on each proposed lot.	APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FFDI.	APZ's are provided complying with Table A1.12.1 in Appendix 1.
	APZs are managed and maintained to prevent the spread of a fire towards the building.	APZs are managed in accordance with the requirements of Appendix 4.	APZ's are provided complying with Table A1.12.1 in Appendix 1.
	the APZs is provided in perpetuity.	APZs are wholly within the boundaries of the development site	Complies
	APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	APZs are located on lands with a slope less than 18 degrees.	APZ's will occur upon lands less than lands with a slope less than 18 degrees.
LANDSCAPING	landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	landscaping is in accordance with Appendix 4; and fencing is constructed in accordance with section 7.6.	The development **complies** provided the appropriate condition is included on the Bush Fire Safety Authority (BFSA) upon application

7.2 Access

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.*

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
ACCESS	firefighting vehicles are provided with safe, all-weather access to structures.	• property access roads are two-wheel drive, all-weather roads; • perimeter roads are provided for residential subdivisions of three or more allotments; • subdivisions of three or more allotments have more than one access in and out of the development; • 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; • all roads are through roads; • 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; and • 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 proposed lots will be provided direct access from the public roads known as Mullbong Road and Orange Grove Road. No roads are proposed as part of the proposal.
	the capacity of access roads is adequate for firefighting vehicles	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.	No perimeter and non-perimeter roads are proposed
	there is appropriate access to water supply.	• 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.	Not applicable

PERIMETER ROAD	access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	• are two-way sealed roads; • minimum 8m carriageway width kerb to kerb; • parking is provided outside of the carriageway width; • hydrants are located clear of parking areas; • are through roads, and these are linked to the internal road system at an interval of no greater than 500m; • curves of roads have a minimum inner radius of 6m; • the maximum grade road is 15 degrees and average grade of not more than 10 degrees; • the road crossfall does not exceed 3 degrees; and • a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	No perimeter roads are applicable
NON-PERIMETER ROAD	access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.	• minimum 5.5m carriageway width kerb to kerb; • parking is provided outside of the carriageway width; • hydrants are located clear of parking areas; • roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m; • curves of roads have a minimum inner radius of 6m; • the road crossfall does not exceed 3 degrees; and • a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	No non-perimeter roads are applicable
PROPERTY ACCESS	firefighting vehicles can access the dwelling and exit the property safely	• There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles. In circumstances where this cannot occur, the following requirements apply: • minimum 4m carriageway width; • in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay; • a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; • provide a suitable turning area in accordance with Appendix 3; • curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress; • the minimum distance between inner and outer curves is 6m; • the crossfall is not more than 10 degrees; • maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and • a development comprising more than three dwellings has access by dedication of a road and not by right of way. .	All dwellings will be located within 70m of Mullbong Road and Orange Grove Road and therefore no specific access is required. In addition, the proposed subdivision will comply with the access requirements as outlined by the NSW Fire and Rescue requirements (2016) “Fire Requirements for Minor Residential Development” are relevant (See Image below)

6.1 Minor residential development should ensure no part of any dwelling is more than 90m from a carriageway that can be readily accessed and traversed by a fire appliance (see Figure 1 and Figure 2).

Note: The 90m distance is equivalent to three lengths of standard 30m firefighting hose being connected to the fire appliance.

6.2 The carriageway should be constructed to support a fire appliance weighing up to 15 tonnes, including being sealed with guttering and drainage. The carriageway is required to have:

a) an unobstructed width of 4.0m, including from any parked vehicles (see Figure 2)

b) a pinch point providing a minimum clearance of 3.0m and is not longer than 30m

c) a minimum 3.5m clearance from any overhanging obstructions

d) a gradient no greater than 1:6

e) a turning radius of not less than 10m (see Figure 3 and Figure 4).

Note: For further information refer to FRNSW *Guidelines for emergency vehicle access* which is available at firesafety.fire.nsw.gov.au.

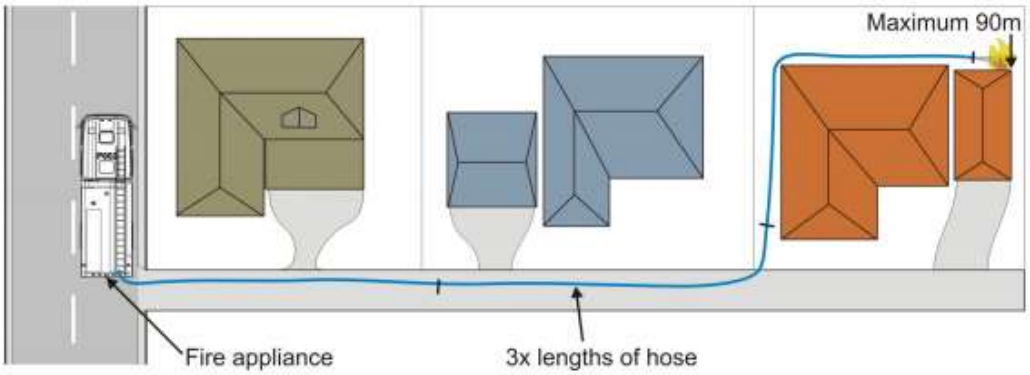

Figure 1 Example of 90m hose coverage from a public road

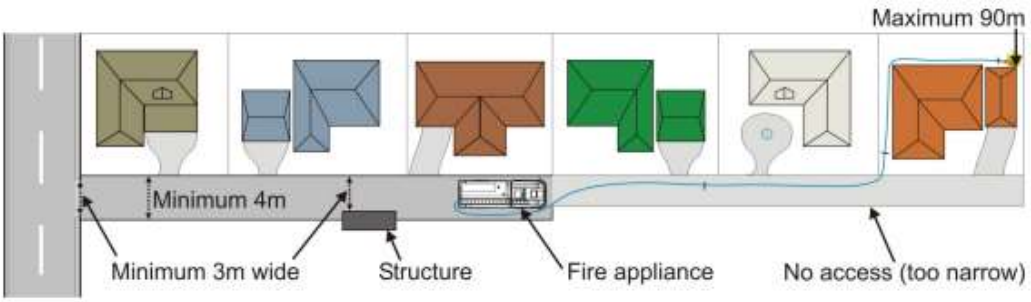

Figure 2 Example of 90m hose coverage from an accessible private carriageway

Figure 6: Access Requirements for NSW Fire and Rescue
Source: NSW Fire and Rescue, 2016

7.3 Services-Water, electricity and gas

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

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
WATER SUPPLY	adequate water supplies is provided for firefighting purposes.	• reticulated water is to be provided to the development where available; • a static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and • static water supplies shall comply with Table 5.3d.	Complies
	• water supplies are located at regular intervals; and • the water supply is accessible and reliable for firefighting operations.	• fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2005; • hydrants are not located within any road carriageway; and • reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	Not Applicable
	flows and pressure are appropriate	fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.	Not Applicable
	the integrity of the water supply is maintained.	• all above-ground water service pipes are metal, including and up to any taps; and • above-ground water storage tanks shall be of concrete or metal	Any future development upon the site will be required to comply with this condition
ELECTRICAL SERVICES	location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	• where practicable, electrical transmission lines are underground; • where overhead, electrical transmission lines are proposed as follows: ○ lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and ○ no part of a tree is closer to a power line than the distance set out in ISSC3 *Guideline for Managing Vegetation Near Power Lines*.	Any future development upon the site will be required to comply with this condition.
GAS SERVICES	location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	• reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - *The storage and handling of LP Gas*, the requirements of relevant authorities, and metal piping is used; • all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side; • connections to and from gas cylinders are metal; • polymer-sheathed flexible gas supply lines are not used; and • above-ground gas service pipes are metal, including and up to any outlets.	Any future development upon the site will be required to comply with this condition

8.0 RECOMMENDATIONS

The allotment falls within a bushfire prone area as deemed by Central Coast Council and therefore the requirements of PBP apply. This bushfire assessment has followed the methods and procedures recommended in this document.

This Bush Fire Assessment Report concludes that the proposed subdivision will comply with the performance criteria for PBP if the proposed development acceptable solutions and recommendations are implemented. These items are outlined below.

8.1 Asset Protection Zones

- A minimum APZ of 24m from the western hazard, 18m from the southern hazard and 45m from the south-eastern hazard is provided as depicted in Figure 5.
- All newly created lots shall be maintained as an APZ for the lifetime of the development (excluding the northernmost vegetated areas depicted in Figure 5).
- The APZ's shall be maintained in accordance with an Inner Protection Area (IPA) and be in accordance with NSW Rural Fire Service's document '*Standards for Asset Protection Zones*' and Appendix 4 of Planning for Bush Fire Protection 2019.

8.1.1 Environmental Considerations

The proposed development will not require any vegetation removal for bushfire purposes.

8.2 Construction Standards

- No new dwellings are proposed as part of this application. An independent assessment will be required under s4.14 of the *Environmental Planning and Assessment Act 1997* at the time of any future application. Building construction standards for the proposed future dwellings are to be applied in accordance with *Australian Standard AS3959-Construction of buildings in bushfire-prone areas* with additional construction requirements as listed within Section 7.5 in PBP.

8.3 Property Access and Egress

- The proposed lots are provided access by a public road that comply with Table 5.3b Property Access of PBP.

Proposed Lots 1 & 2

- The new/existing dwellings within proposed lots 1 and 2 will be within 70m of Mullbong Road and Orange Grove Road and therefore no specific access requirements under Table 5.3b Property Access of PBP.

8.4 Duty of Care

- It is recommended that the building occupants prepare a bushfire survival plan which addresses the option to leave early prior to bushfire impacting the site. Details on how to prepare this plan are provided by the NSW RFS website (http://www.rfs.nsw.gov.au/file_system/attachments/Attachment_BushFireSurvivalPlan.pdf)

- The landowner/manager is to be made aware of their liability to manage the development lands for the ongoing protection of themselves and their neighbours (refer to *Section 63(2) Rural Fires Act*).

- Landowners living in bushfire prone areas should familiarise themselves with publications published by the NSW Rural Fire Service. These are located on the RFS website www.rfs.nsw.gov.au.

8.5 Water and Utility Services Supply

Water, electricity and gas supply for each allotment is to comply with Table 5.3c of PBP.

9.0 CONCLUSION

Clarke Dowdle & Associates were engaged to conduct a Bush Fire Assessment Report on the property located at 55 Mullbong Road, Blackwall. The assessment was performed in February 2022 and was conducted in accordance with the procedures and methods recommended in the NSW Rural Fire Service published document '*Planning for Bushfire Protection'* (PBP).

This report has outlined and provided recommendations as to how the proposal may comply with the Specific objectives outlined in section 5.2 of PBP as summarised below;

minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters and create bottlenecks should be avoided);

The proposed subdivision design complies with this objective

minimise vegetated corridors that permit the passage of bush fire towards buildings;
The proposed subdivision does not adjoin any vegetation corridors that would allow the passage of fire towards and new or existing buildings.

provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;

Any future dwelling will not be located on ridge-tops, steep slopes, within saddles and narrow ridge crests;

ensure that APZs between a bush fire hazard and future dwellings are effectively designed to address the relevant bush fire attack mechanisms;

APZs have been provided which comply with and/or exceed the minimum requirements of Table A1.12.2 of *PBP*. The future buildings will be constructed in accordance with *AS3959-2018* and Section 7.5 in PBP

ensure the ongoing maintenance of APZs;

Fuel management within the residential lots can be undertaken by the land owners under the guide of Appendix B and as outlined within NSW RFS publications such as *Standards for Asset Protection Zones* available from the RFS website at www.rfs.nsw.gov.au.

provide adequate access from all properties to the wider road network for residents and emergency services;

Access complies with the performance requirements outlined in PBP, 2019

provide access to hazard vegetation to facilitate bush fire mitigation works and fire suppression; and

Not applicable as hazardous vegetation does not occur within and/or immediately adjoining the property.

ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.
Water supply, gas services and electricity are to comply with Table 5.3c in PBP, 2019

The determining authorities and Rural Fire Service may suggest further or additional measures to be implemented in the planning and construction on the subject site.

We would be pleased to provide further information on any aspects of this report.

For and on behalf of

Clarke Dowdle and Associates



Kristan Dowdle

B. Env. Sc.
Grad Dip. Design in Bushfire Prone Areas
Bushfire Consultant

Disclaimer

PBP States;
Notwithstanding the precautions adopted, it should always be remembered that bushfire burn under a wide range of conditions and an element of risk, no matter how small always remains.

AS 3959-2018 states;
It should be borne in mind that the measures contained in this standard cannot guarantee that the building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions.

This report provides the required information to assist Local Council and the Rural Fire Service in determining compliance in accordance with PBP and AS 3959-2018 and as stated above, this report does not guarantee that the proposal will withstand bushfire attack on every occasion.

REFERENCES

- Keith, D. (2004), *Ocean Shores to Desert Dunes.* Department of Environment and Conservation, Sydney
- National Construction Code (NCC) (2019), Building Codes Australia, *Class 1 and Class 10 Building Housing Provisions Volume 2*
- NSW Rural Fire Service (2005). *Standards for Asset Protection Zones.* NSW Rural fire Service http://www.rfs.nsw.gov.au/file_system/attachments/State/Attachment_20060130_7DE0A145.pdf
- NSW Rural Fire Service and Department of Planning (2019), *Planning for Bushfire Protection, A guide for Councils, Planners, Fire Authorities and Developers*. NSW Rural Fire Service.
- Schauble, J. (2004). *The Australian Bushfire Safety Guide*. Harper Collins Publishers, Sydney, Australia.
- Standards Australia, (2018), AS3959 Construction of Buildings in Bushfire-prone Areas. Standards Australia International

NSW GOVERNMENT

NSW RURAL FIRE SERVICE

Central Coast Council
PO Box 20
WYONG NSW 2259

Your reference: CNR-39331 DA/668/2022
Our reference: DA20220511007719-Original-1

ATTENTION: Development South Admin

Date: Wednesday 17 August 2022

Dear Sir/Madam,

Integrated Development Application
s100B – Subdivision – Subdivision
55 Mullbong Road Blackwall NSW 2256, A//DP378115

I refer to your correspondence dated 17/05/2022 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 entirety of the proposed residential lots 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.

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NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

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

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

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

2. The existing dwelling must be upgraded to improve ember protection by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

General Advice – Consent Authority to Note

- Future development applications lodged on lots created within this subdivision may be subject to further assessment in relation to the relevant version of Planning for Bush Fire Protection 2019 or its equivalent.

For any queries regarding this correspondence, please contact Marc Ellwood on 1300 NSW RFS.

Yours sincerely,

Nika Fomin
Manager Planning & Environment Services
Built & Natural Environment

NSW GOVERNMENT
NSW RURAL FIRE SERVICE

BUSH FIRE SAFETY AUTHORITY

Subdivision – Subdivision
55 Mullbong Road Blackwall NSW 2256, A//DP378115
RFS Reference: DA20220511007719-Original-1
Your Reference: CNR-39331 DA/668/2022

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

Wednesday 17 August 2022

RECORD OF PRE-DEVELOPMENT ADVICE

APPLICANT DETAILS

Name	Gary Walker		
Company	C/- Clarke Dowdle & Associates		
Phone	4344 3553	Email	admin@cdasurveys.com.au

MEETING DETAILS

Date	1 March 2018	Time	2pm – 3pm
Venue	Gosford Administration Building	Fees	Paid $565 Receipt #5030819 add $165 paid Receipt #40951002
DART Advice			

PROPERTY DETAILS

Description of proposed development	Residential Subdivision of one (1) Lot into two (2) Lots		
Estimated cost of development	$0	Estimated value of development	$
Owner	C R & G W Walker		

Lot No					
	A	DP	378115	Zone	R2 LOW DENSITY RESIDENTIAL

Address	55 Mullbong Road BLACKWALL NSW 2256

ATTENDEES

Council Representatives

Name	Position	Phone Number
K. Singh	Town Planner	43258325
John Noakes	Engineer	43258210

RECORD OF PRE-DEVELOPMENT ADVICE

Applicant Representatives

Name	Position / Company	Phone Number
Ravi Sharma	Clarke Dowdle & Associates	43443553
Dale Walker	Owners son	c/o 43443553

RECORD OF PRE-DEVELOPMENT ADVICE

RECORD OF ADVICE

Town Planning Comments

1 The proposal is subject to the statutory requirements of Clause 4.1(3) of Gosford Local Environmental Plan (GLEP) 2014, in relation to minimum site area requirement (Principal Development Standards), which in this instance is 550.0m^2 per allotment.

2 It is noted that proposal (proposed lot 1), does not comply with the minimum site area requirement prescribed by Clause 4. (1)(3) Of GLEP 2014. In the event that the applicant wishes to proceed with the proposal, then this will necessitate the submission of a comprehensive Clause 4.6 Exemptions to Development Standards variation being submitted, to the minimum site area requirement prescribed by clause 4.1(3) of GLEP 2014, which will be subject to a merit based assessment.

3 The common property boundary between proposed Lot 1 and proposed Lot 2 is to be adjusted so as to be in keeping with the existing pattern of subdivision in the immediate locality, as well as providing for more usable open space area in conjunction with the existing dwelling house on proposed lot 2. The site area of proposed lot 1 shall not be less than 450.0m^2, as a result of the adjustment to the common property boundary.

4 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 2.1 – Character and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.
NB: The SEE shall identify the Character Precinct and desired character objectives for the locality.

5 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 2.2 – Scenic Quality and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

NB: The SEE shall identify the Geographical Unit and address the development objectives for the locality.

6 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 3.5 – Residential Subdivision and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

It is noted that proposal does not comply with the minimum site area requirement prescribed by Clause 3.5.3.2 (a) (i) and 3.5.3.2 (b) (i) of the abovementioned DCP. In the event that the applicant wishes to proceed with the proposal, then this will necessitate the submission of a comprehensive written submission being submitted, seeking to vary the requirements of the abovementioned clauses of the abovementioned DCP, which will be subject to a merit based assessment.

NB: The SEE shall address the requirements of Clauses 3.5.3.1 and 3.5.3.2, as well as providing a detailed assessment of slope analysis, in addition to other matters prescribed by Chapter 3.5 – Residential Subdivision.

RECORD OF PRE-DEVELOPMENT ADVICE

7 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 6.3 – Erosion and Sedimentation Control and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

8 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 6.6 – Preservation of Trees or Vegetation and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

9 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 6.7 – Water Cycle Management and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

10 The land is subject to the provisions of Gosford Development Control Plan (DCP) 2013 Chapter 7.2 – Waste Management and this aspect shall be addressed in the Statement of Environmental Effects [SEE], accompanying the Development Application.

11 Proposal is subject to the provision of the State Environmental Planning Policy (SEPP) No 71 – Coast Protection and the subject site is located within a "Sensitive Coastal Location", as defined with the abovementioned SEPP. Refer Part 5 SEPP No 71 – Coastal Protection for "Master Plan" Provisions.

NB: Further advice shall be obtained from the Department of Planning and Environment – Gosford Branch, with respect to the Development Control Plan (DCP) waiver.

12 Proposal is classified as an Integrated Development (Bush Fire Prone) and will require the submission of a Bushfire Hazard Assessment Report from a suitably qualified Bush Fire Consultant, as the proposal will be required to obtain a Bushfire Safety Authority under Section 100B of the Rural Fires Act 1997, from the NSW Rural Fire Service.

NB: A referral fee to the RFS and Council administration fee is applicable.

13 The proposal shall comply with any Provisions specified by Planning for Bushfire Protection 2006 as issued by the NSW Rural Fire Service.

14 The issue of vegetation removal (if proposed), is required to be addressed in the Statement of Environmental Effects (SEE) and may be subject to further assessment by Council's Tree Preservation Officer and Environmental Officer, during the assessment process. This may necessitate the submission of further technical information.

15 Applicant is to provide detailed assessment of how the existing dwelling house on proposed Lot 2, satisfies the requirements of Gosford Development Control Plan (DCP) Chapter 3.1 – Dwelling Houses, Secondary Dwellings and Ancillary Development. The assessment is to include an assessment of site coverage, floor space ratio, setbacks, building envelope and any relevant matters prescribed by the abovementioned DCP.

16 The proposal is subject to Section 7.11 Contributions (previously section 94 contributions), as detailed in Contribution Plan (CP) 31 – Peninsula.

RECORD OF PRE-DEVELOPMENT ADVICE

17 Development Application lodgement plans, fees and details are to be in accordance with Council's general lodgement requirements and guide to submitting a development application, which can be downloaded from council's website

Engineering Comments

Subdivision Works

Any proposed subdivision of the subject site will require the provision of a stormwater drainage system to connect the existing dwelling's roofed and driveway generated stormwater discharges in an Inter-allotment stormwater drainage system. The system can connect into the existing piped stormwater drainage system within Orange Grove Road. Note: The system shall be designed in accordance with Councils Civil Design & Construction Specifications.

The application shall also include the preliminary design plans of a Water Cycle Management Plan in accordance with Chapter 6.7 Gosford DCP 2013.

Water and sewer connection shall also be required and include in the Water Management Act Section 307 conditions.

RECORD OF PRE-DEVELOPMENT ADVICE

DA LODGEMENT REQUIREMENTS

1. Development Application lodgement plans, fees and details are to be in accordance with Council's general lodgement requirements and guide to submitting a development application, which can be downloaded from council's website

RECORD OF PRE-DEVELOPMENT ADVICE

The planning information provided by Council is to assist you with understanding the relevant planning controls related to your land/proposed development and what documentation is required to be submitted for your development application. This information and/or advice does not constitute approval of a development application or a guarantee that the purchase of a property is without any site constraint or is fit for the purpose for which you intend.

Disclaimer

The information provided verbally and/or within the text of any document by Central Coast Council is for the purpose of assisting you with understanding the planning controls relating to your land and/or proposed development and the application process that may be applicable.

It is recommended that anyone contemplating the carrying out of development or the purchasing of land in the Central Coast Local Government Area (LGA) obtain their own planning advice from a suitably qualified professional such as a town planner or private solicitor specialising in land use and/or planning law. Please note that Council is not able to recommend the name or contact details of such professionals.

Officer - Signed: K. Singh – Town Planner

Date: 22 March 2018

RECORD OF PRE-DEVELOPMENT ADVICE

NOTES

1 Online Lodgement

Development Applications, Section 96 Applications, Construction Certificates and Complying Development Certificates can be lodged online. Lodging online is the quick, easy and secure way to prepare and lodge your application and is available 24/7.

Former Gosford LGA - through Council's e-Planning Online Lodgement service.

Visit the Central Coast Council ePlanning Portal for the former Gosford LGA and click the *Application Lodge* button. Follow the steps in the Lodge Online home page to get started.

A USB flash drive containing a complete copy all documents, including the forms Part A - Application for Approval and Part B - Application Detail and Owner(s) Consent is required, along with a hardcopy of the Part A and Part B application forms when you lodge your application. Hard copies of other documents are not accepted.

For full document lodgement requirements including naming convention and document preparation, refer to Council's website.

Alternatively, applications can be lodged in person at Council's Customer Service Centres located at

- 49 Mann Street Gosford
- Or via post to PO Box 21 Gosford NSW 2250

Former Wyong LGA - through ePathway online lodgement service

Council's Online Service is available by clicking the website link for the former Wyong Local Government Area.

Alternatively, applications can be lodged in person at Council's Customer Service Centres located at

- 2 Hely Street Wyong
- Or via post to PO Box 20 Wyong NSW 2259

2 Planning Enquiry

Planning Enquiry is an interactive tool to assist with your planning enquiry that provides advice on whether your development can proceed within the former Gosford LGA. Find the permissibility and rules on a property for a development, activity or use under Gosford LEP 2014 and Gosford DCP 2013 by completing a Planning Enquiry via Central Coast Council's ePlanning Portal.

Clause 4.6 Exception to a Development Standard – GLEP 2014 – cl 4.1(2) Minimum Lot Size

1. Introduction

The application includes the subdivision of one (1) lot into two (2) of the property known as 55 Mullbong Street, Blackwall. Proposed lot one (1) would be 450m^2 and proposed lot two (2) would be 578m^2. Subsequently proposed lot one (1) does not meet the numerical minimum lot size of 550m^2 in accordance with the minimum lot size map within the Gosford LEP 2014.

2. Gosford LEP 2014 - Clause 4.6 Exceptions to Development Standards

Clause 4.6 Exceptions to Development Standards states:

4.6 Exceptions to development standards

(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.

(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 Secretary has been obtained.

(5) In deciding whether to grant concurrence, the 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 Secretary before granting concurrence…

Assessment:

The Gosford LEP 2014 includes clause 4.6 Exceptions to Development Standards. The clause 4.6 of the Standard Instrument LEP is effectively the successor to SEPP 1, as it aims to enable development standards (such as height, FSR and minimum lot size) in the relevant LEP to be varied where appropriate. It allows flexibility in the application of development standards, in order to achieve overall better planning outcomes. In this case, given the unique location it is considered that the lot area non-compliance will not be detrimental to the appearance of the dwelling-houses (existing and proposed) when viewed from the adjoining properties or from the public domain. As demonstrated in the dwelling-house plans the lot area would not create any further amenity impacts beyond that associated with a compliant lot area. Furthermore, it is considered that lot areas provide for a sustainable, orderly use of the site given that a low density scale is maintained within the R2 – Low Density Residential Zone.

The proposed variation to the minimum lot size development standard has been considered in light of the evolving methodology and "tests" established by the NSW Land & Environment Court (the Court) including the following cases:

- *Winten Developments Pty Ltd v North Sydney Council [2001]*
- *Wehbe v Pittwater Council [2007]*
- *Four2Five Pty Ltd v Ashfield Council [2015]*
- *Randwick City Council v Micaul Holdings Pty Ltd [2016]*
- *Moskovich v Waverley Council [2016]*
- *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118*

The key tests or requirements arising from recent LEC Judgements are that:

- The consent authority be satisfied the proposed development will be in the public interest because it is "*consistent with*" the objectives of the development standard and zone. It is not a requirement to "achieve" those objectives. It is a requirement that the development be compatible with the objectives, rather than having to 'achieve' the objectives.

- Establishing that 'compliance with the standard is unreasonable or unnecessary in the circumstances of the case' does not always require the applicant to show that the relevant objectives of the standard are achieved by the proposal (Wehbe "test" 1). Other methods are available as per the previous 5 tests applying to SEPP 1, set out in Wehbe v Pittwater 2007

- When pursuing a clause 4.6 variation request it is appropriate to demonstrate environmental planning grounds that support any variation; and

- The proposal is required to be in 'the public interest'.

This clause 4.6 variation demonstrates that the proposed lot sizes:

- Satisfies the relevant objectives of the lot size standard;
- Satisfies the objectives of the R2 – Low Density Residential Zone under Gosford LEP 2014;
- Provides for a better planning outcome;
- Has sufficient environmental planning grounds to permit the variation; and
- Is in the public interest

3. The relevant clause therein the GLEP sought to be varied:

4.1(2) Minimum subdivision lot size states:

The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

4. The Nature of the Development Standard sought to be varied and details of the variation:

Proposed lot one (1) would be 450m^2 and proposed lot two (2) would be 578m^2. Subsequently proposed lot one (1) does not meet the numerical minimum lot size of 550m^2 in accordance with the minimum lot size map within the Gosford LEP 2014. As such the proposal entails a numerical variation of 18.2%. Notwithstanding the numerical non-compliance with the development standard, the variation is justified on planning grounds and is discussed below.

In Wehbe v Pittwater Council [2007] NSW LEC 827 Preston CJ set out a new 5-part test and as such outlined below is an assessment of the variation against the development standard.

1. Consistency with the Objectives of the Minimum Lot Size Standard notwithstanding non-compliance with the development standard

The objective of the development standard are:

(a) to reflect State, regional and local planning strategies relating to the provision of various sizes of land,

(b) to ensure that the subdivision of land is compatible with the desired future character of the area,

(c) to promote the ecologically, socially and economically sustainable subdivision of land,

(d) to ensure that the creation of parcels of land for development occurs in a manner that protects the physical characteristics of the land, does not create potential

physical hazard or amenity issues for neighbours, can be satisfactorily serviced and will, through its potential cumulative effects, not create capacity problems for existing infrastructure.

In relation to the underlying objective outlined are the reasons of compliance with the set object based on environmental planning grounds:

- The proposal to allow the creation of an additional lot within the Woy Woy Peninsula area is consistent with the directions outlined within the Central Coast Regional Plan 2036. The regional plan identifies a requirement to construct and additional 41,500 homes by 2036.

- The proposed lots would be commensurate with the lot sizes located within the adjoining and surrounding cadaster. Subsequently the proposal would not be consistent with the established density and character as discussed above and would not be setting precedence in this regards.

- The proposed subdivision will have no ecological impacts to the subject land and surrounds. Given the site is located within close proximity of the Woy Woy and Ettalong Town Centres, public transport, essential infrastructure, the proposed development represents a socially, environmentally and economically suitable form of residential subdivision that maintains low density lots.The proposal allows the creation of a new allotment and dwelling-house would balance the social needs of the peninsula area (new lots and dwelling-houses) that are essentially more substantial that the typical secondary dwellings that are becoming established on suburban sized allotments – including appropriate land tenure with the provision of all required services and infrastructure required for the creation of Torrens Title lots in an efficient and orderly fashion.

2. The underlying objective or purpose of the standard of not relevant to the development and therefore compliance is unnecessary.

The underlying objectives of the development standard are relevant and as outlined above it is considered that the proposal adheres the underlying objectives of the development standard; in this instance the minimum lot size provision.

3. The underlying object of purpose would be defeated or thwarted if compliance was required and therefore compliance is unreasonable.

As discussed in detail above the development adheres to the objectives of the development standard and therefore the concept of compliance with the objects of the development standard would actually contravene the concept of having these overarching merit based statements (overarching requirements) accompanying the prescriptive measures. Further the underlying object of purpose would be defeated or thwarted if compliance was required as this would result in the development not proceeding until such time as the draft Central Coast LEP is finalised at which point would comply with the minimum lot size requirement.

4. The development standard has been virtually abandoned or destroyed by council's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable.

All the surrounding lots are around the 450m^2 mark. As such the development standard in the locality has been abandoned and council have found that the 450m^2 to be an acceptable lot area for the area. Further councils' own action in reducing the minimum lot size from 550m^2 to 450m^2 as indicated in the draft Central Coast LEP further compounds the fact that compliance with the development standard is unnecessary and unreasonable.

5. The compliance with the development standard is unnecessary or inappropriate due to the existing use of land and current environmental character of the particular parcel of land. That is, the particular parcel of land should not have been included in the zone.

The subject lot should remain in the exisitng R2 Low Density Residential zone.

6. Consistency with the Objectives of the Zone

The NSW legislation website indicates the subject site is currently zoned R2 – Residential

Under the LEP the objectives of the R2 Residential zone are:

• *To provide for the housing needs of the community within a low density residential environment.*

• To enable other land uses that provide facilities or services to meet the day to day needs of residents.

• To ensure that development is compatible with the desired future character of the zone.

• To encourage best practice in the design of low-density residential development.

• To promote ecologically, socially and economically sustainable development and the need for, and value of, biodiversity in Gosford.

• To ensure that non-residential land uses do not adversely affect residential amenity or place demands on services beyond the level reasonably required for low-density housing.

Comment:

• The proposed use falls under the definitions of 'subdivision' and under the LEP and is permissible subject Council consent.

- The proposed area and dimensions of the lots are commensurate with the area and width of many foreshore lots that are located within the immediate vicinity and surrounds within the lower foreshore area of Blackwall and Orange Grove.

- The surrounding cadaster has no established or regularised 'standard' lot size and width. As such the proposal would not be creating precedence to breaking a regularised cadaster pattern along the coastal locale.

- As demonstrated in the plans and the character statement, the proposal would be compatible with the surrounding intensity of low density residential development within the immediate area.

- The proposal would allow the continuation of residential development that would facilitate the incorporation of landscaping that is compatible with the residential zone.

- As addressed within the SEE, the proposed dwellings would comply with the prescriptive measures and objectives within relevant chapters of the GDCP 2013 and is compatible with the desired future character of the zone.

- The proposal would not be detrimental to the residential amenity and place overbearing demands on services that would be commensurate for low density housing

- The subject site is located within walking distance of public transport and public and private recreational facilities.

- The subject site includes the essential utilities, including reticulated water, sewer, power and telecommunications.

- The development caters for additional lots and dwelling-house in accordance with the *Draft Central Coast Regional Plan released in November 2015*.

7. Consistency with State and Regional Planning Policies

The proposed development would be in line with Draft Central Coast Regional Strategy that is the NSW Government's long term land use plan for the region, which covers the Gosford City and Wyong Shire Local Government Areas. The Regional Strategy contains policies and actions designed to cater for the region's projected housing and employment growth over next 20 years. Greater housing choice is prioritised to satisfy the community's desire for smaller households. The plan places emphasis on providing new housing in existing and committed growth areas. To meet the projected housing demands over the next 20 years, an average of 1,980 new homes will need to be constructed each year. This is 590 more homes than the average annual housing production of 1,390 dwellings over the 19 years to 2014-15.The proposed subdivision would allow additional housing that is consistent with the policies and strategic actions outlined in the strategy.

6. The Variation in the Public Interest

The proposal is considered to be in the public interest due to the superior use of the land and subsequent land tenure that would be provided as opposed to secondary dwellings or villas within the low density area. Subsequently the proposal provides a more appropriate use of the land whist maintaining the low density character and housing scale and density within the Woy Woy Bay locale.

7. Conclusion

For the reasons outlined above the clause 4.6 variation is provided in support of the variation to the minimum lot size at 55 Mullbong Street, Blackwall as detailed above, in this instance the proposal:

- The proposed non-compliance does not raise any matter of significance for State or regional environmental planning as it is peculiar to the creation of a new lot is not readily transferrable to any other site in the immediate locality, wider region of the State and the scale or nature of the proposed development does not trigger requirements for a higher level of assessment.

- As the proposed development is in the public interest because it complies with the objectives of the development standard and the objectives of the zone there is no significant public benefit in maintaining the numerical development standard.

- There are no other matters required to be taken into account by the secretary before granting concurrence.

On the basis outlined above, the proposal satisfies all the requirements of clause 4.6 of the GLEP 2014 with the exception to the development standard providing sufficient environmental planning justification to warrant the proposed lot size to be acceptable in this case.

Item No:	4.2
Title:	DA/1809/2022 - 15-17 Coral Street, The Entrance - Construction of a 6 Storey Shop Top Housing development with Basement Level carparking
Department:	Environment and Planning

Central Coast Local Planning Panel

14 March 2024 Local Planning Panel Meeting

Reference: DA/1809/2022 - D15941091
Author: Alexandra Hafner, Development Planner Consultant
Section Manager: Emily Goodworth, Section Manager Employment and Urban Release
Unit Manager: Andrew Roach, Unit Manager Development Assessment
Executive: Alice Howe, Director Environment and Planning

Summary

An application has been received for the consolidation of two allotments and the construction of a six storey shop top housing development comprising 12 residential units with ground floor retail and associated basement car parking at No. 15-17 Coral Street, The Entrance. The application has been examined having regard to the matters for consideration detailed under Section 4.15 of the *Environmental Planning and Assessment Act 1979* and other statutory requirements, with issues requiring attention and further consideration addressed in this report.

The application is referred to the Central Coast Local Planning Panel in accordance with the Local Planning Panels Ministerial Directions as the proposal is development to which *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* applies and is four or more storeys in height. No submissions have been received.

The application is recommended for approval, subject to recommended conditions.

Application Number	DA/1809/2022
applicant	Design Cubicle Pty Ltd
Owner	Mr M Rammal and Mr A A A Nasrallah
Property Lot and DP	Lot 2 DP 25544, Pt Lot 1 DP 25544
Property Address	15-17 Coral Street, The Entrance, NSW 2261
Proposal	Consolidation of two (2) allotments and construction of a six (6) storey shop top housing development.
Application Type	Development Application – Local
Site Area	1,093m^2
Zoning	B2 – Local Centre
Existing Use	Vacant
Employment Generating	No
Application Lodged	6 September 2022
Estimated Value	$6,00,496.00

Exhibition	23 September to 19 October 2022 inclusive
Submissions	Nil
Disclosure of Political Donations & Gifts	No
Site inspection	14 December 2022

Recommendation

1. That the Local Planning Panel grant consent to DA/1809/2022 – 15-17 Coral Street, The Entrance, for construction of a six (6) storey shop top housing development and basement level car parking subject to the conditions detailed in the schedule attached to the report and having regard to the matters for consideration detailed in Section 4.15 of the Environmental Planning and Assessment Act 1979.

2. That Council advise Ausgrid of the Panel's decision.

Key Issues

The following key issues in consideration of the application, are:

1. Variation to the performance requirements of clause 4.3 – Height of Buildings under the *Central Coast Local Environmental Plan 2022* (CCLEP 2022).
2. Minor variation to car parking requirements.
3. Minor variation to ADG design criteria (deep soil planting).

Precis:

Proposed Development	Construction of a six (6) storey shop top housing development with basement level car parking.
Permissibility and Zoning	Permissibility: The proposed development is defined as a *commercial premises* and *shop top housing,* both of which are permissible with consent in the B2 – Local Centre zone.
Current Use	Vacant land.
Integrated Development	No
Submissions	Nil

Proposed Variations to Policies

The following variations are proposed to Council policy:

Clause	**Part 3(e) -Deep Soil Planting**
Standard	7% of total site area to be deep soil planting (76.5m^2)
SEPP	SEPP 65 Design Quality of Residential Apartment Development
Departure basis	100%

Clause	**4.3 Height of buildings**
Standard	Maximum building height = 23m
LEP	CCLEP 2022
Departure basis	0.9m or 4%

Clause	**2.13.3.2 Car parking requirements**
Standard	Shop top housing Up to 3 bedrooms = 1 space per dwelling 4 bedrooms or more =2 spaces per dwelling Shops = 1 space per 30m^2
DCP	Chapter 2.13 Transport and Parking
Departure basis	2 spaces or 12%

The Site

The site is legally identified as Lots 1 and 2 in DP 25544, No. 15-17 Coral Street, The Entrance and has a total site area of 1,093m^2. Located at the intersection of Coral Street and Torrens Avenue, the site is a large irregular shaped allotment with a primary frontage of 10.493m addressing Coral Avenue, a splay of 4.33m and secondary frontage of 32.064m addressing Torrens Avenue. The site is relatively flat with a gentle 0.78m cross fall from Coral Street to Farrell Lane.

