# **Central Coast** Local Planning Panel

Central Coast Supplementary Local Planning Panel Business Paper 19 January 2022

## **Meeting Notice**

## The Supplementary Meeting Local Planning Panel of Central Coast will be held remotely - online, Wednesday 19 January 2022 at 3.00 pm,

for the transaction of the business listed below:

## 1 PROCEDURAL ITEMS

1.1	Disclosures of Interest	3
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## 2 PLANNING REPORTS- OUTSIDE OF PUBLIC MEETING

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah -	
	Mixed Use Development comprising Specialised Retail Premises,	
	Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning	
	Panel meeting 24 June 2021)	4

Donna Rygatre Chairperson

Item No:	1.1	Central Coast
Title:	Disclosures of Interest	Local Planning Panel
Department:	Governance	
19 January 2022	2 Supplementary Local Planning Panel	
Reference: F2	020/02502 - 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	Control Coost	
Title:	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)	Central Coast Local Planning Panel	
Departmen	t: Environment and Planning		
19 January 2	2022 Supplementary Local Planning Panel		
Reference:	DA/530/2019 - D14985950		
Author:	Janice Buteux-Wheeler, Senior Development Planner		
Manager:	Emily Goodworth, Section Manager Development Assessment North		
Executive:	Andrew Roach, Unit Manager, Development Assessment		

## Summary

An application was received for a Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises at 2 & 11 Bryant Drive, Tuggerah.

The Local Planning Panel considered the matter at its meeting of 24 June 2021. The matter was deferred at the meeting pending the submission of supplementary information. The panel resolved the following:

- 1 That the Local Planning Panel defer a decision regarding DA/530/2019 2 & 11 Bryant Drive - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises and request the Council to notify all adjoining owners who have not previously been notified and provide them the opportunity to make a submission on the proposal within 14 days of the notification.
- 2 The matter is to be reported back to the Panel for determination within 28 days of the closing date for submissions in accordance with 1 above.
- 3 This report should include information detailing the basis on which contributions are being levied, including the net developable area for contributions that have been paid and contributions that are proposed.

This supplementary report is submitted for the consideration of the Local Planning Panel having regard to the resolution of the 24 June 2021 meeting to be read in conjunction with the report of 24 June 2021 report, addressing all relevant matters to be considered within the provisions of the *Environmental Planning and Assessment Act 1979*.

Applicant	Aventus Tuggerah Pty Ltd c/- ADW Johnson Pty Ltd
Owner	Aventus Tuggerah Pty Ltd
Application No	DA/530/2109
Description of Land	Lot 101 and Lot 102 DP 1209157

Proposed Development			Development nage and Food	1 3	Retail
Zoning	B5 Busi	ness [	Development		
Existing Use	Car par	king, v	vacant		
<b>Employment Generation</b>	Yes				
Estimated Value	\$29,777	,000.0	00		

## Recommendation

- **1** That the additional information be considered in the Panel's determination of the application.
- 2 That the Local Planning Panel grant consent to DA/530/2019 Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises on 2 & 11 Bryant Drive Tuggerah, 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.
- 3 That Council advise those who made written submissions of the Panel's decision.
- 4 That the Council advise relevant external authorities of the Panel's decision

## Key Issues

Flooding, drainage, traffic and noise impacts.

## Precis:

Proposed Development	Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises		
Permissibility and Zoning	B5 Business Development zoning. Mixed use development combining the permissible uses of <i>business identification signage, food and drink premises</i> and <i>specialised retail premises</i>		
Relevant Legislation	Environmental Planning and Assessment Act 1979 State Environmental Planning Policy No. 64 – Advertising and Signage		

	State Environmental Planning Policy No.55 – Remediation of Land State Environmental Planning Policy (Koala Habitat Protection) 2019 Wyong Local Environmental Plan 2013 Draft Central Coast Local Environmental Plan 2018 Wyong Development Control Plan 2013	
Current Use	Car parking, vacant.	
Integrated Development No		
Submissions	Three additional submissions as a result of further notification period.	
List of all documents	Attachments:	
submitted with this report	1. Water Cycle Management Plan – Addendum Letter	
for the Panel's	Revision C December 2021	
consideration	2. LPP Report and Attachments (24 June 2021)	
	3. LPP Minutes (24 June 2021)	
	4. Updated Draft Conditions of Consent	
Report prepared by	Janice Wheeler – Senior Development Planner	
Report date	17 December 2021	

## Background

The Panel considered a Planning Report on the matter at its meeting on 24 June 2021 and resolved as follows:

PanelThat the Local Planning Panel defer a decision regarding DA/530/2019Decision- 2 & 11 Bryant Drive - Mixed Use Development comprising<br/>Specialised Retail Premises, Signage and Food and Drink Premises and:

1 Request the Council to notify all adjoining owners who have not previously been notified and provide them the opportunity to make a submission on the proposal within 14 days of the notification.

In oral submissions provided by members of the public during the determination meeting, attention was brought to the interpretation of the notification provisions of Chapter 1.2 of the *Wyong Development* 

*Control Plan 2013* (WLEP 2013). The Panel considered that it was arguable that the proposed development may be a change of use triggering a requirement to notify all adjoining land owners.

The application was notified to all adjoining property owners from 1 July 2021 to 22 July 2021. Submissions from three submitters were received.

2 The matter is to be reported back to the Panel for determination within 28 days of the closing date for submissions in accordance with 1 above.

Noted.

## 3 This report should include information detailing the basis on which contributions are being levied, including the net developable area for contributions that have been paid and contributions that are proposed.

The Panel sought clarification as to the methodology for the calculation of the contributions, having regard for historical approvals on the site.

- **Reasons**1The Panel considered that it was arguable that the proposed<br/>development may be a change of use triggering a requirement<br/>to notify all adjoining owners.
  - 2 Clarification is required regarding contributions.

## **Additional Information**

In response to the decision of the Panel at its meeting of 24 June 2021, council undertook notification of all adjoining properties, irrespective of the use of the land, in accordance with Chapter 1.2 of *Wyong Development Control Plan 2013*. The notification period commenced on 1 July 2021 and finished on 22 July 2021. During the submission period, submissions from three submitters were received.

Following Council's consideration of the submissions, Council requested that the applicant provide a response to submissions document in relation to matter's raised regarding storm water, overland flow and localised flooding. This document is titled Water Cycle Management Plan Addendum Letter. The latest revision of this document is Revision C.

## 20 August 2021:

• Council attended an online meeting with the Applicant to request the applicant respond to submissions raised during the notification period.

## 31 August 2021:

 Received Applicant's Water Cycle Management Plan – Addendum Letter Revision A.

## 20 September 2021:

• Council assessed the information, and the following summary of comments is provided:

The proposed split system is a better option than the originally presented option because it allows for the minor system to drain the proposed development and intercept the overland flows from the adjoining lots that are impacted by the proposed filling. The larger culvert independently caters for the major flow when Bryant Drive becomes inundated.

The submission from ADW Johnson provides the outcome of the additional work that they have undertaken but for transparency some of the workings should be provided in to report to support the solution. This information is required and should be provided. The need for a full flood study was raised in submissions.

The flood relief culvert size, its capacity flowing full and with 25% blockage has been identified. A direct correlation between the existing bypass capacity and culvert capacity has been made which indicates an improvement in that sense, however that improvement is not quantified. Clarification of the improvement is required. This is dependant on the inlet capacity of Pit 8/3 and the piped flow from Pits 8/1 and 8/2 with their associated entry types and blockage factors.

The independent lot drainage system should also be supported by the calculations to prove its efficiency. The type of grating system for the overland flow connection points must be considered from the perspective of children and pet safety. This in turn may impact inlet capacities and system efficiency. The system has generally been designed for the 5% rain event, however consideration should be given to the performance of the system in the 1% event to ensure that there are no severe adverse impacts (inundation of floor levels). The duration of inundation for the 1% draining through the system should be provided, particularly for the properties identified in the Bryant Drive catchment.

The information should be readily available as it was used to provide the outcome summary in the WCMP.

This information was provided to the applicant to respond.

## 15 October 2021:

 Received Applicant's Water Cycle Management Plan – Addendum Letter Revision B.

## 24 November 2021:

• Council assessed the information and requested that the applicant address ground water issues identified in submissions.

## 30 November 2021:

• Copy of Water Cycle Management Plan – Addendum Letter Revision B provided to submitters.

## 2 December 2021:

 Received Applicant's Water Cycle Management Plan – Addendum Letter Revision C, with clarification of geotechnical information and addressing ground water queries of Council.

## 7 December 2021:

 Council's engineer and planner met with objectors to discuss water management concerns and provide information on the response to submissions document (Water Cycle Management Plan – Addendum Letter Revision C) that was provided by the applicant.

## 8 December 2021:

• Council requests survey plan with spot levels.

## 9 December 2021:

• Received Applicant's survey plan.

## <u>10 December 2021:</u>

• Copy of survey plan with spot levels provided to submitters.

## **RESPONSE TO PANEL DECISION**

In response to the matters raised by the Panel in the deferral of decision of 24 June 2021 the following is provided:

# 1 Request the Council to notify all adjoining owners who have not previously been notified and provide them the opportunity to make a submission on the proposal within 14 days of the notification.

In response to the outcome of the Panel meeting of 24 June 2021, council undertook notification of all adjoining properties, irrespective of the use of the land. The notification period commenced on 1 July 2021 and finished on 22 July 2021. During the submission period, submissions from three submitters were received.

Following Council's consideration of the submissions, Council requested that the applicant provide a response to submissions document in relation to matter's raised regarding storm water, overland flow and localised flooding. This document is titled Water Cycle Management Plan Addendum Letter. The latest revision of this document is Revision C.

A summary of the issues raised in submissions and the responses of both the applicant and Council are provided in the table below.

Submission	ADW Response	Council Comment
	(Applicant)	
1 (D14759142)		
Detailed survey shows:	ADW Johnson agrees that	The revised drainage
Water would need to reach	any water ponding within	strategy now includes the
an elevation of between 4.2	Bryant Drive would need to	extension of the flood relief
and 4.3m AHD before it	reach between RL 4.2m and	culvert to the Bryant Drive
begins to flow into the	4.3m prior to overtopping	road boundary with a low
southern driveway	the driveway of the	flow interconnection to the
	adjoining property. It is	Bryant Drive Drainage
	however, noted that the	system.
	drainage system within the	

	adjoining property connects to the stormwater system in Bryant Drive and has a lower finished surface level of between RL 4.04m and 4.11m. This results in water entering the adjoining property via pit surcharge, when water within Bryant Drive reaches RL 4.04m (approximately 20mm after it enters the existing swale).	This culvert begins to operate at RL 3.8m AHD and the main inlet pit begins operating at RL 4.0m AHD. The applicant has indicated that this maintains/reduces the impact of the 1% AEP flood level.
The Survey shows a drainage depression / swale with elevations of between 3.68 and 4.02m AHD along the north-western boundary of the Aventus Site	Whilst the survey shows that there is a drainage depression / swale along the northern boundary of the Aventus site, it should be noted that the survey also shows that the swale does not explicitly grade to the East and currently grades in a "sawtooth" pattern with the lowest point being RL 3.68 (towards the Bryant Drive end) and the highest being RL 3.88m (towards the eastern end). This means that the depression / swale would not discharge water to the east until the depression has filled up to RL 3.88 (noting that the swale would not start filling up until the flood levels reach RL 4.02m). Despite the above, ADW Johnson proposes to amend the proposed design to ensure that, at a minimum, the capacity of the existing swale is maintained.	The revised drainage strategy (Rev C) addresses this by the extension of the flood relief culvert to the Bryant Drive road boundary. The strategy includes a low flow interconnection to the Bryant Drive Drainage system that begins to operate at RL 3.8m AHD. The main inlet pit begins operating at RL 4.0m AHD.

This flow path creates a direct link from Bryant Drive frontage (4.02m AHD) through to sag location at the rear of 19-21 Bryant Drive (3.74m AHD) and would become active prior to inundation through the adjoining property.	ADW Johnson agree that this drainage link would convey flows prior to inundation of the adjoining property, however as mentioned above, this would not occur until the swale fills up past RL 3.88m. It is also noted that the swale would break its banks at approximately RL 4.2m and therefore has a minimal flow capacity and the drainage connection from the adjoining property to Bryant Drive results in water entering the site from RL 4.04m.	This is addressed in the comments above. The revised strategy has been designed to address the low point on Bryant Drive and convey water towards the rear of the development site consistent with the contributions plan.
The ADW Johnson report references the Flood Impact Assessment Report, prepared by SKM for the Pacific Highway and Wyong Road Intersection Upgrade	As mentioned in Section 2, the original concept engineering works were based upon a 1% AEP flood level of RL 3.8m. After the DA had been lodged with Council, ADW Johnson were provided the SKM report and were advised that this was to be adopted as the location of overland flow path. Accordingly, the concept engineering design made provision for a stormwater culvert at the back of the adjoining property to allow flows to continue to the east. Whilst ADW Johnson were aware of the drainage swale along the northern boundary and that it was	The revised Water Cycle Management Plan and Addendum Letter (Revision C) contain the necessary flood impact consideration having regard for the very localised catchment. This includes regard for the SKM Flood Impact Assessment Report for the Pacific Highway and Wyong Road Intersection Upgrade. Mitigation measures for the interim scenario include the extension of the flood relief culvert to the Bryant Drive road boundary with a low flow interconnection to the Bryant Drive Drainage system.

What the current application is proposing is to delete the existing drainage swale arrangement, fill the land and re-direct the overland flow from the Aventus land to Blueview's land (adjoining land)	We are proposing to introduce a flood relief culvert independent to the proposed stormwater system capable of discharging more runoff than the existing swale to improve the existing flooding in the adjoining property. This statement is incorrect as the application is not proposing to redirect flows to the adjoining property. The proposed filling on the subject site is required to be undertaken in accordance with the district stormwater	The contributions plan for the area includes a drainage strategy that relies upon filling the land to achieve drainage channels. The proposal includes filling the land as per the contributions plan, and direction of storm water to the east via a series

	The amended design will ensure that the subject development will not adversely impact on any adjoining property.	of land as required by the contributions plan. The revised drainage strategy includes the extension of the flood relief culvert to the Bryant Drive road boundary with a low flow interconnection to the Bryant Drive Drainage system.
Deleting the existing open culvert arrangement and relocating the overland flow path to a 'higher' location (i.e. Blue views site) not only results in flooding to the adjoining property but also greater flooding to surrounding properties.	Based upon the regional flood RL provided by Council (RL 3.8m) the filling of the drainage swale would not impact on flooding within Bryant Drive in events up to and including the 1% AEP event. Despite the above, ADW Johnson proposes to amend the proposed design to provide a flood relief culvert that improves the existing flooding of the adjoining property.	The revised drainage strategy now includes the extension of the flood relief culvert to the Bryant Drive road boundary with a low flow interconnection to the Bryant Drive Drainage system.
2 – (D14767780)		
There is no drainage provided for Lot 13 Bryant Drive to the East. The small pipe at the north western corner of this lot is inadequate other than from minor rain events	The Bryant Drive / Lake Road intersection design plans show an interelement drainage connection back to Bryant Drive, which is confirmed in the public submission. As such it is considered that Lot 13 has a connection to Bryant Drive and not to the east. Despite this, the original proposal allowed for a connection to this property, however it is understood that this	The revised drainage strategy proposes 3 separate drainage systems providing a direct connection for all lots at ground level to collect surface water. As a result of the condition of consent that requires the removal of the parking that from the Lake Road accessway, the surface water connection point will be

	clear. Accordingly, the design drawings have been amended to provide a clear connection point to allow overland flows to continue to drain east and to allow for future development in accordance with the district stormwater Contributions plan. Refer to section 5.0 for details of the amended design.	directly to the boundary with the neighbour, however the neighbour will retain the right to drain into the sytem.
Wyong Council's original Contributions Plan require 13 Bryant Drive to drain to the east to maintain this protection to our properties	The Contributions Plan is based upon a fully developed scenario in which Lot 13 (and all surrounding properties) have been filled to above the flood level. This filling would enable fall on Lot 13 to be developed to the east. The Contributions plan is irrelevant in determining the flow of water in the existing scenario, where not all properties have yet been filled and developed as per the Contributions Plan. The design prepared in response to submissions offers an appropriate interim arrangement whereby current flows are retained until such time as the adjoining sites are also filled.	The drainage scheme in the contributions plan relies upon the filling of land in order to achieve the overall drainage strategy, and does not identify drainage management in the "interim scenario". A site specific drainage strategy for the interim is proposed by the applicant. This strategy does not frustrate the future development of adjoining properties in accordance with the strategic plans for the area.
Pooling and damming along our eastern boundary, and block the natural flow of surface and ground water	Subsoil drainage has been provided.	Council's engineer and planner have further considered surface and subsurface drainage for properties on Lake Road as

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises,	
	Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) (contd)	

		a result of the filling of part
		of the site fronting Lake
		Road to facilitate truck
		access. Having regard for
		the concerns raised in public
		submissions, as a result of
		Council's meeting with
		submitters, and having regard for the information
		provided within the Water
		Cycle Management Plan
		Addendum Letter, additional
		conditions of consent have
		been imposed that remove
		surplus areas of car parking
		from the lot fronting Lake
		Road, increasing the setback
		of areas of fill to 4 metres
		from the side boundaries
		with Lake Road properties,
		and allowing additional
		opportunities to manage
		storm water impacts
		through water quality
		infiltration measures such as
		a bioretention filter and
		subsurface drainage
		pipework.
		Surface water connections
		to the proposed drainage
		system will still be provided
		at this location.
Shadow and dampness from	Not addressed in additional	Although half of the
the retaining wall and	supplementary information.	boundary retains very close
fencing that provides privacy,		to existing levels, there are
security and soundproofing		impacts associated with the
		acoustic fence on top of fill
		towards the rear of the
		neighbour's property.
		Having regard for the
		concerns of the neighbour,
		the car parking in this

		location is not approved for the interim scenario until such time as adjoining properties are developed. The truck access will be permitted with a pedestrian pathway, and is to be acoustically attenuated with a fence, however the car parking is not approved. As a result of conditions of consent the fill, retaining structures and acoustic fence will be required to be located at a minimum distance of 4 metres from the common boundary with the neighbour Lot 3 and Lot 5 and Lot 13 DP5536 ( <b>Condition 2.20</b> ).
Inappropriate to establish a car park immediately adjoining a residence.	Not addressed in additional supplementary information.	The car parking is deleted via conditions of consent ( <b>Condition 2.20</b> ). The use of the part of the site fronting Lake Road in proximity to the dwellings on Lot 3, Lot 5 and Lot 13 DP5536 is limited to delivery access.
The images provided in the development application showing drains on the "finger"are misleading and definitely do not show drainage for the adjoining lots 3 (our house) and Lot 13 DP5536. All other adjoining properties have future drainage supplied but ours do not.	We agree that the proposed drainage connections are not clearly shown on the current drawings, however, also confirm that these connections have always been part of the proposed scheme. The amended design outlined within section 5.0 clearly demonstrates connection	The updated Water Cycle Management Plan Addendum Letter (Revision C) indicates adequate surface drainage connection points are proposed for all adjoining properties.

	points for all properties adjoining the Aventus site.	
Safety concern for heavy vehicles and cars where there is no guard rail	Not addressed in additional supplementary information.	A guard rail will be required to be provided. This is referenced in AS 2890 and is a condition of consent ( <b>Condition 2.11</b> ).
How does the boom gate location work with trucks turning from Lake Road	Not addressed in additional supplementary information.	The boom gate is required to be located with sufficient queuing inside the property boundary to accommodate the length of the longest permitted vehicle (semi- trailer 19m). This is imposed as a condition of consent ( <b>Condition 2.11</b> ).
How is noise policed	Not addressed in additional supplementary information.	The conditions of consent 2.19, 3.14, 4.2, 5.4, 5.5, 6.3 address construction and operational noise impacts. Non-compliance with operational conditions of consent in relation to noise impacts can be investigated by Council's compliance officers in response to a noise complaint.
3 – (D14751641) Traffic impacts and safety and efficiency of the Bryant Drive and Wyong Road intersection	Not addressed in additional supplementary information.	Refer to comments in relation to traffic contained within the assessment report of 24 June 2021 provided as <b>attachment 2</b> .

# 2 The matter is to be reported back to the Panel for determination within 28 days of the closing date for submissions in accordance with 1. above.

Noted. In order to provide the applicant an opportunity to adequately address the matters raised in submissions, this timeframe was extended.

# 3 This report should include information detailing the basis on which contributions are being levied, including the net developable area for contributions that have been paid and contributions that are proposed.

The Panel require clarification as to the methodology for the calculation of the contributions, having regard for historical approvals on the site.

Council's contributions officer has provided further information in relation to the calculation of contributions for the information of the Panel:

The contributions have been re-calculated to take into account the latest indexing and to include credit for the roads and drainage contributions that were previously paid under Development Application 2438/2000.

The application falls under Wyong District s7.11 Contributions Plan. The following contributions are applicable:

Tuggerah Industrial estate stage 3 drainage land & works Tuggerah Industrial Estate drainage – segment D (0.92 ha only) Roads – Wyong Rd/Bryant Dr/Pacific Hwy/ Cobbs Rd Roads – Tuggerah Industrial Estate stage 3

The total site area is 3.55 hectares. The contributions have been calculated based on a total net developable area (NDA) of 1.45 hectares.

The NDA takes into account a credit for the roads and drainage contributions paid over that part of the site occupied by the existing carpark. The previous contributions relating to the existing carpark, were paid under DA/2438/2000, and were based on an NDA of 2.1 hectares.

Only part of the proposed development (0.92 ha) is within the drainage scheme for segment D, and that specific contribution has been calculated based on an NDA of 0.92 ha (instead of 1.45 ha).

The total s7.11 contributions are **\$272,534.66**. The contributions are subject to quarterly indexation.

## Conclusion

The application was re-notified to surrounding properties and three submissions were received. The applicant has submitted a Water Cycle Management Plan Addendum Letter (Revision C) in response to the submissions raised, and Council have met with submitters in relation to this document.

The additional storm water measures proposed by the applicant in this document have been further revised via conditions of consent to ensure an adequate storm water management outcome at the interface with adjoining properties. A detailed explanation of the calculation of s7.11 contributions has been provided and the recommended condition of consent has been revised having regard for indexing.

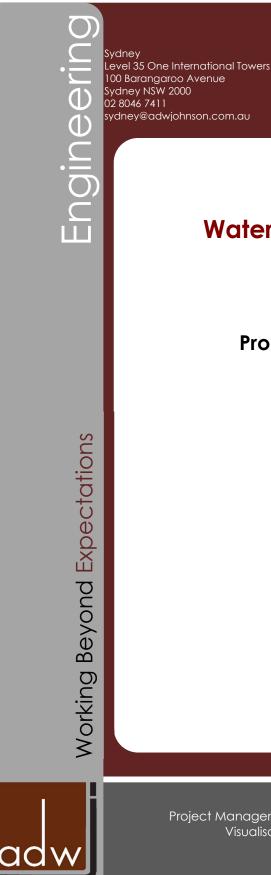
The original assessment report, which was considered by the Panel on 24 June 2021, and this supplementary report, have had regard for the matters for consideration of Section 4.15 of the *Environmental Planning & Assessment Act 1979* and all relevant instruments, plans and policies. The potential constraints of the site have been assessed and it is considered that the site is suitable for the proposed development.

Subject to the imposition of appropriate conditions, it is recommended that the Local Planning Panel grant consent to DA/530/2019 for a Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises on 2 & 11 Bryant Drive, Tuggerah.

## Attachments

1 🕂 🔛	Water Cycle Management Plan - Addendum Letter - Revision C	D14969458
21 🖾	LPP Report & All Attachments 24 June 2021	D14987653
3.	Minutes of LPP meeting 24 June 2021 with Item No 4.1 only	D14987688
4 <u>.</u> ]	Revised Recommended Conditions of Consent	D14985743

## Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink



nnsor

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## Water Cycle Management Plan – Addendum Letter

## Proposed Bulky Goods Development

Property: Lot 102 DP1209157 11 Bryant Drive, Tuggerah

Applicant: Aventus Tuggerah Pty Ltd

December 2021

Project Management • Town Planning • Engineering • Surveying Visualisation • Social Impact • Urban Planning

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## Document Control Sheet

Issue No.	Amendment	Date	Prepared By	Checked By
А	Initial Issue	August 2021	BM	ND
В	Council Comments	October 2021	BM	ND
С	Council Comments	December 2021	BM	ND

#### Limitations Statement

This report has been prepared in accordance with and for the purposes outlined in the scope of services agreed between ADW Johnson Pty Ltd and the Client. It has been prepared based on the information supplied by the Client, as well as investigation undertaken by ADW Johnson and the sub-consultants engaged by the Client for the project.

Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

This document is solely for the use of the authorised recipient. It is not to be used or copied (either in whole or in part) for any other purpose other than that for which it has been prepared. ADW Johnson accepts no responsibility to any third party who may use or rely on this document or the information contained herein.

The Client should be aware that this report does not guarantee the approval of any application by any Council, Government agency or any other regulatory authority.

Water Cycle Management Plan – Addendum Report Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

Water Cycle Management Plan - Addendum Lett

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## **Executive Summary**

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed bulky goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site).

Post lodgment of the initial DA and Water Cycle Management Plan, a number of public submissions have been received, specifically in relation to the stormwater management and the potential impact of the development on existing overland flow paths. This report has been prepared to address the public submissions and outline the modifications to the design to relieve concerns surrounding the proposal.

The provision of a flood relief culvert from Bryant Drive through the Aventus site ensures that the capacity of the existing drainage path is not only maintained but improved. The provision of the flood relief culvert ensures that any flows overtopping Bryant Drive can continue to drain to the east and ensures that adjoining properties are not adversely impacted during extreme storm events by the filling of the subject site.

The provision of property connections and a separated internal drainage system ensures that overland flow from the adjoining properties can continue to flow to the east whilst also providing provision for the connection of the same properties to the regional conveyance system (generally in accordance with the district Contributions Plan). A subsoil drainage system will ensure that no water will pond within the upper layers of topsoil.

The amended design adequately addresses Council's updated requirements and the concerns raised by the public submissions.

#### Attachment 1

Water Cycle Management Plan - Addendum Lett

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Appendix AWater Cycle Management PlanAppendix BPublic SubmissionsAppendix CProposed Design Drawings



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## 1.0 Introduction

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed Bulky Goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site). The preparation of the management plan was undertaken to accompany a Development Application (DA) required for the proposed development.

Post lodgment of the initial DA and Water Cycle Management Plan, a number of public submissions have been received, specifically in relation to the stormwater management and the potential impact of the development on existing overland flow paths.

It is important to understand that the subject site is identified as part of the "Tuggerah Industrial Estate" within the Wyong District Development Contributions Plan (the Plan). Within this Plan, Council has made provision for filling to create a number of building pads. The subject site is identified as part of Building Pad 1, and the objectors are typically also within the same building pad area, or are within the directly adjoining Building Pad 2 area.

The filling within the Plan is intended to address flooding issues, and to facilitate drainage of what is otherwise a very flat expanse of land.

With land ownership being fragmented throughout the Plan area, it is natural that individual proposals may need to address what should be regarded as temporary impacts upon adjoining, as yet undeveloped sites. This updated Water Cycle Management Plan has been designed to make such provision, with the primary aims of not exacerbating existing flood issues for adjoining sites, and also ensuring that provision is made for these sites to continue to be able to drain through the subject site until such time as they too are filled and developed as per the Plan.

This report has been prepared to address the public submissions and outline the modifications to the design to relieve concerns surrounding the proposal. This addendum letter should be read in conjunction with the initial Water Cycle Management Plan attached as **Appendix A**.



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## 2.0 Current Design Criteria

The current design, as outlined within the original stormwater management report, was developed based upon a set of criteria determined from a pre-DA meeting with Council and a review of the relevant Council Development Control Plans and engineering guidelines.

With specific focus on overland flows and flooding, the current design was based upon the following criteria:

- 1% AEP flood level RL 3.8m;
  - Provided by Central Coast Council on 31st January 2019;
  - It is understood that this level is based upon the Wyong River Floodplain Risk Management Plan;
- Flood relief to be provided to drain the overland flow path identified on the SKM flood report for the Pacific Highway and Wyong Road intersection upgrade;
  - Report was provided by Central Coast Council and ADW Johnson were advised that the design was required to consider this flow path;
- Ensure that the Contributions Plan (or similar system) could be constructed in the future;
  - The system was to be utilised during both the interim and final scenarios.

Further details on each of the abovementioned parameters can be seen in the following sections.

## 2.1 ORIGINAL DESIGN PARAMETERS

The key elements of the abovementioned criteria can be seen in the following sections:

#### 2.1.1 1% AEP Flood Level

The 1% AEP flood level of RL 3.8m was assessed against the verge levels of Bryant Drive to determine if any overland flow paths would be blocked by the filling associated with the proposed development.

This analysis indicated that the lowest verge level along Bryant Drive is RL 4.02m and that it is located at the entry to the existing drainage swale adjacent to the northern verge of the Aventus site.

Given the verge level was above the 1% AEP flood level it was considered that the filling of the Aventus site would not have an impact on flood waters within Bryant Drive and therefore would not adversely impact any adjoining properties.

#### 2.1.2 SKM Report Overland Flow Path

As instructed by Central Coast Council, the overland flow path identified on the SKM report was considered and a flood relief culvert provided at the back of the adjoining property to ensure that it could continue to drain towards the east.

Based upon discussions with Council it was determined that the culvert should be sized to convey the 1% AEP flood event from the local Bryant Drive catchment, including a 25% inlet blockage factor.

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#### 2.1.3 Contributions Plan

The district stormwater Contributions Plan outlines that an open swale, capable of conveying the 20% AEP storm event, is to be constructed along the northern boundary of the Aventus site.

After discussions with Council, it was agreed that a modified conveyance system could be adopted and therefore the flood relief culvert was proposed to be utilised for the purpose of regional conveyance as well as flood relief.

To enable future developments to connect to this system, connections were provided to all adjoining properties. These connections were provided at the existing ground level to ensure that natural flow paths were not blocked during the interim scenario (pre development of the surrounding properties).



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## 3.0 Public Submissions

As mentioned in Section 1.0, a number of public submissions were received in relation to the proposed development. The majority of the concerns raised within the public submissions centred around the stormwater management proposal and the potential impacts of the development on the existing overland flow paths within the area.

The following sections outline the key items from each of the submissions and ADW Johnson's responses to each of the concerns. It should be noted that the extracts from the submissions outlined below are partial only and the entire submissions, attached as **Appendix B**, should be read in conjunction with this report. This report only considers flooding related items, with other items raised to be addressed in separate documentation, or having already been addressed separately by Council.

## 3.1 PUBLIC SUBMISSION 1 – D14759142

The key elements contained within Public Submission 1 and ADW Johnsons responses are outlined below. It is noted that further details surrounding items within the ADW Johnson responses can be seen in Section 5.0 of this report.

- 1. Detailed survey shows:
- a. Water would need to reach an elevation of between 4.2 and 4.3m AHD before it begins to flow into the southern driveway

ADW Johnson agrees that any water ponding within Bryant Drive would need to reach between RL 4.2m and 4.3m prior to overtopping the driveway of the adjoining property. It is however, noted that the drainage system within the adjoining property connects to the stormwater system in Bryant Drive and has a lower finished surface level of between RL 4.04m and 4.11m. This results in water entering the adjoining property via pit surcharge, when water within Bryant Drive reaches RL 4.04m (approximately 20mm after it enters the existing swale).

b. The Survey shows a drainage depression / swale with elevations of between 3.68 and 4.02m AHD along the north-western boundary of the Aventus Site

Whilst the survey shows that there is a drainage depression / swale along the northern boundary of the Aventus site, it should be noted that the survey also shows that the swale does not explicitly grade to the East and currently grades in a "sawtooth" pattern with the lowest point being RL 3.68 (towards the Bryant Drive end) and the highest being RL 3.88m (towards the eastern end). This means that the depression / swale would not discharge water to the east until the depression has filled up to RL 3.88 (noting that the swale would not start filling up until the flood levels reach RL 4.02m).

Despite the above, ADW Johnson proposes to amend the proposed design to ensure that, at a minimum, the capacity of the existing swale is maintained.

c. This flow path creates a direct link from Bryant Drive frontage (4.02m AHD) through to sag location at the rear of 19-21 Bryant Drive (3.74m AHD) and would become active prior to inundation through the adjoining property.

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ADW Johnson agree that this drainage link would convey flows prior to inundation of the adjoining property, however as mentioned above, this would not occur until the swale fills up past RL 3.88m. It is also noted that the swale would break its banks at approximately RL 4.2m and therefore has a minimal flow capacity and the drainage connection from the adjoining property to Bryant Drive results in water entering the site from RL 4.04m.

2. The ADW Johnson report references the Flood Impact Assessment Report, prepared by SKM for the Pacific Highway and Wyong Road Intersection Upgrade

As mentioned in Section 2, the original concept engineering works were based upon a 1% AEP flood level of RL 3.8m. After the DA had been lodged with Council, ADW Johnson were provided the SKM report and were advised that this was to be adopted as the location of overland flow path. Accordingly, the concept engineering design made provision for a stormwater culvert at the back of the adjoining property to allow flows to continue to the east.

Whilst ADW Johnson were aware of the drainage swale along the northern boundary and that it was likely to convey overflows from Bryant Drive, given the 1% AEP flood level provided by Council (RL 3.8m) and the Bryant Drive verge level (4.02m), it was clear that the filling of this depression would not impact on the flow of flood waters in the 1% AEP event. The stormwater culvert was therefore provided to cater for flows from the adjoining site and for future connections in accordance with the district stormwater Contributions plan.

We are proposing to introduce a flood relief culvert independent to the proposed stormwater system capable of discharging more runoff than the existing swale to improve the existing flooding in the adjoining property.

 What the current application is proposing is to delete the existing drainage swale arrangement, fill the land and re-direct the overland flow from the Aventus land to Blueview's land (adjoining land)

This statement is incorrect as the application is not proposing to redirect flows to the adjoining property. The proposed filling on the subject site is required to be undertaken in accordance with the district stormwater Contributions Plan as discussed within the Introduction at Part 1.0 of this document. Further, the overland flow path identified on the adjoining property is not being proposed by the proponent, but as outlined previously, was advised to be adopted by Council.

The amended design will ensure that the subject development will not adversely impact on any adjoining property.

4. Deleting the existing open culvert arrangement and relocating the overland flow path to a 'higher' location (i.e. Blueviews site) not only results in flooding to the adjoining property but also greater flooding to surrounding properties.

Based upon the regional flood RL provided by Council (RL 3.8m), the filling of the drainage swale would not impact on flooding within Bryant Drive in events up to and including the 1% AEP event.

Despite the above, ADW Johnson proposes to amend the proposed design to provide a flood relief culvert that improves the existing flooding of the adjoining property.

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In summary, the main issue of concern raised within the first submission is that the filling of the existing drainage swale will result in overland flows overtopping Bryant Drive impacting on the adjoining properties, specifically the property immediately to the north of the Aventus site.

Despite the flood RL provided by Council indicating that in storm events up to and including the 1% AEP event flows within Bryant Drive would not overtop the verge level, it is proposed to provide a new flood relief culvert adjacent to the existing low point to exceed the capacity of the existing drainage swale. Details of this design are provided within section 5.0.

## 3.2 PUBLIC SUBMISSION 2 – D14767780

The key elements outlined within Public Submission 2 and ADW Johnson's responses are outlined below:

1. There is no drainage provided for Lot 13 Bryant Drive to the East. The small pipe at the north western corner of this lot is inadequate other than from minor rain events....

The Bryant Drive / Lake Road intersection design plans show an interallomtent drainage connection back to Bryant Drive, which is confirmed in the public submission. As such it is considered that Lot 13 has a connection to Bryant Drive and not to the east.

Despite this, the original proposal allowed for a connection to this property, however it is understood that this connection was not made clear. Accordingly, the design drawings have been amended to provide a clear connection point to allow overland flows to continue to drain east and to allow for future development in accordance with the district stormwater Contributions plan. Refer to Section 5.0 for details of the amended design.

2. Wyong Council's original Contributions Plan require 13 Bryant Drive to drain to the east to maintain this protection to our properties....

The Contributions Plan is based upon a fully developed scenario in which Lot 13 (and all surrounding properties) have been filled to above the flood level. This filling would enable fall on Lot 13 to be developed to the east. The Contributions plan is irrelevant in determining the flow of water in the existing scenario, where not all properties have yet been filled and developed as per the Contributions Plan. The design prepared in response to submissions offers an appropriate interim arrangement whereby current flows are retained until such time as the adjoining sites are also filled.

3. The images provided in the development application showing drains on the "finger" are misleading and definitely do not show drainage for the adjoining lots 3 (our house) and Lot 13 DP5536. All other adjoining properties have future drainage supplied but ours do not.

We agree that the proposed drainage connections are not clearly shown on the current drawings, however also confirm that these connections have always been part of the proposed scheme The amended design outlined within Section 5.0 clearly demonstrates connection points for all properties adjoining the Aventus site.



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 This proposed development will completely block the natural flow of both surface water and groundwater......

The proposed culvert connections will ensure that surface flows are not blocked by the development.

Preliminary geotechnical information indicates that the underlying soils associated with the subject property and the neighbouring properties consist largely of impermeable clays which will result in very minimal water infiltrating the soils. Despite this, it is proposed to provide a subsoil drainage system to ensure that any water seeping into the topsoil layer will be captured and conveyed to the drainage system.

In summary, the main issue of concern (from a stormwater perspective) raised within the second submission is that the filling of the "finger" of land to Lake Road will inhibit the natural conveyance of overland flows and cause ponding within adjoining properties.

It is noted that the filling of the "finger" is required under the Contributions plan strategy and therefore is required to allow for future development of the area. Once the adjoining properties are developed and filled (timing unknown), there will be no overland flow issue. To alleviate the potential impact during the interim scenario, the amended design provides connection points to all properties adjoining the Aventus site, including a subsoil drainage system.

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## 4.0 Council Requirements

Upon receipt and review of the public submissions, ADW Johnson and Central Coast Council had a meeting on Friday 20<sup>th</sup> August to discuss the project and the concerns of the adjoining residents.

At this meeting, Central Coast Council provided ADW Johnson with a set of requirements to be considered in any amended design to address the public submissions. The following key elements are to be considered in any amended proposal:

- The amended design is to address the filling of the drainage channel and either show that the filling of the channel has no impact on adjoining properties, or provide an alternate system to, at a minimum, match existing conditions (ideally improve existing conditions);
- Future and interim stormwater connection points are to be provided to all adjoining properties;
  - The connection points are to not increase inundation on the adjoining properties through backflow issues;
  - $_{\odot}$   $\,$  The system should consider capacity for around a 5% AEP event;
- The proposal is to ensure that natural flow paths, including groundwater are not blocked;
- The proposal is to consider the flow of water once the adjoining properties have been filled in accordance with the district stormwater Contributions Plan.

An amended design has been prepared to ensure that the concerns of the adjoining residents have been clearly addressed and Councils updated requirements considered. The amended proposal is outlined in Section 5.0.

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## 5.0 Amended Design

An amended stormwater strategy has been developed to ensure that the concerns raised by the adjoining residents and Council's updated requirements have both been addressed. The amended design is outlined in the following sections.

## 5.1 DESIGN SUMMARY

The amended design has been based upon achieving the key requirements set out by Council and fundamentally consists of two (2) elements:

- Flood culvert to convey any flows overtopping Bryant Drive in extreme events;
- Stormwater connection points to adjoining properties;
  - This system is split into two (2) systems to convey the Bryant Drive and Lake Road lots separately (refer Section 5.3 for details);
  - This system was designed to cater for both the future development in accordance with the district stormwater Contributions Plan and the interim scenario to avoid blocking natural flow paths.

The following sections outline the design of the proposed system along with the compliance with Council's key requirements.

## 5.2 BRYANT DRIVE FLOOD RELIEF CULVERT

The Bryant Drive flood relief culvert has been provided as a relief point to enable any flows overtopping Bryant Drive to continue to drain towards the east and ensure that the existing drainage path is maintained.

The flood relief culvert is to address the following key requirements provided by Council:

- The amended design is to address the filling of the drainage channel and either show that the filling of the channel has no impact on adjoining properties or provide an alternate system to, at a minimum, match existing conditions (ideally improve existing conditions);
- The proposal is to ensure that natural flow paths are not blocked;
- The proposal is to consider the flow of water once the adjoining properties have been filled in accordance with the district plan.

The following sections outline the design of the flood relief culvert.

## 5.2.1 Existing Drainage Swale

To facilitate the development of the Aventus site, and to comply with the intent of the district stormwater Contributions Plan, (i.e., fill above the flood planning level) the existing drainage swale will be filled in. The filling of this swale has the potential to block any flows that overtop Bryant Drive in extreme flood events (noting the significant point that the 1% AEP flood level is RL 3.8m and the verge level RL 4.0m).

To ensure that the proposed culvert system is, at a minimum, matching existing conditions, a capacity analysis of the existing swale has been undertaken.

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To assist in this analysis, a review of the detail survey provided within submission 1 was undertaken and this identified the following key levels to be considered in any analysis:

- RL 4.02m The level at which flows will overtop Bryant Drive and enter the drainage swale;
- RL 3.68 the lowest point of the existing drainage swale base;
- RL 3.88 the highest point of the existing drainage swale base;
- RL 4.2 the level at which flows would break the bank of the drainage swale and enter the adjoining property to the north;
- RL 4.25 the level at which flows would overtop the adjoining property's driveway;
- RL 4.04 the level at which flows would enter the adjoining property through the existing drainage system.

These key levels and additional elements to consider are highlighted on ESK 014 which is attached within **Appendix C**.

In addition to the abovementioned levels, it can also be seen from the provided survey plan that the existing drainage swale does not grade out to the east and is in fact grading in a "sawtooth" pattern. This means that water will pond within the swale until it reaches RL 3.88m.

Given the swale does not grade out, an analysis has been undertaken to determine the capacity of the existing swale based upon the flow of water once ponding to RL 3.88m has been achieved. Based upon the detail survey, a longitudinal swale of grade of 0.4% has been adopted downstream of the high point. The Manning's calculation parameters can be seen in **Table 1** below.

Parameter	Value	
Base Width	0.1m	
Side Slopes	1V in 3H	
Longitudinal Grade	0.4%	
Manning's 'n'	0.035	
Maximum Flow Depth	0.32m	

## Table 1: Existing Drainage Swale Parameters

The maximum flow depth outlined in **Table 1** above was calculated based upon the highest point of the swale (RL 3.88m – the point at which the flows start flowing to the east) and the point at which the flows break the bank of the swale and enter the adjoining property (RL 4.2).

Based upon the parameters above, a Manning's Calculation was performed to determine the flow capacity of the swale at 0.4% longitudinal grade. The results of this analysis can be seen in **Table 2** below.

## Table 2: Existing Drainage Swale Flow Capacity

•	Longitudinal grade	Flow Capacity (m <sup>3</sup> /s)
	0.4%	0.180

The flow capacity outlined within **Table 2** above will be used as a baseline that the culvert system will need to be, at a minimum, match.



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#### 5.2.2 Proposed Culvert System Capacity

The proposed culvert system has been designed to replace the existing drainage swale to ensure that any flows overtopping Bryant Drive can continue to be conveyed to the east and do not adversely impact adjoining properties.

The culvert has been located in a similar location to the existing drainage swale and will provide a connection point to Bryant Drive and allow flows to be conveyed to the east.

Given the existing levels, it is not feasible to design the culvert to drain directly from Bryant Drive to the back of the Aventus site. Similar to the existing drainage swale, flood waters will pond within the culvert until they reach RL 3.8m (compared to RL 3.88m for the swale) at which point they will start to drain towards the back of the Aventus site.

Based upon the existing Bryant Drive levels, proposed design levels and existing levels of the proposed outlet location, a longitudinal grade of 0.3% has been adopted downstream of the high point. Accordingly, a longitudinal grade of 0.3% has been utilised to assess the proposed systems capacity. The culvert parameters can be seen in **Table 3** below.

#### **Table 3: Proposed Culvert Parameters**

Parameter	Value
Culvert Size	1.2m Wide x 0.45m High
Longitudinal Grade	0.3%
Manning's 'n'	0.013
Maximum Flow Depth	0.45m

The maximum flow depth outlined in **Table 3** above, was calculated based upon the RL at which the culvert starts to flow to the east (RL 3.8m) and the RL at which flows within Bryant Drive would overtop the adjoining driveway (RL 4.25m).

Based upon the parameters above, a Manning's Calculation was performed to determine the flow capacity of the culvert at 0.3% longitudinal grade. In accordance with the advice provided by Council a blockage factor of 25% has also been applied to the culvert.

The results of this analysis can be seen in Table 4 below.

#### Table 4: Proposed Culvert Flow Capacity

Longitudinal grade	Flow Capacity (m <sup>3</sup> /s)
0.3%	0.920
0.3% (25% Blockage)	0.690

It can be seen from **Table 4** above that even when considering a 25% blockage, the proposed culvert system has approximately four (4) times the capacity of the existing drainage swale. It is therefore considered that the provision of a 1.2m wide x 0.45m high box culvert not only matches the existing conditions but significantly improves them.

Despite increasing the capacity of the existing system, to ensure that the 1% AEP local catchment flows can be safely conveyed to the east, a DRAINS model was prepared to determine the ultimate capacity of the system.

The flood storage available within Bryant Drive was estimated using the 12D software and Lidar information, and was modelled as a basin node within the DRAINS model.



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The following outlets configurations were modelled form the basin:

- 450mm diameter pipe at 0.5% existing system within Bryant Drive;
- 1.2m wide x 0.45m high box culvert (flood relief culvert).

Utilising the abovementioned basin in the DRAINS model (parameters outlined in the original report), it was found that, with the provision of the flood relief culvert, flood waters would be required to reach RL 4.24m to discharge the 1% AEP local catchment flows to the east. It is noted that any storage provided within the adjoining properties has been ignored within this model and therefore it is considered conservative.

Based upon the existing levels of the adjoining property, it is clear that the flood relief culvert will enable the 1% AEP local catchment flows to be conveyed to the east without impacting on the adjoining property.

Based upon the above design, it is considered that the provision of the flood relief culvert adequately addresses the adjoining resident concerns and meets the key criteria set out by Council.

### 5.2.3 Connection to Bryant Drive

To ensure flows can adequately and efficiently enter the culvert system two (2) connection points have been proposed to Bryant Drive (a pipe connection and overland connection).

The first connection point is a piped drainage line from the end of the culvert to the existing drainage system within Bryant Drive. This drainage connection is located at RL 2.5m and therefore will allow flows to enter the culvert at a significantly lower point than the current drainage swale (RL 4.02m). Given part of the culvert drains back towards Bryant Drive, the first connection point also allows water to drain out of this culvert system once the flows within Bryant Drive have receded. It should be noted that this grade does not prohibit entry of water into the system.

The second connection point is a 1500mm x 1500mm grated surface inlet pit located within the secondary driveway access of the Aventus site at approximately RL 4.0m. This inlet is once again provided at a lower RL than the current discharge into the drainage swale and is provided as a secondary point of entry to the system.

To ensure that there is adequate capacity within the inlet structure to enable the required flows to be conveyed by the culverts, the grated surface inlet pit capacity has been assessed utilising the DRAINS software utility spreadsheets. The pit was designed adopting a 250mm ponding depth which is based upon the difference between the pit surface level (RL 4.0) and the level at which ponding would overtop the adjoining driveway (RL 4.25).

Based upon a ponding depth of 250mm, the inlet capacity of the 1500mm x 1500mm inlet pit is approximately 1.25 m<sup>3</sup>/s. Adopting a blockage factor of 25% (which is considered appropriate given the pit is located within a driveway and the chance of blockages is low) then the inlet capacity is reduced to approximately 0.940 m<sup>3</sup>/s which is considerably higher than the 0.690 m<sup>3</sup>/s being conveyed by the culverts.

It is noted that the capacity of the 300mm pipe connection from this pit has been ignored in these calculations and therefore the abovementioned capacity can be considered conservative. It is therefore shown that the capacity of the inlet pit will not govern the capacity of the overflow system and the capacity outlined in Section 5.2.2 is valid.

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#### 5.2.4 Self Cleansing Velocity

Given the relatively flat grade of the culvert system, a check has been undertaken to ensure that minimum self-cleansing velocities are achieved to ensure no blockages occur within the system.

Based upon the Manning's calculation parameters outlined within Section 4.2.2, at a longitudinal gradient of 0.03% and a maximum flow depth of 0.45m a velocity of 1.70m/s is achieved which is considered sufficient to achieve self-cleansing (typically around 0.5 m/s).

As the culvert will not always flow full, an analysis was also undertaken at a flow depth of 0.1m and it was found that a velocity of 0.82 m/s was achieved.

It is therefore considered that self-cleansing of the culvert system is not an issue.

#### 5.2.5 Ultimate Scenario

As mentioned in Section 4.0, Council has requested that the future filling of the adjoining properties is considered in the design of any flood relief culvert. It is the intention of this proposal to keep the flood relief culvert in place even once the adjoining properties have been filled.

Based upon the DRAINS modelling outlined within Section 5.2.2, it is clear that the provision of the flood relief culvert significantly improves the existing scenario and ensures that the 1% AEP local catchment flows can be conveyed through the flood relief culvert without flowing into the adjoining properties.

It is therefore considered that filling of the adjoining properties will not have an impact on the flood levels within Bryant Drive and therefore the provision of the flood relief culvert will ensure that future filling within the area will not adversely impact adjoining properties from the incursion of local catchment flows from Bryant Drive.

#### 5.2.6 Summary

In summary, the proposed culvert system will allow flows to enter at a lower RL than the existing drainage swale; will mitigate any issues with flows breaking the banks of the swale; allow flows to drain to the east at a lower RL; and has approximately four (4) times the capacity of the existing system.

The proposed design complies with all of Council's requirements and adequately addresses the concerns raised within the public submissions.

Details of the proposed culvert system can be seen in ESK 011, 012 and 013 in Appendix C.

#### 5.3 ADJOINING PROPERTY CONNECTION POINTS

Stormwater drainage connections have been provided to each adjoining property to ensure that natural flow paths are not blocked, and adjoining properties can connect to the system when developed in the future.

The property connections were provided on the original design, however have been slightly amended to address the concerns raised in the public submission and to address the Council requirements outlined below:



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- Future and interim stormwater connection points are to be provided to all adjoining properties;
  - The connection points are to not increase inundation on the adjoining properties through backflow issues;
- The proposal is to ensure that natural flow paths are not blocked.

#### 5.3.1 Design Overview

As mentioned in Section 5.1, it is proposed to split the property connection system into two (2) separate systems. This has been done to ensure that flows from the Bryant Drive properties do not cause a backwater effect and cause inundation within the, lower, Lake Road Properties.

The two (2) systems have been designed to discharge at the same location and therefore for future extension could be combined into a single system depending on the status of downstream properties. Such consideration however, is beyond the scope of an individual DA.

It is noted that the district stormwater Contributions plan requires a drainage system to be constructed along the northern boundary of the Aventus site with the capacity to convey the 20% AEP event from the surrounding properties. It is proposed to utilise the same system for the interim connection points and the ultimate regional conveyance system

To provide flexibility within the system, it is proposed to design the network to cater for the 5% AEP storm event which is over and above what is required under the Contributions plan.

#### 5.3.2 Bryant Drive Properties

The drainage system providing connections for the Bryant Drive catchment has been designed to provide a connection to the following properties:

- Lot 141 DP 1007716;
- Lot 13 DP 5536;
- Lot 3 DP5536.

In addition to catering for the abovementioned properties, the system has been designed to have capacity to convey flows generated by a portion of the Aventus site and Lot 2 DP 5536 and Lots A and B DP 394818.

Based upon information provided by Central Coast Council for the Lake Road and Bryant Drive upgrade works, and as outlined in the original report, the majority of flows from these properties in their existing state discharge towards Bryant Drive and Lake Road. Despite this, in order to cater for the future development and be in accordance with the Contributions plan, the system has been designed to cater for the 5% AEP event from the entire catchment.

The system has been designed with a hydraulic grade line analysis utilising the 12D design software. The drainage network was designed to ensure that the system was not operating under pressure and therefore backwater effects into adjoining properties were not an issue.

Based upon the hydraulic grade line analysis, it is proposed to provide a box culvert system of varying size depending on its location within the system. The details of each box culvert size can be seen in ESK-011 to 013.

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To ensure no ponding within the adjoining properties, the inlet capacity of the system at each property connection was determined utlising the weir equation. Based upon this calculation, it was found that the provision of 0.45m wide x 0.3m high and 0.6m wide x 0.3m high concrete box culverts were required. The weir calculation identified that the water level required to convey the design flows through the inlet was less than the height of the culvert and therefore no ponding would occur upstream of the inlets.

The approximate location and size of the connection points, the proposed drainage system (including hydraulic grade line) and catchments can be seen in ESK-011 to 013 in Appendix C.

In addition to the design flows, an analysis of the 1% AEP flows was also undertaken to determine the maximum ponding depth required and to ensure that there is no impact to the adjoining properties. The 1% AEP flow was determined based upon the fully developed lot which, given the fact that the majority of these properties currently drain to Lake Road or Bryant Drive is considered very conservative in the interim scenario.

The capacity of the culverts to convey the 1% AEP flows were assessed utilising a weir equation at the inlet adopting a 25% blockage factor. The ponding depth results for each connection are outlined in Table 5 below:

Lot / DP	Connection Size (mm W x mm H)	Peak Flow (1% AEP) (m3/s)	Inlet Ponding (mm)	Inlet Ponding (mm) (25% Blockage)
Lots A & B DP394818 & Lots 2 & 3 DP5536	600 x 300	0.165	300	360
Lot 13 DP5536	450 x 300	0.075	210	260
Lot 141 DP1007716	600 x 300	0.175	310	370

### Table 5: Ponding Denth Results

It can be seen from Table 5 that the maximum ponding in the 1% AEP event, including an appropriate blockage factor is minor and will not result in any severe flooding or impact to property. Once again it is noted that this is highly conservative given the fact majority of the lots drain towards Lake Road and Bryant Drive.

It is noted that Lot 141 has an approximately 350mm high berm at the back of the property (based upon the detail survey provided by the adjoining resident) and therefore any ponding will be contained within this area.

It is further noted that all of the abovementioned properties have fences along the common boundary and that these fences would restrict flows in the current scenario. It is therefore considered that the proposed solution is adequate and minimises any ponding on the adjoining properties, and importantly, does not cause any property damage in the 1% AEP event.

### 5.3.3 Lake Road Properties

The drainage system providing connections for the Lake Road catchment has been designed to provide a connection to the following properties:

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• Lots 5-7 DP 5536.

Water Cycle Management Plan – Addendum Report Proposed Bulky Goods Development – Bryant Drive, Tuggerah (Ref: 190557)

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Based upon information provided by Central Coast Council for the Lake Road and Bryant Drive upgrade works, and as outlined within the original report, the majority of flows from these properties in their existing state discharge towards Lake Road. Despite this, in order to cater for the future development and be in accordance with the Contributions plan, the system has been designed to cater for the 5% AEP event from the entire catchment.

The system has been designed with a hydraulic grade line analysis utilising the 12D design software. The drainage network was designed to ensure that the system was not operating under pressure and therefore backwater effects into adjoining properties were not an issue.

Based upon the hydraulic grade line analysis, it is proposed to provide a 375mm reinforced concrete pipe system to convey the required flows to the outlet.

To ensure no ponding within the adjoining properties, the inlet capacity of the system at each property connection was determined utilising the weir equation. Based upon this calculation, it was found that the provision of 0.45m wide x 0.3m high concrete box culverts was required. The weir calculation identified that the water level required to convey the deign flows through the inlet was less than the height of the culvert and therefore no ponding would occur upstream of the inlets.

The approximate location and size of the connection points, the proposed drainage system (including hydraulic grade line) and the catchments can be seen in ESK-011 to 013 in **Appendix C**.

Similar to the Bryant Drive properties, in addition to the design flows, an analysis of the 1% AEP flows was also undertaken to determine the maximum ponding depth required and to ensure that there is no impact to the adjoining properties. The 1% AEP flow was determined based upon the fully developed lot which, given the fact that the majority of these properties currently drain to Lake Road is considered very conservative in the interim scenario.

The capacity of the culverts to convey the 1% AEP flows were assessed utilising a weir equation at the inlet adopting a 25% blockage factor. The ponding depth results for each connection are outlined in Table 6 below:

Connectio Lot / DP Size (mm W mm H)		Peak Flow (1% AEP) (m3/s)	Inlet Ponding (mm)	Inlet Ponding (mm) (25% Blockage)		
Lot 5 DP5536	450 x 300	0.075	210	260		
Lot 6 DP5536	450 x 300	0.075	210	260		
Lot 7 DP5536	450 x 300	0.075	210	260		

#### Table 6: Ponding Depth Results

It can be seen from Table 6 that the maximum ponding in the 1% AEP event, including an appropriate blockage factor is minor and will not result in any severe flooding or impact to property. Once again it is noted that this is highly conservative given the fact majority of the lots drain towards Lake Road.

#### 5.3.4 Groundwater

A concern has been raised that the proposed "Lake Road Finger" fill and retaining will not only block overland flows but impact on the natural flow of groundwater away from Lots 3 & 13 DP 5536 and Lot 141 DP1007716.

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#### Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting e 2021) vision C

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ADW Johnson has reviewed the available geotechnical reporting and understands that the soil profile within this area consists of an approximately 150mm thick organic clayey siltbased topsoil layer underlaid by very low permeability clays. Given this soil profile it is anticipated that the large majority of rainfall will runoff and not infiltrate into the soils. This conclusion is consistent with the observations noted within public submission 2.

Despite the high likelihood that there will be minimal infiltration, it is proposed to provide a subsoil drainage system capable of draining any water that may seep into the topsoil layer. The subsoil drain will be constructed in front of the wall footing within the Aventus property.

Based upon the site levels, to ensure the subsoil pipe can drain away, it is proposed to connect the subsoil drainage into both the existing stormwater system within Lake Road and the proposed internal culvert system. A concept of the subsoil drainage system is provided on ESK - 011 with final details to be provided at the detailed design stage.



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### 6.0 Conclusion

This report was written as an addendum to the original Stormwater Management Plan submitted as part of the Development Application for the proposed Bulky Goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah.

This report considered concerns raised by public submissions and Central Coast Council and outlined an amended design to address these.

The provision of a flood relief culvert from Bryant Drive, ensures that the current drainage paths from Bryant Drive are not only maintained but improved.

Property connections to adjoining lots have been provided to ensure flow paths are not blocked during the interim scenario whilst also allowing for connection to the ultimate system. It is noted that these connections were always proposed, however have been modified to suit the new flood relief culvert.

The proposed design adequately addresses all concerns raised by both Council and the public submissions.



2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
	Premises - (Agenda Item 4.1 Local Planning Panel meeting
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# Appendix A

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# Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink



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# Water Cycle Management Plan

# **Proposed Bulky Goods Development**

Property: Lots 102 DP1209157 11 Bryant Drive, Tuggerah

Applicant: Aventus Tuggerah Pty Ltd

> Date: March 2021

Project Management • Town Planning • Engineering • Surveying Visualisation • Social Impact • Urban Planning

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# Document Control Sheet

Issue No.	Amendment	Date	Prepared By	Checked By
А	Initial Issue	March 2019	Ben Myles	Mark Kelly
В	DA Issue	March 2019	Ben Myles	Mark Kelly
С	Layout Amended	April 2019	Ben Myles	Mark Kelly
D	Council Comments	February 2020	Ben Myles	Mark Kelly
E	Council Comments	March 2021	Ben Myles	Ben Myles

#### Limitations Statement

This report has been prepared in accordance with and for the purposes outlined in the scope of services agreed between ADW Johnson Pty Ltd and the Client. It has been prepared based on the information supplied by the Client, as well as investigation undertaken by ADW Johnson and the sub-consultants engaged by the Client for the project.

Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

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The Client should be aware that this report does not guarantee the approval of any application by any Council, Government agency or any other regulatory authority.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 time 2021)

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### **Executive Summary**

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed bulky goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site). The preparation of this management plan has been undertaken to accompany a Development Application required for the proposed development.

Drainage works are currently earmarked for the subject site as part of Council's section 7.11 contributions plan for the Tuggerah area. Whilst not strictly being in accordance with the proposed 7.11 plan, it was shown that a design of a box culvert could provide a similar outcome and meet the intent of the contributions plan. The proposed box culvert is to be utilised as an emergency overland flow route for larger flooding events impacting on Bryant Drive.

