Central Coast Council

Local Planning Panel Meeting

ATTACHMENTS PROVIDED UNDER SEPARATE COVER

Thursday 14 August 2025

Central Coast Council

ATTACHMENTS PROVIDED UNDER SEPARATE COVER to the

Local Planning Panel Meeting

To be held Remotely - Online,
2 Hely Street, Wyong
on Thursday 14 August 2025
Commencing at 12:00 PM

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Chapter 2.9 Industrial Development

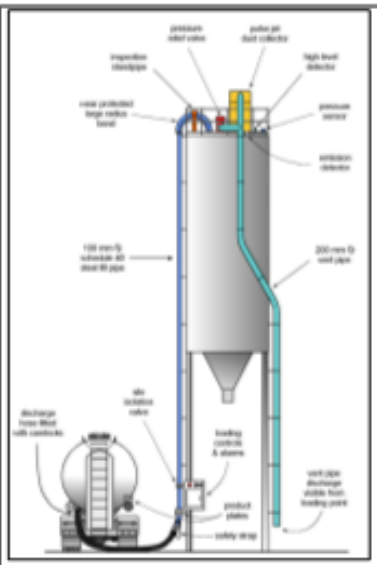
Requirement	Proposal	Complies?
2.9.1.2 Objectives of this Chapter		
To encourage employment generating development		
To ensure the efficient use of urban land by maximising the development potential of land and infrastructure.		
To promote quality industrial development by identifying Council's expectations and requirements relating to design and construction		
To control environmental impacts arising from industrial development		
2.9.2 Industrial Site Development Design Elements		
2.9.2.1 Floor Space Ratio		
All activities and processes associated with the industrial use of the site are accommodated on the site in buildings of acceptable bulk and scale.	The subject application does not involve the erection of a building.	N/A
Unless otherwise indicated on the Floor Space Ratio Map, a maximum Floor Space Ratio of 0.8:1 is applicable to industrial development on any land.	As above.	N/A
2.9.2.2 Site Coverage		
The extent of built and hardstand areas on site is to be minimised.	No additional hardstand is proposed under the subject application.	N/A
The development footprint is to be augmented by the design, implementation and maintenance of soft landscape works.	No additional landscaping works are proposed under the subject application.	N/A
2.9.2.3 Setbacks		
a. Front: i. 20m if on a State Road (Main or Arterial) ii. 10 metres on any other road, except: • Manns Road, West Gosford: 18m • Barralong Road, Erina: 15m • As otherwise specified in Part 6: Location Specific Development Provisions. A minimum five (5) metre wide landscaped area must be provided within the above setback except for vehicle access. Suitable landscaping would comprise tree planting incorporating mulch beds in preference to often neglected grass lawns and poorly maintained shrubs.	The proposal will not result in any changes to established setbacks within the site.	N/A
b. On corner lots, the setback to the other road shall be not less than 5 metres.	The subject site is not a corner allotment.	

	The proposal will not result in any changes to established setbacks within the site.	
c. Side and Rear: Nil, Provided: i. the proposed building meets the requirements of the BCA ii. any requirements for bushfire protection are met iii. any site specific requirements for setbacks and landscaping are met.	The proposal will not result in any changes to established setbacks within the site.	
d. Where side or rear setbacks are proposed or required: i. narrow and inaccessible setbacks are to be avoided. ii. other than area used specifically for access, side and rear setbacks are to be appropriately landscaped.	The proposal will not result in any changes to established setbacks within the site.	
e. Where a creek, river or lagoon adjoins or traverses the site, the building(s) are required to be set-back six (6) metres from the top of the bank.	The proposal will not result in any changes to established setbacks within the site.	
f. Where the industrial allotment adjoins or abuts rural, residential or open space land the development is not to be carried out within five (5) metres of the boundary of the allotment adjoining or abutting that land.	The proposal will not result in any changes to established setbacks within the site.	
2.9.2.4 Design and Appearance of Buildings		
a. A building with acceptable bulk and scale: i. does not excessively overshadow outdoor staff facilities of adjoining development; ii. retains sufficient area in the curtilage of the building(s) to cater for landscape works, setbacks, car parking and access, outdoor staff facilities, outdoor industrial activities, fire radiation zones and other ancillary uses; iii. takes account of the landform of the site and minimises cut, fill and retaining works; iv. takes account of the general bulk and scale of adjoining development; v. includes architectural treatment of the facades of the building(s) to diminish the apparent height and length of walls, particularly on elevations with street frontage.	No buildings are proposed under the subject application.	
b. The design of buildings is to be as architecturally attractive as possible by	No buildings are proposed under the subject application.	Y

selective use of materials of suitable texture and colour.	The batching silos are to be finished in muted natural tones.	
c. Buildings should be sited to avoid the destruction of any prominent landscape features, such as stands of large trees, etc	No buildings are proposed under the subject application.	
d. The building(s) should not project above the skyline and detract from the natural landscape when viewed from a distance.	No buildings are proposed under the subject application.	
e. Buildings should be constructed of high quality, durable, UV stabilised / resistant building materials.	No buildings are proposed under the subject application.	
f. The office component of industrial buildings is to be of masonry and glass construction.	No buildings are proposed under the subject application.	
g. The reflectivity index for glass used externally in construction of a building shall not exceed 20%.	No buildings are proposed under the subject application.	
h. Corrugated iron shall not be used for the predominant wall cladding under any circumstances.	No buildings are proposed under the subject application.	
I. All other metal cladding shall be suitably painted.	No buildings are proposed under the subject application.	
j. Long blank walls on street frontages are to be avoided. Where this is not possible, they are to be screened by appropriate landscaping or incorporate design features into the walls.	No buildings are proposed under the subject application.	
k. Important parts of the building such as corners, entrances, the building base and the roof should be articulated. Corners should not be unduly emphasised but should respond to their particular context and the characteristics of the two (2) streets they may address	No buildings are proposed under the subject application.	
l. No service plumbing or pipes, other than downpipes for the conveyance of roof water, shall be external to the building where visible from any public place	No buildings are proposed under the subject application.	
m. Applicants will be required to indicate on the Development Application plans, building materials and colours proposed. The development is encouraged to draw upon colours and materials that are sympathetic to the surrounding natural and cultural landscape.	No buildings are proposed under the subject application.	
n. Articulated parapets and cornice lines should emphasise the top of the building combining to create a cohesive design and an appropriate scale for the overall façade.	No buildings are proposed under the subject application.	
o. Air conditioning units, roof top pergolas, lift over-runs, telecommunications devices and other roof mounted equipment, which	No buildings are proposed under the subject application.	

protrude above the general roof line of the building, will not be permitted (refer s.2.25).		
2.9.2.5 Car Parking and Manoeuvring		
a. Developments are to comply with the relevant provisions of Chapter 2.13 – Transport and Parking.	Council's DCP provides the following parking rates relevant to the development: o Factory – 1 space per 100m2 GFA o Ancillary Office – 1 space per 40m2 GFA o Disabled Park Space – 1 per 4 to 100 car parking spaces Based on the DCP rates, a total of two on-site parking spaces are required for the development. The proposal provides 3 on-site car spaces and an accessible space in the southern carpark, 1 space in excess of DCP car parking requirements. There are areas available for any small overflow of light vehicle parking which may occur during large orders, and truck drivers are also able to park their cars adjacent to the agitators.	Y
2.9.2.6 Off-Street Loading/Unloading		
a. All loading and unloading is to take place within the curtilage of the building	Adequate arrangements for loading and unloading of all vehicles has been made and demonstrated through submission of swept path analysis for all required vehicles.	Y
b. Developments are to comply with the requirements identified within Chapter 2.13 – Transport and Parking and Australian Standards 2890.1 and 2890.2.	A review of the proposed car park design indicates that it would comply with the minimum design dimensions for a private car park provided within AS2890.1-2004.	Y
c. If loading areas are undercover, no stormwater pits shall be located in the area and all surface drainage shall be diverted away from the area.	Loading and unloading areas are not proposed within covered areas.	N/A
d. All loading and unloading facilities are to be screened from the street with suitable evergreen shrubs and trees (such screening to be indicated upon the submitted landscape plan) and are to be designed so as not to transmit excessive noise to adjacent residential areas.	Loading and unloading areas will be generally obscured from the street by other improvements (e.g buildings) within the site. Measures (e.g. acoustic wall) form part of the proposal to mitigate noise generated from the proposed operations. The effectiveness of such measures has been addressed in a Noise Impact Assessment.	Y

e. Loading/unloading and parking areas are to be separated so as not to cause conflict	The swept path analysis submitted demonstrates that adequate separation is provided to avoid conflict between loading areas and parking.	
f. If the proposal involves the loading/unloading of dangerous goods or hazardous materials, appropriate bunding must be provided.	Appropriate arrangements to allow for the safe unloading of goods associated with the batching process, including separation of clean and dirty water areas. Cement and Fly Ash will be transported to the site in enclosed trucks consistent with the image below:  Product will be transferred from the bulk carriers to the silo via an enclosed pipe system with camlocks, isolation valves and high level alarms and the like to prevent spillage of product onto hardstand areas or into the atmosphere. The handling of cement and fly ash will be generally in accordance with the industry reference Guidelines for Delivery of Bulk Cementitious Products to Premixed Concrete Plants (Cement Concrete and Aggregates Australia, 2018) The below schematic plan shows the typical components for a silo loading system.	Y

		
2.9.2.7 Flooding and Stormwater Management		
a. All developments shall comply with requirements detailed within Council's Civil Works Specification and Chapter 3.1 – Floodplain Management.	A detailed watercycle management plan has been submitted. The proposal is capable of satisfying Council's Civil Works Specifications. The site is not subjected to flooding.	Y
2.9.2.8 Earthworks and Retaining Walls		
a. Full details of any proposed cut and fill of the site are to be provided together with materials, height and drainage for any proposed retaining walls	No cut, fill or retaining is proposed under this application.	N/A
b. Retaining walls shall be constructed of brick or masonry.	No cut, fill or retaining is proposed under this application.	N/A
c. Retaining walls in excess of 900mm or those subject to significant loads shall be designed by a suitably qualified engineer.	No cut, fill or retaining is proposed under this application.	N/A
d. Retaining walls located on boundaries shall not undermine or adversely impact upon the structural integrity of existing retaining wall systems on adjacent sites.	No cut, fill or retaining is proposed under this application.	N/A
2.9.2.9 Building Over and Adjacent to Sewer Mains		
a. Where a proposed building is permitted to be located over a sewer main, the main must be encased with reinforced concrete. The encasement is to be in accordance with Council requirements, with the full cost of design and construction to be borne by the owner.	No works are proposed over or in the zone of influence of any sewer main.	N/A
b. Any footing to be located within the zone of influence of the sewer main trench will require a structural engineer's report. The building foundation system is to be	No works are proposed over or in the zone of influence of any sewer main.	N/A

designed so that pressure from the foundation is not transferred to the main. The design must also consider the effect of the sewer main and trench on the building foundations.		
c. Outbuildings of light construction erected on a concrete slab may be located over or near a sewer main. Such buildings may contain brickwork to a maximum height of one (1) metre.	No works are proposed over or in the zone of influence of any sewer main.	N/A
d. Concrete slab/footing construction of such outbuildings shall be in accordance with Council's Civil Works Specification.	No works are proposed over or in the zone of influence of any sewer main.	N/A
e. It is the responsibility of the owner or builder to determine the location of a sewer main, which may affect or be affected by the proposed building.	No works are proposed over or in the zone of influence of any sewer main.	N/A
f. All proposals shall comply with the requirements of the *Water Management Act 2000*.	No works are proposed over or in the zone of influence of any sewer main. No approval is required under the Water Management Act 2000.	N/A
2.9.2.10 Thematic Links		
a. Where the site is part of an industrial estate development, the design of the building(s), external fixtures (such as lighting), signs and landscaping matches or complements adjacent buildings and the overall theme of the estate.	The proposal is of a nature and scale that is compatible with the broader industrial aesthetic and established composition of land uses found in the locality.	N/A
2.9.2.11 Site Landscape Works		
a. Significant vegetation is to be identified by an appropriately qualified person and incorporated into the landscape design.	Landscaping works are not proposed or required as part of the subject application.	N/A
b. The development is designed to optimise retention and survival of significant, threatened and endangered vegetation.	The likely impacts of the proposal on nearby endangered ecological communities has been assessed in a flora and fauna assessment prepared by a suitably qualified consultant. The likely impacts will be minimal. As such the retention and survival of the EEC will not be compromised by the proposed development.	Y
c. Where possible bushland corridors are maintained or created across the estate.	The proposal will not impact on the maintenance or creation of bushland corridors.	N/A
d. Presentation of the building façade to the street is to be complemented by appropriate landscaping.	No building facades are proposed under the subject application.	N/A
e. Landscaping must be provided across the frontage of a site having a minimum depth of five (5) metres except in the case of corner allotments where the secondary street frontage shall have a minimum depth of two (2) metres. Earth mounding should be considered within this setback	Landscaping works are not proposed or required as part of the subject application	N/A