The site is currently vacant. There are no trees or vegetation on site.

The site is burdened by a 3.6m wide right-of-carriageway along the rear of the site, which is shared with adjoining properties that also front Coral Street. Informal vehicular access is also provided along the right-of-carriageway between Torrens Avenue and Farrell Lane.

The site is not identified as 'bush fire prone land' on Council's maps.

There are known overland flooding issues in the local catchment due to insufficient drainage capacity of the existing network. This is due to the flat nature of the land and its limited ability to drain via a gravity system to the lake.

The site and surrounding land is not affected by flooding from Tuggerah Lake, rather due to localised overland flooding and back up of the system during prolonged rainfall.



Figure 1 - Aerial of subject site

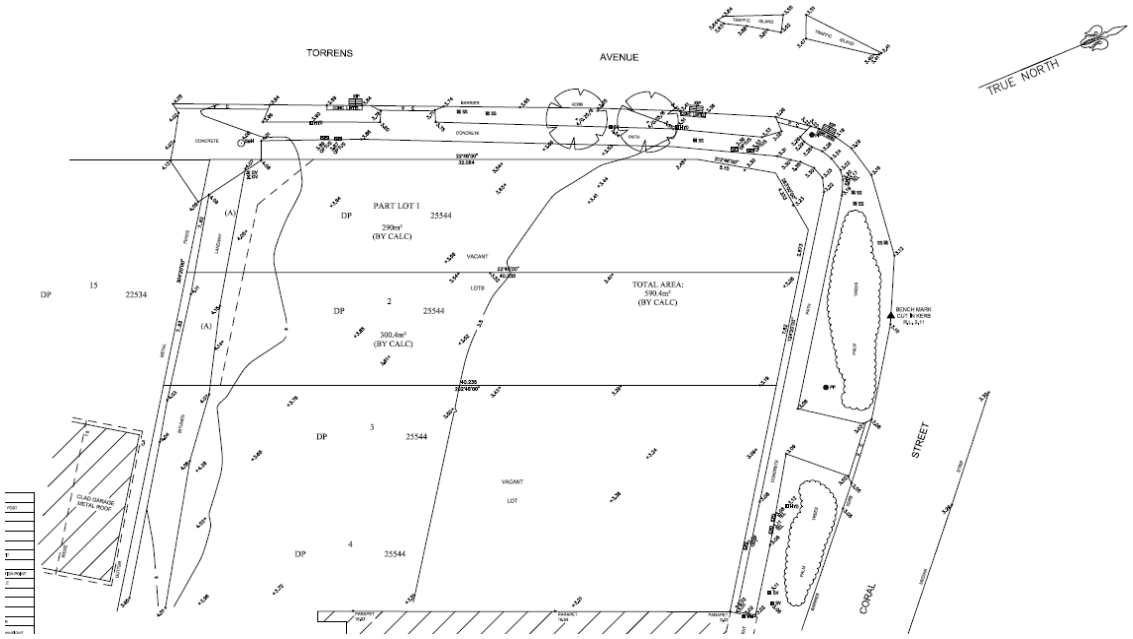


Figure 2 - Survey Plan

Surrounding Development

The site is bound by a vacant parcel to its immediate eastern boundary (19-21 Coral Street, The Entrance) and a 4 storey shop top housing development just beyond, separating the subject site from a large mixed-use building comprised of a hotel with ground floor retail premises to the north.

Torrens Avenue separates the site from a single storey residential dwelling house and a more recently constructed large 6 storey residential flat building to the west with Farrell Lane separating the site from low density housing to the south.

The Proposed Development

The subject development application seeks consent for the following (Figures 3-18):

- Consolidation of two (2) lots
- 15 x parking spaces contained within Basement Level 2 to Ground Floor
- One (1) x loading bay at Ground Floor with six (6) bicycle parking spaces
- Three (3) x commercial/retail tenancies within the Ground Floor
- 12 residential units within Levels 1 to Level 5 comprised of:
    - Four (4) x one-bedroom units
    - Four (4) x two-bedroom units and
    - Four (4) x three-bedroom units.

Typically, each residential unit will comprise of a bathroom, bedroom, ensuite, laundry, combined living/dining, and kitchen with a balcony.

Off street parking is to be provided in a new three-level basement parking area with vehicular access provided via Farrell Lane at the rear of the site. The existing driveway crossover located on Torrens Avenue is to be closed and restored to kerb and gutter.

Off-street parking for 15 cars is proposed, comprising 12 residential spaces, 1 visitor space (including a shared car wash bay) and 2 retail spaces in accordance with Council requirements.

The proposed building has a varied external materials palette that includes rendered and painted finishes for the façade walls, both solid and glazed balustrades with rich and soft landscaping to complement stencil finished concrete.



Figure 3 - 3D perspective showing Coral Street façade

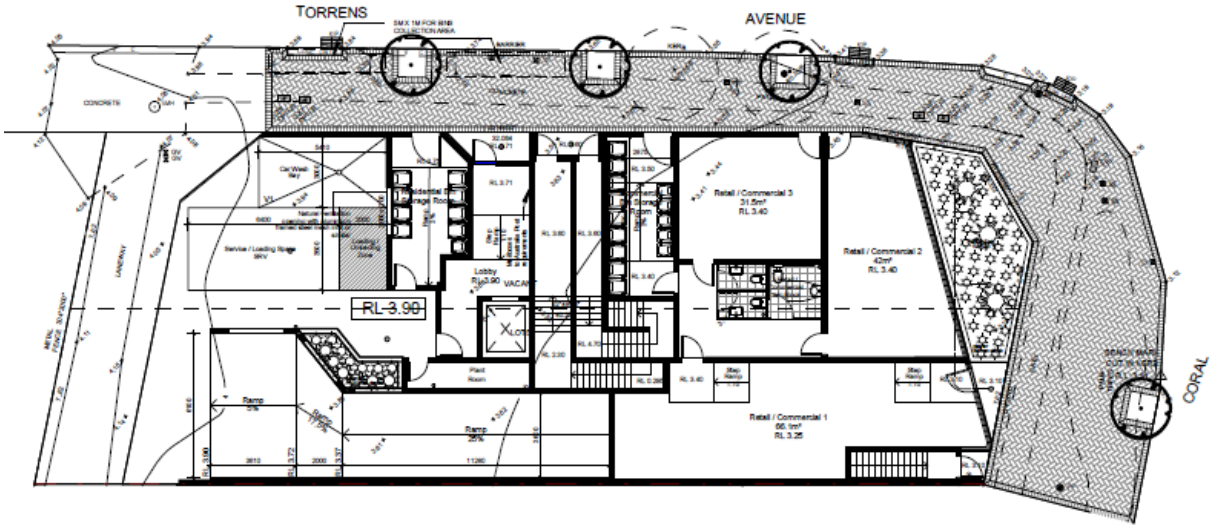
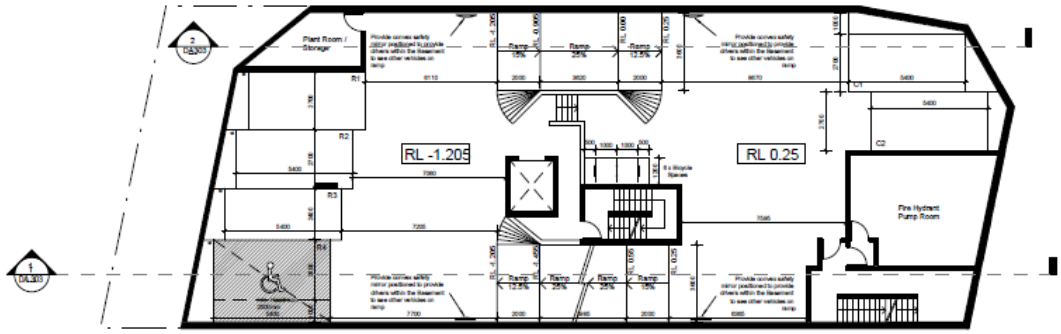
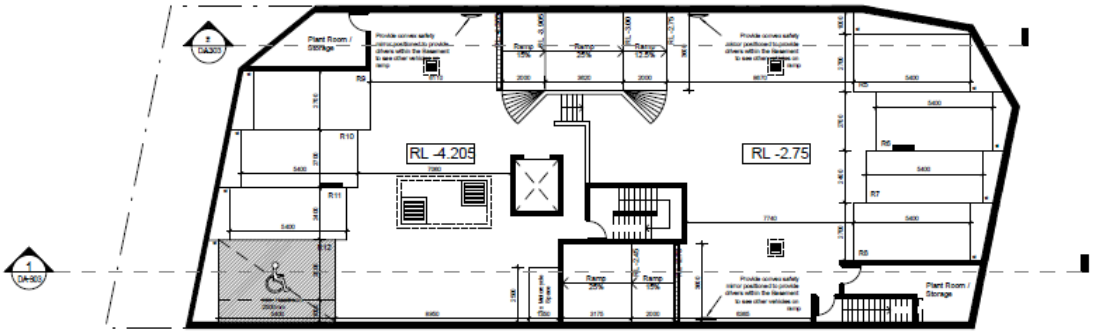


Figure 4 – Site Plan

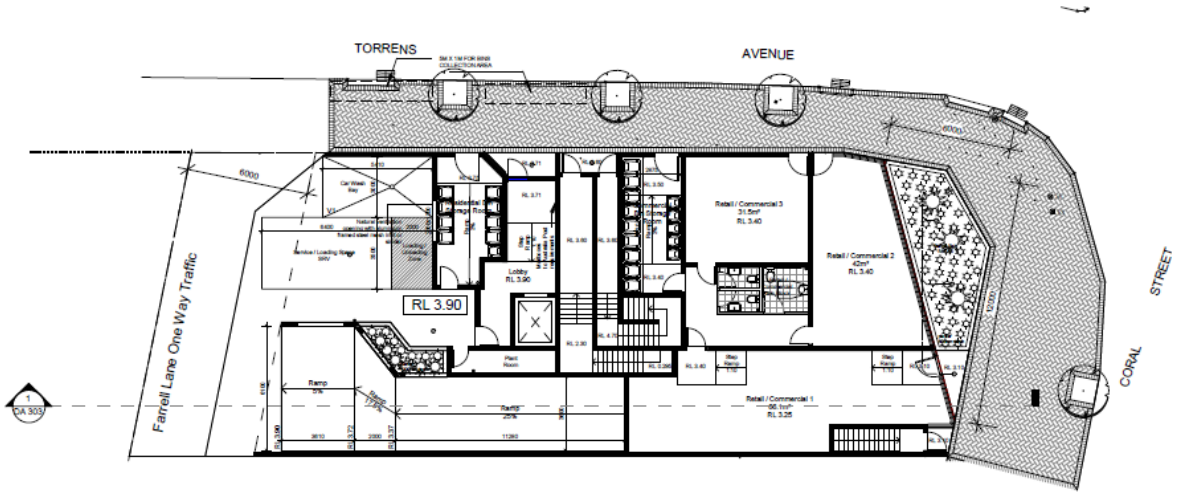


BASEMENT 1



BASEMENT 2

Figures 5 and 6 – Basement 1 and 2 Plan



Ground Floor Plan
1 : 200

Figure 7 – Ground Floor Plan

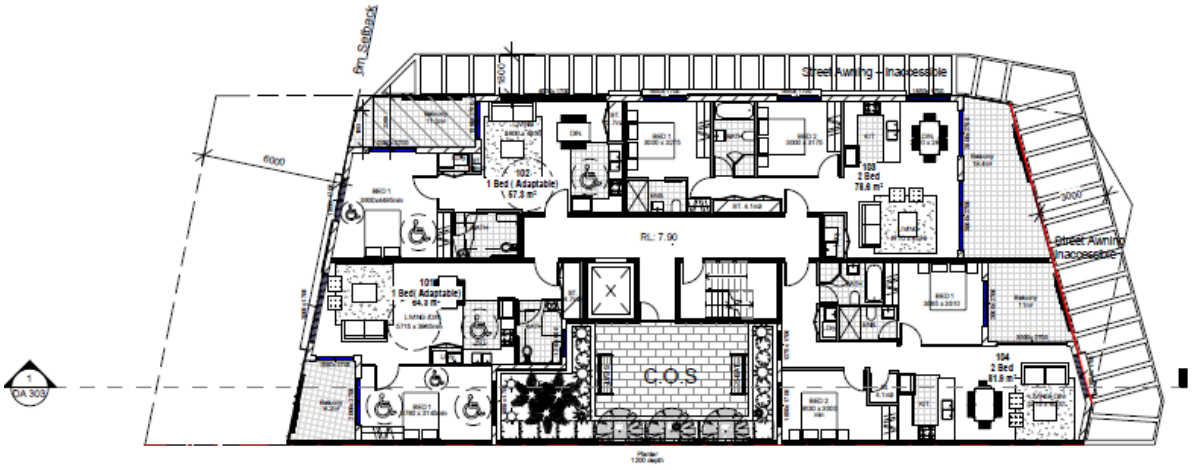


Figure 8 – Level 1 Plan

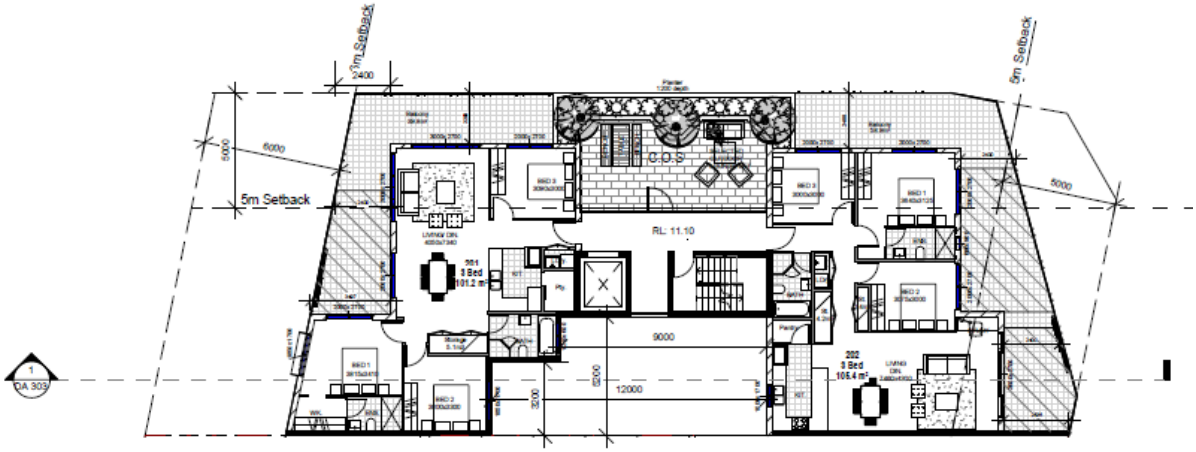


Figure 9 – Level 2 Plan

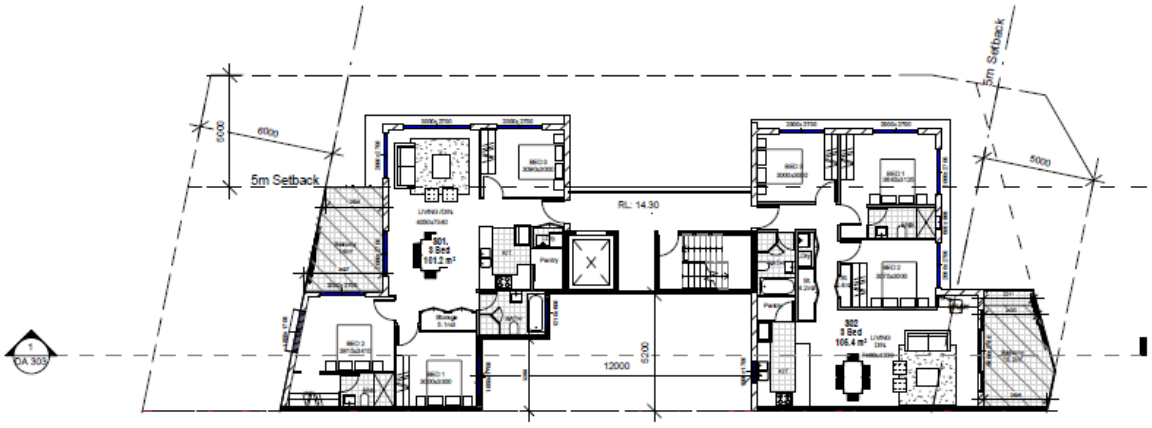


Figure 10 – Level 3 Plan

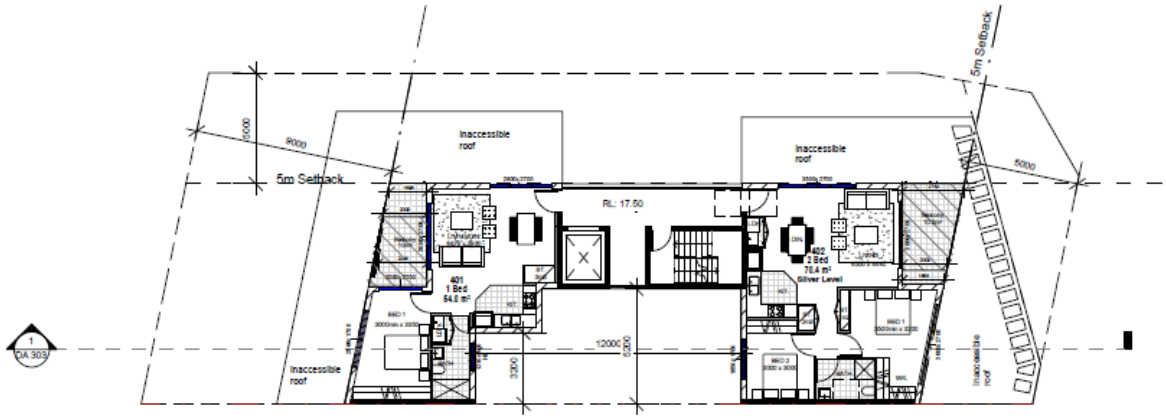


Figure 11 – Level 4 Plan

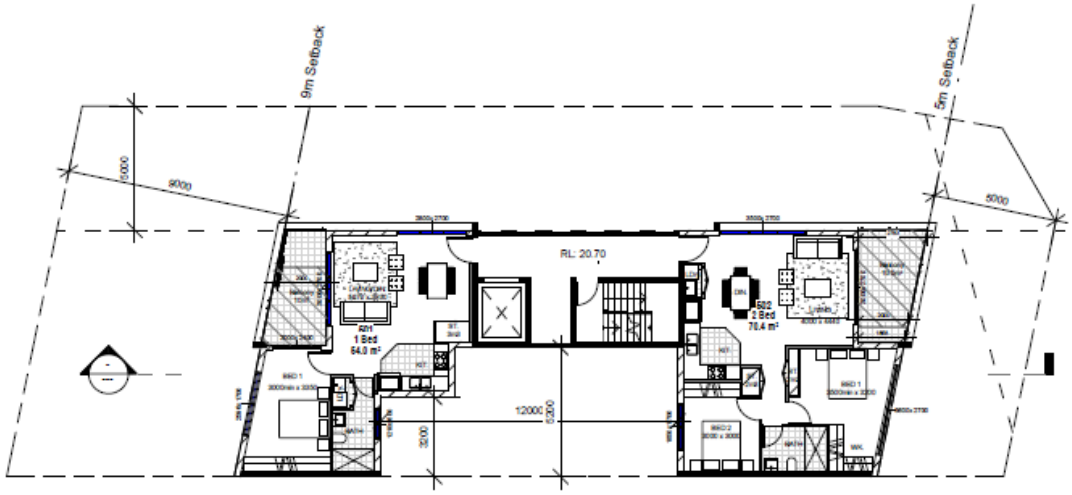


Figure 12 – Level 5 Plan

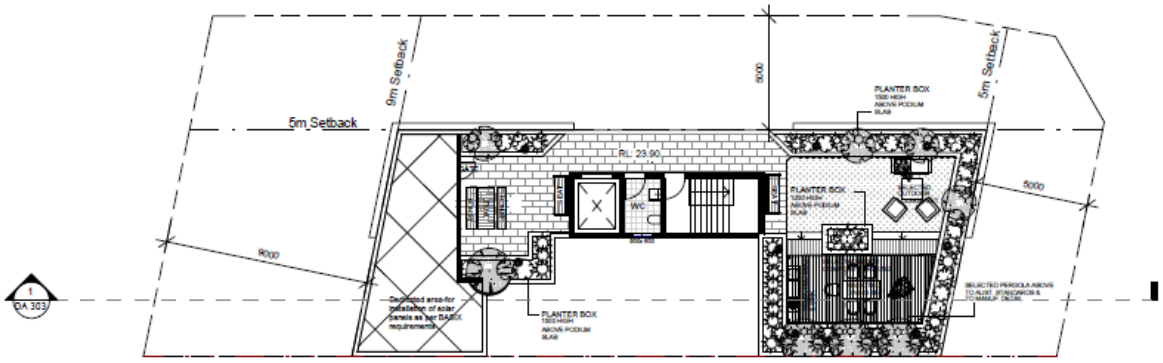


Figure 13 – Roof Plan

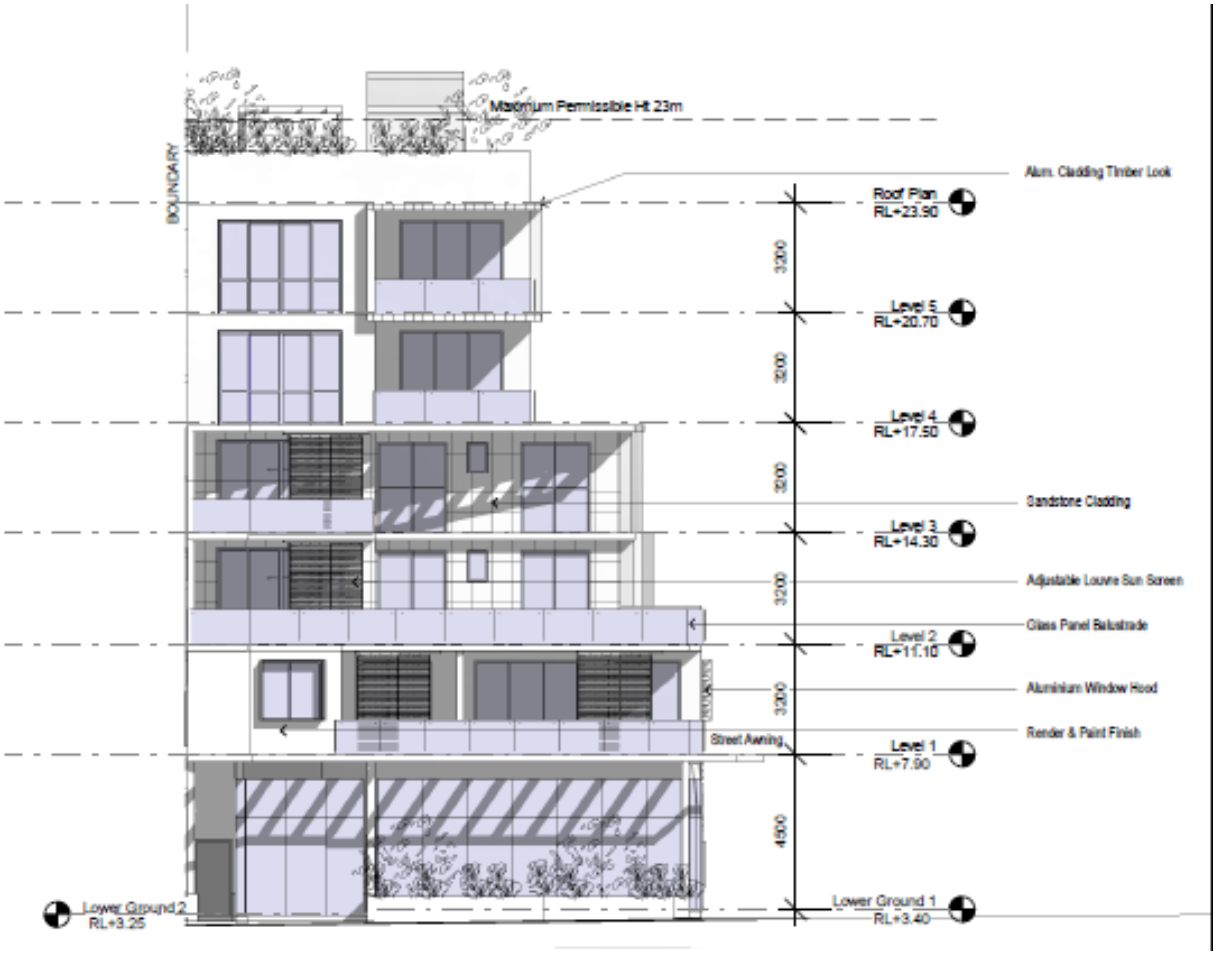


Figure 14 – Northern Elevation

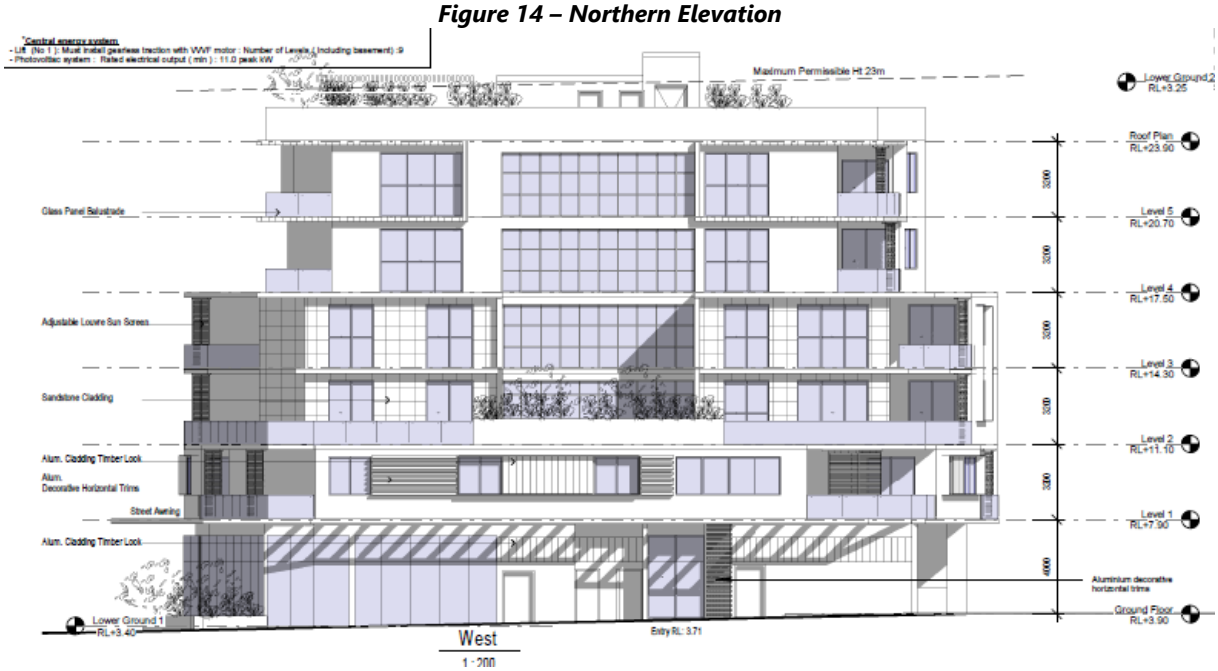


Figure 15 – Western Elevation

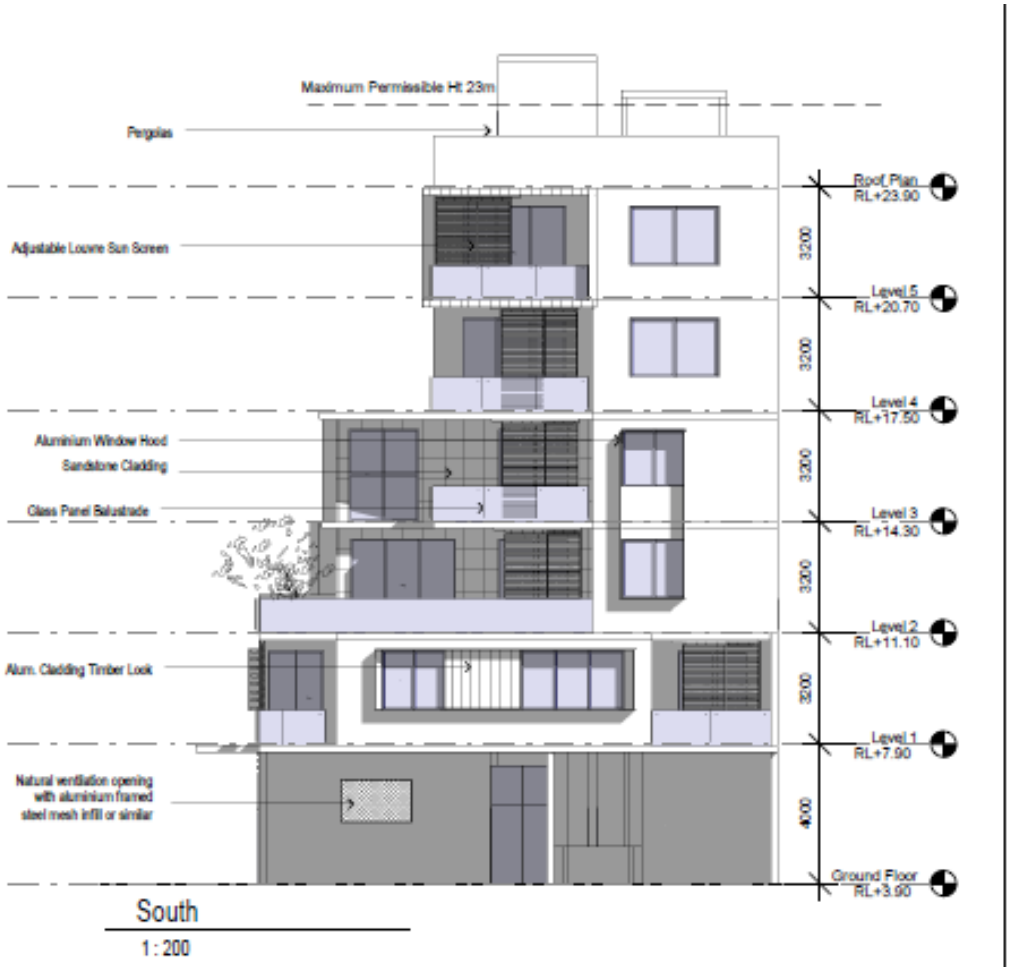


Figure 16 – Southern Elevation

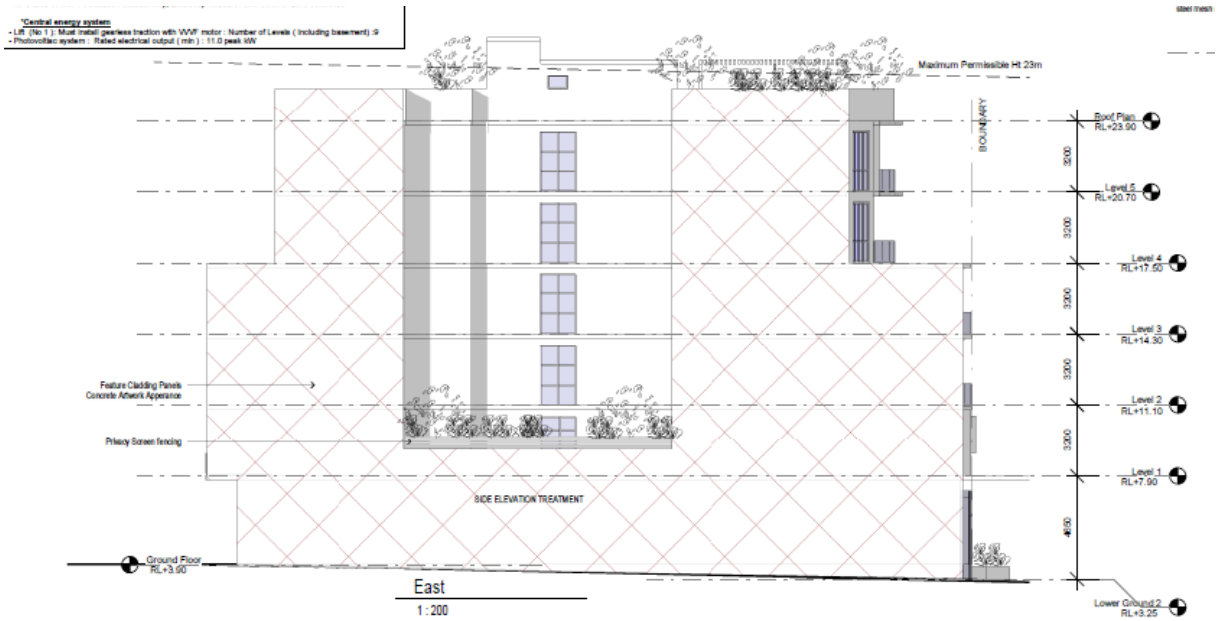


Figure 17 – Eastern Elevation

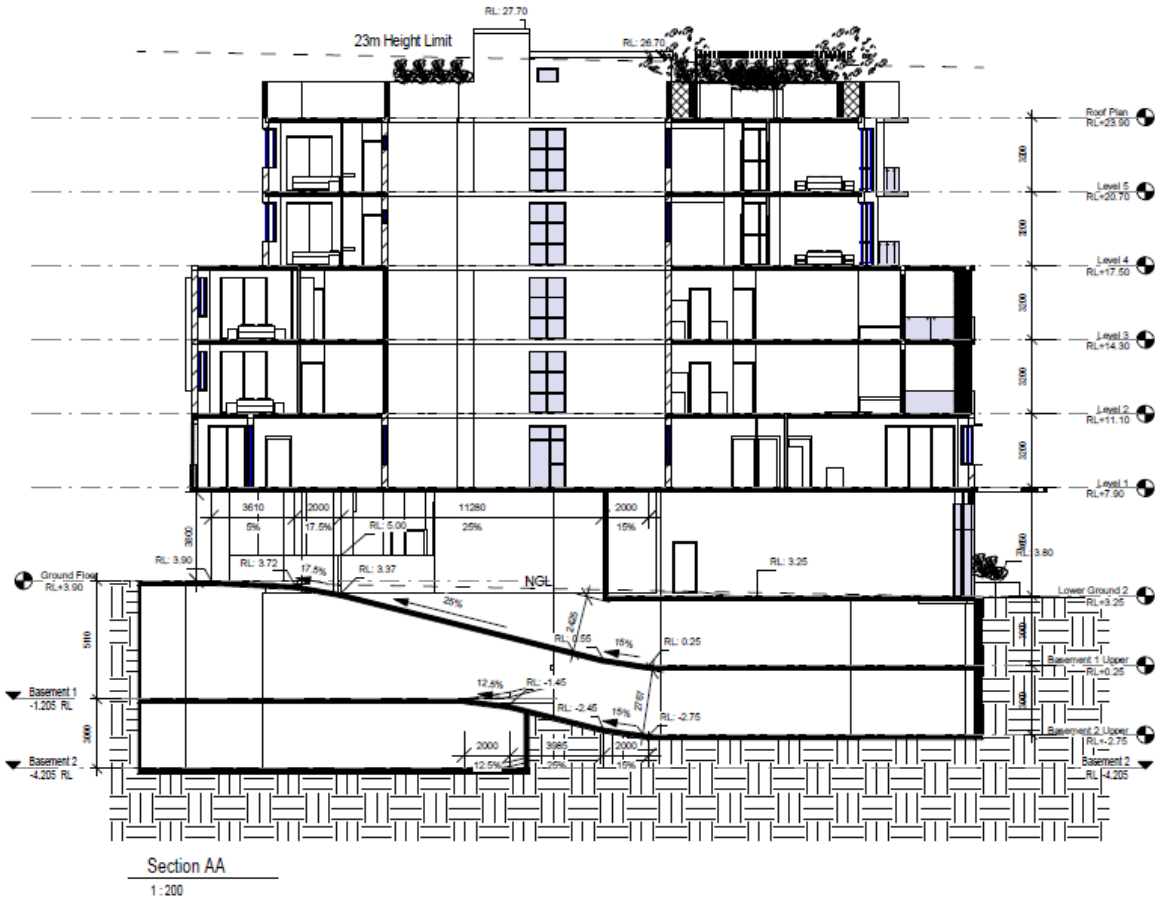


Figure 18 – Section AA

Background

Council's records show the below history of applications relevant to the site:

Application number	Description	Status	Decision	Determination date
DA/407/1987	Motel	Approved	Approved	1987
BC/522/1991	Single dwelling and garage	Approved	Approved	1991
TA/1524/1994	Remove two trees from the frontage and four from the rear	Approved	Approved	1994
DA/1163/1996	Shop and holiday units	Refused	Refused	1996
DA/1729/2004	Mixed use residential and	Approved	Approved	19 January 2005

Application number	Description	Status	Decision	Determination date
	commercial development of 18 units and ground floor commercial and demolition of existing structures			
Construction Certificate for DA/1729/2004	Mixed use residential and commercial development of 18 units and ground floor commercial and demolition of existing structures	Refused	Refused	1 September 2006
RZ/6/2011	Rezoning	Approved	Approved	23 December 2013

Development Application No. DA/5/2019

Development consent was issued on 11 May 2020 for a comparable shop top housing development at 19-21 Coral Street as shown in Figures 19 and 20. It is intended that the subject development, prepared by the same architect, adopt similar elements to that site, so it forms a cohesive presentation to the street.





Figures 19 and 20 - Photomontage of subject site and adjoining at 19-21 Coral Street

Assessment

Having regard for the matters for consideration detailed in Section 4.15 of *the Environmental Planning and Assessment Act 1979* and other statutory requirements, Council's policies and Section 10.7 Certificate details, the assessment has identified the following key issues, which are elaborated upon for the Panel's information.

Section 4.15(1)(a) – Assessment against relevant EPI's, DCPs, etc.

The relevant applicable planning controls for the purpose of this application are:

- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development*
- *Central Coast Local Environmental Plan 2022 and*
- *Central Coast Development Control Plan 2022.*

An assessment against relevant provisions of the above is undertaken below.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The application is accompanied by a revised Multi Dwelling BASIX Certificate No. 1261505M_02, dated Wednesday 20 December 2023.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 2

Chapter 2 of the consolidated SEPP contains planning controls and rules from the former Vegetation SEPP that applies to the site and relates to the clearing of native vegetation in NSW on land zoned for urban and environmental purposes. This chapter aims to protect the biodiversity value of trees and other vegetation in non-rural areas of the state and to preserve the amenity of non-rural areas of NSW through the appropriate preservation of trees and other vegetation.