DRAINS modelling has been completed to ensure that the post developed flows are adequately attenuated back to pre-developed levels for all outlet locations. It was found that based upon the site grading and redistribution, four (4) out of the five (5) post developed catchments did not require a detention structure as post developed flows were less than or equal to pre developed flows. Modelling indicates that an underground tank with approximately 445m<sup>3</sup> of storage was required to adequately attenuate flows from the main catchment.

MUSIC modelling was completed to show compliance with Council's water quality targets. It is noted that full water quality treatment was not provided on a number of the catchments as they will be catered for in future regional works provided by Central Coast Council.

The main catchment was modelled using MUSIC and it was found that a treatment train of GPT's, litter baskets and a "Jellyfish" filter adequately treated runoff to Council's standards.

Further MUSIC modeling was undertaken to ensure the flow regime entering an existing EEC area was maintained post development. The analysis indicates that the site can be graded to ensure the flow regime is maintained and water quality targets can be met.

Council's regional flooding maps indicate that the site is subject to flooding during the 1% AEP storm event. A review of the site survey indicates that the majority of the existing site is currently above the 1% AEP flood level and the proposed grading of the site will lift the proposed development even higher, ensuring compliance with Council's floodplain management guidelines.

An erosion and sedimentation control plan has been completed for the proposed development to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the site to downstream waterways during the construction period.

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

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Exhibit 002	Concept Stormwater Design
Exhibit 003	Proposed Catchments
Exhibit 004	EEC Flows
Exhibit 005	Council Proposed Contribution Plan Works
Exhibit 006	Alternate Stormwater Contribution Works
Exhibit 007	Erosion & Sedimentation Control Plan

#### **APPENDICES**

DRAINS Model
MUSIC Details
CPAA Information
Flood Information Application



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# 1.0 Introduction

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed Bulky Goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site). The preparation of this management plan has been undertaken to accompany a Development Application required for the proposed development.

It is noted that this report has been prepared to address the requirements of Stage 1 of the development only. Further information will be provided under separate cover when required for Stage 2.

This report documents the means of stormwater detention, treatment and disposal from the proposed development in accordance the Central Coast Council (CCC) requirements current at the time of writing this report.



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# 2.0 Site Description

The subject site, as depicted in Figure 1 below, is located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah. The site has an area of approximately 5.6ha.



Figure 1: Site Locality (Nearmaps Image)

The subject site is bound to the north by Lake Road and existing residential development, to the east by existing mixed use properties, to the south by existing commercial development and to the west by Bryant Drive and the existing Tuggerah Super Centre.

The western portion of the site consists largely of an asphalt overflow carpark associated with the existing Super Centre, whilst the eastern portion is largely undisturbed open grasses and vegetation. A small open grassed area, associated with a previous residential dwelling, exists on the Bryant Drive frontage of the site.

The existing carpark largely grades toward Bryant Drive and slopes in the order of 1-2%. Flows generated within the carpark sheet flow to a series of dish drains located within low points running east west. The flows are then captured by a series of stormwater pits and conveyed to the stormwater network in Bryant Drive before ultimately being discharged into an open channel on the corner of Bryant Drive and Lake Road.

The western portion of the site consists of a series of small open channels before flattening out into open plains with slopes in the order 0.5-0.7%. A relatively large area of Endangered Ecological Community (EEC) is present in the south east corner of the subject site. It is noted that this EEC will not be disturbed by any works associated with Stage 1 of the development.

The existing site and infrastructure can be seen in Exhibit 1.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 2021)

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# 3.0 Council Requirements

The proposed development is to comply with the following CCC documents:

- CCC Civil Works Specification Design Guideline 2018;
- CCC Wyong Development Control Plan 2013.

The CCC – Civil Works Design Guideline outlines the requirements for fractions impervious for the various catchments and subcatchments used in the modelling of the proposed subdivision. Additionally, the Civil Works Design Guideline outlines the various requirements for the design of both the stormwater detention and stormwater quality requirements for the development.

### 3.1 CCC REGIONAL STORMWATER WORKS

During a Pre-DA meeting held at Central Coast Council (Wyong Shire) offices, Council indicated that the subject site, and adjacent catchments, are subject to future stormwater conveyance and quality works under a contributions plan.

A review of the relevant contribution plan indicates that Council is proposing to construct an open channel system along the northern and eastern boundaries of the subject site. This open channel will be capable of conveying the 20% AEP storm event and caters for both the subject site and upstream catchments.

The open channels will discharge into a proposed stilling pond which is located within Stage 2 of the subject site. The stilling pond then spills into a wetland located on the adjacent, Council owned property.

It is noted that a portion of the proposed contributions works severely impact on the EEC community in the south east corner of the site and would likely result in the removal of all vegetation associated with this area.

Despite these works being proposed to cater for the subject site, based upon the proposed grading of the development and the likely impact to the EEC, it is considered that it is more appropriate for the majority of Stage 1 of the development to provide its own stormwater detention and water quality treatment and discharge to Bryant Drive.

The proposed development footprint will impact on the land earmarked for drainage infrastructure under the contributions plan, however design works have been undertaken to provide a new system to provide a similar outcome to the contributions plan. The proposed design is discussed further in Section 8. It is noted, that the proposed solution will not involve land acquisition by Council, thereby removing these costs.

Any potential future works undertaken on the subject site as a part of Stage 2 will consider the contributions plan works in further detail. It is noted that as Stage 1 will cater for itself, the contributions works will likely decrease as the contributing catchment has become smaller.

### 3.1.1 Regional Flooding / Overland Flow Path

The Central Coast Council flood mapping tool outlines that the fringe of the site is impacted by regional flooding, however through additional correspondence with council, it was discovered that in extreme flood events water overtopping Bryant Drive is currently conveyed through the adjoining property, 19-21 Bryant Drive, and onto the subject site.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (Ref: 190557)

Council requires that the abovementioned box culvert system is designed to have the capacity to convey these flows in an emergency situation. The conveyance of these flows is discussed further in section 8.

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## 4.0 Objectives

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### 4.1 CONCEPT STORMWATER DESIGN

A concept stormwater design is required to demonstrate that stormwater runoff can be effectively and efficiently conveyed from the proposed subdivision to the existing downstream infrastructure and receiving waters. The stormwater design is required to consider adjacent properties and ensure no nuisance runoff occurs onto the existing properties.

### 4.2 STORMWATER QUANTITY

The pit and pipe network needs to cater for the minor storm event (5% AEP) without any surcharging within the system and minimising flow widths and ponding. The overland flow paths need to cater for the major storm event (1% AEP) with freeboard to adjacent habitable floor levels.

The purpose of this study is to limit post-development critical peak flows to less than or equal to existing flows all storm events up to and including the 1% AEP.

### 4.3 STORMWATER QUALITY / WATER SENSITIVE URBAN DESIGN

The stormwater drainage system must effectively remove the nutrients and gross pollutants from the site prior to the runoff entering the existing downstream waterways.

The stormwater design for the proposed subdivision is to adopt Water Sensitive Design (WSUD) principles throughout the development to promote sustainable and integrated land and water resource management.

The guidelines for stormwater quality treatment objectives are expressed as mean annual reductions of pollutant loads. The target objectives were obtained from Table 11.1 in the CCC Civil Works Guideline.

Table 1 – Slottiwalet nearment objectives				
Pollutant	Stormwater Treatment Objectives			
Suspended Solids	80% retention of the average annual load			
Total Phosphorus	45% retention of the average annual load			
Total Nitrogen	45% retention of the average annual load			
Litter	90% reduction in the post development average annual load for pollutants greater than 5mm in diameter			

#### Table 1 – Stormwater Treatment Objectives

### 4.4 FLOODPLAIN MANAGMENT

Floodplain management requirements are outlined in Chapter 3.3 of the Wyong Development Control Plan 2013. Chapter 3.3 documents the minimum requirements for a development to ensure that any issues relating to flooding are adequately addressed. The aim of this report is to show that the proposed development complies with all floodplain management requirements.

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### 4.5 EROSION AND SEDIMENTATION CONTROL

Erosion and sedimentation control measures need to be implemented during any construction activities on the proposed subdivision to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the construction site to downstream drainage.



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# 5.0 Concept Stormwater Design

The proposed stormwater system contains a combination of conventional pit and pipe networks and WSUD elements to effectively convey stormwater runoff to the existing downstream infrastructure.

Flows generated within the carpark areas are proposed to be captured by a series of pits located within the carpark areas and conveyed by an underground pipe system to the existing infrastructure in Bryant Drive. Flows generated on the roofs of the proposed buildings are to be captured by downpipes which will be connected directly to the carpark network.

Based upon the conceptual grading, there will be a number of different discharge locations for the development, each of which is discussed in further detail below.

The concept stormwater design can be seen in Exhibit 2 whilst the proposed catchments can be seen in Exhibit 3.

### 5.1 CATCHMENT 1 – BRYANT DRIVE NORTH

The largest proposed catchment discharges to the existing stormwater system within Bryant Drive at the northern edge of the subject site.

The Bryant Drive North catchment is approximately 1.9ha in area and drains the vast majority of the proposed development. The catchment generally grades in a westerly direction towards Bryant Drive with flows being captured by a series of stormwater pits.

For the purposes of the modelling, Catchment 1 is required to be split into two (2) subcatchments, being Catchment 1A and 1B. All flows generated in Catchment 1A will be conveyed to an underground detention tank before discharging to the existing network in Bryant Drive. Flows generated within Catchment 1B will not be conveyed to the detention tank, with Catchment 1A being over detained to cater for this area.

Flows generated within Catchment 1A will be conveyed through a GPT prior to entering the detention tank, with flows then entering a Jellyfish filter system after leaving the tank. Flows captured in Catchment 1B will be treated by a series of litter baskets contained within the surface inlet pits.

Modelling details can be seen in Sections 6 and 7.

### 5.2 CATCHMENT 2 – BRYANT DRIVE SOUTH

The existing Catchment 2 is much larger than the proposed catchment and therefore the peak post developed flows are less than the peak pre developed flows. Accordingly, it is not required to provide stormwater detention within this catchment.

Stormwater quality within Catchment 2 will be achieved through the use of litter baskets within the surface inlet pits, with catchment 1 being over treated to ensure Council targets are met for Catchment 1 and 2 combined.



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#### 5.3 CATCHMENT 3 – LAKE ROAD

Based upon the existing surface levels and the proposed grading surface, a portion of the proposed carpark located within the 'finger' adjoining Lake Road will drain to the existing network within Lake Road.

Similar to Catchment 2, the existing Catchment 3 is much larger than the proposed catchment and therefore stormwater detention is not required.

Given the size of this catchment, and the fact it will sheet flow to Lake Road, it is considered that water quality treatment is not required.

#### 5.4 CATCHMENT 4 – STAGE 2

Catchment 4 includes a portion of the proposed development as well as a portion of the Stage 2 land. Two (2) outlets will be provided into the stage 2 land, where the flows will be conveyed to existing flow paths.

The first outlet will be located on the alignment of the contributions plan drainage channel and will convey flows from a small portion of the development, along with flows from upstream properties. The design of this system is discussed further in section 8.

The second outlet discharging into Stage 2 will be provided in a similar location to an existing headwall, with all discharge being directed to the existing open channel. Similar to Catchments 2 and 3, the existing catchment is much larger than the post developed catchment and therefore stormwater detention is not required.

As per Catchment 3, this outlet will be catered for in the future regional works and therefore it is considered that the catchment does not need to meet Council's water quality targets. Despite this, in order to ensure gross pollutants are captured prior to entering the downstream waterways, it is proposed to provide litter baskets within all surface inlet pits.

#### 5.5 CATCHMENT 5 – EEC

As mentioned in Section 2.0, a cluster of EEC exists in the south eastern corner of the subject site. Whilst no works within Stage 1 of the development will have a direct impact on the EEC, the development will alter the existing flow regime draining to this area.

In order to ensure the existing flow regime is followed as closely as possible, the site has been graded to direct a similar volume of flows to the EEC in developed conditions. Flows will be discharged via a stabilised headwall before being trapped by a large level spreader which will spread the flows out to mimic the existing flow conditions.

A gravel base will be provided on the level spreader to allow for infiltration of flows to ensure groundwater flows are recharged. It is noted that the existing site soils are clay and that infiltration is unlikely to occur in meaningful amounts during both existing and developed conditions.

A Jellyfish filter system will be provided prior to this outlet to ensure that water quality targets are met for any stormwater being conveyed to the EEC.

Modelling of the EEC flows can be seen in Section 7.4 whilst the proposed outlet configuration can be seen in Exhibit 4.

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## 6.0 Stormwater Quantity

The proposed development is required to limit post-development critical peak flows to less than or equal to existing flows for all design storms for all storm events up to and including the 1% AEP.

### 6.1 MODELLING

The quantity of required storage to reduce the post developed discharge from the site to less than or equal to the existing discharge for various storm events was analysed using the 'DRAINS' software, which uses the runoff routing method.

#### 6.1.1 Catchment Data

Catchment data for the existing site was based upon the detail survey and current site conditions, whilst the data for the developed site was based upon council's guidelines and the proposed development layout.

The pre development catchment boundaries can be seen in Exhibit 1, whilst the catchment parameters can be seen in Table 2 below.

Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)
Catchment 1	1.05	80	0.84	0.21
Catchment 2	0.44	90	0.40	0.04
Catchment 3	0.11	10	0.01	0.1
Catchment 4	2.16	25	0.54	1.62
Catchment 5	1.69	10	0.17	1.52
Total	5.45	-	1.96	3.49

#### Table 2 – Pre Development Catchments

The post development catchment boundaries can be seen in Exhibit 2, whilst the catchment parameters can be seen in Table 3 below.

### Table 3 – Post Development Catchment and Subcatchment Areas

Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)
Catchment 1A	1.57	90	1.41	0.16
Catchment 1B*	0.09	90	0.08	0.01
Catchment 2	0.43	95	0.41	0.02
Catchment 3	0.06	90	0.05	0.01
Catchment 4	2.08	50	1.04	1.04
Catchment 5	1.22	45	0.55	0.67
Total	5.59	-	3.47	2.12

\* Catchment 1B outlets to the same location as 1A, however does not enter the OSD tank.

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#### Model Parameters and Rainfall Data 6.1.2

As per the new CCC civil design guideline, model parameters were based upon AR&R and experience on similar sites. The following parameters were adopted for the DRAINS model:

- Pervious depression storage = 5mm; •
- Impervious depression storage = 1mm; .
- Soil Type = 3; •
- Antecedent Moisture Condition = 3. •

Rainfall data for the site was sourced from the Bureau of Meteorology whilst times of concentration for each catchment were based upon the kinematic wave equation. A screenshot of the DRAINS model can be seen in Appendix A.

#### 6.2 RESULTS

In accordance with Council's requirements, modelling was undertaken to demonstrate compliance of post development flows being less than or equal to the pre development flows.

The results of the DRAINS modelling can be seen in Table 4 below.

ARI Event (Year)	Pre Development Flow (m <sup>3</sup> /s)	Post Development Flow Without Detention (m <sup>3</sup> /s)	Post Development Flow With Detention (m <sup>3</sup> /s)
		Catchment 1	
20%	0.42	0.67	0.41
10%	0.47	0.76	0.46
5%	0.54	0.87	0.51
2%	0.59	0.94	0.56
1%	0.66	1.04	0.65
		Catchment 2	
20%	0.18	0.17	n/a
10%	0.20	0.20	n/a
5%	0.23	0.23	n/a
2%	0.25	0.25	n/a
1%	0.28	0.28	n/a
		Catchment 3	
20%	0.04	0.02	n/a
10%	0.05	0.03	n/a
5%	0.05	0.03	n/a
2%	0.06	0.03	n/a
1%	0.07	0.04	n/a
		Catchment 4	
20%	0.78	0.78	n/a
10%	0.89	0.89	n/a
5%	1.04	1.04	n/a
2%	1.15	1.13	n/a
1%	1.29	1.27	n/a

#### Table 4 – DRAINS Results

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Catchment 5					
20%	0.56	0.44	n/a		
10%	0.64	0.50	n/a		
5%	0.76	0.58	n/a		
2%	0.82	0.62	n/a		
1%	0.92	0.70	n/a		

As it can be seen from Table 4 above, the peak post developed flows are less than or equal to the peak pre developed flows without the provision of stormwater detention for Catchments 2-5. Catchment 1 however, requires a stormwater detention tank in order adequately attenuate the peak flows. The tank parameters can be seen in Table 5 below.

#### Table 5 - Tank Parameters

Tank Parameter	Detail	
	0.15m H x 1.40m W cut out – IL RL 0m*	
Outlet Controls	Weir (top of control pit wall) – 0.5m length - IL RL 0.85m	
Tank Surface Area	305m <sup>2</sup>	
Tank Depth	1.0m	
Max Water Depth (1% AEP Event)	1.0m	
Total Storage at 1% AEP Stage	305m³	

\* Levels are relative to the bottom of the tank. R.L's to AHD to be provided at CC stage.

It is anticipated that the proposed tank will be constructed as a concrete structure, however this is to be confirmed at the CC stage of the project.



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# 7.0 Water Quality/Water Sensitive Urban Design

The proposed stormwater system, as detailed in Section 5.0, uses a combination of pit and pipe networks and water sensitive urban design elements to convey stormwater runoff from the site. It is intended to use a combination of treatment devices within the drainage system to remove nutrients and sediments from the stormwater prior to the runoff leaving the site.

### 7.1 TREATMENT DEVICES

The stormwater design for the proposed subdivision proposes to use a combination of conveyance, and end of line controls to treat the stormwater runoff from the site. The treatment train will be modelled for demonstration of compliance with CCC's key objectives.

#### <u>Conveyance</u>

The low flows will be conveyed through a GPT which will be the conveyance control used to treat the stormwater. The GPT is the primary pollution control device in the treatment train after the stormwater is conveyed via the pit and pipe network. The GPT will primarily remove litter, large debris and the nutrients attached to particles. The GPT will be in the form of a Humegard (or approved equivalent) and litter baskets.

### End of Line

It is proposed to provide a stormwater 360 "Jellyfish" filter device at the end of the treatment train to provide tertiary treatment to flows prior to them leaving the site.

#### 7.2 MODELLING

The software used for the water quality modelling is MUSIC. This program is well regarded as industry best practice for analysis of the effectiveness of treatment mechanisms on the quality of stormwater runoff from a development site of this size.

The MUSIC model parameters were adopted using the MUSIC-LINK feature, whilst treatment node parameters were based upon a combination of Council's guidelines and information provided by individual device providers.

The MUSIC-LINK report can be found in **Appendix B**.

#### 7.2.1 Catchment Data

The MUSIC catchments were based upon the proposed architectural layout and grading. A summary of the catchment parameters can be seen in Table 6 overleaf.



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Catchment	Sub Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)
	1 A Roof	0.26	100	0.26	0.00
Catchment 1	1A Road	1.31	90	1.18	0.13
	1B Road	0.09	90	0.08	0.01
Catchment 2	Roof	0.17	100	0.17	0.00
	Road	0.26	95	0.25	0.01
Catchment 3	Roof	-	-	-	-
	Road	-	-	-	-
Catchment 4	Roof	0.58	100	0.58	0.00
	Road	0.39	85	0.39	0.06
Catchment 5	Roof	0.18	100	0.18	0.00
	Road	0.18	85	0.15	0.03
<u> </u>		•	•		•

Table 6 – Post Development Catchment and Subcatchment Areas

#### 7.3 RESULTS

In accordance with Council requirements, modelling has been undertaken to demonstrate compliance with water quality objectives for stormwater runoff from the proposed development prior to discharge of stormwater into the downstream waterways.

As discussed in Section 5.0, Catchments 3, 4 and 5 are to be catered for in the future regional Council works and therefore they are not required to meet Council's water quality targets. Litter baskets will be provided within all pits within these catchments to ensure no gross pollutants enter the downstream waterways.

Catchment 1 has been over treated to cater for Catchment 2 which will be provided with litter baskets only.

The results of the modelling for the combined Catchments 1 and 2 are shown in Table 7 below.

Catchments 1 & 2				
Pollutant	Without Treatment (kg/yr)	With Treatment (kg/yr)	Modelled Reduction (%)	Target Reduction (%)
TSS	6660	1060	84.1	80
TP	11.8	5.15	56.4	45
TN	56.2	30.3	46.1	45
GP	589	6.12	99	90

#### Table 7 – Pollutant Loads and Reductions

From Table 7, it can be seen that the MUSIC modelling indicates that the proposed treatment train complies with council's water quality targets. A screenshot of the MUSIC model can be seen in **Appendix B**.



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#### 7.4 EEC FLOW REGIME

As mentioned in Sections 2.0 and 5.5, a cluster of EEC exists in the south eastern corner of the subject site. Whilst no works within Stage 1 of the development will have a direct impact on the EEC, the development will alter the existing flow regime draining to this area.

To ensure the development does not have an adverse impact on the area of EEC, MUSIC modelling was undertaken to determine the total flows draining to the EEC area in both the pre developed and post developed scenarios. The results of the modelling can be seen in **Table 8** below.

#### Table 8 - EEC Flows

Catchment	Total Area (ha)	% Impervious	Flow (ML/yr)
Predeveloped	1.2	10	5.22
Post Developed	0.71	50	5.40

It can be seen from Table 8 above that the post developed flows discharging to the EEC area closely mimic the pre developed flows.

In addition to maintaining flows to the EEC, further MUSIC modelling has been undertaken to ensure that flows discharging to this area also meet Council's water quality targets. As mentioned in section 5.5 it is proposed to provide a Jellyfish filter system prior to flows discharging. The results of the MUSIC modelling can be seen in **Table 9** below.

Catchments 5				
Pollutant	Without Treatment (kg/yr)	With Treatment (kg/yr)	Modelled Reduction (%)	Target Reduction (%)
TSS	637	42.9	93.3	80
TP	1.31	0.52	60.2	45
TN	8.75	4.49	48.7	45
GP	96.3	2.97	96.9	90

#### Table 9 – Pollutant Loads and Reductions

A catchment plan showing the proposed catchments to the EEC area can be seen in **Exhibit 3** along with the MUSIC modelling results.

Further information surrounding the ECC area is contained within the Ecology report, prepared by AEP.



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### 8.0 Regional Stormwater Conveyance

As mentioned in Section 3.1, the subject site and adjacent catchments are subject to future stormwater conveyance and quality works under Wyong district Contributions Plan No.1. Whilst the water quality control measures proposed under the contributions plan are not impacted by the development, the stormwater conveyance channel along the northern boundary of the subject site, proposed under the plan, is proposed to be varied as part of the development layout.

### 8.1 CONTRIBUTIONS PLAN

A review of the contribution plan No.1 indicates that Council is proposing to construct an open channel system along the northern and eastern boundaries of the subject site. This open channel will be capable of conveying the 20% AEP storm event and caters for both the subject site and upstream catchments.

To further understand the intent of the proposed conveyance channels, a review of the underlying stormwater report used to inform the contributions plan was undertaken. The report, prepared by Webb McKeown in 2000, outlines a number of constraints, and subsequent options for the conveyance and treatment of stormwater in the Tuggerah industrial area.

In regards to the channel proposed along the northern boundary, the Webb McKeown report outlines the provision of a concrete based channel with grass lined batters capable of conveying the 20% AEP flows. The channel is to be within a 10m – 20m strip of land to be dedicated to Council. The catchment for the proposed channel is notated as "Building Pad 2" which encompasses part of the subject site and a number of adjoining properties.

It is noted that the channel is proposed to be provided in between future building pads 1 & 2, both of which are to be filled up to approximately 1.5m above the invert of the channel. Whilst the report outlines that the channel has been designed to convey the 20% AEP flows (with the provision of 300mm freeboard) it is noted that the report does not indicate how flows in excess of the 20% AEP event are conveyed. Despite this, considering the channel is cut in between the proposed building pads, it is expected that flows in excess of the 20% AEP will be conveyed between the building pads until the capacity of this cross section is breached and flows spill on to the building pads themselves. The contributing catchments and channel design can be seen in **Exhibit 5**.

An important item that is not considered within the existing report, is how to deal with the complications of staged construction of the future building pads. It is noted that should the channel be constructed as part of this development, but prior to the filling of the properties fronting Lake Road, the channel will be unable to convey the flows generated by these properties in the interim.

To enable the safe conveyance of flows up to, and including, the 1% AEP event without impacting on the building pads and to enable the construction of a system capable of meeting the intent of the contributions plan whilst also being sympathetic to both the proposed and future development, an alternate design has been prepared.



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#### 8.2 REGIONAL FLOODING / OVERLAND FLOW PATH

As mentioned in section 3.1.1, council requires that the alternate box culvert design has the capacity to convey overland flow overtopping Bryant Drive in extreme flood events. Council requires that the culvert inlet lines up with the existing overland flow path along the southern boundary of 19 - 21 Bryant Drive and that the inlet is subject to a 25% blockage factor.

A review of the Flood Impact Assessment Report, prepared by SKM for the Pacific Highway and Wyong Road intersection upgrade, indicates that the overland flow path currently conveys water through the carpark on the southern edge of 19 - 21 Bryant Drive in the 1 in 100 year and greater flood events. An extract of the report, showing the 1 in 100-year flood impacts can be seen in **Figure 2** below.



Figure 2. Extract of RMS Flood Study

The proposed culvert design outlined within section 8.3 will ensure that the abovementioned council requirements are complied with.

#### 8.3 ALTERNATE DESIGN

The alternate design, proposed to be constructed with this development, aims to not only meet the intent of the contributions plan, but provide a safe and efficient stormwater system capable of conveying flows up to the 1% AEP whilst also being sympathetic to both the proposed development and existing adjoining properties.

As can be seen in **Exhibit 6**, it is proposed to provide a box culvert system, underneath the proposed access road, in lieu of the open channel proposed in the contributions plan. The culvert will be designed to convey the 1% AEP, including a 50% blockage on all pits and pipes and provide connections to the adjoining properties. The culvert will also be designed to ensure it has capacity to take any flows that enter the site from 19 - 21 Bryant Drive in an extreme flood event. The following sections of the report outline the design of the proposed box culvert.

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#### 8.3.1 Culvert Conveyance

To determine the peak discharge required to be conveyed by the culvert, the contributing catchment to the culvert based upon both the ultimate scenario (Lake Road and 19 - 21 Bryant Drive developed) and interim scenario (subject site developed and water overtopping Bryant Drive) were compared.

The contributing catchments can be seen in **Exhibit 6** & **Exhibit 8** whilst the catchment parameters can be seen in **Tables 9 & 10** below.

Catchment	Total Area (ha)	% Impervious	Time of Concentration (min)
Development	0.21	90	5
Bryant Drive	0.80	90	5
Lake Road	0.46	90	5

#### Table 10. Contributing Catchment Parameters – Interim Scenario

Catchment	Total Area (ha)	% Impervious	Time of Concentration (min)
Catchment 1A	1.57	90	5
Catchment 1B	0.09	90	5
Catchment 2	0.43	95	5
Bryant Drive	1.82	90	8

Using the abovementioned parameters, a rational method calculation was undertaken to determine the 1% AEP flow required to be conveyed by the proposed box culvert in the ultimate scenario.

To account for the size of the Bryant Drive catchment, the proposed OSD tank and associated differences in hydrograph peaks a DRAINS model was prepared to determine the peak flow in interim scenario.

The results of both analyses' can be seen in Table 11 below.

### Table 11. Rational Method Calculation

Catchment	Flow (m <sup>3</sup> /s)
Ultimate Scenario	1.03
Interim Scenario	1.84

It can be seen from **Table 11** above that the critical peak flow occurs during the interim scenario when flows overtop Bryant Drive. It is noted that the interim peak flow calculated is the flow approaching the pit in the low point of Bryant Drive. This pit has a 450mm diameter pipe outlet at 0.5% which will be capable of conveying a portion of the flow. Based upon the Colebrook White pipe capacity charts, it has been adopted that this pipe will convey approximately 0.23 m<sup>3</sup>/s. The design flow adopted for the culvert sizing is therefore 1.61 m<sup>3</sup>/s. A copy of the Colebrook White Chart can be seen in **Appendix C**.



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As required by council, a blockage factor of 25% was applied to the culvert inlet. The culvert sizing was undertaken using the Concrete Pipe Association of Australia (CPAA) sizing charts assuming an inlet control with 0.5m ponding at the inlet. A summary of the sizing can be seen in Table 12 below, whilst a copy of the CPAA chart can be seen in Appendix C.

#### Table 12. Culvert Sizina

Ponding Depth (m)	Culvert Width (m)	Culvert Depth (m)	Capacity (m³/s)
0.5	2.7	0.6	1.61
0.38	2.1 (x2)	0.6	1.61

It can be seen from Table 12 above that a 2.7m x 0.6m box culvert would be required to convey the flows without the provision of the blockage, whilst including the 20% blockage twin 2.1m x 0.6m box culverts would be required. Accordingly, it is proposed to provide twin 2.1m x 0.6m box culverts.

It is noted that the CPAA sizing was checked against an orifice calculation and the size was confirmed as being adequate.

#### 8.3.2 Culvert Levels and Flows

To ensure that 19 – 21 Bryant Drive can drain in the interim scenario, the culvert inlet is to be provided at the base of the proposed retaining wall. Given the existing levels on site, this results in a maximum achievable longitudinal grade of 0.3% for the proposed box culvert.

To ensure the culvert capacity, a Manning's calculation as undertaken adopting a 4.2m wide x 0.6m high box culvert with a Manning's 'n' of 0.013 and longitudinal grade of 0.3%. this calculation resulted in a flow conveyance of approximately 6.9 m<sup>3</sup>/s, well in excess of the required flow.

A review of the catchments draining to the culvert in the interim scenario (excluding overflow from Bryant Drive) reveals that a peak flow of 0.7 m<sup>3</sup>/s flow velocity of 1 m/s would be conveyed within the culvert in the minor design storm event (20-year ARI). A Manning's calculation, adopting an 'N' of 0.012 and a longitudinal grade of 0.3%, reveals that the water level within the culvert would be 140mm deep which results in a velocity of over 1 m/s. This is important as a flow velocity of 1m/s will ensure that the build-up of sediment and other debris is minimised, lowering the risk of blockages and minimising maintenance of the system.

It is noted that the design flows entering the culvert will only increase in the ultimate scenario resulting in the self-cleansing velocity being achieved more frequently.

### 8.3.3 Connections to Adjoining Properties

As mentioned in Section 8.1, consideration is needed to be given to the staged construction of the proposed building pads and how this will impact on the proposed stormwater conveyance. It is noted that this was not considered in the Webb McKeown report and, based upon the channel design, it is considered that the adjoining properties would not be able to drain to the channel without first being filled.

Based upon the Central Coast Council upgrade of Lake Road, the majority of the lots fronting Lake Road currently drain to Lake Road, with only a small portion at the rear of the lots currently draining via sheet flow into the subject site. Given the small size of the catchments, and their largely pervious nature, it is considered that the flow generated



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would be minimal and would likely pond in the backyards of these properties in the current situation. As such, it is considered that a stormwater connection to these properties, in the interim scenario, is not required.

To enable future connection, for these same properties once they are filled during development, it is proposed to provide piped connections from the box culvert to the boundary. These pipes will be capped and only used once the adjoining sites have been filled. It is noted that, as it is unknown if the adjoining properties will be developed individually, a pipe connection will be provided to each individual lot and these connections will be designed to convey the 1% AEP.

Similar to the above, a piped connection will be provided to Lot 141 DP1007716 to ensure it can continue to drain during both the interim and future scenarios. In this case, the pipe connection will be used during both scenarios. The culvert will be placed at the base of the proposed retaining wall ensuring that overland flows from the existing property can drain through, whilst during the ultimate scenario a pit can be constructed over the culvert. Safety features such as child proof grates will be incorporated to ensure no access is provided to the culvert opening.

It is noted that Lot 13 DP 5536 also adjoins the site, however this lot is provided with a drainage connection to Bryant Drive and therefore no connection is required.

A typical detail of the proposed connections can be seen in Exhibit 6.

#### 8.3.4 Council Concerns

2.1

Previous correspondence has been had with Central Coast Council regarding the proposed solution and a number of concerns were raised. These concerns included:

- Flow conveyance Council is concerned that the channel system was designed to convey the 20% AEP with the proposed solution being able to convey the 1% AEP
  - o As mentioned earlier in the report, based upon the channel and building pad design, flows larger than the 20% AEP would be conveyed between the building pads until the capacity of the cross section is exceeded and the flows spill onto the building pad. As such it is considered that ultimately the 1% AEP flows would find their way to the same location and the proposed solution is preferred due to the fact it would not allow flows to spill onto the building pads, which has the potential to cause damage to private property;
- Maintenance Council is concerned that maintenance of the system would be difficult:
  - The culvert system could be kept as private system to be maintained by the owner of the site:
  - Maintenance access pits would be provided to the system in accordance 0 with Council standards;
- Blockages / Surcharge / Larger Storm events Council is concerned about what may happen in larger events and if the system is to block;
  - As mentioned in the report, despite the extremely low risk of blockage due to the size and nature of the upstream catchment, a 25% blockage factor has been taken into account for the design inlet;
  - Blockage factors of 50% will be applied to all internal pits as requested by council;

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- Given the limited capacity of the channel system it is considered that the proposed box culverts provide a much better outcome during larger storm events.
- Location of culvert inlet;
  - The culvert inlet has been located to coincide with the overland flow path through the adjoining property.



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# 9.0 Floodplain Management

A review of Council's flooding maps indicate that portions of the site are flood affected in both the 1% AEP and PMF events. A copy of Council's flooding map can be seen in Figure 2 below.



Figure 2: Site Flooding (CCC's Flooding Maps)

As the site is flood affected, a flood information application was submitted to Central Coast Council. The response indicates that the 1% AEP flood level within the site is R.L 3.8m with the minimum habitable floor level being R.L 4.3m. A copy of the flood information application response can be seen in **Appendix D**.

A review of the site survey indicates that the majority of the existing site is currently well above the 1% AEP flood level with the exception of the small open area associated with the previous residential dwelling. Council indicated the following at the pre-da meeting:

- Council has no objection to filling within the site to bring the low-lying area above the 1% AEP flood level;
- The proposed carpark level could be a maximum of 300mm below the 1% AEP level if required.

At the time of writing this report, the formal Pre-DA meeting minutes were not available.

Given the majority of the site is currently above the 1% AEP flood level and the proposed grading is to lift the site further, it is considered that the proposed development will not be impacted by the regional flood levels and therefore complies with Council's floodplain management guideline.



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# 10.0 Erosion and Sedimentation Control

Erosion and sedimentation control measures need to be implemented during any construction on the proposed subdivision to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the construction site to downstream waterways.

An Erosion and Sedimentation Control Plan can be seen in **Exhibit 7**. The attached Erosion and Sedimentation Control Plan is only an indicative plan as another Erosion and Sedimentation Control Plan will be provided as part of the Construction Certificate drawings and a further plan will be provided by the contractor before construction takes place.

It is expected that particular care will need to be taken when preparing the erosion and sediment control plan to ensure no adverse effects on the EEC.



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### 11.0 Conclusion

To comply with Central Coast Council stormwater management guidelines, the stormwater system for the proposed development will consist of a series of stormwater pits and pipes, an underground detention tank, gross pollutant traps and a Jellyfish filter system.

Consideration has been given to an existing area of EEC, with the site being graded to ensure the existing flow regime to the area is followed as closely as possible.

Consideration was given to the provision of Council's channelized stormwater conveyance system outlined in the contributions plan. An alternate design of a box culvert system was proposed in lieu of the channel to provide a design that was sympathetic to both the intent of the contributions plan and the proposed development.

It has been determined that the proposed development will not be adversely affected by regional flooding.

Water conservation has been considered during the design and modelling of the proposed development so as to incorporate water retention or reuse measures to reduce the demand on potable water. Furthermore, the incorporation of water retention devices has reduced the volume of stormwater runoff from the developed site.

An Erosion and Sedimentation Control Plan has also been prepared for construction of the proposed development also complying with Council's requirements.



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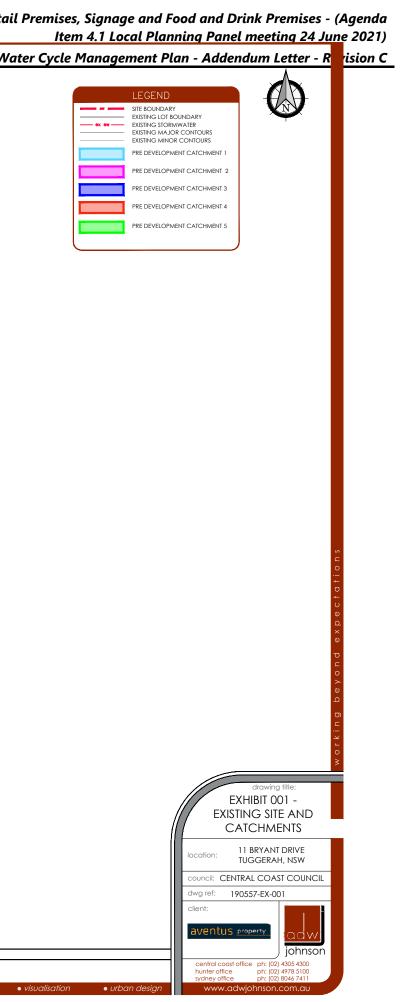
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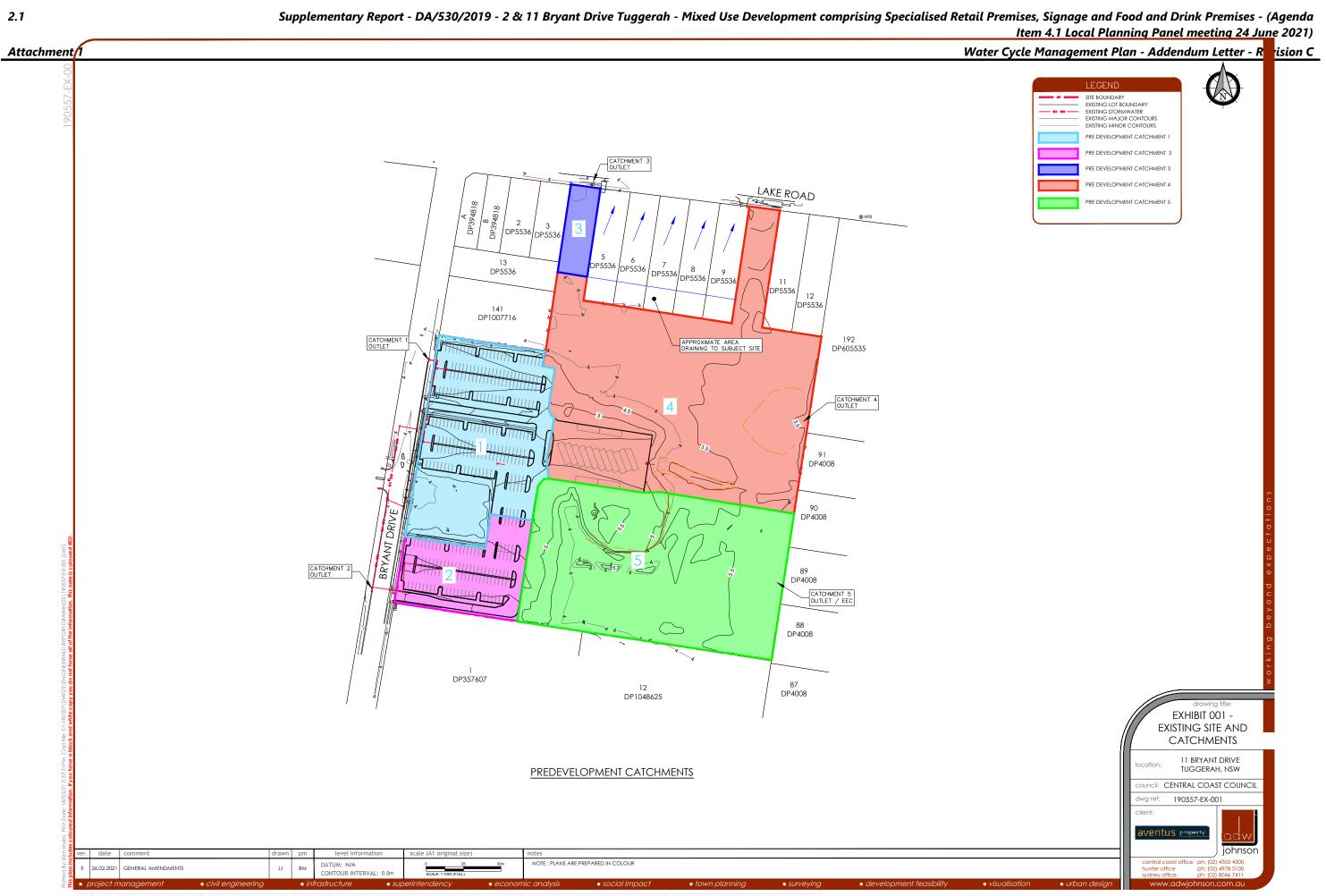
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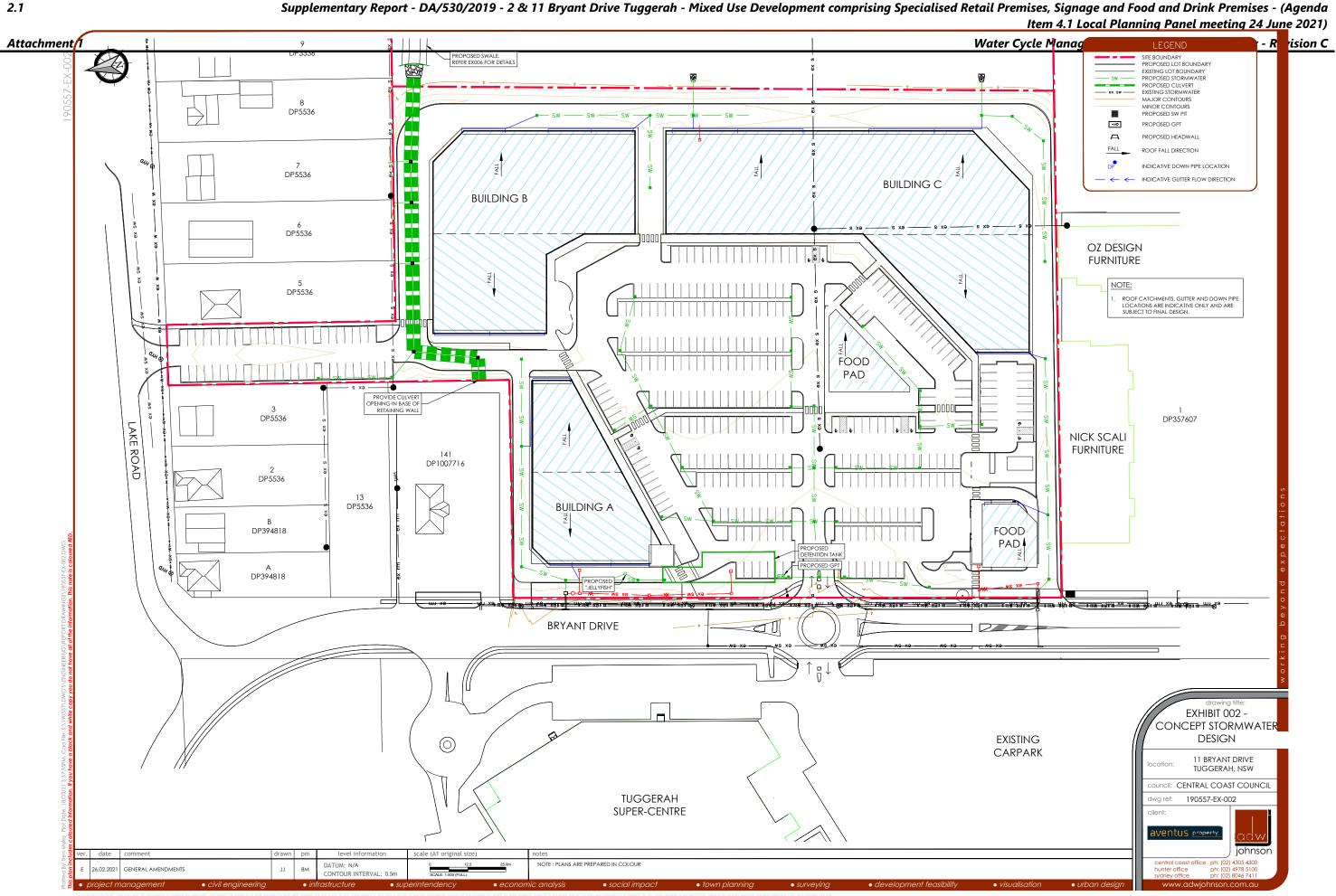
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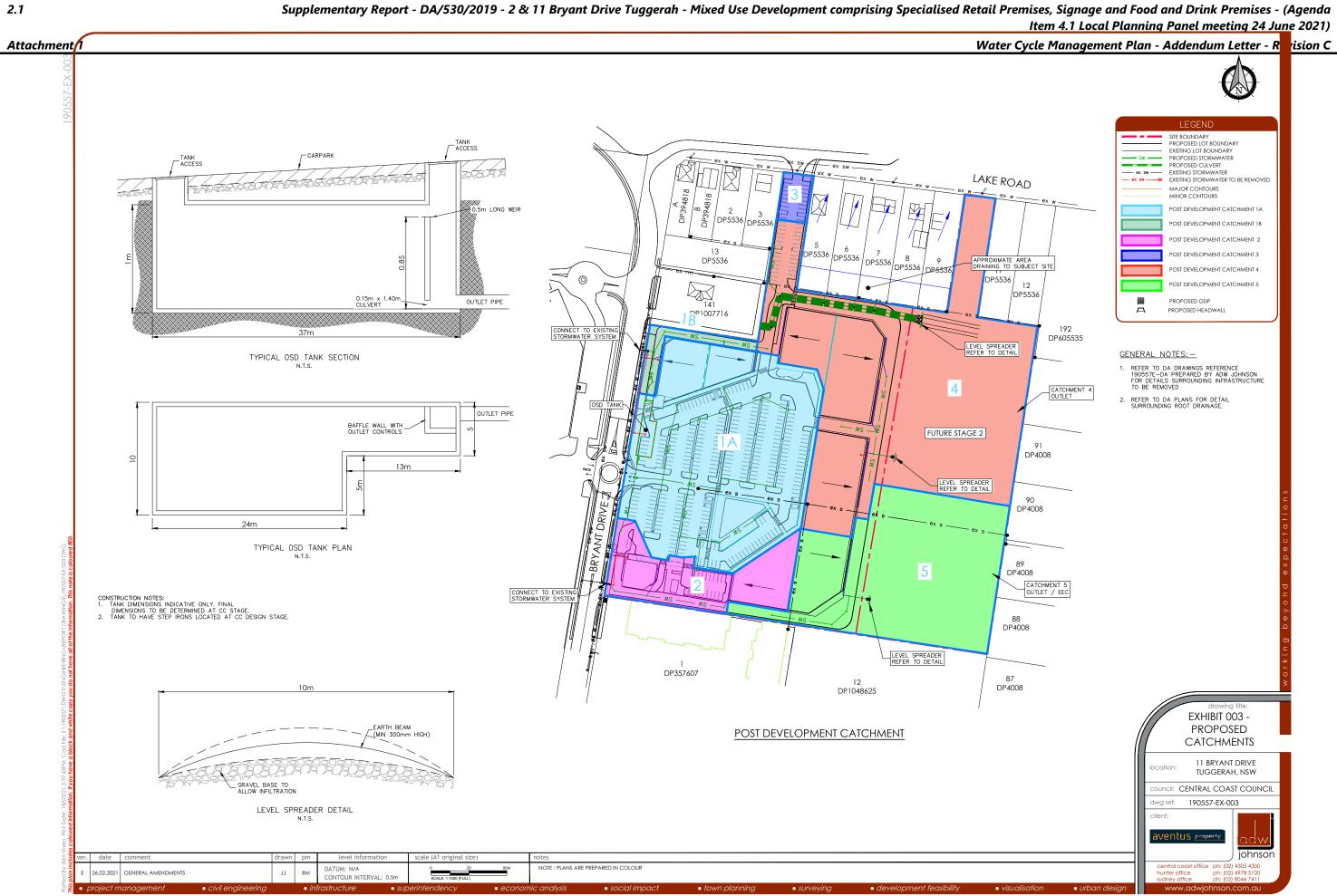
### **Exhibits**

EXHIBIT 001	EXISTING SITE AND CATCHMENTS
EXHIBIT 002	CONCEPT STORMWATER DESIGN
EXHIBIT 003	PROPOSED CATCHMENTS
EXHIBIT 004	EEC FLOWS
EXHIBIT 005	COUNCIL PROPOSED CONTRIBUTION PLAN WORKS
EXHIBIT 006	ALTERNATE STORMWATER CONTIRBUTION WORKS
EXHIBIT 007	<b>EROSION &amp; SEDIMENTATION CONTROL PLAN</b>
EXHIBIT 008	PROPOSED CULVERT CATCHMENT PLAN



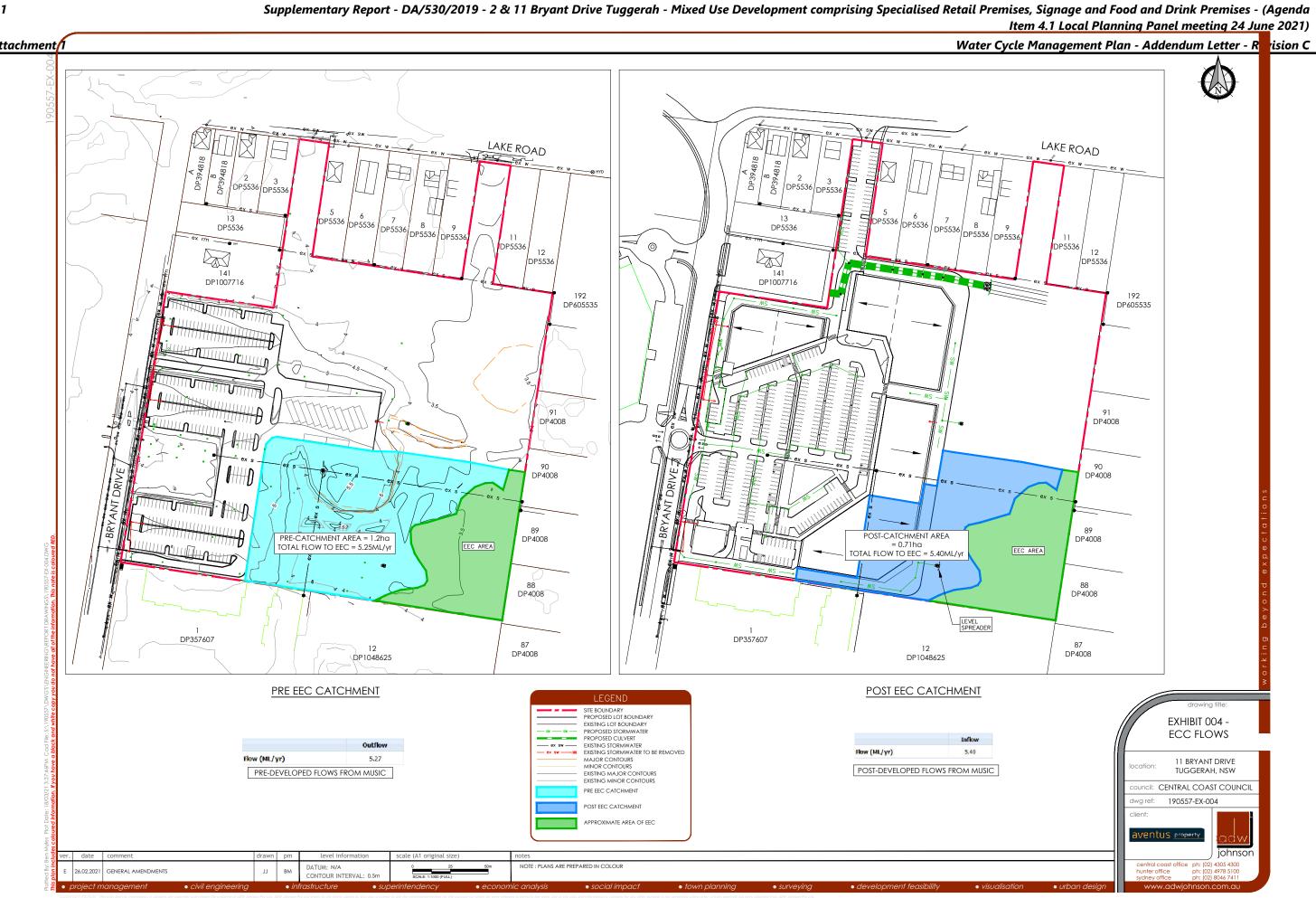


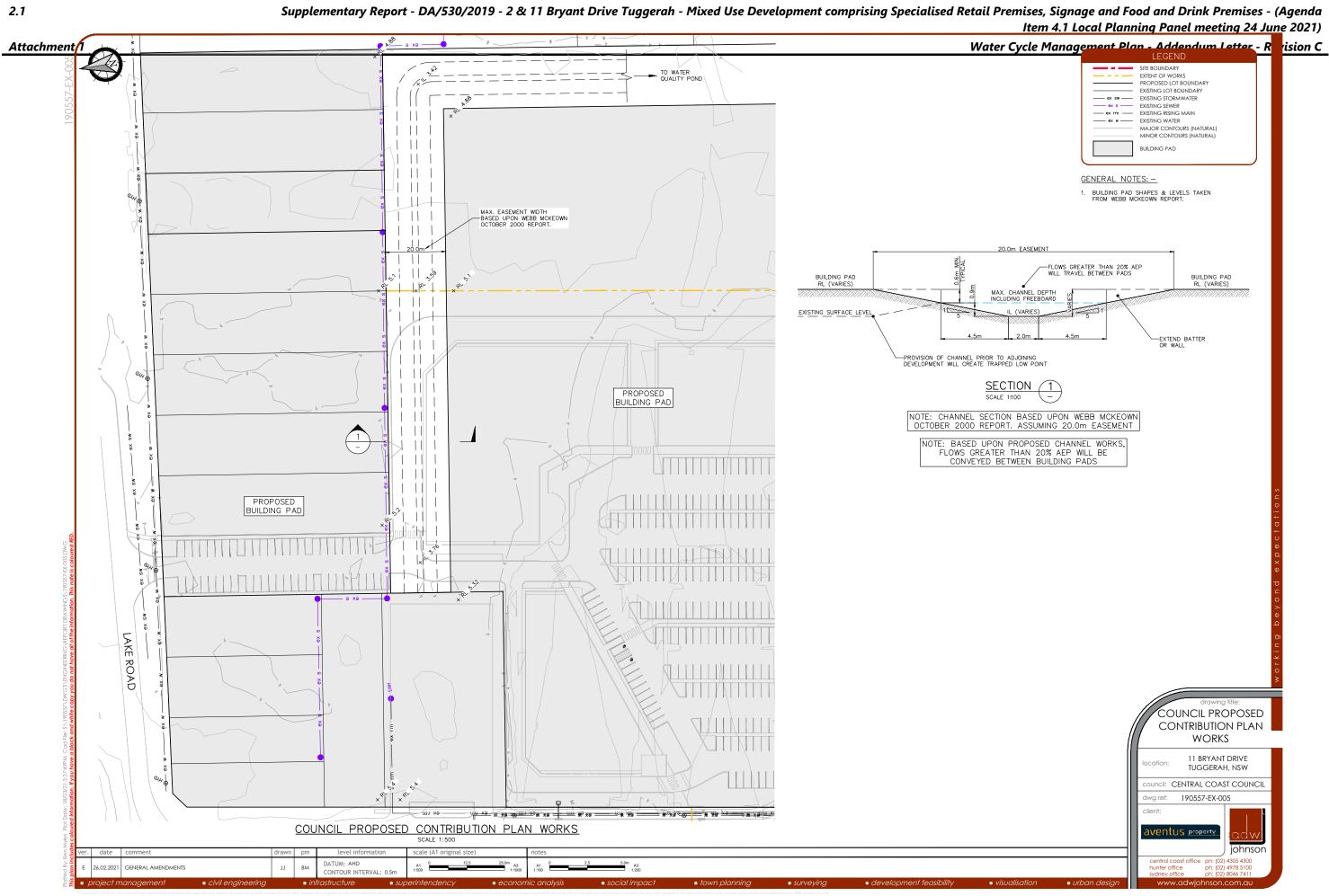


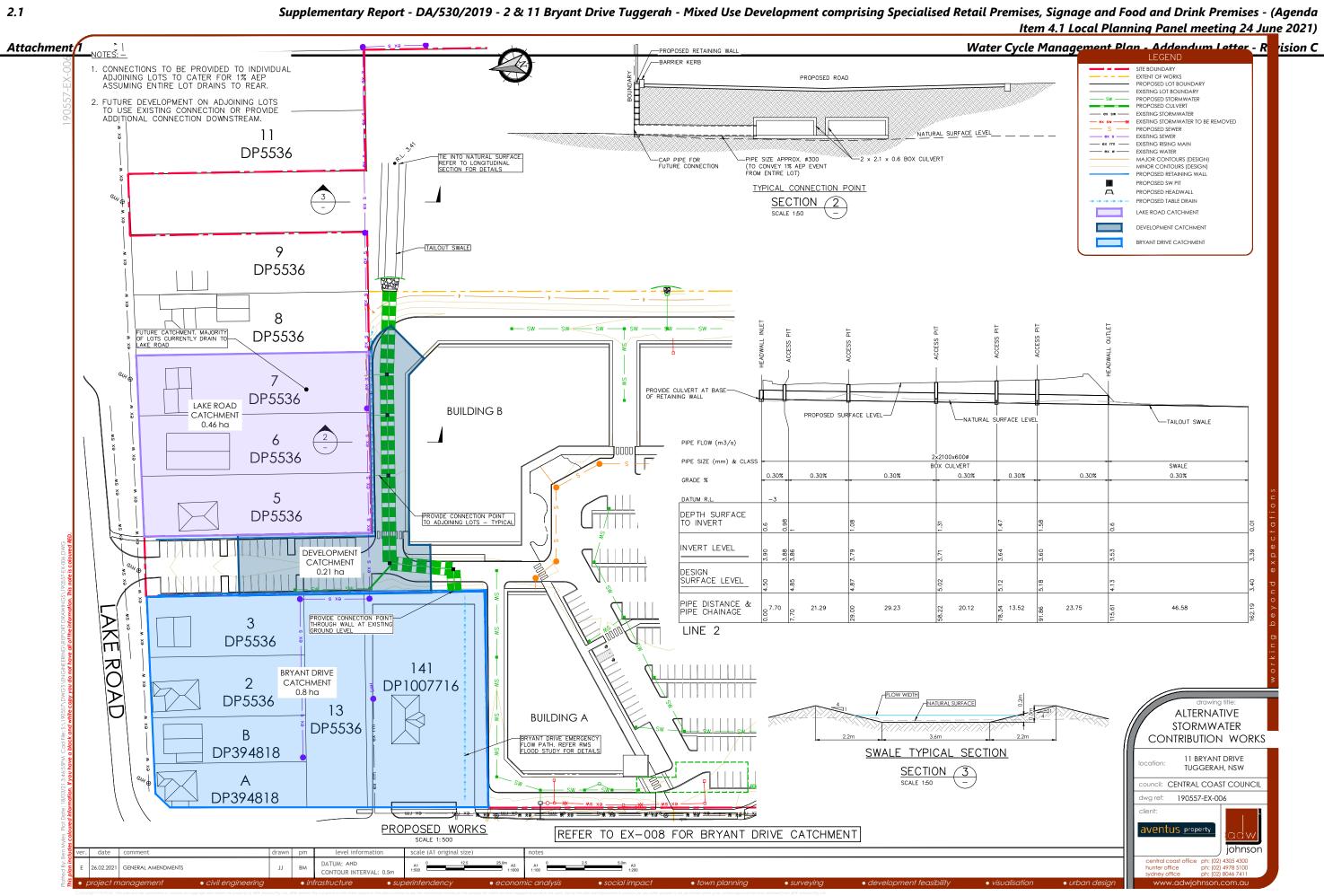




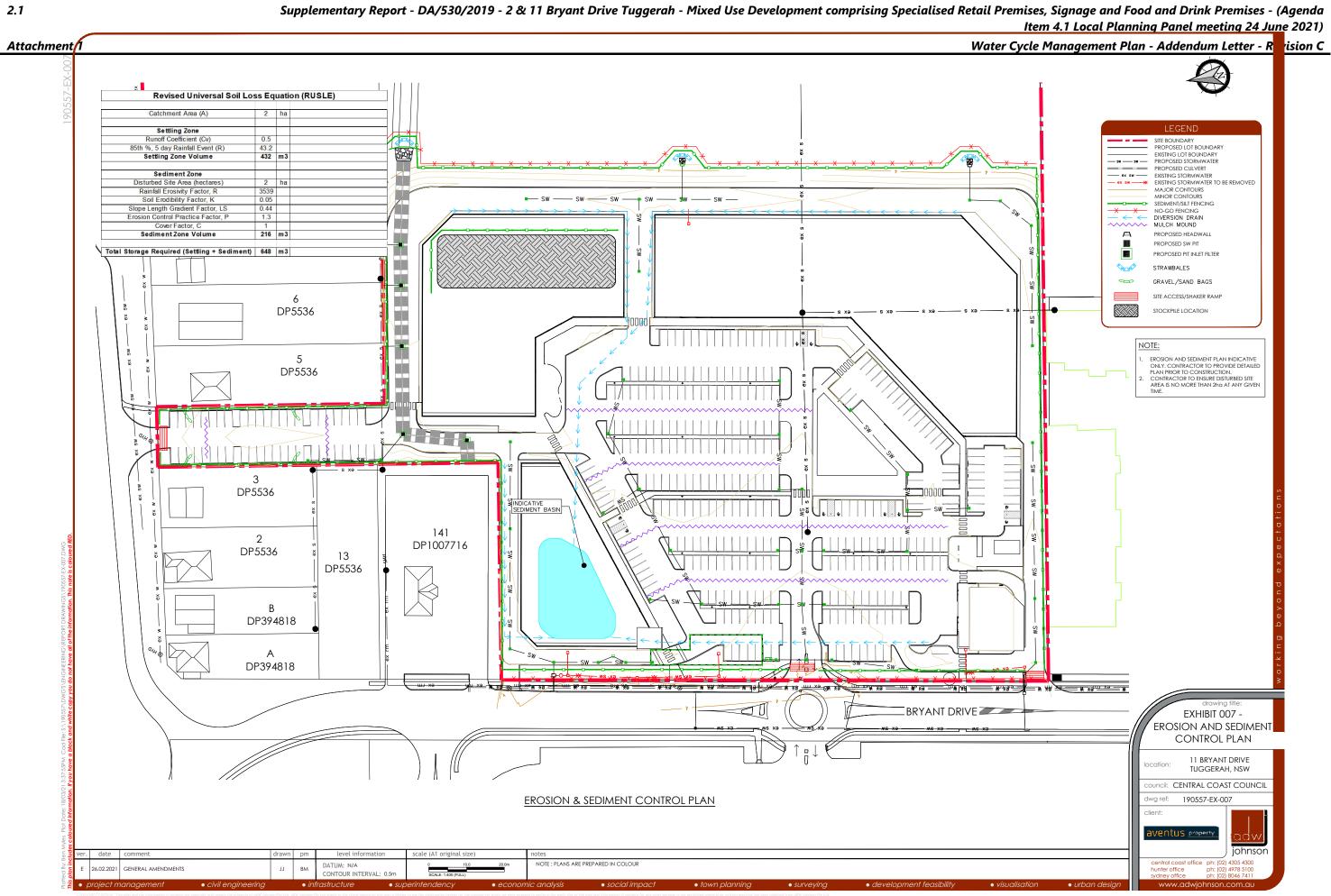






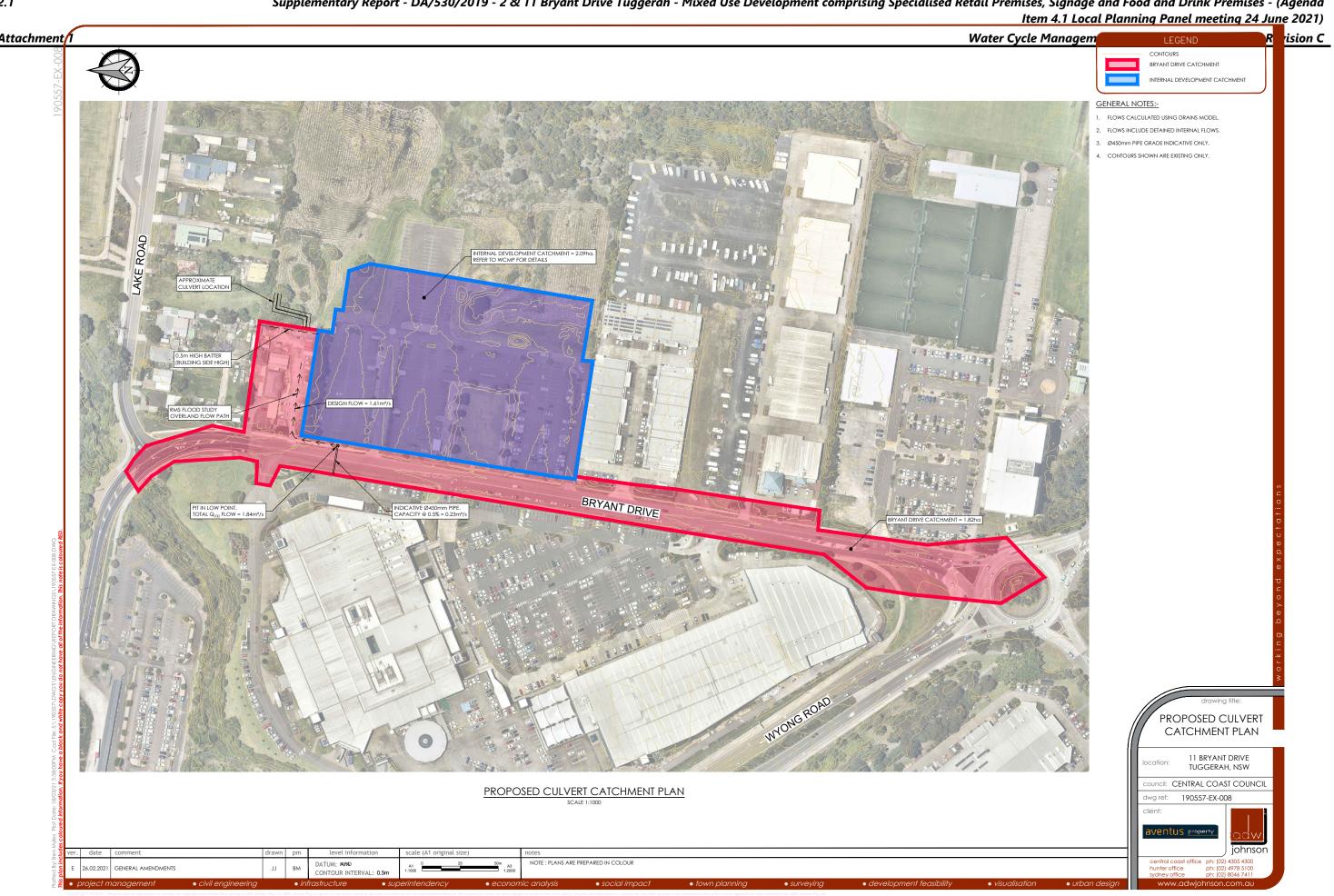












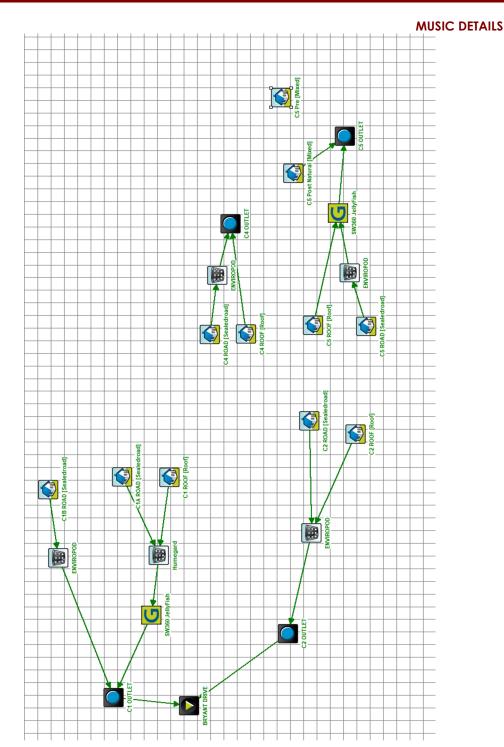
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Attachment 1