area. The earth mounding should not be steeper than a 1:3 grade in order for satisfactory maintenance of the mound.		
f. Planting within car park areas is designed to provide shade, ameliorate views of large expanses of paved areas and parked cars, and to identify entrances to car parks.	Landscaping works are not proposed or required as part of the subject application	N/A
g. A Landscape Design Report and associated plan(s), is to be prepared by a suitably qualified landscape	Landscaping works are not proposed or required as part of the subject application	N/A
h. Landscaping style and species selection should match or complement the landscaping theme approved for the estate.	Landscaping works are not proposed or required as part of the subject application	N/A
I. Landscape works within side and rear setbacks should be planted with trees of appropriate size at maturity to mitigate the scale of the industrial building(s). Trees should be selected from the Keystone Species List within Chapter 3.5 – Tree and Vegetation Management.	Landscaping works are not proposed or required as part of the subject application	N/A
j. The provision/retention of buffer areas adjacent to wetlands in accordance with the provisions of Chapter 5.46 – Northern Wetlands Management (where applicable) and the requirements of the Department of Planning and Environment in relation to *State Environmental Planning Policy (Resilience and Hazards) 2021.*	The likely impacts of the proposal on the nearby EEC (groundwater dependent ecosystem) has been assessed by a suitably qualified ecologist. The proposal is unlikely to have a significant impact on this EEC.	Y
2.9.2.12 Storage Areas		
a. External storage areas are located and/or screened so as not to be visible from outside the site particularly from areas accessible to the public, e.g., railway lines, roads and residential areas.	Material storage bins are situated to the rear of the site and are screened from the public domain.	Y
2.9.2.13 Design for Safety		
a. Clear sightlines are to be maintained over public and private spaces.	Works associated with the proposal will not obscure any sightlines between the public and private domain.	Y
b. There is effective lighting of key points.	A lighting plan has been submitted which indicates there will be sufficient levels of illumination across the site.	Y
c. Landscaping does not provide potential offenders with places to hide.	No landscaping works are proposed as part of the application.	N/A
d. Landscaping channels pedestrians into target areas.	No landscaping works are proposed as part of the application.	N/A
e. There is clear transition and boundaries between public and private spaces.	Measures such as fencing and existing elements, including driveway crossings and existing landscaped areas assist to define and distinguish the private and public rhelm.	Y

g. Appropriate security is provided as part of any development, which may include security cameras in parking areas and the provision of security guard patrols, to ensure safety of staff and the public.	Provision can be made for security cameras. Fencing and gates will provide an appropriate level of deterrence when the site is not operational and can be supplemented by security cameras.	Y
h. Care is taken to ensure that public spaces are not made into secluded spaces through gates and enclosures.	No public spaces will be affected by the proposal	N/A
2.9.2.14 Security Fencing		
a. Details of security fencing and other visible security devices are to be included in the Development Application	A fencing plan detailing heights and materials forms part of the application.	Y
b. Security fencing is to be integrated with the site landscaping and the overall design of the building.	Security fencing is proposed to the perimeter of the batching plant site.	Y
2.9.2.15 Lighting		
a. Lighting details shall be provided with the Development Application.	A lighting plan forms part of the application.	Y
b. Lighting is to be designed so as to not cause light spill onto adjoining sites.	The lighting plan generally indicates that lighting will be directed to spaces within the stie.	Y
c. Lighting powered by solar batteries or other renewable energy sources is encouraged.	N/A	Y
2.9.2.16 Site Signs		
a. Signs are used to clearly identify industrial premises without visually dominating the appearance of the development.	No signage is proposed under the current application.	N/A
b. Signs are to be constructed of high quality, durable materials.	No signage is proposed under the current application.	N/A
c. Any sign is to be contained wholly within the subject site.	No signage is proposed under the current application.	N/A
d. Sites are restricted to one sign identifying the name of the occupants and/or products manufactured or produced on site.	No signage is proposed under the current application.	N/A
e. All signs shall comply with the provisions of Chapter 2.15 – Signage and Advertising, and SEPP (Exempt and Complying Development Codes) 2008.	No signage is proposed under the current application.	N/A
f. Where factory units are proposed, each factory unit development should have a directory board within or near the entry landscape area listing each firm and their unit number within the complex.	No signage is proposed under the current application.	N/A
2.9.2.17 Encouraging Energy Efficient Construction and Development		
a. Developments are to be designed and constructed having regard to available energy efficient materials, lighting, heating and cooling.	Where appropriate the proposal allows for the reuse of materials (e.g.) water.	Y
b. New buildings are to be orientated as much as possible so that they make best	No new buildings are proposed.	N/A

use of solar energy and prevailing winds to lower heating and cooling costs.		
c. Glazing on north facing facades is encouraged to maximise solar access in winter and glazing to the west is to be minimised to reduce excessive summer solar access.	No new buildings are proposed.	N/A
d. Building materials and insulation are to be used which assist in thermal performance and maintain internal comfort levels.	No new buildings are proposed.	N/A
e. The use of top star rated energy smart rated appliances and lighting is required.	No new buildings are proposed.	N/A
f. It is advisable that larger developments (buildings exceeding 4,000m² in area) utilise renewable energy resources for all lighting on site and a statement is to be included with the development application addressing this requirement for the consideration of Council.	No new buildings are proposed.	N/A
2.9.2.18 Air Quality and Odour Control		
a. Industrial development likely to generate air pollution and odours is to be located away from residential areas.	The proposal is situated in an established industrial area separated from land zoned for residential purposes. The likely air quality impacts of the proposal in the nearest residential receivers has been evaluated in a comprehensive Air Quality Impact Assessment.	Y
b. Best practice techniques are used to reduce the level of risk and degree of impact at the point of production and the point of discharge.	The AQIA assesses and includes measures to mitigate emissions from the proposed batching activities. The consent will require the inclusion of such measures and other ongoing management arrangements to minimise the likelihood of any exceedances.	Y
c. Where the development proposed will release odours, an odour impact assessment shall be undertaken and submitted to council with the development application.	N/A	N/A
d. Where air polluting industries are permissible, no point of pollution discharge is within 300m of the nearest dwelling.	The nearest residential receiver is situated over 300m away on the eastern side of the Pacific Motorway.	Y
e. Industrial development shall comply with the "Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW", issued by the EPA in November 2006.	An evaluation of the proposed development against the relevant EPA guidelines has been provided in a comprehensive AQIA.	Y
f. Where the assessment indicates that a facility will exceed the odour performance criteria prescribed by the EPA, then	N/A	N/A

additional design, management and control strategies for odour mitigation are to be investigated by the proponent and incorporated within the development.		
2.9.2.19 Noise Generation		
a. Acoustic design principles are to be incorporated into the development design. In this regard, industrial noise shall be controlled so that it does not impact upon the amenity of the nearest residential dwelling.	A noise impact assessment has been prepared which consideres the likely impacts of the proposal on the nearest residential receivers. Mitigation measures are incorporated into the proposal to ensure the development does not cause unreasonable impacts on the amenity of nearby residential receivers.	Y
b. Industrial development shall comply with the requirements of the Noise Policy for Industry produced by the EPA in 2017.	The noise impact assessment has been prepared giving adequate regard to the applicable EPA guidelines.	Y
c. An Acoustic Report shall be submitted with the Development Application for any industrial development proposal located within 50 metres of a residential property boundary (other than a Manager's residence on an adjacent industrial site).	The nearest residential receiver is located over 300m to the east.	N/A
2.9.2.20 Fire Mitigation and Control		
a. All buildings on land adjoining bushland are designed and located to minimise potential damage due to bushfire.	No buildings are proposed under the subject application.	Y
b. Practical measures are implemented to achieve the appropriate level of fuel management and bushfire hazard reduction on the site.	The proposal will not contribute to fuel loads nor require any specific bushfire hazard reduction measures on site.	N/A
c. Access for emergency vehicles including fire trucks is provided and easily identified.	The swept path analysis submitted indicates adequate arrangements can be made for emergency vehicles to manoeuvre within the site.	Y
d. Water hydrants are clearly marked and accessible.	Provision is made for fire safety measures within the site including hydrants and hose reels	Y
e. Flammable and other materials likely to act as fire accelerants are located and stored in a manner to minimise the risk of contact with fire.	Provision can made for the storage of small quantities of flammable goods within the existing workshop building. Fuel storage on site no longer forms part of the proposal	Y
f. Flammable materials shall be stored in accordance with relevant guidelines produced by the Department of Planning and Infrastructure and WorkCover requirements.	The proposal is capable of complying with this requirement.	Y
2.9.2.21 Waste Minimisation and Disposal		
a. Waste storage and disposal is to be carried out in accordance with a site and use specific Waste Management Plan which shall be prepared and submitted with the Development Application.	Waste management arrangements shall be formalised as part of a comprehensive OEMP.	Y

b. The requirements for a Waste Management Plan are identified in Chapter 2.14 – Waste Management and Council's Waste Control Guidelines		
c. Reference should be made to "Specification for Supply of Recycled Material for Pavements, Earthworks and Drainage" produced by Department of Environment, Climate Change and Water in April 2010.	To be observed.	Y
2.9.2.22 Contaminated Sites		
a. The level of risk from potentially contaminated land or contaminated land is to be accurately determined and an appropriate treatment is determined and implemented in conjunction with	N/A	N/A
b. Any application for industrial development shall comply with the provisions of *State Environmental Planning Policy (Resilience and Hazards) 2021*.	Consideration has been given to SEPP (Resilience and Hazards) 2021 in the EIS.	
2.9.2.23 Disabled Access		
a. Access ways are provided to and within a building to enable people with disabilities safely, equitably and with dignity: i. to approach the building from the road boundary and from any car parking spaces associated with the building; and ii. to access work and public spaces and facilities for personal hygiene.	The proposal does not seek to alter existing arrangements or accessible facilities within the site.	Y
b. Car parking spaces for use by people with disabilities must be provided to the degree necessary to give equitable access for car parking and be designated and easy to find.	Accessible spaces are provided within the site. No changes are proposed as part of the subject application.	Y
c. Any inbuilt communication system for entry, information or for provision of service must be suitable for occupants who are hearing impaired.	No inbuild communication system is proposed.	N/A
d. Development is to comply with the relevant provisions of AS1428.1 – Design for access and mobility and the Disability (Access to Premises – Buildings) Standards 2010	The existing site arrangements have been designed and constructed to comply with AS1428.1	A
2.9.2.24 Communications Infrastructure		
a. Where possible, all electricity and telecommunications supply to the development and throughout the site is to be placed underground.	N/A	N/A
b. A precautionary approach is to be adopted to the placement of communication infrastructure having	N/A	N/A

regard to community concerns regarding the potential effect of Electro-magnetic Frequency Radiation		
c. Full details of all proposed communication infrastructure proposed to be located on the site or attached to buildings on the site shall be provided with the Development Application.	N/A	N/A
d. Communication infrastructure such as radio towers, satellite dishes and roof mounted equipment which protrude above the general roof line of the building shall not be permitted except where: i. the building is not visible from adjoining residential development or major viewing points such as major roads; ii. it is appropriately integrated into the design of the building so as not to detract from the appearance of the development or dominate the skyline; iii. any communications infrastructure which is proposed as Exempt or Complying Development should comply with State Environmental Planning Policy (Transport and Infrastructure) 2021.	N/A	N/A
2.9.2.25 Ancillary Retail	N/A	
2.9.2.26 Ancillary Residential	N/A	

ENVIRONMENTAL IMPACT STATEMENT

Proposed Concrete Batching Plant

53 Gindurra Road, Somersby

Lot 12 DP1189679

December 2022

Ref: 1110_EIS
Proposed Concrete Batching Plant

DOCUMENT STATUS

Issue	Date	Description	By
1	04/05/2022	Draft	LK
2	16/12/2022	Rev 1	LK
3	23/12/2022	Rev 2	AW
4			

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This document has been authorised by A Williams
Date 23/12/2022

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EXECUTIVE SUMMARY

Purpose of this Report

This Environmental Impact Statement (EIS) has been prepared by WPP Pty Limited (WPP) on behalf of ATB Morton Group (the proponent) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for a proposed concrete batching plant at 53 Gindurra Road Somersby.

The proposed concrete batching plant will process more than 30,000 tonnes of concrete per annum, and is therefore classed as 'Designated Development' under Clause 17 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2021* (EPA Regulation).

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 15 December 2020, and the SEARs (Ref 1537) for the proposed development were issued on 17 March 2021. This EIS has been prepared in accordance with the SEARs and meets the minimum form and content requirements in clauses 190 and 192 of Division 5 of the EPA Regulation.

The Site

The site is located at 53 Gindurra Road Somersby and is legally described as Lot 12 DP1189679 (the site). The site is located within the Somersby industrial precinct, in the Central Coast Local Government Area. It is immediately to the west of the Pacific Motorway with access available via Wisemans Ferry Road to the south-west.