The site is vacant and does not contain trees or vegetation that would be considered under the remit of the SEPP. No further consideration is required in this regard.

Chapter 4

There is no approved koala plan of management which applies to the site and no koalas are recorded to have occurred on the site. In accordance with Section 4.9(3) of the *Biodiversity Conservation SEPP 2021,* the application is considered to have no impact on koalas or koala habitat.

State Environmental Planning Policy (Resilience and Hazards) 2021

The aims of Chapter 2 are to be considered when determining an application within Coastal Management Areas. The subject site is located within a coastal environment area and on the periphery of the coastal use area as shown in Figures 21 and 22.

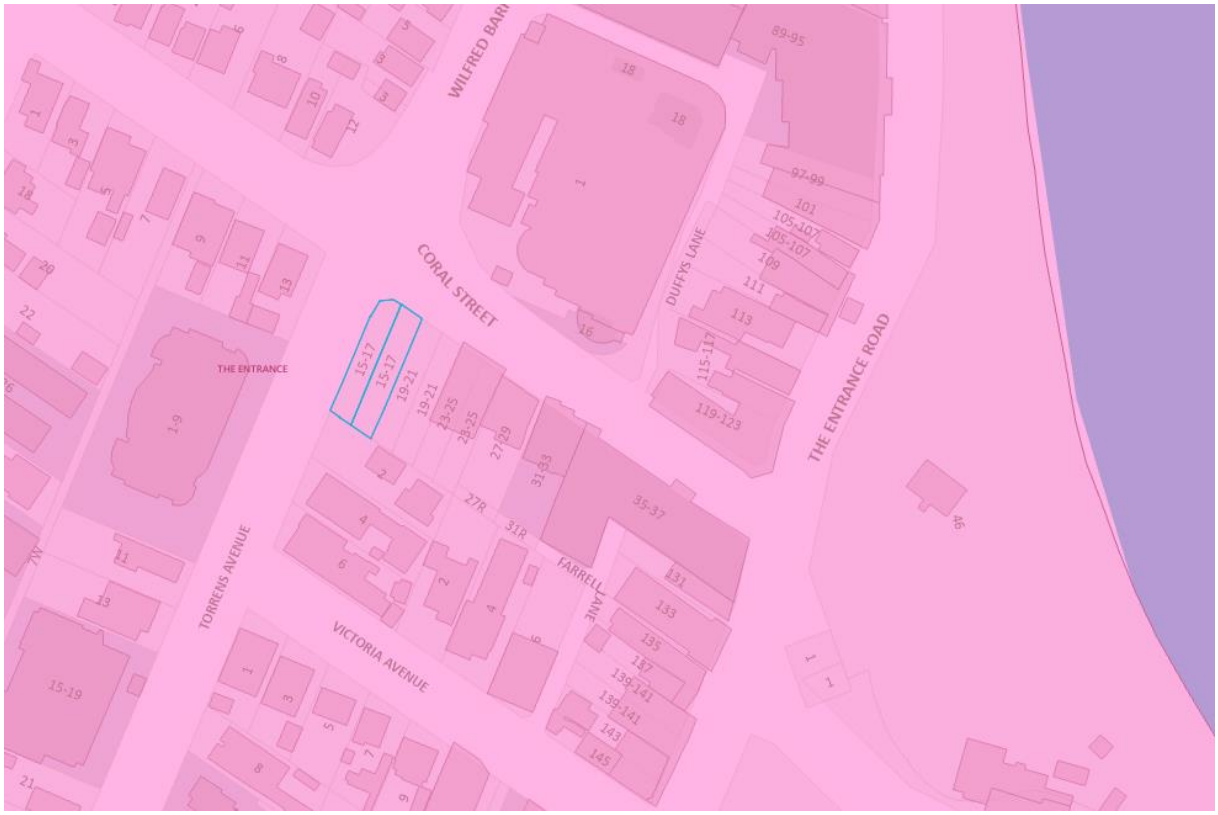


Figure 21 – Coastal Environment Area



Figure 22 – Coastal Use Area

Sections 2.10 and 2.11 are to be taken into consideration by the consent authority when it determines a development application to carry out development on land to which this SEPP applies. The proposed development has satisfactorily addressed the matters for consideration outlined in Sections 2.10 and 2.11 as shown in the below tables:

Clause 2.10 – Coastal Environment Area

Matters for Consideration	Compliance
***(1)* Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:**	
(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment	Stormwater will be captured on the roof and directed via the existing stormwater drainage system, meaning the development is unlikely to have adverse impacts on the biophysical, hydrological, and ecological environment.
(b) coastal environmental values and natural coastal processes	The site is not located directly near the coastline or beach and on this basis, is considered to have negligible impact upon existing coastal environmental values and natural coastal processes
(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of	The site is not located within a marine estate. The proposed development and existing stormwater system will have negligible impacts upon Tuggerah Lakes, listed as a sensitive

the proposed development on any of the sensitive coastal lakes identified in Schedule 1	coastal lake in Schedule 1 of the SEPP, due to its distance.
(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms	The proposal is unlikely to adversely impact marine vegetation, native vegetation and fauna and their habitats, underdeveloped headlands and rock platforms due to its distance from both Tuggerah Lakes and beach.
(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability	The site is not in proximity to public open space and does not impact existing safe access to and along the foreshore for members of the public
(f) Aboriginal cultural heritage, practices and places	The proposal is not likely to cause an adverse impact on Aboriginal cultural heritage, practices and places. Standard conditions are imposed to stop works and report the findings to the AHO if any Aboriginal Engravings or Relics are unearthed.
(g) use of the surf zone.	The site is not in proximity to the surf zone
***(2)* Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:**	
(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1)	The proposed development has been designed, sited to avoid any adverse impact referred to in subclause (1).
(b) if that impact cannot be reasonably avoided - the development is designed, sited and will be managed to minimise that impact	N/A
(c) if that impact cannot be minimised - the development will be managed to mitigate that impact	N/A

Clause 2.11 – Coastal Use Area

Matters for Consideration	Compliance
(1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority:	
(a) has considered whether the proposed development is likely to cause an adverse impact on the following:	
(i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,	The site is not in proximity to public open space along the foreshore and does not impact existing safe access to and along the foreshore for members of the public
(ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,	The proposal will not result in unreasonable overshadowing, wind funnelling or loss of views from any public places to foreshores.
(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,	The proposal does not impact visual amenity or scenic qualities of the area
(iv) Aboriginal cultural heritage, practices and places,	The proposal is not likely to cause an adverse impact on Aboriginal cultural heritage, practices and places. Standard conditions are imposed to stop works and report the findings to the AHO if any Aboriginal Engravings or Relics are unearthed.
(v) cultural and built environment heritage, and	The site is within a developed urban area and the proposed development is unlikely to adversely impact the cultural and built environment heritage
(b) is satisfied that—	
(i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or	The proposed development has been designed, sited to avoid any adverse impact referred to in paragraph (a).
(ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or	N/A
(iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and	N/A
(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.	The proposed development has taken into account surrounding coastal and built environment. The proposed bulk, scale and size of the development is acceptable.

Having regard for Sections 2.10 (2), 2.11(2) and 2.12 of *State Environmental Planning Policy (Resilience & Hazards) 2021*, the Panel can be satisfied that the proposed development is designed, sited, and will be managed to avoid an adverse impact referred to in Section 2.10(1) and Section 2.11(1), the bulk, scale and size of the proposed development is satisfactory having regard for the surrounding coastal and built environment

(Section 2.11(3)), and the development is not likely to cause increased risk of hazards on the subject site or other land (Section 2.12).

Chapter 4

The provisions of Chapter 4 have been considered in the assessment of the development application and require consent authorities to consider whether the land is contaminated, and if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be made suitable, after remediation) for the purpose for which the development is proposed to be carried out.

The application is accompanied by a Stage 1 Contamination Report, prepared by Ground Technologies NSW and dated 23 May 2022. The report was referred to Council's Environmental Health Officer for review and comment. The investigation has included limited testing and analysis at the site with the following conclusions made:

- The site has historically been used for residential and commercial purposes from a date prior to 1965.
- The residential structure was removed prior to 2007.
- In 2009, a fire destroyed the commercial structure. The buildings were identified as highly likely to contain asbestos and surficial asbestos contamination was possible. It is understood that the surface was prayed with a binding agent to limit the potential for asbestos to become airborne.
- The subject site appears to have been used for car parking purposes since 2009.
- Potential contamination exists in the form of asbestos within the upper surficial soils.

A Remedial Action Plan (RAP) for the site has been prepared and accompanies the report. As the proposed development requires excavation to basement level, the most appropriate remediation strategy for the site is the classification, excavation and disposal of contaminated materials. The affected fill material will be directly transported off site to landfill as General Solid Waste – Asbestos Contaminated Material.

Following the excavation and removal of the affected fill material, a validation report will be prepared on completion of on-site remedial works. This shall contain an overview of all remediation activities conducted and details of the volumes of excavated fill material.

The underlying natural soils will then be classified as virgin excavated natural material (VENM) for future use.

The site is suitable for the intended use subject to the RAP being implemented and validated. The RAP and validation report form conditions of consent.

Subject to these conditions, the proposal is deemed acceptable with regards to the provisions of the SEPP.

State Environmental Planning Policy (Transport and Infrastructure) 2021

Traffic generating development is identified as sites with access on a road within 90m to a classified road and that includes parking for 50 or more vehicles. The proposed rear lane access is within 90m of the roundabout section of Wilfred Barrett Drive; however, the proposal does not include parking for 50 or more vehicles.

Consideration shall be given to where the site has a frontage to a classified road and is for development sensitive to road noise or vibration. The site is in close proximity to Wilfred Barrett Drive but does not have a frontage to this classified road. The site, however, does front a busy road that intersects with Wilfred Barrett Drive and is for a residential purpose that is likely to be adversely impacted by road noise or vibration.

The application is accompanied by a Traffic Noise Assessment, prepared by Rodney Stevens Acoustics, dated 26 May 2021. The report includes suitable acoustic impact mitigation measures including glazing, which forms conditions of consent.

Subject to these conditions, the proposal is deemed acceptable with regards to the provisions of the SEPP.

***State Environmental Planning Policy No. 65 (Design Quality of Residential Apartment Development)* (SEPP 65)**

SEPP 65 applies to residential flat buildings that are three or more storeys in height and that comprise four (4) or more dwellings. The proposal seeks consent for a six (6) storey residential flat building with 12 dwellings and is therefore subject to the provisions of SEPP 65 and the associated Apartment Design Guidelines (ADG).

As required by Clause 29 of the *Environmental Planning and Assessment Regulation 2021*, a design verification statement prepared by Design Cubicle Pty Ltd was submitted with the application verifying that the proposal was designed and undertaken by nominated architect Sam Min-Han Lu (#8842). The statement confirms the design objectives of SEPP 65 have been considered in the design and have been met.

The Regulations also require that the statement explains how the development addresses:

(i) The design quality principles, and
(ii) The objectives in Parts 3 and 4 of the Apartment Design Guide

The following table considers the proposal against the SEPP 65 design quality principles and includes the applicant's relevant design comments.

Principles	Proposal (applicant's response)
Context and neighbourhood character	*The site is situated at 15-17 Coral Street, The Entrance, NSW. The proposal provides for a quality development that responds to and utilises the advantages of its unique context. The immediate surroundings of the subject site fall within a precinct that is characterised by a nearby future diverse range of land uses, including more proposed medium-high density residential developments, and includes mainly existing residential and commercial/retail uses.* *The immediate context for this site is residential development consisting of mainly individual dwellings and selected multi-dwelling developments, as well as commercial/retail premises in the nearby vicinity. The close proximity of the subject site to nearby schools/churches/multitude of clubs/bus services/petrol stations etc and to major arterial roadways and streets as well as the fact the site is within a few minutes to the centre of The Entrance CBS district supports the view for higher residential densities. The site layout of the building generates favourable orientation with respect to solar access which further reinforces the appropriateness of the development.* *The most important elements that informed and influenced the design and aesthetics of the building were:* • *The future vision of high density for the immediate surrounding locality, resulting in the transformation of the surrounding subject area from low to high density.* • *An opportunity to access the sun, air, distant views and greenery.* • *Current and future residential developments containing contemporary aesthetics.* *The goal of our design is to generate a positive outcome towards the future character of the area, and we believe that our proposed development responds to and creates a transitional buffer zone between the different components of the existing and future precinct situation.*
Built form and scale	*The locality displays a traditional mixed character, consisting of mainly small, individual dwellings, selected multi-dwelling developments, as well as nearby commercial/retail premises. However, as discussed above, Council's vision for the subject area is a transformation from low to high density over the coming years, hence the zoning of the site as high density residential to help accommodate future population growth.* *The site is considered suitable for an increased development, and out proposed development, will establish a transitional buffer zone that bridges between the different scales evidence in the surroundings, in addition to creating a climax/landmark effect, especially when perceived from surrounding roads.* *The development bulk and scale of this building will complement the surroundings on each elevation, including the main facades to both Coral Street*

Principles	Proposal (applicant's response)
	and Torrens Avenue. The proposed building will dialogue with its immediate context and respond adequately, creating a contextual answer to a setting that is due to become more diversified and complex over time. *The proposed design has been developed in keeping with the requirements of the Apartment Design Guide and Council's requirements in relation to building alignment, proportions, building type, articulation and the manipulation of building elements. The proposal defines and activates the public realm by creating communal and public open space for the residents on both intermediate roof terraces and the rooftop of the proposal.* *The proposed built form for the mixed-use development consists of a six-storey building component with Basement and Ground Floor car parking for 15 vehicles. The development contains 12 fully dedicated, consisting of a mixture of 1-, 2- and 3-bedroom apartments.* *The proposed building block speaks to its surroundings through interpreting its context in a modern manner, dialoguing with surrounding buildings by interacting with them visually through scale and built form i.e., balcony/blade wall elements will give added interest to the facades with pleasing proportions, as well as reduces the comparable bulk and scale to the elevations of the building.* *The shape of the site has informed the composition of the development. The buildings internal room layouts are controlled to achieve better amenities and minimise the impact of traffic noise and pollution. Facades show their protective function yet present a residential face to the public view, using a variety of shapes, materials and colours, with a visual play between walls, entries, balconies and external finishes.* *The facades have a variety of elements to reflect a visually softer presentation, to lessen the impact of the building, and to maximise apartments exposure to the sun and views. Façade planes and masses of the building are visually divided into smaller elements by horizontals and verticals, and materials, to reduce building bulk. This composition helps the development to fit into the urban landscape setting, whilst maintaining is contextual uniqueness and importance in the existing streetscapes of both Coral Street and Torrens Avenue.*
Density	*The proposed density is a direct response to the regional context, availability of public transport, facilities in this precinct and the development capacity of the site.* *The proposed development will consist of 12 apartments, over three levels of Basement and Ground Floor car parking with the following breakdown:* • *4 x 1 bed apartments* • *4 x 2 bed apartments* • *4 x 3 bed apartments.* *The proposal presents an adequate variety of apartment mixture and orientation.*

Principles	Proposal (applicant's response)
Sustainability	*The proposed design will promote ecologically sustainable development (ESD) through:* • *Benefiting from its orientation more than 70% of the apartments will have adequate sun access.* • *At least 60% of the units will achieve natural cross-flow ventilation.* • *The proposal incorporates both active and passive sun controls systems.* • *Working towards ensuring waste minimisation during the construction phase and the lifespan of the building, including through the recycling and reuse of materials and waste.* • *The development will incorporate the installation of low energy saving devices wherever possible.* • *Adhering to BASIX constraints.*
Landscape	*The landscape scheme is to incorporate adequate special experience for both the public and private realm. Incorporating a variety of activity spaces, the proposal promotes community involvement in the landscape through communal gardens on various rooftops of the proposal, containing elements such as seating areas and the like. All common areas are accessible for people with a disability.* *The landscape solution is designed by an experienced specialist landscape consultant.*
Amenity	*Amenities were given high priority in the design through:* • *Maximising views and exposure* • *The apartments were orientated to have good solar aspect and enjoy cross-flow ventilation wherever possible.* • *All apartments will enjoy good visual and acoustic privacy through orientation (the positioning of windows and private open space, setbacks etc) or through materials used.* • *All apartments will be air conditioned.* • *All apartments will be equipped with adequate storage space either in the basement or inside each apartment.* • *All apartments have efficient layouts and have been provided with adequate outdoor space.* • *All apartments have access to the waste area on the Ground Floor for the deposition of garbage and recyclables.* • *All apartments will have the adequate number of car spaces required according to Council's DCP requirements.*
Safety	*The proposal optimises safety and security both within the development and the public domain. The proposal affords good casual surveillance of both the street frontages, and the public and communal areas of the site, through the glazed openings and balconies of the upper-level apartments and lobbies, and Ground Floor commercial tenancies.* *With regards to parking areas, secure access is to be always maintained to ensure that the parking premises are solely for the occupants of the building, and their visitors. Visitor access will be provided through an intercom system and remote-control access or the like for residents.*

Principles	Proposal (applicant's response)
Housing Diversity and Social Interaction	*The proposal contributes to its social context by adhering to the desired future character of the areas as highlighted in Council's LEP and DCP.* *The proposal promotes social encounters while providing adequate privacy for each owner, resident or tenant. The public domain through the common open spaces complements the private spaces associated with each apartment, and promotes social interaction between the residents through design and configuration of the landscaped areas and the like, containing things such as seating areas, relaxation areas etc.* *The proposal will provide quality residential apartments in multiple plan configurations of varying sixes to cater for a wide variety of people.* *Persons with disabilities or restricted/impaired mobility area catered for through the provision of apartments highlighted for future adaptability, complaint with relevant Australian Standards.* *The provision of a stretcher lift facility in the building also allows for wheelchair access to be accommodated to the entry door of all units on all floors for persons with a disability as required by the BCA.*
Aesthetics	*The creation of a well-articulated proposed building form is outlined in our proposal, along with the quality use of finishes, and will add to the visual interest to be generated by the future residential streetscape and character of this locality, which we aim to be at the forefront of driving forward in the future progress for The Entrance area.* *Materials and colours have been selected to add visual interest and identity and to soften the impact of the development's bulk and scale.* • *The proposal incorporates a variety of materials including rendered and painted finishes for the façade walls, a combination of solid balustrades as well as glazed balustrade treatments and special cladding for partial walls.* • *Balcony balustrades are of various types and serve different purposes: painted and rendered solid walls work as compositional devices to divide facades, whilst the safety tinted glass plate balustrades allow for maximum views.* • *Glazing will be fixed to powder-coated aluminium frames.* • *The colours lessen the apparent bulk of the building. The overall external colour scheme helps to give our proposal a sharp, modern look whilst not overpowering its surroundings. The feature colours used add warmth, interest and a sense of identity to the building. The overall colour scheme is designed to complement its surroundings, including the rich surrounding greens of the landscape, and to create a synergy with nearby existing structures.* • *Together with the rich, soft landscaping, the hard surfaced landscaped areas of the site will contain a variety of materials and finishes, which*

Principles	Proposal (applicant's response)
	may include stencil finished concrete, various pavement patterns and colours. • *The choice and composition of the building elements are contemporary to reflect the time, but also with a view to becoming a leader and guide towards the future character of the area.* *The combination of glazing, blade walls and feature colours and materials help to bring life to the facades and will serve as a positive reinforcement to the urban fabric of the evolving greater area of The Entrance as the years progress.*

Further, an assessment against the design criteria in Parts 3 and 4 of the ADG has been conducted by Council's Urban Designer and is provided below:

Design criteria	Required	Proposed	Compliance
3D – 1 Communal Open Space	• Minimum communal open space area 25% of the site • Minimum dimension of 3m • 50% direct sunlight to principal usable part for min 2 hours between 9am and 3pm midwinter	• Communal open space is to have a minimum area equal to 25% of the site, and an area of 261.2m² has been highlighted as communal open space, which equates to approximately 44.2% of the site area, exceeding the minimum requirements. • Direct sunlight is achieved to the principal useable part of the communal open space for a minimum of 2 hours between 9am and 3pm. • Communal open space achieves requirement of a minimum dimension of 3m.	Yes
3E – 1 Deep Soil Zone	• Deep soil zones are to meet the following minimum requirements. • Minimum dimension of 650sqm – 1500sqm • 7% of site area	The proposed development provides no deep soil zone which is deemed acceptable in a commercial context	Acceptable given E1 – Local Centre zone.

Design criteria	Required	Proposed	Compliance
		noting the site configuration and size.	
3F – 1 Visual Privacy	• Separation from boundaries and buildings: - Up to 12m/4 storeys – 6m to habitable 3m to non-habitable - Up to 25m /5-8 storeys – 9m to habitable, 4.5m to non-habitable	With regards to the proposed development, compliance with the numerical standard with regards to habitable room separation from both the side and rear boundaries is achieved, due to the fact blank walls are proposed to the side boundary for portions of the building, as allowed by the ADG along main streets or at podium levels within main centres, or otherwise required separation is achieved. In addition, the stated setback requirements are met for the rear boundary in respect to the residential levels. Revised plans have ensured that proposed bathroom windows are higher with improvement to visual privacy.	Yes
4A – 1 Solar and Daylight Access	• Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas. • A maximum 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid-winter.	91% (11 units) receive a minimum of 2 hours of solar access required to the main living area. There are no proposed units that receive no direct sunlight between 9am and 3pm in midwinter.	Yes
4B-3 Natural Ventilation	• At least 60% of units are naturally cross ventilated in the first nine storeys of the building.	100% (12 units) receive natural cross flow ventilation.	Yes

Design criteria	Required	Proposed	Compliance
	• Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line		
4C - 1 Ceiling Heights	• Minimum finished floor level to finished ceiling level heights are: - 2.7m habitable rooms - 2.4m non-habitable rooms	The proposed development incorporates minimum ceiling heights of 2.7m for habitable rooms and 2.4m for non-habitable rooms.	Yes
4D – 1 Apartment Size	• Minimum dwelling sizes are: - Studio: 35sqm - 1 bed: 50sqm - 2 bed: 70sqm - 3 bed: 90sqm - Every habitable room must have a window in an external wall with a total min glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	All dwelling sizes satisfy the minimum area requirements and are increased by 5sqm with any additional bathrooms.	Yes
4D – 2 Room Depths	• Habitable room depths are limited to a max of 2.5m x the ceiling height • In an open plan layout the maximum habitable room depth is 8m from a window.	Habitable room depths comply with the requirements of 8m from a window in an open plan layout, or else 2.5m x the ceiling height.	Yes
4D – 3 Apartment Layouts	• Master bedrooms have a min area of 10sqm and other bedrooms 9sqm (excluding wardrobe space) • Bedrooms have a min dimension of 3m (excluding wardrobe space) • Living rooms or combined living/dining rooms have a min width of: - 3.6m for studio and 1 bed apartments - 4m for 2 and 3 bed apartments • The width of cross-over or cross through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$, excluding wardrobe space. Bedrooms have a minimum dimension of 3m (excluding wardrobe space). Living rooms or combined living/dining rooms have a minimum width of 2.6m for 1 bedroom apartments and 4m for 2 and 3 bedroom apartments.	Yes

Design criteria	Required	Proposed	Compliance
4E – 1 Private open space and balconies	• All apartments are required to have primary balconies as follows: - 1 bed: 8sqm, min 2m depth - 2 bed: 10sqm, min 2m depth - 3 bed: 12sqm, min 2.4m depth	Revised plans demonstrate that full area and minimum depth dimensions have been satisfied for all Units.	Yes
4F -1 Common Circulation	• The maximum number of apartments off a circulation core on a single level is eight	The maximum number of apartments sought off a circulation core is four.	Yes
4G – 1 Storage	• In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: - 1 bed: $6m^3$ - 2 bed: $8m^3$ - 3 bed: $10m^3$ At least 50% of the required storage is to be located within the apartment.	All units comply with the minimum storage requirements.	Yes
4H Acoustic Privacy	Noise transfer is limited through the siting of buildings and building layout.	Development has generally been sited to avoid noise transfer.	Yes
4J Noise and Pollution	The impact of external noise transfer and pollution are minimised through the siting and layout of the building.	As above, the design seeks to minimise this.	Yes
4K Apartment Mix	A range of apartment types are provided to cater for different household types and distributed throughout the building.	The following mix of units are proposed: - Four x 1 bed - Four x 2 bed - Four x 3 bed	Yes
4L Ground Floor Apartments	Maximise street frontage activation and amenity. Design of ground floor apartments delivers amenity and safety.	No apartments are located on the ground floor.	N/A
4M Facades	Provide visual interest whilst respecting the character of the area.	The facades and external appearance of the building are generally considered acceptable.	Yes
4N Roof Design	Roof features are incorporated into the roof design, respond to the street and provide sustainability features.	Roof design is acceptable and responds to the height and character of the development.	Yes

Design criteria	Required	Proposed	Compliance
4O Landscape Design	Landscape Design is viable, sustainable, contributes to the streetscape and amenity.	Landscape and planting schemes include an appropriate mix of species.	Yes
4V Water	Water Management and Conservation is achieved.	The application is accompanied by a valid BASIX Certificate which confirms water management and conservation is achieved.	Yes
4W Waste	Waste storage facilities are provided to minimise impacts to the streetscape, building entry and amenity of residents.	Ground floor waste storage are located towards the rear of the development, at ground level.	Yes

Central Coast Local Environmental Plan 2022

The relevant local environmental plan applying to the site is CCLEP 2022. The aims of CCLEP 2022 are to promote a high standard of urban design that responds appropriately to the existing or desired future character of areas.

Zoning and Permissibility (Part 2)

The subject site is zoned E1 – Local Centre pursuant to clause 2.2 of CCLEP 2022 (Figure 23).

The CCLEP 2022 defines the development as:

> ***Shop top housing*** *means one or more dwellings located above ground floor retail premises or business premises.*
>
> Shop top housing is a type of ***residential accommodation***—see the definition of that term in this Dictionary.
>
> ***Commercial premises*** *means any of the following-*
> *(a) Business premises*
> *(b) office premises,*
> *(c) retail premises.*
>
> ***residential accommodation*** *means a building or place used predominantly as a place of residence, and includes any of the following:*
> *(a) attached dwellings,*
> *(b) boarding houses,*
> *(c) dual occupancies,*
> *(d) dwelling houses,*
> *(e) group homes,*

(f) hostels,
(g) multi dwelling housing,
(h) residential flat buildings,
(i) rural workers' dwellings,
(j) secondary dwellings,
(k) semi-detached dwellings,
(l) seniors housing,
(m) shop top housing,
but does not include tourist and visitor accommodation or caravan parks.

retail premises *means a building or place used for the purpose of selling items by retail, or hiring or displaying items for the purpose of selling them or hiring them out, whether the items are goods or materials (or whether also sold by wholesale), and includes any of the following—*

(a), (b) (Repealed)
(c) food and drink premises,
(d) garden centres,
(e) hardware and building supplies,
(f) kiosks,
(g) landscaping material supplies,
(h) markets,
(i) plant nurseries,
(j) roadside stalls,
(k) rural supplies,
(l) shops,
(la) specialised retail premises,
(m) timber yards,
(n) vehicle sales or hire premises,
but does not include farm gate premises, highway service centres, service stations, industrial retail outlets or restricted premises.

Note—

Retail premises are a type of ***commercial premises****—see the definition of that term in this Dictionary.*

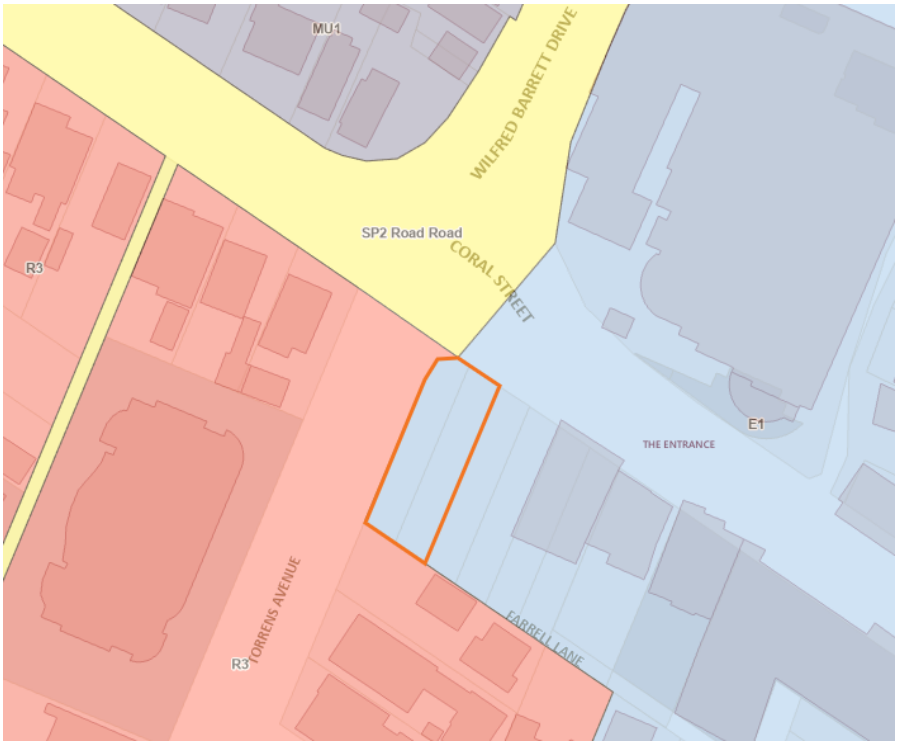


Figure 23 – Land Zoning Map

Shop top housing and commercial premises are permissible with consent within the E1 – Local Centre zone. The design of the development can be properly characterised as "shop top housing" as the residential accommodation is above the retail or commercial parts (*Hrsto v Canterbury City Council (No 2)* [2014] NSWLEC 121).

Pursuant to the Land Use Table in clause 2.3 of CCLEP 2022, the objectives of the E1 – Local Centre zone are as follows:

- *To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.*
- *To encourage employment opportunities in accessible locations.*
- *To maximise public transport patronage and encourage walking and cycling.*
- *To permit residential uses while maintaining active retail, business and other non-residential uses at street level to contribute to the vitality of the area.*
- *To minimise conflict between land uses within the zone and land uses within adjoining zones.*

The proposed development satisfies the objectives of the zone as it will permit the orderly development of a currently vacant site, contributing to the range of retail uses serving the

needs of people who live, work, and visit the local area, whilst also increasing housing and commercial stock in The Entrance.

General Controls and Development Standards (Parts 2, 4, 5, 6 and 7)

CCLEP 2022 contains controls relating to development standards, miscellaneous provisions and local provisions. The relevant controls to the proposal are further set out in the table below.

Clause	Requirement	Proposal	Complies
4.3(2) – Height of buildings	Clause 4.3 permits a maximum overall building height of 23m.	Overall building height of 23.9m (RL 27.70 – RL 3.80)	No – discussed below.
4.4(2) – Floor Space Ratio	Clause 4.4 permits a maximum floor space ratio of 2.75:1.	2.2:1	Yes.
4.6 – Exceptions to Development Standards	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 EPI instrument.	Discussed below.	N/A – discussed below.
5.6 – Architectural roof features	Development that includes an architectural roof feature that exceeds or causes a building to exceed the height limits set by clause 4.3 may be carried out, but only with development consent.	The proposed development includes two architectural roof features, 0.9m and 0.1m in height, which causes the building to exceed the height limit set by clause 4.3(2).	Yes – discussed below.
5.21 - Flooding	Development consent must not be granted within a flood planning area unless the consent authority is satisfied of the relevant matters in 5.21(2).	There are known overland flooding issues in the local catchment due to insufficient drainage capacity of the network due to the flat nature of the land and the ability to drain via a gravity system to the lake. The site and its surrounds is not affected by flooding from the lake, rather localized overland flooding and backup of the system during prolonged rainfall. The applicant has proposed a finished floor level of 3.90m AHD, which is above the flood level and satisfies the relevant matters in 5.21(2).	Yes

7.1 – Acid Sulfate Soils	Development consent must not be granted until an ASS Plan in accordance with the Acid Sulfate Soils Manual has been prepared.	The site is identified as Class 3 on the Acid Sulfate Soils map. The clause requires the consideration of the need for an acid sulfate soils management plan where excavation is greater than 1m or will lower the water table by more than 1m below natural ground level. The application is accompanied by an Acid Sulfate Soils Investigation, prepared by Ground Technologies NSW and dated 23 May 2022. Soil sampling at the site does not indicate the presence of oxidisable sulphur to levels below basement excavation. A condition of consent that covers unexpected finds in relation to acid sulfate soils is imposed.	Yes
7.6 – Essential Services	Essential services must be made available or adequate arrangements be made to make them available.	Services include water supply, electricity supply, sewage management and disposal, stormwater drainage or on-site conservation and suitable road access. Water and sewer contributions will be applicable to the development in accordance with the Shire Wide charges. The development will require a Section 307Certificate under the *Water Management Act 2000*. Other services already available to the site include electricity supply, stormwater drainage and suitable road access. The proposed development can be suitably serviced in accordance with the provisions of this clause.	Yes

Clause 4.3 – Height of Buildings

The objectives of this clause are:

(a) To establish a maximum height of buildings to enable an appropriate development density,

(b) To ensure that the height of buildings is compatible with the character of the locality.

In accordance with clause 4.3(2), the height of building on the subject site are not to exceed a maximum of 23m (Figure 24).

The proposed development seeks consent for an overall building height of 23.9m (RL 27.70 – RL 3.80) (Figure 25), which exceeds the maximum permitted numerical provisions of this Clause by 0.9m or 4% at its maximum encroachment. This minor height exceedance accommodates a lift shaft, deemed as a by-product of appropriately servicing the building.

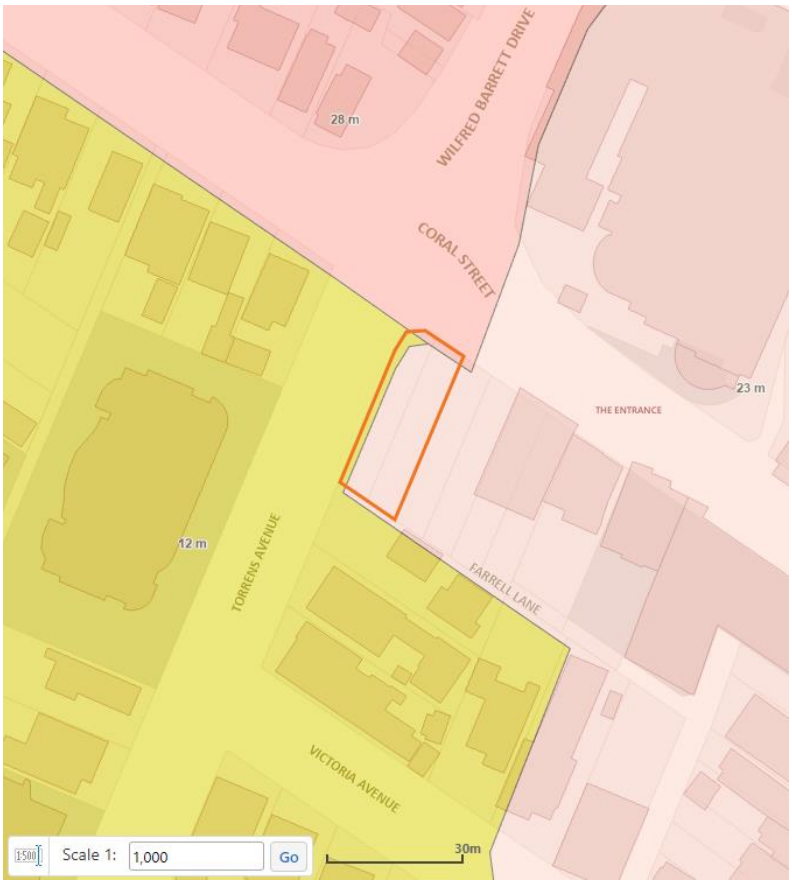


Figure 24 – Building Height Map

A secondary point encroachment of 100m (RL 26.70) is also sought to accommodate a small portion of the staircase.

A *Clause 4.6 Variation Request* was submitted with the application, seeking to vary the development standard and is discussed below.

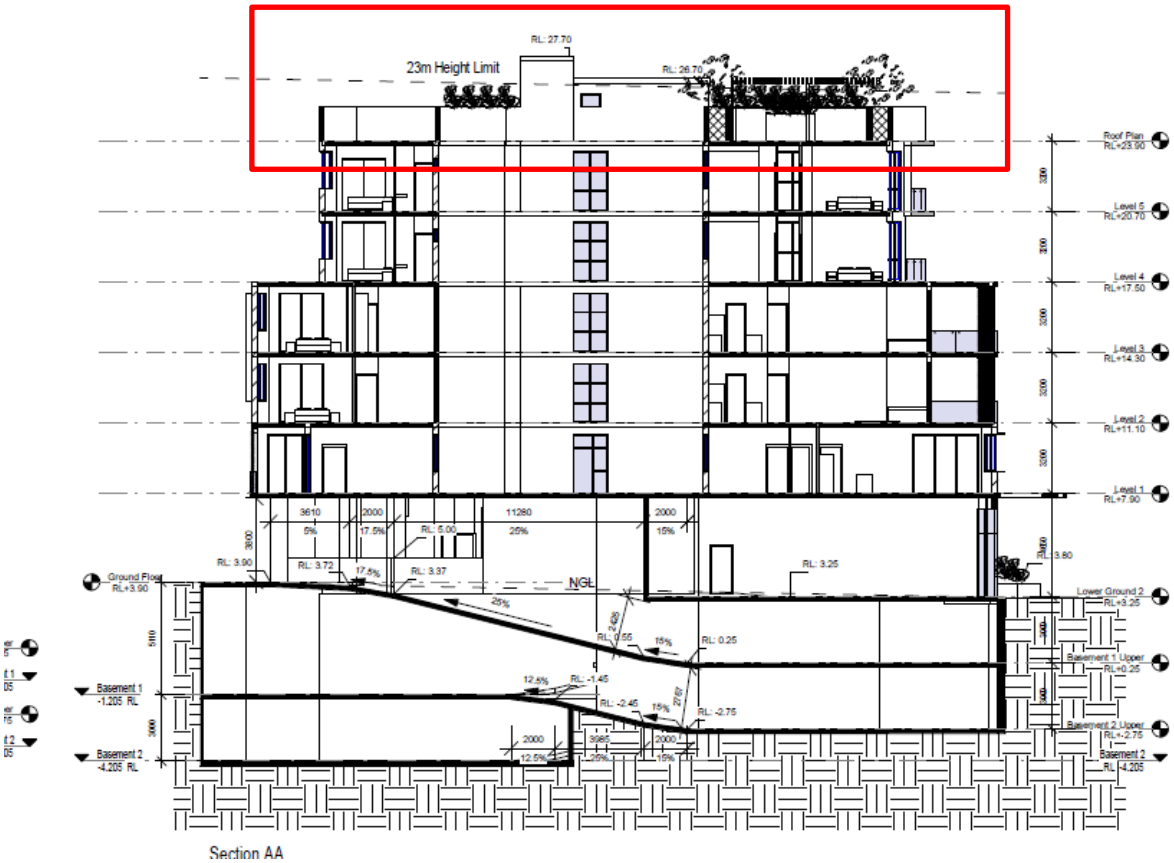


Figure 25 – Point encroachment to maximum building height as shown in red.