Water Cycle Management Plan - Addendum Letigow vision C

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### Appendix B



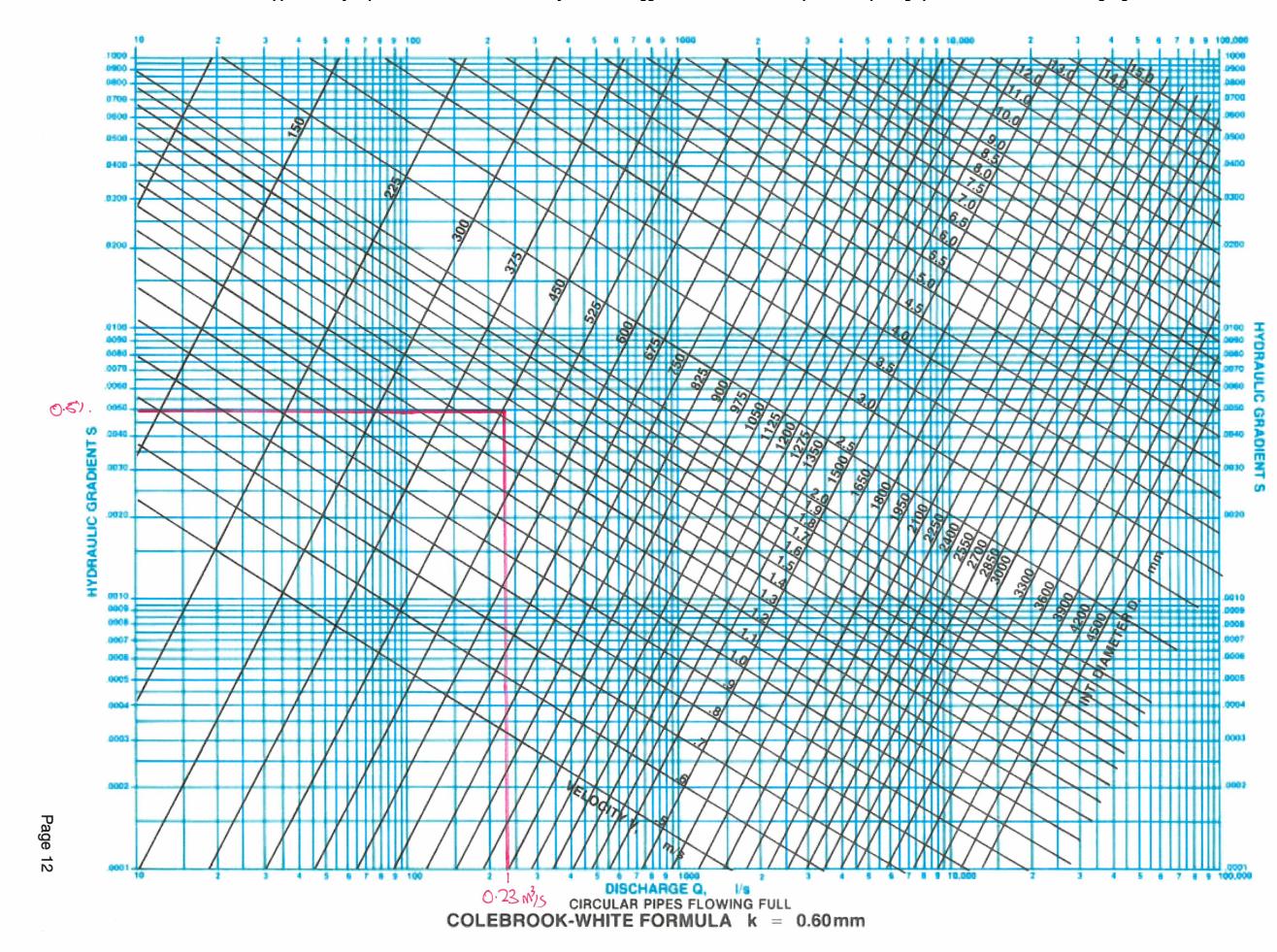
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## Appendix C

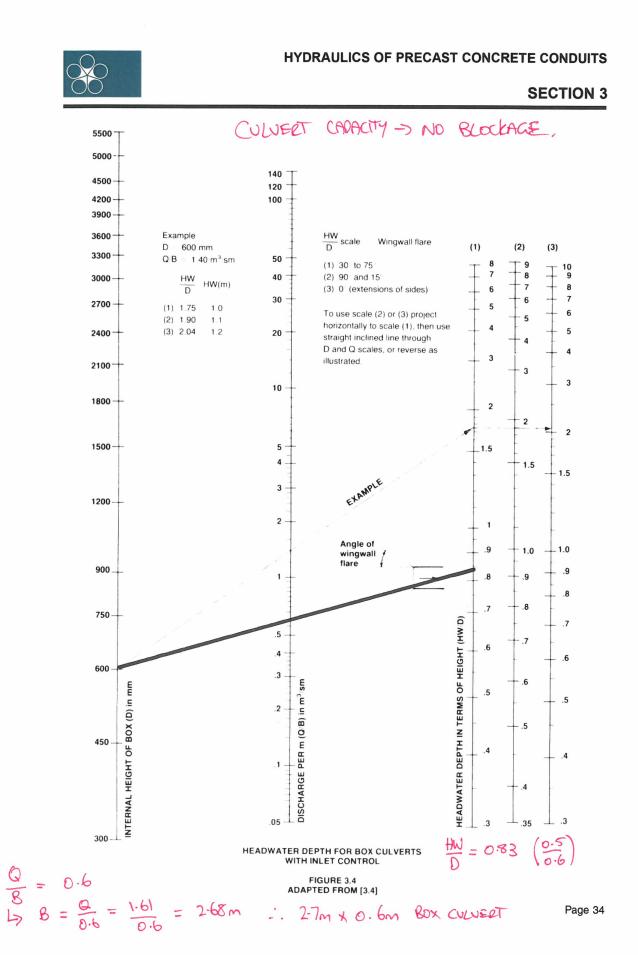
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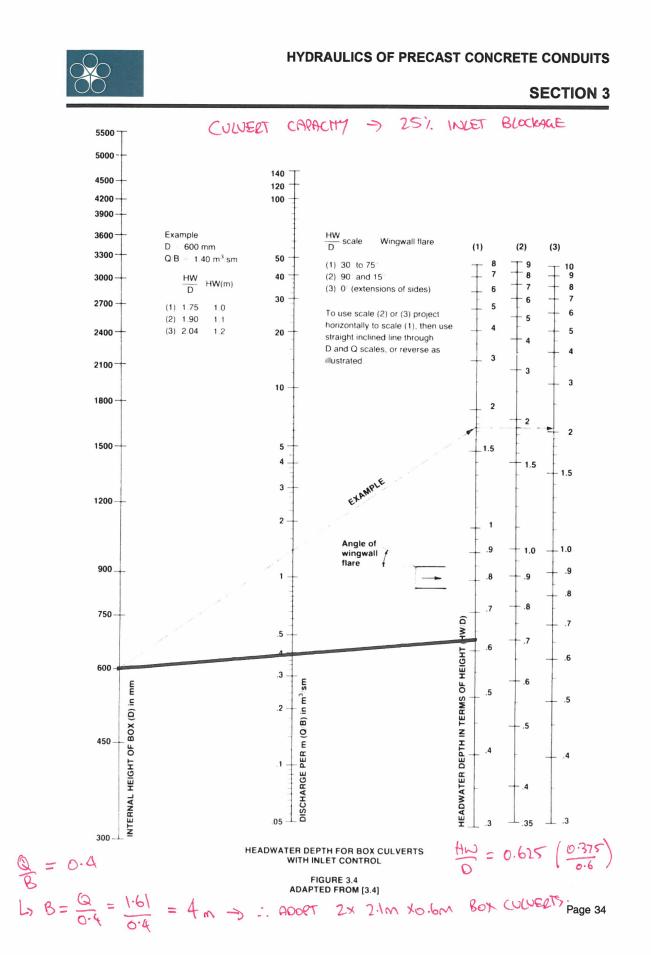
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2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Us	
	Development comprising Specialised Retail Premises, Signage and Food and Drink	
	Premises - (Agenda Item 4.1 Local Planning Panel meeting	
Attachment 1	Water Cycle Management Plan - Addendum Letion vision C	
	johnson	

## Appendix D

FLOOD INFORMATION APPLICATION

- 87 -

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment 1

Water Cycle Management Plan - Addendu



31-Jan-2019

ADW Johnson 5 Pioneer Ave TUGGERAH NSW 2259

### FLOOD LEVEL CERTIFICATE

Property: Lot 102 DP 1209157, 11 Bryant Dr, TUGGERAH NSW 2259

Council refers to your flood enquiry application for the above property, and provides the following information in response:

Design Flood Level	RL 3.8m AHD
Freeboard	0.5m
Minimum Habitable Floor Level	RL 4.3m AHD

\*AHD (Australian Height Datum)

DISCLAIMER: Council provides you with the above information as general advice only, and you should not rely upon that information when making decisions relating to the purchase or development of the above property. Council strongly recommends that you seek site specific flooding advice from a suitably experienced expert prior to making any decisions relating to the purchase or development of above property. That disclaimer and recommendation is provided for the following reasons:

1. The information in the above table is based on Council's records. Those records do not include a recent flood study or a recent detailed survey of the above property. For example, a recent detailed survey would provide precise ground levels for the subject property as well as identify, with precision, the location of any watercourses, drainage structures and systems, overland flowpaths and built structures that might impact on the extent and degree to which the subject property might flood. Council does not have sufficient information to provide you with accurate prediction of the likelihood and extent to which the above property might flood, and so cannot provide you with accurate design levels for potential development of that property.

### Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment 1 2. Council does not, and cannot, Water Cycle Maihagen and Pitans-Addendumt Letter - Revision C

under the *Environmental Planning and Assessment Act 1979*, grant consent to a development application that seeks to erect or use dwellings or other structures on the above property that conform with the levels set out in the above information. As a consent authority, Council is required to consider the suitability of the above property for the specific development proposed as well as consider the requirements of Council's Development Control Plan 2013 – Chapter 3.3 Floodplain Management (this is available on Council's website). Council may also have to consider the requirements of other statutory bodies, such as the Mine Subsidence Board.

The information provided in this letter is provided only to you, and is not intended to be provided to any third party.

Yours faithfully,

Man Devolut

Mark Dowdell
PRINCIPAL DEVELOPMENT DESIGN ENGINEER

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
	Premises - (Agenda Item 4.1 Local Planning Panel meeting
Attachment 1	Water Cycle Management Plan - Addendum Letion vision C
	johnson

## Appendix B

PUBLIC SUBMISSIONS

- 90 -

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)



Attention:

Janice Buteux-Wheeler - Senior Development Planner - Major Development Applications Rik Hart – Chief Executive Officer

Further to the below e-mail, please find attached a copy of the detail survey plan which is more legible.

Thank you.



Attention:

Janice Buteux-Wheeler - Senior Development Planner - Major Development Applications Rik Hart – Chief Executive Officer

Hello,

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Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment find attached our submission in relation Watter Gyden Management Rhant a Addamdum Letter - Revision C

Once reviewed, we would appreciate the opportunity to be able to liaise with Council to demonstrate how the application in its current form adversely affects our property.





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	REGISTERED SURVEYORS AND LAND DEVELOPMENT CONSULTA SUITE 4, 1 BOUNTY CL., TUGGERA P.O. BOX 4144, BAY VILLAGE: 22, PHONE (02) 43539644 FAX (02) 4 Email -admin@surveyors.com.a	H 2259 61 I3533855
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Please see follo	wing submission	
V1.1 26.3.19 D13496201	Wyong Office: 2 Hely St / PO Box 20 Wyong NSW 2259 Gosford Office: 49 Mann St / PO Box 21 Gosford NSW 2250	Page 2 of 2

Wyong Office: 2 Hely St / PO Box 20 Wyong NSW 2259 Gosford Office: 49 Mann St / PO Box 21 Gosford NSW 2250 P 1300 463 954 LF ask@centralcoast.nsw.gov.au.LARN 73 149 644 003

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22<sup>nd</sup> July 2021

2.1

#### Submission DA/530/2019 Property: 2 & 11 Bryant Dr, Tuggerah

Dear Sir / Madam,

Please see below points raised in response to the notification of proposed development DA/530/2019. For ease of reference, below are the following land owners;

The Development Application from Aventus lacks essential information which is expected for any Development Application, let alone one of this magnitude to enable Council to be able to make an informed assessment. In particular, there is no site survey plan which illustrates spot levels (*the survey drawing provided had spot levels turned off*). In addition, there is no sitespecific flood impact assessment.

As detailed survey information was not available, **a second secon** 

- 1. Detailed survey from (Annexure A) which shows;
  - Water in Bryant Drive would need to reach an elevation of between 4.2 and 4.3m AHD before it begins to flow into the southern driveway of
  - The survey also shows a drainage depression/ swale with elevations of between 3.68 and 4.02m AHD along the north-western boundary of the Aventus site.
  - This flow path creates a direct link from Bryant Drive frontage (4.02m AHD) through to the sag location at the rear of 19-21 Bryant Dr (3.74m AHD) and would become active prior to inundation through
- A review from (Annexure B) in relation to the Water Cycle Management Plan prepared by ADW Johnson and associated flood related information relevant to DA/530/2019, concludes that a more comprehensive sitespecific assessment of flooding is required.

Please see below comments in relation to the notified Development Application, DA/530/2019, relating to 2 & 11 Bryant Drive, Tuggerah.

#### **Flood Impact Assessment**

There is no site-specific flood impact assessment which was conducted as part of the Development Applications DA/530/2019.

#### **Central Coast Council – Overland Flow Study**

In reviewing the YouTube video from the Panel Meeting dated 24/06/21, Mr Mark Dowdell, Principal Development Assessment Engineer for Central Coast Council confirmed that Council did not have an Overland Flood Study for the area.

#### ADW Johnson Water Cycle Management Plan

This report references the Flood Impact Assessment Report, prepared by SKM for the Pacific Highway and Wyong Road intersection upgrade, which indicates that the overland flow path currently conveys water through the carpark on the southern edge of 19-21 Bryant Drive in the 1 in 100 year and greater flood events.

The report prepared by SKM in 2012 notes;

- The sole purpose of the report relates to the proposed Pacific Highway and Wyong Road intersection upgrade. The findings from the study is not to be used for determination of flood planning levels.
- SKM has relied upon, and presumed accurate, certain information (or absence thereof) provided by the Client and other sources.
- SKM accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.
- The report has been prepared on behalf of, and for the exclusive use of, Roads and Maritime Services (RMS).

In view of the above disclaimers, there should be no reliance on the SKM report from 2012 which did not include detailed ground survey away from the intersection works. Also, any LiDAR (aerial) survey that may have been used as part of the SKM assessment to define the terrain was unlikely to capture the existing swale, due to the vegetation over the swale on the northern side of the Aventus land, which is possibly the reason this flow path was not identified.

Given the magnitude of this proposal, Aventus should have commissioned a new site-specific flood assessment report at their own expense.

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#### Survey Drawing

The survey drawing which accompanies DA/530/2019 has <u>spot levels turned off</u>. contacted Janice Buteux-Wheeler, Senior Development Planner to request for a survey drawing which illustrates spot levels, but was advised *"I will make the request, but I can't compel them to. There are contours on the plans provided."* 

It is understood Council can't compel an applicant to provide the necessary information, but neither can Council make a valid assessment of the application without the necessary information.

Central Coast Council's - Guide for Applications on Supporting Documentation Requirements, notes the following requirements;

"An essential part of your preliminary investigation is a site survey, showing the location and relative levels of the natural and built features of the site and adjoining properties. The survey plan must be prepared by a registered surveyor and is required for most developments. It provides council with important information to enable a proper assessment of the development proposal and needs to show the following information ............Contours at 1metre intervals, or spot levels, relative to the Australian Height Datum; · Location of all creeks, water bodies and drainage channels on the site, including mean high water mark, where applicable; and · Location of easements, or rights of access / carriageway, benefiting or burdening the site".

In addition, Central Coast Council's - Development Control Plan 2013 – Chapter 3.3 Floodplain management notes the following requirements;

"Development Applications for land subject to flood related development controls are to include the following information 2.1 (b) Applications for earthworks, filling of land, infrastructure and subdivision are to be accompanied by a survey plan (with minimum contour interval of 0.25m) showing relative levels to AHD".

This is considered essential information to enable the proper assessment and/or determination of a Development Application for land subject to flood related development controls.

#### **Architectural Drawings**

The architectural drawings which accompanies DA/530/2019, lacks some essential information in relation to Blueview's primary concerns which relate to flooding and transparency to be able to understand existing and proposed levels for not only the building pods, but also driveways levels & associated driveway grades.

Central Coast Council's - Guide for Applications on Supporting Documentation Requirements, notes the following requirements;

#### FLOOR PLANS / BUILDING SPECIFICATIONS

Floor plans show the layout of each floor of the building, including any basement car parking. The plans must be drawn to a recognised architectural scale eg; 1:50, 1:100, 1:200. 1:200 is the minimum acceptable scale for floor plans, elevations and section. The plans must clearly identify:  $\cdot$  The scale to which they are drawn and the true north point  $\cdot$  The layout, room sizes and intended uses of each part of the building  $\cdot$  The finished floor levels of the building relative to Australian Height Datum (AHD)  $\cdot$  The location and sizes of windows and doors  $\cdot$  The thickness and structure / type of walls  $\cdot$  Setback from

## LIFE PROPERTY GROUP

boundaries Information must include: · Location of the proposed building, including extensions or additions to existing buildings in relation to the site boundaries and adjoining developments. Note: For additions and alterations, new work must be uniquely coloured to differentiate the new work on the plans from the existing building; · Floor plan of the proposed buildings showing building layout and it use, room sizes, windows and door locations; · Wall thicknesses and structure type; · All floor levels and steps in floor levels (to the Australian Height Datum); · Total floor area; and · Floor Space Ratio (FSR) i.e. Ratio of Gross Floor Area to Site Area

#### **ELEVATIONS & SECTIONS**

Elevations are drawings showing the appearance of all the external walls of the building. Sections show cuts through the building to show the internal construction and levels. The plans must include: • The scale to which they are drawn • The existing and proposed levels of the land, finished floor levels and height of the building relative to Australian Height Datum • The external finishes of buildings on the site and adjoining properties • The location and sizes of windows and doors • The building height limit (as defined in the Planning Controls) as a dotted line The following must be provided for all applications, except minor internal alterations, and should include: • All building elevations, external door and window positions and roof profiles; • External materials, finishes and heights of existing and proposed finished ground, floors, walls, windows, eaves and ridges; • A minimum of two sections indicating levels of ground, all floors (including basements), ceilings, eaves and ridges to Australian Height Datum (AHD). Additional sections may be required for more complex buildings; • Levels of existing and proposed ground in relation to buildings and roads to AHD; and • Proposed parking arrangements including entry and exit points for vehicles and provision for the movement of vehicles within the site including necessary levels to AHD and dimensions. All parking and vehicle access must comply with AS 2890.1-2004.

#### Flooding

As illustrated from the photo's below which were previously provided to Council, there is an existing drainage swale on the northern portion of the Aventus land which drains flood waters. This existing arrangement means that flood waters flow along the existing swale prior to flowing onto

What the current application is proposing is to delete the existing drainage swale arrangement, fill the land and re-direct the overland flow from the Aventus land to Blueview's land (adjoining land).

The images below clearly demonstrate floodwater flowing into the existing drainage swale on the Aventus land, as floodwaters have not breached the driveway of **Tuggerah**. This is also demonstrated via spot levels on the survey drawing annexed to this report, and as summarised below;

- Water in Bryant Drive would need to reach an elevation an elevation of between
   4.2 and 4.3m AHD before it begins to flow into the southern driveway of
   Blueview's site.
- The survey also shows a drainage depression/ swale with elevations of between
   3.68 and 4.02m AHD along the north-western boundary of the Aventus site.
- This flow path creates a direct link from Bryant Drive frontage (4.02m AHD) through to the sag location at the rear of the sage of the sa

## LIFE PROPERTY GROUP

Deleting the existing open culvert arrangement and relocating the overland flow path to a 'higher' location (i.e. Blueview's site) not only results in flooding to **surrounding properties**.

The proposal has a detrimental and adverse effect to **control**, which is in breach of Council's LEP 2013, Clause 7.2 Flood Planning Controls, as noted below.



Photo 1: Confirms the findings in the consultants reports which accompany this submission and are titled 'Annexure A' and 'Annexure B'.



Photo 2: Confirms the findings in the consultants reports which accompany this submission and are titled 'Annexure A' and 'Annexure B'





#### Wyong Local Environmental Plan 2013 7.2 Flood Planning

(2) This clause applies to land at or below the flood planning level.

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development –

(b) is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties.

#### Conclusion

The Detail Site Survey and Review of Flood Related issues report by Catchment Simulation Solutions demonstrates that the application DA/530/2019 in its current form will significantly affect flood behaviour resulting in flood affectation of Blueview's property, and surrounding properties.

In the event the application is approved in its current form without a site-specific flood impact assessment, appropriate survey drawings illustrating spot levels and detailed architectural drawings which disproves the findings of the reports which accompany this submission, Blueview P/L reserves its legal rights.



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Annexure A Detail Site Survey



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# LIFE PROPERTY GROUP

Annexure B Review of Flood Related issues for DA/530/2019

#### LIFE PROPERTY GROUP

ABN 35 000 340 009 PO BOX 1097, DEE WHY POST SHOP. NSW 2099 Ph: +61 2 9938 5788 www.lifepropertygroup.com.au

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Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah Review of Flood Related Issues for DA/530/2019

#### Background

Further to recent discussions, I am pleased to advise that we have reviewed the flood related information relevant to a development application (DA) at Lot 102 DP 1209157, 11 Bryant Dr, Tuggerah (the subject site) (DA/530/2019). The proposed works on the subject site will include the filling of a large section of land that currently comprises car parking areas, open space and an existing drainage swale (as illustrated in Plate 1) to provide for construction of building pads, access roads and car parking areas for a proposed bulky goods development.



Plate 1: Photograph showing flow moving along an existing drainage swale along the northern boundary of the subject site (image provided by Blueview Pty Ltd, sourced from public submission objection (29/06/2020)

Therefore, in accordance with your request, we have reviewed the available flood and topographic information for the area to confirm the adequacy of the WCMP and determine if the potential flooding impacts have been satisfactorily addressed. The outcome of this review is summarised below.

#### **Review of Flood Related Issues**

We have reviewed the WCMP in conjunction with detailed site survey commissioned by across the area of interest (a copy of the survey is enclosed in **Attachment A**). This was reviewed relative to the flood related development requirements set out in the Wyong Development Control Plan 2013 (WDCP 2013). This review determined that:

- Based upon flood mapping available from the Central Coast Council Online Mapping website, part sections of the subject site falls within Flood Risk Precinct 2. As such, the flood-related development requirements set out in Chapter 3.3 of the WDCP 2013 apply. However, the flood assessment completed as part of the WCMP does not appear to satisfy the requirements of the DCP. More specifically:
  - o Section 2.1 states:

"Development Applications for land subject to flood related development controls are to include the following information;

(b) Applications for earthworks, filling of land, infrastructure and subdivision are to be accompanied by survey plan (with a minimal contour interval of 0.25m) showing relative levels to AHD.

(c) For large scale developments, or developments that in the opinion of Council are in critical situations, where an existing catchment-based flood study is not available, a flood study prepared by a suitably qualified engineer using hydrologic and hydraulic dynamic one or two dimensional computer model may be required".

• Section 3.1, criteria 2 states that the development should have:

(j) "Negligible flood affectation elsewhere in the floodplain for a full range of flood events up to the 1% AEP flood event, having regard to: a) loss of flood storage, b) changes in flood levels, flows and velocities upstream, downstream and adjacent to the site, c) cumulative impact of multiple development in the vicinity."

(k) "Consideration of the impacts of climate change."

 Section 4.3 states: "filling will not be permitted unless a report from a suitably qualified engineer has been submitted and approved by Council that certifies that the development will not increase flood affectation elsewhere.":

No such modelling has been completed to allow flood impacts, cumulative development impacts or climate change impacts to be determined.

- It is understood that the online flood mapping is based upon the regional flood study for the Wyong River catchment. This study considered "mainstream" flooding only and does not consider local catchment flows. As such, this mapping does not consider any local overland flow paths that may drain through the subject site.
- The WCMP largely draws on information contained in the Flood Impact Assessment report prepared by SKM for the Pacific Highway and Wyong Road intersection upgrade to define local overland flow paths in the vicinity of the subject site. This determined that local flows pass through 19-21 Bryant Dr in a 1% AEP flood. However, it needs to be recognised that this study was developed for the Pacific Highway and Wyong Road intersection upgrade only and was not intended to be used for any other purpose (as noted in the disclaimer on the fly page of the SKM report). As a result, the SKM study did not include detailed ground survey away from the intersection works and as outlined below, cannot be considered reliable at the subject site.
- As discussed, detailed site survey has been commissioned by Blueview Pty Ltd (see Attachment A) and shows that water in Bryant Drive would need to reach an elevation of between 4.2 and 4.3m AHD before it begins to flow into the southern driveway of 19-21 Bryant Dr (Blueview Pty Ltd site). The survey also shows a drainage depression/swale with elevations of between 3.68 and 4.02m AHD along the north-western boundary of the subject site. This flow path provides a direct link from the Bryant Drive frontage (4.02m AHD) through to the sag location at the rear of 19-21 Bryant Dr (3.74m AHD), and would become active prior to inundation through 19-21 Bryant Dr (the Blueview Pty Ltd site). As this flow path is vegetated, any LiDAR survey that may have been used as part of the SKM assessment to define the terrain is unlikely to reliably capture this depression (likely the reason this flow path was not identified). It is noted that the survey supplied by the applicant for the subject site does not include spot elevations at the location of this overland flow path.

#### Conclusion

The review of the available flood and topographic information highlights limitations in the flood assessment that has been completed to support the DA for the subject site. It is considered that a more comprehensive assessment of flooding that addresses the full requirements of the Wyong Development Control Plan 2013 is required to support the DA. The assessment should explicitly confirm that the proposed development will not adversely impact on flood behaviour across adjoining properties, as would currently appear is possible. This assessment should take advantage of improved survey that fully captures the overland flow path to the south of 19-21 Bryant Dr to ensure local overland flooding is appropriately represented and managed as part of any future development of the site.

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I trust this letter suitably summarises the outcomes of the review of flood related issues for the subject site. However, if you have any questions or require anything further on this matter, please do not hesitate to contact

Kind Regards,





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## Attachment A Detailed Site Survey





# **Submission Form**

Prior to submitting this form, please read the Guide to Making a Submission to help you understand how to make a submission, and what Council will be doing with any personal information you provide in your submission.

1. DA NUMBEI	R
DA Number	530/2019
2. YOUR CONT	ACT DETAILS
Name / Organisatic	on
Address:	
Phone:	Email:
3. POLITICAL D	DONATIONS AND GIFTS
Councillor or C	as any person associated with you, made a political donation or gift to a Council employee within the last two years? Council employee within the last two years? Council employee within the last two years?
4. SIGNATURE	
Signature	Date
5. GUIDE TO M	AKING A SUBMISSION (For further information on making a submission, refer to Council's website)
1. Make sure that you The closing date w team on 4350 555	ur submission is lodged by the closing date for public exhibition of the development application (DA). /ill be on either the notification letter you received; is available online; or by phoning Council's Customer Service 5.
2. If you are objecting in its assessment o	g to the DA, you must provide the reasons why you object. These reasons will be carefully considered by Council of the DA,
3. Group petitions ca reasons for the obj	n also be submitted and should follow the same format shown in the standard submission form and must provide iection(s).
-	offensive or defamatory comments in a submission.
donations and gift: under the EP&A Ad information about	Environmental Planning & Assessment Act 1979 (EP&A Act), requires you to disclose reportable political s if you are making a relevant public submission to Council. Failure to disclose relevant information is an offence ct. Council is required to make any disclosure made under this section publicly available on its website. Further the requirement to disclose any political donations and gifts is outlined in section 10.4 of the EP&A Act. If itical donation or gift is necessary, please provide details on your submission.
6. Council will send ye	ou an acknowledgement of your submission, and notify you of the outcome of the DA. Council may also notify d DA, or of any public Council meetings which you may wish to attend, at which the DA will be considered
<ol> <li>In accordance with submission you ma signature. Member</li> </ol>	the provisions of the <i>Government Information (Public Access) Act 2009 (GIPA Act)</i> , Council will place any ake on its website with the exception of your address, email address and telephone contact information and its of the public are entitled to access and take copies of your submission under the GIPA Act. A copy of your so be reproduced in Council reports or in Court proceedings.

8. It is voluntary for you to provide your name, address and any other contact information when making a submission to Council. It is important to note however that **Council does not consider anonymous submissions.** 

Page 1 of 2

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Page 2 of 2

	SUBMISSIO	N FORM	
DA DETAILS			
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Attachment 1

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Water Cycle Management Plan - Addendum Letter - Revision C

+We object to this development as the drainage issues we have discussed in both our previous two submissions have not been addressed.

There is NO Drainage provided for Lot 13 Bryant Drive to the East. The small pipe at the North Western corner of this lot is inadequate other than for minor rain events and does not have the capacity to drain 5000 Square metres of land . It becomes inoperable once the water is flooding on Bryant Drive as at this point the Creek is too high for our water to drain into. There are also no safeguards to prevent it blocking. Council did exploratory work (in preparation for redeveloping the road at the Bryant Drive and Lake Road intersection) adjacent to the Creek on the corner of Bryant Drive placing vertical pipes to mark gas lines and blocked the pipe to the creek. Council had to undertake remediation works to find the outlet into the creek and repair the damage. This pipe is not on Council plans as it was established more than 100 years ago. Photos have been supplied (in our 2nd submission) showing the level of water at the point where it reaches capacity and begins to follow the natural flow to the East and empty into the Aventus swamp to the South East.

Wyong Council's original Contributions Plans required Lot 13 Bryant Drive to drain to the East to maintain this protection to our properties. Because of this, Austral bricks had to provide a dish drain at the rear of their property and construct a concrete swale as part of their DA in1999 to maintain the <u>natural flow of water</u>

This is because under larger rain events the <u>natural flow of the entire corner</u> of Lake road encompassing the 1st Four houses and Lot 13 Bryant drive is towards the South East.

The car park and truck entry in Lake Road which was proposed to be lower than our property is now being raised by around .8 to 1 metre higher than existing ground level. (See 2019 and 2021 diagrams below - site section B - B) The majority of this "Finger" is currently lower than our properties and is part of the natural flow path.

Raising of this is going to cause Pooling and Damming along our Eastern boundary and the retaining wall and structures to maintain privacy, security and soundproofing for us are going to cause overshadowing and create a damp and stale air environment in our house and workshop. It is totally inappropriate to establish a car park immediately adjoining a private residence.

The images provided in the development application showing drains on the "Finger" are misleading and definitely do not show drainage for the adjoining Lots 3 (our house) and 13 DP 5536. All other adjoining properties have future drainage supplied but ours do not.

Under the New South Wales Planning Act, Council is responsible for negative effects of development to existing properties.

On Council's Website Please see ENVIRONMENT: BUSHFIRES AND FLOODING: PREPARING FOR FLOOD EMERGENCIES

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Water Cycle Management Plan - Addendum Letter - Revision C

#### Attachment 1

# Flood planning and management responsibilities

Council has a duty of care to manage lands subject to flooding within its Local Government Area. Under the <u>NSW</u> <u>Government's Flood Prone Land Policy</u>, the local government has responsibility for managing flood liable land.

Council is responsible for formulating and implementing Floodplain Risk Management Plans in accordance with the policy.

See our <u>Strategies and plans</u> page for all Floodplain Risk Management Plans.

The policy aims to reduce private and public losses resulting from flooding and encourages the development of:

- solutions to existing flood problems in developed areas; and
- strategies for ensuring that new development is compatible with any identified flood hazards and does not create
  additional problems in existing developed areas.

Central Coast Council, with the assistance of an Advisory Committee, is responsible for this task in each drainage catchment. Council seeks assistance from State and Federal Government in the form of technical advice and grant funding for studies and works.

#### Flooding on Private Property

Council relies on information from the general public to monitor flood issues on the Central Coast.

If you have experienced consistent minor flooding on or near your property which has originated from a local stormwater drain, natural stream or estuary please reported it to council.

We have supplied Council with a comprehensive flood description of this area with supporting photos showing water flows in our 2nd submission.

This proposed development will completely block the natural flow of both surface water and groundwater with no provision for drainage to any of the houses as they exist now. We have Geotech reports showing impermeability of our land (similar to Aventus reports) as there is a clay base that does not allow ground water to dissipate over the entire area.

There are no guard rails proposed along boundaries where children play in back yards.

It is not appropriate for heavy vehicles to be driving alongside and behind residential properties without a reasonable safety distance not to mention cars parking facing into the residences on the boundary . There is a danger that cars could accidentally run into our backyards.

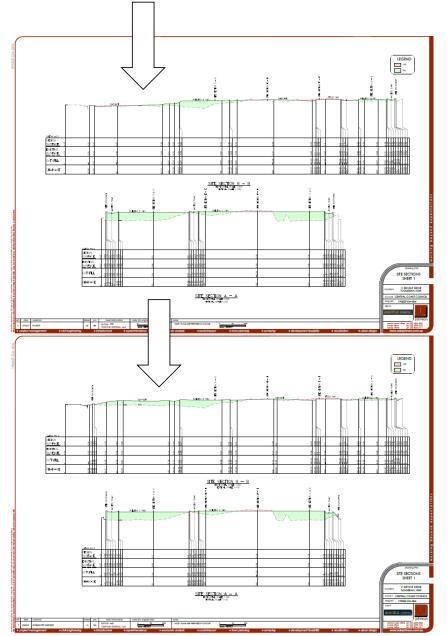
Can you please explain how boom gates will work. How can the indicative boom gate location work with trucks including semi trailers turning across Lake Road into the driveway? Trucks will have to block Lake Road traffic while they wait for the gate to open. The Super Centre is supposed to have locked gates at night. These gates have not been locked for many years and trucks access the site at 4.30am for rubbish collection. How is Council going to monitor noise in this new development when they are already not policing the original one?

Despite the fact that we have been changed to B5 zoning we still have residential land use rights and no intention of moving. Our son bought No5 Lake Road to live in and raise his family. No 13 Lake Road was recently sold to the Daughter of the family to also raise her family in her childhood home. Aventus repeatedly states that we are transitional because they want us to be. This is not the case. We live here because these are our homes. Council recently approved a DA/788/2018 at No 15 Lake Road permitting industrial buildings whilst allowing the current 1950s residence to remain. The reason for allowing the house to remain is that it suits the streetscape and makes the industrial buildings blend in. The use of the finger as a car park and truck entrance does not fit in with the streetscape and creates a dangerous environment for accessing the Central Coast Regional Sporting Complex.

Would Council please re-examine our first two submissions and understand that the photos provide proof of our flood issues. They clearly show levels of inundation where the flood level information provided by Aventus is incomplete (levels turned off).

We would request that we be given the opportunity to discuss these issues with the relevant council experts. They need to stand here and envision a metre high retaining wall with a 2.1 metre fence on top along Eastern our boundary.

The following two images show the cross section demonstrating increase in land height in the finger site section B - B (The first image is 2019 and the second is 2021).



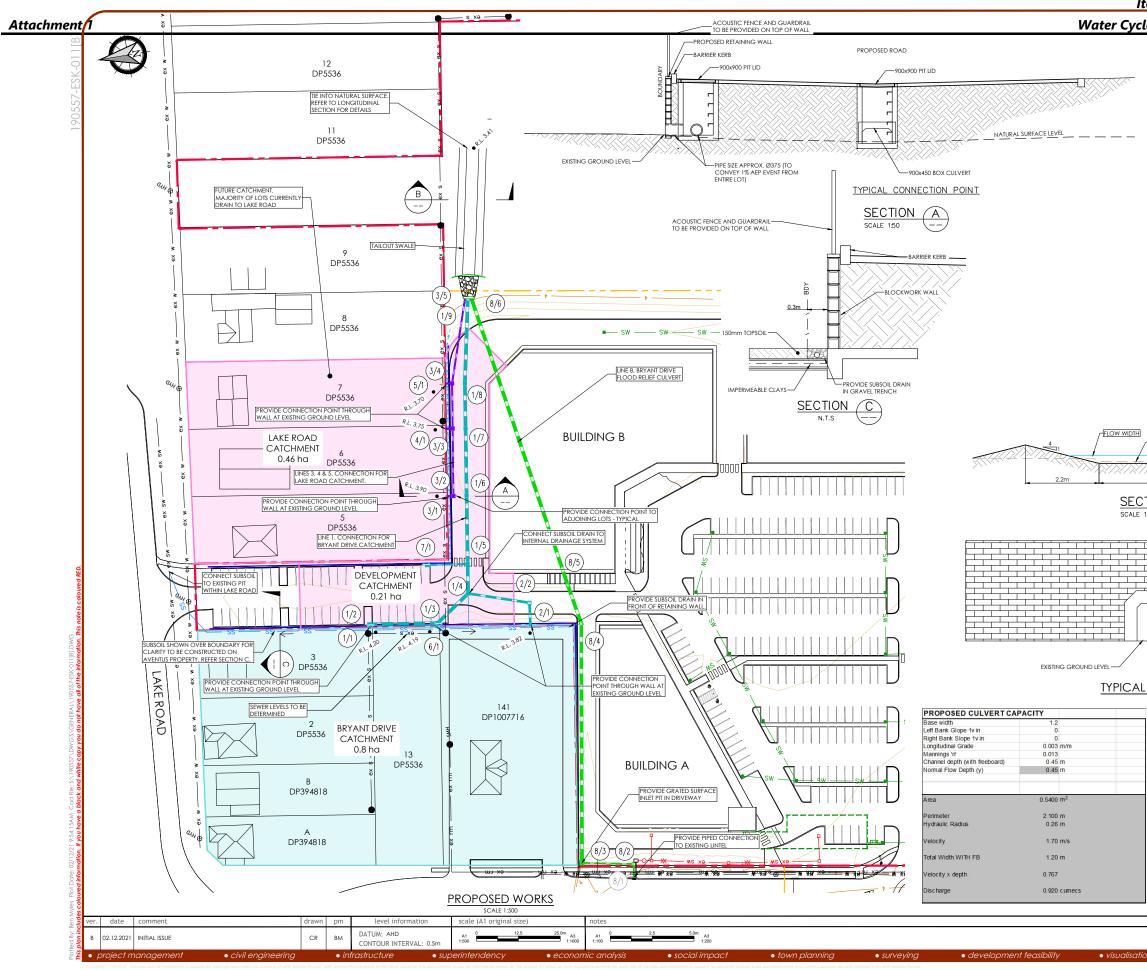
Attachment 1

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
	Premises - (Agenda Item 4.1 Local Planning Panel meeting
Attachment 1	Water Cycle Management Plan - Addendum Letiadw vision C
	johnson

# Appendix C

PROPOSED DESIGN DRAWINGS

- 115 -



# Item 4.1 Local Planning Panel meeting 24 June 2021)

	al Planning Panel meeting 24		
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	SITE BOUNDARY EXTENT OF WORKS		
	EXISTING LOT BOUNDARY     EXISTING LOT BOUNDARY		
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$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$	PROPOSED RETAINING WALL PROPOSED TABLE DRAIN		
	PROPOSED STORMWATER PROPOSED HEADWALL		
	<ul> <li>PROPOSED CULVERT (BRYANT DRIVE FLOOD RELIEF)</li> <li>PROPOSED STORMWATER PIT (BRYANT DRIVE FLOOD RELIEF)</li> </ul>		
	PROPOSED STORMWATER (BRYANT DRIVE CATCHMENT) PROPOSED STORMWATER PIT (BRYANT DRIVE CATCHMENT)		
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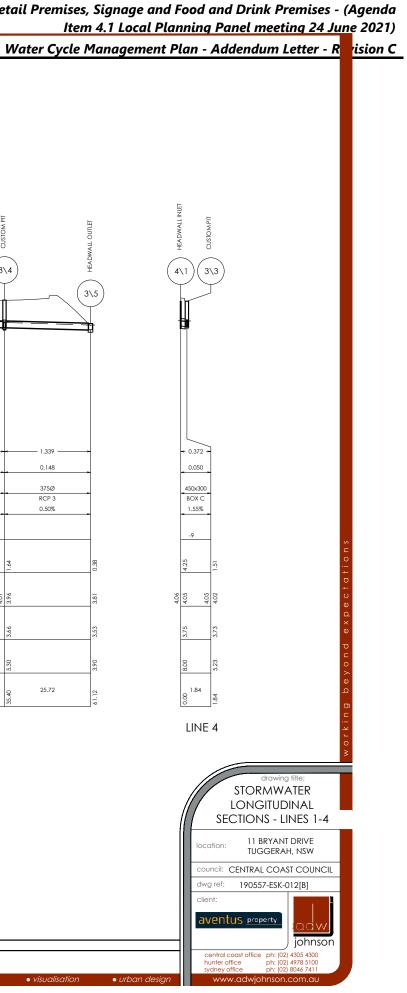
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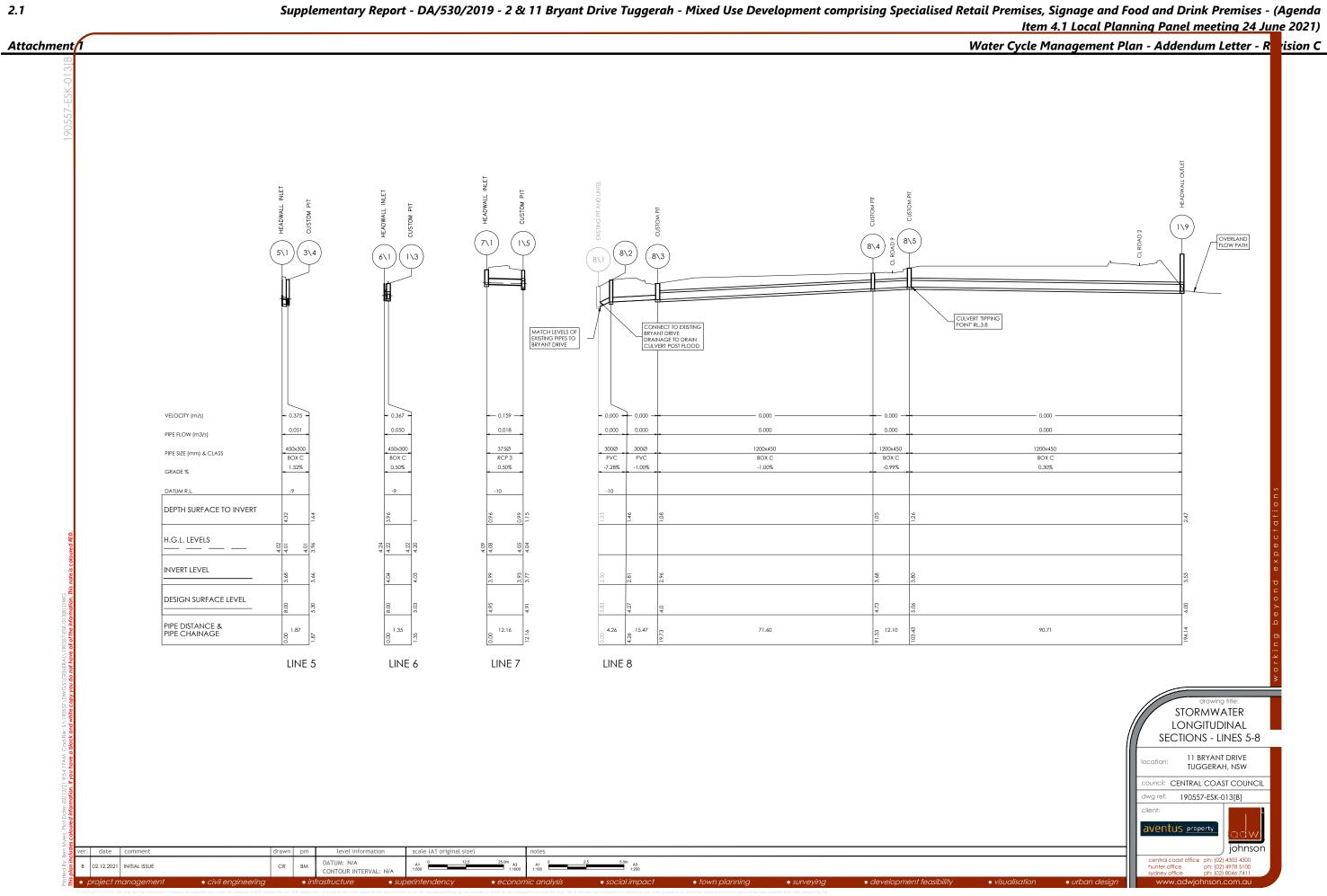
#### Attachment 1 INLET CUSTOM PIT HEAD V CUSTOM F 1\9 ( 2\1 ) 2\2 (1\4) 3\3) 3\4 1\8 1\7) 1\6 3\1) 3\2 1\3 1\4 1\5 1\2 1\1 VELOCITY (m/s) • 0.695 · - 0.495 - 0.713 0.867 0.876 0.890 0.680 - 0.678 0.370 - 0.451 - 0.896 1.339 0.812 0.848 0.193 0.329 0.125 0.134 0.344 0.351 0.355 0.360 0.122 0.122 0.050 0.050 0.099 0.148 PIPE FLOW (m3/s) 900x300 900x450 900x450 900x450 600x300 450x300 375Ø 375Ø 600x300 900x300 900x450 900x450 375Ø 600x300 PIPE SIZE (mm) & CLASS BOX C 0.50% BOX C 0.50% BOX C 0.50% BOX C 0.30% BOX C 1.51% RCP 3 0.50% RCP 3 0.50% RCP 3 0.50% GRADE % DATUM R.L DEPTH SURFACE TO INVERT 6.0 H.G.L. LEVELS 4.29 4.30 4.12 4.10 4.06 4.36 4.22 88.88 4.19 4.09 4.07 4.08 4.08 INVERT LEVEL 3.79 DESIGN SURFACE LEVEL PIPE DISTANCE & PIPE CHAINAGE 1.24 20.38 12.73 ي 8.85 ي 20.38 20.12 13.52 25.28 6.95 18.54 1.76 20.12 13.52 25.72 8 LINE 1 LINE 2 LINE 3 ver. date comment drawn pm level information scale (A1 original size) DATUM: N/A CONTOUR INTERVAL: N/A 5.0m A3 B 02.12.2021 INITIAL ISSUE BM A1 CR A1 0 1:500

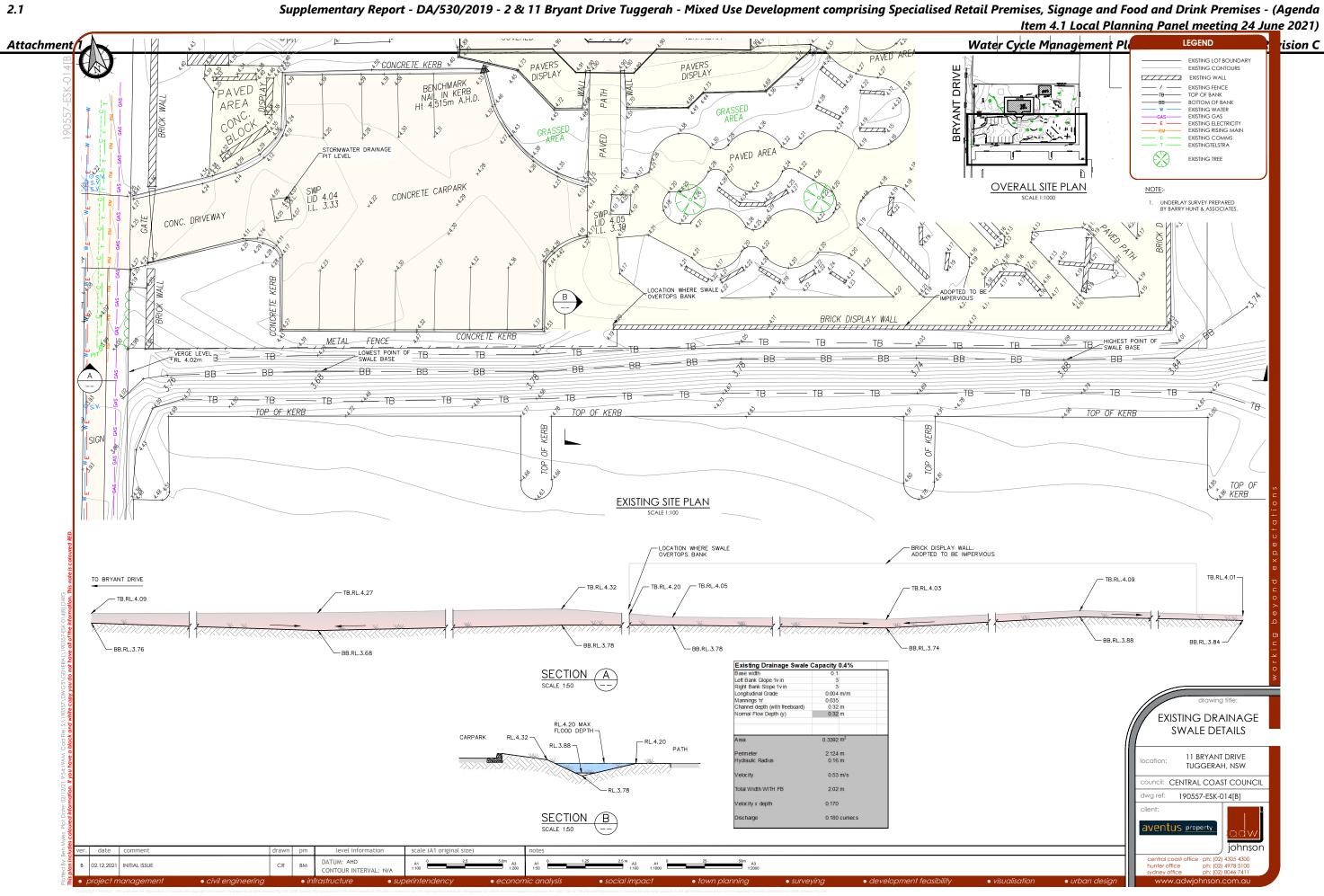
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- 120 -

## Attachment 1

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B 02.12.2021 INITIAL ISSUE

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Item 4.1 Local Planning Panel meeting 24 Ju	ne 2021)
Water Cycle Management Plan - Addendum Letter - R	rision C

	5% AEP YEAR HYDRAULIC DESIGN											
REACH	TYPE	LENGTH	DIA	U/SIL	_	PIPE	PIPE	PIPE	U/S HGI	D/S HGL	GRADE HGL	U/S PIT
nerten		LENGTH	014.	0/012	0/5/12			VELOCITY	0/3/102	0,01102	GIVE HEL	Ku
		m	mm	m	m	%	L/s	m/s	m	m	%	
1\1 to 1\2	BOX CULVERT	1.2	300	4.14	4.14	0.5	125	1.3	4.31	4.29	1.04	2
1\2 to 1\3	BOX CULVERT	20.4	300	4.14	4.03	0.5	134	1.3	4.27	4.22	0.21	2.1
1\3 to 1\4	BOX CULVERT	12.7	300	4.03	3.97	0.5	193	1.4	4.2	4.12	0.64	0.9
1\4 to 1\5	BOX CULVERT	8.8	450	3.79	3.77	0.3	329	1.4	4.06	4.05	0.18	1.2
1\5 to 1\6	BOX CULVERT	20.4	450	3.77	3.71	0.3	344	1.4	4.04	3.99	0.21	0.2
1\6 to 1\7	BOX CULVERT	20.1	450	3.71	3.65	0.3	351	1.4	3.98	3.94	0.22	0.4
1\7 to 1\8	BOX CULVERT	13.5	450	3.65	3.6	0.3	355	1.4	3.92	3.9	0.21	0.3
1\8 to 1\9	BOX CULVERT	25.3	450	3.6	3.53	0.3	360	1.4	3.88	3.78	0.39	0.3
2\1 to 2\2	BOX CULVERT	7	300	3.87	3.85	0.3	122	1.1	4.15	4.14	0.05	2
2\2 to 1\4	BOX CULVERT	18.5	300	3.85	3.79	0.3	122	1.1	4.11	4.1	0.07	1.2
												1.2
3\1 to 3\2	BOX CULVERT	1.8	300	3.85	3.83	1.51	50	1.6	4.07	4.07	-0.1	2
3\2 to 3\3	RCP CLASS 3	20.1	375	3.83	3.73	0.5	50	1.2	4.05	4.05	0.01	2.1
3\3 to 3\4	RCP CLASS 3	13.5	375	3.73	3.66	0.5	99	1.5	4.02	4.01	0.1	0.8
3\4 to 3\5	RCP CLASS 3	25.7	375	3.66	3.53	0.5	148	1.6	3.96	3.81	0.57	0.5
4\1 to 3\3	BOX CULVERT	1.8	300	3.75	3.72	1.55	50	1.6	4.05	4.05	0.03	2
												0.8
5\1 to 3\4	BOX CULVERT	1.9	300	3.68	3.66	1.52	51	1.6	4.01	4.01	0.05	2
												0.5
6\1 to 1\3	BOX CULVERT	1.4	300	4.04	4.03	0.5	50	1.1	4.22	4.22	0	2
												0.9
7\1 to 1\5	RCP CLASS 3	12.2	375	3.99	3.93	0.5	18	0.9	4.08	4.05	0.29	7
												0.2
8\1 to 8\2		4.3	300	2.5	2.81	-7.28	0	0	3.8	3.8	0	0
8\2 to 8\3		15.5	300	2.81	2.96	-1	0	0	3.8	3.8	0	0
	BOX CULVERT	71.6	450	2.96	3.68	-1	0	0	3.8	3.8	0	0
	BOX CULVERT	12.1	450	3.68	3.8	-0.99	0	0	3.8	3.8	0	0
8\5 to 8\6	BOX CULVERT	90.7	450	3.8	3.53	0.3	0	0	3.8	3.53	0.3	0

YEA	EAR HYDRAULIC DESIGN										
II.	PIPE	PIPE	PIPE	U/S HGL	D/S HGL	GRADE HGL	U/S PIT				
	GRADE	FLOW	VELOCITY				Ku				
n	%	L/s	m/s	m	m	%					
4	0.5	165	1.5	4.34	4.34	0.26	2				
)3	0.5	174	1.4	4.29	4.28	0.08	2.1				
97	0.5	256	1.6	4.24	4.24	0	0.9				
77	0.3	465	1.5	4.16	4.14	0.15	1.2				
1	0.3	481	1.6	4.13	4.09	0.16	0.2				
55	0.3	491	1.6	4.07	4.03	0.18	0.4				
6	0.3	496	1.6	4.01	3.98	0.2	0.3				
53	0.3	501	1.6	3.96	3.85	0.44	0.3				
35	0.3	176	1.2	4.36	4.34	0.27	2				
79	0.3	175	1.2	4.29	4.24	0.27	1.2				
							1.2				
33	1.51	75	1.8	4.22	4.22	0.1	2				
73	0.5	75	1.4	4.17	4.15	0.11	2.1				
66	0.5	148	1.6	4.08	4.03	0.4	0.8				
53	0.5	221	2	3.98	3.87	0.43	0.5				
2	1.55	75	1.8	4.15	4.15	0.1	2				
							0.8				
66	1.52	76	1.8	4.03	4.03	0.1	2				
							0.5				
)3	0.5	74	1.2	4.28	4.28	0.02	2				
							0.9				
93	0.5	20	1	4.14	4.14	-0.01	7				
							0.2				
31	-7.28	0	0	3.8	3.8	0	0				
96	-1	0	0	3.8	3.8	0	0				
58	-1	0	0	3.8	3.8	0	0				
8	-0.99	0	0	3.8	3.8	0	0				
53	0.3	0	0	3.8	3.53	0.3	0				
					-						



#### Attachment 2

LPP Report & All Attachments 24 June 2021

ltem No: Title:		4.1 DA/530/2019 - 2 and 11 Bryant Drive, Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises	Central Coast Local Planning Panel
Departmen	nt:	Environment and Planning	
24 June 202	21 Lo	cal Planning Panel Meeting	
Reference:			
Author:	Jan		
Manager:			
Executive: Andrew Roach, Unit Manager, Development Assessment			

#### Recommendation

- 1 That the Local Planning Panel grant consent to DA/530/2019 2 & 11 Bryant Drive - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises 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 Section 7.13 of the Environmental Planning and Assessment Act 1979.
- 3 That Council advise those who made written submissions of the Panel's decision.
- 4 That Council advise relevant external authorities of the Panel's decision.