Approval for two industrial workshops and ancillary offices, associated hardstand areas, parking, stormwater infrastructure and landscaping at the site was secured by way of a Complying Development Certificate (CDC60744/2021) issued on 12/03/2021. This approval process also included approval issued pursuant to Section 138 of the Roads Act 1993.

Project Overview

ATB Morton seeks approval for the construction and operation of a batching plant at the site. The new plant is proposed to be located on the approved hardstand areas in the rear (northern) part of the site.

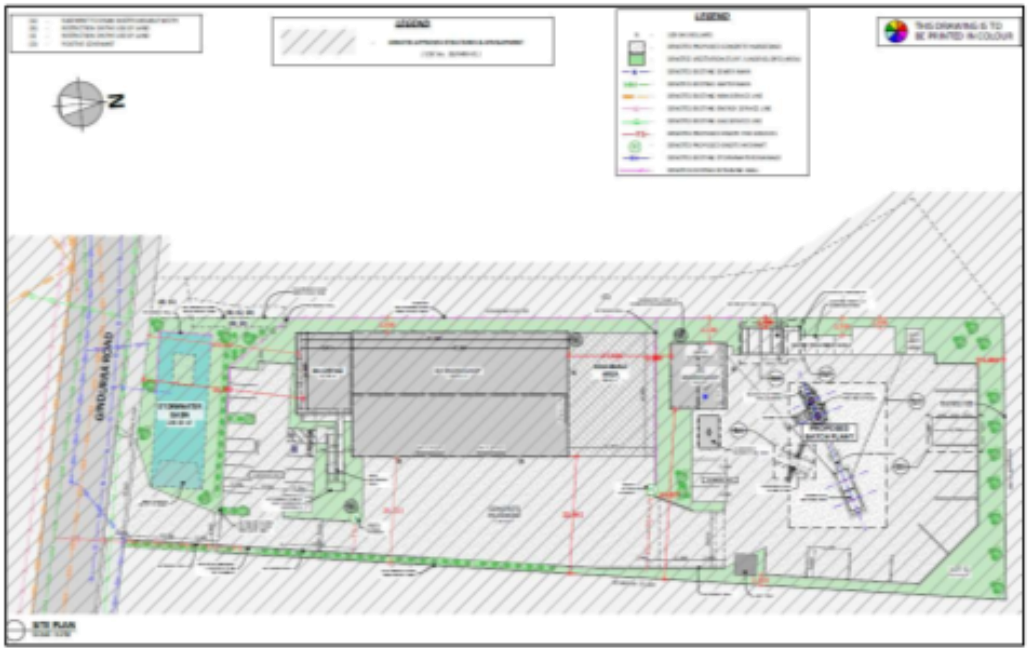
Accordingly, this application seeks approval for construction of a concrete batching plant with the capacity to produce more than 30,000 tonnes of concrete per anum (up to 47,000 tonnes or 20,000m3). The plant will generally operate 6:00am to 6:00pm, Monday to Friday, and 6:00am to 12:00pm on Saturdays. Raw materials would usually be received during weekday operations.

As the proposal will utilise existing site infrastructure, with the exception of installation of the plant (batching silos) and minor changes to the approved stormwater regime, no external construction works, earthworks or vegetation clearing is proposed.

The plant is to be operated by Redicrete Pty Ltd, a subsidiary company of the ATB Morton Group. Redicrete currently operates batching plants at Cameron Park, Tomago, Berkely Vale, Dungog and Branxton.

An extract of the proposed Site Plan is provided in **Figure 1** below, showing the location and indicative layout of the proposed batching plant.

Figure 1 - Proposed Site Plan (Source: ATB Morton)



Project Need and Alternatives

The primary need for the project is to meet the increasing demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney. The proposal would allow Redicrete to more efficiently service a greater catchment on the Central Coast than that afforded by its current capabilities at Berkeley Vale, some 25 minutes to the north.

While an alternative site option would potentially respond to the project need, desktop investigations of other sites available at the time the land was secured did not offer any discernible commercial advantages or lesser risk to the built and natural environment. The current site benefits from existing approval for industrial development, meaning the proposal can be undertaken with minimal upgrades or environmental impacts.

A 'do nothing' option was considered and immediately discounted as it would not adequately respond to the project need.

Site Suitability

The subject site is zoned for industrial development, and is located within an established industrial precinct in a strategically-identified growth corridor. The site has good access to the local and state road network, and is also suitably separated from sensitive residential receivers.

The proposal would utilise existing / approved infrastructure with only minor upgrades required. It would result in no changes to the existing environment in terms of disturbance footprint.

The proposal does not rely on impractical mitigation measures to maintain appropriate levels of amenity and minimise risk to the environment.

Planning Context

Section 5 of the EIS considers all applicable legislation in detail. In summary, the proposed development is consistent with the requirements of all relevant SEPPs. The Site is zoned IN1 General Industrial under *Central Coast Local Environmental Plan 2022*. The proposed development is permissible with consent and meets the objectives of the IN1 zone.

The proposal does not constitute integrated development, as provided in Section 4.46 of the EP&A Act.

Stakeholder Consultation

Section 6 of the EIS outlines all community and stakeholder consultation undertaken on behalf of the proponent to date. Should the project be approved, consultation with the community and identified stakeholders will continue in the lead up to, and during the construction of the project. This will ensure the stakeholders, including the community, remain informed of the project's progress and the outcomes of the development application.

Impact Assessment

Section 7 of the EIS provides an assessment of the environmental impacts of the project in accordance with the requirements of the SEARs, and sets out the undertakings made by the proponent to manage and minimise potential impacts arising from the development.

All measures that have been recommended as part of the detailed technical studies to mitigate potential environmental impacts have been incorporated into the proposed development, or are included in the Mitigation Measures at **Section 8.**

Conclusion and Justification

In considering economic and social impacts, including the principles of ecologically sustainable development, the proposed development is justified for the following reasons:

- approval of the proposal will help meet the increasing demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney.
- the site is suitable for the proposed use, and the proposal is in the public interest and consistent with the objects of the EP&A Act.
- the environmental and community impacts are considered to be minimal and the project benefits outweigh the negatives.

TERMS AND ACRONYMS

Term	Definition
AHIMS	Aboriginal Heritage Information Management System
Approved Methods	The Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales
ATBM	ATB Morton Pty Ltd
BAM	Biodiversity Assessment Methodology
BC Act	Biodiversity Conservation Act 2016
BoM	Bureau of Meteorology
Council	Central Coast Council
CBP	Concrete Batching Plant
CSEP	Community and Stakeholder Engagement Plan
CTMP	Construction Traffic Management Plan
DCP	Development Control Plan
DPE	Department of Planning and Environment
E&C SEPP	State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPA	Environmental Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPIs	Environmental Planning Instruments
EPL	Environment Protection Licence
ESD	Ecologically sustainable development
FTE	Full time equivalent
Heritage Act	Heritage Act 1977
ICNG	Interim Construction Noise Guideline
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
MNES	Matters of National Environmental Significance
NCA	Noise Catchment Area
NHVR	National Heavy Vehicle Regulator
NPI	Noise Policy for Industry
NPW Act	National Parks and Wildlife Act 1974
NSW	New South Wales
PM10	Particulate matter less than 10 microns in diameter
PM2.5	Particulate matter less than 2.5 microns in diameter
POEO Act	Protection of the Environment Operations Act 1997
RBL	Rating Background Level
RMS	Roads and Maritime Services
RNP	Road Noise Policy
SEARs	Secretary's Environmental Assessment Requirements
SEPP Planning Systems	State Environmental Planning Policy (Planning Systems) 2021
SEPP Resilience and Hazards	State Environmental Planning Policy (Resilience and Hazards) 2021
SEPP T&I	State Environmental Planning Policy (Transport and Infrastructure) 2021
SIP	Somersby Industrial Precinct
TSP	Total suspended particulates
WM Act	Water Management Act 2000

STATEMENT OF VALIDITY

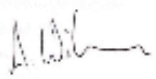
Development Application Details	
Applicant name	ATB Morton Pty Ltd
Applicant address	PO Box 186 HRMC NSW 2303
Land to be developed	53 Gindurra Road, Somersby Lot 12 DP1189679
Proposed development	Concrete Batching Plant
Prepared by	
	A.P. Williams Registered Planner Grad Dip Urban Management and Planning Registered Environmental Assessment Practitioner (62360)
Address	60 Denison Street Hamilton East NSW 2303
In respect of	Designated Development Application
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge: - it is in accordance with Clause 190, Division 5 of the Environmental Planning and Assessment Regulation 2021; - all available information that is relevant to the environmental assessment of the development to which the statement relates; and - the information contained in the statement is neither false nor misleading.
Signature	
Name	A.P. Williams, WPP Pty Ltd
Date	23/12/2022

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1 Introduction

1.1 Overview

Redicrete Pty Ltd (a subsidiary of the ATB Morton Group) is a leading producer of ready mixed concrete with a focus on the Lower Hunter and Central Coast regions of New South Wales. Redicrete operates four (4) concrete batching plants at Cameron Park, Tomago, Berkeley Vale, Dungog and Branxton. Parent company ATB Morton Pty Ltd is the owner of the subject site, described as Lot 12 in DP1189679, 53 Gindurra Road Somersby, and has secured planning approval by way of a complying development certificate (CDC) issued under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction of two industrial workshops with ancillary offices and hardstand areas (CDC20/0499-01). As of December 2022, construction works associated with the CDC were under way. The development to which this Environmental Impact Statement (EIS) relates to involves the use of part of the subject site for the production of concrete and construction of associated plant and infrastructure.

The proposed concrete batching plant will process up to 47,000 tonnes of concrete per annum, and is therefore classed as 'Designated Development' under Clause 17 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2021* (EPA Regulation). The proposal requires development consent from Central Coast Council (the consent authority) under Part 4, Division 4.3 of the EP&A Act.

This EIS has been prepared by WPP Pty Ltd on behalf of ATB Morton Pty Ltd. The EIS has been prepared in accordance with the relevant provisions of the EP&A Act and in response to the project specific Secretary's Environmental Assessment Requirements (SEARs) (1537) issued for the project on 17 March 2021.

1.2 The Applicant

The applicant for the development is ATB Morton Pty Ltd (ATBM).

Contact details for ATBM are:

ATB Morton Pty Ltd
PO Box 186
Hunter Regional Mail Centre NSW 2310
Head Office: 9 Old Punt Road Tomago NSW 2322

1.3 Document Purpose and Structure

This EIS assesses the impacts of the project pursuant to Part 4 of the EP&A Act. It has been prepared in accordance with the requirements of Part 4 of the EP&A Act and the SEARs.

The EIS provides:

- Details on the project, including need and alternatives considered
- An explanation of relevant legislation

- An assessment of the potential key environmental impacts of the project in accordance with the SEARs
- An outline of Redicrete's commitments concerning measures to mitigate and manage potential environmental impacts

The structure of the EIS is outlined below:

- **1. Introduction**
  - An overview of the project and applicant.
  - An overview of the project approval process.
  - An outline of the document purpose and structure.
- **2. Site setting and context**
  - A description of the site location, existing site conditions, surrounding land use and environmental setting relevant to the project.
  - An overview of the history of planning approvals relevant to the site and the current approved site operations.
- **3. Project need and alternatives**
  - An explanation of the need for the project.
  - An overview of the project alternatives.
- **4. Project description**
  - A description of the construction and operational works proposed for the project.
  - An outline of the project's capital investment value.
- **5. Legislative framework**
  - An explanation of the planning approval framework relevant to the project, including the environmental planning instruments and other State and Commonwealth legislation relevant to the project.
  - An overview of how the SEARs for the project have been addressed within this EIS.
- **6. Stakeholder and community consultation**
  - An outline of the stakeholder and community consultation process.
  - A summary of the issues raised during consultation.
  - A description of future consultation activities for the project.
- **7. Environmental impact assessment**
  - A summary of the identified environmental impacts from the project, including impacts to transport and traffic, biodiversity, bushfire, waste management, hazard and risk, air quality, noise and vibration, soil and water, visual amenity, Aboriginal cultural heritage, and non indigenous heritage.
- **8. Environmental management and mitigation**
  - An outline of the mitigation and management measures proposed to avoid, minimise or offset the identified environmental impacts from the project.
- **9. Conclusion and justification**
  - A detailed justification for the project and a conclusion regarding the findings of the environmental impact assessments completed for the project.
- **Appendices**

1.4 Limitations

This report has been prepared by WPP and may only be used and relied on by ATB Morton Pty Ltd for the purpose agreed between WPP and the ATB Morton Pty Ltd as set out in Section 1 of this report.

WPP otherwise disclaims responsibility to any person other than ATB Morton Pty Ltd arising in connection with this report. WPP also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by WPP in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. WPP has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by WPP described in this report. WPP disclaims liability arising from any of the assumptions being incorrect.