Clause 4.4 – Floor Space Ratio

The objectives of this clause are:

(a) To establish standards for the maximum development density and land use intensity,

(b) To ensure the density, bulk and scale of development integrates with the streetscape and character of the area in which the development is located,

(c) To minimise adviser environmental effects on the use or enjoyment of adjoining properties and the public domain,

(d) To facilitate design excellence by ensuring the extent of floor space in building envelopes leaves generous space for the articulation and modulation of design.

In accordance with clause 4.4(2), the maximum permitted floor space ratio for the subject site is 2.75:1 (Figure 26).

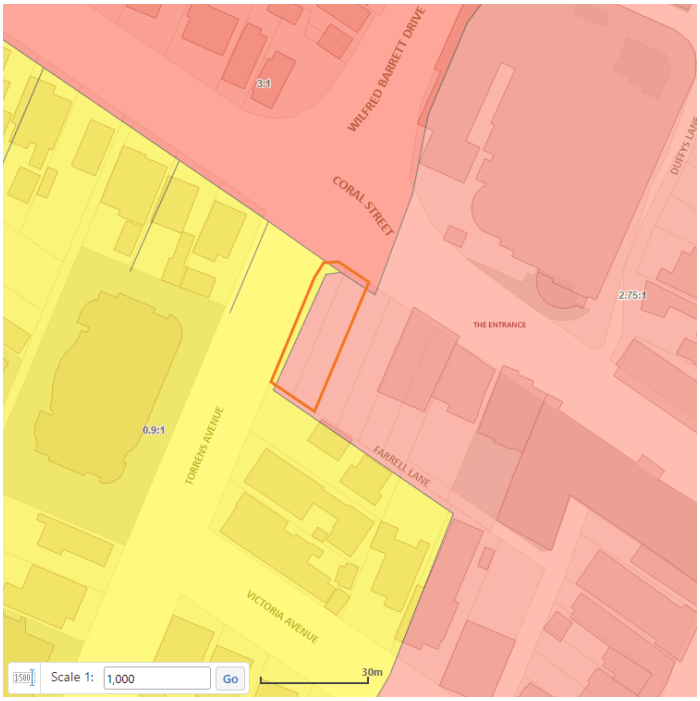


Figure 26 – Floor Space Ratio Map

In accordance with the accompanying Statement of Environmental Effects, the proposed development seeks a GFA of 1,565.6m^2 or FSR of 2.65:1. Council calculations demonstrate a proposed GFA of 1,312m^2 or resultant FSR of 2.2:1, which complies with the maximum permitted in accordance with this clause.

Clause 4.6 – Exceptions to development standards

The application is accompanied by a *Clause 4.6 Variation Request*, prepared by Think Planners, dated 7 June 2022, seeking to vary the maximum permitted building height in accordance with clause 4.3(2) of CCLEP 2022.

Clause 4.6 of the Standard Instrument LEP was revised in November 2023 and was accompanied by the release of a *Guide to Varying Development Standards* by the Department of Planning and Environment. In accordance with this Guide and under Section 6.2.2, the *'consent authority must be satisfied the criteria identified in clause 5.6(3) is met. If the proposal does not satisfy the criteria, a written request under clause 4.6 is required'*.

Accordingly, for purposes of the assessment of the subject application, reliance will be made upon clause 5.6 of CCLEP 2022 to consider the point encroachment and building height exceedance, discussed below.

Clause 5.6 – Architectural roof features

Clause 5.6 allows the consent authority to approve a development containing an architectural roof feature that exceeds or causes a building to exceed the building height under clause 4.3 without the need for a written request to vary the standard.

In accordance with clause 5.6(3), development consent must not be granted to any such development unless the consent authority is satisfied that –

(a) The architectural roof feature –

(i) Comprises a decorative element on the uppermost portion of the building, and
(ii) Is not an advertising structure, and
(iii) Does not include floor space area and is not reasonably capable of modification to include floor space area, and
(iv) Will cause minimal overshadowing, and

(b) Any building identification signage or equipment for servicing the building (such as plant, lift motor rooms, fire stairs and the like) contained in or supported by the roof feature is fully integrated into the design of the roof feature.

As shown in Figure 27, the non-compliance can be considered as a decorative element of the uppermost portion of the building only, limited to a small portion of the staircase and lift shaft.

The architectural feature is not an advertising structure and does not include floor space area or area which is reasonably capable of modification to include floor area, as all portions of the building height including all habitable rooms are located below the maximum building height. The lift core is fully recessed, causing minimal overshadowing, wholly contained within, and supported by the uppermost level.

The Panel can be satisfied that the considerations of clause 5.6(3) have been met in this instance and in accordance with the aforementioned Guide, a written request under lause 4.6 is not required to vary the height exceedance of the architectural roof feature.

Clause 5.21 – Flood Planning

The land is classified as partially affected by the 1 in 100 Year Flood as shown in Figure 28 and within Precinct 1: Probable Maximum Flood and Precinct 2: Flood Planning Areas as shown in Figure 29.

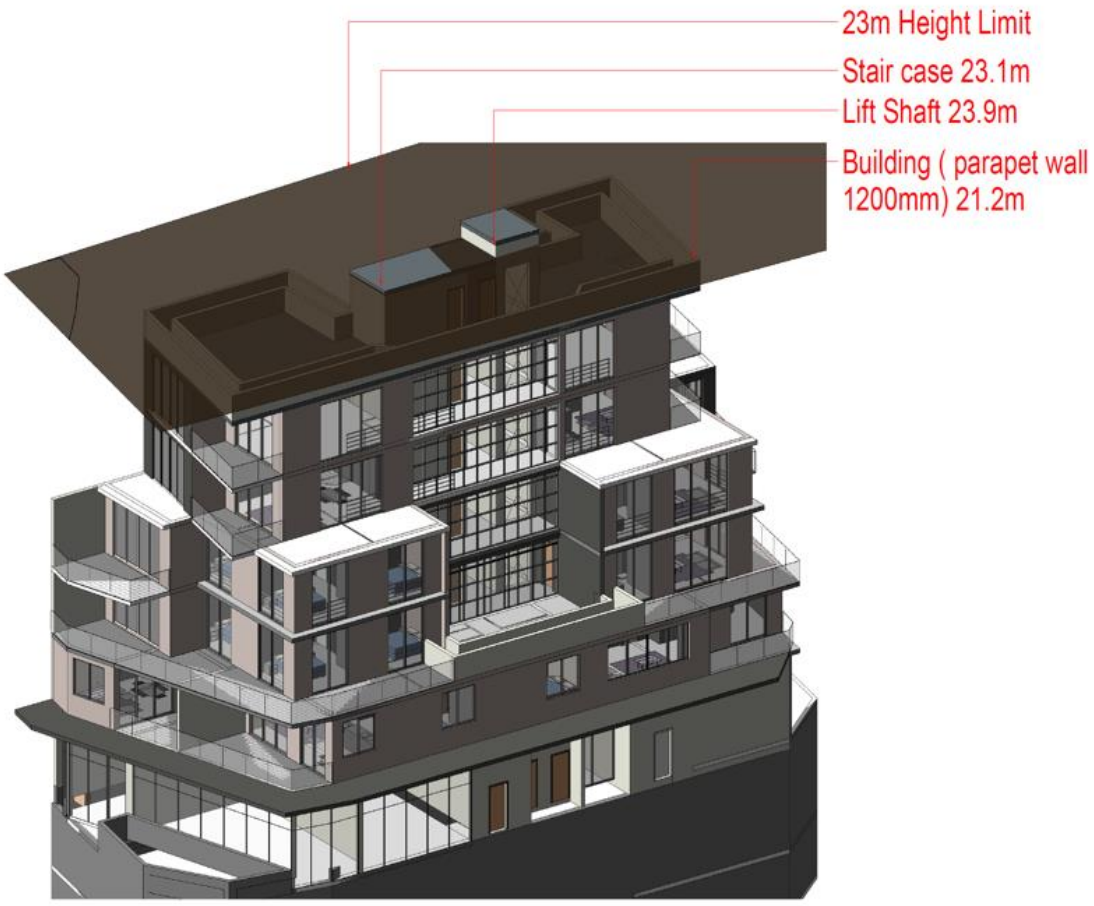


Figure 27 – Height Plane Study



Figure 28 – 1 in 100 Year Flood

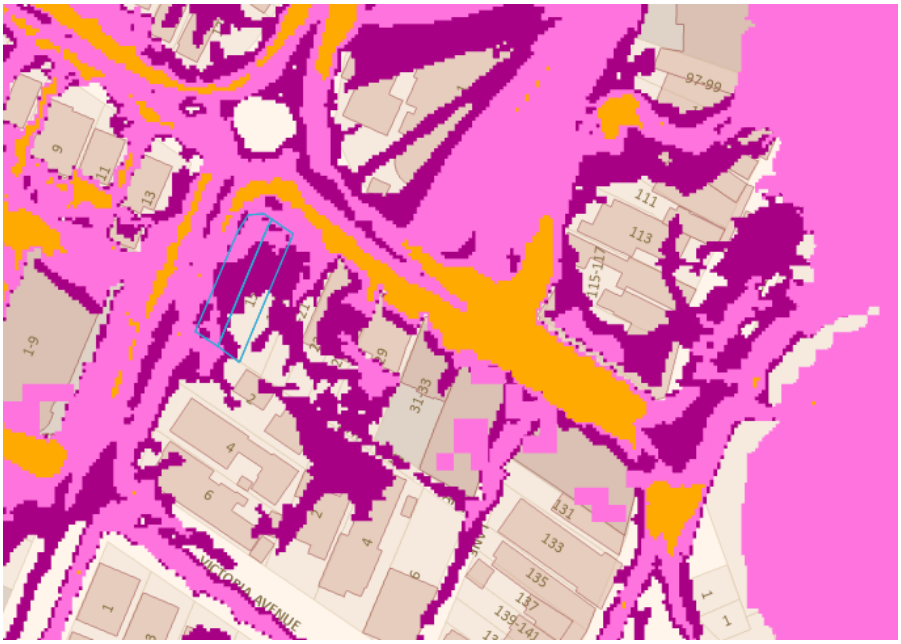


Figure 29: Flood Precincts

Development consent must not be granted to land identified by this clause, unless the Panel is satisfied that the development:

(a) Is compatible with the flood function and behaviour on the land, and

(b) Will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other developments or properties, and

(c) Will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and

(d) Incorporates appropriate measures to manage risk to life in the event of a flood, and

(e) Will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.

The application and supporting documentation considered the site's flood affectation and was referred to Council's Senior Development Assessment Engineer who has determined flood planning has been satisfactorily addressed in accordance with subclauses 5.21(1) and 5.21(3).

Clause 7.1 – Acid Sulfate Soils

Clause 7.1 requires consideration to be given to certain development on land being subject to actual or potential acid sulphate soils. The site is identified as Class 3 on the Acid Sulfate Soils (ASS) Planning Map which are likely to occur where there are works more than 1m below natural ground level and/or works by which the watertable is likely to be lowered more than 1m below the natural ground surface.

Significant eathworks will be required for the evcavation of the basement (up to 6.7-8.5m). The geotechnical report prepared by ground technologies identified that Acid Sulphate Soils are not present at the site and an Acid Sulphate Soil lManagement Plan is not required.

The applicant has undertaken soil sampling at the site. The soil sampling does not indicate the presence of oxidisable sulfur to levels below the basement excavation. However, in the unlikely event acid sulfate soils are found during works a condition is included to cease all excavation works if acid sulfate soils are identified until such time as details of mitigation and treatment measures are submitted to, and approved by, the Principal Certifier (refer to Condition 5.7).

The Panel can be satisfied that the proposed development complies with the provisions of clause 7.1 Acid Sulfate Soils.

Clause 7.9 – Essential Services

Development consent must not be granted to development unless the consent authority is satisfied that all the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required—

a) the supply of water,
b) the supply of electricity,
c) the disposal and management of sewage,
d) stormwater drainage or on-site conservation,
e) suitable vehicular access
f) the collection and management of waste

The property is connected to electricity, reticulated water and sewer and has the capacity to be serviced for waste collection.

Water and sewer services are available to the land. Council's Building in the Proximity of Water & Sewer Pipelines Procedure and water and sewer contributions are applicable to the proposal. A Section 307 certificate of compliance under the *Water Management Act 2000* is required to be obtained prior to the occupation of the building. Satisfactory details have been provided in the Waste Management Plan for waste management procedures associated with the demolition, construction, and ongoing operation of the proposed development.

Satisfactory stormwater drainage can be obtained in accordance with the Stormwater Plans and there is adequate area for vehicle access and manoeuvring within the site to enter and exit the site in a forward direction.

The Panel can be satisfied that the proposed development complies with the provisions of clause 7.6 and that adequate essential servicing is available to the development having regard for water, sewer, electricity, stormwater drainage, waste collection and vehicular access.

Central Coast Development Control Plan

The following Chapters of CCDCP 2022 are relevant to this application:

- Chapter 1.2: Notification of Development Proposals
- Chapter 2.3: Residential Flat Buildings and Shop Top Housing
- Chapter 2.13: Transport and Parking
- Chapter 2.14: Site Waste Management
- Chapter 3.5 Tree and Vegetation Management

Chapter 1.2 – Notification of Development Proposals

The proposed development was notified and exhibited in accordance with the abovementioned Chapter from 23 September 2022 to 19 October 2022 inclusive. No submissions were received regarding the proposed development.

Chapter 2.3: Residential Flat Buildings and Shop Top Housing

Chapter 2.3 of CCDCP 2022 applies to the proposed residential apartments component of the development. However, there are several requirements under CCDCP 2022 that are relevant to the proposal but superseded by similar controls within the ADG.

These are:

- Communal open space ($10m^2$ per dwelling with a minimum dimension of 5m)
- Private open space (a minimum area of $10m^2$ and a minimum dimension of 2m)
- Deep soil provision (12.5% site area), site coverage (soft landscaping 25%)

- Solar access (minimum of 3 hours midwinter between 9am and 3pm for 70% of dwellings)

- Building separation

- Storage ($3m^2$ of floor area for 1- or 2-bedroom dwellings)

The following CCDCP 2022 requirements relevant to the proposal that are not provided within the ADG:

Part 2.3.3.1 - Building Height

The objectives of this Part are:

- *To ensure that buildings are compatible with the existing and desired future character of the locality.*

- *To ensure that the height of buildings protects the amenity of neighbouring properties in terms of visual bulk, access to sunlight, privacy and views.*

- *To ensure that building height is not visually obtrusive, is compatible with the scenic qualities of hillside and ridgetop locations and respects the sites natural topography.*

Part 2.3.3.1(a) requires compliance with the Height of Building Map for areas within the LGA where residential flat development can be built in accordance with the CCLEP 2022, permitting an overall building height of 23m.

As discussed above, the proposed development seeks consent for an overall building height of 23.9m, with a resultant 0.1m and 0.9m point encroachment of an architectural roof feature suitably justified under clause 5.6 of CCLEP 2022. No further consideration is required in this regard.

Part 2.3.3.2 – Density – Floor Space Ratio

The objectives of this Part are:

- *To have development sites and densities that are appropriate in the zone and compatible with the local context.*

- *To ensure building bulk and scale provisions are compatible with neighbouring development.*

Part 2.3.3.2(a) requires compliance with the Floor Space Ratio map and relevant considerations for areas within the LGA in accordance with CCLEP 2022, permitting a maximum FSR of 2.75:1.

As discussed above, the proposed development seeks consent for an overall FSR of 2.2:1, compliant with the provisions of Part 2.3.3.2 of CCDCP 2022. No further consideration is required in this regard.

Chapter 2.13 – Transport and Parking

The proposed development includes off street parking for 15 cars, comprising 12 residential spaces, 1 visitor parking space (including a shared car wash bay) and 2 retail spaces. Vehicular access to the basement level parking facilities is to be provided via a new entry/exit driveway located from Farrell Lane (see Figures 30-32 for existing condition). A single width basement ramp is proposed with a traffic control system including control signals and convex mirrors to improve circulation within the basement.

Accordingly, the application is accompanied by a *Traffic and Parking Assessment Report,* prepared by Varga Traffic Planning Pty Ltd and dated 3 May 2022, Ref 20660. The report assesses the traffic and parking implications of the proposed development in terms of road network capacity and the adequacy and suitability of the quantum of off-street parking and loading provided on the site.

Traffic Assessment

Application of the NSW Guide to Traffic Generating Development to the proposed development yields a traffic generation potential of approximately nine (9) vehicle trips per hour during commuter peak periods as set out below:

Projected Future Traffic Generation Potential

Residential apartments (12 apartments):	6.2 peak hour vehicle trips
Retail tenancies (140m^2):	2.8 peak hour vehicle trips
TOTAL TRAFFIC GENERATION POTENTIAL:	**9.0 peak hour vehicle trips**

The projected increase in traffic activity because of the proposed development is considered minimal and generally consistent with the planning controls, not resulting in any unacceptable traffic implications in terms of road network capacity. The Panel can be satisfied that no mitigating actions are required in this regard.



Figure 30: Farrell Lane looking west



Figure 31: Farrell Lane looking west



Figure 32: Farrell Lane looking east

Parking Assessment

Chapter 2.13 of CCDCP 2022 requires car parking for the development to be provided at the following rates:

Land Use	Requirements	
Shop Top Housing	Up to 3 bedrooms	1 space per dwelling
	4 bedrooms or more	2 spaces per dwelling
Visitor		Nil
Retail (Shops)		1 space per 30m^2 GFA

Based on the above, 17 parking spaces are required:

- Shop Top Housing: 12 x units up to 3 bedrooms = 12 spaces
- Retail: 139.6m^2 /30m^2 = 4.65 spaces (5 spaces, rounded up)
- Total required: 17 spaces

The application provides 15 spaces in the following mix:

- Shop Top Housing: 12 spaces
- Retail: 2 spaces
- Visitor: 1 space

The proposed development fails to meet the minimum numerical requirements in accordance with this Part by two (2) parking spaces or 12%. The assessment report considers the shortfall acceptable based on the following:

- *The site is located within easy walking distance of a variety of bus services into and out of the local area which can also be used to interchange with interconnecting train services at several railway stations such as Gosford, Wyong and Tuggerah Railway Stations.*

- *The site is also located within The Entrance Town Centre and in close proximity to shops and services.*

- *The proposed retail component is intended to cater for the local residential and business community who are located within walking distance of the site.*

- *The accessibility of the site by public transport and its proximity to shops and services will facilitate reduced car usage rates by residents and employees of the retail component of the development proposal.*

- *As noted in the foregoing Council's WDCP 2013 permits a residential parking rate of 1 space per dwelling if development is in a major or a town centre subject to submission of a Transport Management Plan and approved by Council.*

- *Contributions can be considered for the existing multi-storey car park located opposite the site, on the eastern corner of the Coral Street and Wilfred Barrett Drive intersection which has an additional capacity of 470 spaces as per Council's advice.*

Based on the above and given the location of the site and its proximity to The Entrance local centre, the availability of, and accessibility to public transport and the established pedestrian pathways within the centre, the 12% or two (2) spaces variation is considered acceptable in this instance.

Part 2.13.3.5 Servicing, Deliveries & Waste Collection

Loading and servicing for the proposed development is expected to be undertaken at the ground floor level at the rear of the site, and vehicles will be required to reverse off the laneway, due to site constraints. This arrangement is deemed acceptable in a rear service lane environment, particularly given low traffic volumes. Once loaded/unloaded, the service vehicle will exit the site in a forward direction.

The accompanying turning path analysis provided by the applicant of a small rigid vehicle (SRV) in accordance with AS2890.2 demonstrates that servicing from the laneway is achievable. The development will be limited to SRVs for servicing requirements in this regard.

Part 2.13.3.8.1 Bicycle Parking Rates

The following bicycle parking rates are specified under Part 2.13.3.8.1:

- Shop Top Housing: 1 space per 3 dwellings = 4 spaces
- Retail: 1 space per 150sqm GFA = 1 space
- Total required: 5 spaces

The proposed development provides a total of six (6) spaces within the proposed ground floor parking level, compliant with the provisions of this Part.

Part 2.13.3.9 Motorcycles and Motor Scooters

The proposed development incorporates one motorcycle parking space on Basement Level 2 in accordance with this Part.

Right of Carriageway

The site is burdened by a 3.6m wide ROW along the rear of the site which is shared with adjoining properties also fronting Coral Street. Informal two-way vehicular access is currently provided along the ROW between Torrens Avenue and Farrell Lane.

The subject development will necessitate road upgrade works with a full road and drainage design and road reconstruction for the full width and frontage of the development in the laneway. The laneway shall be one-way crossfall (3-4%) to the southern boundary and pavement shall be reinforced concrete 2.8m in width. Foot paving will also be required for the full frontage of the development in Torrens Avenue and Coral Street.

Chapter 2.14 – Site Waste Management

The application is accompanied by a Waste Management Plan, dated December 2023, which discusses both demolition, site preparation, construction, and ongoing waste management for the proposed development.

The Panel can be satisfied that the proposed development is acceptable with regards to this chapter of CCDCP 2022 and associated Waste Control Guidelines. Appropriate conditions have been recommended.

Chapter 3.5: Tree and Vegetation Management

The application was accompanied by an Arborist Report, prepared by Redgum Horticultural dated 3 July 2021. The application and accompanying documentation were referred to Council's Tree Assessment Officer who undertook a site inspection on 21 September 2022 and carried out an assessment of the proposal.

There are 13 Cocos Palms located forward of the property on the road reserve, which are proposed to be removed and replaced with new plantings as per the accompanying Landscape Plan. The trees cannot be retained due to the proposed building envelopes and infrastructure, such as basement level excavation where encroachment will have an adverse impact on its roots and crown for viability and stability.

Subject to conditions, the proposed development is acceptable with regards to the requirements of this Chapter and suitable replacement landscaping appropriate to its commercial context.

Section 4.15(1)(a)(iiia) – Planning Agreements under Section 7.4 of the EP&A Act

There are no planning agreements or draft planning agreements entered or proposed for the site. No further consideration is required in this regard.

Section 4.15(1)(a)(iv) – Provisions of Regulations

The *Environmental Planning and Assessment Regulation 2021* applies to all development applications regarding such items as application type, compulsory contributions, notification of development applications and a range of many other details regarding development

application requirements. Regarding this application, there is no specific clause that warrants further discussion.

Section 4.15(1)(b) – Likely impacts of development

Built Form, Character, Locality and Context

The proposal will positively contribute to the character and amenity of the locality and streetscape. The scale, form, character, and density of the development is considered acceptable within the locality given the E1 zoning of the site.

The proposal involves the development of two vacant lots at the end of an existing business and residential street within The Entrance town centre. The design and appearance of the development is of a high quality and satisfactory architectural appearance envisaged by the future character of the streetscape. The proposal provides a well activated ground floor with commercial/retail premises and separate residential entry that continues the existing business typology along Coral Street.

The built form is well articulated and composed and has considered its relationship to surrounding properties in addition to the site's visual prominence.

External works and road infrastructure

The site is currently vacant with a redundant vehicular crossing fronting Coral Street and upright kerb and channel, service, pedestrian footpath, and vegetation.

The proposed development has been designed with vehicle access via an existing Right of Way connecting Torrens Avenue and Farrell Lane. Dedication to Council of the part of the land that is subject to the existing ROW will be required as part of this application. It is noted that other properties further east where also required to achieve a laneway connection between Torrens Avenue and Farrell Lane (known as Carousel Lane).

The development will therefore necessitate the completion of road infrastructure in accordance with the relevant provisions of Council's Civil Works Specification Design Guidelines 2019. Conditions have been recommended requiring the provision of a new driveway crossing and layback (Torrens Avenue) and paving similar to the existing infrastructure along Coral Street and removal of the existing redundant driveway crossing and layback (Coral Steet).

Potential conflict with overhead power and streetlights is addressed via conditions of consent.

Traffic and Transport

The application is accompanied by a Traffic and Parking Assessment Report, prepared by Varga Traffic Planning Pty Ltd and dated 3 May 2022. The report concludes that the projected increase in traffic activity because of the proposal is minimal and will not have unacceptable traffic implications in terms of road network capacity.

The site fronts both Coral Street, Farrell Lane and Torrens Avenue, which are local roads. The site is located within The Entrance local centre and is frequently serviced via the local bus network. The site is located within close proximity to the existing shared path bicycle network.

Drainage

The site falls to Coral Street and the proposal includes revised concept stormwater drainage plans, which seek to direct stormwater to Torrens Avenue. The basement and subsoil levels are to be piped via a pump-out system.

No on-site detention is required for this proposal due to the proximity of the receiving downstream drainage system – The Entrance Channel. No rainwater tank storage is required as per the revised BASIX water commitments.

Water and Sewer

The proposed development is located within the Zone of Influence (ZOI) of the sewer main within the lane. Therefore, the development will need to comply with Council's "Policy for Building Over or Adjacent to Sewer Mains".

The proposed basement is below the Zone of Influence (ZOI) of the water main servicing the area. The development will require a Section 307 Certificate under the *Water Management Act 2000*.

Privacy, overlooking and boundary treatments

There is the potential for overlooking to adjoining residential dwellings to the south of the site and privacy impacts from the future intended occupants of the site. These properties however have an R3 – High Density Residential development zoning and are highly likely to be redeveloped in the future. The best and highest use of this land would be a multi dwelling development or residential flat building.

Notwithstanding this, potential overlooking has been minimised in the design through the placement of windows and orientation of dwellings and layouts. Appropriate screening will also be provided to windows to further increase privacy.

Air quality

A condition is imposed in relation to dust control during earthworks, excavation and construction requiring adoption of appropriate measures to minimise emissions into the surrounding environment. Subject to the recommended condition, there is minimal potential for any air pollution, odour, fumes, or other air quality impacts associated with the development on the site.

Noise and vibration

A condition has been recommended in relation to noise and vibration. The condition relates to standard operating hours for the construction of the development. It is not anticipated that the development will cause ongoing excessive or unreasonable noise or vibration.

Natural Environment

There will be no significant impact upon the natural environment resulting from the proposal.

Economic and Social Impacts

Social Impacts

Principles of Crime Prevention Through Environmental Design (CPTED) have been considered under the design of the proposed new development. The application is accompanied by a CPTED assessment within the Statement of Environmental Effects which has identified a number of design considerations to discourage anti-social behaviour and minimise opportunity for criminal activity. Satisfactory consideration has been given to the four CPTED principles.

A condition is imposed to ensure the development is consistent with CPTED proposals as outlined in the accompanying Statement of Environmental Effects.

Economic Impacts

The proposed development will contribute to the supply of housing needs in the locality and is satisfactory from an economic perspective.

THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT

The site is situated within The Entrance town centre and this location is well serviced with a high level of amenity. The site is accessible to public transport and facilities and the proposed development provides benefits to the ongoing viability of The Entrance town centre by encouraging people to live within the centre and by providing active commercial frontage.

The site is located within an area that is undergoing a transition and includes some low scale existing development and vacant sites. The building form is considered consistent with the planned future character of the area. The architectural design and treatment of the building will present well on all facades.

The design of the proposed development is in an appropriate form, layout and scale that suitably balance the opportunities and constraints of the site. There are no significant site constraints or hazards that would render the location of the development as unsuitable. The building form will present well within streetscape and will not adversely impact on the character and amenity of the locality.

Submissions

The application was notified and exhibited in accordance with Chapter 1.2 of CCDCP 2022. No submissions were received.

Submissions from Public Authorities

Other than comments from Ausgrid, which are discussed below, no other submissions from public authorities were received.

Internal Consultation

Tree Assessment Officer	Supported, subject to conditions.
Contributions Officer	Supported, subject to conditions.
Development Assessment Engineer	Supported, subject to conditions.
Environmental Health Officer	Supported, subject to conditions.
Traffic Engineer	Supported, subject to conditions.
Urban Designer	Supported.
Waste Officer	Supported subject to conditions.

Waste

Waste collection services are intended to be undertaken from the kerbside in Torrens Avenue using the existing line-marked shoulder located immediately adjacent to the site, usually in the early hours of a weekday. This is commonplace within an urban environment and satisfactorily accommodated without causing any obstruction to traffic.

The proposed waste collection arrangements are illustrated on the attached swept turning path and demonstrates the following:

- *a 12.5m long waste collection truck can stand within the line-marked road shoulder located adjacent to the site*

- *another truck can pass the waste collection vehicle stopped in the line-marked road shoulder without difficulty*

- *the line-marking defining the road shoulder could be modified, if required by Council, to introduce a curved approach generally following the swept paths of the truck exiting the roundabout to further increase the space available for the truck standing in the line marked road shoulder*

- *alternatively, if required by Council, a kerb blister extension could also be provided on the exit from the roundabout as indicated by the exiting truck paths to improve the definition of the line-marked road shoulder,*

- *waste collection will typically occur in the early hours of the morning, when traffic activity tends to be minimal*

- *the stationary waste collection truck will be clearly visible to other vehicles exiting the roundabout, and will typically be further highlighted by flashing lights as is used by frequently stopping vehicles.*



Figure 33: 12.5m truck parking (waste collection)

The application was referred to Council's Waste Officer who advised that the Waste Management Plan was to be amended to reflect the current proposal.

In response, the applicant advised that a revised Waste Management Plan has been submitted with minor adjustments to the proposed excavation totals in the construction section of the WMP to more accurately reflect the final levels of the development.

Council's Waste Officer also noted that the proposed residential and commercial waste storage areas do not adequately satisfy Council requirements however further information has been received from the applicant advising of the following:

- *Under Appendix 2 - Waste/Recycling Generation Rates of the Central Coast Council Waste Control Guidelines Version 01, multi-unit dwellings are required to cater for 120L / unit / week for waste generation, & a further 120L / unit / week for recyclable material generation. As a result of Council's latest feedback, we have now amended the Waste Management Plan, as attached dated December 2023, to reflect the required 120L / unit / week rate for both waste & recycling.*

Council comment

The Panel can be satisfied that the proposed development adequately satisfies Appendix 2 of Council's Waste Control Guidelines.

Council's Waste Officer also requested the provision for future food and garden organics (FOGO) collection; however, further information has been received from the applicant advising of the following:

- *We have reviewed Council documentation including the CCDCP 2022 in addition to the Central Coast Council Waste Control Guidelines Version 01 (June 2022) and in all cases found no requirements that future FOGO collection needs to be accommodated. Similarly, our neighbouring approved development for 19-21 Coral Street also has no provision for future FOGO collection, as again no requirement for this exists in the controls either of the developments is assessed against.*

Council comment

The Panel can be satisfied that the proposed method for waste collection is satisfactory with regards to the existing and approved arrangements for developments addressing Farrell Lane, the adjoining approved development and future intended development for its surrounds and in accordance with current and existing controls.

External Consultation

Ausgrid	Supported, subject to conditions.

Ausgrid

Ausgrid consents to the proposed development, subject to the imposition of the following conditions which are listed in the draft conditions of consent (Attachment 1):

Method of Electricity Connection

The method of connection will be in line with Ausgrid's Electrical Standard ES(1) – Premise Connection Requirements.

Supply of Electricity

The nominated electrical consultant/contractor is to provide a preliminary enquiry to Ausgrid to obtain advice for the connection of the proposed development to the adjacent electricity network infrastructure. An assessment will be carried out based on the enquiry which may include whether or not:

- the existing network can support the electrical load of the development;
- a substation may be required on-site, either a pad mount kiosk or chamber style; and
- site conditions or other issues that may impact on the method of supply.

Reference is made to Ausgrid's website www.ausgrid.com.au about how to connect to Ausgrid's network.

Conduit Installation

The need for additional electricity conduits in the footway adjacent to the development will be assessed and documented in Ausgrid's Design Information, used to prepare the connection project design.

Streetlighting

The developer is to consider the impact that existing streetlighting and any future replacement streetlighting and maintenance may have on the development. Should the developer determine that any existing streetlighting may impact the development, the developer should either review the development design, particular placement of windows, or discuss with Ausgrid the options for relocating the streetlighting. The relocation of streetlighting will generally be at the developers cost. In many cases, it is not possible to relocate streetlighting due to its strategic positioning.

Proximity to existing network assets

Underground cables

There are existing underground electricity network assets in existing conduit and cable in Coral Street adjacent the development. Special care should also be taken to ensure that driveways and any other construction activities within the footpath area do not interfere with the existing cables in the footpath. Ausgrid cannot guarantee the depth of cables due to possible changes in ground levels from previous activities after the cables were installed.

The developer shall locate and record the depth of all known underground services prior to any excavation in the area.

Safework Australia – Excavation Code of Practice, and Ausgrid's Network Standard NS156 outlines the minimum requirements for working around Ausgrid's underground cables.

Ecologically Sustainable Principles

The proposal has been assessed having regard to ecologically sustainable development principles and is consistent with the principles. The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any endangered flora or fauna habitats and is unlikely to significantly affect fluvial environments.

Climate Change

The potential impacts of climate change on the proposed development have been considered by Council as part of the assessment of the application. This assessment has included consideration of such matters as potential rise in sea level; potential for more intense and/or frequent extreme weather conditions including storm events, bushfires, drought, flood and coastal erosion; as well as how the proposed development may cope, combat, withstand these potential impacts. The proposed development is considered satisfactory in relation to climate change.

The Public Interest

Section 4.15 (1)(e) of the *Environmental Planning and Assessment Act 1979* requires consideration as to whether to proposal is in the public interest.

The proposal will not have any adverse impact on the natural environment and will not unreasonably impact the amenity of neighbouring properties. The approval of the application is in the public interest.

OTHER MATTERS FOR CONSIDERATION

Section 7.11 Contributions

The total contribution payable to Council under this condition is $163,433.20, as calculated at the date of this consent, in accordance with The Entrance District Section 7.11 Plan as is imposed as a recommended condition.

Water and Sewer Contributions

Water and sewer services are available to the land. Building adjacent to sewer conditions apply and developer charges are applicable. A Section 307 Certificate of Compliance is required.

Construction Traffic and Pedestrian Management Plan (CTMP)

A Construction Traffic and Pedestrian Management Plan (CTMP) will be prepared and submitted to the certifying authority which will detail proposed construction works, the traffic impacts on the local area and how these impacts will be addressed. Council is not required to approve these plans, and this is imposed as a condition.

Political Donations

During assessment of the application there were no political donations were declared by the applicant, applicant's consultant, or owner.

Conclusion

This development application has been considered in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* and the Regulations, as outlined in this report. The following is a summary of prerequisite conditions for the granting of development consent that have been considered in the assessment report and provided as part of the conclusion, for the benefit of the Panel:

- Having regard for Sections 2.10, 2.11 and 2.12 of *State Environmental Planning Policy (Resilience & Hazards) 2021*, the Panel can be satisfied that the proposed development is designed, sited, and will be managed to avoid an adverse impact referred to in s.2.10(1) and s.2.11(1), and the development is not likely to cause increased risk of hazards on the subject site or other land.

- The Panel can be satisfied that the land is suitable for the proposed development and does not include land referenced in Section 4.6(4) of the *State Environmental Planning Policy (Resilience and Hazards) 2021* nor does it involve a change of use of the land. Accordingly, the development is satisfactory having regard for the provisions of Section 4.6 of the same SEPP.

- The Panel can be satisfied that the provisions of the *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004* have been met having regard to the thermal, energy and water commitments, subject to conditions.

- The Panel can be satisfied that the provisions of the *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* and associated design principles of the ADG have been met.

- The Panel can be satisfied that the proposed development is satisfactory with regards to the permitted uses and objectives of the E1 Zone of the *Central Coast Local Environmental Plan 2022*.

- The proposal is considered satisfactory with regards to the relevant Chapters of the *Central Coast Development Control Plan 2022*.

- There are no significant issues or impacts identified with the proposal under Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

- Having regard for the prerequisite conditions to the granting of consent under the *Central Coast Local Environmental Plan 2022,* the Panel can be satisfied that:

    - Clause 5.21 – Flood Planning

      The proposed development:

      a) Is compatible with the flood function and behaviour on the land, and
      b) Will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and
      c) Will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and
      d) Incorporates appropriate measures to manage risk to life in the event of a flood, and

e) Will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.

- Clause 7.6 – Essential services

  All services essential for the proposed development remain available to the subject site.

- Subject to the imposition of appropriate conditions, the proposed development is not expected to have any adverse environmental, social, or economic impact.

RECOMMENDATION

That DA/1809/2022 for the construction of a six (6) storey shop top housing development and basement level car parking at No 15-17 Coral Street, The Entrance, NSW, be APPROVED pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979* subject to the draft conditions attached to this report at Attachment 1.

Attachments

1	Draft conditions - 15-17 Coral Street, THE ENTRANCE NSW 2261 - DA/1809/2022 - Central Coast Council	D16062040
2	PUBLIC - Redacted Revised Architectural Plans - Issue D - 15-17 Coral Street, THE ENTRANCE - PAN-233783 - DA/1809/2022	D16098708
3	SEPP 65 Design Quality Report - Rev B - 15-17 Coral Street, The Entrance	D16094408
4	Stormwater Plans - 15-17 Coral Street, The Entrance	D16094409
5	Revised BASIX Certificate - 15-17 Coral Street, The Entrance	D16094412
6	Revised Landscape Plans - Revision B - 15-17 Coral Street, The Entrance	D16094414
7	Revised Waste Management Plan - December 2023 - 15-17 Coral Street, The Entrance	D16094416
8	Schedule of Finishes - 15-17 Coral Street, The Entrance	D16094417

Date: 9 February 2024
Responsible Officer: Alexandra Hafner
Location: 15-17 Coral Street, THE ENTRANCE NSW 2261
Lot 2 DP 25544, Pt Lot 1 DP 25544
Owner: Mr M Rammal and Mr A A A Nasrallah
Applicant: Design Cubicle Pty Ltd
Date of Application: 23 June 2022
Application No: DA/1809/2022
Proposed Development: 6 Storey Shop Top Housing
Land Area:
Existing Use: Vacant

PROPOSED CONDITIONS

The development taking place in accordance with the approved development plans reference number DA/1809/2022 except as modified by any conditions of this consent, and any amendments in red.