#### Summary

An application has been received for a Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises at 2 & 11 Bryant Drive, 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 referred to the Local Planning Panel for determination 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	Aventus Tuggerah Pty Ltd c/- ADW Johnson Pty Ltd
Owner	Aventus Tuggerah Pty Ltd

DA/530/2019 - D14677046

# Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment 2

DA/530/2019 - 2 and 11 Bryant Drive, Tuggerphe Mixed Vat Attachments 24 June 2021
Development comprising Specialised Retail Premises, Signage and Food
and Drink Premises (contd)

Application No	DA/530/2109
Description of Land	Lot 101 and Lot 102 DP 1209157
Proposed Development	Mixed Use Development comprising Specialised Retail
	Premises, Signage and Food and Drink Premises
Site Area	5.586 ha (Lot 102)
Zoning	B5 Business Development
Existing Use	B5 Business Development
<b>Employment Generation</b>	Yes
Estimated Value	\$29,777,000.00

# Key Issues

- Drainage
- Traffic
- Amenity to neighbouring properties

# Precis:

Proposed Development Permissibility and Zoning	Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises B5 Business Development zoning. Mixed use development combining the permissible uses of <i>business</i> <i>identification signage, food and drink premises</i> and
	specialised retail premises
Relevant Legislation	Environmental Planning and Assessment Act 1979 State Environmental Planning Policy No. 64 – Advertising and Signage State Environmental Planning Policy No.55 – Remediation of Land State Environmental Planning Policy (Koala Habitat Protection) 2019 Wyong Local Environmental Plan 2013 Draft Central Coast Local Environmental Plan 2018 Wyong Development Control Plan 2013
Current Use	Car parking, vacant.
Integrated Development	No
Submissions	Тwo

#### The Site

The subject site is an irregular shaped site that has a 181 metre frontage to Bryant Drive. The site additionally has two "fingers" that each have a frontage to Lake Road of 20.125 metres and are separated from each other by approximately 100 metres. The site has an average depth of 255 metres and an area of 5.584 hectares. The topography of the site is generally flat, with a general fall towards the rear. The current and previous site uses have been predominantly vacant land with some use as overflow car park and a return and earn recycling collection point that are ancillary to the associated retail on the opposite side of Bryant Drive. The parts of the site that are not hardstand carpark are partly mown and partly remnant vegetation.

#### **Surrounding Development**

The site is located within a mixed-use large format commercial area with Bunnings and a retail Super Centre located to the west; bulky goods retailing located to the south; single residential dwellings with home business/home industry and the Tuggerah Regional Sporting Centre to the north. The Tuggerah Train Station is approximately 400 metres to the north west. To the east are industrial land uses that obtain access via Lake Road and Mooramba Avenue. Refer to Figure 1.

The single residential dwellings in the area are existing uses that predate the rezoning of the land to B5 Business Development. In this regard, the area is in transition towards the anticipated development outcomes of the zoning.

Attachment 2

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) DA/530/2019 - 2 and 11 Bryant Drive, Tuggerpheeting Att Attachments 24 June 2021 Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

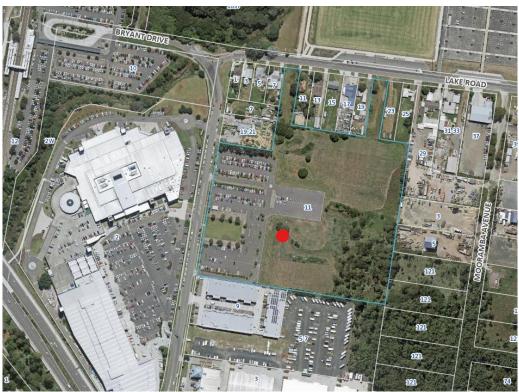


Figure 1: Aerial photo showing the site and surrounding development

The site is zoned B5 Business Development, as is directly adjoining land to the north, west and south of the site. To the east directly adjoining sites are zoned IN2 Light Industrial and SP2 Infrastucture.



Figure 2: Locality aerial view with land zoning and aerial view of subject site

## **The Proposed Development**

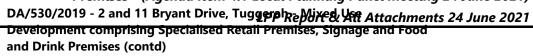
Mixed Use Development comprising *Specialised Retail Premises*, *Business Identification Signage* and *Food and Drink Premises*. The proposed works include the following:

- Earthworks including the importation of fill to create a level and flood free building area;
- Three specialised retail premises, comprising:
- Building A 1,784m<sup>2</sup> of specialised retail floor area;
- Building B 3,526m<sup>2</sup> of specialised retail floor area and small cafe;
- Building C 5,364m<sup>2</sup> of specialised retail floor area;
- Two food and drink premises with attached alfresco dining, comprising the
- following;
  - $\circ$  Food Pad 1–470m<sup>2</sup>;
  - Food Pad 2– 229m<sup>2</sup>;
- Supporting amenities;
- Signage;
- 389 onsite carparking spaces and internal driveways;
- Removal of existing northern entry access to the site;
- A central roundabout entry/exit access off Bryant Drive to be shared with the existing Super Centre opposite the site;
- Modification of the existing exit off Bryant Drive to accommodate service vehicles only and a new combined entry/exit access off Lake Road;
- Connection to all services including stormwater;
- Relocation of the existing NSW 'Return and Earn' container deposit facility; and
- Landscaping including Public Art elements.

The site layout is shown below.

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)





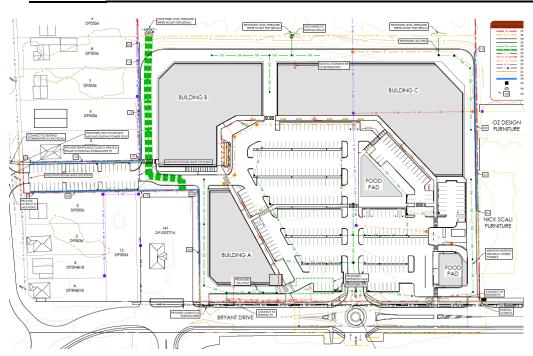


Figure 3: Site plan showing development layout

#### History

The site has historically been used for overflow car parking in association with the Super Centre site on the opposite side of Bryant Drive, with the remainder of the site being vacant. As these car parking spaces were surplus to the requirements of the Super Centre, Lot 102 was subdivided from Lot 101 under DA/285/2013.

# **Pre-Lodgement Meeting/Discussions**

A pre-lodgement meeting was held with Council on 28 February 2019. The development that has been submitted is generally aligned with the development presented at pre-lodgement, with peripheral changes.

#### 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 Panel's information. Any tables relating to plans or policies are provided as an attachment.

#### Wyong Local Environmental Plan 2013 - Permissibility

The subject site is zoned *B5* – *Business Development* under *Wyong Local Environmental Plan* (*WLEP*) 2013. The proposal is best defined as a mixed use development combining the permissible uses of *business identification signage, food and drink premises* and *specialised retail premises*, each of which are permissible uses in the B5 zone.

The following definitions under WLEP are relevant to the proposal and read:

#### business identification sign means a sign—

- (a) that indicates—
  - (i) the name of the person or business, and
  - (ii) the nature of the business carried on by the person at the premises or place at which the sign is displayed, and

(b) that may include the address of the premises or place and a logo or other symbol that identifies the business,

but that does not contain any advertising relating to a person who does not carry on business at the premises or place.

**food and drink premises** means premises that are used for the preparation and retail sale of food or drink (or both) for immediate consumption on or off the premises, and includes any of the following—

- (a) a restaurant or cafe,
- (b) take away food and drink premises,
- (c) a pub,
- (d) a small bar.

**specialised retail premises** means a building or place the principal purpose of which is the sale, hire or display of goods that are of a size, weight or quantity, that requires—

(a) a large area for handling, display or storage, or

(b) direct vehicular access to the site of the building or place by members of the public for the purpose of loading or unloading such goods into or from their vehicles after purchase or hire,

but does not include a building or place used for the sale of foodstuffs or clothing unless their sale is ancillary to the sale, hire or display of other goods referred to in this definition.

Note—

Examples of goods that may be sold at specialised retail premises include automotive parts and accessories, household appliances and fittings, furniture, homewares, office equipment, outdoor and recreation equipment, pet supplies and party supplies.

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2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
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	Development comprising Specialised Retail Premises, Signage and Food
	and Drink Premises (contd)

Specialised retail premises are a type of **retail premises**—see the definition of that term in this Dictionary.

## Wyong Local Environmental Plan 2013 - Zone Objectives

Having regard for Clause 2.3 of WLEP, the *B5 – Business Development* zone objectives read as follows:

- To enable a mix of business and warehouse uses, and specialised retail premises that require a large floor area, in locations that are close to, and that support the viability of, centres.
- To encourage development that supports or complements the primary office and retail functions of Zone B2 Local Centre and Zone B3 Commercial Core.
- To enable other complementary land uses that do not detract from the viability of business and warehouse uses, including bulky goods premises.

The proposal is found to be consistent with the stated zone objectives. In particular, the development provides specialized retail premises with large floor tenancies in an established specialized retail area and includes food and drink premises (including drive thru and take away) that will complement, and do not detract from, the viability of business, warehouse, and bulky goods premises in the area.

# Wyong Local Environmental Plan 2013 Clause 4.3 - Height of Buildings

Clause 4.3 specifies the building height for the site shall not exceed that indicated on the applicable map. The site does not have a mapped height control under the LEP.

#### Wyong Local Environmental Plan 2013 Clause 4.4 - Floor Space Ratio

Clause 4.4 specifies the floor space ratio (FSR) for the site shall not exceed that indicated on the applicable map. The site does not have a mapped FSR control under the LEP.

# Wyong Local Environmental Plan 2013 Clause 5.10 – Heritage Conservation

The site is within the vicinity of the Pioneer Dairy (Item 103), however is sufficiently separated from the item that it will not result in any material impact of significance to the item. An Aboriginal Heritage Information Management System (AHIMS) search was undertaken by the applicant and submitted with the development application. This does not indicate that there are any items or places of significance that require further consideration.

# Wyong Local Environmental Plan 2013 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 containing Class 3 and Class 4 on the Acid Sulphate Soils (ASS) Planning Map. The area of the site that is subject to development under this development application is identified as Class 4.

The clause requires the consideration of the need for an acid sulphate soils management plan where works are more than 2 metres below the natural ground surface or works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface. The proposal, which is predominantly located upon fill, does not include works that generate the need for an acid sulfate soils management plan.

A procedure for managing acid sulfate soils should they be encountered on site during works are required by condition **4.20**.

# Wyong Local Environmental Plan 2013 - Clause 7.2 - Flood Planning

Clause 7.2 applies to the site as it is identified as flood planning land under Council's maps. Consent must not be granted to land identified by this clause unless the consent authority is satisfied that the development:

- is compatible with the flood hazard of the land: and
- Is not likely to significantly adversely affect flood behaviour resulting in worsened flood hazard to other development or properties, and
- Incorporates appropriate measures to manage risk to life from flood and
- Is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses, and
- Is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

The site is located within the Tuggerah Industrial Catchment and Council's records indicate that the site is affected by flooding and/or minimum floor level requirements.

The identified 1% AEP flood extent is 3.8m AHD. The proposal seeks to provide commercial buildings at or above 4.8m AHD. This is above the 1% AEP level and thus considered satisfactory.

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
	Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)
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Following a request for more information, the Applicant has submitted additional flooding information that details how the development manages the overland flows created in the 1% AEP event.

The Applicant has previously submitted a revised Water Cycle Management Plan that includes an alternative method to drain water to that identified in the Wyong District Development Contributions Plan. The Contributions Plan identifies a 20 metre wide open trapezoidal and vegetated channel. The Applicant has proposed a closed stormwater system containing reinforced box culverts.

The system has been designed for the 1% AEP extent with a 50% blockage factor applied for the underground system and a 25% inlet blockage for the secondary flowpath conveying overtopped stormwater from Bryant Drive (traverses through 19-21 Bryant Drive Tuggerah). The enclosed system will be private infrastructure. Council's Floodplain Management and Asset Management sections have been consulted as to the alternative drainage scheme and raise no objections. Conditions outlining the above have been included within consent conditions **2.7**, **5.19**, **5.20**, **5.22**, **5.23**, **5.24** and **5.25**.

On this basis, the proposal is considered satisfactory having regard for the above considerations.

#### Wyong Local Environmental Plan 2013 Clause 7.9 – Essential Services

This clause requires Council to ensure that services such as water, sewer, electricity, and stormwater drainage and road access can be adequately provided. The application has demonstrated that all these services are adequately provided for the development and adjoining properties.

Road and access - Suitable access is to be achieved via a new roundabout fronting Bryant Drive, a new driveway fronting Lake Road, a heavy vehicle entry only driveway from Bryant Drive and an existing exit only driveway fronting Bryant Drive. Refer to road and access discussion under section 4.15 matters heading below.

Water supply – The proposed development is located outside the Zone of Influence (ZOI) of the water main servicing the area. Water hydrants require adjustment to facilitate the proposed driveway crossing and roundabout. Suitable protection of the 525mm Asbestos Cement water main will be required as part of the roundabout construction. The development will require a Section 307 Certificate under the *Water Management Act 2000*. (Conditions of consent **2.13** and **2.14**).

Sewer - The proposed development is located within the Zone of Influence (ZOI) of the 150mm uPVC sewer main traversing the property and the development will need to comply with Council's "Policy for Building Over or Adjacent to Sewer Mains". Re-diversion of the existing sewer main is also proposed to facilitate Proposed Building C. Shortening of the

existing sewer main can also be made as part of this arrangement. (Conditions of consent **2.13**, **2.14** and **2.15**).

Stormwater Management - The revised proposal seeks to direct stormwater to Mooramba Road, Lake Road, Bryant Drive and the rear of the site. Refer to discussion under section 4.15 matters heading below. An on-site stormwater detention (OSD) and drainage system will be required to control the rate of runoff leaving the site (to the street drainage system).

The detention system must be designed to attenuate post developed flow rates to predevelopment flow rates for a full range of storm durations for the 5, 20 and 100-year average reoccurrence interval (ARI) design storms.

Accordingly, the proposal is satisfactory with regard to clause 7.9 of WLEP. Design detail for adjustment of water and sewer pipes, drainage and the OSD are required via conditions of consent.

## State Environmental Planning Policy No. 64 – Advertising and Signage

The proposed development includes identified signage locations and sizes to control the signage available for future businesses. The content of the signs will be determined once the future tenants of the buildings are identified. The signs will in all cases be either "building identification signs" or "business identification signs".

Clause 8 of the SEPP requires the consent authority to be satisfied that the proposal is consistent with the aims and objectives of the policy:

(a) to ensure that signage (including advertising):
(i) is compatible with the desired amenity and visual character of an area, and
(ii) provides effective communication in suitable locations, and
(iii) is of high-quality design and finish, and

Clause 8 also requires a consent authority to consider the assessment criteria within Schedule 1. The proposed signage has been assessed using the Schedule 1 Assessment Criteria of the SEPP and is found to be consistent with the policy's aim to ensure that signage is compatible with the desired amenity and visual character of the area and is of a high quality design and finish.

Part 3 of the SEPP does not apply to building and business identification signs.

A compliance table of the provisions under Schedule 1 are provided at Attachment 3.

Having regard for the above, the subject proposal is acceptable.

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2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
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#### State Environmental Planning Policy No.55 – Remediation of Land

Clause 7(1) of State Environmental Planning Policy No. 55 requires that the consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated and if contaminated that the land is suitable in its contaminated state (or will be suitable, after remediation) for the development proposed to be carried out.

The proposal is for commercial/business uses. There are no known historical uses that are likely to have contributed to contamination of the site and there are no other identified contamination concerns that would prevent the site from being utilised for its intended use.

#### State Environmental Planning Policy (Koala Habitat Protection) 2019

The subject site is mapped within the Koala Development Application mapping. Clause 9 of the SEPP states as follows:

(1) Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies that it is satisfied is a potential koala habitat, it must satisfy itself as to whether or not the land is a core koala habitat.

(2) The council may be satisfied as to whether or not land is a core koala habitat only on information obtained by it, or by the applicant, from a person with appropriate qualifications and experience in biological science and fauna survey and management.

(3) If the council is satisfied—

(a) that the land is not a core koala habitat, it is not prevented, because of this Policy, from granting consent to the development application, or

(b) that the land is a core koala habitat, it must comply with clause 10.

The ecological assessment report prepared by AEP has included an assessment of the likelihood of impacts to Koala. The report provides that whilst the site contains suitable koala feed trees these represent less than 15% and no evidence of koalas were recorded on site during surveys.

#### **Draft Central Coast Local Environmental Plan 2018**

Draft Central Coast Local Environmental Plan 2018 (Draft CCLEP) was adopted on 14 December 2020 but has not yet been gazetted. The CCLEP will replace the planning instruments relating to the former Local Government Areas. Under the provisions of Draft CCLEP, the site retains its B5 Business Development zoning. There are no additional or amended clauses or provisions warranting further discussion.

## Wyong Development Control Plan 2013 (WDCP)

#### Chapter 2.6 Signage of WDCP 2013

The proposal includes standardised signage throughout the site. This signage is classified as business identification signage, that is located upon the façade of the building or within a pylon sign. The DCP requires compliance with SEPP 64. An assessment against SEPP 64 has been undertaken and is included at **Attachment 3**.

#### Chapter 2.11 Parking and Access of WDCP 2013

A detailed discussion of car parking is contained in the Section 4.15 assessment discussion below.

The DCP requires 224 spaces for the bulky goods premises component and 9 service spaces. Additionally, the DCP requires 100 spaces for the food and drink premises on the site. The combined parking requirement for the proposal is 324 spaces. The proposal provides a total of 389 parking spaces, which is in excess of the DCP requirement and in this regard does not rely upon street parking. The proposal contains adequate manoeuvring for delivery and service vehicles.

Council's development engineer has undertaken an assessment of the dimensions and manoeuvring of the spaces and is satisfied, this is contained within the discussion under 4.15 matters below. Additionally, and assessment of the amenity outcomes to neighbouring properties as a result of the proposed parking area is contained within the discussion under 4.15 matters below.

# Chapter 3.1 Site Waste Management of WDCP 2013

The proposal has been assessed against the provisions of Chapter 3.1 of WDCP 2013 and additionally the Wyong Shire Council Waste Control Guidelines.

The floor plans for Buildings A, B and C include indicative waste storage areas. Sufficient area exists within the food pads for waste areas commensurate with food premises. The amended plans demonstrate that while the waste storage areas are located within the buildings, the servicing (collection) of these will be carried out externally. This will involve the tenants transferring their waste to the collection area at the rear of each building for collection as shown. Building C has an external waste storage area. The applicant has amended the plans to indicate that the area will be screened. All waste collection areas can be serviced by a heavy rigid vehicle.

Detailed comments are provided within the waste discussion under Clause 4.15 matters discussed below.

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#### Chapter 3.3 Floodplain Management of WDCP 2013

The site is located within the Tuggerah Industrial Catchment and Council's records indicate that the site is affected by flooding and/or minimum floor level requirements. The applicant has submitted a Flood Impact Assessment Report by SKM that details how the development intends to manage the overland flows created in the 1% AEP event and this has been reviewed by Council's Development Engineer.

The proposal has been assessed having regard for the provisions of Chapter 3.3 Floodplain Management. The proposal has a ground floor level for commercial buildings at a minimum 4.8m AHD. This will satisfy the design requirements outlined in *Wyong Development Control Plan 2013,* Chapter 3.3 Floodplain Management.

#### Chapter 5.1 – Retail Centres of WDCP 2013

Wyong DCP Chapter 5.1 – Retail Centres applies to the development. The chapter includes specific provisions relating to the site and identifies the subject site and surrounding area as being a specialist bulky goods precinct. The key outcomes of the Retail Centres provisions of the DCP relating to this site are:

- To ensure the development will not lead to the deterioration of any centre designated for retail activity
- To ensure the development will result in an increase in the total range of retail goods and services presently available to the community.

The proposed development includes three buildings encompassing approximately 10,000m<sup>2</sup> of specialised large retail floor area providing an increase in the total range of retail goods to the community.

Additionally, the development proposes no standard retail floor space (only specialized) to ensure the existing viability of the Tuggerah Centre.

#### Chapter 6.14 – Tuggerah Precinct of WDCP 2013

Wyong DCP Chapter 6.14 – Tuggerah Precinct applies to the development and a summary of compliance with the relevant controls under the Chapter are outlined under the attached table (**Attachment 2**). The location specific DCP controls that apply to the site take precedent over Chapter 5.1 controls. The subject site is identified within "area C – Lake Road and subgroup "Area C1 Lake Road South and Supa Centre Complex". The following relevant provisions are identified:

- a. No access to Wyong Road.
- b. Maximum floor space ratio = 0.8:1

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- c. Maximum site coverage (building only) = 50%
- d. 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.
- e. 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.

The proposal is compliant having regard for the above provisions. The buildings are single storey and low scale. Facades provide visual interest and appropriate scale through the provision of public art elements to the façade. These are detailed within the Landscape and Public Domain Design Report by Site Image that has been lodged with the development application.



Figure 4 – Extract from Landscape and Public Domain Design Report by Site Image showing façade treatment.

The development achieves the desired character as stipulated within the DCP to an acceptable degree.

# Any planning agreement

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There are no planning agreements applicable to the application. **Relevant Regulations** 

There are no specific matters under the Regulation that require further discussion.

# Likely Impacts of the Development (built environment, natural environment, economic and social impacts)

#### 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 development is considered satisfactory with regard to the built environment.

#### **Accessibility**

The proposal provides accessible parking spaces that are practical and in accordance with AS/NZS 2890.6 (2009) – "Off-street parking for people with disabilities". The proposal provides accessible pathways from the street to the building entry and common areas.

#### Traffic and transport

The development is located on Bryant Drive within a busy business precinct. Key locations for traffic congestion in proximity to the site are Wyong Road in proximity to the Wyong Road/Bryant Drive roundabout, and Bryant Drive.

The applicant has submitted a traffic impact assessment (TIA) by Intersect Traffic. This assessment has looked at the proposed traffic generation of the development in the context of the existing traffic and predicted traffic through to 2029 and has modelled traffic within the immediate surrounding road network including the Wyong Road/Pacific Highway signalised intersection to the west.

The traffic Impact assessment accompanying the application calculates a weekday PM traffic generation of 250 vehicle trips per hour and 254 during the weekend peak.

The traffic modelling of the intersection of Wyong Road and Bryant Drive undertaken by the consultant indicates that the intersection currently operates at a level of service 'F' during both the weekday and weekend peak periods. Observations by Council staff and TfNSW have also confirmed that the existing roundabout is currently at level of service 'F' in the AM, PM and weekend peaks.

The TIA acknowledges that this development will contribute to the deterioration of the operation of the roundabout, however given that the cost estimate for the development is \$29M and the cost to upgrade the intersection to traffic signals will be in excess of \$30M, it

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would be unreasonable to expect this development to fully fund the work. The TIA does not recommend any interim mitigation measures; however Council staff consider that any interim treatment would be at too high a cost and would likely become 'throw away work' as signalisation will be required in the near future.

The traffic Impact Assessment also modelled the proposed roundabout at the intersection of Bryant Drive and the proposed development access. The modelling indicated that the roundabout will operate at a level of service A to 2029 with development traffic.

Council's Traffic and Transport Engineer has reviewed the intersection modelling provided by the applicant and has confirmed that the results of the calibrated base model are an accurate indication of the existing traffic conditions at the intersection of Wyong Road and Bryant Drive.

While the increased traffic generated by the proposal will have some impact on the efficiency of the existing Wyong Road/ Bryant Drive roundabout during peak periods, the intersection has already reached capacity due to 25 years of background traffic growth and it would not be reasonable for this development to be required to mitigate the existing intersection condition.

Having regard for the existing traffic situation and the traffic outcomes resulting from the proposed development, the proposal is considered acceptable.

A further detailed summary of the Transport for NSW comments and the traffic impact assessment is included in the Transport for NSW discussion below.

#### Internal access and parking

Parking for the site is generally located within the centralised parking location that is surrounded by the large plate commercial tenancies. An additional parking area is located fronting Lake Road. The DCP requires 224 spaces for the specialised retail premises component and 9 service spaces. Additionally, the DCP requires 100 spaces for the food and drink premises on the site. The combined parking requirement for the proposal is 324 spaces. The proposal provides a total of 389 parking spaces, which is in excess of the DCP requirement and in this regard does not rely upon street parking. The proposal contains adequate manoeuvring for delivery and service vehicles. Council's development engineer has undertaken an assessment of the dimensions and manoeuvring of the spaces and is satisfied.

Suitable access is to be achieved via a new roundabout fronting Bryant Drive, a new driveway fronting Lake Road, a heavy vehicle entry only driveway from Bryant Drive and an existing exit only driveway fronting Bryant Drive.

The Lake Road parking area contains 48 car parking spaces and includes tree planting areas, lighting, acoustic fencing and boom gate access. This parking area also serves as the access

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for large trucks entering the site. Directly adjoining this area on either side are residential dwellings that have existing use rights within the zone. Given that the area is in transition to fulfillment of the uses identified in the B5 zoning, additional amenity considerations are warranted for this parking area.

In order to achieve an appropriate outcome that does not encourage antisocial behavior or security concerns for neighbouring properties, the area is to be secured by solid acoustic fencing and boom gates to limit vehicular access. The parking spaces are in excess to the required spaces of the uses as stipulated by the DCP, and in this respect are to have limited access via the boom gates for trucks and staff vehicles only. Conditions of consent regarding limits on vehicle access have been imposed (conditions of consent **6.20**, **6.21** and **6.22**). Additionally, lighting is to be installed within the area to ensure the area achieves appropriate safety and limits opportunities for antisocial behavior. This is particularly important as the area does not benefit from passive surveillance from within the centre. A condition of consent relating to the proposed lighting and requiring CCTV camera surveillance of the area is proposed (condition of consent **5.7**).

Acoustic amenity for the neighbouring residential properties shall be achieved via an acoustic rated boundary fence that is a minimum of 2.1 metres in height above the finished level of the car park and driveway, and additionally through conditions of consent that limit truck movements during the "night time" noise criteria (conditions of consent **5.10 6.21**, and **6.22**). The landscape plan indicates that *Tristaniopsis laurina* water gum will be planted within the car park area. These are a native species related to eucalypts and will grow from 5m to 15m in height depending upon the growing conditions. The tree planting is considered appropriate in the location proposed.

#### External works and road infrastructure

The development will necessitate the completion of road infrastructure in accordance with the relevant provisions of Council's Civil Works Specification Design Guidelines. Conditions have been recommended below requiring the provision of a new roundabout, (Bryant Drive), minor existing driveway widening (Bryant Drive), heavy-duty driveway crossings (Bryant Drive & Lake Road), stormwater pit upgrade (Lake Road), removal of the redundant driveway crossings (Bryant Drive & Lake Road), pram ramp relocation, new pram ramps, pedestrian refuge relocation, new pedestrian refuges and regulatory signage relocation in the frontage road reserves.

The potential for the new roundabout to obstruct likely through traffic (including semitrailers and truck and dog) has been considered and found to be acceptable. Additionally, possible interim traffic safety measures that might be employed to Bryant Drive in future have been considered, to ensure the roundabout does not obstruct achievement of future traffic improvements, should they be necessary.

# 2.1 Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Attachment 2 4.1 DA/530/2019 - 2 and 11 Bryant Drive\_Toggerahr Development comprising Specialised Retail Premises, Signage and Food Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

A Road Safety Audit is required in accordance with Section 3.12 from Council's Civil Works Specification Design Guidelines to ensure the safety of all road users. This audit is generally carried out in conjunction with advanced Construction Certificate issue plans.

The applicant's submitted traffic report concludes that the proposed development will not have an adverse impact upon the surrounding road network, and this position has been reviewed and is supported by Council's Traffic & Transportation Engineer.

## <u>Drainage</u>

The revised proposal seeks to direct stormwater to Lake Road, Bryant Drive and the rear of the site. Stormwater runoff is intended to be managed in the following manner:

- Catchment 1A Bryant Drive North Stormwater piped to Bryant Drive via OSD and water quality measures.
- Catchment 1B Bryant Drive North Stormwater piped to Bryant Drive via water quality measures. This will bypass the proposed OSD system in Catchment 1A.
- Catchment 2 Bryant Drive South Stormwater piped to Bryant Drive via water quality pit inserts. Additional stormwater runoff will be directed to Lake Road (0.44 ha). This arrangement cannot be avoided due to the flat grade through the site.
- Catchment 3 Lake Road Stormwater piped from carpark areas to Lake Road via water quality pit inserts. Concern is noted from an adjoining property regarding this arrangement. When compared to the existing scenario, a formal piped drainage system to Lake Road as well as a formal piped system proposed as part of the development will provide a significantly improved outcome.
- Catchment 4 Drainage Channel Stormwater piped to the northern drainage channel system.
- Catchment 5 EEC Outlet discharge headwall mimicking existing flows

An on-site stormwater detention and drainage system will be required to control the rate of runoff leaving the site (to the street drainage system). The detention system is to be designed to attenuate post developed flow rates to predevelopment flow rates for a full range of storm durations for the 5, 20 and 100-year average reoccurrence interval (ARI) design storms.

With the reconstruction of Lake Road and the associated drainage system, the lots fronting Lake Road can drain to the Lake Road system. Connection points at the rear of the lots to the trunk drainage system are also being provided to further assist with any potential drainage issues.

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## Water and sewer

Water supply is available from Bryant Drive via an existing 150mm asbestos cement pipe. Council's existing system is adequate to provide water supply to the proposed development.

The proposed roundabout will necessitate the replacement and relocation of the existing asbestos cement water mains from the new pavement area. The applicant will be required to provide detailed design plans with the application for a 307 (*Water Management Act 2000*) approval, to determine suitable requirements for protecting existing asbestos cement 525mm water trunk main. (Conditions of consent **2.13** and **2.14**)



Figure 5: Water Supply Arrangements

The site is currently connected into Council's sewer network. An existing gravity sewer line traverses the proposed development site. Sufficient capacity exists in Council's sewerage network for the proposed development.

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Figure 6: Sewerage Arrangements

Council Building Over/Adjacent to Sewer guideline applies as new structure is proposed over the existing sewer main. The applicant is required to submit engineering details prepared and certified by a practicing structural engineer demonstrating compliance with the guidelines. Any proposed adjustments to Council's sewerage assets will require a detailed design to be prepared by the applicant and submitted to Council for approval prior to the issue of the Construction Certificate. This is reflected in conditions of consent **2.13**, **2.14** and **2.15**.

#### Waste disposal

The floor plans for Buildings A, B and C include indicative waste storage areas. Sufficient area exists within the food pads for waste areas commensurate with a food premises. The amended plans demonstrate that while the waste storage areas are located within the buildings, the servicing (collection) of these will be carried out externally. This will involve the tenants transferring their waste to the collection area at the rear of each building for collection. Building C has an external waste storage area. The applicant has amended the plans to indicate that the area will be screened. All waste collection areas can be serviced by a heavy rigid vehicle.

Waste volumes have been provided by the applicant having regard for the waste volumes of the operation of the Supa Centre directly opposite the site and operated by the applicant. This is an appropriate indicator given the size, and similar type operators anticipated for the proposed centre. The waste management plan submitted with the application reflects these volumes.

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The site currently includes a bottle and can recycling "return and earn" facility along the Bryant Drive frontage. It is proposed to relocate this facility further south, behind food pad 2. This will improve the acoustic impact to nearby residential properties that has been expressed in public submissions. The return and earn facility will operate between 7am and 10pm 7 days a week. In this regard, the facility does not operate during the nighttime noise criteria. A condition of consent for the operation of the facility has been imposed (condition **6.19**). Additionally, this condition limits collection times to outside of the nighttime noise criteria, excluding collection between 10pm and 7am.

#### Locality and streetscape

The proposal, subject to conditions of consent regarding ongoing operation and management, will not adversely impact on the character and amenity of the locality and streetscape. The proposal will result in a change to the character of the area that is consistent with the gradual transition of the area to achieve the outcomes anticipated by the B5 zoning. The scale, form, character and density of the development is considered acceptable within the locality given the B5 zoning of the site.

The proposal involves the development of an area undergoing transition to achieve the large floor plate commercial outcomes identified for this precinct in Tuggerah. Conditions of consent have been placed to limit amenity impacts to residual residential uses within the area, to the extent that they are directly related to the proposed development.

#### Privacy and boundary treatments

The nearby dwellings to the north of the site are the most sensitive of potentially affected neighbouring properties that are most likely to be impacted by the development. These dwellings are located within an area that is undergoing transition, and as a result some short-term impacts may result. These properties have a B5 zoning, are not isolated sites, benefit from future amalgamation and are to a large degree unencumbered in a manner that would enable them to be redeveloped in the future consistent with the anticipated uses of the zoning.

The proposal has been assessed having regard for the interim scenario that requires the development to respond to the existing land uses in the area and provides for transitional mid-term amelioration of impacts. The proposal includes large vehicle manoeuvring, loading docks (to service reverse alarm vehicles) and car parking on top of areas of as much as 1.4 metres fill up to the common property boundary with residential neighbours. It is considered that the proposal will need to ameliorate these impacts through the provision of the following measures:

• Solid acoustic attenuating fencing of at least 2.1 metres in height above the finished ground level directly adjoining the north boundary.

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- Restricted access (via boom gate) to the northern car park that is only limited to staff vehicles and service trucks. The boom gate is always to be closed and accessed electronically as required for the above identified vehicles.
- Lighting and CCTV surveillance of the car park is to be provided
- Landscaping and tree planting is to be provided consistent with the landscape plan.

These measures are required by conditions of consent **5.5**, **5.7**, **5.8**, **5.9**, **5.10**, **5.13**, **6.21**, **6.22** and **6.23**).

# **Overshadowing**

Being located on the southern side of existing residential neighbours, the development is unlikely to result in any shadow impact of significance to neighbouring properties.

# <u>Air quality</u>

Dust suppression and control during demolition, earthworks and construction can be achieved by requiring the adoption of appropriate measures to minimise emissions into the surrounding environment. There is minimal potential for any uncontrolled or unmanaged air pollution, odour, fumes or other air quality impacts associated with the development on the site.

# Noise and vibration

The impacts to adjoining properties as a result of the proposed development has been considered in the assessment of the application. The closest noise sensitive receptors are residential dwellings located on the Lake Road on the northern boundary of the property. Parking and site access are proposed adjacent to No. 7 and 11 Lake Rd. Loading zones are also proposed adjacent to residential lots on Lake Road.

The applicant has addressed the noise impacts to neighbouring properties by the provision of an acoustic fence of at least 2.1 metres, limiting access to the car park area on Lake Road, and locating the return and earn recycling facility as far as possible from residential properties.

In addition to these measures which are enforced via conditions **5.10**, **6.19**, **6.20** and **6.22**, the following additional measures are proposed to be imposed via conditions of **consent 6.19**, **6.20**, **6.21** and **6.22**:

1 The return and earn facility is limited in operation so that it is unavailable and does not have any collection or servicing during night time noise restriction hours of 10pm to 7am.

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- 2 The Lake Road service truck access and access to the Lake Road car park for all vehicles is to be restricted so that access into the area via the boom gate is unavailable during nighttime noise restriction hours of 10pm to 7am.
- 3 The development is not to be serviced by truck deliveries or collections between the hours of 10pm and 7am.

4 An acoustic report to be prepared by a suitably qualified acoustic consultant that details the predicted noise levels to be emitted from the proposed development and any required noise attenuation measures to be implemented to demonstrate that offensive noise as defined by the Protection of the Environment Operations Act 1997 will not be caused onto neighbouring residential properties.

- The report should consider noise sources which include but are not limited to:
- Vehicle movements
- Boom gate
- Loading docks
- Waste collection including the bottle recycling facility (conditions of consent **2.19** and **5.5**)
- 5 The operation of all plant (including rooftop and all mechanical ventilation) in combination is required to not exceed more than 5dB(A) above the background level during the day when measured at the site's boundaries and shall not exceed the background level at night (10.00pm 7.00am) when measured at the nearest affected residence and property boundary (condition of consent **6.24**).

Having regard for the above, Council's Environmental Health Officer has reviewed the proposal and advises that the above measures should ensure that the development achieves acceptable acoustic amenity for adjoining properties.

#### Safety, security and crime prevention

The principles of Crime Prevention Through Environmental Design (CPTED) have been considered within the design of the proposed new development. The applicant has included a CPTED assessment with the development application.

The design has appropriate regard for the principles of CPTED through employment of the following strategies:

• Surveillance – casual surveillance is achieved through the varied uses on the site that ensures that tenants are active in surveillance, and the site does not rely on passing surveillance from the street. The Lake Road car park is to have CCTV surveillance installed as required via condition of consent **5.7** and **6.25**.

Attachment 2 4.1

- Access control all internal spaces are capable of maintaining controlled access. The Lake Road car park which has limited casual surveillance will have boom gated access and lighting is proposed.
- Space management the proposal will be managed by a caretaker and will ensure appropriate management of common areas.

Having regard for the principles of CPTED and safer by design, the proposal adequately discourages anti-social behaviour and minimises the opportunities for criminal activities.

## Isolation of sites and future development potential of adjoining sites

The assessment of the application has included an assessment for the potential isolation or constraint of development potential of adjoining sites to either side of the proposed development on Lake Road. These lots are zoned B5 Business Development.

The application has been assessed having regard for whether the development proposed prevents or impacts the likely amalgamation of adjoining sites and whether orderly and economic use and development of the separate sites can be achieved. In this instance, six sites to the north west of the subject site could be amalgamated for future development. The adjoining five sites to the north east could also achieve development of a scale consistent with the B5 Business Development zoning upon amalgamation.

DA/530/2019 - 2 and 11 Bryant Drive **Development Comprising Specialised Retail Premises**, Signage and Food and Drink Premises (contd)

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Figure 7: aerial image showing site (blue) and opportunities for amalgamation of adjoining lots (orange)

## Overall built environment impacts

The proposal will be subject to a number of conditions of consent that will ensure that the proposal does not result in a significant adverse impact on the amenity of the locality and streetscape. The scale, form, character and density of the development are acceptable within the locality and the B5 zoning.

2.1

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A thorough assessment of the proposed development's impact on the built environment has been undertaken having regard for the provisions of WLEP 2013 and WDCP and built environment impacts are considered reasonable within the context of the site.

#### 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. The following further detail is provided:

#### Flooding

The site is located within the Tuggerah Industrial Catchment and Council's records indicate that the site is affected by flooding and minimum floor level requirements. The 1% AEP flood extent is identified as 3.8m AHD

The proposed commercial buildings have a ground floor level at or above 4.8m AHD. This is above the 1% AEP level and satisfies the design requirements outlined in Chapter 3.3 Floodplain Management of Council's Development Control Plan 2013.

During the assessment, the Applicant submitted additional flooding information that details how the development intends to manage the overland flows created in the 1% AEP event, a Flood Impact Assessment Report and a Water Cycle Management Plan.

The site is identified as part of a broader storm water strategy for the area within the Wyong District Development Contributions Plan. The plan specifies that the site is subject to a 20 metre wide open trapezoidal and vegetated channel. The applicant has proposed an alternative drainage scheme within the part of the lot being developed that comprises a closed stormwater system containing reinforced box culverts.

The system is designed for the 1% AEP extent with a 50% blockage factor applied for the underground system and a 25% inlet blockage for the secondary flowpath conveying overtopped stormwater from Bryant Drive (traverses through 19-21 Bryant Drive Tuggerah). The enclosed system will be private infrastructure. Council's Floodplain Management and Asset Management sections have been consulted as to the alternative and raise no objections. Conditions outlining the above have been included within conditions of consent 2.7, 5.19, 5.20, 5.22, 5.23, 5.24 and 5.25.

## Vegetation impacts and water quality

The direct ecological impacts are anticipated to be minimal as the proposal is in an area of mostly cleared land with exotic grasses, a small number of scattered trees and high levels of weed infestation.

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Vegetation in the south-eastern corner of the site comprises Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community (EEC) and includes the threatened plant species *Melaleuca biconvexa*. The EEC areas on the site have not been surveyed for *Melaleuca biconvexa*, and consequently the presence on the site is not acknowledged in the EAR other than being "likely to occur" in the EEC area. Council's Ecologist can confirm the species has been recorded on the site within the EEC.

The potential for direct and indirect impacts to the EEC are dependent on the stormwater management system and the ability of the system to maintain flow regimes and water quality to the EEC area.

The applicant's proposed alternate stormwater management system proposes to discharge water from part of the development (Catchment 5) to the EEC. The Water Cycle Management Plan and site regrading plans have been updated to propose additional measures to maintain pre-development flow regimes and water quality to the EEC area.

The application documentation has adequately detailed water quality facilities to treat stormwater in accordance with the Engineers Australia publication *Australian Runoff Quality – A Guide to Water Sensitive Urban Design* prior to entering Council's stormwater drainage system.

#### Ecological impact mitigation measures

The site contains the endangered ecological community Swamp Sclerophyll Forest and *Melaleuca biconvexa*. In order to mitigate impacts of the development on this community and threatened species, a Vegetation Management Plan (VMP) is required for the areas of the site that are not developed. Although requested from the applicant, this information has not been provided. As such a condition is recommended for the VMP to be provided for approval by Council prior to works commencing (condition of consent **3.6**). The VMP is to include measures for weed and litter control.

The site currently has a high weed load, and as recognised in the Environmental Assessment Report (EAR) as there is a high potential for weeds to be spread during site works. Weed control measures will be conditioned and form part of the VMP.

Section 13 of the EAR submitted by the applicant makes a number of recommendations in relation to the site. The implementation of these recommendations has been conditioned (conditions of consent **3.8** and **4.9**):

- Secure fencing should be erected between the proposed work and the EEC on eastern boundary.
- Required clearing supervised by a suitably experienced Ecologist. Any displaced native fauna should be taken into care and dealt with appropriately.

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- Landscape tree plantings to use of species of the surrounding vegetation community where possible.
- Best practice erosion and sedimentation controls.
- Equipment should be cleaned thoroughly and disinfected before entering site to prevent weed and disease introduction.

Having regard for field surveys, habitat assessments and impact assessments and the conditions of consent, Council's Ecologist has concluded that 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*. The proposed development does not trigger the Biodiversity Offsets Scheme.

#### Acid sulfate soils

As previously discussed, the site is identified as containing Class 3 and Class 4 on the Acid Sulphate Soils (ASS) Planning Map. The area of the site that is subject to development under this development application is identified as Class 4. The clause requires the consideration of the need for an acid sulphate soils management plan where works are more than 2 metres below the natural ground surface or works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface. The proposal, which is predominantly located upon fill, does not include works that generate the need for an acid sulfate soils management plan.

Generally, having regard for the matters raised above, the development application has included sufficient information to address impacts on the natural environment.

## Economic impacts

The development is likely to result in positive economic impacts through the provision of employment generation for the construction of the building and ongoing for the use of each tenancy of specialised retail premises within an area identified for such uses.

#### Social impacts

The development is consistent with the anticipated outcomes for the zoning of the area. The development is considered acceptable having regard for likely social impacts upon the area.

All other relevant issues regarding the likely impacts of the development have been discussed throughout this report. In general, it is considered that the property is suitable for the proposed development subject to conditions.

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
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	Development comprising Specialised Retail Premises, Signage and Food
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#### Suitability of the Site for the Development

The site is situated within a precinct that has been identified for a mix of business and warehouse uses and specialised retail premises that are close to, and that support the viability of, the primary office and retail functions of Zone B2 Local Centre and Zone B3 Commercial Core. The site is located within an area that has been established consistent with this purpose, in proximity to the Tuggerah Business Park and retail centre. The site is well serviced by public transport via Tuggerah railway station and bus interchange.

The site is located within an area that is undergoing transition and includes some low-density residential dwellings. The development is one storey in height and compatible with surrounding development that has responded to the B5 Business Development zoning and is considered consistent with the planned future character of the area.

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 is compatible with the streetscape and will not adversely impact on the character and amenity of the locality having regard for the intended purposes identified by the zoning.

#### Submissions

The application was notified between 18 June 2019 and 2 July 2019 and as a result of subsequent amended plans the application was re-notified between 29 May and 19 June 2020 in accordance with DCP 2013 – Chapter 1.2 Notification of Development Proposals with two submissions received. The general issues raised in relation to the proposal are included below:

• Noise impacts as a result of location of car park, movement of trucks, collection of garbage, return and earn facility operation

#### Comment:

The impacts to adjoining properties as a result of the proposed development has been considered in the assessment of the application. The closest noise sensitive receptors are residential dwellings located on Lake Road on the northern boundary of the property. Parking and site access are proposed adjacent to No. 7 and 11 Lake Rd. Loading zones are also proposed adjacent to residential lots on Lake Road.

The applicant has addressed the noise impacts to neighbouring properties by the provision of an acoustic fence (at least 2.1 metres high), limiting access to the car park area on Lake Road, and locating the return and earn recycling facility as far as possible from residential properties.

In addition to these measures which are enforced via conditions of consent **5.10**, **6.20**, **6.21** and **6.22**, the following additional measures are proposed to be imposed via conditions of consent **2.19**, **5.4**, **5.5**, **6.19**, **6.20**, **6.21**, **6.22**, **6.23**, **6.24**, **6.25**:

## Attachment 2 4.1

DA/530/2019 - 2 and 11 Bryant Drive Dyge pont Wixe Altachments 24 June 2021 Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

- 1. The return and earn facility is limited in operation so that it is unavailable and does not have any collection or servicing during night time noise restriction hours of 10pm to 7am.
- 2. The Lake Road service truck access and access to the Lake Road car park for all vehicles is to be restricted so that access into the area via the boom gate is unavailable during night time noise restriction hours of 10pm to 7am.
- 3. The development is not to be serviced by truck deliveries or collections between the hours of 10pm and 7am.

4. An acoustic report to be prepared by a suitably qualified acoustic consultant that details the predicted noise levels to be emitted from the proposed development and any required noise attenuation measures to be implemented to demonstrate that offensive noise as defined by the *Protection of the Environment Operations Act 1997* will not be caused onto neighbouring residential properties.

- The report should consider noise sources which include but are not limited to:
- Vehicle movements
- Boom gate
- Loading docks
- Waste collection including the bottle recycling facility
- The operation of all plant (including rooftop and all mechanical ventilation) in combination is required to not exceed more than 5dB(A) above the background level during the day when measured at the site's boundaries and shall not exceed the background level at night (10.00pm - 7.00am) when measured at the nearest affected residence and property boundary.

Having regard for the above, Council's Environmental Health Officer has reviewed the proposal and advises that the above measures should ensure that the development achieves acceptable acoustic amenity for adjoining properties.

• Drainage concerns as a result of fill and retaining walls, redirection of storm and flood water, incorrect catchments

## Comment:

Future development of the adjoining lots will require them to be filled to similar levels to the proposed development in accordance with the Contributions Plan. In the interim the Applicant/Developer is proposing to provide drainage connection points for the lots to connect to the trunk drainage system proposed with the development.

• Privacy and security concerns from car park and commuter use

## Comment:

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The nearby dwellings to the north of the site are the most sensitive of potentially affected neighbouring properties that are most likely to be impacted by the development. The proposal has been assessed having regard for the interim scenario that requires the development to respond to the existing land uses in the area and provides for transitional mid-term amelioration of impacts.

The proposal includes large vehicle manoeuvring, loading docks (to service reverse alarm vehicles) and car parking on top of areas of as much as 1.4 metres fill up to the common property boundary with residential neighbours. It is considered that the proposal will need to ameliorate these impacts through the provision of the following measures:

- Solid acoustic attenuating fencing of at least 2.1 metres in height above the finished ground level directly adjoining the north boundary.
- Restricted access (via boom gate) to the northern car park that is limited to staff vehicles and service trucks at all times. The boom gate is to be closed at all times and accessed electronically as required for the above identified vehicles.
- No vehicular entry access via the boom gates between the hours of 10pm and 7am.
- Lighting and CCTV surveillance of the car park is to be provided
- Landscaping and tree planting is to be provided consistent with the landscape plan.

This will prevent the use of the carpark by commuters. These measures are required by conditions of consent **5.8**, **5.9**, **5.10**, **6.20**, **6.21** and **6.22**).

• Excessive car parking

## Comment:

The applicant has proposed the car park on Lake Road as a staff car park. The amelioration measures identified for the car park on Lake Road will result in an acceptable outcome that is consistent with the planning outcomes derived from the B5 zoning.

• Habitat for green and golden bellfrogs

Comment:

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# 2.1 Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Attachment 2 4.1 DA/530/2019 - 2 and 11 Bryant Drive\_Development Comprising Specialised Retail Premises, Signage and Food Davelopment comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

A revised Ecological Assessment Report (EAR) by Andersen Environment and Planning dated March 2020 was submitted. The revised report included additional targeted surveys for the Green and Golden Bell Frog that were undertaken after rainfall in January and February 2020.

The Revised EAR states that targeted frog surveys were undertaken on 17 January 2020 after approximately 29mm of rainfall and on 17 February 2020 after approximately 22mm of rainfall.

There was also significant rain between the 7 to 10th February 2020, and Green and Golden Bell Frogs were known to be calling at Avoca during that week.

The surveys are sufficient to conclude the species is unlikely to occur on the site.

#### **Submissions from Public Authorities**

#### Transport for NSW

The proposal does not constitute Traffic Generating Development as set out in Schedule 3 of SEPP (Infrastructure) 2007, however, the application was referred to Transport for NSW (TfNSW) given the proximity of the development to the arterial traffic network. TfNSW have responded with the following comments:

• The TIA demonstrates that the average delay and queue length (95th percentile) at the Wyong Road and Bryant Drive roundabout in 2029 weekday (PM) and 2029 (PM) weekend doubles and the level of service deteriorates from LoS D to LoS F with development traffic. TfNSW considers that the proposed development reduces serviceable life of the intersection to such an extent that within the 10-year horizon upgrades will need to be brought forward.

#### Council response:

While it is agreed that this development will contribute to delays at this intersection it is already at or near capacity due to background traffic growth.

• As such, it is considered there is a demonstrable nexus between the development and the deterioration of this intersection to the point where additional work will be required. However, the TIA fails to acknowledge this, and to identify mitigation measures to address the potential development impacts.

#### Council response:

The TIA acknowledges that this development will contribute to the deterioration of the operation of the roundabout, however given that the cost estimate for the development is \$29M and the cost to upgrade the intersection to traffic signals will be in excess of \$30M, it would be unreasonable to expect this development to fully fund the work. The TIA does not

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recommend any interim mitigation measures, however Council staff consider that any interim treatment would be at a high cost and would likely become 'throw away work' as signalisation will still be require in the near future.

• TfNSW highlights that there is currently no State funding commitments for any upgrade works at the Wyong Road/Bryant Drive roundabout. All works having nexus with the subject development shall be undertaken at full cost to the developer and at no cost to TfNSW or Council, and to TfNSW and Council requirements.

#### Council response:

Council's current contributions plan collects funds that are attributed to the construction of the existing roundabout which was undertaken approximately 25 years ago. The traffic assessment at the time would have estimated that the intersection would have a design life of approximately 20 years. It is not feasible for Council to seek contributions from the few remaining development sites to further fund an intersection that has already been funded by developer contributions. Council's contributions staff have also advised that Council no longer collects funds for works on Classified roads due to the excessive cost and the need for a focus on upgrading local road infrastructure through development.

• TfNSW raises concern regarding the cumulative traffic impact of the subject development, and other proposed/approved developments accessed by Bryant Drive and Lake Road, on the operation of Wyong Road/Bryant Drive roundabout. As such, shared contributions framework for this development and other developments to contribute to required upgrade works is a matter for Council to consider and initiate as the relevant planning authority.

#### Council response:

As identified above, Council has an existing contributions plan that includes funding of the Bryant Drive/Wyong Road roundabout. These works have already been undertaken. Any further necessary funding of upgrading of the state network will need to occur via a state government funding mechanism. Meetings held with TfNSW have identified that TfNSW are currently preparing a Tuggerah Integrated Transport Plan that will form the basis for future upgrade of the intersection.

TfNSW recommends that the following matters should be considered by Council in determining

this development:

• TfNSW has no proposal that requires any part of the property.

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• It is noted the proposed development represents a large percentage increase in the amount of traffic entering and exiting Bryant Drive. TfNSW is also aware

2.1

## Attachment 2 4.1

that a five lot industrial subdivision development application (DA/1005/2020) at 25-27 Bryant Drive proposes to use Bryant Drive to access the site.

## Council response:

DA/1005/2020 has been approved, however the traffic impact identified as part of the subdivision is limited to construction traffic. Consultation with TfNSW over that DA has identified the need for a comprehensive Construction Traffic Management Plan in order to ensure the safety of the roundabout at the corner of Bryant Drive and Wyong Road. This requirement has also been applied to the subject development (condition of consent **3.12**). The applicant has undertaken further traffic studies including 'back of queue' assessment (Traffic and Parking Assessment, Intersect Traffic, June 2021). This further detailed assessment indicates:

- The Traffic Impact Assessment accompanying the application calculates a weekday PM traffic generation of 250 vehicle trips per hour and 254 during the weekend peak.
- During peak hours 50% of trips will be inbound and 50% will be outbound;
- Traffic will be split 50%:50% from and to Wyong Road east and west, respectively;
- 90% of traffic will utilise the new roundabout access to enter the site while
   10% of traffic will utilise the Lake Road access for entry to the site;
- 80% of traffic will exit the site via the new roundabout access, 10% will exit the site via Lake Road and 10% of traffic will exit via the exit only access to Bryant Drive.
- With approximately three vehicle deliveries occurring during peak traffic periods and with a delivery vehicle split of 80% heavy rigid vehicles or smaller and 20% semi-trailers there will be two deliveries via the new service vehicle access in Bryant Drive in the peak traffic periods.

The traffic modelling of the intersection of Wyong Road and Bryant Drive undertaken by the consultant indicates that the intersection currently operates at a level of service F during both the weekday and weekend peak periods. Observations by Council staff and TfNSW have also confirmed that the existing roundabout is currently at level of service F in the AM, PM and Weekend peaks.

The TIA acknowledges that this development will contribute to the deterioration of the operation of the roundabout, however given that the cost estimate for the development is \$29M and the cost to upgrade the intersection to traffic signals will be in excess of \$30M, it would be unreasonable to expect this development to fully fund the work. The TIA does not recommend any interim mitigation measures, however Council staff consider that any interim

2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
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treatment would be at too high a cost and would likely become 'throw away work' as signalisation will still be required in the near future.

The traffic Impact Assessment also modelled the proposed roundabout at the intersection of Bryant Drive and the proposed development access. The modelling indicated that the roundabout will operate at a level of service A to 2029 with development traffic.

Council's Traffic and Transport Engineer has reviewed the intersection modelling provided by the applicant and has confirmed that the results of the calibrated base model are an accurate indication of the existing traffic conditions at the intersection of Wyong Road and Bryant Drive.

While the increased traffic generated by the proposal will have some impact on the efficiency of the existing Wyong Road/ Bryant Drive roundabout during peak periods, the intersection has already reached capacity due to 25 years of background traffic growth and it would not be reasonable for this development to mitigate the exiting intersection condition.

• TfNSW recommends Council ensure the capacity, accessibility and safety of Bryant Drive is not compromised by the traffic generated by this development and other proposed/approved developments accessed from Bryant Drive and Lake Road.

#### Council response:

The Traffic Impact Assessment accompanying the application calculates a weekday PM traffic generation of 250 vehicle trips per hour and 254 during the weekend peak.

The traffic Impact Assessment also modelled the proposed roundabout at the intersection of Bryant Drive and the proposed development access. The modelling indicated that the roundabout will operate at a level of service A to 2029 with development traffic.

Council's Traffic and Transport Engineer has reviewed the intersection modelling provided by the applicant and has confirmed that the results of the calibrated base model are an accurate indication of the existing traffic conditions at the intersection of Wyong Road and Bryant Drive.

• Council should ensure that the proposed internal and external road work provides an efficient and safe access for public transport, pedestrians and bicycles and ensure alignment with the overall vision outlined in the draft Tuggerah to Wyong Economic Corridor Strategy.

## Council response:

The draft Tuggerah to Wyong Economic Corridor Strategy identifies the following vision for Tuggerah:

Attachment 2 4.1

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

DA/530/2019 - 2 and 11 Bryant Drive **Development** Witt Attachments 24 June 2021 Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

- Tuggerah will continue to provide employment, destination retail and transport opportunities.
- The precinct will maintain and improve its employment lands and continue to offer an attractive place for business to locate close to regional road and rail transport.
- Improved public domain connections to the train station will maximise the benefits of this important piece of public infrastructure whilst opportunities for future transport oriented development will be encouraged.

The development caters for pedestrian movements both within the development and at the Bryant Drive frontage of the site.