2 Site Setting and Context

2.1 Site Location

The site is located in the Central Coast Local Government Area, approximately 90km from Newcastle, 80km from Sydney, 25km from Wyong and 6km from Gosford by road.

The site has access to the Pacific Motorway and the Pacific Highway via Wisemans Ferry Road to the south-west. The Pacific Motorway provides further connection to Newcastle and Sydney, while the Pacific Highway provides connection to the Gosford town centre to the south-east.

The site's regional context is shown in **Figure 2** below.

Figure 2 - Regional Context



The site is within the Somersby industrial precinct (SIP), which comprises approximately 300 hectares of industrial zoned land bisected by the Pacific Motorway. The SIP accommodates a range of industrial land uses and vegetated conservation areas. A range of industries have established within the SIP including but not limited to:

- A Concrete Batching Plant;
- Resource Recovery Facilities;
- Building Product Manufacturing (CSR Hebel, Polytec);
- Laboratories;
- Food Production and Distribution;
- Transport Depots;
- Plant and Equipment Hire; and
- Joinery Workshops.

The closest residential receiver is located along Wisesmans Ferry Road, approximately 400m to the north-west of the site. The nearest receiver is 6 Chivers Road, to the immediate west of the site. While this site has been developed for industrial purposes, it is a workplace and therefore the operations of the CBP have the potential to impact on the amenity of the work environment at this address.

The site's local context is shown in **Figure 3** while the location of residential receivers relative to the site is shown in **Figure 4**.

Figure 3 - Local Context (Source: Sixmaps)



Figure 4 - Location of Residential Receivers (source: Advitech / Google Maps 2022)



2.2 Site Conditions

The site comprises of a single allotment described as Lot 12 DP1189679 (the site). The site is generally rectangular in shape, has an area of 8,418m2 and frontage to Gindurra Road of approximately 45m. It is bounded by a large undeveloped and vegetated allotment to the north and east, Gindurra Road to the south, and existing industrial warehouse development to the west. Light industrial units are found to the immediate south of the site, also fronting Gindurra Road.

Construction works approved under CDC 20/4099-01 are under way, inclusive of:

- Civil works,
- Stormwater infrastructure,
- Hardstand areas, buildings,
- Car parking areas,
- Landscaped areas,
- A driveway crossing to Gindurra Road; and
- Service connections.

Figure 5 provides details on the site attributes prior to the commencement of construction works, while **Figure 6** details the general arrangements approved under CDC 20/4099-01. ATB Morton anticipates the works approved under CDC 20/4099-01 will be complete in the first half of 2023, in advance of the construction or operation of the concrete batching plant. The topographical and detail survey can be found at **Appendix 2**, while a copy of CDC 20/4099-01 is provided at **Appendix 4**. A copy of the Deposited Plan (DP1189679) is provided at **Appendix 3**, which details the site

boundaries along with the location of restrictions on the use of the land and location of easements to drain water which benefit Lot 12.

Figure 5 - Pre Development Topographical Survey (Source: Earth Surveying)

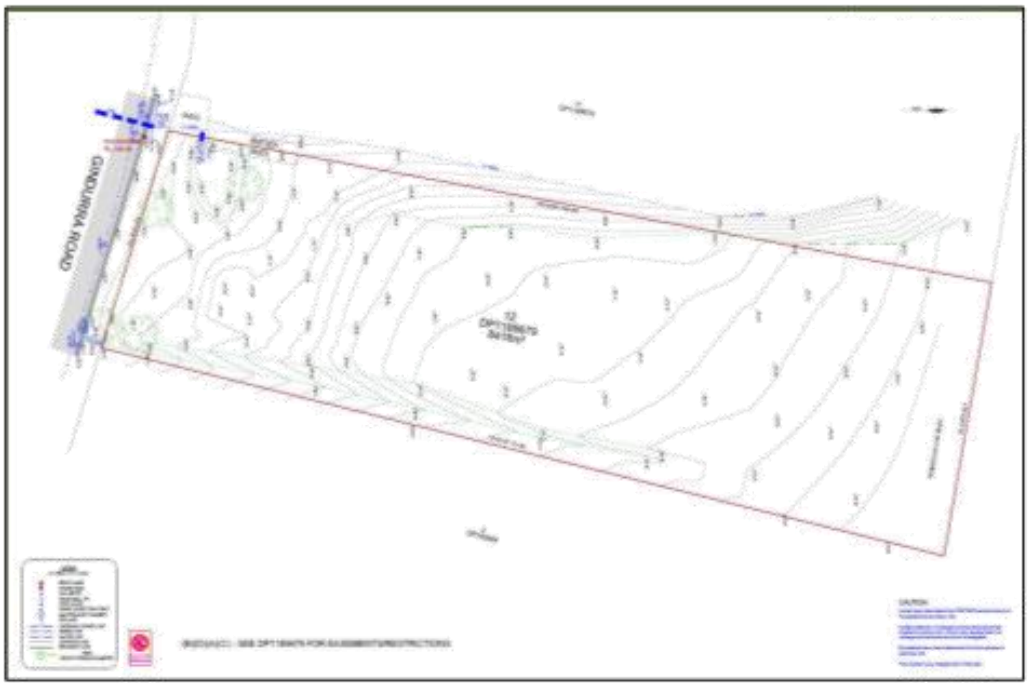


Figure 6 - Site Plan and General Arrangements - CDC Approved Works (Source: ATB Morton)

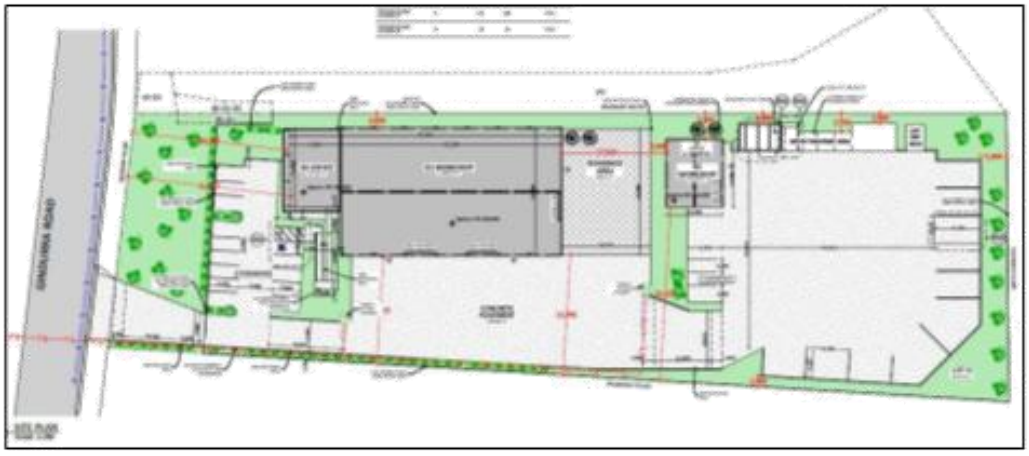


Figure 7 - Aerial Image - Lot 12 DP1189679 (Source: SixMaps)



2.3 Environmental Setting

A desktop analysis of Council / NSW Department of Planning records indicates the site:

- Is mapped as bushfire prone land (predominately comprising 'Vegetation Buffer');
- Is not mapped as containing Acid Sulfate Soils;
- Is not affected by flooding nor affected by flood related development controls;
- Is not within the NSW coastal zone;
- Does not contain any water courses;
- Is not a listed heritage item or located in a heritage conservation area, or in proximity to a heritage item;
- Is not affected by any reservation for acquisition;
- Is not within a mine subsidence district;
- A review of the EPA Contaminated Lands Register did not identify any historical activities or notified sites likely to have resulted in soil or groundwater contamination (refer to **Appendix 19**);
- Does not contain any recorded Aboriginal sites or places;
- Is not identified on the Biodiversity Values Map (**Appendix 20**) as containing land with high biodiversity value that is particularly sensitive to impacts from development and clearing. Further, no clearing of native vegetation is required to facilitate the proposal and the proposal does not exceed BOS thresholds; and

- Is not affected by any services, infrastructure or easements which would preclude development.

A description of relevant environmental characteristics is provided below:

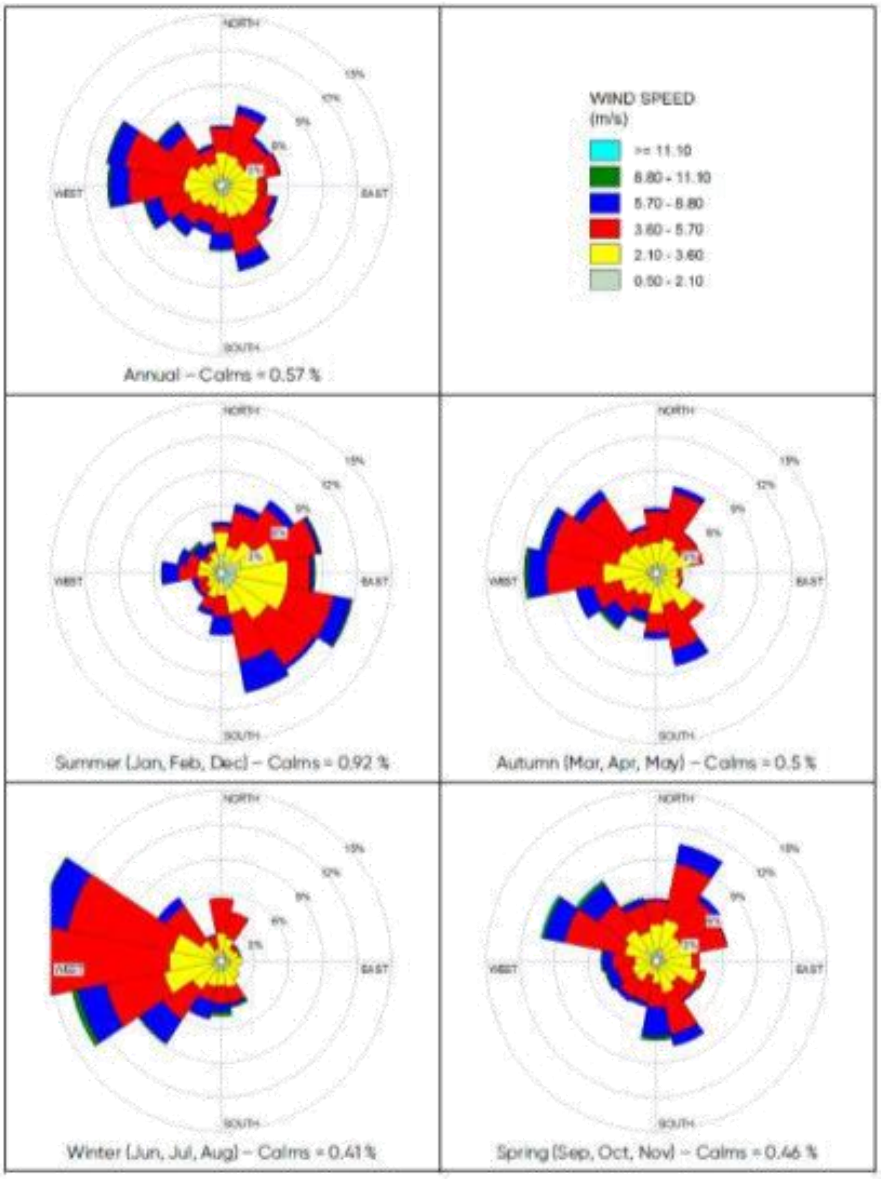
2.3.1 Local Climate

Historical Bureau of Meteorology (BOM) climate data taken from the Gosford Automatic Weather Station (approximately 6.5km to the east of the site) between 2016 and 2020 provides an overview of local climatic conditions and is provided in **Table 1** below, while **Figure 8** provides windrose Data for 2020, a year with least deviation from long term average climate statistics (Advitech 2022):

Table 1 - Climate Data History for Gosford (source: Advitech / BoM)

Year	Temperature (°C)				Rainfall (mm)	
	Maximum year average	Difference from long term average	Minimum year average	Difference from long term average	Yearly total	Percentage of long-term average
2016	23.8	0.5	13.5	0.3	1305	99 %
2017	23.7	0.4	13.6	0.4	1124	86 %
2018	23.3	0	13.1	-0.1	1126	86 %
2019	24.0	0.7	13.0	-0.2	1087	83 %
2020	22.9	-0.4	13.3	0.1	1328	101 %

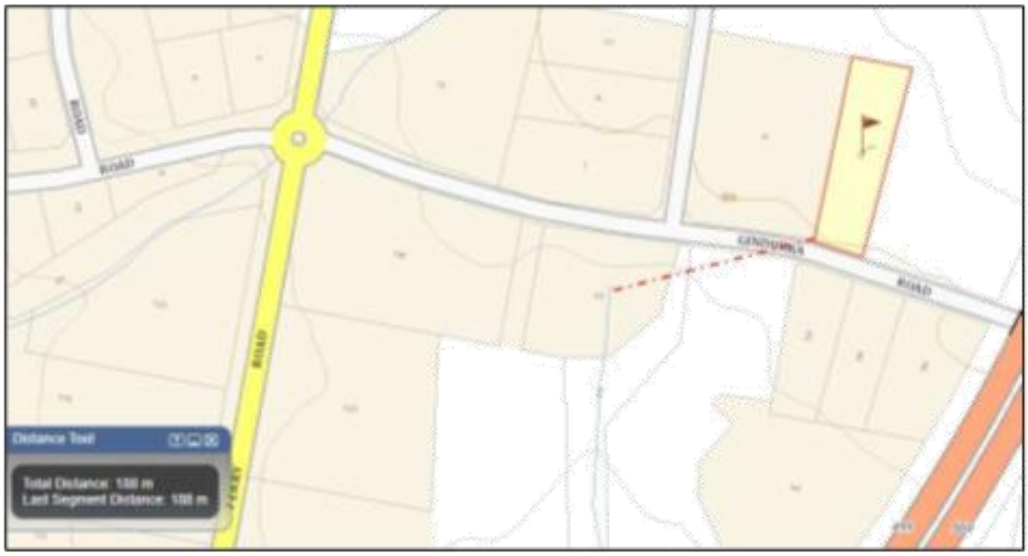
Figure 8 - Wind Rose - (source: Advitech / Calmet)



2.3.2 Catchment and Watercourses

The site generally falls from the north west to the south western corner. As detailed in **Figure 9**, the nearest mapped watercourse is found approximately 188 metres to the south west of the site, which is likely to receive runoff / stormwater from the subject site.