1.PARAMETERS OF THIS CONSENT

Approved Plans and Supporting Documentation

1.1 Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Plan No.	Revision No.	Plan Title	Drawn By	Dated
DA201	D	Site Plan	Design Cubicle	19.12.2023
DA202	D	Basement 1 and 2 Plans	Design Cubicle	19.12.2023
DA203	D	Ground Floor Plan	Design Cubicle	19.12.2023
DA204	D	Level 1 Plan	Design Cubicle	19.12.2023
DA205	D	Level 2 Plan	Design Cubicle	19.12.2023
DA206	D	Level 3 Plan	Design Cubicle	19.12.2023
DA207	D	Level 4 Plan	Design Cubicle	19.12.2023
DA208	D	Level 5 Plan	Design Cubicle	19.12.2023
DA209	D	Roof Plan	Design Cubicle	19.12.2023
DA301	D	Elevations 1 of 2	Design Cubicle	19.12.2023
DA302	D	Elevations 2 of 2	Design Cubicle	19.12.2023
DA303	D	Sections	Design Cubicle	19.12.2023
DA203	A	Traffic Control System Plans	Design Cubicle	13.05.2022
21136DA 1-2	B	Landscape Plan	Vision Dynamics	-
21136DA	B	Landscape Plan	Vision Dynamics	-

2-2				
SW200	A	Stormwater Concept Design Basement Plan	SGC Consulting Engineers	11.04.22
SW201	A	Stormwater Concept Design – Ground Floor Plan	SGC Consulting Engineers	11.04.22
SW202	A	Stormwater Concept Design – Roof Plan	SGC Consulting Engineers	11.04.22
SW300	A	Stormwater Concept Design – Details Sheet	SGC Consulting Engineers	11.04.22
SW400	A	Erosion and Sediment Control – Plans and Details	SGC Consulting Engineers	11.04.22

Document Title	**Version No.**	**Prepared by**	**Dated**
Acid Sulfate Soils Report	GTE3652-ASS Report	Ground Technologies	23.05.22
Acoustic Report	R200717R1 Revision 2	Rodney Stevens Acoustics	26.05.21
Arborist Report	6676	Redgum Horticultural	03.07.21
BASIX Certificate No. 1261505M_02	02	Green Star Energy Solutions	20.12.2023
Design Verification Statement	Revision B	Design Cubicle	23.11.2023
Stage 1 Contamination Assessment	GTE3652	Ground Technologies	23.05.22
Waste Management Plan	-	Design Cubicle	December 2023

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

1.2. Carry out all building works in accordance with the National Construction Code Series, Building Code of Australia, Volume 1 and 2 as appropriate.

1.3. Comply with the requirements from the Authorities as listed below and attached as a schedule of this consent.

Government Agency / Department / Authority	Description	Ref No	Date
AUSGRID	Conditions	TRIM 2017/11/233	20.09.22

1.4. Comply with all commitments listed in the BASIX Certificate 4594818M_02 and dated Wednesday 20 December 2023 for the development as required under Section 75 *Environmental Planning and Assessment Regulation 2021*.

2.PRIOR TO ISSUE OF ANY CONSTRUCTION CERTIFICATE

2.1. All conditions under this section must be met prior to the issue of any Construction Certificate.

2.2. No activity is to be carried out on-site until the Construction Certificate has been issued, other than:

a) Site investigation for the preparation of the construction, and / or
b) Implementation of environmental protection measures, such as erosion control and the like that are required by this consent
c) Demolition.

2.3. Before the issue of a construction certificate, the applicant is to ensure that the person liable pays the long service levy to the Long Service Corporation or Council under section 34 of the *Building and Construction Industry Long Service Payments Act 1986* and provides proof of this payment to the certifier.

2.4. Before the issue of a construction certificate, the applicant must ensure a construction site management plan is prepared before it is provided to and approved by the certifier. The plan must include the following matters:

- location and materials for protective fencing and hoardings to the perimeter on the site
- provisions for public safety
- pedestrian and vehicular site access points and construction activity zones
- details of construction traffic management, including proposed truck movements to and from the site and estimated frequency of those movements, and measures to preserve pedestrian safety in the vicinity of the site
- protective measures for on-site tree preservation (including in accordance with AS 4970-2009 Protection of trees on development sites and Council's DCP, if applicable) and trees in adjoining public domain (if applicable)
- details of any bulk earthworks to be carried out
- location of site storage areas and sheds
- equipment used to carry out all works
- a garbage container with a tight-fitting lid
- dust, noise and vibration control measures
- location of temporary toilets.

The applicant must ensure a copy of the approved construction site management plan is kept on-site at all times during construction.

2.5. Before the issue of a construction certificate, the applicant is to ensure that a waste management plan is prepared in accordance with the EPA's Waste Classification Guidelines and the following requirements before it is provided to and approved by the certifier:

(a) Council's Waste Management Development Control Plan
(b) details the following:

- the contact details of the person(s) removing the waste
- an estimate of the waste (type and quantity) and whether the waste is expected to be reused, recycled or go to landfill
- the address of the disposal location(s) where the waste is to be taken.

The applicant must ensure the waste management plan is referred to in the construction site management plan and kept on-site at all times during construction.

2.6. Prior to the issue of any Construction Certificate, all remedial actions specified in the Preliminary Site Investigation by Ground Technologies (CCC ref: D15216001) must be undertaken to ensure all contaminated material is removed from off the site and disposed of in a lawful and environmentally satisfactory manner.

2.7. Prior to the issue of any Construction Certificate, a suitably qualified contamination consultant who is currently practising in this field must provide the Principal Certifying Authority a "Compliance Certificate". This compliance certificate must certify that all the remedial actions outlined in Preliminary Site Investigation by Ground Technologies (CCC ref: D15216001) has been correctly applied and the land is suitable for its intended use. A copy of the "Compliance Certificate" must be provided to Council with the Occupation Certificate.

2.8. The road signage and pavement marking design drawings identifying parking, other regulatory elements and traffic management facilities must be endorsed by the Local Traffic Committee prior to any installation on site. The road signage and pavement marking design drawings are to be submitted to Council with the *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

2.9. Submit an application to Council under section 305 of the Water Management Act 2000 for a section 306 Requirements Letter. The Application form can be found on Council's website centralcoast.nsw.gov.au. Early application is recommended.

The section 305 application will result in a section 306 letter of requirements which must be obtained prior to the issue of any Construction Certificate. The requirements letter will outline which requirements must be met prior to each development milestone e.g. prior to construction certificate, subdivision works certificate, occupation certificate and/or subdivision certificate.

2.10. Obtain a Roads Act Works Approval by submitting an application to Council for a section 138 Roads Act Works Approval for all works required within the road reserve. The application is to be lodged using an *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

The application is to be accompanied by detailed design drawings, reports and other documentation prepared by a suitably experienced qualified professional in accordance with Council's *Civil Works Specifications*.

Fees, in accordance with Council's Fees and Charges, will be invoiced to the applicant following lodgement of the application. Fees must be paid prior to Council commencing assessment of the application.

Design drawings, reports and documentation will be required to address the following works within the road reserve:

a) Design and Construction of an upgraded industrial/commercial vehicle access crossing including construction of a heavy-duty gutter crossing and road pavement adjacent to the gutter crossing in Torrens Avenue.

A structural design to cater for anticipated loadings and detailing all concrete elements must be provided.

b) Construction of a 2.8 metre wide new pavement in Farrell Lane generally in accordance with the concept design plans prepared by ***"SBD consulting engineers", Dated: June 2006***. The new pavement shall be reinforced concrete and match the formation to the east.

"No Stopping" signage will be required for the full length of the laneway on both sides.

c) Construction of a new concrete footpath for the full street frontage of the development in Torrens Avenue and Coral Street. Extend the concrete footpath to match the existing footpath either side.

d) Removal of all redundant vehicle gutter crossings / laybacks and replacement with kerb.

e) Removal and replacement of all damaged kerb and gutter with new kerb and channel.

f) Construction of any works required to transition new works into existing infrastructure and the surrounding land formation.

g) Installation of road signage and pavement marking in accordance with Austroads guides, Transport for NSW Roads and Maritime Services Supplements and Australian Standards.

h) Construction of a storm water drainage connection from the development site to Council's storm water drainage system within the road reserve.

i) Adjustment to services as required resulting from required works.

The section 138 Roads Act Works Approval must be issued by Council and all conditions of that approval must be addressed prior to occupying and commencing any works in the road reserve.

2.11. Submit to Council a dilapidation report detailing the condition of all Council assets within the vicinity of the development. The report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, footpath, driveways, street trees, street signs, street lights or any other Council assets in the vicinity of the development. The dilapidation report will be required to be submitted to Council prior to the issue of the Section 138 Roads Act Works approval or the issue of any construction certificate for works on the site. The dilapidation report may be updated with the approval of Council prior to the commencement of works. The report will be used by Council to establish damage to Council's assets resulting from the development works.

2.12. Submit to the Registered Certifier responsible for issuing the construction certificate for works within the development site detailed design drawings and design reports for the following engineering works:

a) Construction of driveways, ramps and car parking areas in accordance with the requirements of the current edition Australian Standard AS/NZS 2890: Parking Facilities and other applicable Australian Standards.

The works shall be undertaken in accordance with the relevant Traffic Planning Reports & Plans for basement level carparking design.

Traffic and Parking Assessment Report, prepared by "Varga Traffic Planning Pty Ltd, Dated: 3 May 2022", "Traffic Control System Functionality Report, prepared by AGD Systems Pty Ltd, Dated: 4 February 2022" and Traffic Control System Plans, prepared by "Design Cubicle, Dated: 13 May 2022" for the basement carpark levels 1 & 2.

The largest vehicle to be used for loading/unloading purposes in the laneway shall be a small rigid vehicle (SRV).

b) Upgrade Farrell Avenue Laneway (Right of Way) across the full frontage of the site and west to Torrens Avenue. The upgrade shall consist of a reinforced concrete pavement for the full road width with provision of one-way crossfall (i.e. to the south) kerb and guttering to match the formation to the east and longitudinal drainage connecting to the existing infrastructure provided in Torrens Avenue.

c) Construction of stormwater drainage collection and piping of all stormwater runoff from areas within the site and basement pump out system to the approved connection to Council's storm water drainage system located in Torrens Avenue. Connection must be made to back of existing pit in Torrens Avenue.

d) Construction of retaining walls where indicated on development approval documentation. Retaining wall design must not conflict with existing or proposed services or utilities. Retaining walls designs for wall greater than 600mm in height must be certified by a registered practising Civil or Structural engineer as being in accordance with Australian Standards.

Detailed design drawings and design reports acceptable to the Registered Certifier must be included in the Construction Certificate documentation.

2.13. Before the issue of a Construction Certificate, pursuant to Section 7.11 of the Environmental Planning & Assessment Act, the applicant must pay the following contributions to Council for:

THE ENTRANCE/LONG JETTY ROADS	$ 86,877.05
THE ENTRANCE/LONG JETTY OPEN SPACE LAND	$ 3,456.00
THE ENTRANCE/LONG JETTY OPEN SPACE WORKS	$ 27,988.55
THE ENTRANCE COMMUNITY FACILITIES LAND	$ 16,263.00
THE ENTRANCE COMMUNITY FACILITIES WORKS	$ 28,848.60
Total	**$ 163,433.20**

The total contribution payable to Council under this condition is $163,433.20, as calculated at the date of this consent, in accordance with The Entrance District Section 7.11 Plan.

The total amount payable may be adjusted at the time the payment is made, in accordance with the provisions of The Entrance District Section 7.11 Plan. Contributions under The Entrance District Section 7.11 Plan are subject to quarterly indexation by CPI.

A copy of the Contributions Plan is available for inspection at 2 Hely St, Wyong or on Council's website: https://www.centralcoast.nsw.gov.au/plan-and-build/development-contributions-plans-and-planning-agreements.

3.PRIOR TO COMMENCEMENT OF ANY WORKS

3.1. All conditions under this section must be met prior to the commencement of any works.

3.2. Appoint a Principal Certifier for the building work:

a) The Principal Certifier (if not Council) is to notify Council of their appointment and notify the person having the benefit of the development consent of any critical stage inspections and other inspections that are to be carried out in respect of the building work no later than two (2) days before the building work commences.
b) Submit to Council a Notice of Commencement of Building Work form giving at least two (2) days' notice of the intention to commence building work. The forms can be found on Council's website: www.centralcoast.nsw.gov.au

3.3. Erect a sign in a prominent position on any work site on which building, subdivision or demolition work is being carried out. The sign must indicate:

a) The name, address and telephone number of the Principal Certifier for the work; and

b) The name of the principal contractor and a telephone number at which that person can be contacted outside of working hours; and
c) That unauthorised entry to the work site is prohibited.
d) Remove the sign when the work has been completed.

3.4. Submit both a Plumbing and Drainage Inspection Application, with the relevant fee, and a Plumbing and Drainage Notice of Work in accordance with the *Plumbing and Drainage Act 2011* (to be provided by licensed plumber). These documents can be found on Council's website at: www.centralcoast.nsw.gov.au

Contact Council prior to submitting these forms to confirm the relevant fees.

This condition only applies if installation / alteration of plumbing and / or drainage works are proposed (excludes stormwater drainage). This condition does not apply to swimming pool plumbing that does not physically connect / break into the sewer system.

3.5. Prepare a Construction Traffic and Pedestrian Management Plan (CTPMP) for all activities related to works within the site. The plan must be prepared and implemented only by persons with Roads and Maritime Service accreditation for preparing and implementing traffic management plans at work sites.

The CTPMP must describe the proposed construction works, the traffic impacts on the local area and how these impacts will be addressed.

The CTPMP must address, but not be limited to, the following matters:

- Ingress and egress of construction related vehicles to the development site.
- Details of the various vehicle lengths that will be used during construction and the frequency of these movement.
- Use of swept path diagrams to demonstrate how heavy vehicles enter, circulate and exit the site or Works Zone in a forward direction.
- Deliveries to the site, including loading / unloading materials and requirements for work zones along the road frontage to the development site. A Plan is to be included that shows where vehicles stand to load and unload, where construction plant will stand, location of storage areas for equipment, materials and waste, locations of Work Zones (if required) and location of cranes (if required).
- Works Zones if heavy vehicles cannot enter or exit the site in a forward direction.
- Control of pedestrian and vehicular traffic where pre-construction routes are affected.
- Temporary Road Closures.

Where the plan identifies that the travel paths of pedestrians and vehicular traffic are proposed to be interrupted or diverted for any construction activity related to works inside the development site an application must be made to Council for a Road Occupancy Licence. Implementation of traffic management plans that address interruption or diversion of pedestrian and/or vehicular traffic must only take place following receipt of a Road Occupancy Licence from Council or the Roads and Maritime Service where on a classified road.

Where a dedicated delivery vehicle loading and unloading zone is required along the road frontage of the development site a Works Zone Application must be lodged and approved by Council. A minimum of 3 months is required to allow Traffic Committee endorsement and Council approval.

The Construction Traffic and Pedestrian Management Plan must be reviewed and updated during construction of the development to address any changing site conditions.

A copy of the Construction Traffic and Pedestrian Management Plan must be held on site at all times and be made available to Council upon request.

3.6. Submit to Council a completed *Notice of Intention to Commence Subdivision, Roads and Stormwater Drainage Works* form with supporting documentation prior to the commencement of any Subdivision Works Certificate works, Roads Act Works Approval works, or Section 68 Local Government Act Stormwater Drainage Works Approval works. These works are not to commence until a pre-commencement site meeting has been held with Council.

3.7. Submit a Hoarding Application to Council for approval under the Roads Act where it is proposed to erect construction fencing, a hoarding, site sheds or utilise the road reserve for any construction activity related to the development works within the site.

Fees, in accordance with Council's Fees and Charges, will be invoiced to the applicant following lodgement of the application and will be required to be paid prior to Council releasing any approval.

3.8. Submit an application to Council for approval under the Roads Act to install ground anchors should ground anchors within a road reserve be required for construction of this development.

The application to Council for Works Approval under Section 138 of the *Roads Act* must be made using an *Application for Subdivision Works Certificate or Construction Certificate, Roads Act Works Approval and other Development related Civil Works* form.

The application is to be accompanied by detailed design drawings, reports and other documentation endorsed by a suitably qualified professional. General requirements for anchoring proposals can be obtained from Council's Engineering Assessment Section.

Fees, in accordance with Council's Fees and Charges, will be invoiced to the applicant following lodgement of the application and will be required to be paid prior to Council releasing any approval.

4.DURING WORKS

4.1. All conditions under this section must be met during works.

4.2. The principal certifier must ensure that building work, demolition or vegetation removal is only carried out between:

7.00 am and 5.00 pm on Monday to Saturday.

The principal certifier must ensure building work, demolition or vegetation removal is not carried out on Sundays and public holidays, except where there is an emergency.

Unless otherwise approved within a construction site management plan, construction vehicles, machinery, goods or materials must not be delivered to the site outside the approved hours of site works.

Note: Any variation to the hours of work requires Council's approval.

4.3. While demolition or building work is being carried out, all such works must cease immediately if a relic or Aboriginal object is unexpectedly discovered. The applicant must notify the Heritage Council of NSW in respect of a relic and notify the Secretary of the Department of Planning, Industry and Environment and the Heritage Council of NSW in respect of an Aboriginal object. Building work may recommence at a time confirmed by either the Heritage Council of NSW or the Secretary of the Department of Planning, Industry and Environment.

In this condition:

"relic" means any deposit, artefact, object or material evidence that:
(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) is of State or local heritage significance; and

"Aboriginal object" means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains. To ensure the protection of objects of potential significance

4.4. Implement and maintain all erosion and sediment control measures at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment. 4.5. Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the Principal Certifier or an officer of Council. 4.6. Place all building materials, plant and equipment on the site of the development during the construction phase of the development so as to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure. Further, no construction work is permitted to be carried out within the road reserve unless the works are associated with a separate approval issued under the provisions of the *Roads Act 1993*.

4.7. 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.

4.8. While building work is being carried out and where no noise and vibration management plan is approved under this consent, the applicant is to ensure that any noise caused by demolition, vegetation removal or construction does not exceed an LAeq (15 min) of 5dB(A) above background noise, when measured at any lot boundary of the property where the construction is being carried out.

4.9. Undertake the removal of any tree located on Council managed land due to works approved by a Development Application at the full cost and responsibility of the developer / owner using a Pre-qualified Tree Contractor.

Contact Central Coast Council on 1300 463 954 for the current list of relevant contractors.

4.10. Trees to be removed to accommodate for the development as specified in Section 5 and Appendix D of the Arboricultural Impact Assessment report by Redgum Horticultural, Arboriculture and Horticulture Consultants on the 3/7/21.

4.11. Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

4.12. Arrange with the relevant service provider / Authority (eg. Ausgrid, Jemena, NBN or other communications provider) for the supply of services concurrently with the engineering works required by this consent. Arrangements must include, where required, any relocation of existing mains and services, and dedication of easements for mains and services.

5.PRIOR TO ISSUE OF ANY OCCUPATION CERTIFICATE

5.1. All conditions under this section must be met prior to the issue of any Occupation Certificate.

5.2. Prior to the issue of any Occupation Certificate, an independent suitably qualified acoustic consultant who is currently practising in this field must provide the Principal Certifying Authority a "Compliance Certificate". This compliance certificate must certify that all acoustic measures outlined in the Noise Assessment by Rodney Stevens Acoustics (CCC ref: D15216010) has been correctly applied and installed. A copy of the "Compliance Certificate" must be provided to Council with the Occupation Certificate.

5.3. Construct any additional civil works, where required by Council, to ensure satisfactory transitions to existing site formations and pavements where designs contained in the Roads Act Works Approval do not adequately address transition works.

5.4. Complete construction of the stormwater management system in accordance with the Stormwater Management Plan and Australian Standard AS 3500.3-*Stormwater drainage systems*. Certification of the construction by a suitably qualified consultant must be provided to the Principal Certifier.

5.5. Complete construction of all works within the road reserve in accordance with the Roads Act Works Approval. Completion of works includes the submission and acceptance by Council of all work as executed drawings plus other construction compliance documentation and payment of a maintenance/defects bond to Council in accordance with Council's Fees and Charges.

5.6. Repair any damage to Council's infrastructure and road reserve as agreed with Council. Damage not shown in the dilapidation report submitted to Council before the development works had commenced will be assumed to have been caused by the development works unless the Developer can prove otherwise.

5.7. Complete the civil engineering works within the development site in accordance with the detailed design drawings and design reports plans within the construction certificate.

5.8. Complete Construction of driveways, ramps and car parking areas in accordance with the requirements of the current edition Australian Standard AS/NZS 2890: *Parking Facilities*, other applicable Australian Standards and the detailed designs and design reports within the construction certificate. Certification by a suitably qualified person that construction is complete is to be provided to the Principal Certifier.

6.ONGOING

6.1. All mechanical plant must be situated within the basement.

6.2. Implement dust suppression measures on-site during bulk earthworks to suppress dust generated by vehicles and equipment. Dust must also be suppressed at all other stages of construction in order to comply with the Protection of the Environment Operations Act 1997.

6.3. All waste generated on the premise must be stored in a manner so that it does not pollute the environment.

6.4. All waste generated on the premise must be transported to a facility which is licensed to receive that material.

6.5. All waste collection services must not be undertaken before 7am any day of the week

7.PENALTIES

Failure to comply with this development consent and any condition of this consent may be a ***criminal offence***. Failure to comply with other environmental laws may also be a ***criminal offence***.

Where there is any breach Council may without any further warning:

- Issue Penalty Infringement Notices (On-the-spot fines);
- Issue notices and orders;
- Prosecute any person breaching this consent, and/or
- Seek injunctions/orders before the courts to retain and remedy any breach.

Warnings as to Potential Maximum Penalties
Maximum Penalties under NSW Environmental Laws include fines up to $1.1 Million and/or custodial sentences for serious offences.

ADVISORY NOTES

- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.
- The following public authorities may have separate requirements in the following aspects:

  a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
  b) Jemena Asset Management for any change or alteration to the gas line infrastructure
  c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
  d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
  e) Central Coast Council in respect to the location of water, sewerage and drainage services.
- Carry out all work under this Consent in accordance with SafeWork NSW requirements including the *Workplace Health and Safety Act 2011 No 10* and subordinate regulations, codes of practice and guidelines that control and regulate the development industry
- Dial Before You Dig
  Underground assets may exist in the area that is subject to your application. In the interests 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 on 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 contacting 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.
- *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.

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Proposed Mixed Use Development
at: 15-17 Coral Street, The Entrance

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ARCHITECTURAL SOLUTIONS

Sheet List	
Sheet Number	Sheet Name
DA 000	Cover Page
DA 201	Site Plan
DA 202	Basement 1 and 2 Plans
DA 203	Ground Floor Plan
DA 204	Level 1 Plan
DA 205	Level 2 Plan
DA 206	Level 3 Plan
DA 207	Level 4 Plan
DA 208	Level 5 Plan
DA 209	Roof Plan
DA 301	Elevations 1 of 2
DA 302	Elevations 2 of 2
DA 303	Sections
DA 400	Shadow Diagrams
DA 500	Solar Access / Cross Ventilation
DA 600	3D Height Plane Study
DA 700	ADG Compliance Table
UA 001	Site Analysis 1 of 2
UA 002	Site Analysis 2 of 2
UA 003	Streetscape-Coral Street
UA 004	Streetscape-Torrens Avenue

BASIX Commitments

Water Commitments:
*Planting
- Must plant indigenous or low water use species of vegetation throughout the area of land specified.
*Fixtures
- Must install 4 Star rating showerheads in all showers.(>4.5 but <=6L/min).
- Must install 4 Star rating toilet flushing system in each toilet.
- Must install 4 Star rating taps in each kitchen.
- Must install 4 Star rating taps in each bathroom.

Energy Commitments:
*Hotwater
- Must install a gas intantaneous 4 Star.
*Cooling/ Heating System
- Must install 4 Star (new rating) rated 1-phase air conditioning or higher to the living areas of each dwelling.

*Ventilation
Must install ventilation systems in:
- Bathroom: individual fan, ducted to facade or roof; Operation control: manual switch on/off.
- Kitchen:individual fan, ducted to facade or roof; Operation control: manual switch on/off
- Laundry: individual fan, ducted to facade or roof; Operation control: manual switch on/off

*Lighting
- Must provide artificial lighting in each Kitchen, all Bathrooms/ toilets, each Laundary, all Hallways.

*Other
- Must install gas cooktop and electric oven in the kitchen of all dwellings.
- Provide indoor or sheltered clothes drying line

Common Areas
Water Commitments:
*Fixtures
- Must install 4 Star rating toilet flushing system in any common toilet.
- Must install 4 Star rating taps.

Energy Commitments:
*Lighting
Must install lighting in:
- Basement Level Parking: compact fluorescent; Efficiency measure: daylight sensor and motion sensor.
- Plant rooms, Storages, Fire Hydrant Pump room, WC on roof: compact fluorescent; Efficiency measure: manual on / manual off.
- Lift cars (No 1): Light-emitting diode; Efficiency measure: connected to lift call button.
Garbage Rooms: compact fluorescent; Efficiency measure: manual on / timer off.
Bulky Goods Room: compact fluorescent; Efficiency measure: motion Sensors.
- Hallway/ Lobbies(No 1, 2, 3) : compact fluorescent; Efficiency measure: daylight sensor and motion sensor.
- Hallway/ Lobbies(No4 & 5) : compact fluorescent; Efficiency measure: manual on / manual off.
- Ground Floor Lobby (No.1) : compact fluorescent; Efficiency measure: daylight sensor and motion sensor.
*Ventilation
Must install ventilation systems in:
- Basement Level Parking: Ventilation (supply + exhaust); Efficiency measure: carbon monoxide monitor + VSD fan
- Ground Floor &Level 1 Lobby : Ventilation supply only;Efficiency measure: time clock or BMS controlled
- Garbage Room Retail : Ventilation supply only
- Fire Hydrant Pump Room B1 : ventilation (supply + exhaust); Efficiency measure: none i.e., continuous
- W/C area of roof : Ventilation exhaust only; Efficiency measure: time clock or BMS controlled

*Central energy system
- Lift (No 1): Must install gearless traction with VVVF motor : Number of Levels (Including basement) :9
- Photovoltiac system : Rated electrical output (min) : 11.0 peak kW

NatHERS Thermal Requirements:

- R2.0 External Wall Insulation
- R2.0 Ceiling Insulation
- Roof type : Suspended Concrete : Medium Col (SA 0.475 - 0.7)
- All External door and windows to be weather sealed
- All windows and sliding doors shall be: Aluminium standard single-glazed: clear glass: U = 6.7 & SHGC = 0.70
- Eaves and Shading Devices (If any) are as per drawings provided

DESIGN FACTS

Site Area		590.4m²
	Required/allowed	Provided
Total Built-up Area	1623.6m²	1561 m²
FSR	2.75:1	2.64:1
Permissible Height	23m	Staircase : 23.4m Lift Shaft : 24.4m Building (Parapet Wall 1500mm): 22m
Car Spaces Residential	1 space / 1 Bed 1 spaces / 2 Bed 1 spaces / 3 Bed 12	12
Car Spaces Visitor	1 space / 5 Units = 2.4	1
Car Spaces Commercial	4.7 spaces / 100m2 =6.56 spaces	2
Car Spaces (Total)	20.96	15
SRV Loading Bay	1	1
Motorcycle Spaces	1	1
Bicycle Spaces	5	6
Communal Open Space	25% of the Site Area= 147.6 m2	261.2 m²
Total Landscape Area		93.8m²
Retail / Commercial		139.6m2 (03 Tenancies)
Unit Breakdown		4 x 1 bedroom 4 x 2 bedroom 4 x 3 bedroom
Total Unit		12 units

REVISIONS			
ISSUE	DESCRIPTION	DATE	BY
A	Issue for DA submission	13.5.2022	MT/JPB
C	Issued in response to Council letter dated 25/05/23	14.08.2023	MT/JPB
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SHEET TITLE: Cover Page		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 000	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	1 : 1		LODGE AT: CENTRAL COAST COUNCIL

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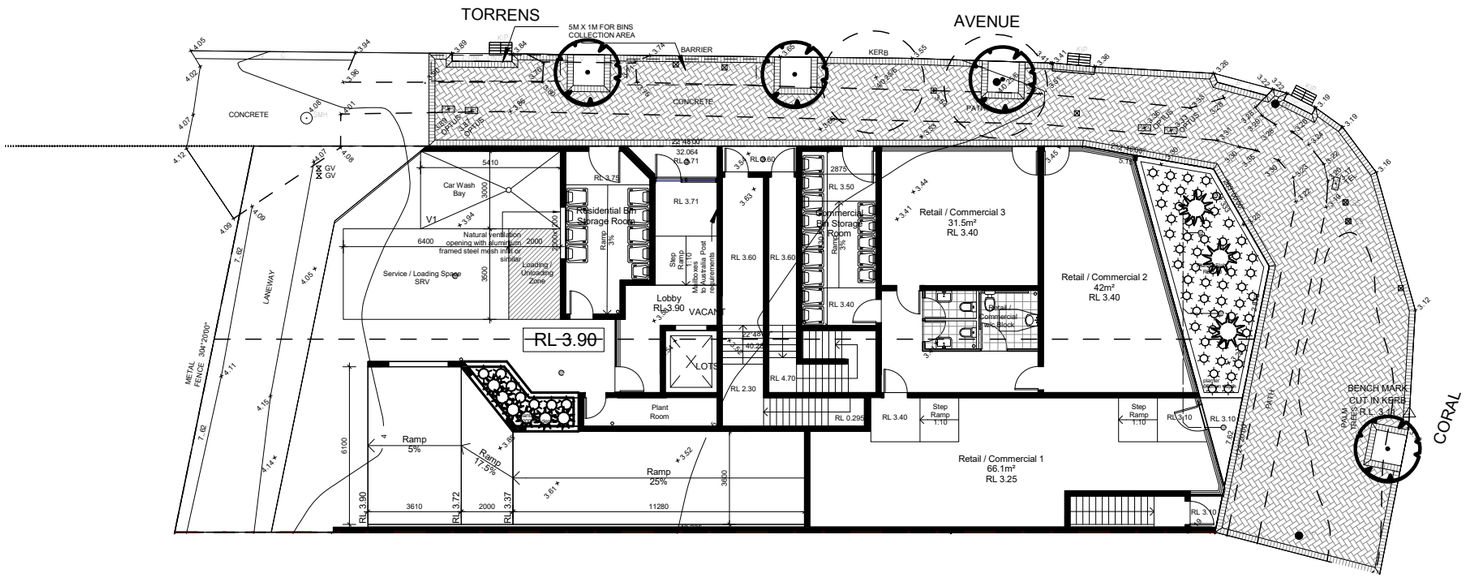
Note – Continuous Accessible Path of Travel

(i) In accordance with Part D4 (Access for people with a disability) of NCC 2022, due to the accommodation of a passenger lift in the design proposal, for the residential Class 2 component of the development, accessibility must be accommodated from the main point of pedestrian entrance at the allotment boundary i.e. Torrens Avenue, or from any accessible car parking space on the allotment i.e. B1 & B2, to the entrance doorway of each sole-occupancy unit, & to spaces for use in common by the residents. This ties in with the requirements of AS 1428.1 (Design for access & mobility), which sets out the requirements for accessibility to permit general use of buildings & facilities for people with disabilities, including the fact that a continuous accessible path of travel is required for wheelchair use. As per Clause 6.1 of the aforementioned standard, a continuous accessible path of travel shall not include a step, stairway, turnstile, revolving door, escalator, moving walk or other impediment, & the proposal has been designed accordingly to cater for this. In addition, in the CC stage further detailing of the public domain will be provided as part of the Civil design to further reinforce a step-free path of travel through the main pedestrian entry, & the accessibility of the building will be further certified prior to the issue of any CC.



Site Plan
1 : 200

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- R2.0 External Wall Insulation
- R2.0 Ceiling Insulation
- Roof type : Suspended Concrete : Medium Col (SA 0.475 - 0.7)
- All External door and windows to be weather sealed
- All windows and sliding doors shall be: Aluminium standard single-glazed: clear glass: U = 6.7 & SHGC = 0.70
- Eaves and Shading Devices (If any) are as per drawings provided

REVISIONS			
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A	Issue for DA submission	13.5.2022	MT/JPB
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ABN: 47 116316 333

SHEET TITLE: Site Plan		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 201	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	As indicated		LODGE AT: CENTRAL COAST COUNCIL

Y:\Design\951-1000\190955 - 15-17 Coral Street, The Entrance\Architecture\15-17 Coral St - DA01-CENTRAL.rvt

BASIX Commitments

Water Commitments:

*Planting
- Must plant indigenous or low water use species of vegetation throughout the area of land specified.

*Fixtures
- Must install 4 Star rating showerheads in all showers.(>4.5 but <=6L/min).
- Must install 4 Star rating toilet flushing system in each toilet.
- Must install 4 Star rating taps in each kitchen.
- Must install 4 Star rating taps in each bathroom.

Energy Commitments:

*Hotwater
- Must install a gas intantaneous 4 Star.

*Cooling/ Heating System
- Must install 4 Star (new rating) rated 1-phase air conditioning or higher to the living areas of each dwelling.

*Ventilation
Must install ventilation systems in:
- Bathroom: individual fan, ducted to facade or roof; Operation control: manual switch on/off.
- Kitchen:individual fan, ducted to facade or roof; Operation control: manual switch on/off
- Laundry: individual fan, ducted to facade or roof; Operation control: manual switch on/off

*Lighting
- Must provide artificial lighting in each Kitchen, all Bathrooms/ toilets, each Laundary, all Hallways.

*Other
- Must install gas cooktop and electric oven in the kitchen of all dwellings.
- Provide indoor or sheltered clothes drying line

Common Areas
Water Commitments:

*Fixtures
- Must install 4 Star rating toilet flushing system in any common toilet.
- Must install 4 Star rating taps.

Energy Commitments:

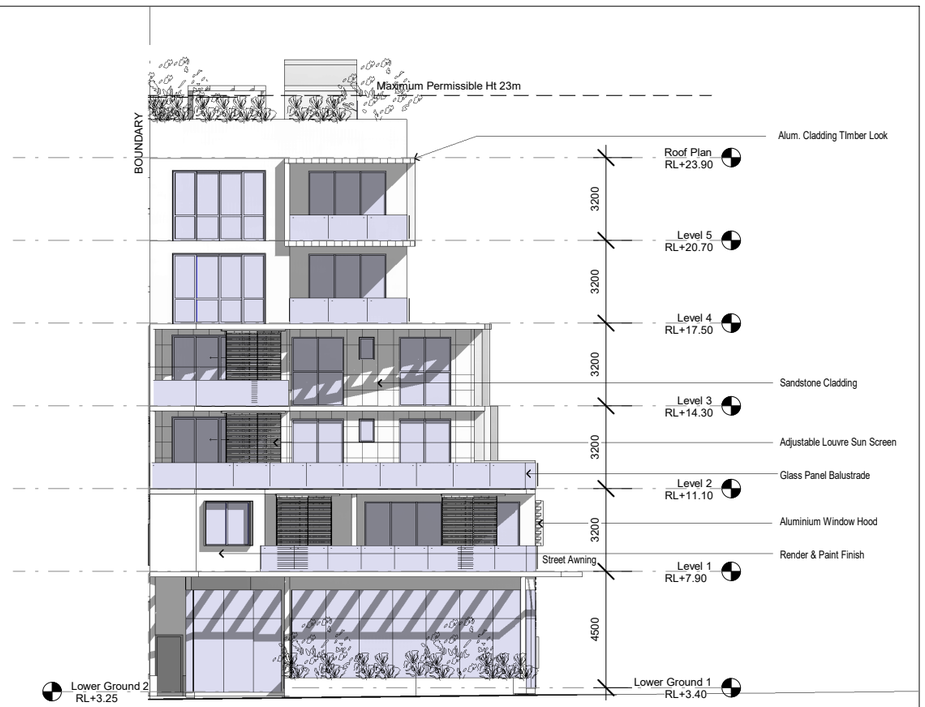
*Lighting
Must install lighting in:
- Basement Level Parking: compact fluorescent; Efficiency measure: daylight sensor and motion sensor.
- Plant rooms, Storages, Fire Hydrant Pump room, WC on roof: compact fluorescent; Efficiency measure: manual on / manual off.
- Lift cars (No 1): Light-emitting diode; Efficiency measure: connected to lift call button.
Garbage Rooms: compact fluorescent; Efficiency measure: manual on / timer off.
Bulky Goods Room: compact fluorescent; Efficiency measure: motion Sensors.
- Hallway/ Lobbies(No 1, 2, 3) : compact fluorescent; Efficiency measure: daylight sensor and motion sensor.
- Hallway/ Lobbies(No4 & 5) : compact fluorescent; Efficiency measure: manual on / manual off.
- Ground Floor Lobby (No.1) : compact fluorescent; Efficiency measure: daylight sensor and motion sensor.