• TfNSW is aware Council is currently upgrading the intersection of Bryant Drive and Lake Road. TfNSW recommends Council to ensure that necessary intersection augmentation works are implemented in the future to cater for additional traffic, pedestrian and cyclist movements generated by proposed and approved developments in the area.

#### Council response:

The proposed upgrading of the intersection of Lake Rad and Bryant Drive will be designed to cater for additional traffic and pedestrian and cyclist movements.

• TfNSW is currently undertaking preliminary investigations to identify an appropriate land for constructing a commuter car park (additional 220 spaces) in the vicinity of Tuggerah railway station.

#### Council response:

Council has considered the proposed roundabout on Bryant Drive in the context of likely future local upgrades to Bryant Drive to accommodate through traffic for Bryant Drive and Lake Road.

• As part of the proposed Tuggerah Integrated Transport Plan, TfNSW will work with Council to identify network demands and infrastructure needs within the study area.

#### Council response:

Council will provide comment within the consultation process on the proposed transport plan.

• Council should ensure that appropriate traffic measures are in place during the construction phase of the project to minimise the impacts of construction vehicles on traffic efficiency and road safety within the vicinity.

Council response:

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A comprehensive Construction Traffic Management Plan in order to ensure the safety of the roundabout at the corner of Bryant Drive and Wyong Road will be required via conditions of consent **3.12**, **3.14**.

• Council should have consideration for appropriate sight line distances in accordance with Section 3 of the Austroads Guide to Road Design Part 4A (Unsignalised and Signalised Intersections) and the relevant Australian Standards (i.e. AS2890:1:2004) and should be satisfied that the location of the proposed driveway promotes safe vehicle movements

Council response:

The TIA has addressed sight distance in accordance with AS 2890.1 - 2004.

#### **Internal Consultation**

The application has been referred to and reviewed by the following experts in council and is generally supported subject to conditions of consent.

Environmental Health	Supported with conditions including 2.13, 2.14, 5.4, 5.5, 6.24, 6.25.
Ecology	Supported with conditions including 3.4 - 3.8, 4.6 - 4.11, 5.2, 5.3, 6.2.
Engineering	Supported subject to conditions.
Engineering – Traffic and Transport	Supported subject to general conditions.
Water and Sewer	Supported subject to conditions including 2.13, 2.14, 2.15
Waste Services	Supported subject to conditions including 4.12, 4.16, 6.3 - 6.10 ,
Contributions	Supported with conditions including 2.17

#### **The Public Interest**

The proposal, which provides specialised retail premises within an area identified within the local planning controls for that purpose, will not detract from the main retail centres, and provides employment and business opportunities that will cater for the demand of the local community, is in the local and broader public interest.

#### **Ecologically Sustainable Principles**

The proposal has been assessed having regard to ecologically sustainable development principles and it is considered that the development adequately demonstrates that it is consistent with the principles.

## Attachment 2 4.1

The proposed development demonstrates satisfactory stormwater, drainage and erosion control and that the proposal is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations.

## **Climate Change**

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

#### **Other Matters for Consideration**

#### **Development Contribution Plan**

The application falls under Wyong District s7.11 Contributions Plan. The following contributions are applicable:

Tuggerah Industrial estate stage 3 drainage land & works Tuggerah Industrial Estate drainage – segment D 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 3.55 ha. Only part of the proposed development (2.21ha) is within the drainage scheme for segment D, and that specific contribution has been calculated on that basis.

The total s7.11 contributions are \$659,075.13. The contributions are indexed by CPI quarterly and are required to be paid prior to the release of the Construction Certificate (condition of consent **2.17**).

#### Contributions infrastructure

The current adopted drainage strategy for the area is identified in Figure 16 from Wyong District Development Contributions Plan. Stormwater for this catchment is to be directed to the east, via stormwater management / water quality facilities. The contributions plan includes the provision of drainage over the site.

The development of other sites in the area (particularly in Maroomba Avenue and Church Road) have been undertaken having regard for and in accordance with this strategy and the contributions plan, particularly the filling of land and the provision of drainage easements.

Attachment 2

DA/530/2019 - 2 and 11 Bryant Drive, Tuggerphe Wired Wet Attachments 24 June 2021 Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

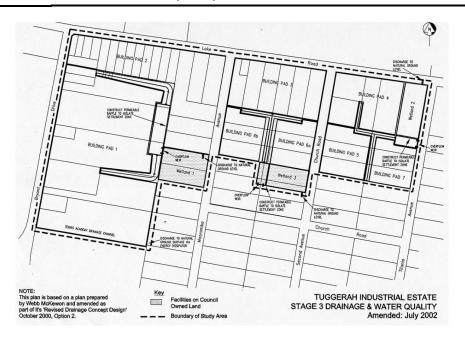
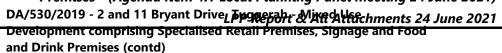


Figure 8: Extract of the contributions plan showing Figure 16 (drainage strategy)

The drainage scheme adopted by the contributions plan requires an open drainage channel. The plan is informed by the Tuggerah Station Industrial Area Revised Drainage Concept Design prepared by Webb McKeown & Associates dated October 2000 Technical Report 1991 Tuggerah Industrial Area Stage 3 )ct 2000)- Tuggerah Area Drainage Concept Report (Webb McKeown) Oct 2000 - Flooding Engineers Report Nov 2000 - Land Valuation (SVO) Oct 2000 -D11699645:

Attachment 2 4.1



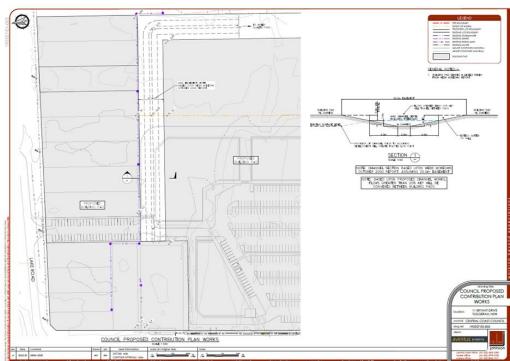
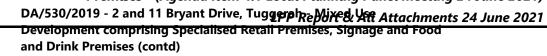


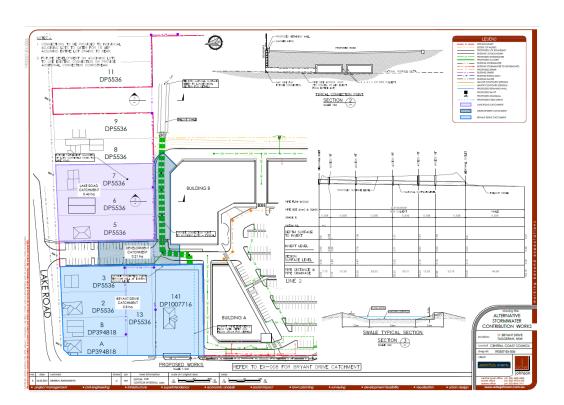
Figure 9: Plan showing drainage strategy as it applies to the site in accordance with the contributions plan

The applicant has proposed an alternative drainage scheme to that identified within the Wyong District Development Contributions Plan. The applicant has proposed a boxed culvert system that is informed by their Water Cycle Management Plan prepared by ADW Revision E dated March 2021.

Attachment 2

2.1





#### Figure 10: Plan showing drainage strategy proposed by applicant (variation to the contributions plan)

The applicant's reasons for varying the contributions plan are summarised as:

- 1 Alternative and more modern drainage methods can achieve the same outcome.
- 2 The alternative reduces the constraints upon the site in terms of developable area.
- 3 The alternative does not hinder the future achievement of the drainage strategy within the contributions plan for the remainder of the drainage network.
- 4 The likelihood of the drainage scheme within the contributions plan being modified in the future is high, given the ecological constraints over areas identified for drainage structures (*Melaleuca Biconvexa* which is a threatened species that is known to be in the area)

Council has considered the applicant's request to vary the drainage scheme adopted by the contributions plan and finds the alternative scheme acceptable having regard for the following:

1 Extensive consultation has occurred between the applicant and Council's assets, drainage and flooding sections.

2.1

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) DA/530/2019 - 2 and 11 Bryant Drive Degree and Altechments 24 June 2021 Development comprising Specialised Retail Premises, Signage and Food

Attachment 2 and Drink Premises (contd)

4.1

- 2 The alternative scheme has addressed all the infrastructure requirements of the contributions plan, including drainage works are complementary to the implementation of the strategy.
- 3 Council's contributions section will be undertaking a review of the Wyong District Contributions plan, however the timeframe for the review to commence is more than 12 months away. At this point in time Council do not have any specialist advice in relation to a broad strategy for an alternative drainage scheme for the area.
- 4 Broadly, the overall delivery of the drainage infrastructure currently adopted by the contributions plan will be complicated by the presence of Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community (EEC) and Melaleuca Biconvexa which is a threatened species that is known to be in the area, and in the future alternatives that do not cause an impact may need to be explored. The proposed scheme does not impact on threatened species.
- 5 The Environmental assessment report (EAR) submitted with the DA does not assess the impact of construction of the adopted stormwater system shown in the Council's section 7.11 contributions plan for the Tuggerah area. Construction of the stormwater works depicted in the contributions plan would result in increased ecological impacts on the EEC and *Melaleuca biconvexa* that are not covered by the EAR submitted with this DA and would require further ecological impact assessment.
- 6 The alternate stormwater management system proposed by the applicant does not require clearing of any of the EEC.
- 7 Recent development including the playing fields on Lake Road have changed the hydrological performance of the area and this is not captured by the current drainage scheme within the contributions plan.
- 8 The scheme generally:
- 9 achieves the outcomes of the adopted strategy being varied.
- 10 manages overland flow and flooding events to an equivalent or better degree.
- 11 Does not obstruct the integrity of the adopted drainage scheme.
- Is more costly to maintain, however will be maintained wholly as private drainage 12 infrastructure by the applicant (refer to condition of consent 5.23).

The works proposed as part of the alternative drainage scheme will not have the benefit of "works in kind" value in terms of the contributions plan. There is no credit available to the applicant. 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 the contributions plan.

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Based on the above, Council recommends that the Local Planning Panel vary the Contributions Plan to the extent identified within this report and the submitted drainage plans.

The ability of the Local Planning Panel to determine an application that applies the contributions plan in a varied form is obtained from the provisions of Section 7.13 of the *Environmental Planning and Assessment Act 1979.* 

#### Water and Sewer Contributions

Water and sewer contributions are applicable to the development and a Section 307 Certificate issued under the *Water Management Act 2000* is required. Prior to the issue of a Section 207 Certificate, payment to Council of the following developer contributions is required. Contributions have been calculated based on the maximum water supply and sewerage capacity utilisation:

- a) Water supply \$190,618.23 (\$3,406.33/ET x 55.96)
- b) Sewerage \$133,484.19 (\$2,385.35 /ET x 55.96)

A credit is provided within the above calculation for the existing services to the development site. The contributions are required to be paid as part of the 307 Certificate.

#### Planning Agreements

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

## Conclusion

This application has been assessed having regard for the matters for consideration under the Section 4.15 of the *Environmental Planning and Assessment Act 1979* and all relevant instruments, plans and policies.

The potential constraints of the site have been assessed and it is considered that the site is suitable for the proposed development in its current form.

The proposal is consistent with the objectives of the B5 Business Development zoning of the site. The development provides specialized retail premises with large floor tenancies in an established specialized retail area and includes food and drink premises (including drive thru and take away) that will complement and do not detract from the viability of business, warehouse, and bulky goods premises in the area.

The development is a permissible use within the B5 Business Development zone of the *Wyong Local Environmental Plan 2013.* 

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# 2.1 Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Attachment 2 4.1 DA/530/2019 - 2 and 11 Bryant Drive\_Development comprising Specialised Retail Premises, Signage and Food and Drink Premises (contd)

The proposal is suitable for the site having regard for any likely contamination and the provisions of *State Environmental Planning Policy* 55 – *Remediation of Land*.

The proposal includes mitigation measures and is acceptable having regard for the Tuggerah Industrial Catchment and the flood affectation of the site and surrounding properties.

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*. The proposed development does not trigger the Biodiversity Offsets Scheme.

The development application provides sufficient information and detail to adequately assess the impacts of the proposed development application. The proposal is acceptable having regard for the existing traffic situation and the traffic outcomes resulting from the proposed development.

The proposed drainage infrastructure achieves the required outcomes of the Wyong District Development Contributions Plan.

The proposal is in the public interest.

Accordingly, the application is recommended for approval pursuant to section 4.16 of the *Environmental Planning and Assessment Act 1979*.

## Attachments

1	Conditions of Consent		D14682371
2	DCP Chapter 6.14 Compliance Table		D14677165
3	SEPP 64 Compliance Table		D14677226
4	Amended Plans (Revision F)	Provided Under Separate	D14598147
		Cover	
5	Amended Water Cycle Management	Provided Under Separate	D14598146
	Plan	Cover	
6	Transport for NSW Comments		D14392903

Attachment 1 – Recommended Conditions of Consent – DA 530-2019

## 1. PARAMETERS OF THIS CONSENT

1.1. Implement the development substantially in accordance with the plans and supporting documents listed below as submitted by the applicant and to which is affixed a Council stamp "Development Consent" unless modified by any following condition.

#### Drawing Description Sheets Issue Date 843 Site Plan DA002 7 28.04.20 843 Demolition and Existing DA010 5 27.03.20 **Conditions Plan** 843 **Overall Elevations** DA020 5 27.03.20 843 Building A – Ground Floor DA100 6 02.04.20 Plan 7 843 Building B – Ground Floor DA101 28.04.20 Plan Building C & Food Pad 1 – 7 843 DA102 28.04.20 Ground Floor Plan 843 Food Pad 2 – Ground Floor DA103 6 28.04.20 Plan Building A – Elevations DA200 27.03.20 843 5 DA201 843 Building B – Elevations 5 27.03.20 5 843 Building C – Elevations DA202 27.03.20 843 Food Pad – Elevations 6 28.04.20 DA203 **Building Sections** 5 27.03.20 843 DA300 6 843 Signage Details DA900 27.03.20 843 Signage Details 5 DA901 27.03.20 843 Signage Details DA902 2 27.03.20

#### Architectural Plans by: Team2 Architects

#### Landscape Plans by Site Image:

Drawing	Description	Sheets	Issue	Date
SS19-4043	Landscape Masterplan	100	E	17.04.2019
SS19-4043	Landscape Plan	101	E	17.04.2019
SS19-4043	Landscape Precinct Plan	102	E	17.04.2019
SS19-4043	Landscape Precinct Plan	103	E	17.04.2019
SS19-4043	Landscape Precinct Plan	104	E	17.04.2019

### **Civil Plans by:**

Drawing	Description	Sheets	Issue	Date
190557	Exhibit 002 - Concept	EX-002	E	26/02/2021
	Stormwater Design			
190557	Exhibit 003 – Proposed	EX-003	E	26/02/2021
	Catchments			
190557	Exhibit 004 – ECC Flows	EX-004	E	26/02/2021
190557	Alternative Stormwater	EX-006	E	26/02/2021
	Contribution Works			
190557	Exhibit 007 – Erosion and	EX-007	E	26/02/2021
	Sediment Control Plan			

Drawing	Description	Sheets	lssue	Date
190557	Detail Plan	003	F	03.03.21
190557	Stormwater Plan	004	F	03.03.21
190557	Site Regrade Plan	005	F	03.03.21
190557	Site Sections – Sheet 1	006	F	03.03.21
190557	Site Sections – Sheet 2	007	F	03.03.21
190557	Site Sections – Sheet 3	008	F	03.03.21
190557	Site Sections – Sheet 4	009	F	03.03.21
190557	Indicative Roundabout Design	010	F	03.03.21
190557	Roundabout Turning Paths	011	F	03.03.21
190557	Linemarking & Signage Plan	012	F	03.03.21
190557	Water & Sewer Plan	013	F	03.03.21
190557	Turning Paths Overall Plan	014	F	03.03.21
190557	Turning Paths Detail Plan – Inset 1	015	F	03.03.21
190557	Turning Paths Detail Plan – Inset 2	016	F	03.03.21
190557	Turning Paths Detail Plan – Inset 3	017	F	03.03.21
190557	Turning Paths Detail Plan 0 Inset 4	018	F	03.03.21

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#### Supporting Documentation:

Document	Title	Date
-	Water Cycle Management Plan Rev E (ADW)	March
		2021
CC190039	Waste Management Plan (Barker Ryan Stewart)	May 2020
1895	Ecological Assessment Report (AEP)	March
		2020
18/191 Rev I	Traffic & Parking Assessment (Intersect Traffic)	01/06/21
SS19-4043	Landscape and Public Domain Design Report (Site	18 April
	Image)	2019

1.2. Carry out all building works in accordance with the Building Code of Australia.

## 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. Roadworks - Design Requirements

Where conditions of this consent require approval from Council under Section 138 of the *Roads Act 1993*, Section 68 of the *Local Government Act 1993* or Section 305 of the *Water Management Act 2000*, a completed Works application form must be lodged with Council and be accompanied by detailed design drawings and supporting information. Upon submission to Council, fees and charges will be calculated in accordance with Council's Management Plan. The fees and charges must be paid prior to Council commencing the design assessment.

- 2.3. The submission to Council of Civil Works design drawings and specifications detailing the following design requirements:
  - Pavement marking & signage.
  - Street trees
  - Pavement design.
  - Vehicle access crossing(s).
  - The restoration of any vehicle access rendered redundant by the development, to standard kerb and footpath formation.
  - Any associated works to ensure satisfactory transitions to existing infrastructure
  - The submission to Council as the Roads Authority of street lighting and reticulation design drawings. The design shall be prepared in accordance with AS/NZS 1158 and AS 4282-1997, including the provision of current best practice energy efficient lighting, documentation confirming a minimum of twenty (20) year design life and be approved by the Council as the Roads Authority prior to issue of a Construction Certificate.

- Adjustment of services as required.
  - Roundabout in Bryant Drive generally in accordance with ADW Johnson Plan 190557-DA-010 Version F dated 3/3/2021

Required design drawings are to be prepared in accordance with Council's *Civil Works Specification Design Guidelines 2018* and must be approved by Council as the Roads Authority prior to the issue of a Construction Certificate.

- 2.4. The submission of a comprehensive road signage and pavement marking design drawings identifying parking restrictions, accesses and traffic management facilities to Council for approval by the Local Traffic Committee prior to issue of the Construction Certificate.
- 2.5. Prior to the commencement of detailed design works within any public road, contact should be made with the National Community Service *"Dial before you Dig"* on 1100 regarding the location of underground services in order to prevent injury, personal liability and even death. Enquiries should provide the property details and the nearest cross street/road.
- 2.6. The submission to the Council as the Roads Authority of a Design Concept stage' Road Safety Audit for the roundabout and site accesses prepared by a Level 3 and level 2 Road Safety Audit Team recognised on the NSW Register of Road Safety Auditors. Any deficiencies identified within the audit must be resolved in consultation with Council prior to the approval of design drawings.

## 2.7. Stormwater Drainage - Design Requirements

The submission to the Accredited Certifier of a detailed stormwater management plan featuring:

- Stormwater disposal in accordance with the Watercycle Management Plan prepared by ADW Johnson dated March 2021 issue E incorporating:
- The provision of an onsite stormwater detention system. The detention system must be designed to attenuate post developed flow rates to predevelopment flow rates for a full range of storm durations for the 5, 20 and 100 year average reoccurrence interval (ARI) design storms.
- The provision of stormwater quality control facilities to treat stormwater in accordance with the Engineers Australia publication *Australian Runoff Quality A Guide to Water Sensitive Urban Design* prior to entering Council's stormwater drainage system.

The plans must be prepared in accordance with *AS/NZS3500.3:2018* and Council's *Civil Works Specification Design Guidelines 2018*, and be approved by the Accredited Certifier prior to issue of the Construction Certificate.

## 2.8. Structural Design Requirements

Any excavation below the adjoining land level requires the retaining of that land and the preservation and protection of any improvements or buildings upon that land including public roads and utilities from damage. If necessary, the improvements or buildings are to be supported in a manner designed by a suitably qualified Registered Structural Engineer. Any design proposals prepared in order to comply with this condition are to include geotechnical investigations and are to be submitted for the approval of the Accredited Certifier and in the case where excavation impacts upon public infrastructure, Council, prior to issue of the Construction Certificate.

2.9. Prior to the issue of a Construction Certificate, suitable detailed design drawings for all retaining wall structures on the site are to be provided for the approval of the Accredited Certifier. Such design drawings are to be prepared by a suitably qualified Registered Structural Engineer in accordance with the requirements of *AS* 4678-2002 - *Earth Retaining Structures*. All retaining walls must be contained wholly within the property and designed so as to accommodate possible surcharge loading from vehicles or structural improvements within the adjoining property.

#### 2.10. Subdivision - Design Requirements

The submission to the Accredited Certifier of detailed design drawings for all subdivision works in accordance with Council's *Civil Works Specification Design Guidelines 2018.* The design drawings, including an overlay of the vegetation plan identifying trees to be retained as per the approved development plans, and any trees to be removed must be approved by the Accredited Certifier prior to issue of a Construction Certificate.

## 2.11. Vehicle Access and Parking - Design Requirements

The submission to the Accredited Certifier of a detailed car parking design. The design shall include:

- Pavement marking, appropriate signage and physical controls detailed for the carpark, access driveway and circulation roads.
- Pavement design able to withstand anticipated vehicle loading.
- Control point/boom gates to Lake Road access

The design drawings shall be prepared in accordance with the requirements of *AS/NZS* 2890 – Parts 1, 2 and 6, and be approved by the Accredited Certifier prior to the issue of a Construction Certificate.

- Attachment 2
  - 2.12. The submission to the Accredited Certifier of lighting design drawings for the carpark and public places. The design shall be prepared in accordance with the requirements of *AS/NZS 1158* and *AS 4282-1997*, including the provision of current best practice energy efficient lighting and be approved by the Accredited Certifier prior to issue of a Construction Certificate.

## 2.13. Water and Sewer Services - Design Requirements

All water and sewer works or works impacting on water and sewer assets must be designed and constructed to the requirements of Council as the Water Supply Authority. The requirements are detailed in the Section 306 Notice of Requirements letter attached to this consent. **Note:** The Section 306 Notice contains requirements associated with the development that must be completed prior to the issue of the Construction Certificate.

- 2.14. The developer must submit an application to Council under Section 305 of the Water Management Act 2000 for any requirements for the obtaining of a Section 307 Certificate of Compliance. The application must be made prior to the issue of the Construction Certificate. **Note:** The Section 305 Notice may contain requirements associated with the development that must be completed prior to the issue of the Construction Certificate.
- 2.15. The submission to Council as the Water Supply Authority of detailed structural design drawings and supporting information for structures within the zone of influence of the sewer main. The design shall indicate the proposed method of protecting the sewer main in accordance with Council's *Requirements for Building Over or Adjacent to Sewer Mains* policy. Design details must be approved by Council as the Water Supply Authority prior to the issue of a Construction Certificate.
- 2.16. The submission to the Accredited Certifier of lighting design drawings for the carpark and public places. The design shall be prepared in accordance with the requirements of *AS/NZS 1158* and *AS 4282-1997*, including the provision of current best practice energy efficient lighting and be approved by the Accredited Certifier prior to issue of a Construction Certificate.

## 2.17. Wyong District Development Contributions Plan

Pursuant to Section 7.11 of the *Environmental Planning and Assessment Act 1979* pay to Council a total contribution amount of **\$659,075.13** that may require adjustment at the time of payment, in accordance with the Wyong District Development Contributions Plan with the applicable amounts as follows:

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Cobbs Area 1/2/3 Roads		26,666.89
Tuggerah Industrial Est Drainage		6,950.56
Tuggerah Industrial Stage 3 Drainage Land		99,357.40
Tuggerah Industrial Stage 3 Drainage Works		275,645.66
Tuggerah Industrial Stage 3 Roads		250,454.62
Total		659,075.13

The contributions 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 on 1300 463 954 for an up-to-date contribution payment amount.

Any Construction 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/Clause 160(2) of the *Environmental Planning and Assessment Regulation 2000*.

A copy of the Contribution Plan may be inspected at the offices of Central Coast Council, 2 Hely Street Wyong or 49 Mann Street Gosford or on Council's website: <u>Development Contributions</u>

- 2.18. An Unexpected Finds Management Plan must be developed and implemented prior to the issue of any Construction Certificate for the discovery of any asbestos fragments, or any other unexpected contamination during any future construction works at the site.
- 2.19. Prior to the issue of any Construction Certificate a Noise Impact Assessment must be undertaken by a suitably qualified acoustic consultant who is an active member of the Association of Australasian Acoustical Consultants. This Noise Impact Assessment will be required to provide recommended attenuation measures that address all potential acoustic impacts being generated on the site, these activities are to include but not limited to:
  - Vehicle movements, Parking & Congregational noise
  - Boom gates
  - The use of Loading docks and vehicles associated with this activity
  - Waste collection including the bottle recycling facility
  - Mechanical Plant

## Attachment 2

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## 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. 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
  - a) Implementation of environmental protection measures, such as erosion control and the like that are required by this consent
  - b) Demolition approved by this consent.
- 3.3. Appoint a Principal Certifying Authority for the building work:
  - a) The Principal Certifying Authority (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.
  - a) Submit to Council a Notice of Commencement of Building Works or Notice of Commencement of Subdivision Works form giving at least two (2) days' notice of the intention to commence building or subdivision work. The forms can be found on Council's website: www.centralcoast.nsw.gov.au
- 3.4. 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 Certifying Authority for the work; and
  - a) The name of the principal contractor and a telephone number at which that person can be contacted outside of working hours; and
  - b) That unauthorised entry to the work site is prohibited.
  - c) Remove the sign when the work has been completed.
- 3.5. Clearly mark and identify all trees and native vegetation proposed for retention and removal onsite and on all final engineering and development plans. All fenced tree protection areas must be clearly marked as "No Go Area" on all plans.
- 3.6. Prior to commencement of any works submit to Council's Ecologist for approval a Vegetation Management Plan for all areas of retained native vegetation on Lot 102/DP1209157. The Vegetation Management Plan must be prepared to Council's satisfaction prior to the commencement of any works. The Vegetation Management Plan must be prepared by a suitably qualified Ecologist and in accordance with Central Coast Council's Flora and Fauna Survey Guidelines 2019. The VMP must include as a minimum:

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- Site specific management actions to protect and mitigate the impacts of the development on the Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community (EEC) and Melaleuca biconvexa on the property.
- Integrate with the Erosion and Sediment Control or Soil and Water Management Plan.
- Clearly stage management actions to identify works required prior to commencement of construction works, during works, prior to occupation certificate and ongoing.
- Include a protocol to prevent the transfer of weeds or pathogens onto or off the site, including during construction.
- A monitoring program and performance objectives.
- Detail ongoing reporting requirements.
- Be implemented for no less than five years.

Progress reports are to be submitted to Council's Ecologist by the 30th June each year for a minimum of 5 years after the commencement of works. Reports are to detail the progress of the works and any recommended additional actions, with a final report certifying completion of the Vegetation Management Plan at the end of the implementation period, or once the specific objectives of the plan have been met. Any recommended additional actions must be completed to the satisfaction of Council prior to lodgement of the final report.

## 3.7. Install temporary fencing

Prior to works associated with the development commencing, vegetation nominated for retention is to be suitably protected by a 1.8 metre high fence. The fence is to be clearly marked as a "No Go Area" on the fencing itself. No clearing of vegetation, storage of vehicles or machinery, stockpiling, materials storage or unauthorised access is to occur within the fenced conservation area.

3.8. Implement the mitigation measures outlined the "Revised Ecological Assessment Report (EAR)- PROPOSED RETAIL AND CARPARK –STAGE 1 AT 11 BRYANT DRIVE, TUGGERAH, NSW" Andersen Environment and Planning, March 2020 (section 13.0). Where the measures are inconsistent, the conditions of consent prevail.

## 3.9. Erosion and Sediment Control Requirements

Prior to the commencement of construction an initial Erosion and Sediment Control Plan (ESCP) prepared in accordance with the latest edition of the Landcom Publication *'Soils and Constructions- Volume 1'* (The Blue Book) shall be provided to the Principal Certifying Authority. This plan shall be modified and updated during construction to reflect any changes due to the on-ground/site conditions. A copy of any modifications or updates to the ESCP shall be provided to the PCA and provided to Council upon request.

Erosion and sediment controls shall be monitored, maintained and adapted in accordance with the most recent ESCP until the site is fully stabilised and landscaped. Failure to comply with this condition may result in fines under the provision of the *Protection of the Environment Operations Act* 

## 3.10 **Protection of Adjoining Property Requirements**

Prior to works associated with the development commencing, the applicant must supply the Principal Certifying Authority with a dilapidation report for the adjoining properties, which documents and photographs the condition of buildings and other improvements. The report must be submitted to and approved by the Principal Certifying Authority prior to the commencement of any works. **Note:** The report is to be made available by the Principal Certifying Authority in any private dispute between neighbours regarding damage arising from construction works upon the development site.

## 3.11 Roads - Preconstruction Requirements

Prior to commencing any works upon public roads the developer and their contractor will be required to:

- Obtain a copy of the Council approved Civil Works plans and pavement design (if applicable).
- Obtain a copy of Council's *Civil Works Specification Construction Guidelines 2018*. This is Council's Specification for Civil Works and is available on Council's web site.
- Arrange a meeting on-site with Council's Principal Development Construction Engineer on 1300 463 954.
- 3.12 Prior to works associated with the development commencing, a Plan of Management is to be submitted to and approved by Council as the Roads Authority for any works or deliveries that impact on any public roads or public land as a result of the construction of the development. The plan must include a Traffic Control Plan prepared by a person holding Roads and Traffic Authority (RTA) accreditation for selecting and modifying traffic control plans. Fees and charges are applicable to the review and approval of the required management plan in accordance with Council's Plan of Management.
- 3.13 Prior to works associated with development commencing, a dilapidation report must be prepared and submitted to Council as the Roads Authority. The required dilapidation report must document and provide photographs that clearly depict any existing damage to the road, kerb, channel, footpath, driveways, water supply, sewer works, street trees, street signs or any other Council assets in the vicinity of the development. **Note:** The report will be used by Council to determine the extent of damage arising from site and construction works.

## 3.14 Construction Traffic Management Plan

Prior to the commencement of any works, the Applicant shall prepare a Construction Traffic Management Plan for the development. The plan shall include Traffic Control Plans prepared by a suitably qualified and experienced consultant. All works must ensure the safety of all vehicles and pedestrians within the frontage service road.

- 3.15 Provide and maintain a garbage receptacle at the work site until the works are completed. The garbage receptacle must have a tight fitting lid and be suitable for food scraps and papers.
- 3.16 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.

3.17 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*.

**Attachment 2** 

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## 4 DURING WORKS

- 4.1. All conditions under this section must be met during works.
- 4.2. Carry out construction or demolition works during the construction phase of the development only between the hours as follows:

7.00am and 5.00pm Monday to Saturday

No construction or demolition works associated with the development are permitted to be carried out at any time on a Sunday or a public holiday.

- 4.3. During the construction phase of the development, if any Aboriginal object (including evidence of habitation or remains), is discovered during the course of the work:
  - a) All excavation or disturbance of the area must stop immediately in that area, and
  - a) The Office of Environment and Heritage must be advised of the discovery in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

**Note:** If an Aboriginal object is discovered, an Aboriginal heritage impact permit may be required under the *National Parks and Wildlife Act 1974*.

- 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 Certifying Authority or an officer of Council.
- 4.6 Conduct all works in accordance with the approved Vegetation Management Plan.
- 4.7 Supervision by a suitably qualified Ecologist is required for all vegetation clearing works. The Ecologist must:
  - Mark trees and native vegetation for retention and removal.
  - Supervise the installation of fencing around all trees and vegetation to be retained.
  - Provide an environmental induction to civil contractors and subcontractors.
  - Undertake pre clearing surveys for fauna and directly supervise all clearing to mitigate any animal welfare issues.

The Ecologist must provide updates in writing to Council's Ecologist within five business days after completion of the environmental protection measures.

- 4.8 Maintain the fence around the retained vegetation. The fence must be maintained for the duration of construction works. No storage of vehicles or machinery, waste, fill or materials or unauthorised access is to occur within the fenced vegetation protection areas.
- 4.9 Implement the mitigation measures outlined the ""Revised Ecological Assessment Report (EAR)- PROPOSED RETAIL AND CARPARK –STAGE 1 AT 11 BRYANT DRIVE, TUGGERAH, NSW" Andersen Environment and Planning, March 2020 (section 13.0). Where the measures are inconsistent, the conditions of consent prevail.
- 4.10 Design, locate and install underground services to minimise or prevent tree root damage in accordance with Australian Standard AS 4970-2009: Protection of Trees on Development Sites.
- 4.11 Vehicles and other equipment to be used on site must be completely free of soil, seeds and plant material before entering/leaving the site to prevent the spread of exotic plant species and pathogens. All vehicles and machinery must be inspected prior to site entry/exit and those failing inspection should be sent away for cleaning. Appropriate records of inspections shall be maintained.
- 4.12 Re-use, recycle or dispose of all building materials during the demolition and construction phase of the development in accordance with the Waste Management Plan signed by Barker Ryan Stewart, dated 7 May 2020.
- 4.13 The developer is solely responsible for any costs relating to alterations and extensions of existing roads, drainage, water and sewer infrastructure and other utilities for the proposed development.
- 4.14 Other public authorities may have separate requirements and should be consulted prior to commencement of works in the following respects:
  - Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments;
  - AGL Sydney Limited for any change or alteration to gas line infrastructure;
  - Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements;
  - Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure.

Full implementation of the recommendations of the Anderson Environment & Planning (2019). Ecological Assessment Report for the Construction of a two storey office premises containing a medical centre 23-25 Anzac Road, Tuggerah, NSW, August 2019.

4.15 Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

- 4.16 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*.
- 4.17 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 which is compliant with the Excavated Natural Material Exemption 2014 issued under clauses 91 and 92 of the Protection of the Environment Operations Act 1997.
- 4.18 All excavated material removed from the site must be classified in accordance with NSW EPA (1999) Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes prior to disposal. All excavated material must be disposed of to an approved waste management facility and receipts of the disposal must be kept on site.
- 4.19 In the event that construction works causes the generation of odours or uncovering of previously unidentified contaminates, works must immediately cease, Council and the Principal Certifying Authority must be notified in writing within 7 days and an appropriately qualified environmental consultant appointed to undertake an assessment of the potential contaminant and works required to make the site safe from potential human health and environmental harm.

## 4.20 Cease excavation if ASS identified

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.

4.21 During construction works, all fill is to be placed on site in such a manner that surface water will not be permanently or temporarily diverted to adjoining land.

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## 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 Permanent solid fencing of the Swamp Sclerophyll Forest Endangered Ecological Community is to be installed prior to issue of Occupation Certificate. Locked access gates are to be provided for maintenance.
- 5.3 The area subject to the Vegetation Management Plan will be placed under a 'Restriction on Use' pursuant to section 88B and 'Public Positive Covenant' 88E of the Conveyancing Act 1919. These instruments must require the land to be managed under an approved Vegetation Management Plan for the conservation of endangered ecological communities and threatened species. The public positive covenant must be created to require the implementation of the Vegetation Management Plan.

The public positive covenant must permit Council or its nominee to enter and inspect the site and carry out any works required under the Vegetation Management Plan, at the owner's cost, if the owner fails to implement and maintain the site in accordance with the Vegetation Management Plan as amended and approved by Council.

The public positive covenant must be submitted to Council's General Counsel for approval. The authority empowered to release, vary or modify the Restriction is Central Coast Council.

- 5.4 Prior to the issue of any Occupation Certificate the completed Noise Impact Assessment must be provided to Councils Senior Environmental Health officer for endorsement prior to implementing any of the recommended acoustic attenuation measures.
- 5.5 Prior to the issue of any Occupation Certificate a compliance certificate must be provided to the Principal Certifying Authority demonstrating that all recommended attenuation measures from the Noise Impact Assessment have been implemented.
- 5.6 Prior to the issue of an Occupation Certificate, any damage not shown in the Dilapidation Report submitted to and approved by the Principal Certifying Authority prior to site works commencing, will be assumed to have been caused as a result of the site works undertaken with respect to the development and must be rectified at the applicant's expense.
- 5.7 Install CCTV

Install a system of Closed Circuit Television (CCTV) of a type and in locations on the site that will provide high-quality images of all public areas within the site. CCTV surveillance of the Lake Road car park shall be installed.

- 5.8 Complete the landscaping works.
- 5.9 Provide the Principal Certifying Authority with written certification from a qualified landscape designer certifying that landscaping has been implemented in accordance with the approved landscape plan as amended by any conditions of this consent.
- 5.10 Solid acoustic attenuating fencing of at least 2.1 metres in height above the finished ground level shall be provided directly adjoining the north boundary. Where the recommendations of the acoustic report dictate a higher fence, this must be provided.

## 5.11 Dilapidation Rectification Requirements

Prior to the issue of an Occupation Certificate, any damage not shown in the Dilapidation Report submitted to and approved by the Principal Certifying Authority prior to site works commencing, will be assumed to have been caused as a result of the site works undertaken with respect to the development and must be rectified at the applicant's expense.

## 5.12 Filling and Haulage- Completion Requirements

All filled areas are to be compacted in accordance with the requirements of *AS 3798-1996*. The submission of test results and appropriate documentation attesting to this requirement having been achieved is to be provided for the approval of the Accredited Certifier prior to issue of the Occupation/Subdivision Certificate.

## 5.13 Lighting Requirements

Prior to the issue of an Occupation Certificate, suitable lighting to car park areas shall be provided in accordance with the requirements of *AS/NZS 1158* and *AS/NZS 2890.1*.

## 5.14 Authorities – Compliance Requirements

Prior to the issue of an Occupation Certificate, the developer must comply with the requirements (including financial costs) of any relevant utility provider (for electricity, water, sewer, drainage, gas, telecommunications, roads, etc) in relation to any connections, works, repairs, relocation, replacements and/or adjustments to public infrastructure or services affected by the development.

5.15 All road signage and pavement marking works must be completed in accordance with the plans approved by the Local Traffic Committee and approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.

- Attachment 2
  - 5.16 The provision of any additional civil works required to ensure satisfactory transitions to existing work as a result of work conditioned for the development works are to be approved by Council as the Roads Authority prior to issue of the Occupation Certificate.
  - 5.17 All works within the public road must be completed in accordance with the approved Civil Works design drawings and Council's *Civil Works Specification Construction Guidelines 2018* and be approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.
  - 5.18 The submission to the Council as the Roads Authority of certification from an Accredited Service Provider (ASP) that the street lighting installation has been completed in accordance with *AS/NZS 1158* and *AS 4282-1997*, the approved design drawings and will achieve a minimum of twenty (20) year design life. The certification must be received by Council prior to the issue of the Occupation Certificate.
  - 5.19 The construction of the stormwater management system in accordance with the approved Stormwater Management Plan and *AS/NZS 3500.3-2018*. Certification of the construction by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.
  - 5.20 The construction of stormwater drainage works external to the site and discharging into a public system or public land in accordance with the approved Stormwater Management Plan and Council's *Civil Works Specification Construction Guidelines 2018*. All works must be approved by Council under Section 68 of the *Local Government Act 1993* prior to issue of the Occupation Certificate. All other stormwater management works must be approved by the Principal Certifying Authority.
  - 5.21 Prior to the issue of an Occupation Certificate, stormwater generated from roof areas of the building and any overflows from rain water tanks installed in conjunction with the development, is to be disposed of to the existing stormwater disposal system servicing the allotment.
  - 5.22 Prior to the issue of the final Occupation Certificate, a 'Restriction on the Use of Land' shall be created on the title of the land restricting any alteration to the on-site stormwater detention system. The terms of the Restriction are to be prepared to Council's standard requirements. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.

- 5.23 Prior to the issue of the final Occupation Certificate, a 'Positive Covenant' shall be created on the title of the land requiring the registered proprietor to ensure the continued maintenance and performance of the on-site stormwater detention structure. The terms of the positive covenant are to be prepared to Council's standard requirements. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.
- 5.24 Prior to the issue of the final Occupation Certificate, a 'Restriction on the Use of Land' shall be created on the title of the land prohibiting the registered proprietor from altering the overland stormwater drainage flow path, or erecting any structure within the overland stormwater drainage flow path, without the express written consent of Council. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.
- 5.25 Creation of an easement over the trunk drainage line benefitting the adjoining properties connected to the trunk drainage line.
- 5.26 The construction of the carpark and accesses in accordance with *AS/NZS 2890*. Certification of the construction of the carpark and associated accesses by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.
- 5.27 Prior to the issue of an Occupation Certificate, all water and sewer works for the development must be approved by Council as the Water and Sewer Authority.
- 5.28 The obtaining of a satisfactory final plumbing & drainage inspection advice or 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 Occupation Certificate. All works for the development must be approved by Council prior to the issue of a Certificate of Compliance.
- 5.29 Prior to the issue of an Occupation Certificate, Works as Executed information for the development as identified in Council's *Civil Works Construction Specification* is to be submitted to and approved by Council.
- 5.30 Prior to the issue of any Occupation Certificate, land required for the roundabout on both sides of Bryant Drive is to be dedicated at no cost to Council as Public Road.

## 6. ONGOING

6.1 Use external lighting that minimises overspill into retained vegetated areas.

- 6.2 mplement the works specified in the approved Vegetation Management Plan. Progress reports are to be submitted to Council's Ecologist by the 30th June each year for a minimum of 5 years after the commencement of works.
- 6.3 Store all waste generated on the premises in a manner so that it does not pollute the environment.
- 6.4 Transport all waste generated on the premises to a facility which is licensed to receive that material.
- 6.5 No obstructions to the wheel out of waste bins are permitted including grills, speed humps, barrier kerbs etc.
- 6.6 Comply with all commitments as detailed in the Waste Management Plan signed by Barker Ryan Stewart, dated 7 May 2020.
- 6.7 Locate the approved waste storage enclosure / area as indicated on Dwg No. DA100, Revision 6 dated 2 April 2020, Dwg No's. DA 101 and 102 Revision 7 dated 25 April 2020 and Dwg No. DA 103 Revision 6 dated 28 April 2020.
- 6.8 Do not place or store waste material, waste product or waste packaging outside the approved waste storage enclosure.
- 6.9 Waste bin storage area/s to be screened from public view.
- 6.10 Waste containers to be wheeled out on arrival of the commercial waste contractors for servicing and immediately returned to the screened waste bin storage area/s after servicing.
- 6.11 Load and unload delivery vehicles wholly within the site. Delivery vehicles must enter and exit the site in a forward direction.
- 6.12 Do not obstruct loading bays when not in use.
- 6.13 Ensure the garbage / recycling bins do not encroach on the car parking or vehicle manoeuvring areas.
- 6.14 Maintain the site landscaping for the life of the development.
- 6.15 Do not store goods, equipment, packaging material or machinery exposed outside the building so as to be visible from any public road or thoroughfare.
- 6.16 Do not erect advertising sign(s) on or in conjunction with the use and / or development without development consent unless the advertisement is exempt development or otherwise permitted without development consent.

- 6.17 Do not use any flashing light, animated or reflective or moving parts, iridescent or fluorescent colours or materials on the external surface of the advertising sign. The colours exhibited on the sign must be in keeping with the amenity of the surrounding area.
- 6.18 Maintain internal pavement and pavement marking.
- 6.19 The return and earn facility is limited in operation so that it is unavailable and does not have any collection or servicing during night time noise restriction hours of 10pm to 7am.
- 6.20 The Lake Road service truck access and access to the Lake Road car park for all vehicles is to be restricted so that access into the area via the boom gate is unavailable during night time noise restriction hours of 10pm to 7am.
- 6.21 The Lake Road carpark shall be boom gated at both entry points and shall be available for parking by staff vehicles only. Restricted access (via boom gate) to the northern car park is limited to staff vehicles and service trucks at all times. The boom gate is to be closed at all times and accessed electronically as required for the above identified vehicles.
- 6.22 The development is not to be serviced by truck deliveries or collections between the hours of 10pm and 7am.
- 6.23 Ongoing compliance with the recommendations of the approved acoustic report.
- 6.24 The operation of all plant (including rooftop and all mechanical ventilation) in combination is required to not exceed more than 5dB(A) above the background level during the day when measured at the site's boundaries and shall not exceed the background level at night (10.00pm 7.00am) when measured at the nearest affected residence and property boundary

## 6.25 Maintain CCTV

Maintain the installed system of Closed Circuit Television (CCTV) that monitors / records all public areas within the site.

## LPP Report & All Attachments 24 June 2021

Requirement	Proposed	Complies?
2.0 Development Principles		
2.1 Private Domain Controls		
2.1.1 Built form		
Modulated and articulated façade to	Single storey built form that includes	Y
street	projecting public art façade elements	
	provide articulation to an otherwise box form	
Blank walls avoided. Stepping façade	Varied façade and courtyard	Y
with the entrance forward or back.	arrangement parking centrally located	1
with the childhee forward of back.	on the site. The building does include	
	some blank walls, however these are	
	back of house areas designed to	
	minimise intrusion to neighbours.	
ESD principles for water and energy	The proposed building is capable of	Y
efficiency incorporated	providing fixtures in accordance with	
	ESD energy and water principles	
2.1.2 Access and Car Parking		
As per DCP 2.11	Exceeds parking requirements of 2.11	Y
Parking is unobtrusive	Parking is contained behind a	Y
	landscaped buffer	
Large metal grills/openings not used	N/A at grade car parking	-
for ventilation of car parking	N/A	
Pacific Highway and rail corridor	N/A	-
special provisions 2.1.3 Flooding and Drainage		
All development as per DCP 3.3 and	The proposal is acceptable	Y
Council's civil works design guide	The proposal is acceptable	r
2.1.4 Landscaping		
A landscape plan is provided that	A suitably detailed landscape plan and	Y
incorporates:	landscape document that incorporates	•
i. Surface flow management	trees has been provided. This	
ii. Sediment pollution control	document, in conjunction with the civil	
iii. Planting themes/species	plans and environmental assessment	
iv. Street tree planting @Wyong Rd	report, address the necessary	
v. Details of paving, street furniture,	requirements.	
lighting etc		
vi. Protection of wetland/riparian		
vii. Protection of veg being retained		
2.1.5 Materials and Building Finishes		
Materials complement masonry	The proposal incorporates materials	Y
construction	precast concrete and rendered	
Deflectivity of sleeping lass that 000/	masonry.	V
Reflectivity of glazing less than 20%	This can be achieved via condition of	Y
Natural colour palette	A varied palette of materials and colours	Y
Natural colour palette	in natural tones	r
2.1.6 Residential Development		
Mixed use with residential 0.05 FSR	N/A	-
bonus		
2.1.7 Roofscape		
Roof structures not permitted unless	Rooftop air conditioning plant can be	Y
integrated into the design	screened from view of streets and	
-	surrounding properties. The rooftop	
	structures are not excessive in height.	
2.1.8 Servicing and storage		

## Wyong DCP 2013, Chapter 6.14 – Tuggerah Precinct

## Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

## Attachment 2

LPP Report & All Attachments 24 June 2021

	ading manoeuvring should be parate from car parking/pedestrian	Adequately separated	Y
are	eas.		
	rvice areas not visible from the lway	N/A	-
	ck areas to be recessed	N/A	-
-	ternal storage not located in front	Not proposed.	_
	back and screened		
	.9 Setbacks		
	Wyong Rd and Wyong Rd (West)	N/A	[_
a)	<ul> <li>15m from Wyong Rd B'dy</li> <li>Carparking and external</li> </ul>		
	storage not permitted in setback. 15m to be landscaped		
b)	Pacific Hwy (Nth Wyong Rd/Mildon	N/A	-
	& Johns Rds		
	<ul> <li>5m from P/Hwy (after Rd</li> </ul>		
	widening)		
	<ul> <li>5m to be landscaped</li> </ul>		
	<ul> <li>Short term car parking behind</li> </ul>		
	5m		
c)	Pacific Hwy (South of Wyong Rd)	N/A	-
	<ul> <li>10m from P/Hwy (after Rd</li> </ul>		
	widening)		
d)	Great North Railway	N/A	-
	<ul> <li>Minimum of 10m to railway bdy</li> </ul>		
	<ul> <li>5m for parking and storage</li> </ul>		
	subject to landscaping etc		
e)	Landscaping	N/A	-
'	<ul> <li>Wyong Rd, P/Hwy and Rail</li> </ul>		
	corridor		
f)	Public Rds	10m to building	Y
	<ul> <li>Minimum of 10m to internal</li> </ul>	5m landscaped setback with mid storey	Υ
	public roads	planting and small trees	
	<ul> <li>5m landscaped area within</li> </ul>	-	
	10m setback		
g)	Power easements	N/A	-
	<ul> <li>No structures within</li> </ul>		
	<ul> <li>Setbacks ensure sufficient</li> </ul>		
	separation		
	<ul> <li>Landscaping to be appropriate</li> </ul>		
	height		
n)	Side and rear	6.2m to north b'dy (minimum setback)	Y
'	<ul> <li>As per BCA</li> </ul>		
	<ul> <li>Where less than 2.5m, should</li> </ul>		
	be on the b'dy		
	<ul> <li>If not 2.5m or b'dy then must</li> </ul>		
	have maintenance available		
)	Variations must address	N/A	-
,	<ul> <li>Visual impact</li> </ul>		
	<ul> <li>Integration</li> </ul>		
	<ul> <li>Function of manoeuvrability,</li> </ul>		
	car parking and service areas		
)	Wetland buffer	The proposal retains important	Y
)	– 5m buffer	ecological areas on the site and a VMP	'
		is required for the ongoing protection of	
	<ul> <li>No car parking within buffer</li> <li>Bebabilitate buffer area</li> </ul>	these areas.	
	<ul> <li>Rehabilitate buffer area</li> </ul>	11030 01003.	1

LPP Report & All Attachments 24 June 2021

a)	Billboard style	Maximum of 1 freestanding sign	Y
	<ul> <li>Not permitted Wyong Rd or rail</li> </ul>	proposed	
	corridor		
	<ul> <li>Not permitted P/Hwy unless</li> </ul>		
	Pylon		
	<ul> <li>1 freestanding per lot</li> </ul>		
b)	Directory sign	Maximum of 1 freestanding "directory"	Y
	<ul> <li>Permitted at entry</li> </ul>	sign proposed	
c)	Sandwich board	N/A	-
	<ul> <li>Prohibited</li> </ul>		
3.0	) Development Principles – Area Sp	ecific	
3.3	3 Area C – Lake Road		
3.3	3.1 Area C1		
a)	No access to Wyong Road	The proposal does not have direct	Y
		access.	
b)	Maximum floor space ration 0.8:1	0.2:1	Y
Ma	aximum site coverage of building	19%	Y
(50	0%)		
	sual impact of bulk, height and scale	The proposal is a low scale single	Y
	ewed from Bryant Drive and Wyong	storey building that wraps around a	
	bad	central parking area.	
	ndscaping of appropriate scale to	The landscape plan provides a	Y
bu	ildings	comprehensive landscape strategy for	
		the site.	



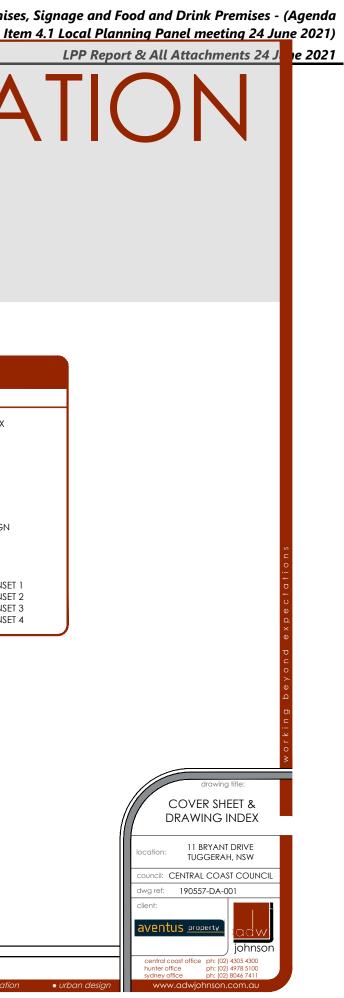
# DEVELOPMENT APPLICATION LOT 102 IN D.P.1209157 11 BRYANT DRIVE, TUGGERAH

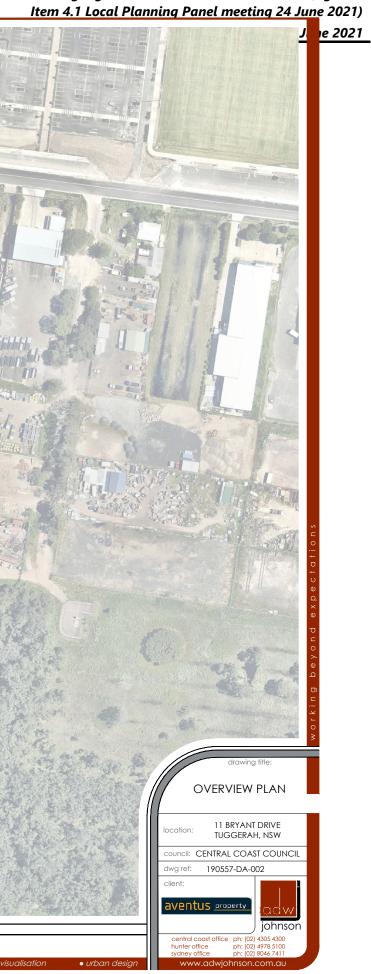


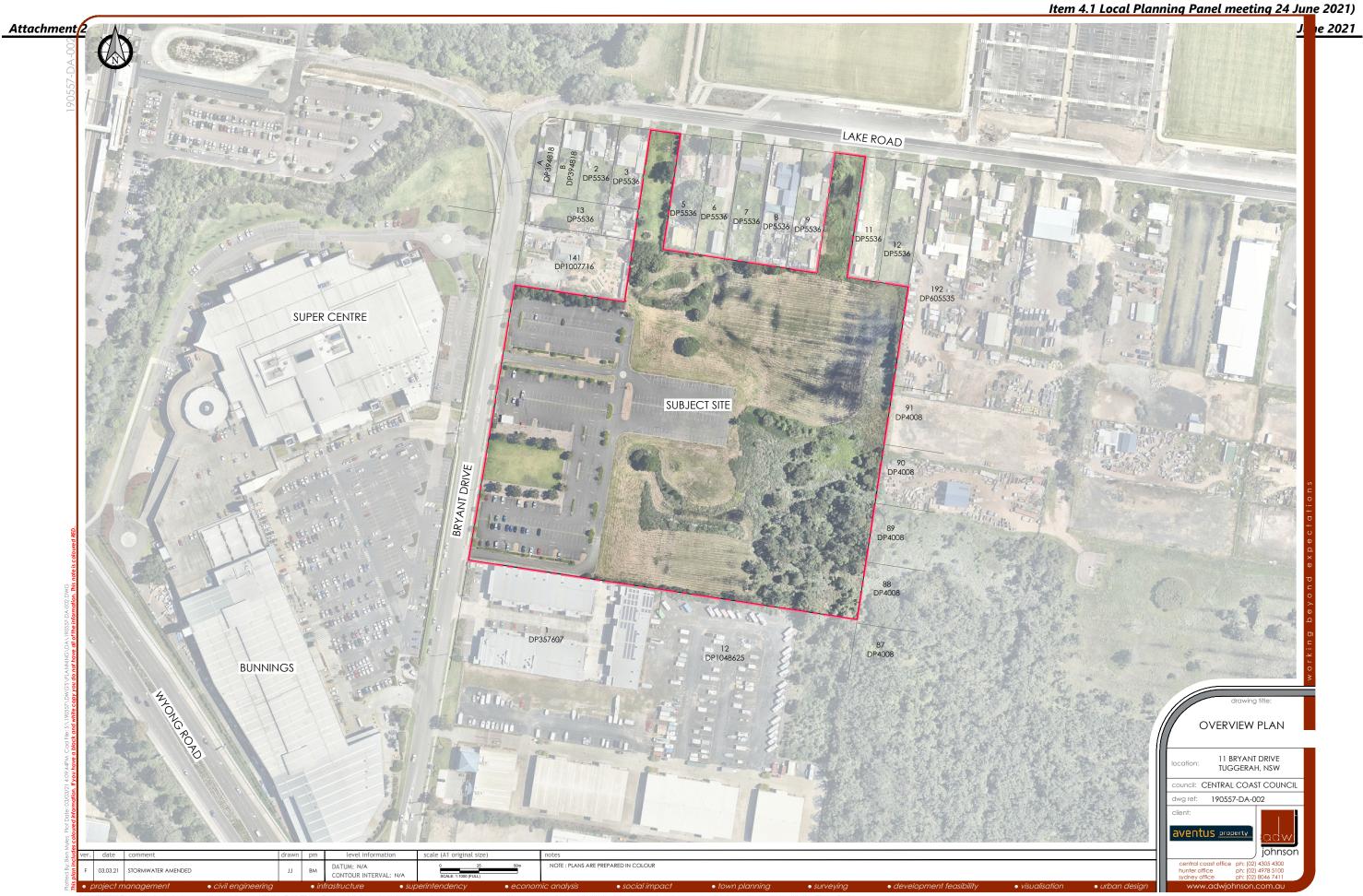
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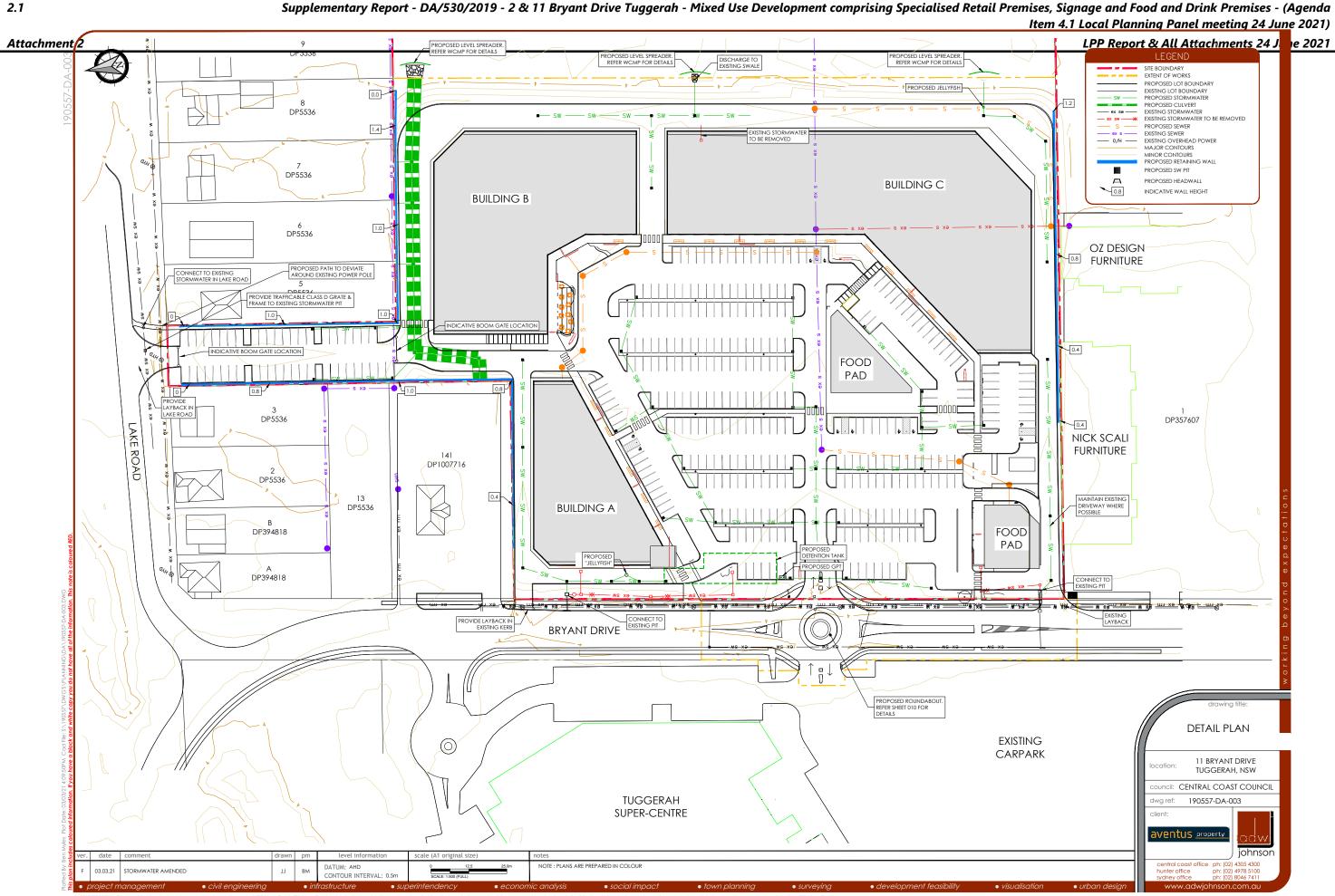
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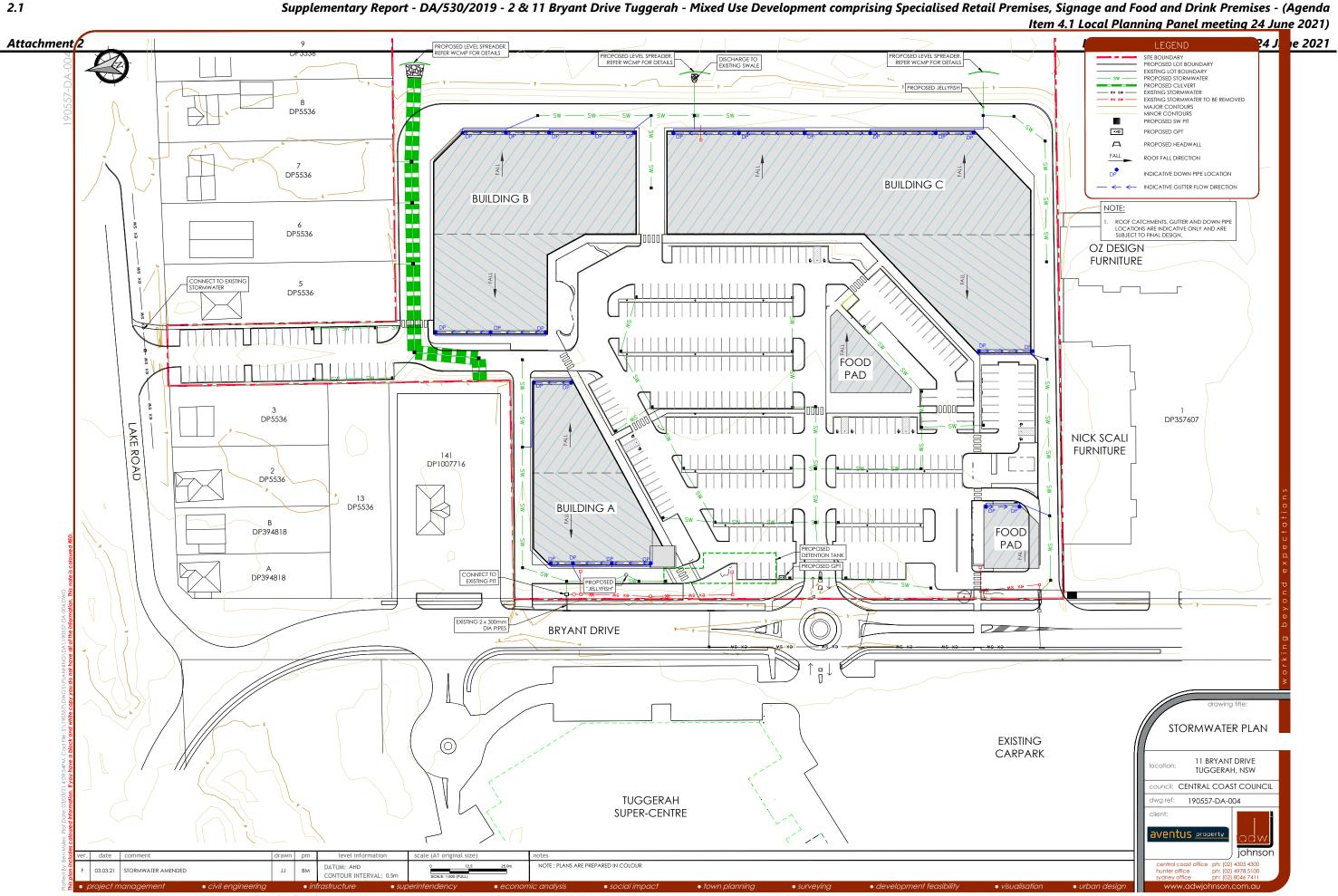
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ed By: B	F	03.03.21	STORMWATER AMENDED		11	ВМ	DATUM: N/A CONTOUR INTERVAL: N/A		NOTE : PLANS AF	RE PREPARED IN COLOUR				
en	ver.	date	comment		drawn	pm	level information	scale (A1 original size)	notes					
2 a														