Figure 9 - Location of Nearest Water Course (source: Sixmaps)



An analysis of the catchment utilising Lidar topographical data for the locality (2011) indicates an upstream catchment (inclusive of the site) of 6.64 hectares, with two discharge points from the site (**Figure 10**).

Figure 10 - Local Catchment Extent (source: SLR 2022)

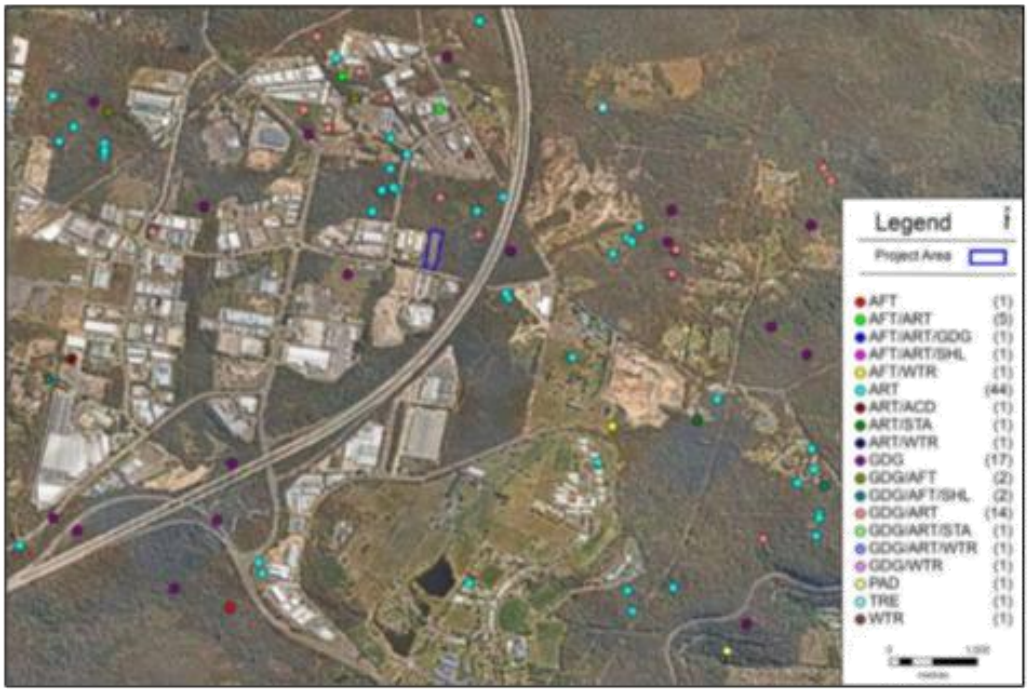


Geotechnical investigations undertaken by Network Geotechnics (2015) indicate groundwater depths of 0.9 – 1.0m below the existing surface.

2.3.3 Aboriginal Heritage

While there is no record of the site containing any registered AHIMS sites, 97 known Aboriginal sites (McCardle 2022) have been recorded within 1.5km of the site. The location of the known sites relative to the subject site are shown in **Figure 11**.

Figure 11 - AHIMS recorded sites (source: McArdle 2022)



2.3.4 Ecology

Historical imagery (**Figures 12** and **13**) (NSW Government 2022) indicates native vegetation was cleared from the site prior to 1966 and the site has generally been retained as 'managed land' since this time.

Figure 12 - Historical Aerial Image - 1966 (source: NSW Government)

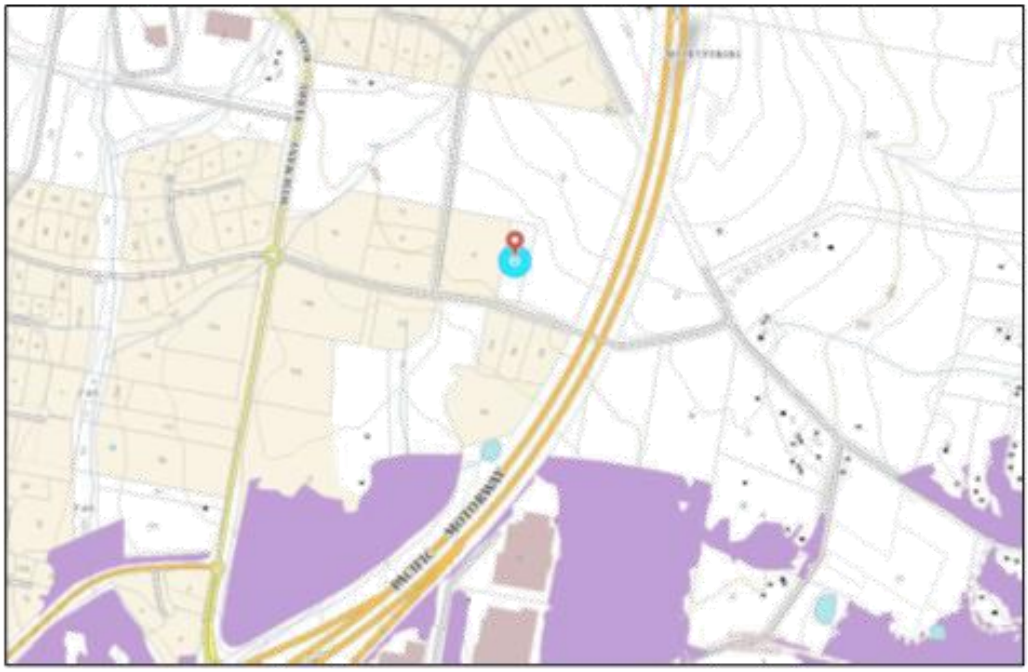


Figure 13 - Aerial Image - 1976 (source: NSW Government)



As provided in **Figure 14**, the site is not, pursuant to Part 7 of the *Biodiversity Conservation Act 2016*, mapped as land with high biodiversity value, with the nearest found approximately 500 metres to the south.

Figure 14 - Biodiversity Values Map (source: NSW Environment & Heritage)



Clause 7.3(3) of the *Biodiversity Conservation Regulation 2017* describes types of land the Environment Agency Head can include on the Biodiversity Map. This includes:

- *coastal wetlands and littoral rainforest mapped under the State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP)#;*
- *core koala habitat identified in a plan of management under State Environmental Planning Policy No 44 – Koala Habitat Protection (SEPP 44)*;*
- *declared Ramsar wetlands defined by the Environment Protection and Biodiversity Conservation Act 1999;*
- *land containing threatened species or threatened ecological communities identified as potential serious and irreversible impacts (SAII) under section 6.5 of the BC Act;*
- *biodiverse riparian land;*
- *high conservation value grasslands or groundcover;*
- *old growth forest identified in mapping developed under the National Forests Policy Statement but excluding areas not meeting the criteria published jointly by the Minister of the Environment and the Minister for Primary Industries;*
- *rainforest identified in mapping developed under the National Forests Policy Statement but excluding areas not meeting the criteria published jointly by the Minister for Energy and Environment and the Minister for Primary Industries;*
- *declared areas of outstanding biodiversity value;*
- *council nominated areas with connectivity or threatened species habitat that the Minister for Energy and Environment considers will conserve biodiversity at bioregional or state scale;*

- *any other land that in the opinion of the Environment Agency Head is of sufficient biodiversity value to be included.*

(https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/when-does-bos-apply/biodiversity-values-map)

#Now State Environmental Planning Policy (Resilience and Hazards) 2021
**Now State Environmental Planning Policy (Biodiversity and Conservation) 2021*

Notwithstanding, Council records indicate land to the east of the site is mapped as containing vegetation type 'Sandstone Hanging Swamp' as noted in **Figure 15**. Council records provided in the pre lodgement meeting (**Appendix 18**) held on 20 April 2022 observe that:

> *The land surrounding the site to the east and north has high biodiversity value. The Endangered Ecological Community (EEC), Coastal Upland Swamp is mapped and appears present along the eastern boundary of the subject site.*
>
> *The proposal has the potential to impact the Coastal Upland Swamp EEC on the adjoining Lot to the east and north. The EEC is groundwater dependent, hydrological regimes must be maintained including water quality.*

Figure 15 - CCC Vegetation Mapping (source: Central Coast Council)



2.3.5 Bushfire

As provided in **Figure 16,** all of the site is mapped as land that is bushfire prone land, being recorded as bush fire prone land on a certified map.

Figure 16 - Bushfire Prone Land Map (source: NSW Planning Portal)



2.4 Current and Historical Approvals

The subject allotment was created in 2012 through subdivision from adjoining 6 Chivers Road Somersby.

Approval for two industrial workshops and ancillary offices, associated hardstand areas, parking, stormwater infrastructure and landscaping at the site was secured by way of a Complying Development Certificate (CDC60744/2021) issued on 12/03/2021. A copy of the CDC and CDC approved site plan are provided at **Appendix 4**.

The approved development includes an on-site dual-purpose detention / bioretention basin, located in the south eastern corner of the site, designed to capture runoff from the site prior to discharging at the existing primary discharge location into the adjacent open channel. The approved basin encompasses a footprint of approximately 300m2 and a storage capacity of approximately 220m3. It includes a 24m2 bioretention footprint to provide filtration of site stormwater runoff.

We note this approvals process also included approval issued pursuant to Section 138 of the Roads Act 1993 for the driveway crossing and a permit issued pursuant to Section 307 of the Water Management Act 2000 for water and sewer connections.

3 Project Need and Alternatives

3.1 Project Need and Objectives

Redicrete is a leading producer and supplier of concrete across the Lower Hunter Region and Central Coast. Redicrete has established and operates concrete batching plants (CBPs) at Cameron Park, Tomago, Branxton and Dungog in the Hunter Region and Berkeley Vale on the Central Coast. Concrete is supplied by Redicrete and used in a range of industrial, commercial, residential and civil / infrastructure projects along with the manufacture of precast concrete products at Tomago (e.g. kerb inlet pits, culverts and the like).

Approval of the project would allow Redicrete to meet the increased demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney.

Concrete is a time perishable product. As such, it is vital that CBPs are located centrally, as close to the market they supply as possible. Similarly, close proximity to the residential and commercial areas requiring concrete reduces transport distances, costs and diesel use and provides for a more sustainable product.

The proposal would allow Redicrete to more efficiently service a greater catchment on the Central Coast than that afforded by its current capabilities at Berkeley Vale, some 25 minutes to the north.

3.2 Consideration of Alternative Options

3.2.1 Do Nothing Option

The 'do nothing' option was considered and immediately discounted, for the following reasons:

- The existing network of Redicrete CBPs are either nearing production capacity or are a substantial distance to Somersby, hindering access to concrete by developments in the area, in particular Gosford, and the 'lower' Central Coast;
- There would be a substantial traffic haul required to transport concrete from other CBPs and potential quality implications due to distance required to transport the concrete;
- The economic benefits of the project including direct employment opportunities and indirect benefits to other local businesses would not be realised;
- The do nothing option would not adequately respond to the project need identified in Section 3.1.

3.2.2 Alternative Site Options

While an alternative site option would potentially respond to the project need, desktop investigations of other sites available at the time the land was secured did not offer any discernible commercial advantages or lesser risk to the built and natural environment. The current site benefits from existing approval for industrial development, meaning the proposal can be undertaken with minimal upgrades.