*Ventilation
Must install ventilation systems in:
- Basement Level Parking: Ventilation (supply + exhaust); Efficiency measure: carbon monoxide monitor + VSD fan
- Ground Floor &Level 1 Lobby : Ventilation supply only;Efficiency measure: time clock or BMS controlled
- Garbage Room Retail : Ventilation supply only
- Fire Hydrant Pump Room B1 : ventilation (supply + exhaust); Efficiency measure: none i.e., continuous
- W/C area of roof : Ventilation exhaust only; Efficiency measure: time clock or BMS controlled

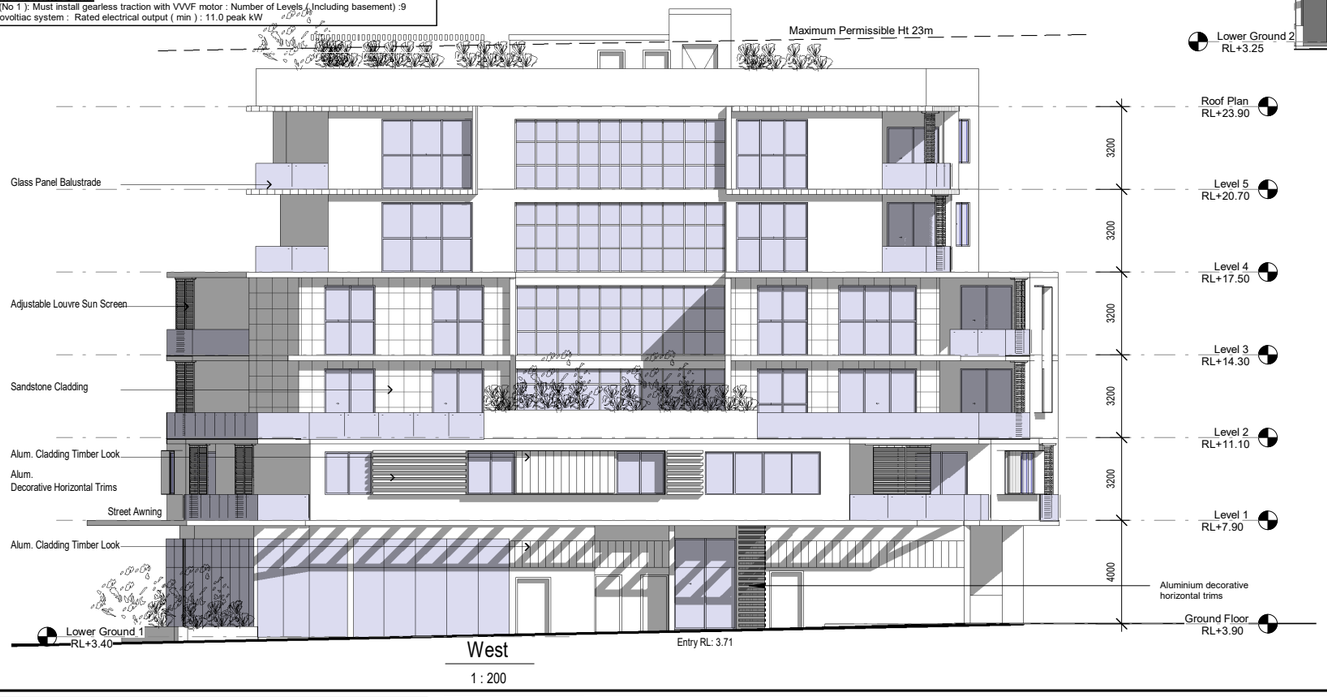
*Central energy system
- Lift (No 1): Must install gearless traction with VVVF motor : Number of Levels (Including basement) :9
- Photovoltiac system : Rated electrical output (min) : 11.0 peak kW

NatHERS Thermal Requirements:

- R2.0 External Wall Insulation
- R2.0 Ceiling Insulation
- Roof type : Suspended Concrete : Medium Col (SA 0.475 - 0.7)
- All External door and windows to be weather sealed
- All windows and sliding doors shall be: Aluminium standard single-glazed: clear glass: U = 6.7 & SHGC = 0.70
- Eaves and Shading Devices (If any) are as per drawings provided



North
1 : 200



West
1 : 200

Note – Passive Solar Design:

(i) All glazed elements (windows & doors) on the Northern (Coral Street) & Western (Torrens Avenue) Elevations are to be fit with a Low-E (Low Emissivity) glass coating, in addition to any glazing specifications already set out in Acoustic Report R200717R1. This Low-E coating enables a reduction in the transmission of heat or cold through the glass, acting as an insulation barrier for the glazing, helping to make the overall building more energy efficient.

Note - Protection of Openings:

(i) All window openings in external walls that are less than 3m from a side or rear boundary & are exposed to said boundary are to be protected in accordance with C4D5 of NCC 2022. This is to be detailed in the C.C. stage of the development, but so as to ensure that the aesthetic of the building is maintained as well as cross-ventilation to these units, the method of protection to be proposed will comprise either internal or external wall-wetting sprinklers with windows that are automatic closing, or -/60/- fire windows that are automatically closing, both of which are Deemed-To-Satisfy provisions of the BCA.

REVISIONS			
ISSUE	DESCRIPTION	DATE	BY
A	Issue for DA submission	13.5.2022	MT/JPB
C	Issued in response to Council letter dated 25/05/23	14.08.2023	MT/JPB
D	Issued in response to Council emails dated 16/09/23 & 26/10/23	19.12.2023	MT/JPB

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ABN: 47 116316 333

SHEET TITLE: Elevations 1 of 2		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 301	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	As indicated		LODGE AT: CENTRAL COAST COUNCIL

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BASIX Commitments

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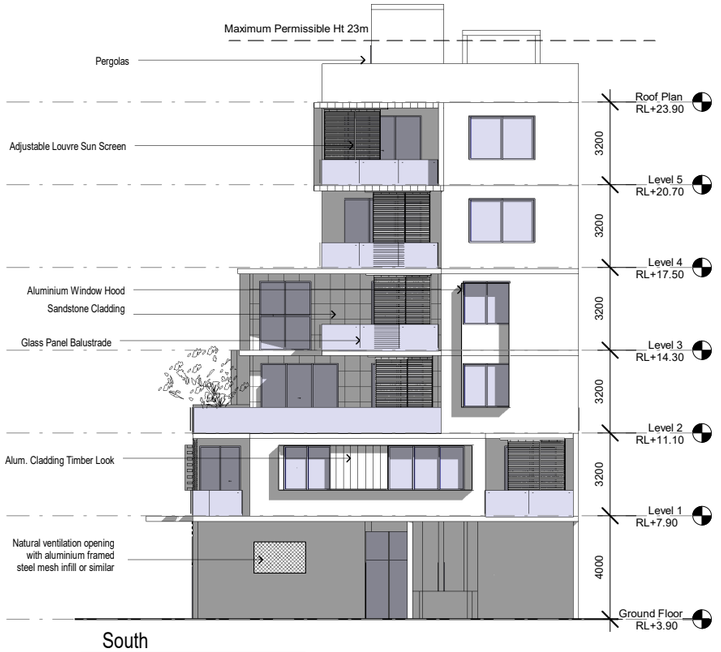
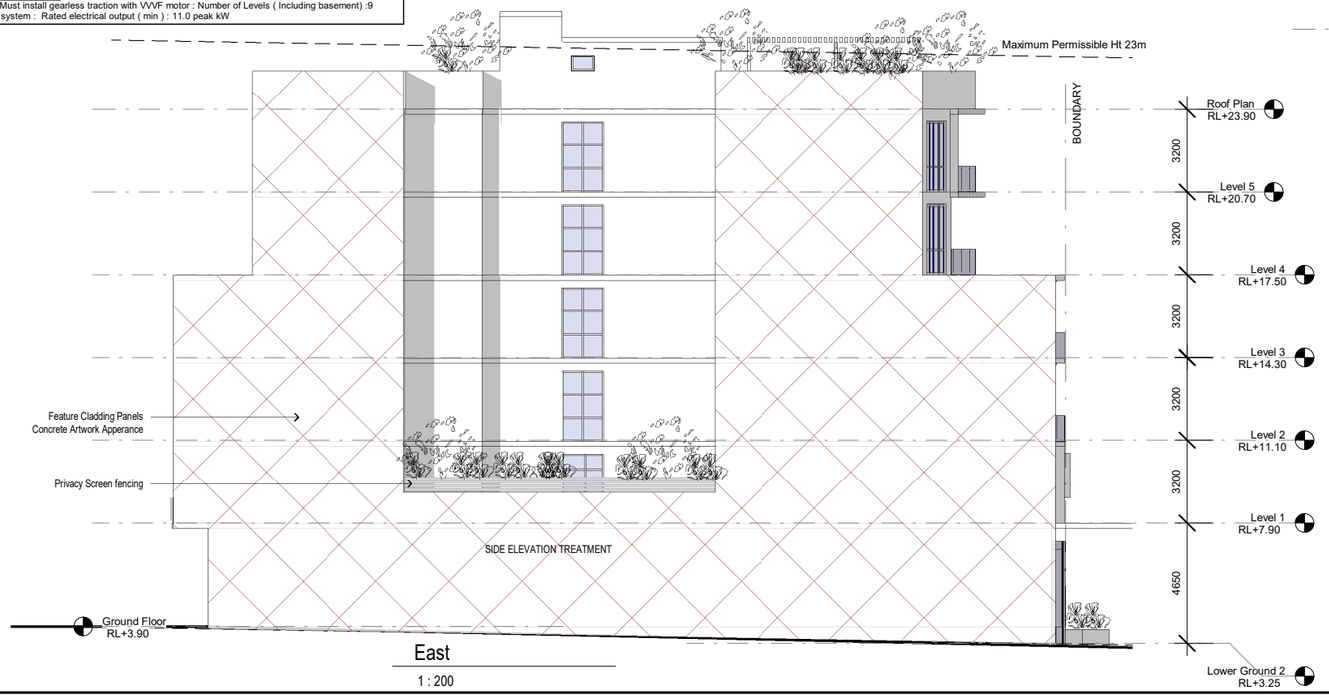


South

1 : 200



East

1 : 200

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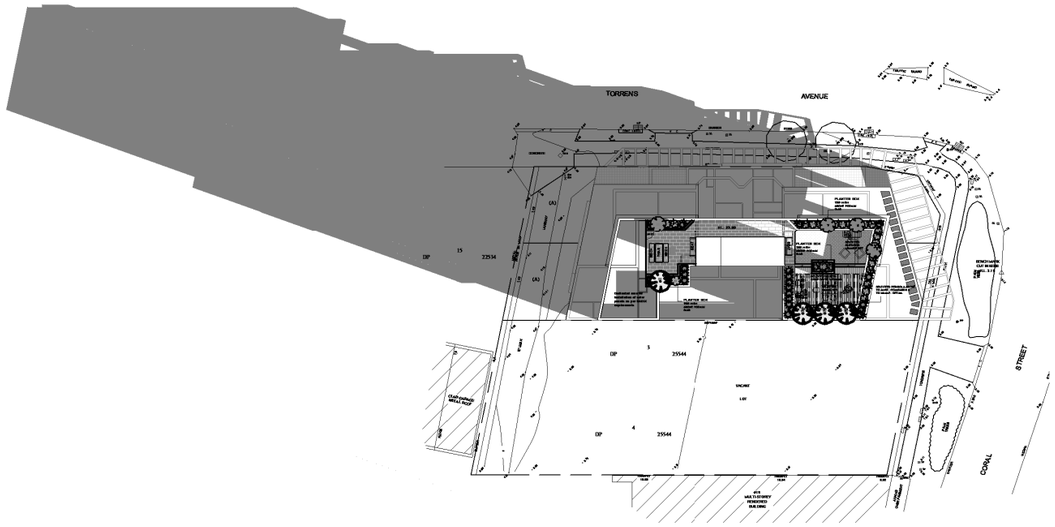
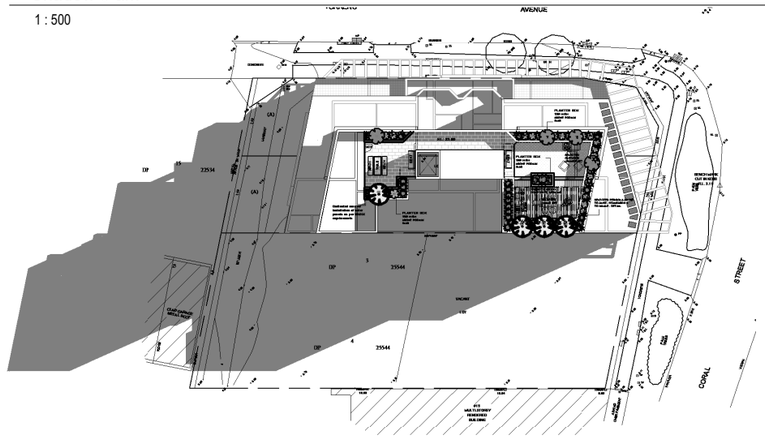
SHEET TITLE: Elevations 2 of 2		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 302	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	As indicated		LODGE AT: CENTRAL COAST COUNCIL

Y:\Design\951-1000\190955 - 15-17 Coral Street, The Entrance\Architecture\15-17 Coral St - DA01-CENTRAL.rvt



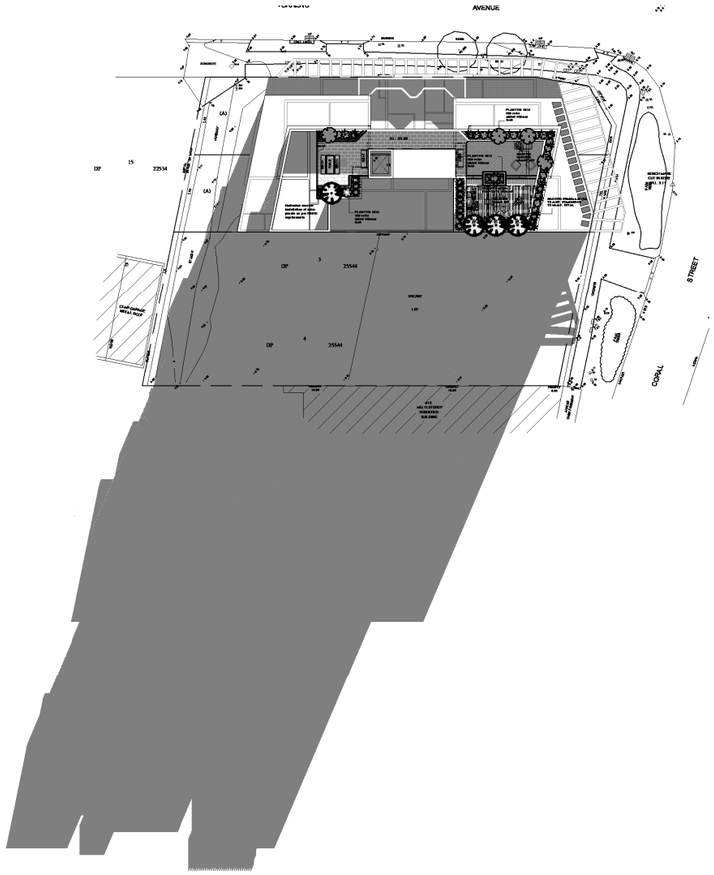
Shadow 9 am

1 : 500



Shadow 12 pm

1 : 500



Shadow 3 pm

1 : 500

REVISIONS			
ISSUE	DESCRIPTION	DATE	BY
A	Issue for DA submission	13.5.2022	MT/JPB
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SHEET TITLE: Shadow Diagrams		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 400	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	1 : 500		LODGE AT: CENTRAL COAST COUNCIL

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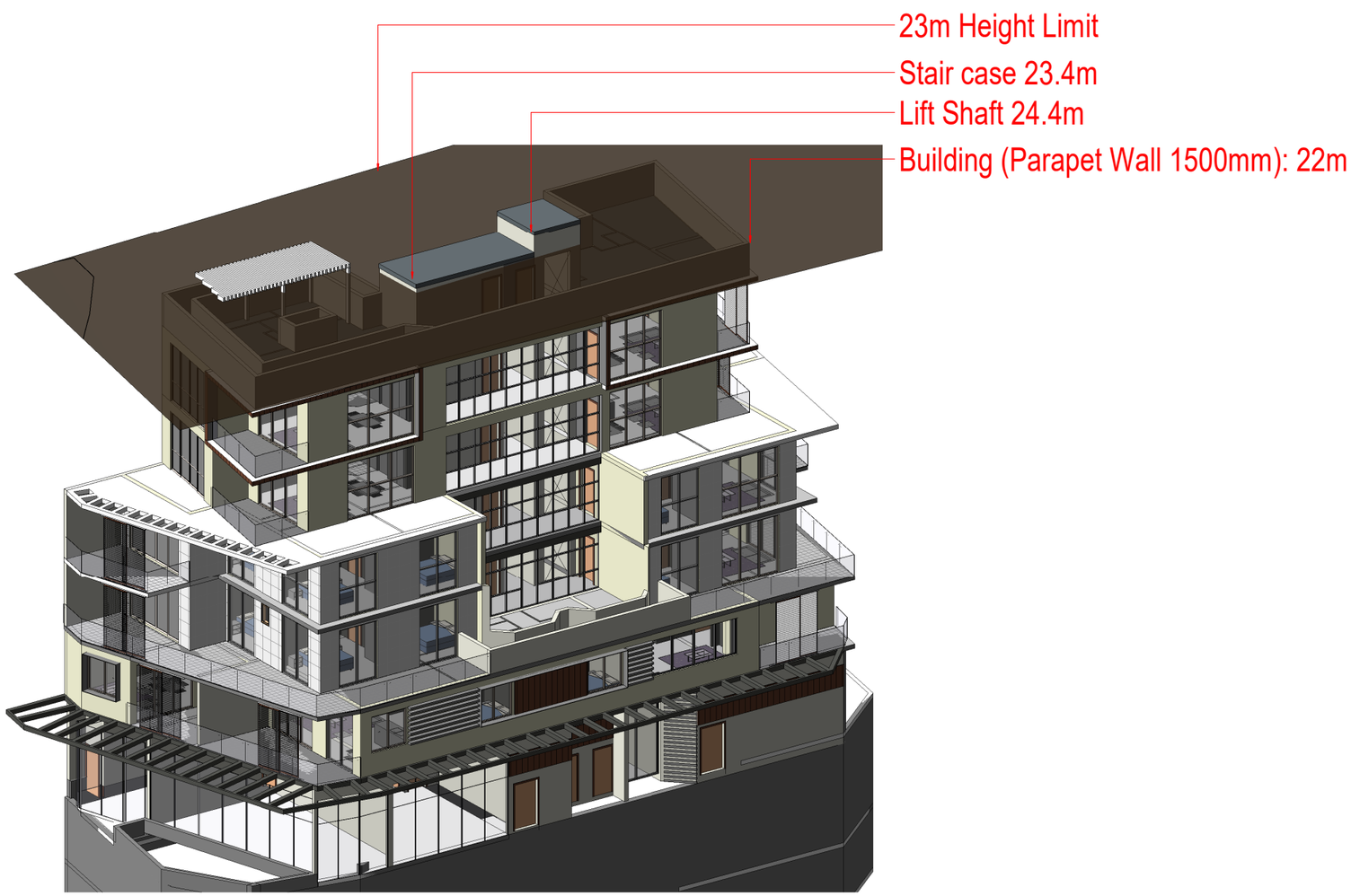

3D Height Plane Study

REVISIONS			
ISSUE	DESCRIPTION	DATE	BY
A	Issue for DA submission	13.5.2022	MT/JPB
C	Issued in response to Council letter dated 25/05/23	14.08.2023	MT/JPB
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WEB: www.designcubicle.com.au
ABN: 47 116316 333

SHEET TITLE: 3D Height Plane Study		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	DA 600	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:			LODGE AT: CENTRAL COAST COUNCIL

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ADG Key Compliance Schedule (15-17 Coral St)

First Floor

Units	Beds	Bathrooms	Units Area	P.O.S / Balcony Areas	Basement Storage Volume	Unit Storage Volume	Total Storage Volume	Width of Living Rooms or Living / Dining Room	Min. 3 Hours Solar Access 9am - 3pm Living & P.O.S	No Direct Solar Access 9am - 3pm	Naturally Cross Ventilated	Overall Depth of Cross-Through Apartment Does Not Exceed 18m	Apartments Achieve Min. Internal Areas Based on the Number of Bedrooms & Bathrooms	Min. Ceiling Height of 2.7m for Habitable Rooms & 2.4m for Non-Habitable Rooms	Every Habitable Room has a Window with Glass Area not Less than 10% of the Floor Area of the Room	Master Bedrooms have Min Area of 10m² & other Bedrooms 9m² (Excluding Wardrobe)	Bedrooms Achieve Min Dimensions of 3m (Excluding Wardrobes)	Living Rooms or Combined Living / Dining Rooms achieve Min Width Required Based on Number of Bedrooms	The Width of Cross-Through Apartments are at least 4m	Apartments Achieve Min. P.O.S / Balcony Areas & Depths Based on Nmber of Bedrooms	Apartments Achieve Min. Storage Volume Based on Number of Bedrooms
101	1	1	64.3m²	9.2m²	5m3 min	5m3	10m3	3900mm	No	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
102	1	1	57.3m²	11.2m²	5m3 min	3.5m3	8.5m3	3700mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
103	2	2	78.6m²	19.4m²	5m3 min	4m3	9m3	4000mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
104	2	2	81.9m²	11m²	5m3 min	8m3	13m3	4000mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
									Total: 3/4	**Total 0/4**	**Total: 4/4**										

Second Floor

Units	Beds	Bathrooms	Units Area	P.O.S / Balcony Areas	Basement Storage Volume	Unit Storage Volume	Total Storage Volume	Width of Living Rooms or Living / Dining Room	Min. 3 Hours Solar Access 9am - 3pm Living & P.O.S	No Direct Solar Access 9am - 3pm	Naturally Cross Ventilated	Overall Depth of Cross-Through Apartment Does Not Exceed 18m	Apartments Achieve Min. Internal Areas Based on the Number of Bedrooms & Bathrooms	Min. Ceiling Height of 2.7m for Habitable Rooms & 2.4m for Non-Habitable Rooms	Every Habitable Room has a Window with Glass Area not Less than 10% of the Floor Area of the Room	Master Bedrooms have Min Area of 10m² & other Bedrooms 9m² (Excluding Wardrobe)	Bedrooms Achieve Min Dimensions of 3m (Excluding Wardrobes)	Living Rooms or Combined Living / Dining Rooms achieve Min Width Required Based on Number of Bedrooms	The Width of Cross-Through Apartments are at least 4m	Apartments Achieve Min. P.O.S / Balcony Areas & Depths Based on Nmber of Bedrooms	Apartments Achieve Min. Storage Volume Based on Number of Bedrooms
201	3	2	101.2m²	39.8m²	5m3 min	5.4m3	10.4m3	4050mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
202	3	2	105.4m²	58.9m²	5m3 min	6.7m3	11.7m3	4300mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
									Total: 4/4	**Total 0/4**	**Total: 4/4**										

Third Floor

Units	Beds	Bathrooms	Units Area	P.O.S / Balcony Areas	Basement Storage Volume	Unit Storage Volume	Total Storage Volume	Width of Living Rooms or Living / Dining Room	Min. 3 Hours Solar Access 9am - 3pm Living & P.O.S	No Direct Solar Access 9am - 3pm	Naturally Cross Ventilated	Overall Depth of Cross-Through Apartment Does Not Exceed 18m	Apartments Achieve Min. Internal Areas Based on the Number of Bedrooms & Bathrooms	Min. Ceiling Height of 2.7m for Habitable Rooms & 2.4m for Non-Habitable Rooms	Every Habitable Room has a Window with Glass Area not Less than 10% of the Floor Area of the Room	Master Bedrooms have Min Area of 10m² & other Bedrooms 9m² (Excluding Wardrobe)	Bedrooms Achieve Min Dimensions of 3m (Excluding Wardrobes)	Living Rooms or Combined Living / Dining Rooms achieve Min Width Required Based on Number of Bedrooms	The Width of Cross-Through Apartments are at least 4m	Apartments Achieve Min. P.O.S / Balcony Areas & Depths Based on Nmber of Bedrooms	Apartments Achieve Min. Storage Volume Based on Number of Bedrooms
301	3	2	101.2m²	14m²	5m3 min	5.4m3	10.4m3	4050mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
302	3	2	105.4m²	15.2m²	5m3 min	6.7m3	11.7m3	4300mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
									Total: 4/4	**Total 0/4**	**Total: 4/4**										

Fourth Floor / Fifth Floor

Units	Beds	Bathrooms	Units Area	P.O.S / Balcony Areas	Basement Storage Volume	Unit Storage Volume	Total Storage Volume	Width of Living Rooms or Living / Dining Room	Min. 3 Hours Solar Access 9am - 3pm Living & P.O.S	No Direct Solar Access 9am - 3pm	Naturally Cross Ventilated	Overall Depth of Cross-Through Apartment Does Not Exceed 18m	Apartments Achieve Min. Internal Areas Based on the Number of Bedrooms & Bathrooms	Min. Ceiling Height of 2.7m for Habitable Rooms & 2.4m for Non-Habitable Rooms	Every Habitable Room has a Window with Glass Area not Less than 10% of the Floor Area of the Room	Master Bedrooms have Min Area of 10m² & other Bedrooms 9m² (Excluding Wardrobe)	Bedrooms Achieve Min Dimensions of 3m (Excluding Wardrobes)	Living Rooms or Combined Living / Dining Rooms achieve Min Width Required Based on Number of Bedrooms	The Width of Cross-Through Apartments are at least 4m	Apartments Achieve Min. P.O.S / Balcony Areas & Depths Based on Nmber of Bedrooms	Apartments Achieve Min. Storage Volume Based on Number of Bedrooms
401/501	1	1	54m²	10m²	5m3 min	3m3	8m3	3900mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
402/502	2	1	70.4m²	10.5m²	5m3 min	3m3	8m3	4000mm	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
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SHEET TITLE:	ADG Compliance Table
SHEET NO:	DA 700
SCALE:	1 : 1
DRAWN BY:	MT
CHECKED BY:	FG
PROJECT DETAIL:	15-17 Coral Street, The Entrance
JOB NO: 190955	DATE: June 2019
LODGE AT: CENTRAL COAST COUNCIL	

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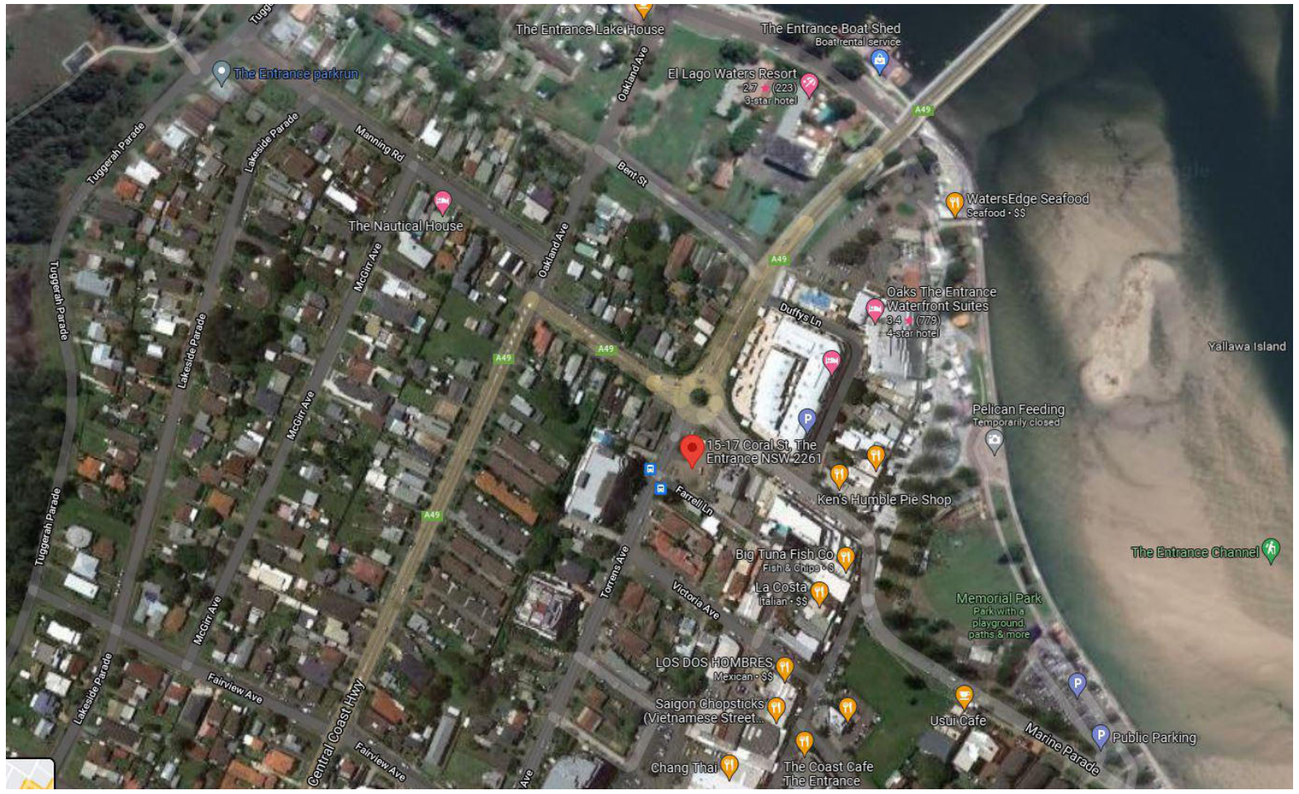

Site Location



View from Coral Street toward Torrens Ave



View from Coral Street toward The Entrance Rd



37-35 Coral Street, The Entrance



27-29 Coral Street, The Entrance



23-25 Coral Street, The Entrance



15-17 Coral Street, The Entrance
View from corner Coral St and Torrens Ave

REVISIONS			
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SHEET TITLE: Site Analysis 1 of 2	
SHEET NO:	UA 001
SCALE:	
DRAWN BY: MT	
CHECKED BY: FG	
PROJECT DETAIL: 15-17 Coral Street, The Entrance	
JOB NO: 190955	DATE: June 2019
LODGE AT: CENTRAL COAST COUNCIL	

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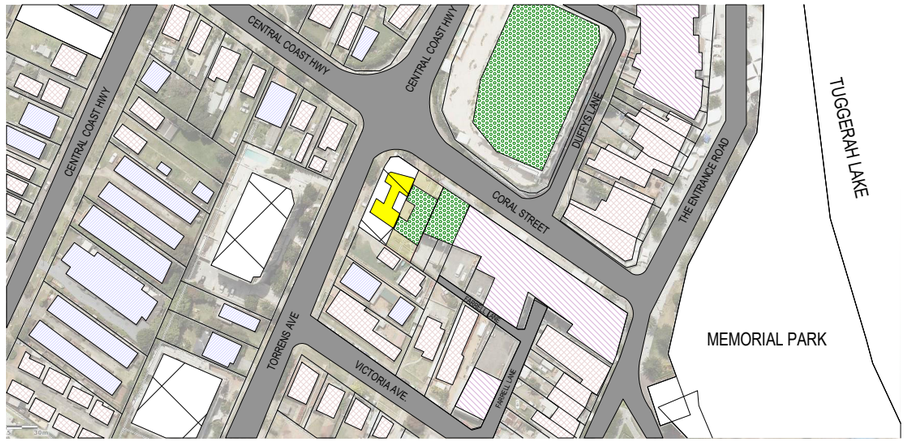
Figure Ground & Location

1 : 2500

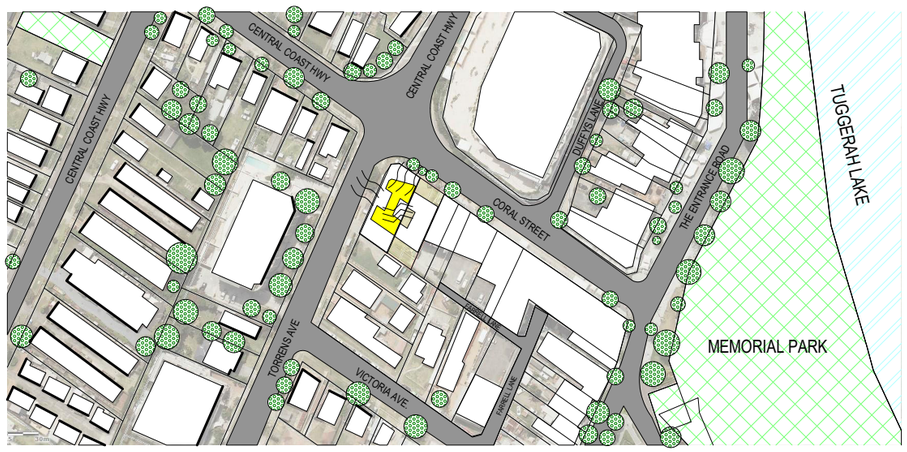


Circulation & Building Height

1 : 2500

LEGEND

- ONE STOREY
- TWO STOREY
- THREE STOREY
- FOUR TO SIX STOREY
- SEVEN TO EIGHT STOREY
- VEHICULAR CIRCULATION

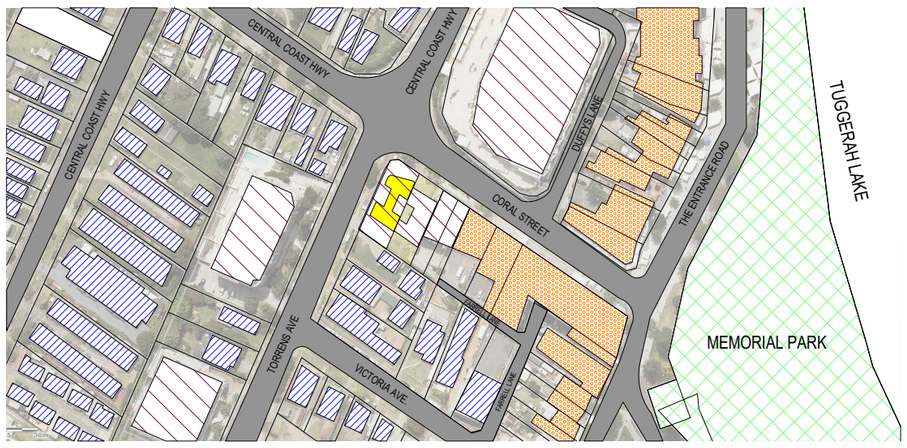


Open Space, Landform & Building Edge

1 : 2500

LEGEND

- NOISE
- PREVAILING WINDS NORTH EASTERLY - SOUTH WESTERLY
- BUILDING EDGE
- Trees
- OPEN SPACE
- TUGGERAH LAKE



Building Use

1 : 2500

LEGEND

- RESIDENTIAL
- MIXED USE
- COMMERCIAL
- RECREATION

REVISIONS			
ISSUE	DESCRIPTION	DATE	BY
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SHEET TITLE: Site Analysis 2 of 2		DRAWN BY: MT	PROJECT DETAIL: 15-17 Coral Street, The Entrance
SHEET NO:	UA 002	CHECKED BY: FG	JOB NO: 190955 / DATE: June 2019
SCALE:	1 : 2500		LODGE AT: CENTRAL COAST COUNCIL

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Streetscape Coral Street

1 : 200

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SHEET TITLE:	Streetscape-Coral Street
SHEET NO:	UA 003
SCALE:	1 : 200
DRAWN BY:	MT
CHECKED BY:	FG
PROJECT DETAIL:	15-17 Coral Street, The Entrance
JOB NO: 190955	DATE: June 2019
LODGE AT:	CENTRAL COAST COUNCIL

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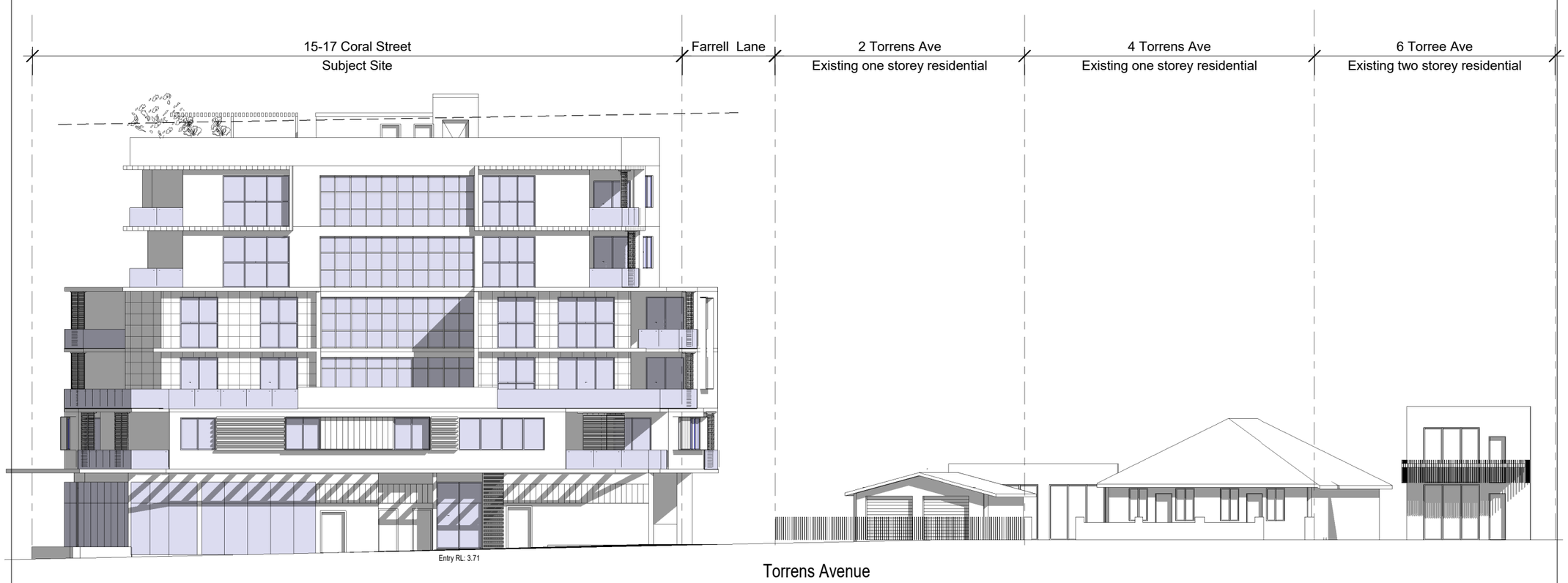

Streetscape Torrens Ave

1 : 200

REVISIONS			
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SHEET TITLE: Streetscape-Torrens Avenue	
SHEET NO:	UA 004
SCALE:	1 : 200
DRAWN BY: MT	
CHECKED BY: FG	
PROJECT DETAIL: 15-17 Coral Street, The Entrance	
JOB NO: 190955	DATE: June 2019
LODGE AT: CENTRAL COAST COUNCIL	

23.11.2023

DESIGN VERIFICATION STATEMENT (REV. B)

PROJECT FOR MIXED USE RESIDENTIAL / COMMERCIAL DEVELOPMENT COMPLEX ABOVE BASEMENT AND GROUND CAR PARKING @ 15-17 CORAL STREET, THE ENTRANCE, NSW

Introduction:

This report should be read in conjunction with the architectural drawings provided in the project development application responding to each of the nine SEPP 65 Design Quality Principles, in addition to the relevant objectives, design criteria and design guidance contained within the Apartment Design Guide.