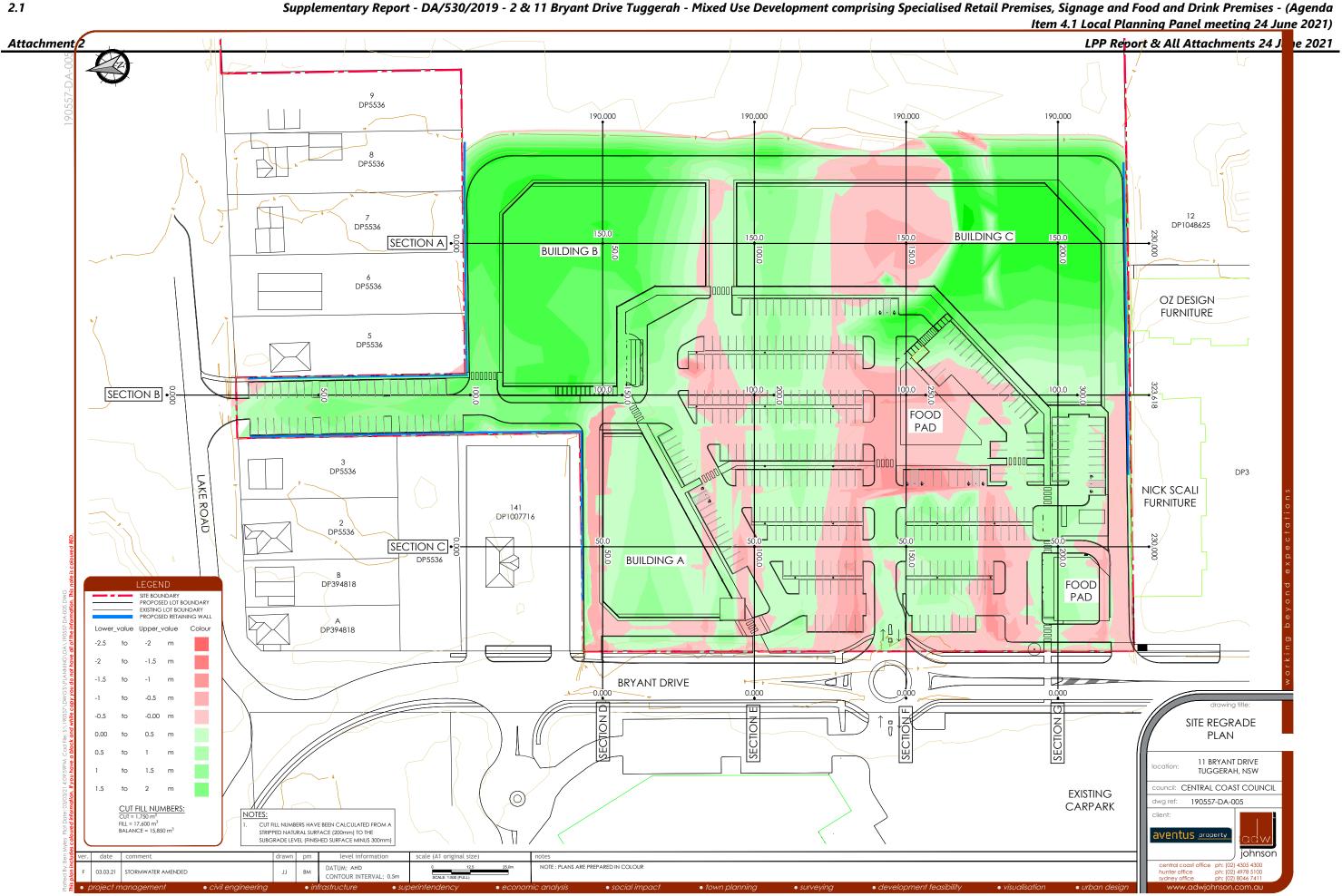


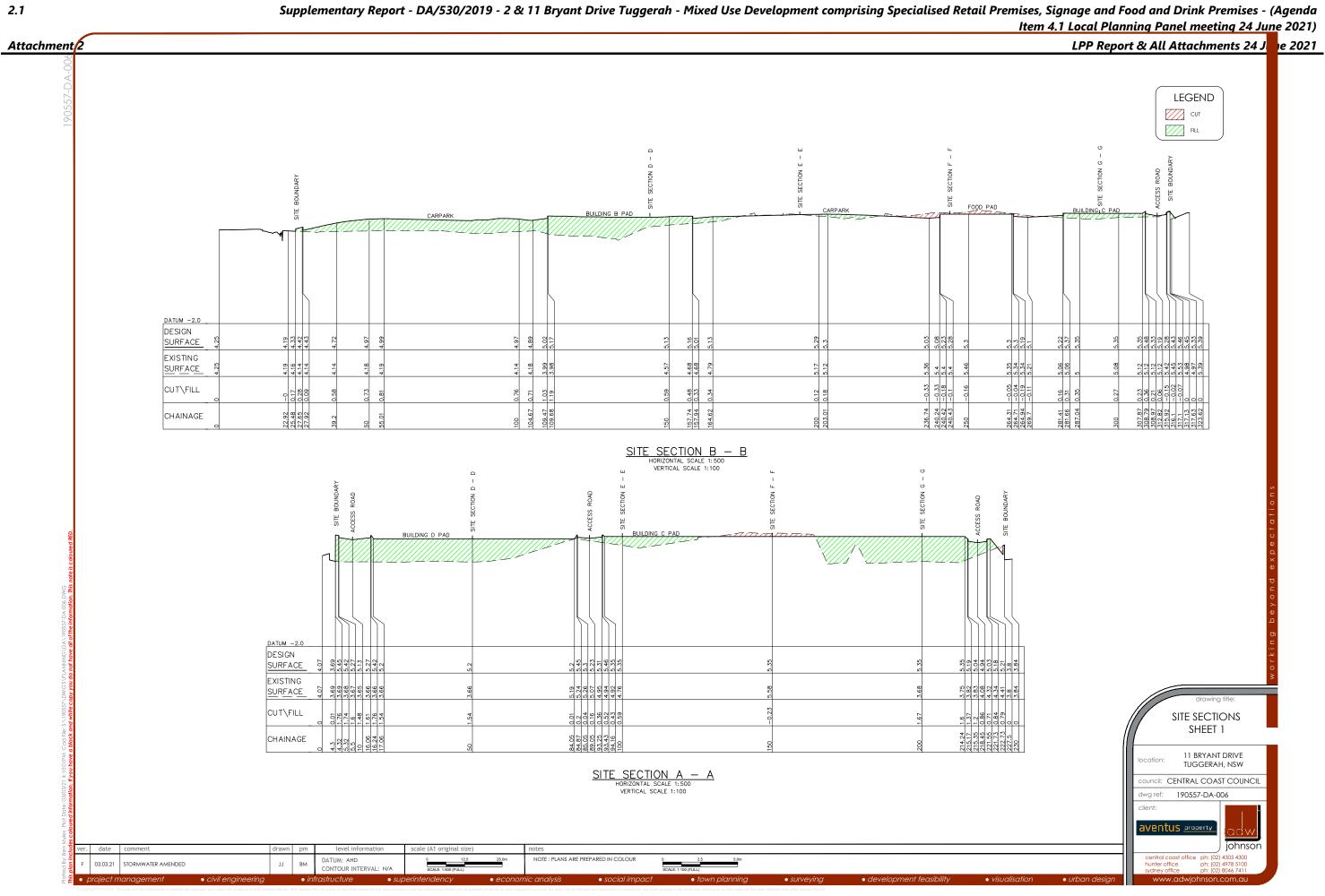


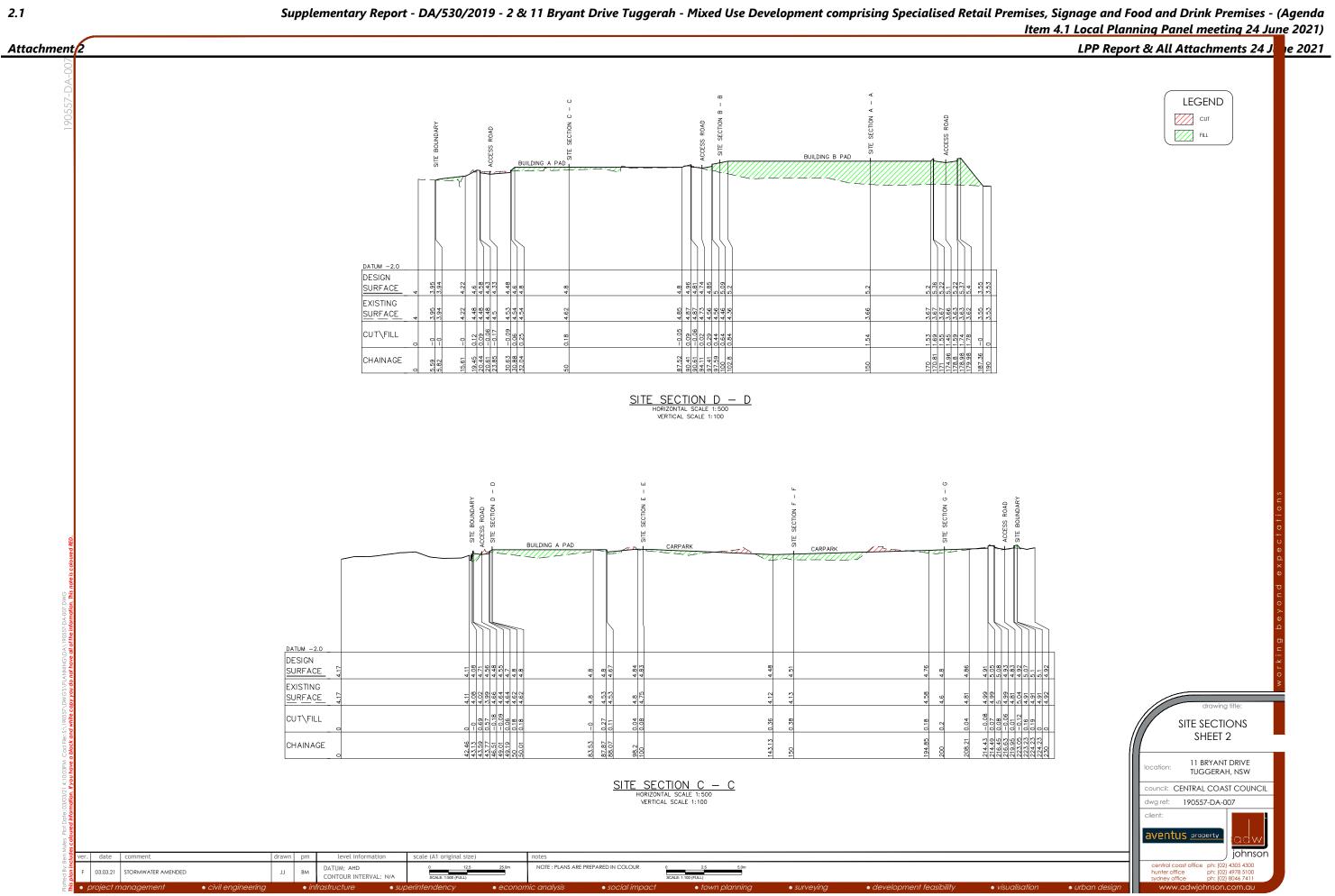


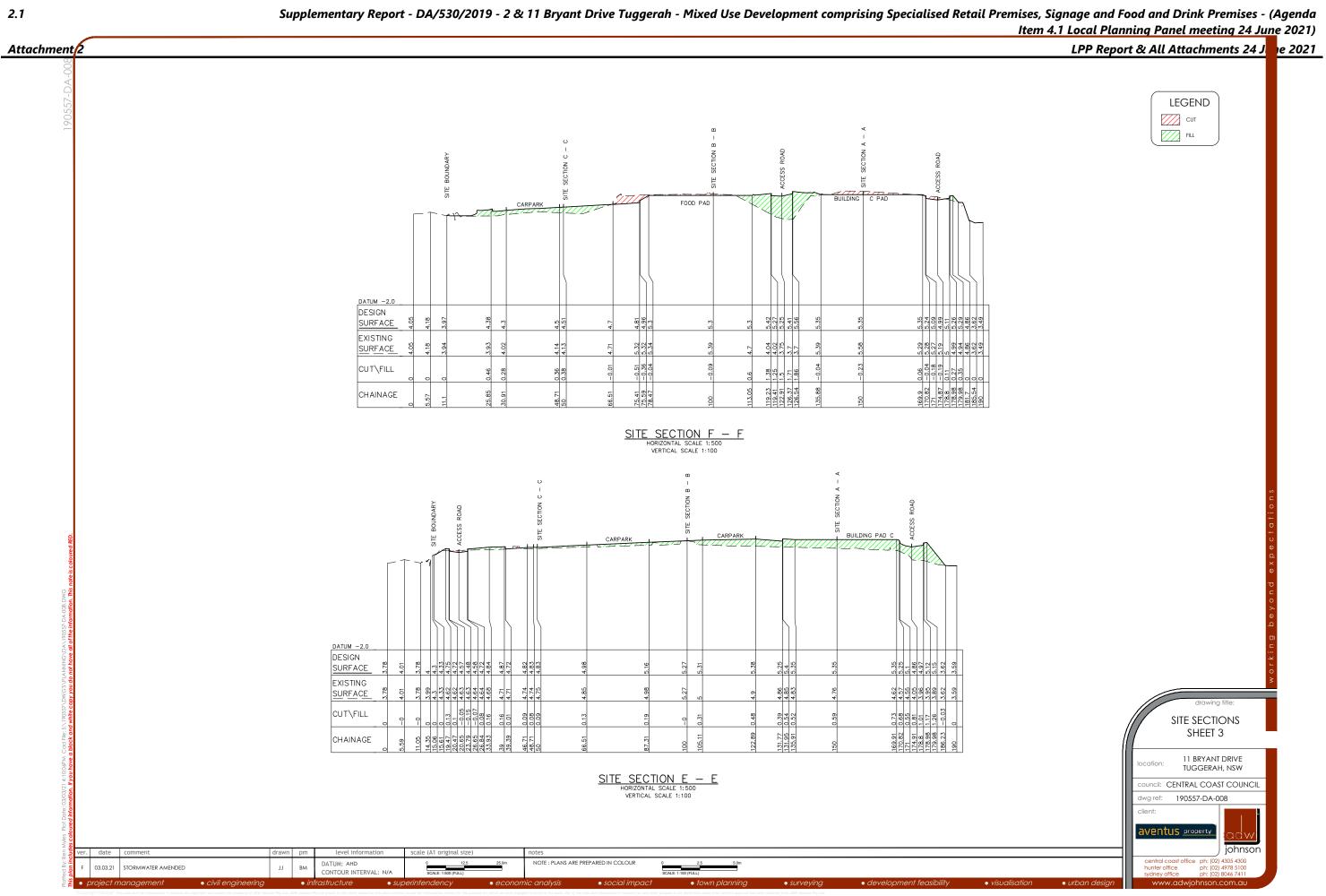


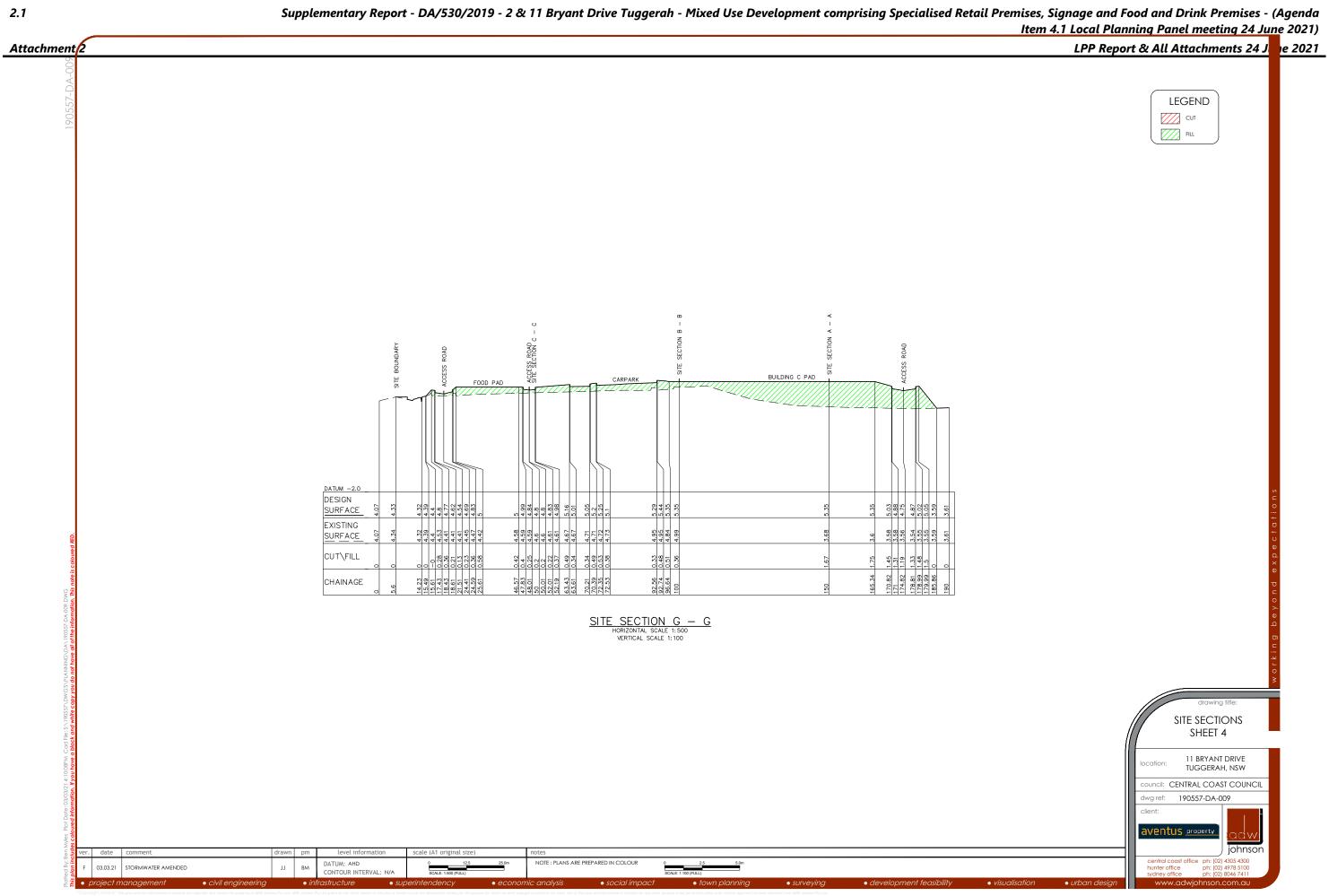


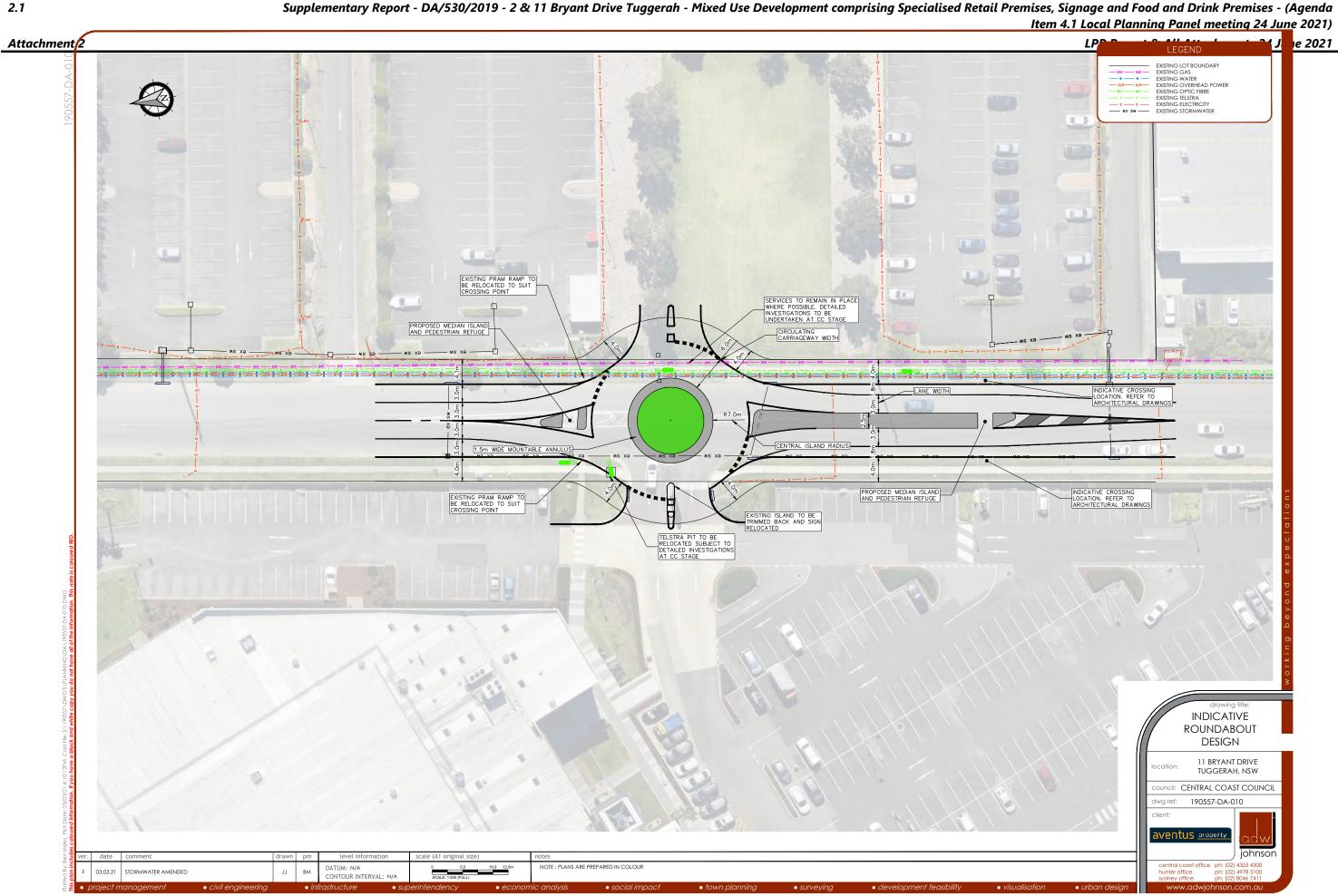


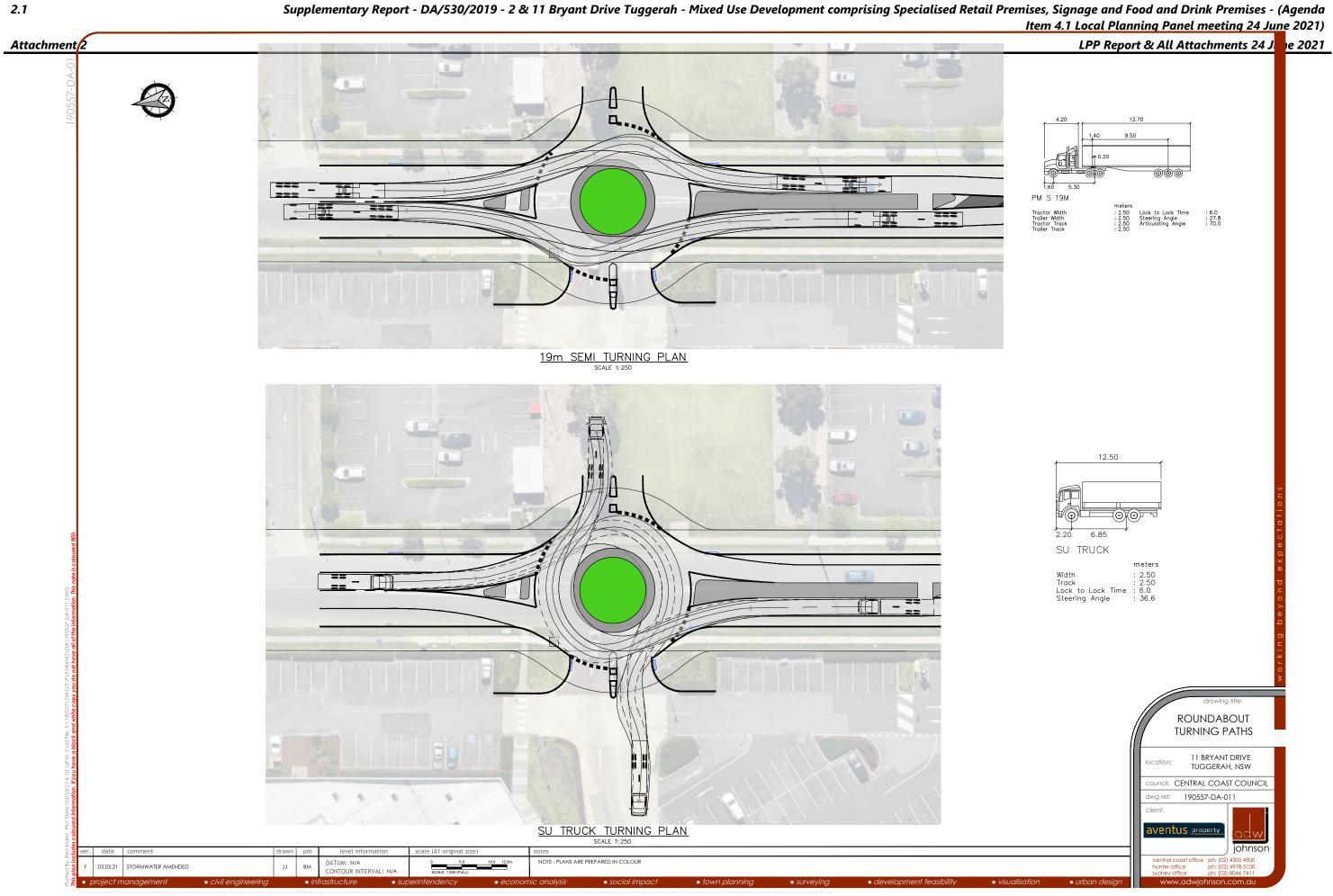


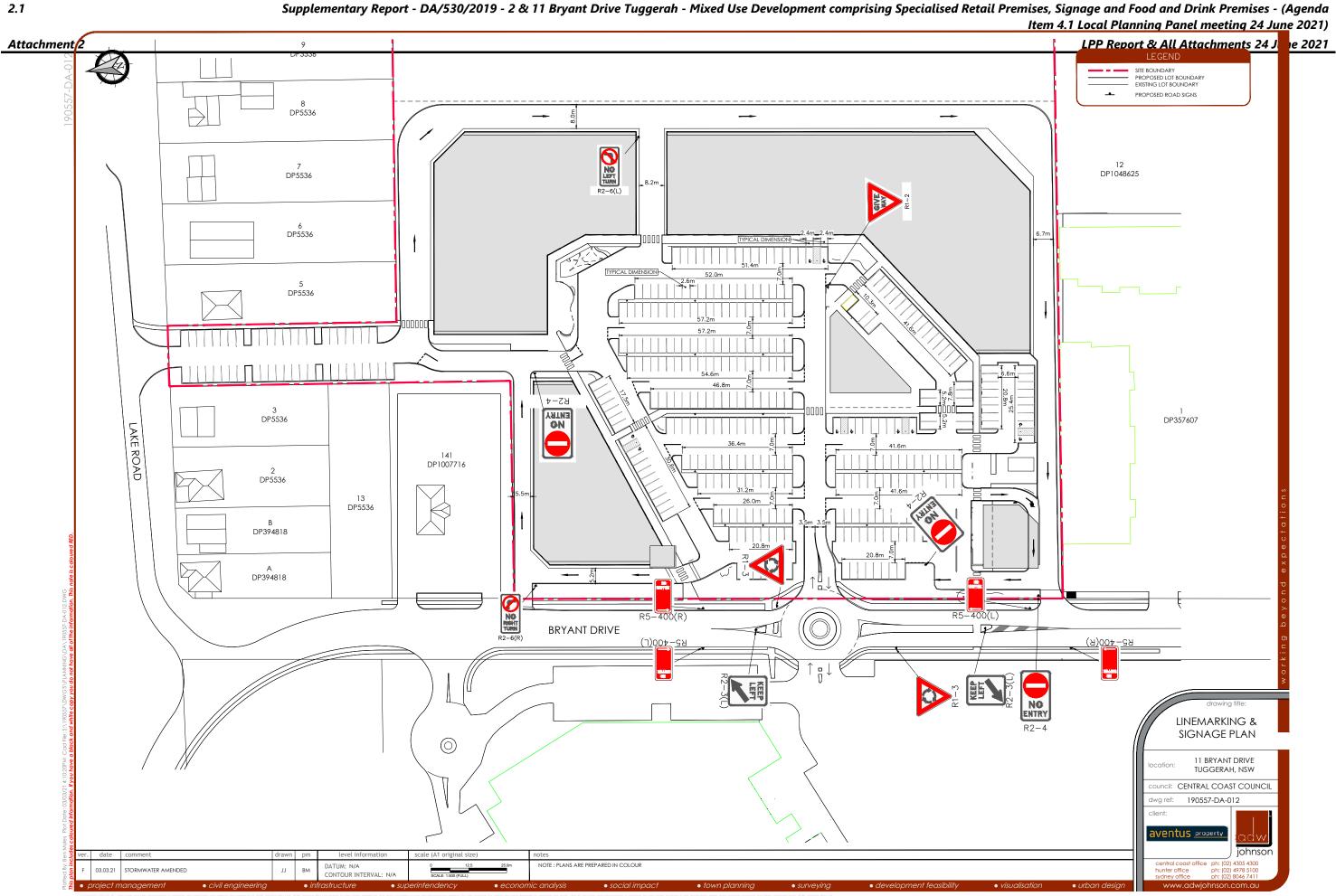


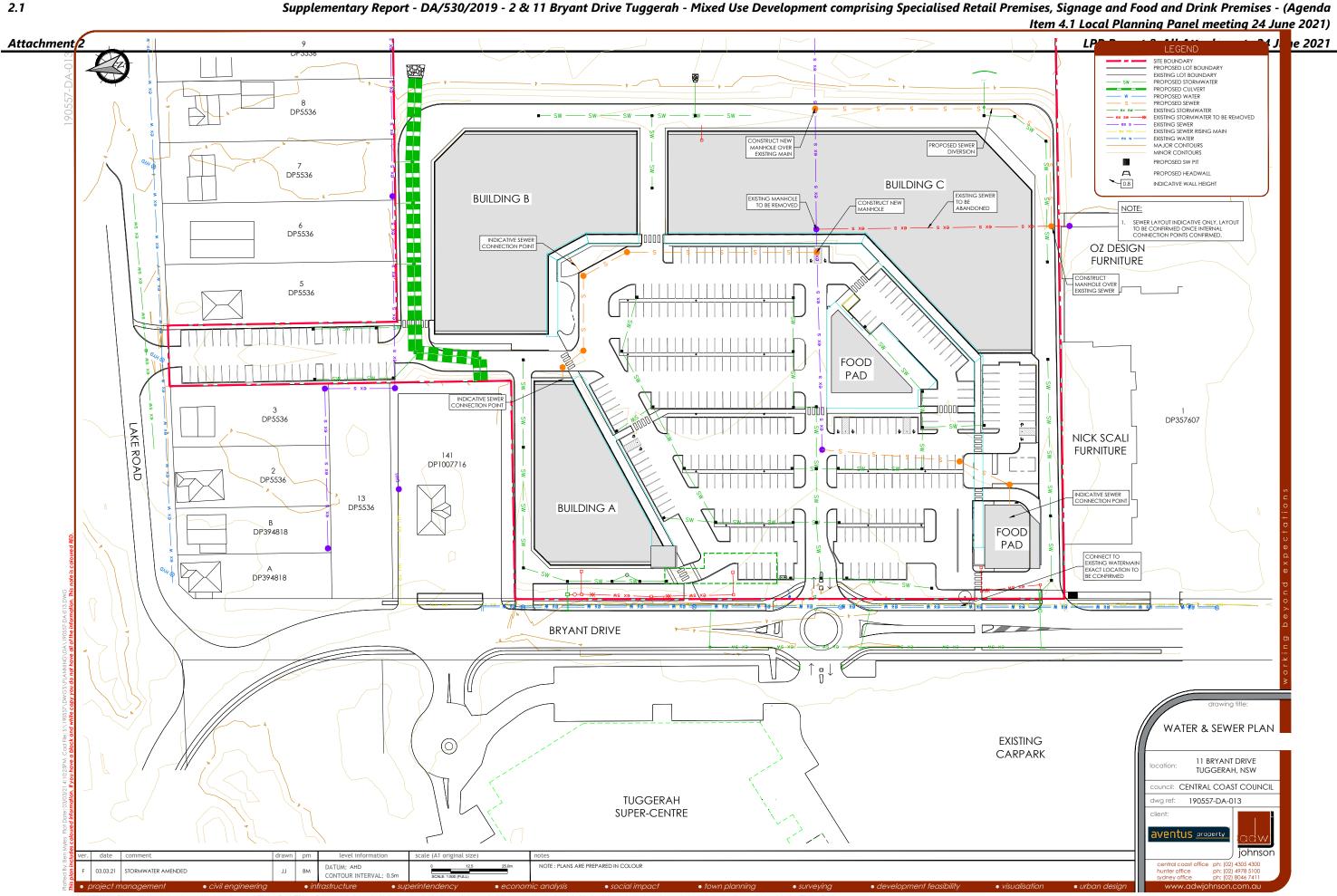




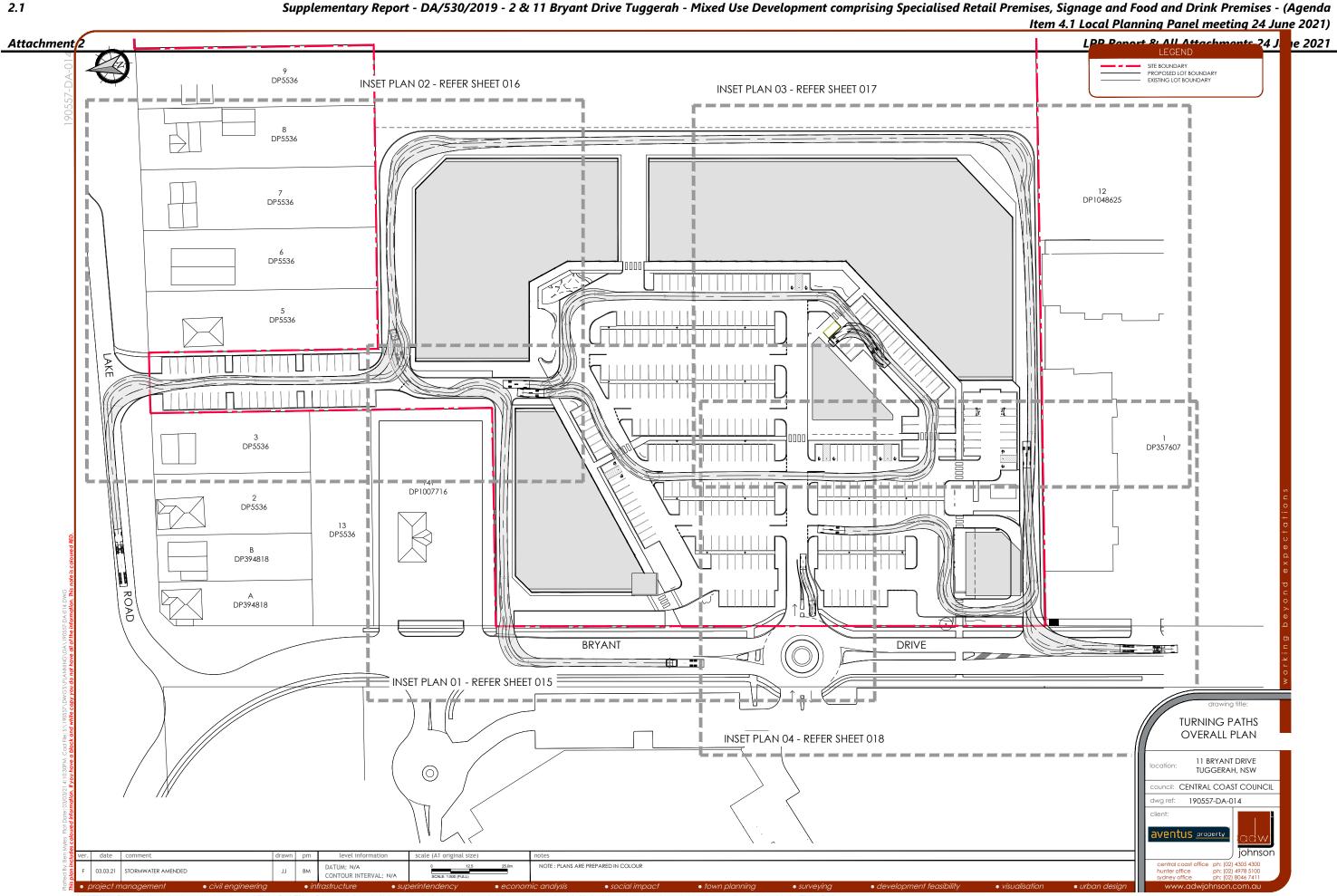


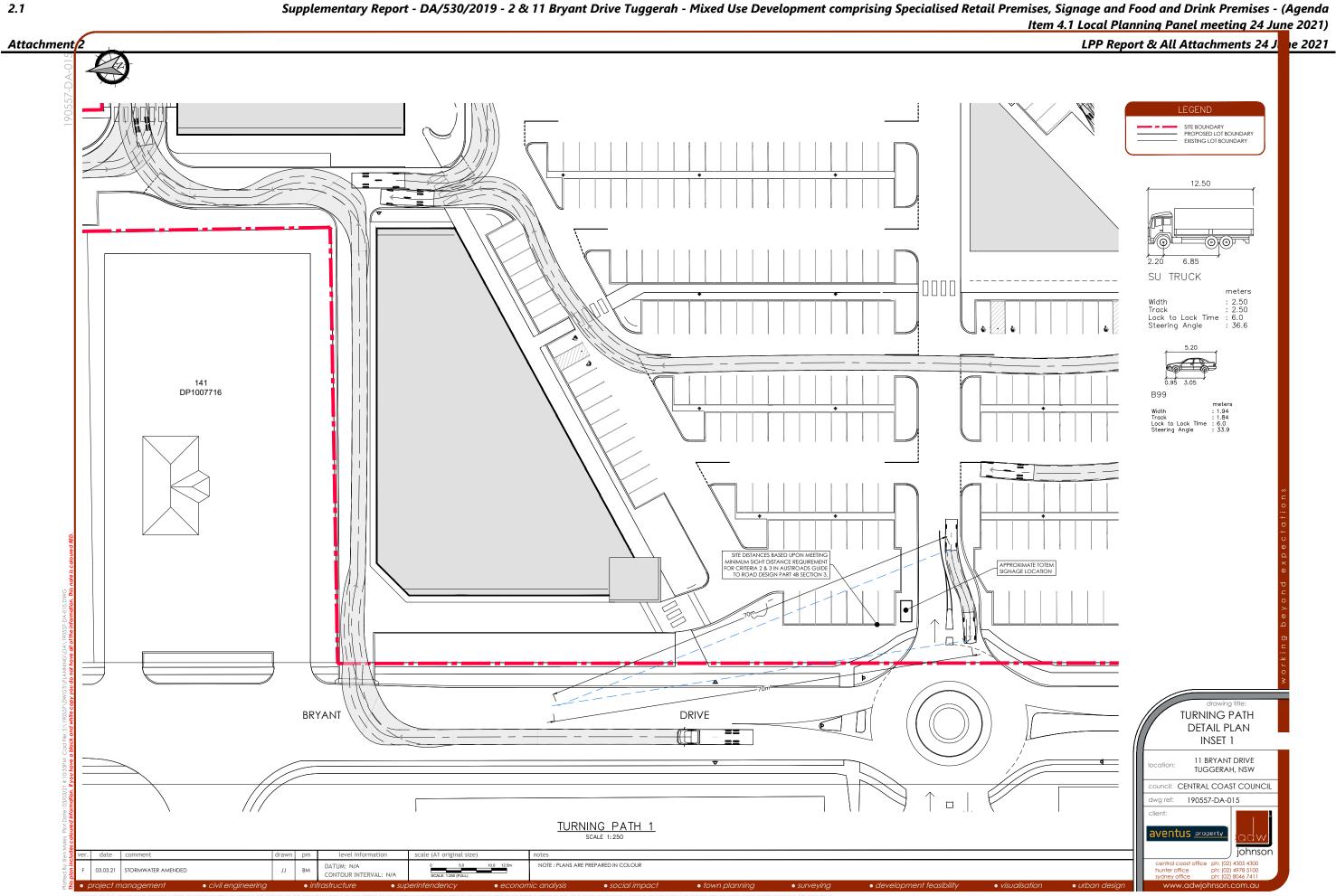


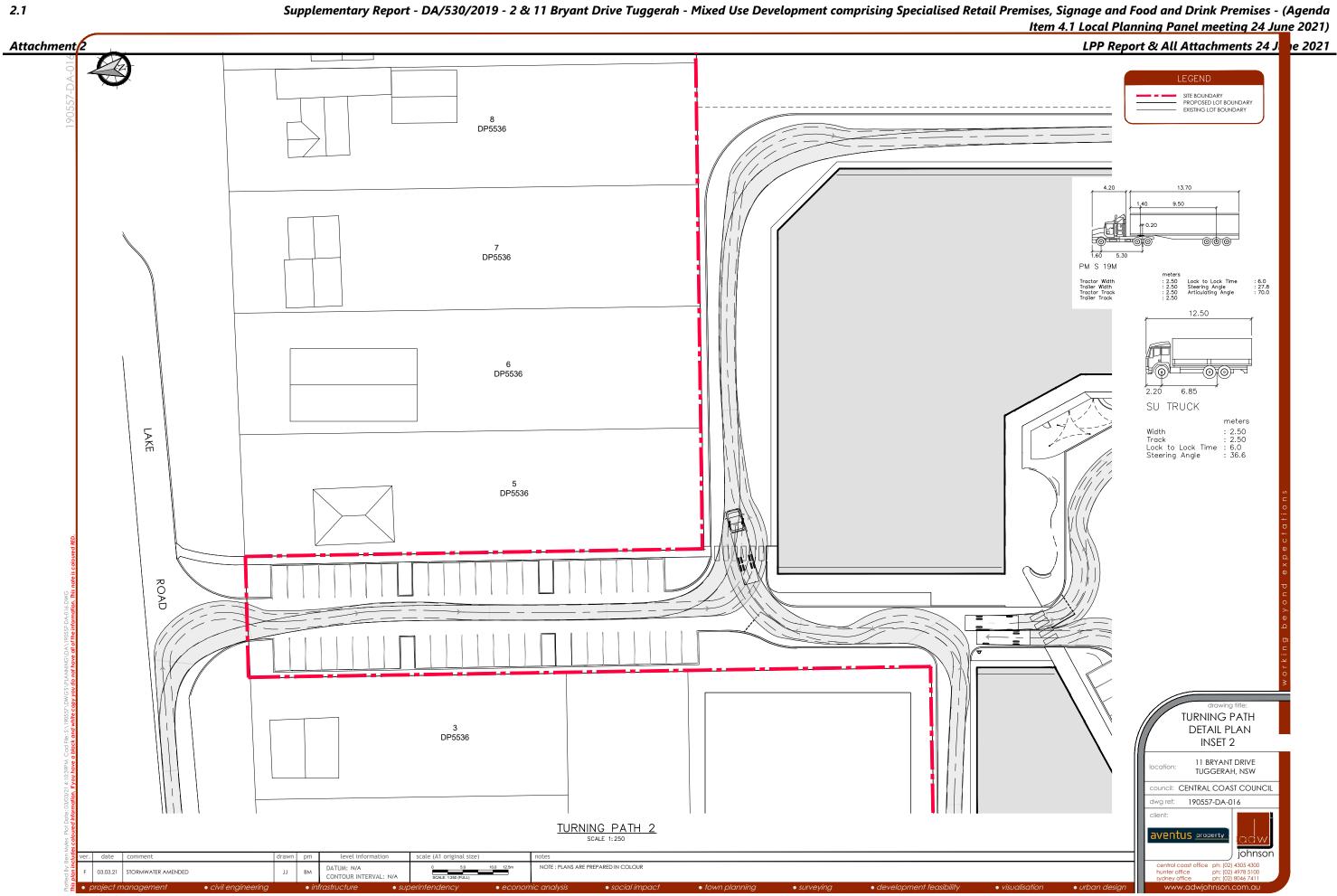


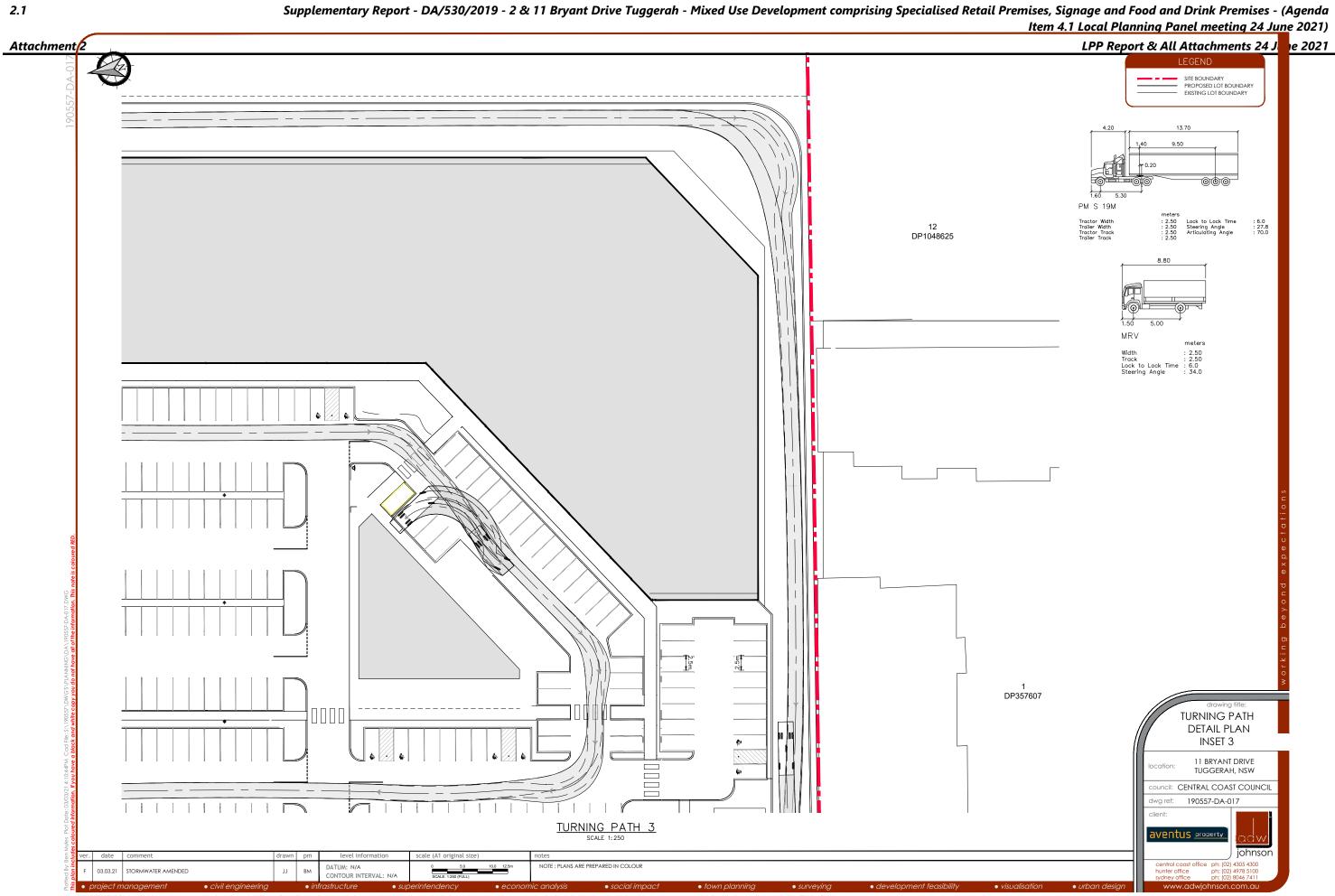


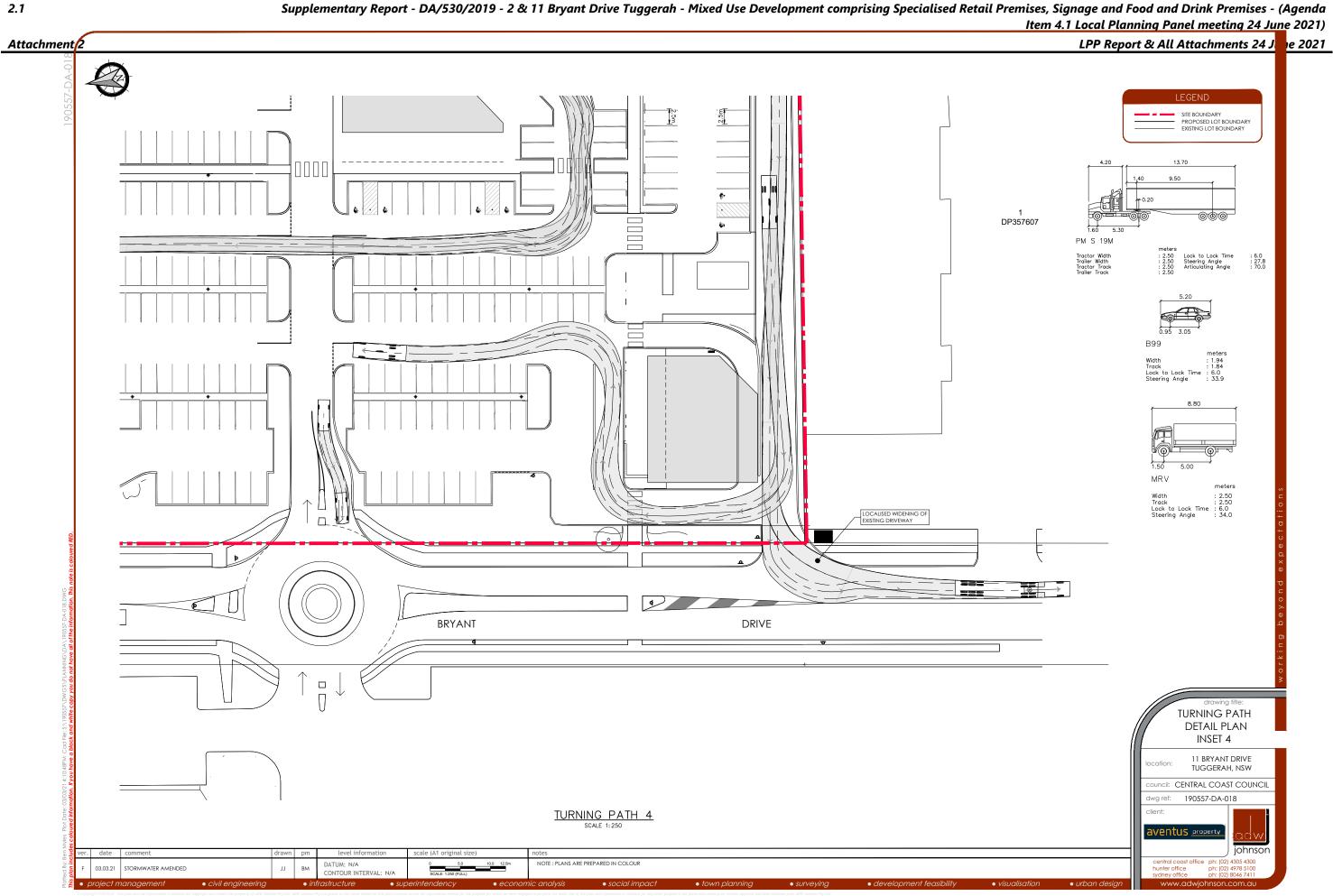












## Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink



nnsor

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21

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## Water Cycle Management Plan

## **Proposed Bulky Goods Development**

Property: Lots 102 DP1209157 11 Bryant Drive, Tuggerah

Applicant: Aventus Tuggerah Pty Ltd

> Date: March 2021

Project Management • Town Planning • Engineering • Surveying Visualisation • Social Impact • Urban Planning

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## **Document Control Sheet**

Issue No.	Amendment	Date	Prepared By	Checked By
А	Initial Issue	March 2019	Ben Myles	Mark Kelly
В	DA Issue	March 2019	Ben Myles	Mark Kelly
С	Layout Amended	April 2019	Ben Myles	Mark Kelly
D	Council Comments	February 2020	Ben Myles	Mark Kelly
E	Council Comments	March 2021	Ben Myles	Ben Myles

#### Limitations Statement

This report has been prepared in accordance with and for the purposes outlined in the scope of services agreed between ADW Johnson Pty Ltd and the Client. It has been prepared based on the information supplied by the Client, as well as investigation undertaken by ADW Johnson and the sub-consultants engaged by the Client for the project.

Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

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The Client should be aware that this report does not guarantee the approval of any application by any Council, Government agency or any other regulatory authority.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

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## **Executive Summary**

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed bulky goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site). The preparation of this management plan has been undertaken to accompany a Development Application required for the proposed development.

Drainage works are currently earmarked for the subject site as part of Council's section 7.11 contributions plan for the Tuggerah area. Whilst not strictly being in accordance with the proposed 7.11 plan, it was shown that a design of a box culvert could provide a similar outcome and meet the intent of the contributions plan. The proposed box culvert is to be utilised as an emergency overland flow route for larger flooding events impacting on Bryant Drive.

DRAINS modelling has been completed to ensure that the post developed flows are adequately attenuated back to pre-developed levels for all outlet locations. It was found that based upon the site grading and redistribution, four (4) out of the five (5) post developed catchments did not require a detention structure as post developed flows were less than or equal to pre developed flows. Modelling indicates that an underground tank with approximately 445m<sup>3</sup> of storage was required to adequately attenuate flows from the main catchment.

MUSIC modelling was completed to show compliance with Council's water quality targets. It is noted that full water quality treatment was not provided on a number of the catchments as they will be catered for in future regional works provided by Central Coast Council.

The main catchment was modelled using MUSIC and it was found that a treatment train of GPT's, litter baskets and a "Jellyfish" filter adequately treated runoff to Council's standards.

Further MUSIC modeling was undertaken to ensure the flow regime entering an existing EEC area was maintained post development. The analysis indicates that the site can be graded to ensure the flow regime is maintained and water quality targets can be met.

Council's regional flooding maps indicate that the site is subject to flooding during the 1% AEP storm event. A review of the site survey indicates that the majority of the existing site is currently above the 1% AEP flood level and the proposed grading of the site will lift the proposed development even higher, ensuring compliance with Council's floodplain management guidelines.

An erosion and sedimentation control plan has been completed for the proposed development to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the site to downstream waterways during the construction period.

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment 2

LPP Report & All Attachment

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#### EXHIBITS

Exhibit 001	Existing Site and Catchments
Exhibit 002	Concept Stormwater Design
Exhibit 003	Proposed Catchments
Exhibit 004	EEC Flows
Exhibit 005	Council Proposed Contribution Plan Works
Exhibit 006	Alternate Stormwater Contribution Works
Exhibit 007	Erosion & Sedimentation Control Plan

## APPENDICES

Appendix A	DRAINS Model
Appendix B	MUSIC Details
Appendix C	CPAA Information
Appendix D	Flood Information Application



Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tugge	rah - Mixed Use
Development comprising Specialised Retail Premises, Signage and	
Premises - (Agenda Item 4.1 Local Planning Panel meetii	une 2021)

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## 1.0 Introduction

ADW Johnson was commissioned by Aventus Property Group to prepare a Water Cycle Management Plan (WCMP) for a proposed Bulky Goods development, located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah (the site). The preparation of this management plan has been undertaken to accompany a Development Application required for the proposed development.

It is noted that this report has been prepared to address the requirements of Stage 1 of the development only. Further information will be provided under separate cover when required for Stage 2.

This report documents the means of stormwater detention, treatment and disposal from the proposed development in accordance the Central Coast Council (CCC) requirements current at the time of writing this report.



Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting e 2021)

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## 2.0 Site Description

The subject site, as depicted in Figure 1 below, is located within Lot 102 DP 1209157, 11 Bryant Drive, Tuggerah. The site has an area of approximately 5.6ha.