3.2.3 Establish New Batching Plant (Preferred Option)

Construction of the CBP at the site was selected as the preferred option as:

- It would utilise existing / approved infrastructure without the need for major upgrades.
- The existing site is preferentially located within an industrial area and is unlikely to result in new environmental impacts to surrounding receivers.
- The closest residential receiver is located along Wisesmans Ferry Road, approximately 400m to the north-west of the site, and buffered by existing industrial development and dense vegetation.
- Nearby workplace receivers are industrial or warehousing;
- The existing site easily accesses residential and commercial areas and key construction sites.
- It would result in no changes to the existing environment in terms of disturbance footprint.
- It would adequately respond to the project need and allow Redicrete to meet the increased demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney.

4 Proposed Development

4.1 Project Overview

This section of the report provides a detailed description of the proposed development. Detailed plans of the proposal are provided at **Appendix 5**.

This designated development application seeks consent for the construction and operation of a concrete batching facility at the site, which is intended to process more than 30,000 tonnes of concrete per annum (up to 47,000 tonnes or 20,000m3). The plant will generally operate between 6:00am to 6:00pm, Monday to Friday, and 6:00am to 12:00pm on Saturdays. Raw materials would usually be received during weekday operations.

The new plant is proposed to be located on the approved hardstand areas in the rear (northern) part of the site. It will comprise of a 'drive thru' area, two overhead cement silos with access platform and ladders, aggregate material bins, feed conveyor and dual stump stand.

The plant will be serviced by:

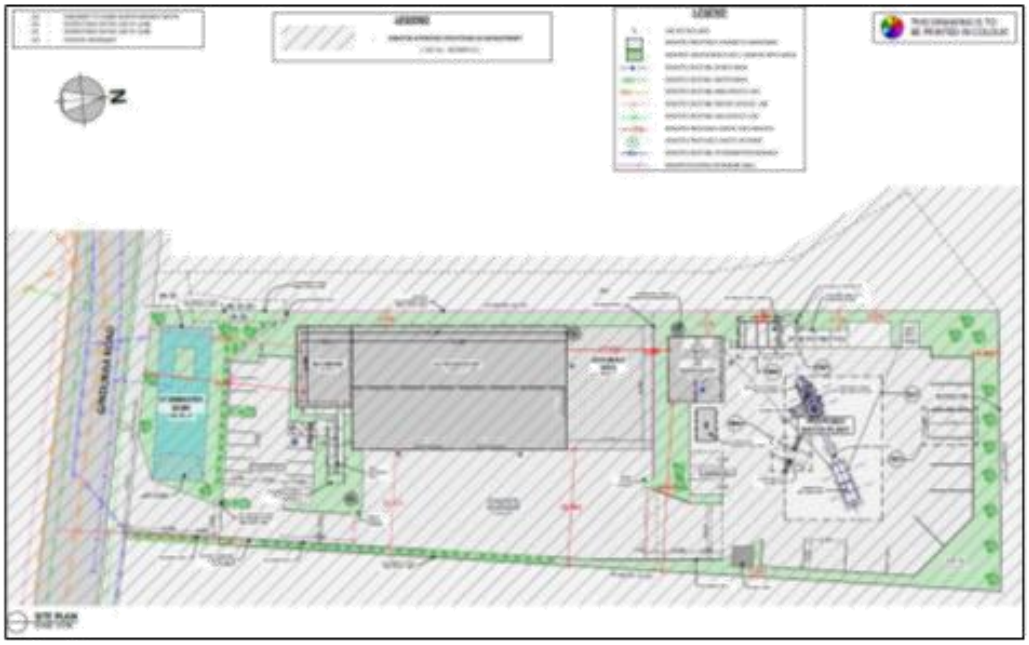
- Concrete hardstand area with paved vehicular access from Gindurra Road (suitable for access by semi trailer and heavy rigid vehicles);
- three parking spaces;
- external material storage bays;
- 10,000L self bunded fuel tank;
- water treatment area (comprising water settling tanks, clean out wedge pit and covered washout aggregate bins);
- dirt grit area; and
- 93.42m2 ancillary maintenance / administration space including an operations control room and staff amenities (approved Workshop B2).

As the proposal will utilise existing site infrastructure, with the exception of construction and installation of the plant (batching silos) and minor changes to the approved stormwater regime, no external construction works, earthworks or vegetation clearing is proposed.

The plant is to be operated by Redicrete Pty Ltd, a subsidiary company of the ATB Morton Group. Redicrete currently operates batching plants at Cameron Park, Tomago, Berkely Vale, Branxton and Dungog.

An extract of the proposed Site Plan is provided in **Figure 177** below, showing the location and indicative layout of the proposed batching plant.

Figure 17 - Proposed Site Plan (Source: ATB Morton)



4.2 Construction of the Project

4.2.1 Timing

As of December 2022, construction works associated with the approved CDC were under way, inclusive of:

- Civil works,
- Stormwater infrastructure,
- Hardstand areas, buildings,
- Car parking areas,
- Landscaped areas,
- A driveway crossing to Gindurra Road; and
- Service connections.

ATB Morton anticipates the works approved under CDC 20/4099-01 will be complete in the first half of 2023, in advance of the construction or operation of the concrete batching plant. Given the minor nature of the works proposed under this application, construction of the concrete batching plant is expected to take approximately 100 days (including commissioning).

4.2.2 Construction Hours

It is anticipated that construction will be carried out during the following hours:

- Monday to Friday: 7:00 am to 6:00 pm
- Saturday: 8:00 am to 6:00 pm
- Sundays and public holidays: no work

4.2.3 Construction Workforce

Construction will require a maximum of 5 construction workers on site at any one time.

4.2.4 Construction Traffic

It is estimated that the construction would involve an average of 3 truck movements per day plus 12 additional traffic movements associated with construction employees during the construction period.

4.2.5 Construction Plant and Equipment

A range of plant and equipment will be used during construction. An indicative list is provided below:

- Delivery vehicles, including trucks
- Workers' transport vehicles
- Crane;
- Excavator;
- Concrete trucks;
- Hand tools (motorised and pneumatic)

4.3 Operation of the Project

4.3.1 Concrete Batching Operations

Generally, concrete batching operations at the site will consist of:

- Deliveries of sand, and aggregate received into external material storage bays by semi trailer
- Deliveries of cement and fly ash received into external material storage bays by semi trailer
- Use of a front end loader to load the components of concrete into the sand and aggregate weigh batch hopper, which will deliver them to the agitator by conveyer
- The other components of concrete (cement and fly ash) are loaded into a mixer truck (single unit truck / bus) located under the silos
- Water is metered and discharged into the mixer truck
- Truck drives away, mixing concrete en-route to delivery site

The plant will be supported by a perimeter dust suppression system and other equipment such as sweepers to mitigate dust.

Raw materials, coarse aggregate (gravel), fine aggregate (sand) and cement, will generally be sourced from suppliers in the Central Coast, Hunter and Sydney regions and would usually be received during weekday operations.

Approximately 130 concrete agitator (heavy rigid) and 25 raw material delivery vehicles (semi trailer) would access the site per week. Truck movements are anticipated to occur consistently throughout the day.

Finished concrete product will be delivered to current and future markets in the Central Coast, Hunter and Sydney regions via the Pacific Motorway.

4.3.2 Hours of Operation

The plant will generally operate 6:00am to 6:00pm, Monday to Friday, and 6:00am to 12:00pm on Saturdays. Raw materials would usually be scheduled and received during weekday operations.

4.3.3 Site Personnel

The concrete batching facility will employ a total of 9 employees on-site at any time including 1 - 2 plant supervisors, 3 concrete batchers and 4 delivery drivers.

4.3.4 Annual Production

The proposed concrete batching facility is intended to process more than 30,000 tonnes of concrete per annum (up to 47,000 tonnes or 20,000m3).

4.3.5 Stormwater Management System

The proposed plant is contained wholly within the approved northern hardstand area of the site, therefore will not cause an increase in impervious area compared to the approved development. Runoff from the batch plant will drain west into the approved water treatment area. This area consists of a clean out wedge pit and water settling tanks. Runoff will flow into the wedge pit where initial settling of suspended solids will occur. Overflows from the wedge pit will discharge into the proprietary sub-surface water settling tanks for storage and re-use. It is proposed to direct overflows

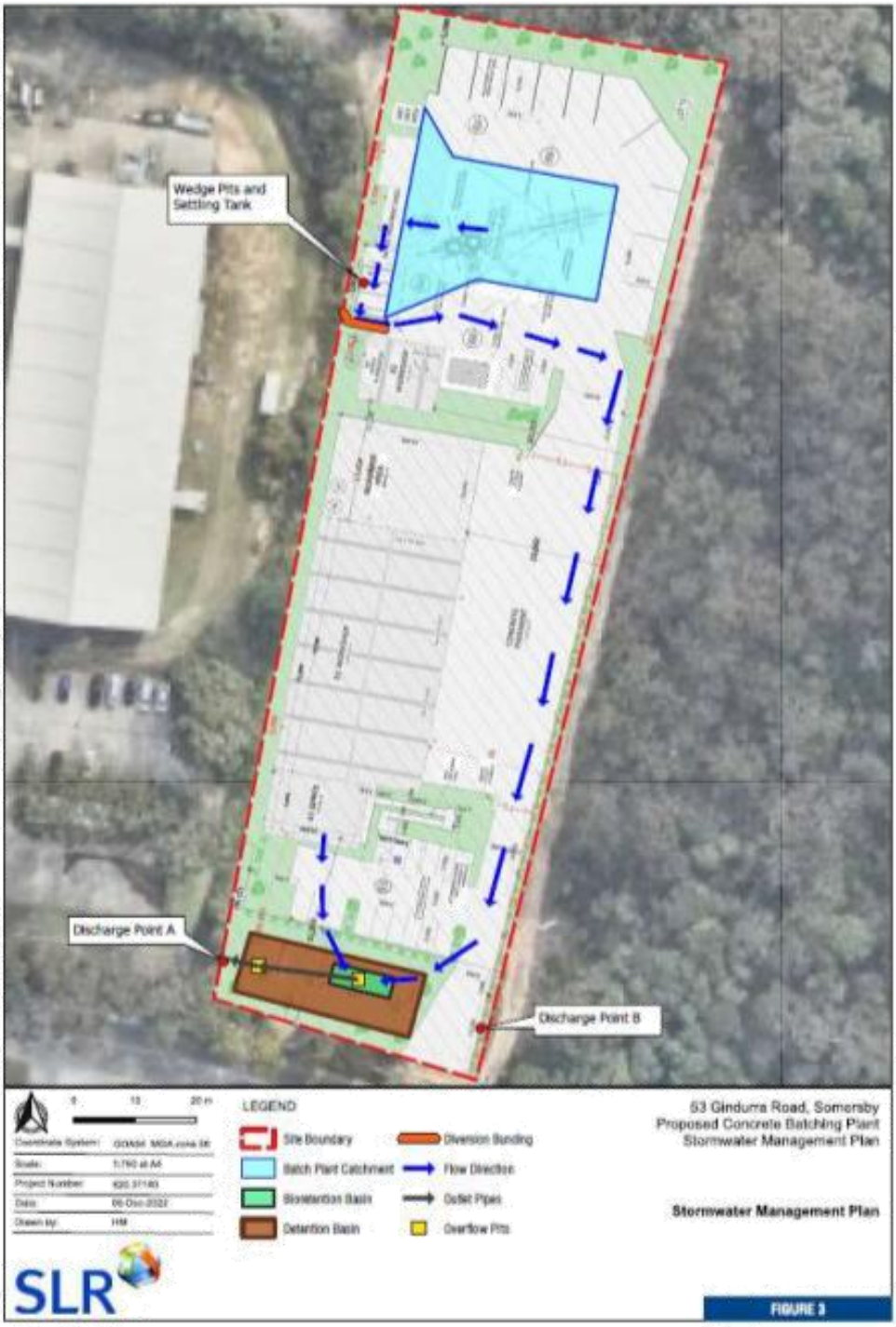
from the settling tanks to the ground surface immediately south of the tanks, where minor bunding will be incorporated to divert flows eastward into the hardstand area. Once the overflows enter the hardstand area, flows will fall to the approved grit trap located on the eastern site boundary before being conveyed to the approved detention / bioretention basin either via the approved drainage network, or as overland flow if the network capacity is exceeded.

The following minor changes to the configuration of the CDC approved detention / bioretention basin are proposed:

- Minimum top-of-bank elevation of 197.5m AHD;
- Overflow weir at the western end of the basin with crest level of 197.0m AHD and width of 8m;
- Bioretention basin to be located in the detention basin north-east corner with configuration of:
    - filter media surface area 35m2;
    - Filter media surface elevation 196.20m AHD;
    - Overflow inlet pit elevation 196.40m AHD;
    - Extended detention depth 200 mm to be achieved with inclusion of concrete nib wall around filter media area; and
    - 150 mm drainage outlet pipe with upstream invert elevation 195.60m AHD.
- Detention basin high flow inlet pit as per previously approved design i.e.:
    - 900 mm x 900 mm grated inlet pit
    - Surface elevation 196.60m AHD
    - Invert elevation 195.45m AHD
    - Outlet pipe 375 mm RCP with upstream invert elevation 195.45m AHD connecting to existing IAD pit.