Design Verification:

In accordance with Clause 29(1) & (2) of the Environmental Planning and Assessment Regulation 2021, I, Sam Min-Han Lu, nominated Architect for Design Cubicle Pty Ltd, am a qualified architect for the purpose of State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development.

I verify that this proposed mixed use residential / commercial development complex was designed under my instruction and the design quality principles as set out in Schedule 1 of SEPP No. 65 – Design Quality of Residential Apartment Development, and the objectives set out in Parts 3 and 4 of the ADG are achieved or otherwise justified in the attached SEPP 65 Design Quality Report for the proposed 12 residential apartments.

Yours Faithfully,



……..

Sam Min-Han Lu (#8842)

Design Cubicle Pty Ltd
Nominated Architect: Sam Min-Han Lu (#8842)

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SEPP 65 DESIGN QUALITY PRINCIPLES

Principle 1: Context and Neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

The site is situated at 15-17 Coral Street, The Entrance, NSW. The proposal provides for a quality development that responds to and utilises the advantages of its unique context. The immediate surroundings of the subject site fall within a precinct that is characterised by a nearby future diverse range of land uses, including more proposed medium-high density residential developments, and includes mainly existing residential and commercial / retail uses.

The immediate context for this site is residential development consisting of mainly individual dwellings and selected multi-dwelling developments, as well as commercial / retail premises in the nearby vicinity. The close proximity of the subject site to nearby schools / churches / multitude of clubs / bus services / petrol station(s) / etc, and to the major arterial roadways and streets, as well as the fact the site is within a few minutes to the centre of The Entrance CBD district, supports the view for higher residential densities. The site layout of the building generates favourable orientation with respect to solar access which further reinforces the appropriateness of the development.

The most important elements that informed and influenced the design and aesthetics of the building were:

- The future vision of higher density for the immediate surrounding locality, resulting in the transformation of the surrounding subject area from low density to high density.
- An opportunity to access the sun, air, distant views and greenery.
- Current and future residential developments containing contemporary aesthetics.

The goal of our design is to generate a positive outcome towards the future character of the area, and we believe our proposed development responds to and creates a transitional buffer zone between the different components of the existing and future precinct situation.

Principle 2: Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

As indicated, the locality displays a traditional mixed character, consisting of mainly small, individual dwellings, selected multi-dwelling developments, as well as nearby commercial / retail premises. However, as discussed above, Council's vision for the subject area is a transformation from low density to high density over the coming years, hence the zoning of the site as high density residential, to help accommodate future population growth.

The site is considered suitable for an increased development, and our proposed development will establish a transitional buffer zone that bridges between the different scales evident in the surroundings, in addition to creating a climax / landmark effect, especially when perceived from the surrounding roads.

The development bulk and scale of this building will complement the surroundings on each elevation, including the main facades to both Coral Street and Torrens Avenue. The proposed building will dialogue with its immediate context and respond adequately, creating a contextual answer to a setting that is due to become more diversified and complex over time.

The proposed design has been developed in keeping with the requirements of the Apartment Design Guide and Council’s requirements in relation to building alignment, proportions, building type, articulation and the manipulation of building elements. The proposal defines and activates the public realm by creating communal and public open space for the residents on both intermediate roof terraces and the rooftop of the proposal.

The proposed built form for the mixed use development consists of a six storey building component with Basement & Ground Floor car parking for 15 vehicles. The development contains 12 fully dedicated, consisting of a mixture of 1, 2 and 3 bedroom apartments.

The proposed building block speaks to its surroundings through interpreting its context in a modern manner, dialoguing with surrounding buildings by interacting with them visually through scale and built form i.e. balcony / blade wall elements will give added interest to the facades with pleasing proportions, as well as reduces the comparable bulk and scale to the elevations of the building, which in turn helps our design to melt in with its surroundings.

The shape of the site has informed the composition of the development. The building's internal room layouts are controlled to achieve better amenities and to minimise the impact of traffic noise and pollution. Facades honestly show their protective function, yet still present a residential face to the public view, using a variety of shapes, materials and colours, with a visual play between walls, entries, balconies and external finishes.

The facades also have a variety of elements to reflect a visually 'softer' presentation, to lessen the impact of the building, and to maximise apartments' exposure to the sun and views. Facade planes and masses of the building are visually divided into smaller elements by horizontals and verticals, and materials, to reduce building bulk. This composition helps the development to fit into the urban landscape setting, whilst maintaining its contextual uniqueness and importance in the existing streetscapes of both Coral Street and Torrens Avenue.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

The proposed density is a direct response to the regional context, availability of public transport, facilities in this precinct and the development capacity of the site.

The proposed development will consist of 12 apartments, over three levels of Basement & Ground Floor car parking with the following breakdown:

- 4 x 1 bed apartments
- 4 x 2 bed apartments
- 4 x 3 bed apartments

The proposal presents an adequate variety of apartment mixture and orientation.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes.

The proposed design will promote ecologically sustainable development (ESD) through:

- Benefiting from its orientation more than 70% of the apartments will have adequate sun access.
- At least 60% of the apartments will achieve natural cross-flow ventilation.

- The proposal incorporates both active and passive sun controls systems.
- Working towards ensuring waste minimisation during the construction phase and the lifespan of the building, including through the recycling and reuse of materials and waste.
- The development will incorporate the installation of low energy saving devices wherever possible.
- Adhering to the BASIX constraints.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

The landscape scheme is to incorporate adequate special experience for both the public and private realm. Incorporating a variety of activity spaces, the proposal promotes community involvement in the landscape through communal gardens on various rooftops of the proposal, containing elements such as seating areas and the like. All common areas are accessible for people with a disability.

The landscape solution is designed by an experienced specialist landscape consultant, please refer to the landscape plan accompanying this submission for further details.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

Amenities were given high priority in the design through:

- Maximising the views and exposure.
- The apartments were orientated to have good solar aspect and enjoy cross-flow ventilation wherever possible.
- All apartments will enjoy good visual and acoustic privacy through orientation (the positioning of windows and private open spaces, setbacks etc.), or through the materials used.
- All apartments will be air-conditioned.
- All apartments will be equipped with adequate storage space either in the basement or inside each apartment.

- All apartments have efficient layouts and have been provided with adequate outdoor space.
- All apartments have access to the waste area on the Ground Floor for the deposition of garbage and recyclables.
- All apartments will have the adequate number of car space(s) required according to Council's DCP requirements.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

The proposal optimises safety and security both within the development and the public domain. The proposal affords good casual surveillance of both the street frontages, and the public and communal areas of the site, through the glazed openings and balconies of the and upper level apartments and lobbies, and the Ground Floor commercial tenancies.

With regards to the parking areas, secure access is to be maintained at all times to ensure that the parking premises are solely for the occupants of the building, and their visitors. Visitor access will be provided through an intercom system and remote control access or the like for residents.

Principle 8: Housing Diversity and Social Interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

The proposal contributes to its social context by adhering to the desired future character of the area as highlighted in Council's LEP & DCP.

The proposal promotes social encounters while providing adequate privacy for each owner, resident or tenant. The public domain through the common open spaces complements the private spaces associated with each apartment, and promotes social interaction between the residents through the design and configuration of the landscaped areas and the like, containing things such as seating areas, relaxation areas etc.

The proposal will provide quality residential apartments in multiple plan configurations of varying sizes, in order to cater for a wide variety of people.

Persons with disabilities or restricted / impaired mobility are catered for through the provision of apartment(s) highlighted for future adaptability, compliant with relevant Australian Standards.

The provision of a stretcher lift facility in the building also allows for wheelchair access to be accommodated to the entry door of all units on all floors for persons with a disability, as required by the BCA.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The creation of a well-articulated proposed building form is outlined in our proposal, along with the use of quality finishes, and will add to the visual interest to be generated by the future residential streetscape and character of this locality, which we aim to be at the forefront of driving forward in the future progress for The Entrance area.

Materials and colours have been selected to add visual interest and identity, and to 'soften' the impact of the development's bulk and scale.

- The proposal incorporates a variety of materials, including rendered and painted finishes for the facade walls, a combination of solid balustrades as well as glazed balustrade treatments, and special cladding for partial walls.
- Balcony balustrades are of various types and serve differing purposes: painted and rendered solid walls work as compositional devices to divide facades, whilst the safety tinted glass plate balustrades allow for maximum views.
- Glazing will be fixed to powder-coated aluminium frames.
- The colours lessen the apparent bulk of the building. The overall external colour scheme helps to give our proposal a sharp, modern look whilst not overpowering its surroundings. The feature colours used add warmth, interest and a sense of identity to the building. The overall colour scheme is designed to complement its surroundings, including the rich, surrounding greens of the landscape, and to create a synergy with nearby existing structures.
- Together with the rich, soft landscaping, the hard surfaced landscaped areas of the site will contain a variety of materials and finishes, which may include stencil finished concrete, various pavement patterns and colours.
- The choice and composition of the building elements are contemporary to reflect the time,

but also with a view to becoming a leader and guide towards the future character of the area.

The combination of glazing, blade walls and feature colours and materials help to bring life to the facades, and will serve as a positive reinforcement to the urban fabric of the evolving greater area of The Entrance as the years progress.

Apartment Design Guide

The following section outlines how the development performs in relation to relevant objectives, design criteria and design guidance contained in Parts 3 and 4 of the Apartment Design Guide:

3D - Communal and public open space:

- Communal open space is to have a minimum area equal to 25% of the site, and an area of 261.2m² has been highlighted as communal open space, which equates to approximately 44.2% of the site area, exceeding the minimum requirements.

- Direct sunlight is achieved to the principal useable part of the communal open space for a minimum of 2 hours between 9am and 3pm.

- Communal open space achieves requirement of a minimum dimension of 3m.

3F - Visual privacy:

- For buildings up to 25m (5-8 storeys) in height, the minimum required separation distances to the side boundaries are 3m for non-habitable rooms, and 6m for habitable rooms and balconies for the lower 4 storeys of the development. In relation to the upper 4 storeys, the minimum required separation distances to the side boundaries are 4.5m for non-habitable rooms, and 9m for habitable rooms and balconies. In addition, if blank walls are proposed than no separation is required.

  With regards to the proposed development, compliance with the numerical standard with regards to habitable room separation from both the side and rear boundaries is achieved, due to the fact blank walls are proposed to the side boundary for portions of the building, as allowed by the ADG along main streets or at podium levels within main centres, or otherwise required separation is achieved. In addition, the stated setback requirements are met for the rear boundary in respect to the residential levels.

4A - Solar and daylight access:

- The proposed development exceeds the requirement for providing living rooms and private open spaces of at least 70% of apartments in a building with a minimum of 2 hours direct sunlight between 9am and 3pm in mid-winter. A minimum of 91.7% of the apartments in the

development are achieving the minimum 2 hours solar access required to the main living area.

- In the proposed development there are no apartments that receive no direct sunlight between 9am and 3pm in mid-winter. With a maximum of 15% allowable, our project meets this control.

4B - Natural ventilation:

- At least 60% of apartments are to be naturally cross ventilated in the first 9 storeys of any building. With 100% of apartments achieving natural cross-flow ventilation, our project meets this control.

4C - Ceiling Heights:

- Minimum ceiling heights of 2.7m for habitable rooms and 2.4m for non-habitable rooms have been accommodated, as required.

4D - Apartment size and layout:

- 1 bedroom apartments which include only one bathroom are required to have a minimum internal area of 50m², and any additional bathrooms increase the minimum internal area by 5m² each. In the current proposal, all 1 bedroom apartments achieve or exceed the minimum internal area requirement based on the number of bathrooms provided.

- 2 bedroom apartments which include only one bathroom are required to have a minimum internal area of 70m², and any additional bathrooms increase the minimum internal area by 5m² each. In the current proposal, all 2 bedroom apartments achieve or exceed the minimum internal area requirement based on the number of bathrooms provided.

- 3 bedroom apartments which include only one bathroom are required to have a minimum internal area of 90m², and any additional bathrooms increase the minimum internal area by 5m² each. In the current proposal, all 3 bedroom apartments achieve or exceed the minimum internal area requirement based on the number of bathrooms provided.

- Habitable room depths comply with the requirements of 8m from a window in an open plan layout, or else 2.5 x the ceiling height.

- Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space).

- Bedrooms have a minimum dimension of 3m (excluding wardrobe space).

- Living rooms or combined living / dining rooms have a minimum width of 3.6m for 1 bedroom apartments, and 4m for 2 and 3 bedroom apartments.

4E - Private open space and balconies:

- 1 bedroom apartments are required to have primary balconies of 8m² minimum area, and a minimum depth of 2m. Our proposal meets this control.

- 2 bedroom apartments are required to have primary balconies of 10m² minimum area, and a minimum depth of 2m. Our proposal meets this control.

- 3 bedroom apartments are required to have primary balconies of 12m² minimum area, and a minimum depth of 2.4m. Our proposal meets this control.

4F - Common circulation and spaces:

- The maximum number of apartments being provided off a circulation core on a single level is 4 x apartments, therefore meeting the maximum number permitted being in the range of 8-12 x apartments.

4G - Storage:

- 1 bedroom apartments require a storage size volume of $6m^3$ to be provided for each apartment, which has been accommodated.

- 2 bedroom apartments require a storage size volume of $8m^3$ to be provided for each apartment, which has been accommodated.

- 3 bedroom apartments require a storage size volume of $10m^3$ to be provided for each apartment, which has been accommodated.

DATE PLOTTED: 11 April 2022 10:54 AM BY: MMASSIC
A1

PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET, THE ENTRANCE
STORMWATER CONCEPT DESIGN



LOCALITY PLAN
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DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	SW100	COVER SHEET	A
2	SW200	STORMWATER CONCEPT DESIGN - BASEMENT PLAN	A
3	SW201	STORMWATER CONCEPT DESIGN - GROUND FLOOR PLAN	A
4	SW202	STORMWATER CONCEPT DESIGN - ROOF PLAN	A
5	SW300	STORMWATER CONCEPT DESIGN - DETAILS SHEET	A
6	SW400	EROSION AND SEDIMENT CONTROL - PLAN AND DETAILS	A

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CLIENT:
ALI CONSTRUCTION GROUP PTY LTD

SGC Reference Number: 20200418

Drawing Number: SW100 Revision Number: A

DWG No: P:\Users\Work\SGC\Applications\Local\Temp\3mrcEA01\sg_SW100.dwg

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A1

SUBSOIL DESIGN CALCS:

100yr 2hr ARI STORM= 62.6mm/hr
ARIx2=125.2mm
AREA OF DRIVEWAY
RAMP UNCOVERED= 72.3m^2

V=Axd
=72.3x(125.2/1000)
=9.05m^3

THEREFORE, A VOLUME OF 16m^3 SUBSOIL PUMP OUT PIT WILL BE APPLIED AS PER AS/NZS 3500.3.2.

GEO-TECHNICAL NOTE:

BASEMENT DRAINAGE DESIGN SUBJECT TO GEOTECHNICAL INVESTIGATION (INCLUDING WATER TABLE AND SEEPAGE RATE) AND STRUCTURAL DESIGN OF WALLS AND SLABS.

GEO-TECHNICAL ENGINEER TO CONFIRM IF THE BASEMENT NEEDS TO BE TANKED.

PUMP-OUT PIT NOTE:

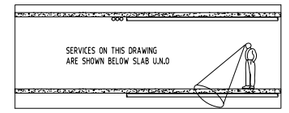
INSTALL WITH THE FOLLOWING ITEMS:
- 900SQ HEAVY DUTY STEEL GRATED LID FOR ACCESS AND MAINTENANCE PURPOSES.
-CONFINED SPACE SIGN ABOVE PUMP OUT PIT FOR PUBLIC AWARENESS AND WARNING.
-STEP IRONS. REFER TO DETAILS.
-PUMPOUT PIT CONTROL BOX (CTRL) TO MANUFACTURERS SPECIFICATIONS. LOCATIONS TO BE CONFIRMED WITH ARCHITECT.
-PUMPS TO OPERATE IN ALTERNATE MODE TO INCREASE LIFESPAN
-INSTALL VISIBLE FLASHING LIGHT SYSTEM IN CASE OF PUMP FAILURE
-INSTALL 2x DRN 300/3/65 A1DT/SQ FROM ZENT WATER SOLUTIONS OR SIMILAR 3 PHASE PUMPS WITH 10L/s OUTFLOW FOR 10m HEAD

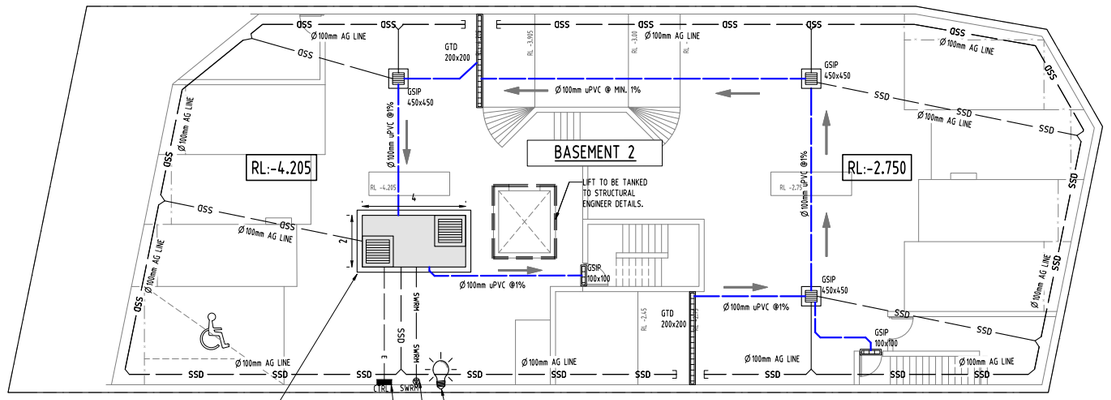
PUMP NOTE

ALL STORMWATER PUMPS TO BE CLASS 1 ZONE 2 FLAME SAFE TO ELECTRICAL CONSULTANT'S REQUIREMENTS.

SURFACE GRADING NOTE:

SURFACES ARE TO BE GRADED TOWARDS SURFACE INLET PIT (GSIP) AND RAINWATER OUTLET (RWO) AT 1% MIN. FOR UNCOVERED AREA AND AT 0.5% MIN. FOR COVERED AREA AS PER AS2890.





Issue	Last revision title	by	Date	Status
A	ISSUE FOR DA	HS	11.04.22	2
P2	PRELIMINARY ISSUE	HS	09.02.22	1
P1	PRELIMINARY ISSUE	HS	20.01.22	1

Issuer internal sequence and revision history
1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other

Reference Coordination Drawing

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

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SCALE 1:100 ON ORIGINAL SIZE

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PROJECT
PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET
THE ENTRANCE

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	2 OF 6	1:100 @ A1

Drawing Status: FOR APPROVAL
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Drawing Title
STORMWATER CONCEPT DESIGN
BASEMENT 2 FLOOR PLAN

Project No	Drawing No	Revision No
20200418	SW200	A

C:\Users\MMASSE\AppData\Local\Temp\AcetoCAD\sp_SSW200.dwg

A1

DATE PLOTTED: 11 April 2022 10:54 AM BY: MMASSIC

SERVICES ON THIS DRAWING ARE SHOWN BELOW SLAB U.N.O

TRUE NORTH

TORRENS AVENUE

T O R R E N S A V E N U E

CORAL STREET

DESIGN NOTES:

THE PROPOSAL IS FOR A MIXED USED DEVELOPMENT LOCATED WITHIN CENTRAL COAST COUNCIL AND GOVERNED BY WYONG DEVELOPMENT PLAN 2013.

TOTAL SITE AREA: 590.40m²

THE SITE IS NOT FLOOD AFFECTED AS PER TUGGERAH LAKE FLOOD RISK MANAGEMENT STUDY AND PLAN.

ON SITE DETENTION IS NOT REQUIRED FOR THE DEVELOPMENT DUE TO SITE FALLING WITHIN CLOSE PROXIMITY OF RECEIVING DRAINAGE SYSTEM - THE ENTRANCE CHANNEL.

DISCHARGE FROM SITE HAS BEEN DIRECTED TOWARDS AN EXISTING KERB INLET PIT ON TORRENS AVENUE.

WSUD IS NOT REQUIRED

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

SURFACE GRADING NOTE:

SURFACES ARE TO BE GRADED TOWARDS SURFACE INLET PIT (GSIP) AND RAINWATER OUTLET (RWO) AT 1% MIN. FOR UNCOVERED AREA AND AT 0.5% MIN. FOR COVERED AREA AS PER AS2890.

DENOTES PIPE TO DROP IN LOWER ELEVATIONS.

DISCHARGE TO EXISTING KERB INLET PIT ON TORRENS AVE.

GKP GRATE RL3.19 C.2.69 (TBC)

GROUND FLOOR RL3.25~3.90

ROOF OUTLINE

BASEMENT OUTLINE

HATCHING DENOTES UNCOVERED RAMP AREA

INDICATIVE LOCATION OF DOWNPIPES. EXACT LOCATION TO BE CONFIRMED AT CC STAGE (TYP.)

DOWNPIPE WITHIN THE GROUND FLOOR PARKING AREA TO BE PROTECTED FROM COLLISION (TYP.)

CLAD GARAGE METAL ROOF

VACANT LOT

25544

#19 MULTI-STORey

BENCH MARK CUT IN KERB R.L. 3.11

Reference Coordination Drawing			
Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

Rev.				
A	ISSUE FOR DA	HS	11.04.22	2
P2	PRELIMINARY ISSUE	HS	09.02.22	1
P1	PRELIMINARY ISSUE	HS	26.01.22	1
Issue	Last revision title	by	Date	Status

Issuer internal sequence and revision history

1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other

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PROJECT

PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET
THE ENTRANCE

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	3 OF 6	1:100 @ A1

Drawing Status: FOR APPROVAL
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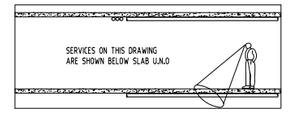
Drawing Title: STORMWATER CONCEPT DESIGN
GROUND FLOOR PLAN

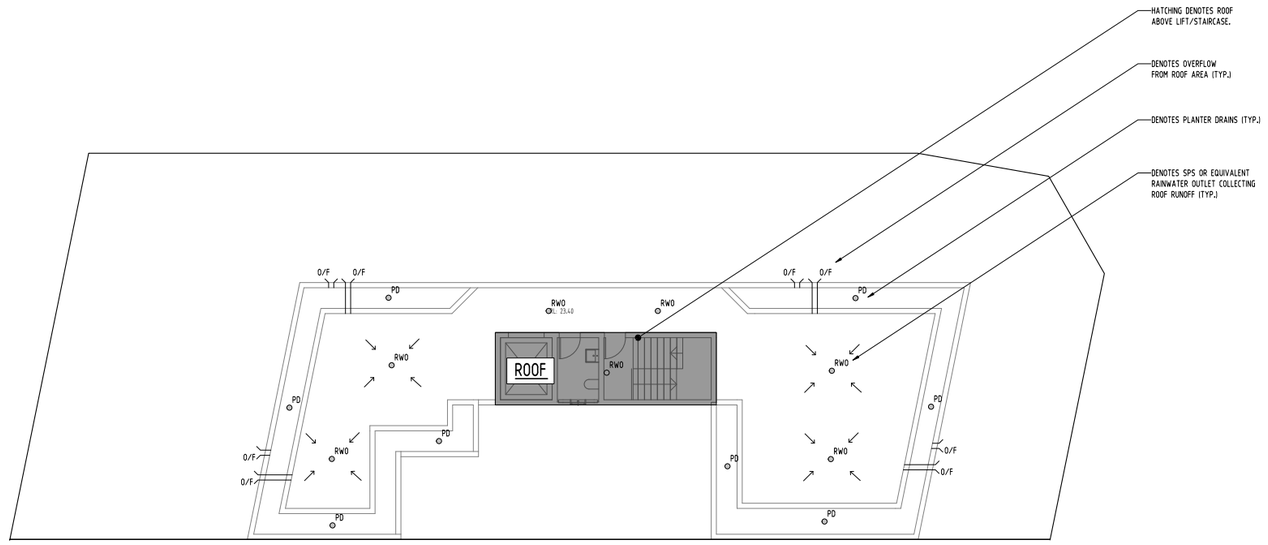
Project No	Drawing No	Revision No
20200418	SW201	A

A1

DATE PLOTTED: 11 April 2022 10:56 AM BY: HANNAH



NOTE:
STORMWATER DOWNPIPES AND LOCATION OF RAINWATER OUTLETS/PLANTER DRAINS ARE JUST INDICVATIVE. EXACT SIZE AND LOCATION TO BE CONFIRMED AT CC STAGE.



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A	ISSUE FOR DA	HS	11.04.22	2
P2	PRELIMINARY ISSUE	HS	09.02.22	1
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PROJECT
PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET
THE ENTRANCE

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	4 OF 6	1:100 @ A1

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Drawing Title
STORMWATER CONCEPT DESIGN
ROOF PLAN

Project No	Drawing No	Revision No
20200418	SW202	A

A1

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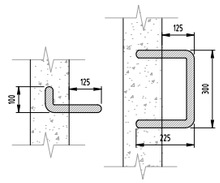
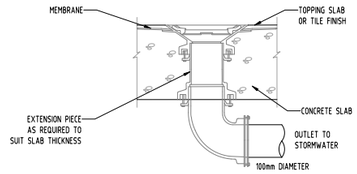
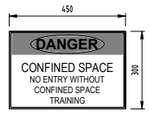


STEP IRONS
SCALE 1:10



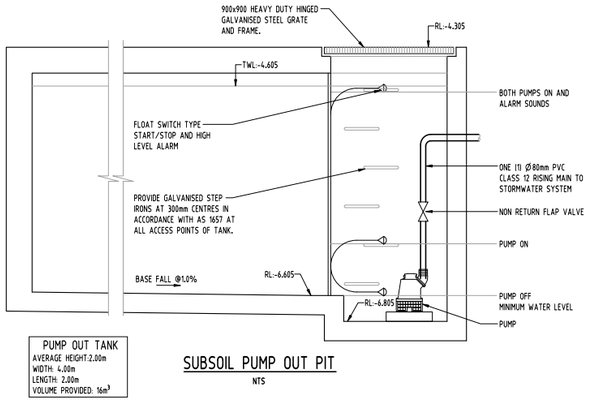
RAINWATER OUTLET
NTS



CONFINED SPACE SIGN
SCALE 1:10

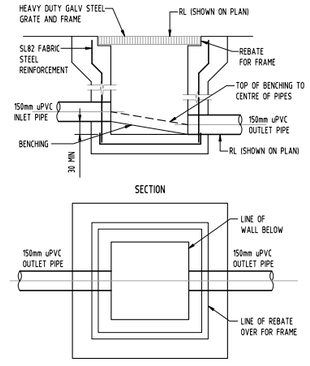
LEGEND

- STORMWATER LINE
- SSD — SUBSOIL LINE
- SWRM — STORMWATER RISING MAIN
- OF — OVERFLOW LINE
- GRATED SURFACE INLET PIT
- GRATED TRENCH DRAIN
- RWO — RAINWATER OUTLET
- CO — CLEAR OUT POINT
- DDO — DISH DRAIN OUTLET
- PD — PLANTER DRAIN
- CAP
- DOWNPIPE DROP
- DP — DOWNPIPE
- DP — DOWNPIPE SPREADER
- WARNING LIGHT
- 154.54 — EXISTING SPOT LEVEL
- ROOF OUTLINE
- BASEMENT OUTLINE

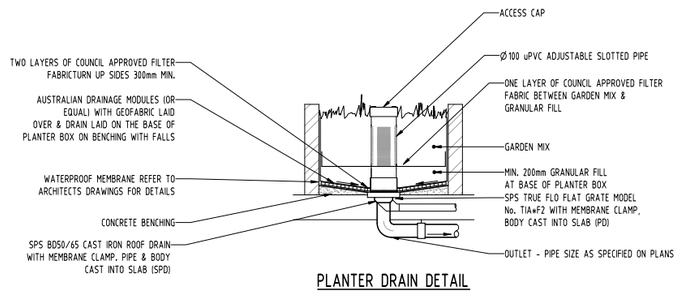


PUMP OUT TANK
AVERAGE HEIGHT:2.00m
WIDTH: 4.00m
LENGTH: 2.00m
VOLUME PROVIDED: 16m³

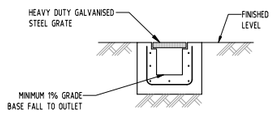
SUBSOIL PUMP OUT PIT
NTS



6 / - DETAIL
STORMWATER PIT
SCALE 1:20



PLANTER DRAIN DETAIL
SCALE 1:20



GRATED TRENCH DRAIN
SCALE 1:20

A	ISSUE FOR DA	HS	11.04.22	2	
P2	PRELIMINARY ISSUE	HS	09.02.22	1	
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ARCH			
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PROJECT
PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET
THE ENTRANCE

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	5 OF 6	AS SHOWN

Drawing Status: FOR APPROVAL
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Drawing Title
STORMWATER CONCEPT DESIGN
DETAILS SHEET

Project No	Drawing No	Revision No
20200418	SW300	A

PDF Path: C:\Users\HannSGC\AppData\Local\Temp\Bluebeam\Revu\24\0\No_SSW300.dwg

A1

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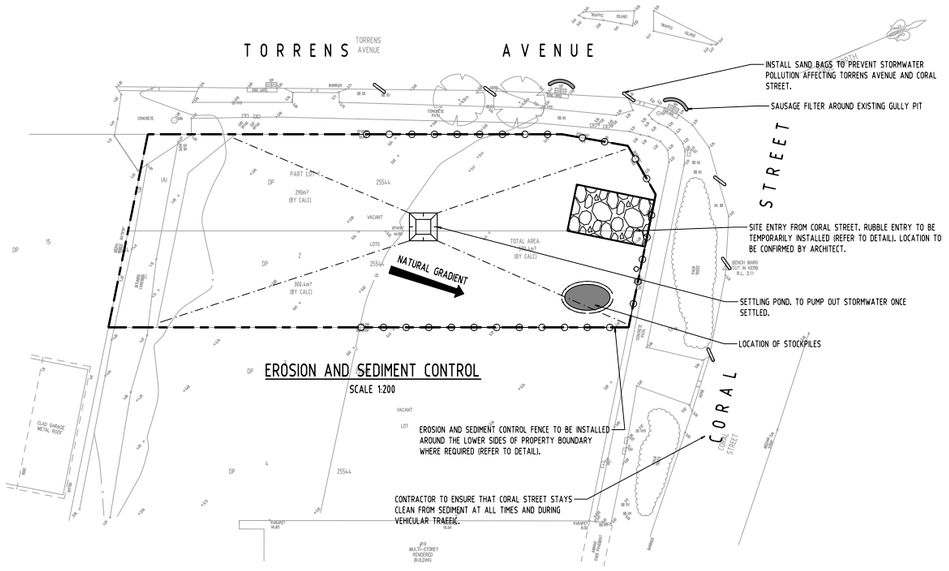


EROSION AND SEDIMENT CONTROL
SCALE 1:200

EROSION & SEDIMENTATION CONTROL NOTES

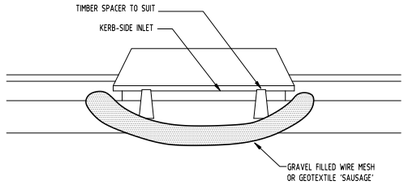
1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

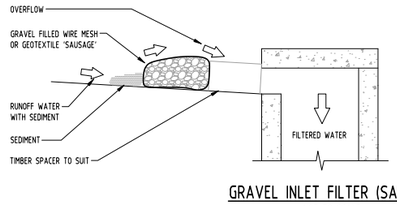
GENERAL NOTES

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

CLAY SOILS

1. A SYSTEM SHALL BE INSTALLED TO EITHER:
2. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
3. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL





GRAVEL INLET FILTER (SAUSAGE)
NOT TO SCALE

CONSTRUCTION NOTES:

FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAT THE LENGTH OF THE INLET PIT

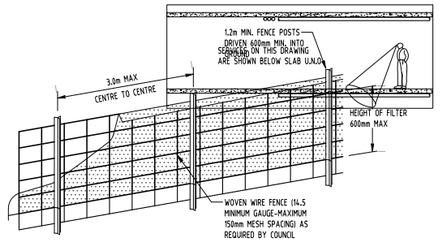
FILL THE SLEEVE WITH 25mm TO 50mm GRAVEL

FORM AN ELLIPTICAL CROSS-SECTION OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY

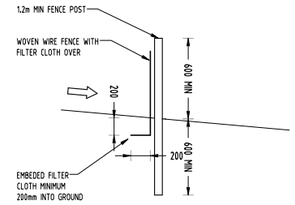
MAINTAIN THE OPENING WITH SPACER BLOCKS

FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER

FIT TO ALL KERB INLETS AT SAG POINTS



DIAGRAMMATIC VIEW



TYPICAL SECTION

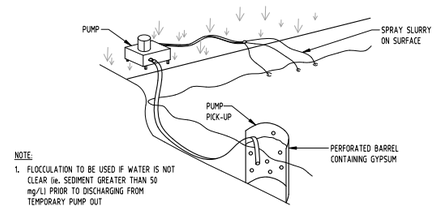
SEDIMENT FENCE
NOT TO SCALE

GEOTEXTILE INLET FILTER

GEOTEXTILE INLET FILTER IS PLACED IN EVERY PIT WITHIN THE SITE TO ENSURE THE RUNOFF WATER DURING CONSTUCTION NOT ENTER THE PITS.

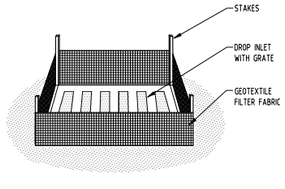
LEGEND

- SEDIMENT FENCE
- STABILISED SITE ACCESS
- SANDBAGS
- SAUSAGE FILTER

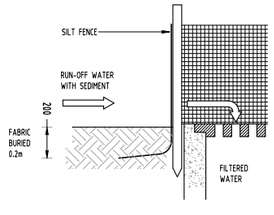


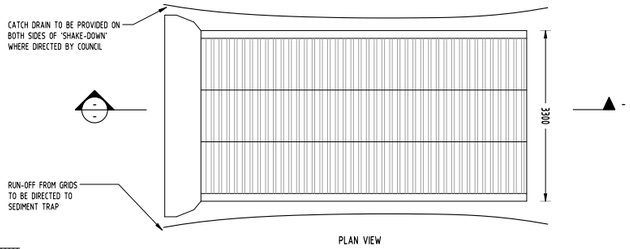
NOTE:
1. FLOCCULATION TO BE USED IF WATER IS NOT CLEAR (ie. SEDIMENT GREATER THAN 50 mg/Ll) PRIOR TO DISCHARGING FROM TEMPORARY PUMP OUT
2. FOR RATES & AGENTS SEE APPENDIX E OF NEW SOUTH WALES DEPARTMENT OF HOUSING "MANAGING URBAN STORMWATER SOILS & CONSTRUCTION".

FLOCCULATION DETAIL
NOT TO SCALE

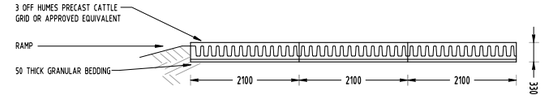


GEOTEXTILE INLET FILTER
NOT TO SCALE





PLAN VIEW



TYPICAL SECTION

'CATTLE GRID' ALTERNATIVE
TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE

Issue	Last revision title	by	Date	Status
A	ISSUE FOR DA	HS	11.04.22	2
P2	PRELIMINARY ISSUE	HS	09.02.22	1
P1	PRELIMINARY ISSUE	HS	20.01.22	1

Issuer internal sequence and revision history
1-preliminary 2-development application 3-construction certificate 4-tender 5-construction 6-other

Reference Coordination Drawing

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER

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QUALITY CONTROL

DRAWN	HS	DATE	11.04.22
CHECKED	SH	DATE	11.04.22
DESIGNED	HS	DATE	11.04.22
VERIFIED	SH	DATE	11.04.22
APPROVED	SH	DATE	11.04.22

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Scales
0m 2 4 6 8 10
SCALE 1:200 ON ORIGINAL SIZE

CLIENT
ALI CONSTRUCTION GROUP PTY LTD

ARCHITECT
design cubicle

SGC
Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au
A.B.N. 21 118 222 530

PROJECT
PROPOSED MIXED USE DEVELOPMENT
15-17 CORAL STREET
THE ENTRANCE

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	6 OF 6	AS SHOWN

Drawing Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Drawing Title
EROSION AND SEDIMENT CONTROL
PLAN AND DETAILS

Project No	Drawing No	Revision No
20200418	SW400	A

C:\Users\MMASSC\AppData\Local\Temp\Bricscr\Dwg_SW400.dwg

BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 1261505M_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 1261505M lodged with the consent authority or certifier on 12 June 2022 with application DA/1809/2022.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environment Planning and Assessment Regulation 2000

Secretary
Date of issue: Wednesday, 20 December 2023
To be valid, this certificate must be lodged within 3 months of the date of issue.