Figure 1: Site Locality (Nearmaps Image)

The subject site is bound to the north by Lake Road and existing residential development, to the east by existing mixed use properties, to the south by existing commercial development and to the west by Bryant Drive and the existing Tuggerah Super Centre.

The western portion of the site consists largely of an asphalt overflow carpark associated with the existing Super Centre, whilst the eastern portion is largely undisturbed open grasses and vegetation. A small open grassed area, associated with a previous residential dwelling, exists on the Bryant Drive frontage of the site.

The existing carpark largely grades toward Bryant Drive and slopes in the order of 1-2%. Flows generated within the carpark sheet flow to a series of dish drains located within low points running east west. The flows are then captured by a series of stormwater pits and conveyed to the stormwater network in Bryant Drive before ultimately being discharged into an open channel on the corner of Bryant Drive and Lake Road.

The western portion of the site consists of a series of small open channels before flattening out into open plains with slopes in the order 0.5-0.7%. A relatively large area of Endangered Ecological Community (EEC) is present in the south east corner of the subject site. It is noted that this EEC will not be disturbed by any works associated with Stage 1 of the development.

The existing site and infrastructure can be seen in Exhibit 1.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref: 190557*)

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## 3.0 Council Requirements

The proposed development is to comply with the following CCC documents:

- CCC Civil Works Specification Design Guideline 2018;
- CCC Wyong Development Control Plan 2013.

The CCC – Civil Works Design Guideline outlines the requirements for fractions impervious for the various catchments and subcatchments used in the modelling of the proposed subdivision. Additionally, the Civil Works Design Guideline outlines the various requirements for the design of both the stormwater detention and stormwater quality requirements for the development.

## 3.1 CCC REGIONAL STORMWATER WORKS

During a Pre-DA meeting held at Central Coast Council (Wyong Shire) offices, Council indicated that the subject site, and adjacent catchments, are subject to future stormwater conveyance and quality works under a contributions plan.

A review of the relevant contribution plan indicates that Council is proposing to construct an open channel system along the northern and eastern boundaries of the subject site. This open channel will be capable of conveying the 20% AEP storm event and caters for both the subject site and upstream catchments.

The open channels will discharge into a proposed stilling pond which is located within Stage 2 of the subject site. The stilling pond then spills into a wetland located on the adjacent, Council owned property.

It is noted that a portion of the proposed contributions works severely impact on the EEC community in the south east corner of the site and would likely result in the removal of all vegetation associated with this area.

Despite these works being proposed to cater for the subject site, based upon the proposed grading of the development and the likely impact to the EEC, it is considered that it is more appropriate for the majority of Stage 1 of the development to provide its own stormwater detention and water quality treatment and discharge to Bryant Drive.

The proposed development footprint will impact on the land earmarked for drainage infrastructure under the contributions plan, however design works have been undertaken to provide a new system to provide a similar outcome to the contributions plan. The proposed design is discussed further in Section 8. It is noted, that the proposed solution will not involve land acquisition by Council, thereby removing these costs.

Any potential future works undertaken on the subject site as a part of Stage 2 will consider the contributions plan works in further detail. It is noted that as Stage 1 will cater for itself, the contributions works will likely decrease as the contributing catchment has become smaller.

## 3.1.1 Regional Flooding / Overland Flow Path

The Central Coast Council flood mapping tool outlines that the fringe of the site is impacted by regional flooding, however through additional correspondence with council, it was discovered that in extreme flood events water overtopping Bryant Drive is currently conveyed through the adjoining property, 19-21 Bryant Drive, and onto the subject site.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (Ref: 190557)

## Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting e 2021)

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Council requires that the abovementioned box culvert system is designed to have the capacity to convey these flows in an emergency situation. The conveyance of these flows is discussed further in section 8.

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting e 2021)

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## 4.0 Objectives

## 4.1 CONCEPT STORMWATER DESIGN

A concept stormwater design is required to demonstrate that stormwater runoff can be effectively and efficiently conveyed from the proposed subdivision to the existing downstream infrastructure and receiving waters. The stormwater design is required to consider adjacent properties and ensure no nuisance runoff occurs onto the existing properties.

## 4.2 STORMWATER QUANTITY

The pit and pipe network needs to cater for the minor storm event (5% AEP) without any surcharging within the system and minimising flow widths and ponding. The overland flow paths need to cater for the major storm event (1% AEP) with freeboard to adjacent habitable floor levels.

The purpose of this study is to limit post-development critical peak flows to less than or equal to existing flows all storm events up to and including the 1% AEP.

## 4.3 STORMWATER QUALITY / WATER SENSITIVE URBAN DESIGN

The stormwater drainage system must effectively remove the nutrients and gross pollutants from the site prior to the runoff entering the existing downstream waterways.

The stormwater design for the proposed subdivision is to adopt Water Sensitive Design (WSUD) principles throughout the development to promote sustainable and integrated land and water resource management.

The guidelines for stormwater quality treatment objectives are expressed as mean annual reductions of pollutant loads. The target objectives were obtained from Table 11.1 in the CCC Civil Works Guideline.

Pollutant	Stormwater Treatment Objectives
Suspended Solids	80% retention of the average annual load
Total Phosphorus	45% retention of the average annual load
Total Nitrogen	45% retention of the average annual load
Litter	90% reduction in the post development average annual load for pollutants greater than 5mm in diameter

#### Table 1 – Stormwater Treatment Objectives

## 4.4 FLOODPLAIN MANAGMENT

Floodplain management requirements are outlined in Chapter 3.3 of the Wyong Development Control Plan 2013. Chapter 3.3 documents the minimum requirements for a development to ensure that any issues relating to flooding are adequately addressed. The aim of this report is to show that the proposed development complies with all floodplain management requirements.

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# 4.5 EROSION AND SEDIMENTATION CONTROL

Erosion and sedimentation control measures need to be implemented during any construction activities on the proposed subdivision to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the construction site to downstream drainage.



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# 5.0 Concept Stormwater Design

The proposed stormwater system contains a combination of conventional pit and pipe networks and WSUD elements to effectively convey stormwater runoff to the existing downstream infrastructure.

Flows generated within the carpark areas are proposed to be captured by a series of pits located within the carpark areas and conveyed by an underground pipe system to the existing infrastructure in Bryant Drive. Flows generated on the roofs of the proposed buildings are to be captured by downpipes which will be connected directly to the carpark network.

Based upon the conceptual grading, there will be a number of different discharge locations for the development, each of which is discussed in further detail below.

The concept stormwater design can be seen in Exhibit 2 whilst the proposed catchments can be seen in Exhibit 3.

### 5.1 CATCHMENT 1 – BRYANT DRIVE NORTH

The largest proposed catchment discharges to the existing stormwater system within Bryant Drive at the northern edge of the subject site.

The Bryant Drive North catchment is approximately 1.9ha in area and drains the vast majority of the proposed development. The catchment generally grades in a westerly direction towards Bryant Drive with flows being captured by a series of stormwater pits.

For the purposes of the modelling, Catchment 1 is required to be split into two (2) subcatchments, being Catchment 1A and 1B. All flows generated in Catchment 1A will be conveyed to an underground detention tank before discharging to the existing network in Bryant Drive. Flows generated within Catchment 1B will not be conveyed to the detention tank, with Catchment 1A being over detained to cater for this area.

Flows generated within Catchment 1A will be conveyed through a GPT prior to entering the detention tank, with flows then entering a Jellyfish filter system after leaving the tank. Flows captured in Catchment 1B will be treated by a series of litter baskets contained within the surface inlet pits.

Modelling details can be seen in Sections 6 and 7.

### 5.2 CATCHMENT 2 – BRYANT DRIVE SOUTH

The existing Catchment 2 is much larger than the proposed catchment and therefore the peak post developed flows are less than the peak pre developed flows. Accordingly, it is not required to provide stormwater detention within this catchment.

Stormwater quality within Catchment 2 will be achieved through the use of litter baskets within the surface inlet pits, with catchment 1 being over treated to ensure Council targets are met for Catchment 1 and 2 combined.



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#### 5.3 CATCHMENT 3 – LAKE ROAD

Based upon the existing surface levels and the proposed grading surface, a portion of the proposed carpark located within the 'finger' adjoining Lake Road will drain to the existing network within Lake Road.

Similar to Catchment 2, the existing Catchment 3 is much larger than the proposed catchment and therefore stormwater detention is not required.

Given the size of this catchment, and the fact it will sheet flow to Lake Road, it is considered that water quality treatment is not required.

#### 5.4 CATCHMENT 4 – STAGE 2

Catchment 4 includes a portion of the proposed development as well as a portion of the Stage 2 land. Two (2) outlets will be provided into the stage 2 land, where the flows will be conveyed to existing flow paths.

The first outlet will be located on the alignment of the contributions plan drainage channel and will convey flows from a small portion of the development, along with flows from upstream properties. The design of this system is discussed further in section 8.

The second outlet discharging into Stage 2 will be provided in a similar location to an existing headwall, with all discharge being directed to the existing open channel. Similar to Catchments 2 and 3, the existing catchment is much larger than the post developed catchment and therefore stormwater detention is not required.

As per Catchment 3, this outlet will be catered for in the future regional works and therefore it is considered that the catchment does not need to meet Council's water quality targets. Despite this, in order to ensure gross pollutants are captured prior to entering the downstream waterways, it is proposed to provide litter baskets within all surface inlet pits.

#### 5.5 CATCHMENT 5 – EEC

As mentioned in Section 2.0, a cluster of EEC exists in the south eastern corner of the subject site. Whilst no works within Stage 1 of the development will have a direct impact on the EEC, the development will alter the existing flow regime draining to this area.

In order to ensure the existing flow regime is followed as closely as possible, the site has been graded to direct a similar volume of flows to the EEC in developed conditions. Flows will be discharged via a stabilised headwall before being trapped by a large level spreader which will spread the flows out to mimic the existing flow conditions.

A gravel base will be provided on the level spreader to allow for infiltration of flows to ensure groundwater flows are recharged. It is noted that the existing site soils are clay and that infiltration is unlikely to occur in meaningful amounts during both existing and developed conditions.

A Jellyfish filter system will be provided prior to this outlet to ensure that water quality targets are met for any stormwater being conveyed to the EEC.

Modelling of the EEC flows can be seen in Section 7.4 whilst the proposed outlet configuration can be seen in Exhibit 4.

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (Ref: 190557)

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# 6.0 Stormwater Quantity

The proposed development is required to limit post-development critical peak flows to less than or equal to existing flows for all design storms for all storm events up to and including the 1% AEP.

### 6.1 MODELLING

The quantity of required storage to reduce the post developed discharge from the site to less than or equal to the existing discharge for various storm events was analysed using the 'DRAINS' software, which uses the runoff routing method.

#### 6.1.1 Catchment Data

Catchment data for the existing site was based upon the detail survey and current site conditions, whilst the data for the developed site was based upon council's guidelines and the proposed development layout.

The pre development catchment boundaries can be seen in Exhibit 1, whilst the catchment parameters can be seen in Table 2 below.

Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)	
Catchment 1	1.05	80	0.84	0.21	
Catchment 2	0.44	90	0.40	0.04	
Catchment 3	0.11	10	0.01	0.1	
Catchment 4	2.16	25	0.54	1.62	
Catchment 5	1.69	10	0.17	1.52	
Total	5.45	-	1.96	3.49	

#### Table 2 – Pre Development Catchments

The post development catchment boundaries can be seen in Exhibit 2, whilst the catchment parameters can be seen in Table 3 below.

### Table 3 – Post Development Catchment and Subcatchment Areas

Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)
Catchment 1A	1.57	90	1.41	0.16
Catchment 1B*	0.09	90	0.08	0.01
Catchment 2	0.43	95	0.41	0.02
Catchment 3	0.06	90	0.05	0.01
Catchment 4	2.08	50	1.04	1.04
Catchment 5	1.22	45	0.55	0.67
Total	5.59	-	3.47	2.12

\* Catchment 1B outlets to the same location as 1A, however does not enter the OSD tank.

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#### 6.1.2 Model Parameters and Rainfall Data

As per the new CCC civil design guideline, model parameters were based upon AR&R and experience on similar sites. The following parameters were adopted for the DRAINS model:

- Pervious depression storage = 5mm;
- Impervious depression storage = 1mm;
- Soil Type = 3;
- Antecedent Moisture Condition = 3.

Rainfall data for the site was sourced from the Bureau of Meteorology whilst times of concentration for each catchment were based upon the kinematic wave equation. A screenshot of the DRAINS model can be seen in **Appendix A**.

6.2 RESULTS

In accordance with Council's requirements, modelling was undertaken to demonstrate compliance of post development flows being less than or equal to the pre development flows.

The results of the DRAINS modelling can be seen in Table 4 below.

ARI Event (Year)	Pre Development Flow (m <sup>3</sup> /s)	Post Development Flow Without Detention (m <sup>3</sup> /s)	Post Development Flow With Detention (m <sup>3</sup> /s)
		Catchment 1	
20%	0.42	0.67	0.41
10%	0.47	0.76	0.46
5%	0.54	0.87	0.51
2%	0.59	0.94	0.56
1%	0.66	1.04	0.65
		Catchment 2	
20%	0.18	0.17	n/a
10%	0.20	0.20	n/a
5%	0.23	0.23	n/a
2%	0.25	0.25	n/a
1%	0.28	0.28	n/a
		Catchment 3	
20%	0.04	0.02	n/a
10%	0.05	0.03	n/a
5%	0.05	0.03	n/a
2%	0.06	0.03	n/a
1%	0.07	0.04	n/a
		Catchment 4	
20%	0.78	0.78	n/a
10%	0.89	0.89	n/a
5%	1.04	1.04	n/a
2%	1.15	1.13	n/a
1%	1.29	1.27	n/a

#### Table 4 – DRAINS Results

Water Cycle Management Plan

Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

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	Catchment 5					
20%	0.56	0.44	n/a			
10%	0.64	0.50	n/a			
5%	0.76	0.58	n/a			
2%	0.82	0.62	n/a			
1%	0.92	0.70	n/a			

As it can be seen from Table 4 above, the peak post developed flows are less than or equal to the peak pre developed flows without the provision of stormwater detention for Catchments 2-5. Catchment 1 however, requires a stormwater detention tank in order adequately attenuate the peak flows. The tank parameters can be seen in Table 5 below.

#### Table 5 - Tank Parameters

Tank Parameter	Detail
	0.15m H x 1.40m W cut out – IL RL 0m*
Outlet Controls	Weir (top of control pit wall) – 0.5m length - IL RL 0.85m
Tank Surface Area	305m <sup>2</sup>
Tank Depth	1.0m
Max Water Depth (1% AEP Event)	1.0m
Total Storage at 1% AEP Stage	305m³

\* Levels are relative to the bottom of the tank. R.L's to AHD to be provided at CC stage.

It is anticipated that the proposed tank will be constructed as a concrete structure, however this is to be confirmed at the CC stage of the project.



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# 7.0 Water Quality/Water Sensitive Urban Design

The proposed stormwater system, as detailed in Section 5.0, uses a combination of pit and pipe networks and water sensitive urban design elements to convey stormwater runoff from the site. It is intended to use a combination of treatment devices within the drainage system to remove nutrients and sediments from the stormwater prior to the runoff leaving the site.

# 7.1 TREATMENT DEVICES

The stormwater design for the proposed subdivision proposes to use a combination of conveyance, and end of line controls to treat the stormwater runoff from the site. The treatment train will be modelled for demonstration of compliance with CCC's key objectives.

#### <u>Conveyance</u>

The low flows will be conveyed through a GPT which will be the conveyance control used to treat the stormwater. The GPT is the primary pollution control device in the treatment train after the stormwater is conveyed via the pit and pipe network. The GPT will primarily remove litter, large debris and the nutrients attached to particles. The GPT will be in the form of a Humegard (or approved equivalent) and litter baskets.

### End of Line

It is proposed to provide a stormwater 360 "Jellyfish" filter device at the end of the treatment train to provide tertiary treatment to flows prior to them leaving the site.

#### 7.2 MODELLING

The software used for the water quality modelling is MUSIC. This program is well regarded as industry best practice for analysis of the effectiveness of treatment mechanisms on the quality of stormwater runoff from a development site of this size.

The MUSIC model parameters were adopted using the MUSIC-LINK feature, whilst treatment node parameters were based upon a combination of Council's guidelines and information provided by individual device providers.

The MUSIC-LINK report can be found in **Appendix B**.

#### 7.2.1 Catchment Data

The MUSIC catchments were based upon the proposed architectural layout and grading. A summary of the catchment parameters can be seen in Table 6 overleaf.



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Table 6 – Post D	Table 6 – Post Development Catchment and Subcatchment Areas				
Catchment	Sub Catchment	Total Area (ha)	% Impervious	Impervious Area (ha)	Pervious Area (ha)
	1 A Roof	0.26	100	0.26	0.00
Catchment 1	1A Road	1.31	90	1.18	0.13
	1B Road	0.09	90	0.08	0.01
Catchment 2	Roof	0.17	100	0.17	0.00
Calchment z	Road	0.26	95	0.25	0.01
Catabra ant 2	Roof	-	-	-	-
Catchment 3	Road	-	-	-	-
Catabraant (	Roof	0.58	100	0.58	0.00
Catchment 4	Road	0.39	85	0.39	0.06
Castalana and C	Roof	0.18	100	0.18	0.00
Catchment 5	Road	0.18	85	0.15	0.03

# 7.3 RESULTS

In accordance with Council requirements, modelling has been undertaken to demonstrate compliance with water quality objectives for stormwater runoff from the proposed development prior to discharge of stormwater into the downstream waterways.

As discussed in Section 5.0, Catchments 3, 4 and 5 are to be catered for in the future regional Council works and therefore they are not required to meet Council's water quality targets. Litter baskets will be provided within all pits within these catchments to ensure no gross pollutants enter the downstream waterways.

Catchment 1 has been over treated to cater for Catchment 2 which will be provided with litter baskets only.

The results of the modelling for the combined Catchments 1 and 2 are shown in Table 7 below.

	Catchments 1 & 2				
Pollutant	Without Treatment (kg/yr)	With Treatment (kg/yr)	Modelled Reduction (%)	Target Reduction (%)	
TSS	6660	1060	84.1	80	
TP	11.8	5.15	56.4	45	
TN	56.2	30.3	46.1	45	
GP	589	6.12	99	90	

#### Table 7 – Pollutant Loads and Reductions

From Table 7, it can be seen that the MUSIC modelling indicates that the proposed treatment train complies with council's water quality targets. A screenshot of the MUSIC model can be seen in **Appendix B**.



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#### 7.4 EEC FLOW REGIME

As mentioned in Sections 2.0 and 5.5, a cluster of EEC exists in the south eastern corner of the subject site. Whilst no works within Stage 1 of the development will have a direct impact on the EEC, the development will alter the existing flow regime draining to this area.

To ensure the development does not have an adverse impact on the area of EEC, MUSIC modelling was undertaken to determine the total flows draining to the EEC area in both the pre developed and post developed scenarios. The results of the modelling can be seen in **Table 8** below.

#### Table 8 - EEC Flows

Catchment	Total Area (ha)	% Impervious	Flow (ML/yr)
Predeveloped	1.2	10	5.22
Post Developed	0.71	50	5.40

It can be seen from Table 8 above that the post developed flows discharging to the EEC area closely mimic the pre developed flows.

In addition to maintaining flows to the EEC, further MUSIC modelling has been undertaken to ensure that flows discharging to this area also meet Council's water quality targets. As mentioned in section 5.5 it is proposed to provide a Jellyfish filter system prior to flows discharging. The results of the MUSIC modelling can be seen in **Table 9** below.

	Catchments 5				
Pollutant	Without Treatment (kg/yr)	With Treatment (kg/yr)	Modelled Reduction (%)	Target Reduction (%)	
TSS	637	42.9	93.3	80	
TP	1.31	0.52	60.2	45	
TN	8.75	4.49	48.7	45	
GP	96.3	2.97	96.9	90	

#### Table 9 – Pollutant Loads and Reductions

A catchment plan showing the proposed catchments to the EEC area can be seen in **Exhibit 3** along with the MUSIC modelling results.

Further information surrounding the ECC area is contained within the Ecology report, prepared by AEP.



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# 8.0 Regional Stormwater Conveyance

As mentioned in Section 3.1, the subject site and adjacent catchments are subject to future stormwater conveyance and quality works under Wyong district Contributions Plan No.1. Whilst the water quality control measures proposed under the contributions plan are not impacted by the development, the stormwater conveyance channel along the northern boundary of the subject site, proposed under the plan, is proposed to be varied as part of the development layout.

# 8.1 CONTRIBUTIONS PLAN

A review of the contribution plan No.1 indicates that Council is proposing to construct an open channel system along the northern and eastern boundaries of the subject site. This open channel will be capable of conveying the 20% AEP storm event and caters for both the subject site and upstream catchments.

To further understand the intent of the proposed conveyance channels, a review of the underlying stormwater report used to inform the contributions plan was undertaken. The report, prepared by Webb McKeown in 2000, outlines a number of constraints, and subsequent options for the conveyance and treatment of stormwater in the Tuggerah industrial area.

In regards to the channel proposed along the northern boundary, the Webb McKeown report outlines the provision of a concrete based channel with grass lined batters capable of conveying the 20% AEP flows. The channel is to be within a 10m – 20m strip of land to be dedicated to Council. The catchment for the proposed channel is notated as "Building Pad 2" which encompasses part of the subject site and a number of adjoining properties.

It is noted that the channel is proposed to be provided in between future building pads 1 & 2, both of which are to be filled up to approximately 1.5m above the invert of the channel. Whilst the report outlines that the channel has been designed to convey the 20% AEP flows (with the provision of 300mm freeboard) it is noted that the report does not indicate how flows in excess of the 20% AEP event are conveyed. Despite this, considering the channel is cut in between the proposed building pads, it is expected that flows in excess of the 20% AEP will be conveyed between the building pads until the capacity of this cross section is breached and flows spill on to the building pads themselves. The contributing catchments and channel design can be seen in **Exhibit 5**.

An important item that is not considered within the existing report, is how to deal with the complications of staged construction of the future building pads. It is noted that should the channel be constructed as part of this development, but prior to the filling of the properties fronting Lake Road, the channel will be unable to convey the flows generated by these properties in the interim.

To enable the safe conveyance of flows up to, and including, the 1% AEP event without impacting on the building pads and to enable the construction of a system capable of meeting the intent of the contributions plan whilst also being sympathetic to both the proposed and future development, an alternate design has been prepared.



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### 8.2 REGIONAL FLOODING / OVERLAND FLOW PATH

As mentioned in section 3.1.1, council requires that the alternate box culvert design has the capacity to convey overland flow overtopping Bryant Drive in extreme flood events. Council requires that the culvert inlet lines up with the existing overland flow path along the southern boundary of 19 - 21 Bryant Drive and that the inlet is subject to a 25% blockage factor.

A review of the Flood Impact Assessment Report, prepared by SKM for the Pacific Highway and Wyong Road intersection upgrade, indicates that the overland flow path currently conveys water through the carpark on the southern edge of 19 - 21 Bryant Drive in the 1 in 100 year and greater flood events. An extract of the report, showing the 1 in 100-year flood impacts can be seen in **Figure 2** below.



Figure 2. Extract of RMS Flood Study

The proposed culvert design outlined within section 8.3 will ensure that the abovementioned council requirements are complied with.

#### 8.3 ALTERNATE DESIGN

The alternate design, proposed to be constructed with this development, aims to not only meet the intent of the contributions plan, but provide a safe and efficient stormwater system capable of conveying flows up to the 1% AEP whilst also being sympathetic to both the proposed development and existing adjoining properties.

As can be seen in **Exhibit 6**, it is proposed to provide a box culvert system, underneath the proposed access road, in lieu of the open channel proposed in the contributions plan. The culvert will be designed to convey the 1% AEP, including a 50% blockage on all pits and pipes and provide connections to the adjoining properties. The culvert will also be designed to ensure it has capacity to take any flows that enter the site from 19 - 21 Bryant Drive in an extreme flood event. The following sections of the report outline the design of the proposed box culvert.

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Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref: 190557*)

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#### 8.3.1 Culvert Conveyance

To determine the peak discharge required to be conveyed by the culvert, the contributing catchment to the culvert based upon both the ultimate scenario (Lake Road and 19 - 21 Bryant Drive developed) and interim scenario (subject site developed and water overtopping Bryant Drive) were compared.

The contributing catchments can be seen in **Exhibit 6** & **Exhibit 8** whilst the catchment parameters can be seen in **Tables 9 & 10** below.

Catchment	Total Area (ha)	% Impervious	Time of Concentration (min)
Development	0.21	90	5
Bryant Drive	0.80	90	5
Lake Road	0.46	90	5

Table 9. Contributing Catchment Parameters – Ultimate Scenario

#### Table 10. Contributing Catchment Parameters – Interim Scenario

Catchment	Total Area (ha)	% Impervious	Time of Concentration (min)
Catchment 1A	1.57	90	5
Catchment 1B	0.09	90	5
Catchment 2	0.43	95	5
Bryant Drive	1.82	90	8

Using the abovementioned parameters, a rational method calculation was undertaken to determine the 1% AEP flow required to be conveyed by the proposed box culvert in the ultimate scenario.

To account for the size of the Bryant Drive catchment, the proposed OSD tank and associated differences in hydrograph peaks a DRAINS model was prepared to determine the peak flow in interim scenario.

The results of both analyses' can be seen in Table 11 below.

#### Table 11. Rational Method Calculation

Catchment	Flow (m <sup>3</sup> /s)
Ultimate Scenario	1.03
Interim Scenario	1.84

It can be seen from **Table 11** above that the critical peak flow occurs during the interim scenario when flows overtop Bryant Drive. It is noted that the interim peak flow calculated is the flow approaching the pit in the low point of Bryant Drive. This pit has a 450mm diameter pipe outlet at 0.5% which will be capable of conveying a portion of the flow. Based upon the Colebrook White pipe capacity charts, it has been adopted that this pipe will convey approximately 0.23 m<sup>3</sup>/s. The design flow adopted for the culvert sizing is therefore 1.61 m<sup>3</sup>/s. A copy of the Colebrook White Chart can be seen in **Appendix C**.



Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref*: 190557)

#### Attachment 2

LPP Report & All Attachment adwine 2021

As required by council, a blockage factor of 25% was applied to the culvert inlet. The culvert sizing was undertaken using the Concrete Pipe Association of Australia (CPAA) sizing charts assuming an inlet control with 0.5m ponding at the inlet. A summary of the sizing can be seen in **Table 12** below, whilst a copy of the CPAA chart can be seen in **Appendix C**.

### Table 12. Culvert Sizing

Ponding Depth (m)	Culvert Width (m)	Culvert Depth (m)	Capacity (m³/s)
0.5	2.7	0.6	1.61
0.38	2.1 (x2)	0.6	1.61

It can be seen from **Table 12** above that a  $2.7m \times 0.6m$  box culvert would be required to convey the flows without the provision of the blockage, whilst including the 20% blockage twin  $2.1m \times 0.6m$  box culverts would be required. Accordingly, it is proposed to provide twin  $2.1m \times 0.6m$  box culverts.

It is noted that the CPAA sizing was checked against an orifice calculation and the size was confirmed as being adequate.

#### 8.3.2 Culvert Levels and Flows

To ensure that 19-21 Bryant Drive can drain in the interim scenario, the culvert inlet is to be provided at the base of the proposed retaining wall. Given the existing levels on site, this results in a maximum achievable longitudinal grade of 0.3% for the proposed box culvert.

To ensure the culvert capacity, a Manning's calculation as undertaken adopting a 4.2m wide x 0.6m high box culvert with a Manning's 'n' of 0.013 and longitudinal grade of 0.3%. this calculation resulted in a flow conveyance of approximately 6.9 m<sup>3</sup>/s, well in excess of the required flow.

A review of the catchments draining to the culvert in the interim scenario (excluding overflow from Bryant Drive) reveals that a peak flow of 0.7 m<sup>3</sup>/s flow velocity of 1m/s would be conveyed within the culvert in the minor design storm event (20-year ARI). A Manning's calculation, adopting an 'N' of 0.012 and a longitudinal grade of 0.3%, reveals that the water level within the culvert would be 140mm deep which results in a velocity of over 1 m/s. This is important as a flow velocity of 1m/s will ensure that the build-up of sediment and other debris is minimised, lowering the risk of blockages and minimising maintenance of the system.

It is noted that the design flows entering the culvert will only increase in the ultimate scenario resulting in the self-cleansing velocity being achieved more frequently.

### 8.3.3 Connections to Adjoining Properties

As mentioned in Section 8.1, consideration is needed to be given to the staged construction of the proposed building pads and how this will impact on the proposed stormwater conveyance. It is noted that this was not considered in the Webb McKeown report and, based upon the channel design, it is considered that the adjoining properties would not be able to drain to the channel without first being filled.

Based upon the Central Coast Council upgrade of Lake Road, the majority of the lots fronting Lake Road currently drain to Lake Road, with only a small portion at the rear of the lots currently draining via sheet flow into the subject site. Given the small size of the catchments, and their largely pervious nature, it is considered that the flow generated



Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah (*Ref: 190557*)

would be minimal and would likely pond in the backyards of these properties in the current situation. As such, it is considered that a stormwater connection to these properties, in the interim scenario, is not required.

To enable future connection, for these same properties once they are filled during development, it is proposed to provide piped connections from the box culvert to the boundary. These pipes will be capped and only used once the adjoining sites have been filled. It is noted that, as it is unknown if the adjoining properties will be developed individually, a pipe connection will be provided to each individual lot and these connections will be designed to convey the 1% AEP.

Similar to the above, a piped connection will be provided to Lot 141 DP1007716 to ensure it can continue to drain during both the interim and future scenarios. In this case, the pipe connection will be used during both scenarios. It is noted that Lot 13 DP 5536 also adjoins the site, however this lot is provided with a drainage connection to Bryant Drive and therefore no connection is required.

A typical detail of the proposed connections can be seen in **Exhibit 6**.

### 8.3.4 Council Concerns

Previous correspondence has been had with Central Coast Council regarding the proposed solution and a number of concerns were raised. These concerns included:

- Flow conveyance Council is concerned that the channel system was designed to convey the 20% AEP with the proposed solution being able to convey the 1% AEP
  - As mentioned earlier in the report, based upon the channel and building pad design, flows larger than the 20% AEP would be conveyed between the building pads until the capacity of the cross section is exceeded and the flows spill onto the building pad. As such it is considered that ultimately the 1% AEP flows would find their way to the same location and the proposed solution is preferred due to the fact it would not allow flows to spill onto the building pads, which has the potential to cause damage to private property;
- Maintenance Council is concerned that maintenance of the system would be difficult;
  - The culvert system could be kept as private system to be maintained by the owner of the site;
  - Maintenance access pits would be provided to the system in accordance with Council standards;
- Blockages / Surcharge / Larger Storm events Council is concerned about what may happen in larger events and if the system is to block;
  - As mentioned in the report, despite the extremely low risk of blockage due to the size and nature of the upstream catchment, a 25% blockage factor has been taken into account for the design inlet;
  - Blockage factors of 50% will be applied to all internal pits as requested by council;
  - Given the limited capacity of the channel system it is considered that the proposed box culverts provide a much better outcome during larger storm events.
- Location of culvert inlet;
  - The culvert inlet has been located to coincide with the overland flow path through the adjoining property.



Attachment 2

Water Cycle Management Plan Proposed Bulky Goods Development – Bryant Drive, Tuggerah

<sup>(</sup>Ref: 190557)

### Attachment 2

LPP Report & All Attachment COM ne 2021

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# 9.0 Floodplain Management

A review of Council's flooding maps indicate that portions of the site are flood affected in both the 1% AEP and PMF events. A copy of Council's flooding map can be seen in Figure 2 below.



Figure 2: Site Flooding (CCC's Flooding Maps)

As the site is flood affected, a flood information application was submitted to Central Coast Council. The response indicates that the 1% AEP flood level within the site is R.L 3.8m with the minimum habitable floor level being R.L 4.3m. A copy of the flood information application response can be seen in **Appendix D**.

A review of the site survey indicates that the majority of the existing site is currently well above the 1% AEP flood level with the exception of the small open area associated with the previous residential dwelling. Council indicated the following at the pre-da meeting:

- Council has no objection to filling within the site to bring the low-lying area above the 1% AEP flood level;
- The proposed carpark level could be a maximum of 300mm below the 1% AEP level if required.

At the time of writing this report, the formal Pre-DA meeting minutes were not available.

Given the majority of the site is currently above the 1% AEP flood level and the proposed grading is to lift the site further, it is considered that the proposed development will not be impacted by the regional flood levels and therefore complies with Council's floodplain management guideline.



### Attachment 2

LPP Report & All Attachment add ne 2021

# 10.0 Erosion and Sedimentation Control

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Erosion and sedimentation control measures need to be implemented during any construction on the proposed subdivision to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the construction site to downstream waterways.

An Erosion and Sedimentation Control Plan can be seen in **Exhibit 7**. The attached Erosion and Sedimentation Control Plan is only an indicative plan as another Erosion and Sedimentation Control Plan will be provided as part of the Construction Certificate drawings and a further plan will be provided by the contractor before construction takes place.

It is expected that particular care will need to be taken when preparing the erosion and sediment control plan to ensure no adverse effects on the EEC.



### Attachment 2

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# 11.0 Conclusion

To comply with Central Coast Council stormwater management guidelines, the stormwater system for the proposed development will consist of a series of stormwater pits and pipes, an underground detention tank, gross pollutant traps and a Jellyfish filter system.

Consideration has been given to an existing area of EEC, with the site being graded to ensure the existing flow regime to the area is followed as closely as possible.

Consideration was given to the provision of Council's channelized stormwater conveyance system outlined in the contributions plan. An alternate design of a box culvert system was proposed in lieu of the channel to provide a design that was sympathetic to both the intent of the contributions plan and the proposed development.

It has been determined that the proposed development will not be adversely affected by regional flooding.

Water conservation has been considered during the design and modelling of the proposed development so as to incorporate water retention or reuse measures to reduce the demand on potable water. Furthermore, the incorporation of water retention devices has reduced the volume of stormwater runoff from the developed site.

An Erosion and Sedimentation Control Plan has also been prepared for construction of the proposed development also complying with Council's requirements.



Attachment 2

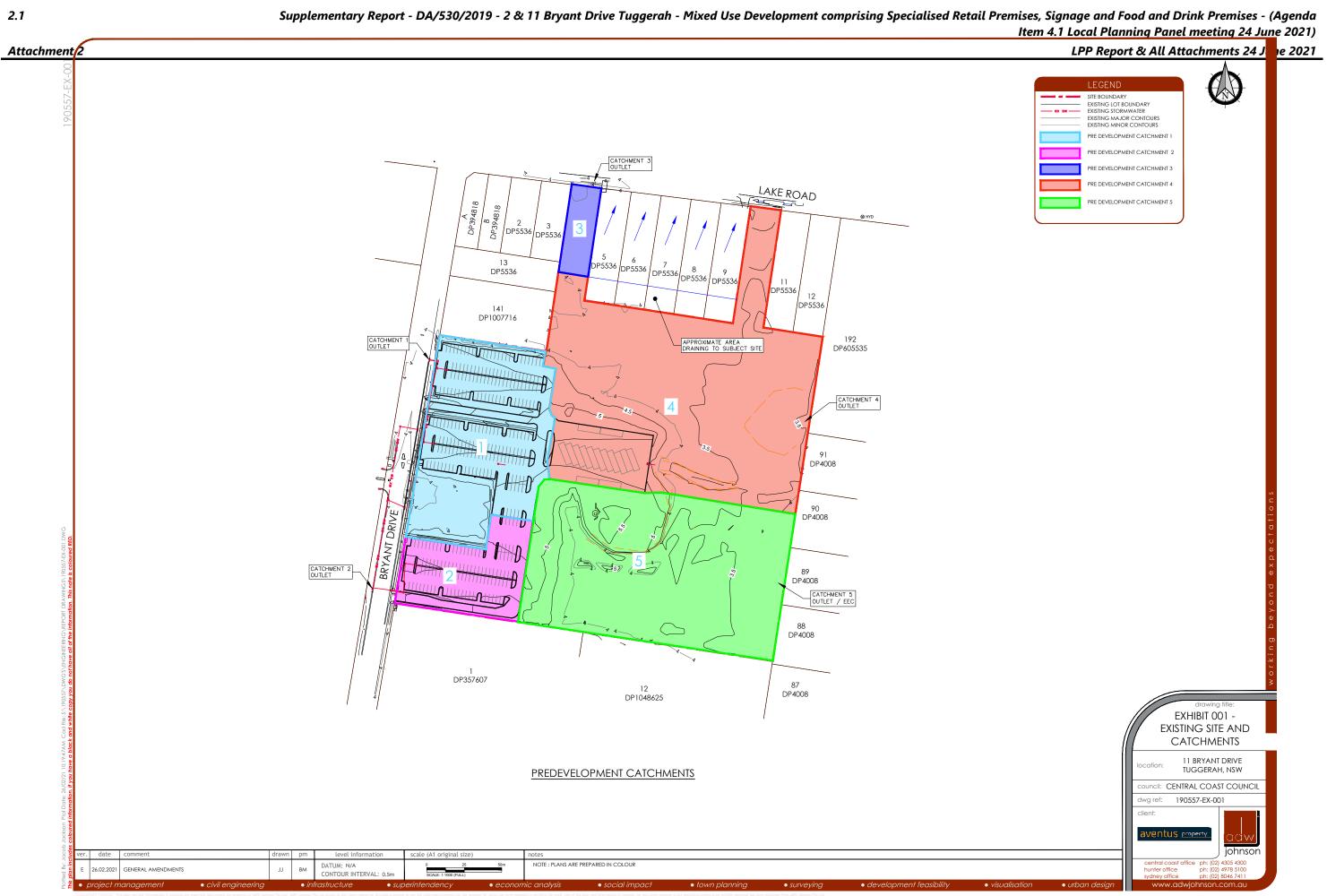
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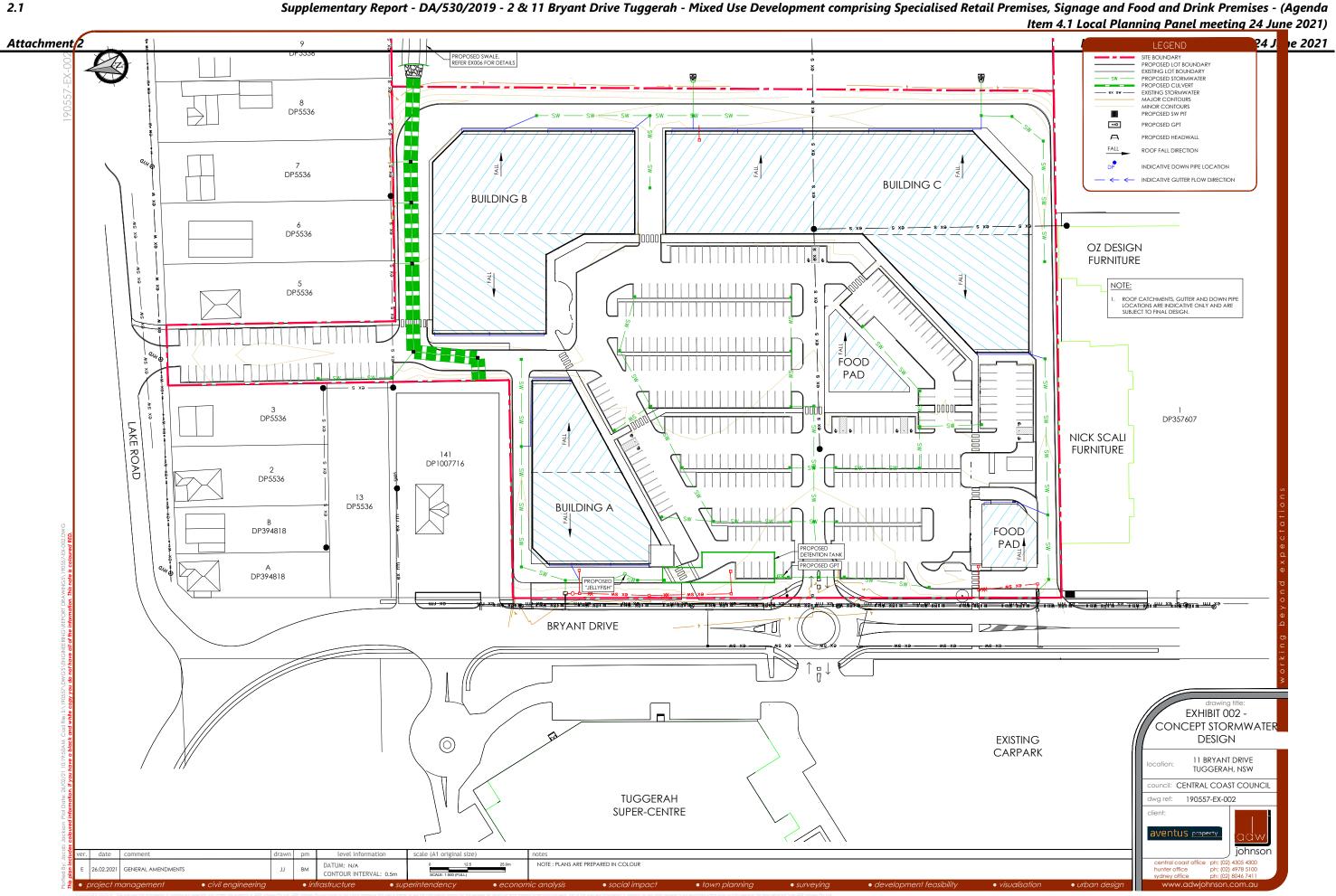
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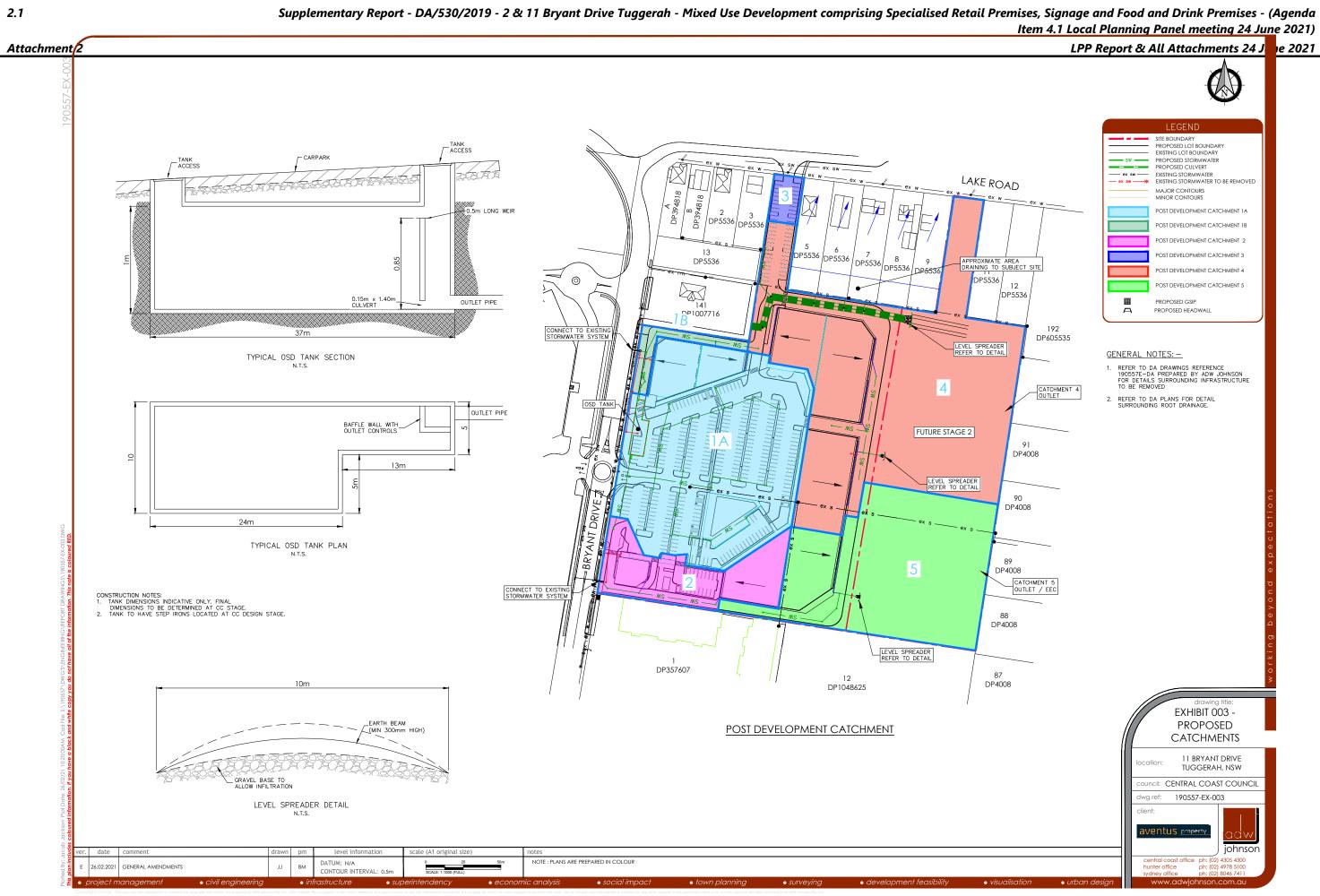
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Exhi	ibits
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EXHIBIT 001	EXISTING SITE AND CATCHMENTS
EXHIBIT 002	CONCEPT STORMWATER DESIGN
EXHIBIT 003	PROPOSED CATCHMENTS
EXHIBIT 004	EEC FLOWS
EXHIBIT 005	COUNCIL PROPOSED CONTRIBUTION PLAN WORKS
EXHIBIT 006	ALTERNATE STORMWATER CONTIRBUTION WORKS
EXHIBIT 007	EROSION & SEDIMENTATION CONTROL PLAN
EXHIBIT 008	PROPOSED CULVERT CATCHMENT PLAN

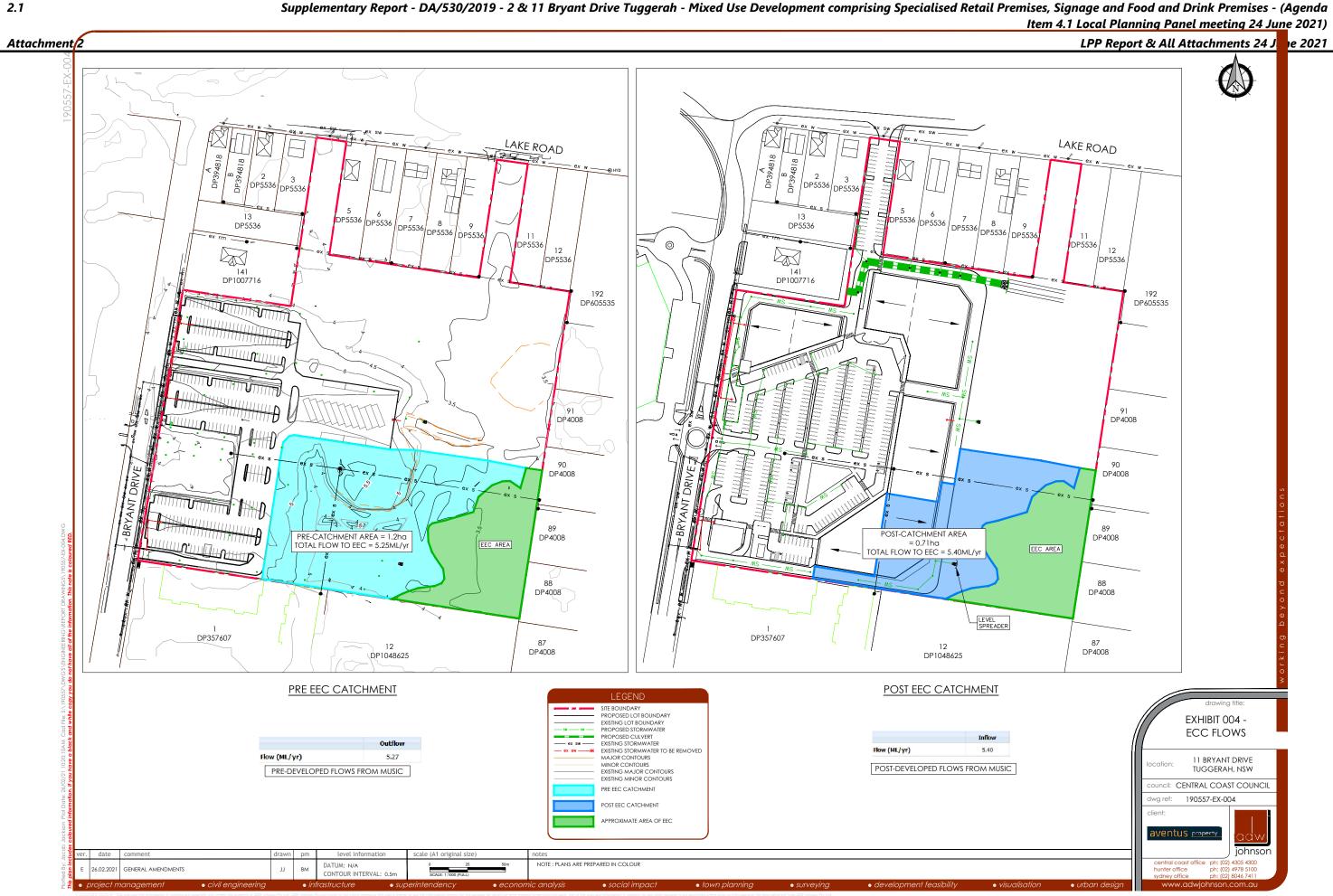


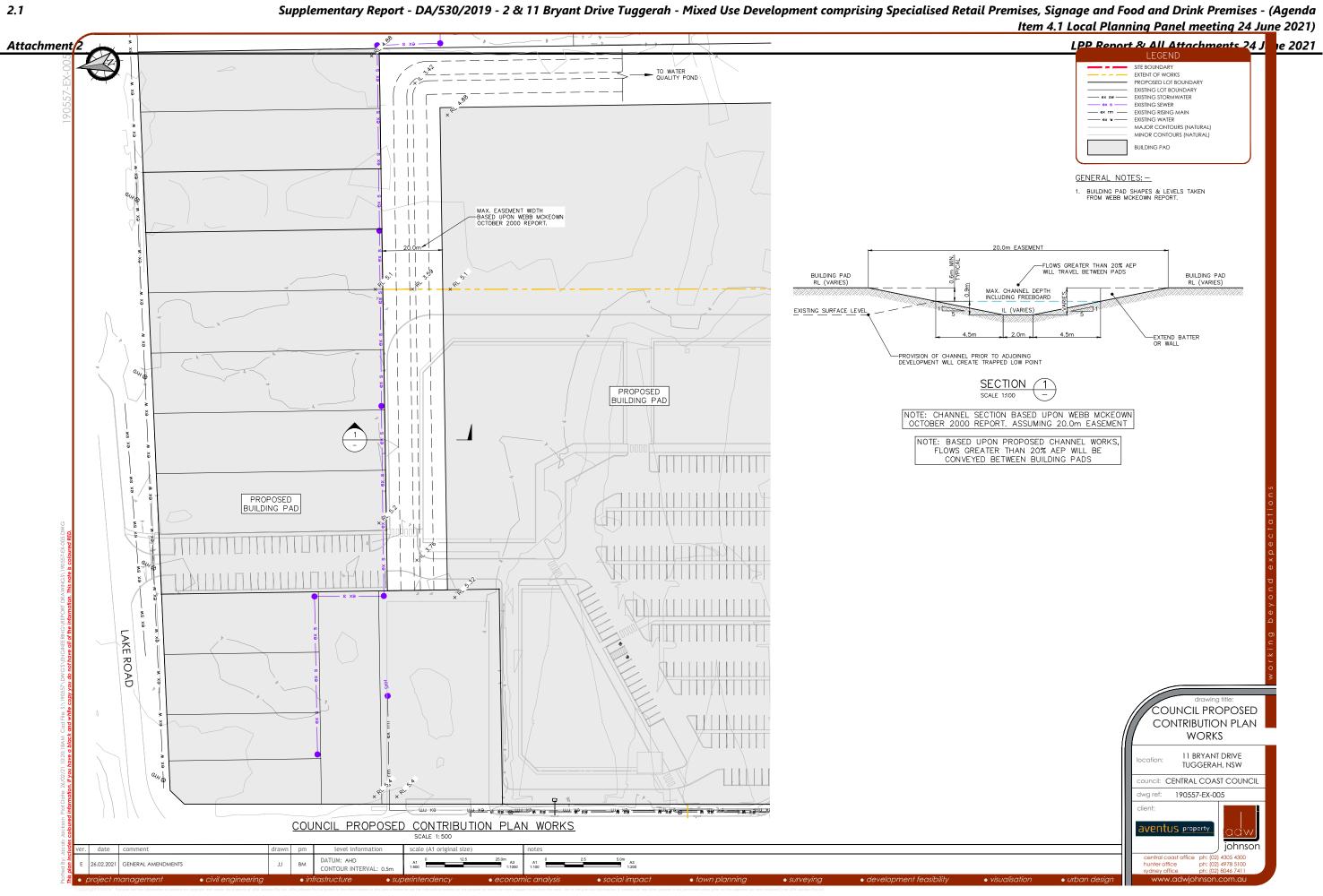


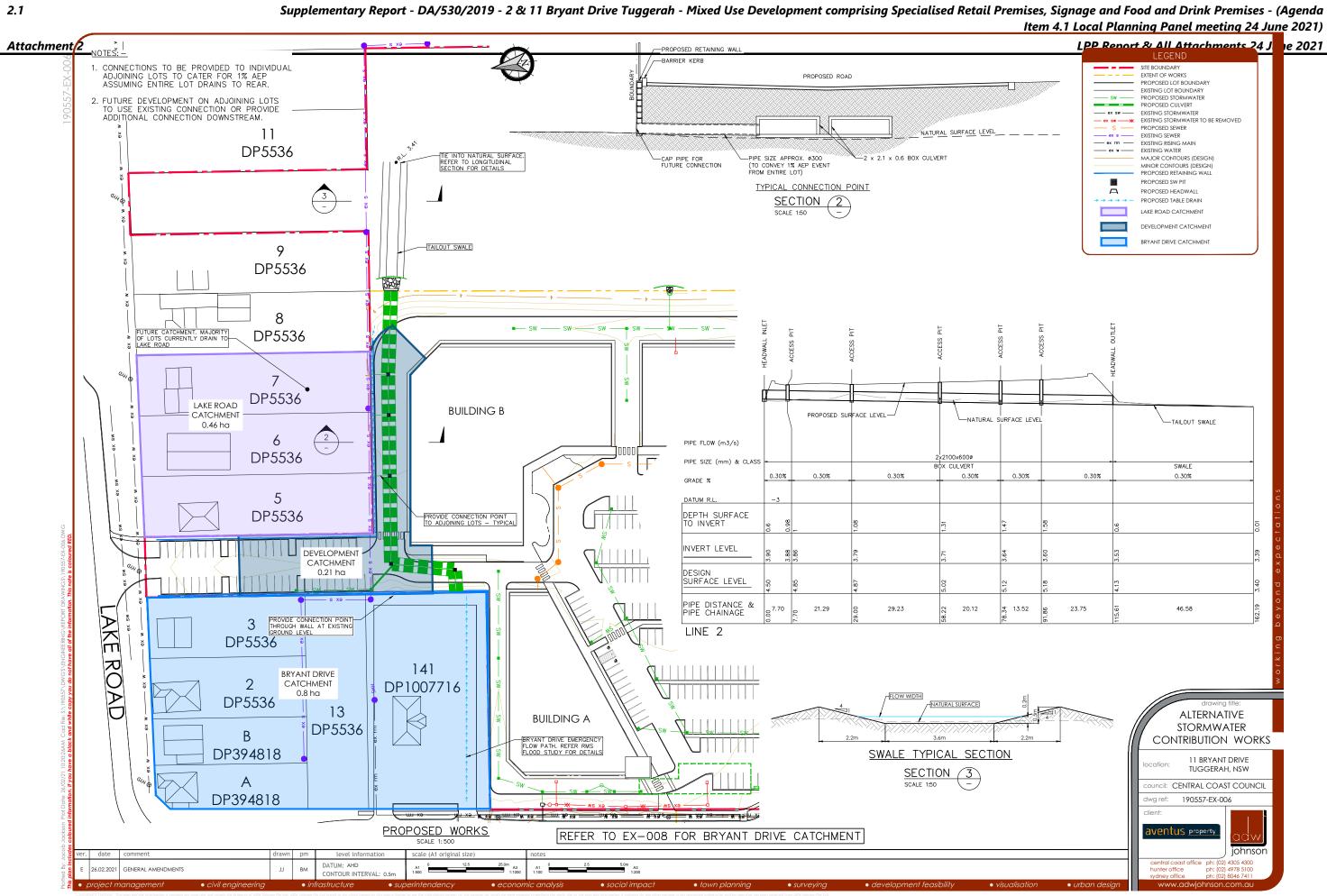


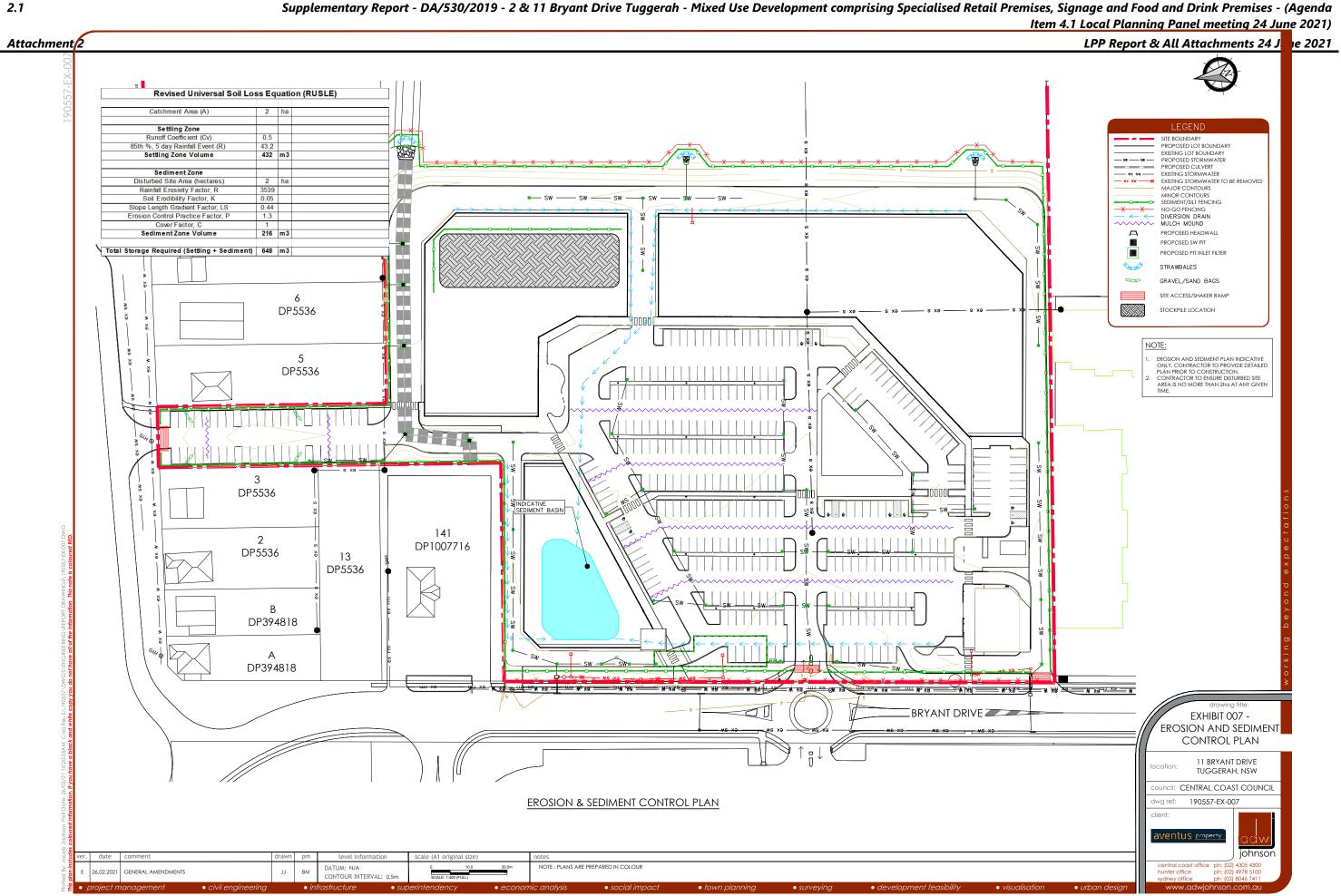


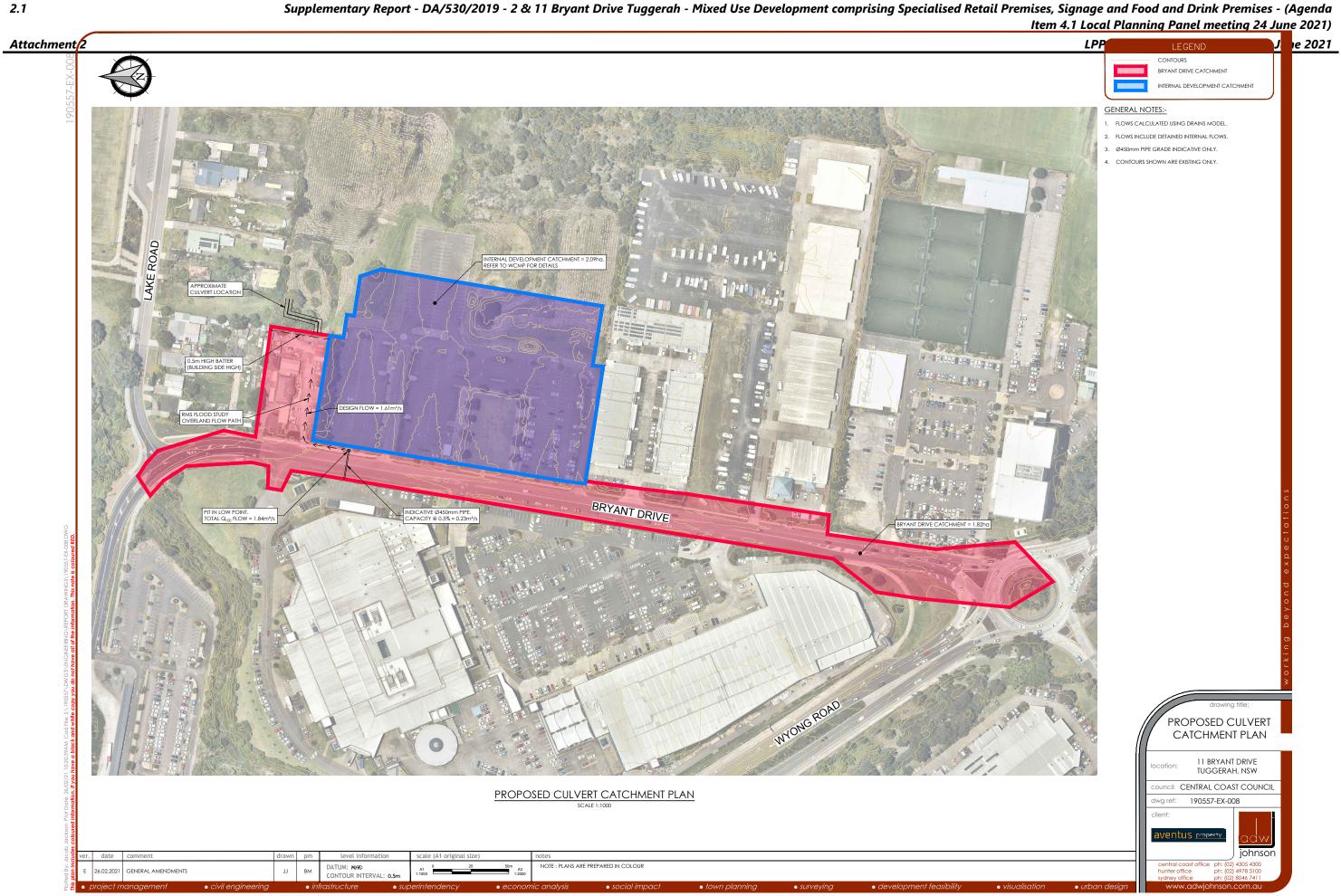










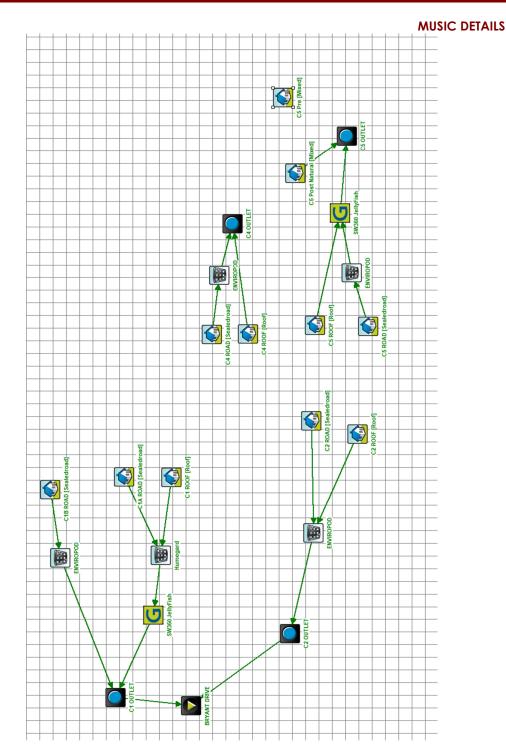


2.1 Attachment 2	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting LPP Report & All Attachmentary ne 2021	
Attachiment 2		johnson
		Appendix A
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# Appendix B