The proposed stormwater management plan is shown in **Figure 188**.

Figure 18 - Proposed Stormwater Management Plan (Source: SLR Consulting)



4.3.6 Plant and Equipment

The new plant is proposed to be located on the approved hardstand areas in the rear (northern) part of the site. It will comprise of a 'drive through' area, two overhead cement silos with access platform and ladders, aggregate material bins, feed conveyor and dual stump stand. A dust suppression system utilising water sprays on paved areas, aggregate and sand unloading areas and material stockpiles will be in place prior to the commencement of batching operations.

Other works will include provision of a 10,000L self bunded fuel tank to the south of the batching plant.

Plans of the proposed plant are provided in **Figures 19 – 21** below.

Figure 19 - Proposed Plant - Layout Plan (Source: ATB Morton)

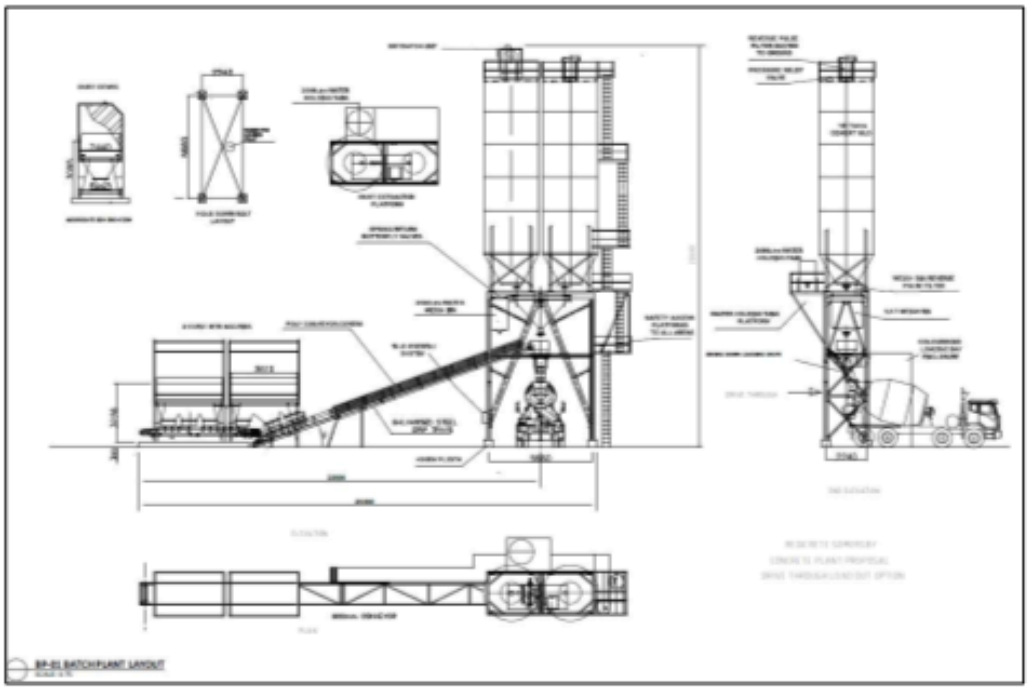


Figure 20 - Proposed Plant – Slump Stand Details (Source: ATB Morton)

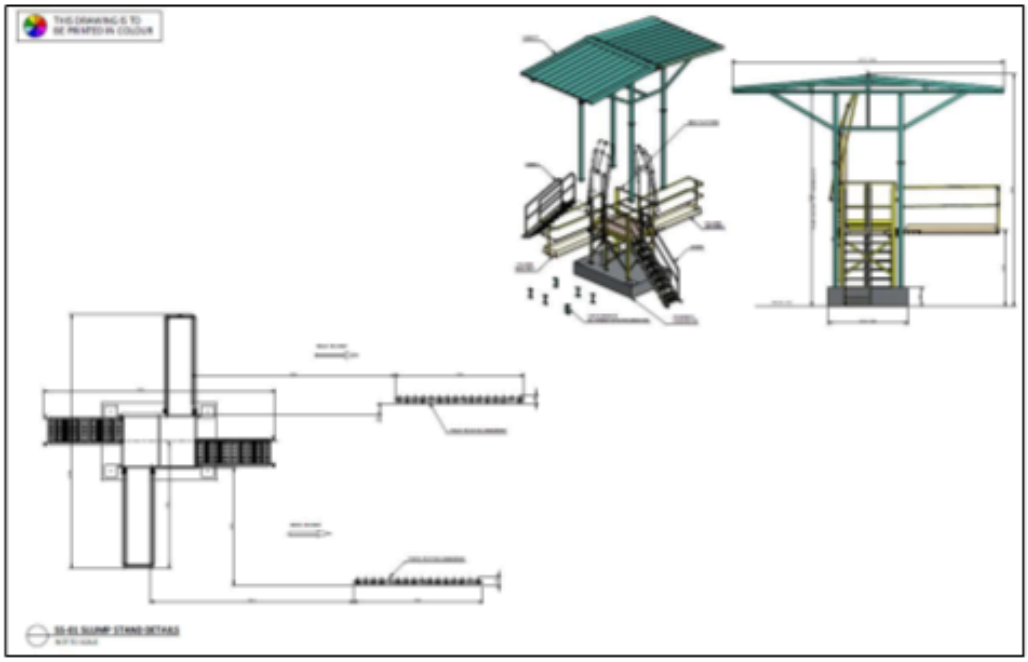
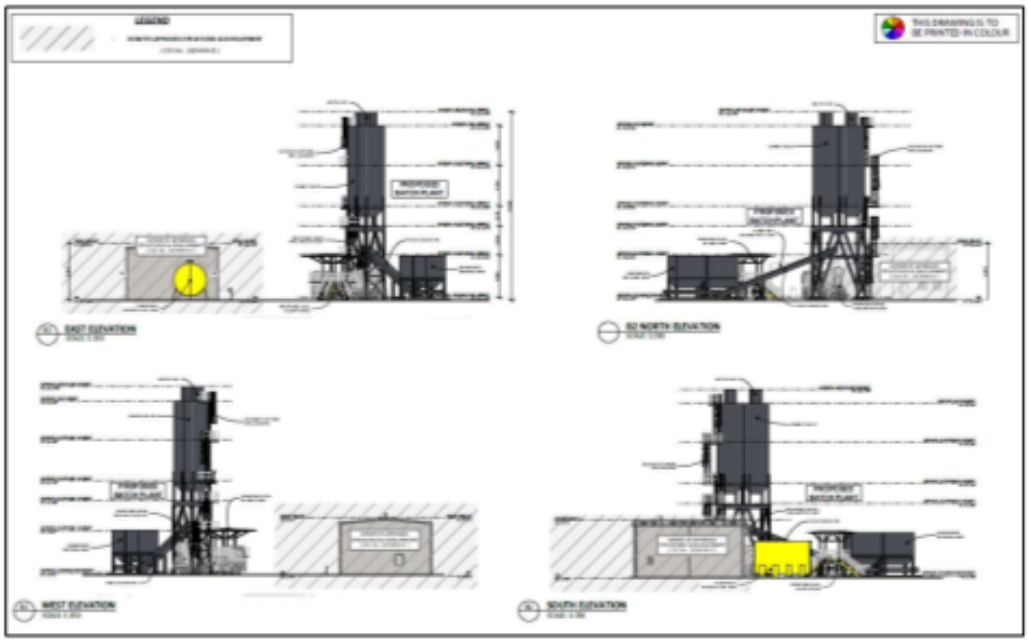


Figure 21 - Proposed Plant - Elevation Plans (Source: ATB Morton)



4.3.7 Workshop space

The proposal will utilise the approved 93.42m2 ancillary maintenance / administration space including an operations control room and staff amenities (approved Workshop B2).

4.3.8 Traffic, Transport and Access

Vehicular access is proposed at the eastern end of the site at Gindurra Road via the approved combined entry / exit driveway constructed to Council requirements and designed to cater for B-Double truck access. Vehicles will be able to utilise the approved 600m2 concrete hardstand area. The manoeuvrability of the heavy vehicles accessing and within the site is included in the architectural plans at **Appendix 5**, and extracted in **Figures 22 and 23** below.

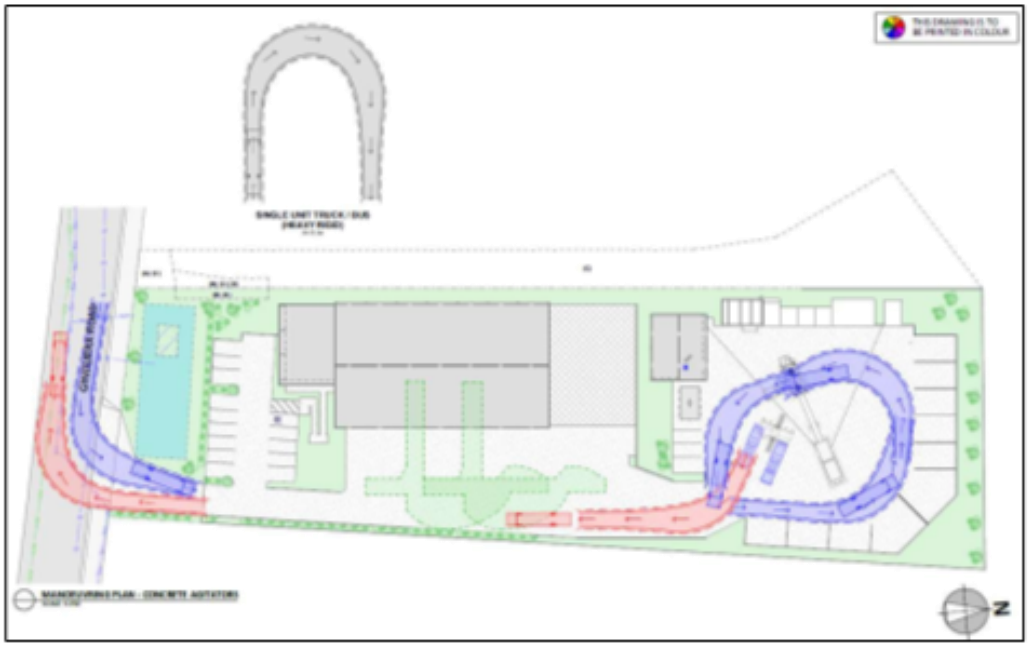
While the swept turning paths shows conflict between entering and exiting B-Doubles, operational management measures are proposed to prevent such conflicts (see **Section 7.1.3** of EIS). In summary, B-Double raw material deliveries will be programmed to occur between 8 pm and 6 am so as to avoid peak traffic periods. With a maximum of 4 deliveries occurring within these times, they will be programmed at least 2 hours apart. As such, within any one hour period there will only be the same vehicle entering and exiting the site.

Approximately 130 concrete agitator (heavy rigid) and 25 raw material delivery vehicles (semi trailer) would access the site per week. Truck movements are anticipated to occur consistently throughout the day.

Figure 22 - Manoeuvring Plan – Semi Trailer (Source: ATB Morton)



Figure 23 - Manoeuvring Plan – Heavy Rigid (Source: ATB Morton)



4.3.9 Parking

The proposal provides 3 on-site car spaces and an accessible space in the southern carpark, 1 space in excess of DCP car parking requirements. There are areas available for any small overflow of light vehicle parking which may occur during large orders, and truck drivers are also able to park their cars adjacent to the agitators.

4.3.10 Waste Management

The types of waste products which will be likely to be generated throughout the construction and on-going operation of the Somersby batching plant include, but are not limited to;

- Rejected Concrete
- Cementitious waste water
- Concrete Washout Waste; Slurry & Solids
- Silt from settling pits
- Steel
- Timber (pallets etc)
- Domestic Refuse
- Other Waste / Unexpected finds

Additionally, small quantities of waste including steel, timber, packaging and the like will be generated during construction. The Waste Management Plan (WMP) (**Appendix 16**) includes a description of the anticipated waste streams, predicted quantities and opportunities for reuse, recycling and preferred locations for off site recycling or where necessary disposal. In addition the

WMP includes procedures for the day to day, weekly and six monthly management of waste across the operation.

4.4 Cost of Works

The project has an estimated cost of $1,093,087 inclusive of GST. A cost summary report, providing a breakdown of anticipated project costs is provided at **Appendix 14**.

5 Legislative Framework

5.1 Environmental Planning and Assessment Act 1979

5.1.1 Application of Part 4 of the EP&A Act

Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) defines the assessment process for proposals that require development consent. Section 4.15 of the Act specifies the matters which a consent authority must consider when determining a DA.

The relevant matters for consideration under Section 4.15 of the Act are addressed in **Table 2** below.