Project summary	
Project name	15-17 Coral Street, The Entrance_02
Street address	15-17 CORAL STREET THE ENTRANCE 2261
Local Government Area	CENTRAL COAST
Plan type and plan number	Deposited Plan 25544
Lot no.	1, 2
Section no.	-
No. of residential flat buildings	1
No. of units in residential flat buildings	12
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 40	Target 40

Certificate Prepared by
Name / Company Name: Green Star Energy Solutions
ABN (if applicable): 22501249847

Description of project

Project address	
Project name	15-17 Coral Street, The Entrance_02
Street address	15-17 CORAL STREET THE ENTRANCE 2261
Local Government Area	CENTRAL COAST
Plan type and plan number	Deposited Plan 25544
Lot no.	1, 2
Section no.	-

Project type	
No. of residential flat buildings	1
No. of units in residential flat buildings	12
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details	
Site area (m²)	590.4
Roof area (m²)	192
Non-residential floor area (m²)	-
Residential car spaces	13
Non-residential car spaces	2

Common area landscape	
Common area lawn (m²)	0.00
Common area garden (m²)	88.2
Area of indigenous or low water use species (m²)	0.00

Assessor details and thermal loads	
Assessor number	10194
Certificate number	0006179841
Climate zone	15
Ceiling fan in at least one bedroom	No
Ceiling fan in at least one living room orother conditioned area	No

Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 40	Target 40

Description of project

The tables below describe the dwellings and common areas within the project

Residential flat buildings - Building1, 12 dwellings, 1 storey above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
101	1	59.3	5	0.00	0.00
201	3	96.2	5.00	0.00	0.00
401	1	48	6.00	0.00	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
102	1	57.3	0.00	0.00	0.00
202	3	105.4	0.00	0.00	0.00
402	2	70.4	0.00	0.00	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
103	2	78.6	0.00	0.00	0.00
301	3	101.2	5.00	0.00	0.00
501	1	48	6.00	0.00	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
104	2	81.9	0.00	0.00	0.00
302	3	105.04	0.00	0.00	0.00
502	2	70.4	0.00	0.00	0.00

Description of project

The tables below describe the dwellings and common areas within the project

Common areas of the development (non-building specific)

Common area	Floor area (m²)
Basement 1	502.00
Fire Hydrant Pump Room B1	32.50
WC Area on Roof	24.00

Common area	Floor area (m²)
Basement 2	502.00
Plant Room or Storage B2	10.00

Common area	Floor area (m²)
Plant Room or Storage B1	10.00
Plant Room or Storage B2	11.50

Common areas of unit building - Building1

Common area	Floor area (m²)
Lift car (No. 1)	0.00
Ground floor lobby type (No. 1)	19.00
Hallway/lobby type (No. 3)	18.00

Common area	Floor area (m²)
Garbage room (Retail)	19.30
Hallway/lobby type (No. 1)	25.00
Hallway/lobby type (No. 4)	18.00

Common area	Floor area (m²)
Garbage room (Residential)	18.4
Hallway/lobby type (No. 2)	18.00
Hallway/lobby type (No. 5)	18.00

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building1
    (a) Dwellings
        (i) Water
        (ii) Energy
        (iii) Thermal Comfort
    (b) Common areas and central systems/facilities
        (i) Water
        (ii) Energy

2. Commitments for single dwelling houses

3. Commitments for multi-dwelling houses

4. Commitments for common areas and central systems/facilities for the development (non-building specific)
    (a) Common areas and central systems/facilities
        (i) Water
        (ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carriedout. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for Residential flat buildings - Building1

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✔	✔
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✔	✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 4.5 but <= 6 L/min)	4 star	4 star	4 star	no	not specified	not specified	-	-	-	-	-	-	-

	Alternative water source						
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	No alternative water supply	-	-	-	-	-	-	-
All dwellings	No alternative water supply	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✔	✔	✔
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✔	✔
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✔	✔
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✔	✔

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✔	✔	✔
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must:			
(aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and		✔	
(bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✔	
(h) The applicant must install in the dwelling:			
(aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✔	
(bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and		✔	✔
(cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✔	
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✔	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous - 4 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroom	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
102	1-phase airconditioning / 4 star	1-phase airconditioning / 4 star	1-phase airconditioning / 4 star	1-phase airconditioning / 4 star	1(dedicated)	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroom	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
	(average zone)(zoned)	(average zone)(zoned)	(average zone)(zoned)	(average zone)(zoned)								
201, 301	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	3(dedicated)	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	no
202, 302	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	3(dedicated)	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	yes
101, 401, 501	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1(dedicated)	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	no
All other dwellings	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	1-phase airconditioning / 4 star (average zone)(zoned)	2(dedicated)	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	not specified	-	not specified	not specified	not specified	yes	-

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✔		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✔	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✔	✔
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✔	✔	✔
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✔	✔	✔

	Thermal loads	
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
101	52.00	26
102	49	27
103	48	29
104	46	25
201	48	28
202	49	30
301	50	28
302	48	30

	Thermal loads	
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
401	46	23.00
402	50	21
501	49	26
All other dwellings	49	24

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	4 star	4 star	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS
Lift car (No. 1)	-	-	light-emitting diode	connected to lift call button	no
Garbage room (Retail)	ventilation exhaust only	-	compact fluorescent	manual on / manual off	no
Garbage room (Residential)	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no
Ground floor lobby type (No. 1)	ventilation supply only	time clock or BMS controlled	compact fluorescent	daylight sensor and motion sensor	no
Hallway/lobby type (No. 1)	ventilation supply only	time clock or BMS controlled	compact fluorescent	daylight sensor and motion sensor	no
Hallway/lobby type (No. 2)	no mechanical ventilation	-	compact fluorescent	daylight sensor and motion sensor	no
Hallway/lobby type (No. 3)	no mechanical ventilation	-	compact fluorescent	daylight sensor and motion sensor	no
Hallway/lobby type (No. 4)	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no
Hallway/lobby type (No. 5)	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 9

4. Commitments for common areas and central systems/facilities for the development (non-building specific)

(a) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	4 star	4 star	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

	Common area ventilation system		Common area lighting		
Common area	**Ventilation system type**	**Ventilation efficiency measure**	**Primary type of artificial lighting**	**Lighting efficiency measure**	**Lighting control system/ BMS**
Basement 1	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	compact fluorescent	daylight sensor and motion sensor	no
Basement 2	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	compact fluorescent	daylight sensor and motion sensor	no
Plant Room or Storage B1	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no
Fire Hydrant Pump Room B1	ventilation (supply + exhaust)	none i.e., continuous	compact fluorescent	manual on / manual off	no
Plant Room or Storage B2	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no
Plant Room or Storage B2	no mechanical ventilation	-	compact fluorescent	manual on / manual off	no
WC Area on Roof	ventilation exhaust only	time clock or BMS controlled	compact fluorescent	manual on / manual off	no

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 11.00 peak kW
Other	-	-

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

LEGEND / FINISHES SCHEDULE

EXISTING RL

EXISTING TREE TO BE REMOVED
NOTE:
All noxious weeds on the site shall be removed and destroyed as per their classification under the noxious weeds Act.

EXISTING TREE TO BE RETAINED AND SHALL BE PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH AS 4970-2009
TREE PRUNING SHALL BE IN ACCORDANCE WITH AS 4373

PROPOSED TREES, SHRUBS & GROUND COVER
(REFER NO. TO PLANT SCHEDULE)

COMMON OPEN SPACE
SELECTED TIMBER LOOK TILES - TO AUST. STANDARDS

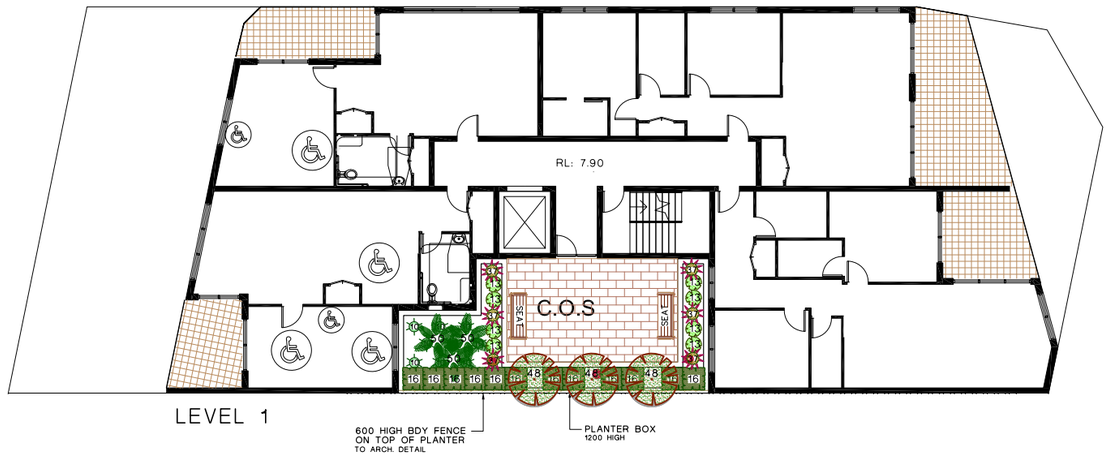
PUBLIC DOMAIN PAVING
TO COUNCIL DETAILS

PATIO / TERRACE / PATH
SELECTED TILES - TO AUST. STANDARDS

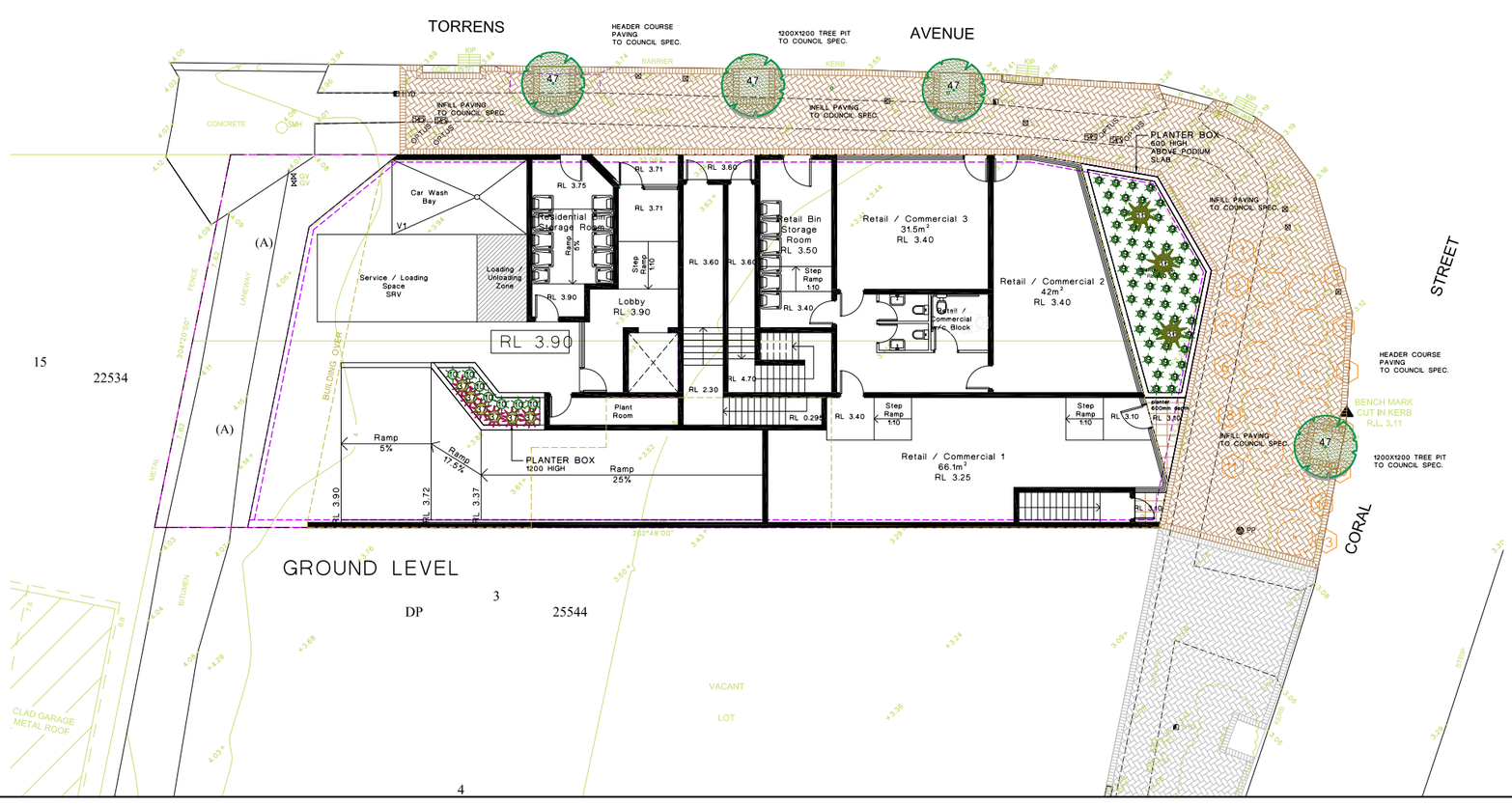
SELECTED BOLLARD ILLUMINATION

SELECTED ILLUMINATION
ILLUMINATION SHALL BE DESIGNED BY A QUALIFIED LIGHTING CONSULTANT AND WITH AS 4282, AS 1680 & AS 1158 IN ACCORDANCE

ITEM	MATERIAL
SOIL DETAIL 1 & 2	NOTE: ALL SOIL TYPE AS PER AUST. NATIVE LANDSCAPE SUPPLY OR EQUIVALENT AND SHALL BE IN ACCORDANCE WITH AS 4419 AND AS 4454 FOR SOIL CONDITIONERS AND COMPOSTS
PLANTER BOX	PLANTER BOX MIX IN ACCORDANCE WITH AS4419:1998 & AS3743 NOTE: PLANTER BOX OVER PODIUM SLABS SHALL PROVIDE ADEQUATE SOIL VOLUME SHOWN TO ALLOW FOR HEALTHY TREE GROWTH
MULCH	SELECTED HARD WOOD CHIP SHALL BE IN ACCORDANCE WITH AS 4454 NOTE: PROVIDE DECORATIVE GRAVEL TO OSD / RAIN GARDEN AREA REFER TO DETAIL 1 & 2
PLANT MATERIAL	AS PER PLANT SCHEDULE REFER TO DETAIL 2







REV	DESCRIPTION	REVISION DATE
B	AMEND AS PER ARCH CHG	28.7.23
A	DA ISSUE	28.2.22

NOTE:

1. In the event of anY inconsistency between the architectural plans and stormwater plans, The architectural plan shall prevail to the extent of the inconsistency
2. All landscape works shall be carried out by members of the LANDSCAPE CONTRACTORS ASSOCIATION of AUSTRALIA.
3. Contractors must verify all dimensions at the site before commencing any work or making any shop drawings which must be approved before manufacturing.
4. Do not scale drawing, if in doubt - ASK
5. This drawing is to be read in conjuction with Architectural, Hydraulic and survey plans
6. All Existing trees to remain shall be protected as per arborist report & council requirements
7. All pruning shall be in accordance with the AS 4373
8. Thoroughly eradicate weeds from all garden areas.
9. No variation to the works to be carried out without prior approval from owner.
10. All materials to be the best of their respective kinds and shall comply with approved sample type submitted or specified.
11. Substitution of plant species or varieties will not be permitted.
12. Unless otherwise specified or directed, all instructions are to be issued by the consulting landscape designer.
13. All storm water outlets & surface run off shall be to Hydraulic Engineers detail.
14. Provide sub-soil drainage to garden beds & lawn areas where required - To be confirmed on site.
15. Refer to survey plan for position of all existing services.
16. Refer to Architectural elevations & Sections for existing and proposed ground lines.
17. All landscape works shall comply with all councils DA & CC conditions and all relevant "AUSTRALIAN STANDARDS" and AUS SPEC NO.1 Specification C273-Landscaping.
18. Irrigation system - If required, shall be designed & installed to comply with AS 2698, AS 2698.1-1994, AS 2698.2-1985, AS 2698.3-1990, water board and other relevant authority regulations.

MAINTENANCE
- All landscape works are to be maintained for a period of 12 months (or as required by council DA Consent) by landscape contractor after final completion AND shall be maintained at all times in a suitable manner. Replace all plants which have failed with the same species. Mulch is to be maintained at specified depth. All plants and turf shall be watered on a regular basis to maintain moisture levels required for optimum growth. All garden areas are to be maintained free from weeds.

0 1 2 3 4 5
SCALE

PROPOSED MIXED USE

15-17 Coral Street,
The Entrance

ARCHITECT:
design cubicle

vision dynamics pty ltd
landscape design
m: 0412 282 888
Ph: (02) 9499 8888
em : visiondynamics @ westnet.com.au

DRAWING TITLE
LANDSCAPE CONCEPT PLAN

DRAWN FF | SCALE 1 : 100@A1 OR 1:200@A3 | REV. B
DRAWING NUMBER 21136 DA 1-2

MEMBER Fiona Fong Associate Member Australian Institute Landscape Designers & Managers Ltd ot Membership No. 193
©

NORTH

LEGEND / FINISHES SCHEDULE

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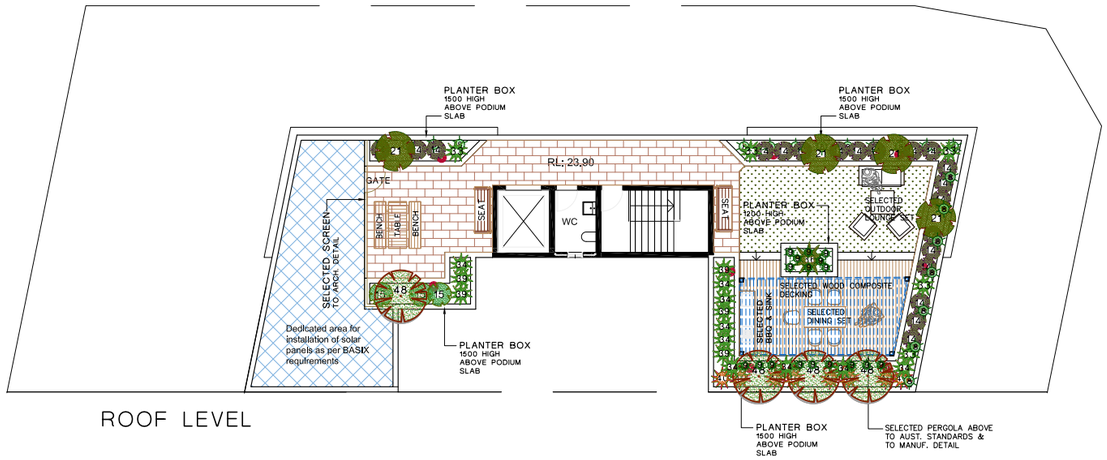

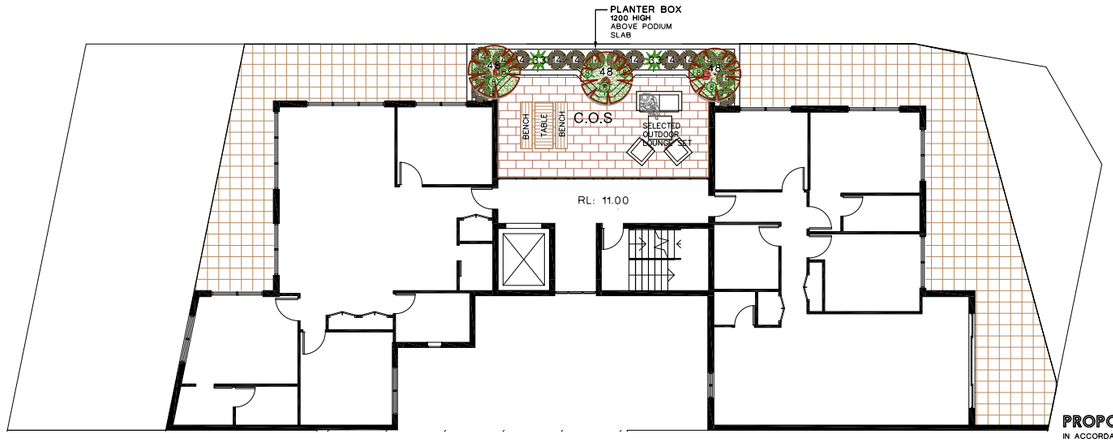

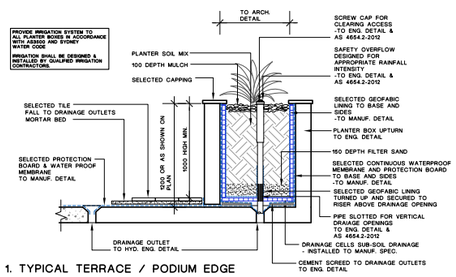

1. TYPICAL TERRACE / PODIUM EDGE PLANTER BOX DETAIL

PROPOSED PLANT SCHEDULE

IN ACCORDANCE WITH AS 2303: 2015

CODE	BOTANICAL NAME	COMMON NAME	APPROX MATURED HEIGHT	POT SIZE	QUANTITY
GROUND COVER / BOARDER					
8	Dichondra Silver Falls	Silver Falls	0.1	150mm	27
9	Trachelospermum 'Tri colour'	Star Jasmine	0.2	150mm	72
10	Dracaena trifasciata	Mother in Laws Tongue	0.5	150mm	9
LOW SHRUBS					
13	Philodendron Xanadu	Xanadu	0.7	200mm	8
14	Crassula 'blue bird'	Crassula	1	200mm	36
15	Callistemon Great Balls of Fire	Great Balls of Fire	2	200mm	3
16	Murraya paniculata	Murraya	3	200mm	12
TALL SHRUBS					
21	Metrosideros thomasii	NZ xmas bush	4	200mm	4
FEATURE SHRUBS					
33	Yucca rostrata 'Sapphire Skies'	Blue yucca	2	25 L	7
34	Phormium tenax purpurea	Dianella	1.2	200mm	9
36	Draceana draco	Dragon blood	4	45 L	4
37	Rhaphis excelsa	Lady palm	2.5	200mm	6
39	Thysanolaena maxima	Tiger grass	1.5	200mm	5
40	Alpinia zerumbet variegata	Variegated Shell Ginger	1.5	200mm	8
TREES					
47	Cupaniopsis anacardioides	Tuckeroo	6	45 L	4
48	Magnolia Teddy Bear	Magnolia	5	45 L	10
50	Howea forsteriana	Kentia Palm	10	45 L	3

NOTE:

THE TREES SHALL COMPLY WITH NATSPEC SPECIFYING TREES:
A GUIDE TO ASSESSMENT OF TREE QUALITY (2003) OR AUSTRALIAN STANDARD AS 2303 - 2015 TREE STOCK FOR LANDSCAPE USE.

HEIGHT AND SPAN ARE INDICATIVE ONLY.SUBJECT TO ON SITE ENVIRONMENTAL FACTORS. USE ONLY AS A GUIDE.

REV	DESCRIPTION	REVISION DATE
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PROPOSED MIXED USE

15-17 Coral Street,
The Entrance

ARCHITECT:
design cubicle

vision dynamics pty ltd
landscape design
m: 0412 282 888
Ph: (02) 9499 8888
em : visiondynamics @ westnet.com.au

DRAWING TITLE
LANDSCAPE CONCEPT PLAN

DRAWN FF | SCALE 1:100@A1 OR 1:200@A3 | REV. B

DRAWING NUMBER 21136 DA 2-2

MEMBER Fiona Fong
Associate Member
Australian Institute Landscape Designers & Managers Ltd ot Membership No. 193

©

NORTH

Proposed Mixed Use Development at 15-17 Coral Street, The Entrance

Waste Management Plan

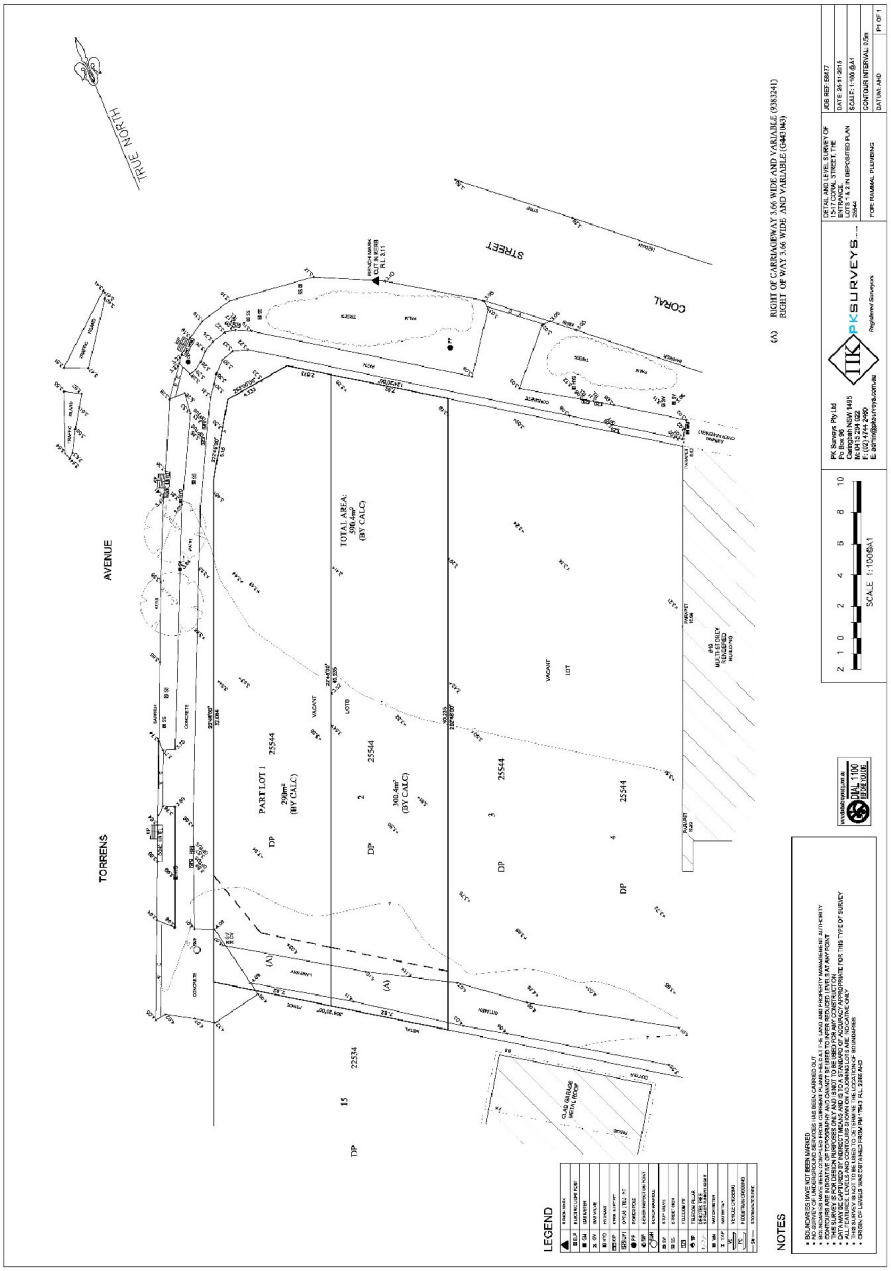
Prepared by: Design Cubicle Pty Ltd
December 2023

INDEX

1. EXISTING SURVEY PLAN
2. OUTLINE OF PROPOSAL & AERIAL PHOTO
3. DEMOLITION
4. CONSTRUCTION
5. PROPOSED ONGOING WASTE MANAGEMENT

Design Cubicle Pty Ltd • 44 Sorrell Street, North Parramatta 2151 NSW
farah@designcubicle.com.au • p: +61 2 9683 2778
Nominated Architect: Sam Min-Han Lu (#8842) •ABN: 47 116 316 333

1. EXISTING SURVEY PLAN



2.OUTLINE OF PROPOSAL

Site Address: 15-17 Coral Street, The Entrance

Applicant: Ali Construction Group Pty Ltd
Mr Ali Nasrallah
c/o Design Cubicle Pty Ltd
44 Sorrell Street, North Parramatta, 2151

Phone: (02) 9683 2778

Buildings and other structures currently on the site:

- No structures or buildings, as it's a vacant site

Brief description of proposal:

Proposed 6 storey mixed use development complex with three levels of car parking, including two basement levels. The building is comprised of 12 fully dedicated residential apartments, as well as three commercial tenancies.

The details provided on this form are for the intentions of managing waste relating to this project.

Signature of Applicant:_____Date:_____



3. DEMOLITION

This is the stage with the greatest potential for waste minimization, particularly in Sydney where there are high levels of development, relatively high tipping charges and where alternative quarry materials are located on the outskirts.

The application considers if it is possible to re-use existing building materials, or parts therefore, for the proposed use. With careful on-site sorting and storage and by staging work programs, it is possible to re-use many materials, either on-site or off. Instead of simply pulling down a building, this waste management plan encourages the practice of recycling on site. This could require a number of colour-coded or clearly labelled bins on-site rather than one size fits all.

- Location of on-site storage space for materials (for re-use) and containers for recycling and disposal will be directed on site by the builder
- Vehicle access to the site and to storage and container areas will be directed on site by the builder

MATERIALS ON-SITE		DESTINATION		
Type of Material	**Estimated Vol. (m3) or Area (m2)**	**RE-USE AND RECYCLING**		**DISPOSAL**
		ON-SITE	**OFF-SITE**	**Proposed contractor/ landfill site**
Excavation material	Nil	Nil	Nil	Nil
Green waste	6m³	Separated. Some chipped and stored on-site for re-use on landscaping.	Remainder to Aust. Native Landscapes P/L Badgerys Creek	Nil
Bricks	Nil	Clean and re-use lime mortar bricks for fill	Concrete mortar bricks to Brandown Crushing & Recycling Co.	Nil
Concrete	Nil	Crush concrete for temporary driveway	Concrete to Brandown Crushing & Recycling Co.	Nil
Timber – hardwood / pine	Nil	Re-use for formwork and studwork. Chip remainder for use in landscaping	To stockpile at Brandown transfer station, by approved waste contractor	Nil
Weatherboard/ Fibro	Nil	Break-up and remove from site	To Brandown Recycling Facilities	Nil
Plasterboard	Nil	Break-up and remove from site	To Brandown Recycling Facilities	Nil
Metals – zinc / aluminium	Nil	Nil	To Selland Parker Metal Recyclers	Nil
Tiles, glass, plastics (inc. roof tiles)	Nil	Broken tiles for fill on-site. Recycle glass.	Remainder to Brandown Recycling Facilities	Nil
Kitchen cupboards, sink, & stove	Nil	Nil	To Brandown Recycling Facilities	Nil
Bathtub vanity and closet pan	Nil	Nil	To Brandown Recycling Facilities	Nil
Asbestos	Nil	Nil	To Kari & Ghossayn Land Fill by approved waste contractor	Kari & Ghossayn Waste Depot Clifton Ave, Kemps Creek

VACANT SITE

Note: Details of site area to be used for on-site separation, treatment and storage (including weather protection) are to be directed on site by the builder.

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4. CONSTRUCTION

The following measures should have been considered when looking to save resources and minimise waste at the construction stage:

- Purchasing Policy – considering measures such as ordering the right quantities of materials and prefabrication of materials where possible;
- Reusing formwork;
- Minimising site disturbance, limiting unnecessary excavation;
- Careful source separation of off-cuts to facilitate re-use, re-sale or efficient recycling; and
- Co-ordination / sequencing of various trades

The following details are to be directed by the builder on site:

- Location of temporary storage space
- Location of Waste Storage and recycling area(s), garbage and recycling room
- Site office
- Access for vehicles
- Lunch shed
- Amenities shed

The allocated Waste Storage and recycling Area can be flexible in size and layout to cater for future changes in use. The size can be calculated on the basis of estimated waste generation rates and proposed bin sizes.

MATERIALS ON-SITE		**DESTINATION**		
Type of Material	**Estimated Vol. (m3) or Area (m2)**	**RE-USE AND RECYCLING**		**DISPOSAL**
		ON-SITE	**OFF-SITE**	**Proposed contractor/ landfill site**
Excavation material	3,738m³	Covered in section as part of demolition	To Kari & Ghossayn Land Fill (excess excavation)	Nil
Green waste	2.3m³	Covered in section as part of demolition	Remainder to Aust. Native Landscapes P/L Badgerys Creek	Nil
Bricks	3.1m³	Use for fill behind retaining walls	Remainder to Brandown Crushing & Recycling Co.	Nil
Concrete	4.7m³	Use for fill behind retaining walls & temporary access pathways	Remainder to Brandown Crushing & Recycling Co.	Nil
Timber – oregon / pine / timber pallets / particle board finishes	3.5m³	Chip for use in landscaping	Remainder to Aust. Native Landscapes P/L Badgerys Creek	Nil
Plasterboard	3.2m³	Re-use where required	Remainder to Boral Recycling 3 Thackery St, Camellia 2142	Nil
Metals – copper / aluminium	3.4m³	Nil	To Selland Parker Metal Recyclers for re-use	Nil
Other – electrical fittings, reject trade-ins, PVC plastics, cardboard,etc	4.4m³	Nil	Nil	To Collex Recycling Waste Contractors

Note: Details of site area to be used for on-site separation, treatment and storage (including weather protection) are to be directed on site by the builder.

5. PROPOSED ONGOING WASTE MANAGMENT

Proposed design of facilities for ongoing waste and recycling management:

TYPE OF WASTE TO BE GENERATED	EXPECTED VOLUME PER WEEK	PROPOSED ON-SITE STORAGE & TREATMENT FACILITIES	DESTINATION
Example: glass, paper, food waste, off cuts, etc	Litre or m^3	▪ Waste storage & recycling area	▪ Recycling ▪ Disposal ▪ Specify contractor
A. RECYCLABLES: 1. Home paper / cardboard waste 2. Glass, aluminium and plastic (bottles) PER UNIT TOTAL	120 litres approx.	There is to be a central garbage area located in the Ground Level serviced by MGB storage, accessible to all tenants. Strata Management will be responsible for transferring the bins from the central garbage area to the street for disposal on collection days, and back again to the Ground Floor bin room once emptied. 2 x (5.0m long x 1.0m wide) kerbside presentation locations not extending beyond the site boundaries & clear of any obstructions at the frontage in Torrens Avenue have been indicated for collection of MGB's.	To be collected by Council Contractors.
B. NON-RECYCLABLES: 1. Foodscraps, etc 2.Other plastics (eg. wrapping) 3. Unrecyclable waste PER UNIT TOTAL	120 litres approx.	There is to be a central garbage area located in the Ground Level serviced by MGB storage, accessible to all tenants. Strata Management will be responsible for transferring the bins from the central garbage area to the street for disposal on collection days, and back again to the Ground Floor bin room once emptied. 2 x (5.0m long x 1.0m wide) kerbside presentation locations not extending beyond the site boundaries & clear of any obstructions at the frontage in Torrens Avenue have been indicated for collection of MGB's.	To be collected by Council Contractors.

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SUMMARY (proposed 12 units) Required: ▪ 120 litres approx. per unit for recycling (collected weekly) ▪ 120 litres approx. per unit for garbage (collected weekly)	 1440 L Recycling 1440 L Garbage	Provide: • 4 x 360 litre recycle MGB bins (weekly collection) • 4 x 360 litre garbage MGB bins (weekly collection) • 1 x 240 litre organic MGB bin (fortnightly collection)	 To be collected by Council Contractors (weekly collection) To be collected by Council Contractors (weekly collection) To be collected by Council Contractors (fortnightly collection)
SUMMARY (proposed 3 x commercial tenancies, total area = 139.6 m^2) Required: Adequate bins to meet needs of the 'anticipated' Commercial Tenancies.	Subject to future DA Application for each Commercial Tenancy	9 x 360 L MGB bins & 5 x 240 L MGB bins have been accommodated in a separate commercial waste room, with collection frequency T.B.C pending servicing agreement following future DA's to cater for rubbish generation of future commercial tenancies. Exact breakdown of the bin allocation for commercial waste & recycling can be resolved once the proposed use of the tenancies is known, with bin lids able to be changed by the Building Manager to reflect changing requirements for the bin allocation based on change of use to commercial tenancies at any point after they are first allocated. This is possible as commercial waste & recycling servicing will occur via servicing agreement with private waste contractor that can be updated & adjusted at any time. The commercial waste room is to be directly accessible from each of the commercial tenancies, but is not to be accessible to residential tenants. The doorway to the waste room from the street is to remain locked at all times & is only openable by Strata Management / Building Manager / Waste Collection Company for moving bins on collection day(s) to kerbside for collection & back again.	To be collected by private waste contractors (frequency T.B.C depending on requirements of future tenancies)

NOTE: Details of on-site waste management facilities should be constructed or provided for as per plans and specifications, Council requirements & strata plan requirements.

In addition:

1. The Strata Management will prepare an Environmental Management System addressing home waste and recycling. This will include expectations and achievable objectives for sorting and separating waste. Also, a regular waste audit should be implemented.
2. An information kit for tenants followed up every 12 months.
3. The waste storage and recycling area will be located as approved by Council.
4. Interim storage for the provision of 1 days' worth of waste is to be located in the kitchen cupboards, most likely beneath the sink, in the form of pull-out bin(s) or similar, with a minimum size of 17L each for garbage & recycling.
5. The tenant will be responsible for transferring refuse to the Residential Bin Storage Room, and the Strata Management will be responsible for keeping the area clean and tidy, through the Building Manager. Access to the waste room is to remain unlocked and available to tenants at all times.
6. Strata Management / Building Manager will also be responsible for transferring the bins from the Residential Bin Storage Room on the Ground Floor to the kerbside on Torrens Avenue for disposal on collection days, and back again to the Ground Floor bin room once emptied.
7. 2 x (5.0m long x 1.0m wide) kerbside presentation locations not extending beyond the site boundaries & clear of any obstructions at the frontage in Torrens Avenue have been indicated for collection of MGB's.
8. The separate Commercial Bin Storage Room is to be directly accessible from each of the commercial tenancies, but is not to be accessible to residential tenants. The doorway to this waste room from the street is to remain locked at all times & is only openable by Strata Management / Building Manager/ Waste Collection Company for moving bins on collection day(s).
9. Strata Management will be responsible for ensuring an active agreement is in place for the servicing of the commercial waste & recycling bins at all times for the development, so long as there is at least one active occupancy for any of the 3x commercial tenancies. Number of bins & collection frequency will be negotiated as part of any future servicing agreement with a private waste contractor for provision of these services, & can be revised at any point in time if the commercial use of any tenancy changes & waste generation rates are adjusted. If need be, the Building Manager can change the colour of the lids assigned to commercial waste & recycling bins, to accommodate for any changes required & to match any adjustments then needed to the servicing agreement.
10. Clear signage for sorting rubbish disposal is to be placed in bin storage areas.

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1. Powder Coated Aluminium
Cladding, Window Hoods
Colorbond Surfmist colour
(or equivalent)

2. Render & Paint Finish -
Dulux Pure white colour
(or equivalent)

3. Render & Paint Finish -
Dulux Accord colour-concrete effect
(or equivalent)



4.Aluminium Cladding Timber Look-
Western Red Cedar colour
(or equivalent)

5. Powder Coated Aluminium
Balustrade Framing
Colorbond Windspray Color
(or equivalent)



8. Tinted Perspex
Street Awning Cover
(or equivalent)



6. Powder coated Aluminium
Windows, Door Frames , Movable Louvre
sun screens,
Window hoods, Horizontal & Vertical
Decorative trims,
Aluminium cladding, Street Awning,
Pergolas
Colorbond Monument colour
(or equivalent)



7.Stone Cladding
Sandstone
(or equivalent)

External Materials and Finishes (02/02/2022)
190955 - 15-17 Coral Street, The Entrance

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