Attachment 2

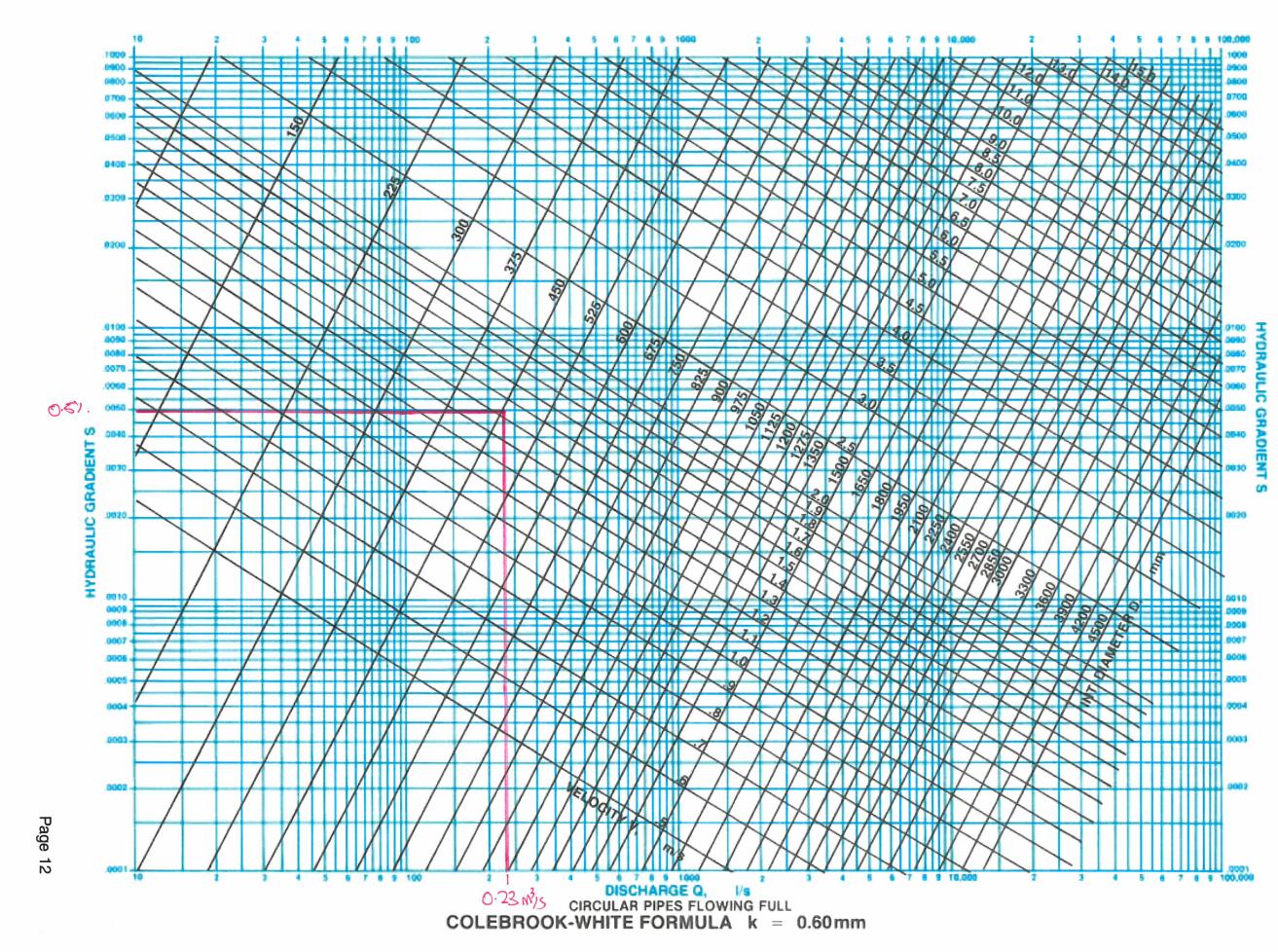
Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
Development comprising Specialised Retail Premises, Signage and Food and Drink
Premises - (Agenda Item 4.1 Local Planning Panel meeting
LPP Report & All Attachment
johnson

# Appendix C

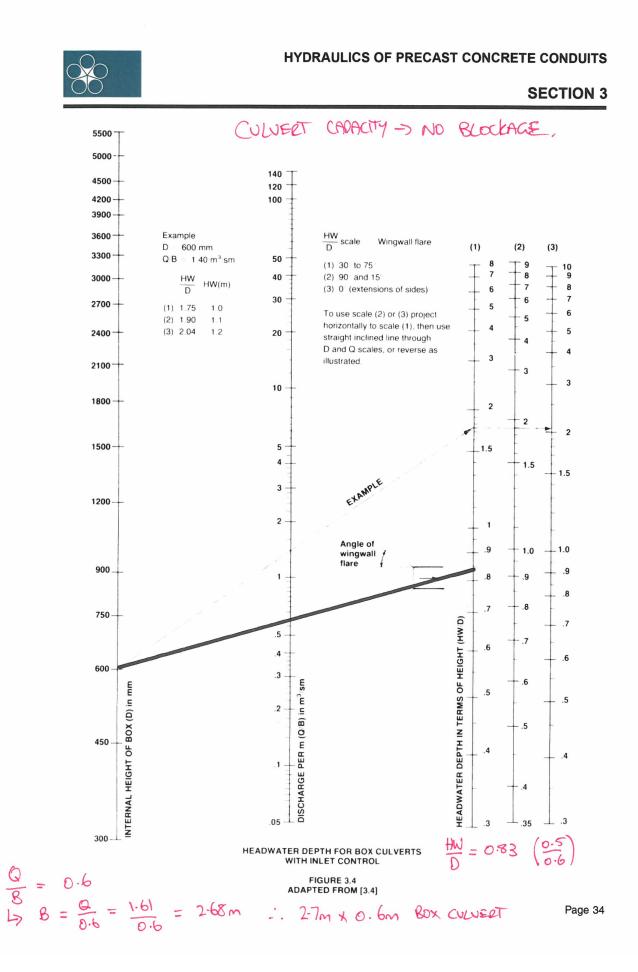
**CPAA INFORMATION** 

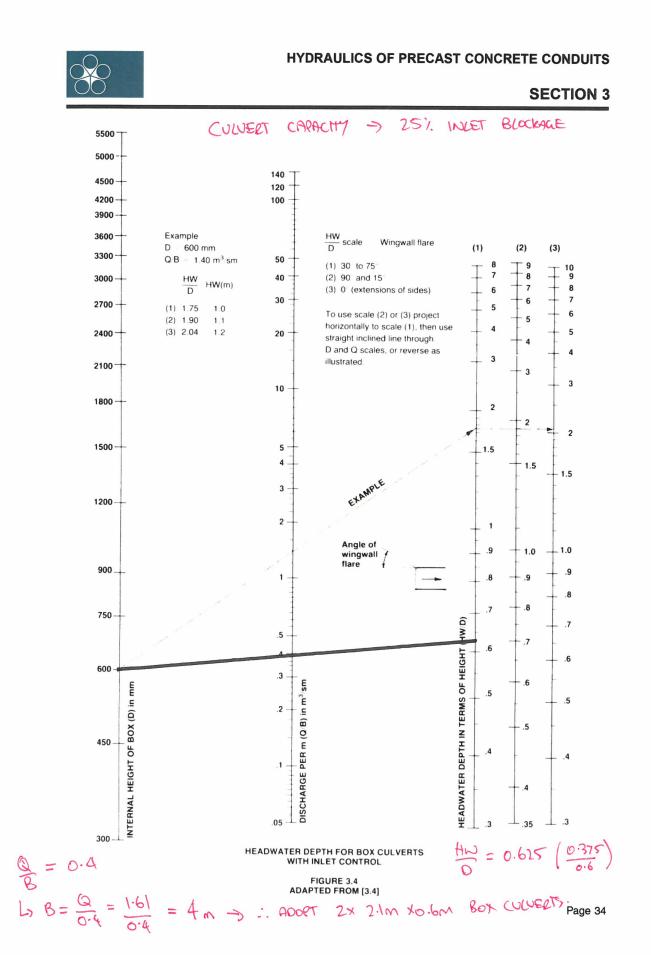
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2.1	Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use
	Development comprising Specialised Retail Premises, Signage and Food and Drink
	Premises - (Agenda Item 4.1 Local Planning Panel meeting
Attachment 2	LPP Report & All Attachment acw ne 2021
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# Appendix D

FLOOD INFORMATION APPLICATION

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Attachment 2

LPP Report & All Attach



31-Jan-2019

ADW Johnson 5 Pioneer Ave TUGGERAH NSW 2259

# FLOOD LEVEL CERTIFICATE

Property: Lot 102 DP 1209157, 11 Bryant Dr, TUGGERAH NSW 2259

Council refers to your flood enquiry application for the above property, and provides the following information in response:

Design Flood Level	RL 3.8m AHD
Freeboard	0.5m
Minimum Habitable Floor Level	RL 4.3m AHD

\*AHD (Australian Height Datum)

DISCLAIMER: Council provides you with the above information as general advice only, and you should not rely upon that information when making decisions relating to the purchase or development of the above property. Council **strongly recommends** that you seek site specific flooding advice from a suitably experienced expert prior to making any decisions relating to the purchase or development of above property. That disclaimer and recommendation is provided for the following reasons:

1. The information in the above table is based on Council's records. Those records do not include a recent flood study or a recent detailed survey of the above property. For example, a recent detailed survey would provide precise ground levels for the subject property as well as identify, with precision, the location of any watercourses, drainage structures and systems, overland flowpaths and built structures that might impact on the extent and degree to which the subject property might flood. Council does not have sufficient information to provide you with accurate prediction of the likelihood and extent to which the above property might flood, and so cannot provide you with accurate design levels for potential development of that property.

Attachment 2 2. Council does not, and cannot, warrant that it will, in LiPP: Report & Allo Attachments/24 June 2021

under the *Environmental Planning and Assessment Act 1979*, grant consent to a development application that seeks to erect or use dwellings or other structures on the above property that conform with the levels set out in the above information. As a consent authority, Council is required to consider the suitability of the above property for the specific development proposed as well as consider the requirements of Council's Development Control Plan 2013 – Chapter 3.3 Floodplain Management (this is available on Council's website). Council may also have to consider the requirements of other statutory bodies, such as the Mine Subsidence Board.

The information provided in this letter is provided only to you, and is not intended to be provided to any third party.

Yours faithfully,

Man Devolut

Mark Dowdell
PRINCIPAL DEVELOPMENT DESIGN ENGINEER



LPP Report & All Attachments 24 June 2021

CR2020/002913 SF2019/124028

24 November 2020

Chief Executive Officer Central Coast Council PO Box 21 Gosford NSW 2250

Attention: Janice Wheeler

# WYONG ROAD (MR335): DA 530/2019, MIXED USE DEVELOPMENT – SPECIAL RETAIL PREMISES, 11 BRYANT DRIVE TUGGERAH

Transport for NSW (TfNSW) advises that legislation to dissolve Roads and Maritime Services and transfer its assets, rights and liabilities to TfNSW came into effect on 1 December 2019. It is intended that the new structure will enable TfNSW to deliver more integrated TfNSW services across modes and better outcomes to customers and communities across NSW.

For convenience, correspondence, advice or submissions made to or by Roads and Maritime Services prior to its dissolution, are referred to in this letter as having been made to or by 'TfNSW'.

On 12 June 2020 TfNSW accepted the referral by Central Coast Council (Council) via email with additional information regarding the abovementioned application (Development Application). Council referred the Development Application to TfNSW for comment Clause 104 / Schedule 3 of the State Environmental Planning Policy (Infrastructure) 2007. This letter is a submission in response to that referral.

TfNSW understands the proposal to be for Mixed Use Development that includes three specialised retail premises, two food and drink premises, stormwater drainage work, onsite car parking signage, internal driveways and site access upgrades.

The proposal will include:

- 10,674 m2 GFA of retail floor space within three (3) separate buildings likely to be utilized by bulky goods retail uses,
- 699 m2 GFA of food and drink premises land uses within two (2) separate food pads,
- On-site car parking for 389 vehicles (including staff car park for 50 vehicles),
- Removal of existing entry access to the site,
- A central roundabout entry / exit access off Bryant Drive opposite existing access to the Tuggerah Super Centre,

# Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

# Attachment 2 LPP Report & All Attachments 24 June 2021 • Modification of the existing exit access to the site off Bryant Drive, • A new entry only access off Bryant Drive for rigid delivery vehicles only, north of the proposed roundabout main access to the site,

- A new combined entry / exit access off Lake Road for use by heavy vehicles accessing the site and direct access to the staff car park,
- On-site drainage,
- Relocation of the return and earn collection centre, and
- Landscaping.

# TfNSW Response & Requirements

TfNSW's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

Wyong Road (MR335) is a classified State road and Bryant Drive is a local road. Council is the roads authority for both roads and all other public roads in the area, in accordance with Section 7 of the Roads Act 1993.

TfNSW has reviewed the referred information including the Statement of Environmental Effects by ADW Johnson dated June 2019, Development Plans prepared by Team Architects dated 15 April 2019, amended Traffic and Parking Assessment (TPA) prepared by Intersect Traffic and dated March 2020 and associated SIDRA files provided on 12 June 2020.

TfNSW provides the following comments to assist the consent authority in making a determination:

- The TIA demonstrates that the average delay and queue length (95th percentile) at the Wyong Road and Bryant Drive roundabout in 2029 weekday (PM) and 2029 (PM) weekend doubles and the level of service deteriorates from LoS D to LoS F with development traffic. TfNSW considers that the proposed development reduces serviceable life of the intersection to such an extent that within the 10 year horizon upgrades will need to be brought forward.
- As such, it is considered there is a demonstrable nexus between the development and the
  deterioration of this intersection to the point where additional work will be required. However,
  the TIA fails to acknowledge this, and to identify mitigation measures to address the potential
  development impacts.
- TfNSW highlights that there is currently no State funding commitments for any upgrade works at the Wyong Road/Bryant Drive roundabout. All works having nexus with the subject development shall be undertaken at full cost to the developer and at no cost to TfNSW or Council, and to TfNSW and Council requirements.
- TfNSW raises concern regarding the cumulative traffic impact of the subject development, and other proposed/approved developments accessed by Bryant Drive and Lake Road, on the operation of Wyong Road/Bryant Drive roundabout. As such, shared contributions

# Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

### Attachment 2

LPP Report & All Attachments 24 June 2021

tramework for this development and other developments to contribute to required upgrade works is a matter for Council to consider and initiate as the relevant planning authority.

### Advice to Council

TfNSW recommends that the following matters should be considered by Council in determining this development:

- TfNSW has no proposal that requires any part of the property.
- It is noted the proposed development represents a large percentage increase in the amount of traffic entering and exiting Bryant Drive. TfNSW is also aware that a five lot industrial subdivision development application (DA/1005/2020) at 25-27 Bryant Drive proposes to use Bryant Drive to access the site.
- TfNSW recommends Council ensure the capacity, accessibility and safety of Bryant Drive is not compromised by the traffic generated by this development and other proposed/approved developments accessed from Bryant Drive and Lake Road.
- Council should ensure that the proposed internal and external road work provides an efficient and safe access for public transport, pedestrians and bicycles and ensure alignment with the overall vision outlined in the draft Tuggerah to Wyong Economic Corridor Strategy.
- TfNSW is aware Council is currently upgrading the intersection of Bryant Drive and Lake Road. TfNSW recommends Council to ensure that necessary intersection augmentation works are implemented in the future to cater for additional traffic, pedestrian and cyclist movements generated by proposed and approved developments in the area.
- TfNSW is currently undertaking preliminary investigations to identify an appropriate land for constructing a commuter car park (additional 220 spaces) in the vicinity of Tuggerah railway station.
- As part of the proposed Tuggerah Integrated Transport Plan, TfNSW will work with Council to identify network demands and infrastructure needs within the study area.
- Council should ensure that appropriate traffic measures are in place during the construction phase of the project to minimise the impacts of construction vehicles on traffic efficiency and road safety within the vicinity.
- Council should have consideration for appropriate sight line distances in accordance with Section 3 of the *Austroads Guide to Road Design Part 4A (Unsignalised and Signalised Intersections)* and the relevant Australian Standards (i.e. AS2890:1:2004) and should be satisfied that the location of the proposed driveway promotes safe vehicle movements
- While it is acknowledged that concurrence is not required to be provided by TfNSW for the new signage proposed in the subject application under Clause 18 of the *State Environmental Planning Policy 64 (SEPP 64)*, the following advice is for Council to consider:

- All signs should meet the criteria contained in the Department of Planning's *TfNSW Corridor Outdoor Advertising and Signage Guidelines (November 2017)* including, but not limited to, Section 3.3.3 Illumination and reflectance.
- Council should ensure that all signs meet the requirements of Schedule 1 Assessment Criteria of the State Environmental Planning Policy (SEPP) No. 64 – Advertising and Signage.
- Please advise the applicant that TfNSW may direct the screening, modification or removal of a structure if, in the opinion of TfNSW, the structure is considered a traffic hazard under Section 104 of the *Roads Act 1993*.

On Council's determination of this matter, please forward a copy of the Notice of Determination to TfNSW for record and / or action purposes. Should you require further information please contact Kumar Kuruppu, Development Assessment Officer, on 4908 7688 or by emailing development.hunter@rms.nsw.gov.au.

Yours sincerely

Peter Marler Manager Land Use Assessment Hunter Region

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use <u>Development comprising Specialised Retail Premises</u>. Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021) Minutes of LPP Seeting 24 with Item No 4.1 only

# Attachment 3

**Central Coast** Local Planning Panel

Minutes of the LOCAL PLANNING PANEL MEETING Held remotely - online on 24 June 2021

### **Panel Members**

Chairperson	Donna Rygate
Panel Experts	Grant Christmas Linda McClure
Community Representative/s	David Kitson

# **Central Coast Council Staff Attendance**

Andrew Roach	Unit Manager Development Assessment
Emily Goodworth	Section Manager Development Assessment North
Ailsa Prendergast	Section Manager Development Assessment South
Mark Dowdell	Principal Development Assessment Engineer
Robert Eyre	Principal Development Planner Development Assessment South
Janice Wheeler	Senior Development Planner Development Assessment North
Sarah Georgiou	Section Manger Civic Support
Rachel Callachor	Meeting Support Officer Civic Support

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.

### 1.1 Disclosures of Interest

The Panel noted that no disclosures had been identified and forms had been submitted by members.

Unanimous

### 2.1 Confirmation of Minutes of Previous Meeting

The Minutes of the following Meeting of the Local Planning Panel, which had been

- 1 -

2.1

AttachmeMinButes of the Local Planning Panel Meeting/Adutes 2021 Planteeting 24 June 2021 with Item No 4.1 only

endorsed by the Chair of that meeting, were submitted for noting:

• Local Planning Panel Meeting held on 10 June 2021.

Moved: Linda McClure Unanimous

# **Public Forum**

The following people addressed the Panel:

# Agenda item 3.1

- 1 Michael Leavey on behalf of D & P Nicolas Investments Pty Ltd & S & L Nicolas Investments Pty Ltd – for the recommendation
- 2 Doug Sneddon Doug Sneddon Planning, on behalf of the applicant against the recommendation
- 3 David Sutton Slater Architects, on behalf of the applicant against the recommendation

# Agenda item 4.1

- 1 Chris and Wendy Lewis against the recommendation.
- 2 Claudio Minns, Development Manager, Blueview and Bill Ryder Director, Blueview against the recommendation.
- 3 Adam Crampton Planning Manager, ADW Johnson and Ben Myles, Civil Engineer, ADW Johnson – answered questions on behalf of the applicant

The Local Planning Panel public meeting closed at 3:12pm. The Panel moved into deliberation from 3:24pm, which concluded at 4:10pm.

# 4.1 DA/530/2019 - 2 and 11 Bryant Drive, Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises

Site Inspected	Yes
Relevant Considerations	As per Council assessment report
Material Considered	<ul> <li>Documentation with application</li> <li>Council assessment report</li> <li>Submissions</li> </ul>

2.1

Council Recommendation	Арр	roval
Panel Decision	1	That the Local Planning Panel defer a decision regarding DA/530/2019 – 2 & 11 Bryant Drive - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises and request the Council to notify all adjoining owners who have not previously been notified and provide them the opportunity to make a submission on the proposal within 14 days of the notification.
	2	The matter is to be reported back to the Panel for determination within 28 days of the closing date for submissions in accordance in 1. above.
	3	This report should include information detailing the basis on which contributions are being levied, including the net developable area for contributions that have been paid and contributions that are proposed.
Reasons	1	The Panel considered that it was arguable that the proposed development may be a change of use triggering a requirement to notify all adjoining owners.
	2	Clarification is required as regards contributions.
Votes	The	decision was unanimous

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**Revised Recommended Conditions of Consent** 

## Attachment 1 – Recommended Conditions of Consent – DA 530-2019

# 1. PARAMETERS OF THIS CONSENT

1.1. Implement the development substantially in accordance with the plans and supporting documents listed below as submitted by the applicant and to which is affixed a Council stamp "Development Consent" unless modified by any following condition.

Drawing	Description	Sheets	lssue	Date
843	Site Plan	DA002	7	28.04.20
843	Demolition and Existing Conditions Plan	DA010	5	27.03.20
843	Overall Elevations	DA020	5	27.03.20
843	Building A – Ground Floor Plan	DA100	6	02.04.20
843	Building B – Ground Floor Plan	DA101	7	28.04.20
843	Building C & Food Pad 1 – Ground Floor Plan	DA102	7	28.04.20
843	Food Pad 2 – Ground Floor Plan	DA103	6	28.04.20
843	Building A – Elevations	DA200	5	27.03.20
843	Building B – Elevations	DA201	5	27.03.20
843	Building C – Elevations	DA202	5	27.03.20
843	Food Pad – Elevations	DA203	6	28.04.20
843	Building Sections	DA300	5	27.03.20
843	Signage Details	DA900	6	27.03.20
843	Signage Details	DA901	5	27.03.20
843	Signage Details	DA902	2	27.03.20

### Architectural Plans by: Team2 Architects

### Landscape Plans by Site Image:

Drawing	Description	Sheets	Issue	Date
SS19-4043	Landscape Masterplan	100	E	17.04.2019
SS19-4043	Landscape Plan	101	E	17.04.2019
SS19-4043	Landscape Precinct Plan	102	E	17.04.2019
SS19-4043	Landscape Precinct Plan	103	E	17.04.2019
SS19-4043	Landscape Precinct Plan	104	E	17.04.2019

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**Revised Recommended Conditions of Consent** 

# **Civil Plans by:**

Inset 2

Inset 3

Inset 4

190557

190557

Turning Paths Detail Plan –

Turning Paths Detail Plan 0

				1
Drawing	Description	Sheets	Issue	Date
190557	Exhibit 002 - Concept	EX-002	E	26/02/2021
	Stormwater Design			
190557	Exhibit 003 – Proposed	EX-003	E	26/02/2021
	Catchments			
190557	Exhibit 004 – ECC Flows	EX-004	E	26/02/2021
190557	Alternative Stormwater	EX-006	E	26/02/2021
	Contribution Works			
190557	Exhibit 007 – Erosion and	EX-007	E	26/02/2021
	Sediment Control Plan			
Drawing	Description	Sheets	Issue	Date
190557	Detail Plan	003	F	03.03.21
190557	Stormwater Plan	004	F	03.03.21
190557	Site Regrade Plan	005	F	03.03.21
190557	Site Sections – Sheet 1	006	F	03.03.21
190557	Site Sections – Sheet 2	007	F	03.03.21
190557	Site Sections – Sheet 3	008	F	03.03.21
190557	Site Sections – Sheet 4	009	F	03.03.21
190557	Indicative Roundabout Design	010	F	03.03.21
190557	Roundabout Turning Paths	011	F	03.03.21
190557	Linemarking & Signage Plan	012	F	03.03.21
190557	Water & Sewer Plan	013	F	03.03.21
190557	Turning Paths Overall Plan	014	F	03.03.21
190557	Turning Paths Detail Plan –	015	F	03.03.21
	Inset 1			
190557	Turning Paths Detail Plan –	016	F	03.03.21
		1		

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# **Revised Recommended Conditions of Consent**

## Supporting Documentation:

Document	Title	Date
-	Water Cycle Management Plan Addendum Letter	December
	Revision C (ADW)	2021
-	Water Cycle Management Plan Rev E (ADW)	March
		2021
CC190039	Waste Management Plan (Barker Ryan Stewart)	May 2020
1895	Ecological Assessment Report (AEP)	March
		2020
18/191 Rev I	Traffic & Parking Assessment (Intersect Traffic)	01/06/21
SS19-4043	Landscape and Public Domain Design Report (Site	18 April
	Image)	2019

1.2. Carry out all building works in accordance with the Building Code of Australia.

# 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. Roadworks - Design Requirements

Where conditions of this consent require approval from Council under Section 138 of the *Roads Act 1993*, Section 68 of the *Local Government Act 1993* or Section 305 of the *Water Management Act 2000*, a completed Works application form must be lodged with Council and be accompanied by detailed design drawings and supporting information. Upon submission to Council, fees and charges will be calculated in accordance with Council's Management Plan. The fees and charges must be paid prior to Council commencing the design assessment.

- 2.3. The submission to Council of Civil Works design drawings and specifications detailing the following design requirements:
  - Pavement marking & signage.
  - Street trees
  - Pavement design.
  - Vehicle access crossing(s).
  - The restoration of any vehicle access rendered redundant by the development, to standard kerb and footpath formation.
  - Any associated works to ensure satisfactory transitions to existing infrastructure
  - The submission to Council as the Roads Authority of street lighting and reticulation design drawings. The design shall be prepared in accordance with AS/NZS 1158 and AS 4282-1997, including the provision of current best practice energy efficient lighting, documentation confirming a minimum of twenty (20)

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year design life and be approved by the Council as the Roads Authority prior to issue of a Construction Certificate.

- Adjustment of services as required.
- Roundabout in Bryant Drive generally in accordance with ADW Johnson Plan 190557-DA-010 Version F dated 3/3/2021

Required design drawings are to be prepared in accordance with Council's *Civil Works Specification Design Guidelines 2018* and must be approved by Council as the Roads Authority prior to the issue of a Construction Certificate.

- 2.4. The submission of a comprehensive road signage and pavement marking design drawings identifying parking restrictions, accesses and traffic management facilities to Council for approval by the Local Traffic Committee prior to issue of the Construction Certificate.
- 2.5. Prior to the commencement of detailed design works within any public road, contact should be made with the National Community Service *"Dial before you Dig"* on 1100 regarding the location of underground services in order to prevent injury, personal liability and even death. Enquiries should provide the property details and the nearest cross street/road.
- 2.6. The submission to the Council as the Roads Authority of a Design Concept stage' Road Safety Audit for the roundabout and site accesses prepared by a Level 3 and level 2 Road Safety Audit Team recognised on the NSW Register of Road Safety Auditors. Any deficiencies identified within the audit must be resolved in consultation with Council prior to the approval of design drawings.

## 2.7. Stormwater Drainage - Design Requirements

The submission to the Accredited Certifier of a detailed stormwater management plan featuring:

- Stormwater disposal in accordance with the Watercycle Management Plan prepared by ADW Johnson dated March 2021 issue E as revised by the Water Cycle Management Plan Addendum Letter Revision C by ADW Johnson dated December 2021 incorporating:
- The provision of an onsite stormwater detention system. The detention system must be designed to attenuate post developed flow rates to predevelopment flow rates for a full range of storm durations for the 5, 20 and 100 year average reoccurrence interval (ARI) design storms.
- The provision of stormwater quality control facilities to treat stormwater in accordance with the Engineers Australia publication *Australian Runoff Quality A Guide to Water Sensitive Urban Design* prior to entering Council's stormwater drainage system.
- Stormwater disposal generally in accordance with the revised stormwater design prepared by ADW Johnson reference 19055-ESK-011(A) to19055-ESK-015(A) revision A dated 15/10/2021 as further amended by condition 2.20.

• Provision of a subsoil drainage system along the entry accessway from Lake Road and the associated retaining walls in the vicinity to neighbouring adjoining lots. This could include a bioretention filter in the area between the Lake Road entry

and No.7 Lake Road with subsoil outlets.

The plans must be prepared in accordance with *AS/NZS3500.3:2018* and Council's *Civil Works Specification Design Guidelines 2018*, and be approved by the Accredited Certifier prior to issue of the Construction Certificate.

# 2.8. Structural Design Requirements

Any excavation below the adjoining land level requires the retaining of that land and the preservation and protection of any improvements or buildings upon that land including public roads and utilities from damage. If necessary, the improvements or buildings are to be supported in a manner designed by a suitably qualified Registered Structural Engineer. Any design proposals prepared in order to comply with this condition are to include geotechnical investigations and are to be submitted for the approval of the Accredited Certifier and in the case where excavation impacts upon public infrastructure, Council, prior to issue of the Construction Certificate.

2.9. Prior to the issue of a Construction Certificate, suitable detailed design drawings for all retaining wall structures on the site are to be provided for the approval of the Accredited Certifier. Such design drawings are to be prepared by a suitably qualified Registered Structural Engineer in accordance with the requirements of *AS* 4678-2002 - *Earth Retaining Structures*. All retaining walls must be contained wholly within the property and designed so as to accommodate possible surcharge loading from vehicles or structural improvements within the adjoining property.

# 2.10. Subdivision - Design Requirements

The submission to the Accredited Certifier of detailed design drawings for all subdivision works in accordance with Council's *Civil Works Specification Design Guidelines 2018.* The design drawings, including an overlay of the vegetation plan identifying trees to be retained as per the approved development plans, and any trees to be removed must be approved by the Accredited Certifier prior to issue of a Construction Certificate.

# 2.11. Vehicle Access and Parking - Design Requirements

The submission to the Accredited Certifier of a detailed car parking design. The design shall include:

- Pavement marking, appropriate signage and physical controls detailed for the carpark, access driveway and circulation roads.
- Pavement design able to withstand anticipated vehicle loading.

**Revised Recommended Conditions of Consent** 

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- boom gate for the largest design vehicle is contained within the property boundary.
- Suitable guard rails/physical barrier provided to parking and manoeuvring areas in proximity to level changes.

The design drawings shall be prepared in accordance with the requirements of *AS/NZS* 2890 – Parts 1, 2 and 6, and be approved by the Accredited Certifier prior to the issue of a Construction Certificate.

2.12. The submission to the Accredited Certifier of lighting design drawings for the carpark and public places. The design shall be prepared in accordance with the requirements of *AS/NZS 1158* and *AS 4282-1997*, including the provision of current best practice energy efficient lighting and be approved by the Accredited Certifier prior to issue of a Construction Certificate.

# 2.13. Water and Sewer Services - Design Requirements

All water and sewer works or works impacting on water and sewer assets must be designed and constructed to the requirements of Council as the Water Supply Authority. The requirements are detailed in the Section 306 Notice of Requirements letter attached to this consent. **Note:** The Section 306 Notice contains requirements associated with the development that must be completed prior to the issue of the Construction Certificate.

- 2.14. The developer must submit an application to Council under Section 305 of the Water Management Act 2000 for any requirements for the obtaining of a Section 307 Certificate of Compliance. The application must be made prior to the issue of the Construction Certificate. **Note:** The Section 305 Notice may contain requirements associated with the development that must be completed prior to the issue of the Construction Certificate.
- 2.15. The submission to Council as the Water Supply Authority of detailed structural design drawings and supporting information for structures within the zone of influence of the sewer main. The design shall indicate the proposed method of protecting the sewer main in accordance with Council's *Requirements for Building Over or Adjacent to Sewer Mains* policy. Design details must be approved by Council as the Water Supply Authority prior to the issue of a Construction Certificate.
- 2.16. The submission to the Accredited Certifier of lighting design drawings for the carpark and public places. The design shall be prepared in accordance with the requirements of *AS/NZS 1158* and *AS 4282-1997*, including the provision of current best practice energy efficient lighting and be approved by the Accredited Certifier prior to issue of a Construction Certificate.

## 2.17. Wyong District Development Contributions Plan

Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Pursuant to Section 7.11 of the *Environmental Planning and Assessment Act 1979* pay to Council a total contribution amount of **\$272,534.66** that may require adjustment at the time of payment, in accordance with the Wyong District Development Contributions Plan with the applicable amounts as follows:

Cobbs Area 1/2/3 Roads	\$ 11,048.35
Tuggerah Industrial Est Drainage	\$ 2 <i>,</i> 934.95
Tuggerah Industrial Stage 3 Drainage Land	\$ 40,582.60
Tuggerah Industrial Stage 3 Drainage Works	\$ 114,202.83
Tuggerah Industrial Stage 3 Roads	\$ 103,765.93
Total	\$ 272,534.66

The contributions 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 on 1300 463 954 for an up-to-date contribution payment amount.

Any Construction 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/Clause 160(2) of the *Environmental Planning and Assessment Regulation 2000*.

A copy of the Contribution Plan may be inspected at the offices of Central Coast Council, 2 Hely Street Wyong or 49 Mann Street Gosford or on Council's website: <u>Development Contributions</u>

- 2.18. An Unexpected Finds Management Plan must be developed and implemented prior to the issue of any Construction Certificate for the discovery of any asbestos fragments, or any other unexpected contamination during any future construction works at the site.
- 2.19. Prior to the issue of any Construction Certificate a Noise Impact Assessment must be undertaken by a suitably qualified acoustic consultant who is an active member of the Association of Australasian Acoustical Consultants. This Noise Impact Assessment will be required to provide recommended attenuation measures that address all potential acoustic impacts being generated on the site, these activities are to include but not limited to:
  - Vehicle movements, Parking & Congregational noise
  - Boom gates
  - The use of Loading docks and vehicles associated with this activity
  - Waste collection including the bottle recycling facility
  - Mechanical Plant
- 2.20. Submit to the Principle Certifying Authority Construction Certificate Plans indicating the following amendment to the development:
  - The deletion of car parking along the delivery/entry accessway from Lake Road for the length of the common boundaries with lots 3, 5 and 13 DP5536.

**Revised Recommended Conditions of Consent** 

Development is limited to construction of access driveway for delivery vehicles, associated fill, retaining walls, fencing, boom gates and drainage works.

- No fill or pavement is to be located within 4 metres of the common boundary of lots 3, 5 and 13 DP5536. A setback of 4 metres to these properties shall be maintained.
- A pedestrian footpath shall be provided on the eastern side of the accessway.
- The acoustic fence shall be located at the edge of the accessway pavement at a minimum distance of 4 metres from the property boundary.
- The boom gate to be relocated so that it allows queuing for the largest (delivery) design vehicle within the property boundary.
- Provision of a subsoil drainage system along the entry accessway from Lake Road and the associated retaining walls in the vicinity to neighbouring adjoining lots. This could include a bioretention filter in the area between the Lake Road entry and No.7 Lake Road with subsoil outlets.

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**Revised Recommended Conditions of Consent** 

# 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. 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
  - a) Implementation of environmental protection measures, such as erosion control and the like that are required by this consent
  - b) Demolition approved by this consent.
- 3.3. Appoint a Principal Certifying Authority for the building work:
  - a) The Principal Certifying Authority (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.
  - a) Submit to Council a Notice of Commencement of Building Works or Notice of Commencement of Subdivision Works form giving at least two (2) days' notice of the intention to commence building or subdivision work. The forms can be found on Council's website: www.centralcoast.nsw.gov.au
- 3.4. 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 Certifying Authority for the work; and
  - a) The name of the principal contractor and a telephone number at which that person can be contacted outside of working hours; and
  - b) That unauthorised entry to the work site is prohibited.
  - c) Remove the sign when the work has been completed.
- 3.5. Clearly mark and identify all trees and native vegetation proposed for retention and removal onsite and on all final engineering and development plans. All fenced tree protection areas must be clearly marked as "No Go Area" on all plans.
- 3.6. Prior to commencement of any works submit to Council's Ecologist for approval a Vegetation Management Plan for all areas of retained native vegetation on Lot 102/DP1209157. The Vegetation Management Plan must be prepared to Council's satisfaction prior to the commencement of any works. The Vegetation Management Plan must be prepared by a suitably qualified Ecologist and in accordance with Central Coast Council's Flora and Fauna Survey Guidelines 2019. The VMP must include as a minimum:

- Site specific management actions to protect and mitigate the impacts of the development on the Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community (EEC) and Melaleuca biconvexa on the property.
- Integrate with the Erosion and Sediment Control or Soil and Water Management Plan.
- Clearly stage management actions to identify works required prior to commencement of construction works, during works, prior to occupation certificate and ongoing.
- Include a protocol to prevent the transfer of weeds or pathogens onto or off the site, including during construction.
- A monitoring program and performance objectives.
- Detail ongoing reporting requirements.
- Be implemented for no less than five years.

Progress reports are to be submitted to Council's Ecologist by the 30th June each year for a minimum of 5 years after the commencement of works. Reports are to detail the progress of the works and any recommended additional actions, with a final report certifying completion of the Vegetation Management Plan at the end of the implementation period, or once the specific objectives of the plan have been met. Any recommended additional actions must be completed to the satisfaction of Council prior to lodgement of the final report.

# 3.7. Install temporary fencing

Prior to works associated with the development commencing, vegetation nominated for retention is to be suitably protected by a 1.8 metre high fence. The fence is to be clearly marked as a "No Go Area" on the fencing itself. No clearing of vegetation, storage of vehicles or machinery, stockpiling, materials storage or unauthorised access is to occur within the fenced conservation area.

3.8. Implement the mitigation measures outlined the "Revised Ecological Assessment Report (EAR)- PROPOSED RETAIL AND CARPARK –STAGE 1 AT 11 BRYANT DRIVE, TUGGERAH, NSW" Andersen Environment and Planning, March 2020 (section 13.0). Where the measures are inconsistent, the conditions of consent prevail.

# 3.9. Erosion and Sediment Control Requirements

Prior to the commencement of construction an initial Erosion and Sediment Control Plan (ESCP) prepared in accordance with the latest edition of the Landcom Publication *'Soils and Constructions- Volume 1'* (The Blue Book) shall be provided to the Principal Certifying Authority. This plan shall be modified and updated during construction to reflect any changes due to the on-ground/site conditions. A copy of any modifications or updates to the ESCP shall be provided to the PCA and provided to Council upon request.

**Revised Recommended Conditions of Consent** 

Erosion and sediment controls shall be monitored, maintained and adapted in accordance with the most recent ESCP until the site is fully stabilised and landscaped. Failure to comply with this condition may result in fines under the provision of the Protection of the Environment Operations Act

### 3.10 **Protection of Adjoining Property Requirements**

Prior to works associated with the development commencing, the applicant must supply the Principal Certifying Authority with a dilapidation report for the adjoining properties, which documents and photographs the condition of buildings and other improvements. The report must be submitted to and approved by the Principal Certifying Authority prior to the commencement of any works. Note: The report is to be made available by the Principal Certifying Authority in any private dispute between neighbours regarding damage arising from construction works upon the development site.

# 3.11 Roads - Preconstruction Requirements

Prior to commencing any works upon public roads the developer and their contractor will be required to:

- Obtain a copy of the Council approved Civil Works plans and pavement design (if applicable).
- Obtain a copy of Council's Civil Works Specification Construction Guidelines 2018. This is Council's Specification for Civil Works and is available on Council's web site.
- Arrange a meeting on-site with Council's Principal Development Construction . Engineer on 1300 463 954.
- 3.12 Prior to works associated with the development commencing, a Plan of Management is to be submitted to and approved by Council as the Roads Authority for any works or deliveries that impact on any public roads or public land as a result of the construction of the development. The plan must include a Traffic Control Plan prepared by a person holding Roads and Traffic Authority (RTA) accreditation for selecting and modifying traffic control plans. Fees and charges are applicable to the review and approval of the required management plan in accordance with Council's Plan of Management.
- 3.13 Prior to works associated with development commencing, a dilapidation report must be prepared and submitted to Council as the Roads Authority. The required dilapidation report must document and provide photographs that clearly depict any existing damage to the road, kerb, channel, footpath, driveways, water supply, sewer works, street trees, street signs or any other Council assets in the vicinity of the development. Note: The report will be used by Council to determine the extent of damage arising from site and construction works.

# 3.14 Construction Traffic Management Plan

Prior to the commencement of any works, the Applicant shall prepare a Construction Traffic Management Plan for the development. The plan shall include Traffic Control Plans prepared by a suitably qualified and experienced consultant. All works must ensure the safety of all vehicles and pedestrians within the frontage service road.

The construction traffic management plan shall identify construction access via Bryant Drive only. Access via Lake Road is limited to those works directly in proximity (within 75 metres) of the Lake Road frontage of the site.

- 3.15 Provide and maintain a garbage receptacle at the work site until the works are completed. The garbage receptacle must have a tight fitting lid and be suitable for food scraps and papers.
- 3.16 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:
  - could cause a danger, obstruction or inconvenience to pedestrian or vehicular a) traffic, or
  - could cause damage to adjoining lands by falling objects, or b)
  - involve the enclosure of a public place or part of a public place. c)

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.

3.17 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:

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

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

Attachment 4

**Revised Recommended Conditions of Consent** 

# 4 DURING WORKS

- 4.1. All conditions under this section must be met during works.
- 4.2. Carry out construction or demolition works during the construction phase of the development only between the hours as follows:

7.00am and 5.00pm Monday to Saturday

No construction or demolition works associated with the development are permitted to be carried out at any time on a Sunday or a public holiday.

- 4.3. During the construction phase of the development, if any Aboriginal object (including evidence of habitation or remains), is discovered during the course of the work:
  - a) All excavation or disturbance of the area must stop immediately in that area, and
  - a) The Office of Environment and Heritage must be advised of the discovery in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

**Note:** If an Aboriginal object is discovered, an Aboriginal heritage impact permit may be required under the *National Parks and Wildlife Act 1974*.

- 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 Certifying Authority or an officer of Council.
- 4.6 Conduct all works in accordance with the approved Vegetation Management Plan.
- 4.7 Supervision by a suitably qualified Ecologist is required for all vegetation clearing works. The Ecologist must:
  - Mark trees and native vegetation for retention and removal.
  - Supervise the installation of fencing around all trees and vegetation to be retained.
  - Provide an environmental induction to civil contractors and subcontractors.
  - Undertake pre clearing surveys for fauna and directly supervise all clearing to mitigate any animal welfare issues.

The Ecologist must provide updates in writing to Council's Ecologist within five business days after completion of the environmental protection measures.

- 4.8 Maintain the fence around the retained vegetation. The fence must be maintained for the duration of construction works. No storage of vehicles or machinery, waste, fill or materials or unauthorised access is to occur within the fenced vegetation protection areas.
- 4.9 Implement the mitigation measures outlined the ""Revised Ecological Assessment Report (EAR)- PROPOSED RETAIL AND CARPARK –STAGE 1 AT 11 BRYANT DRIVE, TUGGERAH, NSW" Andersen Environment and Planning, March 2020 (section 13.0). Where the measures are inconsistent, the conditions of consent prevail.
- 4.10 Design, locate and install underground services to minimise or prevent tree root damage in accordance with Australian Standard AS 4970-2009: Protection of Trees on Development Sites.
- 4.11 Vehicles and other equipment to be used on site must be completely free of soil, seeds and plant material before entering/leaving the site to prevent the spread of exotic plant species and pathogens. All vehicles and machinery must be inspected prior to site entry/exit and those failing inspection should be sent away for cleaning. Appropriate records of inspections shall be maintained.
- 4.12 Re-use, recycle or dispose of all building materials during the demolition and construction phase of the development in accordance with the Waste Management Plan signed by Barker Ryan Stewart, dated 7 May 2020.
- 4.13 The developer is solely responsible for any costs relating to alterations and extensions of existing roads, drainage, water and sewer infrastructure and other utilities for the proposed development.
- 4.14 Other public authorities may have separate requirements and should be consulted prior to commencement of works in the following respects:
  - Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments;
  - AGL Sydney Limited for any change or alteration to gas line infrastructure;
  - Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements;
  - Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure.

Full implementation of the recommendations of the Anderson Environment & Planning (2019). Ecological Assessment Report for the Construction of a two storey office premises containing a medical centre 23-25 Anzac Road, Tuggerah, NSW, August 2019.

4.15 Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

- 4.16 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*.
- 4.17 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 which is compliant with the Excavated Natural Material Exemption 2014 issued under clauses 91 and 92 of the Protection of the Environment Operations Act 1997.
- 4.18 All excavated material removed from the site must be classified in accordance with NSW EPA (1999) Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes prior to disposal. All excavated material must be disposed of to an approved waste management facility and receipts of the disposal must be kept on site.
- 4.19 In the event that construction works causes the generation of odours or uncovering of previously unidentified contaminates, works must immediately cease, Council and the Principal Certifying Authority must be notified in writing within 7 days and an appropriately qualified environmental consultant appointed to undertake an assessment of the potential contaminant and works required to make the site safe from potential human health and environmental harm.

# 4.20 Cease excavation if ASS identified

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.

4.21 During construction works, all fill is to be placed on site in such a manner that surface water will not be permanently or temporarily diverted to adjoining land.

Supplementary Report - DA/530/2019 - 2 & 11 Bryant Drive Tuggerah - Mixed Use Development comprising Specialised Retail Premises, Signage and Food and Drink Premises - (Agenda Item 4.1 Local Planning Panel meeting 24 June 2021)

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**Revised Recommended Conditions of Consent** 

# 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 Permanent solid fencing of the Swamp Sclerophyll Forest Endangered Ecological Community is to be installed prior to issue of Occupation Certificate. Locked access gates are to be provided for maintenance.
- 5.3 The area subject to the Vegetation Management Plan will be placed under a 'Restriction on Use' pursuant to section 88B and 'Public Positive Covenant' 88E of the Conveyancing Act 1919. These instruments must require the land to be managed under an approved Vegetation Management Plan for the conservation of endangered ecological communities and threatened species. The public positive covenant must be created to require the implementation of the Vegetation Management Plan.

The public positive covenant must permit Council or its nominee to enter and inspect the site and carry out any works required under the Vegetation Management Plan, at the owner's cost, if the owner fails to implement and maintain the site in accordance with the Vegetation Management Plan as amended and approved by Council.

The public positive covenant must be submitted to Council's General Counsel for approval. The authority empowered to release, vary or modify the Restriction is Central Coast Council.

- 5.4 Prior to the issue of any Occupation Certificate the completed Noise Impact Assessment must be provided to Councils Senior Environmental Health officer for endorsement prior to implementing any of the recommended acoustic attenuation measures.
- 5.5 Prior to the issue of any Occupation Certificate a compliance certificate must be provided to the Principal Certifying Authority demonstrating that all recommended attenuation measures from the Noise Impact Assessment have been implemented.
- 5.6 Prior to the issue of an Occupation Certificate, any damage not shown in the Dilapidation Report submitted to and approved by the Principal Certifying Authority prior to site works commencing, will be assumed to have been caused as a result of the site works undertaken with respect to the development and must be rectified at the applicant's expense.
- 5.7 Install CCTV

Install a system of Closed Circuit Television (CCTV) of a type and in locations on the site that will provide high-quality images of all public areas within the site. CCTV surveillance of the Lake Road car park shall be installed.

**Revised Recommended Conditions of Consent** 

- 5.8 Complete the landscaping works.
- 5.9 Provide the Principal Certifying Authority with written certification from a qualified landscape designer certifying that landscaping has been implemented in accordance with the approved landscape plan as amended by any conditions of this consent.
- 5.10 Solid acoustic attenuating fencing of at least 2.1 metres in height above the finished ground level shall be provided as follows:
  - directly adjoining the north boundary with lots 5, 6. 7 and 8 DP5536, and
  - to either side of the delivery access at a distance of 4 metres from the common boundary with Lot 3, 5 and 13 DP5536 and
  - to the common boundary with Lot 141 DP1007716.

Where the recommendations of the acoustic report dictate a higher fence, this must be provided.

# 5.11 Dilapidation Rectification Requirements

Prior to the issue of an Occupation Certificate, any damage not shown in the Dilapidation Report submitted to and approved by the Principal Certifying Authority prior to site works commencing, will be assumed to have been caused as a result of the site works undertaken with respect to the development and must be rectified at the applicant's expense.

# 5.12 Filling and Haulage- Completion Requirements

All filled areas are to be compacted in accordance with the requirements of *AS 3798-1996*. The submission of test results and appropriate documentation attesting to this requirement having been achieved is to be provided for the approval of the Accredited Certifier prior to issue of the Occupation/Subdivision Certificate.

## 5.13 Lighting Requirements

Prior to the issue of an Occupation Certificate, suitable lighting to car park areas shall be provided in accordance with the requirements of *AS/NZS 1158* and *AS/NZS 2890.1*.

# 5.14 Authorities – Compliance Requirements

Prior to the issue of an Occupation Certificate, the developer must comply with the requirements (including financial costs) of any relevant utility provider (for electricity, water, sewer, drainage, gas, telecommunications, roads, etc) in relation to any connections, works, repairs, relocation, replacements and/or adjustments to public infrastructure or services affected by the development.

- 5.15 All road signage and pavement marking works must be completed in accordance with the plans approved by the Local Traffic Committee and approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.
- 5.16 The provision of any additional civil works required to ensure satisfactory transitions to existing work as a result of work conditioned for the development works are to be approved by Council as the Roads Authority prior to issue of the Occupation Certificate.
- 5.17 All works within the public road must be completed in accordance with the approved Civil Works design drawings and Council's *Civil Works Specification Construction Guidelines 2018* and be approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.
- 5.18 The submission to the Council as the Roads Authority of certification from an Accredited Service Provider (ASP) that the street lighting installation has been completed in accordance with *AS/NZS 1158* and *AS 4282-1997*, the approved design drawings and will achieve a minimum of twenty (20) year design life. The certification must be received by Council prior to the issue of the Occupation Certificate.
- 5.19 The construction of the stormwater management system in accordance with the approved Stormwater Management Plan and *AS/NZS 3500.3-2018*. Certification of the construction by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.
- 5.20 The construction of stormwater drainage works external to the site and discharging into a public system or public land in accordance with the approved Stormwater Management Plan and Council's *Civil Works Specification Construction Guidelines 2018*. All works must be approved by Council under Section 68 of the *Local Government Act 1993* prior to issue of the Occupation Certificate. All other stormwater management works must be approved by the Principal Certifying Authority.
- 5.21 Prior to the issue of an Occupation Certificate, stormwater generated from roof areas of the building and any overflows from rain water tanks installed in conjunction with the development, is to be disposed of to the existing stormwater disposal system servicing the allotment.
- 5.22 Prior to the issue of the final Occupation Certificate, a 'Restriction on the Use of Land' shall be created on the title of the land restricting any alteration to the on-site stormwater detention system. The terms of the Restriction are to be prepared to Council's standard requirements. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.
- 5.23 Prior to the issue of the final Occupation Certificate, a 'Positive Covenant' shall be created on the title of the land requiring the registered proprietor to ensure the continued maintenance and performance of the on-site stormwater detention structure. The terms of the positive covenant are to be prepared to Council's standard

requirements. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.

- 5.24 Prior to the issue of the final Occupation Certificate, a 'Restriction on the Use of Land' shall be created on the title of the land prohibiting the registered proprietor from altering the overland stormwater drainage flow path, or erecting any structure within the overland stormwater drainage flow path, without the express written consent of Council. Central Coast Council shall be nominated as the party to release, vary or modify the restriction.
- 5.25 Creation of an easement over the trunk drainage line benefitting the adjoining properties connected to the trunk drainage line.
- 5.26 The construction of the carpark and accesses in accordance with *AS/NZS 2890*. Certification of the construction of the carpark and associated accesses by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.
- 5.27 Prior to the issue of an Occupation Certificate, all water and sewer works for the development must be approved by Council as the Water and Sewer Authority.
- 5.28 The obtaining of a satisfactory final plumbing & drainage inspection advice or 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 Occupation Certificate. All works for the development must be approved by Council prior to the issue of a Certificate of Compliance.
- 5.29 Prior to the issue of an Occupation Certificate, Works as Executed information for the development as identified in Council's *Civil Works Construction Specification* is to be submitted to and approved by Council.
- 5.30 Prior to the issue of any Occupation Certificate, land required for the roundabout on both sides of Bryant Drive is to be dedicated at no cost to Council as Public Road.

# 6. ONGOING

- 6.1 Use external lighting that minimises overspill into retained vegetated areas.
- 6.2 Implement the works specified in the approved Vegetation Management Plan. Progress reports are to be submitted to Council's Ecologist by the 30th June each year for a minimum of 5 years after the commencement of works.
- 6.3 Store all waste generated on the premises in a manner so that it does not pollute the environment.

**Revised Recommended Conditions of Consent** 

- 6.4 Transport all waste generated on the premises to a facility which is licensed to receive that material.
- 6.5 No obstructions to the wheel out of waste bins are permitted including grills, speed humps, barrier kerbs etc.
- 6.6 Comply with all commitments as detailed in the Waste Management Plan signed by Barker Ryan Stewart, dated 7 May 2020.
- 6.7 Locate the approved waste storage enclosure / area as indicated on Dwg No. DA100, Revision 6 dated 2 April 2020, Dwg No's. DA 101 and 102 Revision 7 dated 25 April 2020 and Dwg No. DA 103 Revision 6 dated 28 April 2020.
- 6.8 Do not place or store waste material, waste product or waste packaging outside the approved waste storage enclosure.
- 6.9 Waste bin storage area/s to be screened from public view.
- 6.10 Waste containers to be wheeled out on arrival of the commercial waste contractors for servicing and immediately returned to the screened waste bin storage area/s after servicing.
- 6.11 Load and unload delivery vehicles wholly within the site. Delivery vehicles must enter and exit the site in a forward direction.
- 6.12 Do not obstruct loading bays when not in use.
- 6.13 Ensure the garbage / recycling bins do not encroach on the car parking or vehicle manoeuvring areas.
- 6.14 Maintain the site landscaping for the life of the development.
- 6.15 Do not store goods, equipment, packaging material or machinery exposed outside the building so as to be visible from any public road or thoroughfare.
- 6.16 Do not erect advertising sign(s) on or in conjunction with the use and / or development without development consent unless the advertisement is exempt development or otherwise permitted without development consent.
- 6.17 Do not use any flashing light, animated or reflective or moving parts, iridescent or fluorescent colours or materials on the external surface of the advertising sign. The colours exhibited on the sign must be in keeping with the amenity of the surrounding area.
- 6.18 Maintain internal pavement and pavement marking.

2.1

### Attachment 4

- 6.19 The return and earn facility is limited in operation so that it is unavailable and does not have any collection or servicing during night time noise restriction hours of 10pm to 7am.
- 6.20 The Lake Road service truck access and access to the Lake Road car park for all vehicles is to be restricted so that access into the area via the boom gate is unavailable during night time noise restriction hours of 10pm to 7am.
- 6.21 The Lake Road service access shall be boom gated at both entry points and shall be available for delivery vehicles only. Restricted access (via boom gate) to the northern access is limited to staff vehicles and service trucks at all times. The boom gate is to be closed at all times and accessed electronically as required for the above identified vehicles.
- 6.22 The development is not to be serviced by truck deliveries or collections between the hours of 10pm and 7am.
- 6.23 Ongoing compliance with the recommendations of the approved acoustic report.
- 6.24 The operation of all plant (including rooftop and all mechanical ventilation) in combination is required to not exceed more than 5dB(A) above the background level during the day when measured at the site's boundaries and shall not exceed the background level at night (10.00pm 7.00am) when measured at the nearest affected residence and property boundary

## 6.25 Maintain CCTV

Maintain the installed system of Closed Circuit Television (CCTV) that monitors / records all public areas within the site.