Table 2 – Section 4.15 Considerations

Section 4.15	Reference within this EIS
(a) the provisions of:	
(i) any environmental planning instrument, and	Refer to **Section 5.2** of this EIS.
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	Refer to **Section 5.2.6** of this EIS.
(iii) any development control plan, and	Refer to **Section 5.5** of this EIS.
(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and	No reference. No planning agreement has been entered into with respect to the site or proposed development.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and	Refer to **Section 5.1.4** of this EIS.
(v) any coastal zone management plan (within the meaning of the *Coastal Protection Act 1979*),	No reference. The site is not within the NSW Coastal Zone.
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Refer to **Section 7** of this EIS and associated technical reports and plans.
(c) the suitability of the site for the development,	Refer to **Section 9.1.3** of this EIS and associated technical reports and plans.
(d) any submissions made in accordance with this Act or the regulations,	To be considered as part the assessment process.
(e) the public interest	Refer to **Section 9.1.4** of this EIS.

5.1.2 Designated Development

Designated Development refers to developments that are high-impact developments (e.g. likely to generate pollution) or are located in or near an environmentally sensitive area (e.g. a wetland).

There are two ways a development can be categorised as 'designated development':

- the class of development can be listed in Schedule 3 of the EP&A Regulation as being designated development, or
- an Environmental Planning Instrument can declare certain types of development to be designated.

Under Clause 17 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) 'Concrete Works are classified as designated development if they meet the following requirements:

> ***17 Concrete works***
> *(1) Development for the purposes of concrete works is designated development if the works have an intended production capacity of more than—*
> *(a) 150 tonnes per day, or*
> *(b) 30,000 tonnes per year.*
> *(2) Development for the purposes of concrete works is designated development if the works—*
> *(a) have an intended production capacity of more than 500 tonnes per year, and*
> *(b) are located within—*
> *(i) 100 metres of a natural waterbody or wetland, or*
> *(ii) 250 metres of a residential zone, or*
> *(iii) 250 metres of a dwelling not associated with the development.*
> *(3) This section does not apply to concrete works located on or adjacent to a construction site exclusively providing material to the development carried out on the site—*
> *(a) for a period of less than 12 months, or*
> *(b) if the environmental impacts were previously assessed in an environmental impact statement prepared for the development.*
> *(4) In this section—*
> *concrete works means works that produce pre-mixed concrete or concrete products.*

The proposed concrete batching plant will process more than 30,000 tonnes of concrete per annum, and is therefore classed as 'Designated Development' under Clause 17 of Schedule 3.

5.1.3 Integrated Development

Section 4.46 of the EP&A Act provides for and describes 'integrated development'. Integrated Development is development that, in order for it to be carried out, requires development consent and one or more approvals from a NSW State Government Agency. As detailed in

Table 3, the proposal does not constitute integrated development, as described in Section 4.46 of the EP&A Act.

Table 3 – Integrated Development

Act	Provision	Approval	Applicable
Fisheries Management Act 1994	s 144	aquaculture permit	N/A
	s 201	permit to carry out dredging or reclamation work	N/A
	s 205	permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease	N/A
	s 159	permit to: (a) set a net, netting or other material, or (b) construct or alter a dam, floodgate, causeway or weir, or (c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat	N/A
Heritage Act 1977	s 58	approval in respect of the doing or carrying out of an act, matter or thing referred to in s 57 (1)	N/A
Mine Subsidence Compensation Act 1961	s 15	approval to alter or erect improvements within a mine subsidence district or to subdivide land therein	N/A
Mining Act 1992	ss 63, 64	grant of mining lease	N/A
National Parks and Wildlife Act 1974	s 90	consent to knowingly destroy, deface or damage or knowingly cause or permit the destruction or defacement of or damage to, a relic or Aboriginal place	N/A
Petroleum (Onshore) Act 1991	s 9	grant of production lease	N/A
Protection of the Environment Operations Act 1997	ss 43 (a), 47 and 55	Environment protection licence to authorise carrying out of scheduled development work at any premises.	N/A
	ss 43 (b), 48 and 55	Environment protection licence to authorise carrying out of scheduled activities at any premises (excluding any activity described as a "waste activity" but including any activity described as a "waste facility").	N/A
	ss 43 (d), 55 and 122	Environment protection licences to control carrying out of non-scheduled activities for the purposes of regulating water pollution resulting from the activity.	N/A

Act	Provision	Approval	Applicable
Roads Act 1993	s 138	consent to: (1)(a) erect a structure or carry out a work in, on or over a public road, or (b) dig up or disturb the surface of a public road, or (c) remove or interfere with a structure, work or tree on a public road, or (d) pump water into a public road from any land adjoining the road, or (e) connect a road (whether public or private) to a classified road (3) Development is not integrated development in respect of the consent required under section 138 of the *Roads Act 1993* if, in order for the development to be carried out, it requires the development consent of a council and the approval of the same council.	N/A
Rural Fires Act 1997	s 100B	authorisation under section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes	N/A
Water Management Act 2000	ss 89, 90, 91	water use approval, water management work approval or activity approval under Part 3 of Chapter 3	N/A

5.1.4 EIS Requirements under the Environmental Planning and Assessment Regulation 2021

Division 5 of the EP&A Regulation defines the requirements for an Environmental Impact Statement (EIS). Clause 191 states that the EIS must address the Secretary's Environmental Assessment Requirements (SEARs). The SEARs for the project were issued on 17 March 2021 (**Appendix 1**). **Section 6.1** of this EIS outlines for how this EIS addresses the SEARs.

Clauses 190 and 192 of Division 5 set out requirements for the form and content of an EIS. This EIS has been prepared in accordance with these requirements.

5.2 Environmental Planning Instruments

5.2.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

5.2.1.1 Chapter 2 – Vegetation in non-rural areas

Chapter 2 of SEPP (Biodiversity and Conservation) 2021 aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

Chapter 2 applies to land described in Clause 2.3 of the SEPP, which includes land zoned IN1 General Industrial, and thus applies to the subject site.

Clause 2.6 outlines that a person must not clear vegetation in any non rural area without either an authority conferred by a permit granted by the relevant Council under Part 2.3 of the Vegetation SEPP, or where clearing exceeds the biodiversity offsets scheme threshold an authority conferred by an approval of the Native Vegetation Panel under Part 2.4 of the SEPP.

The proposed development footprint has been cleared under previous approvals and no vegetation removal is proposed as part of this application. Under the circumstances no authority is required under the Vegetation SEPP.

5.2.1.2 Chapter 4 – Koala habitat protection 2021

Chapter 4 aims to encourage the appropriate conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline.

Chapter 4 applies to Local Government Areas (LGAs) listed in Schedule 2, which includes the Central Coast Local Government Area.

Claus 4.9 of Part 4.2 provides for the development assessment process for koala habitat where an approved koala plan of management does not apply. However, Clause 4.9 does not apply as the site is less than 1 hectare in area. Accordingly, no further assessment under Chapter 4 is required.

5.2.2 State Environmental Planning Policy (Planning Systems) 2021

5.2.2.1 Chapter 2 – State and regional development

Chapter 2 of SEPP (Planning Systems) 2021 to confer functions on Regional Planning Panels (RPP) to determine development applications in certain circumstances.

Part 2.4 of the SEPP provides that a regional panel (in this case the Hunter-Central Coast Regional Planning Panel) may exercise consent authority functions, including the determination of development applications, for development identified within Schedule 6.

The proposal is not described as regional development within Schedule 6, Clause 5. Consequently, the application will be assessed and determined by Central Coast Council.

5.2.3 State Environmental Planning Policy (Resilience and Hazards) 2021

5.2.3.1 Chapter 2 – Coastal Management

Chapter 2 of SEPP (Resilience and Hazards) 2021 provides a state-wide approach for land use planning in the coastal zone in a manner consistent with the objectives to the Coastal Management Act 2016.

The site is not mapped as being located within the NSW Coastal Zone and therefore Chapter 2 does not apply.

5.2.3.2 Chapter 3 – Hazardous and offensive development

The objective of Chapter 3 of the SEPP is to link the permissibility of an industrial proposal to its safety and pollution control performance. It aims to ensure that the merits of proposals are properly assessed in relation to off site risk and offence before being determined.

Chapter 3 applies to any proposals which fall under the definition of 'potentially hazardous industry', defined as:

> *A development for the purposes of an industry which, if the development were to operate without employing any measures to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality;*
>
> - *To human health, life, or property; or*
> - *To the biophysical environment.*
>
> *And includes a hazardous industry and a hazardous storage establishment.*

The NSW DPIE guideline, 'Applying SEPP 33' (2011), provides an approach to the identification of developments which must be assessed under SEPP 33 (now Chapter 3 of SEPP (Resilience and Hazards) 2021), and explains the assessment requirements of the policy. It lists activities that are likely to be potentially hazardous and provides a risk screening procedure to help determine whether the proposed development is 'potentially hazardous development' and therefore subject to the provisions of Chapter 3. If SEPP 33 is triggered under the screening test, the development must be supported by a Preliminary Hazard Analysis (PHA).

A development may also be potentially hazardous if the Transportation Screening Thresholds are exceeded for vehicular movements to and from the site. From Table 2 of 'Applying SEPP33', the screening value for cumulative vehicle movements is as follows:

- > 500 vehicle movements for Class 2.1; and
- > 500 vehicle movements for all Class 8.

Chapter 3 would also apply where a development is an 'potentially offensive industry', which is defined as follows:

> *Potentially offensive industry means a development for the purposes of industry which, if the development were to operate without employing any measures (including, for example,*

isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

In deciding if a proposal is a 'potentially offensive industry', it is necessary to consider whether, in the absences of safeguards, the proposal would emit a polluting discharge which would cause a significant level of offence. Generally, a development may be classified as potentially offensive where, either:

- A licence is required under pollution control legislation; or
- Where no such licence is required, the proposal has the potential to cause offence having regard to the sensitivity of the surrounding environment.

A screening report was prepared for the proposal by Advitech Pty Ltd (see **Appendix 8**). The report assesses the proposed materials that are to be stored on site against relevant screening thresholds and is summarised in **Table 5** below:

Table 4 – Materials to be Stored in Storage Shed (Capacity 1,000L) (Source: Advitech Pty Ltd)

Materials[1]	Hazardous Classification[2]	DG Class	Packing Group (PG)	Minimum Quantity from *Applying SEPP 33*	Closest Distance to Site Boundary[3]	SEPP 33 Triggered
Coolant Concentrate	Hazardous (SWA) Acute Toxicity – Oral: Cat 4 STOT (Repeated Exposure): Cat 2	NA	-	-	-	No
Chlorinated Cleaner	Hazardous (SWA) Corrosion to Metals: Cat 1 Skin Corrosion/Irritant: Cat 1 STOT (Single Exposure): Cat 3 Hazardous to Aquatic Environment: Cat 2	8	III	50 t	5 m	No
Hand Cleaner	Hazardous (SWA) Skin Sensitisation: Cat 1	NA	-	-	-	No
Liquid Petroleum Gas	Hazardous (SWA) Flammable Gas: Cat 1 Gases Under Pressure: Liquefied gas	2.1	NA	10 t	5 m	No
Bleach Cleaner	Hazardous (SWA) Toxicity: Cat 1 Skin Corrosion/Irritant: Cat 3	8	III	50 t	5 m	No
Silica Additive	Hazardous (SWA) Sensitisation to Skin Irritant to Eye, Skin and Respiratory	NA	-	-	-	No
Gel Concrete Remover	Hazardous (SWA) Skin Corrosion/Irritant: Cat 2 Eye Damage/Irritant: Cat 2A STOT (Single Exposure): Cat 3	NA	-	-	-	No
Spray Paint	Hazardous (SWA) Aerosols: Cat 1 Serious Eye Damage/Irritant: Cat 2A STOT (Single Exposure): Cat 3	2.1		100 kg	5 m	No

Notes:

[1]: Information as provided by WPP (on behalf of ATB). Safety data sheets (SDS) can be provided (as required)

[2]: Hazardous Classification acronyms used in column 2 are as follows:

- SWA – SafeWork Australia
- STOT – Specific Target Organ Toxicity
- Cat – Shorthand for category

[3]: Closest distance to site boundary is based on **Appendix A**: Drawing Number 1638.B – DWG – 203 - 02004

Table 5 - Materials to be Stored in Admixture Tank (Capacity 15,000L) (Source: Advitech Pty Ltd)

Materials[1]	Hazardous Classification[2]	DG Class	Packing Group (PG)	Minimum Quantity from *Applying SEPP 33*	Closest Distance to Site Boundary[3]	SEPP 33 Triggered
Setting Time Accelerant	Hazardous (SWA) Irritant: Inhalation, Eye-Contact, Skin Contact	NA	-	-	-	No
Air Entraining Agent	Hazardous (SWA) Serious Eye Damage/Irritation: Cat 1	NA	-	-	-	No
Retardant of Setting Time	Hazardous (SWA) Short-term Aquatic Hazard: Cat 3 Long-term Aquatic Hazard: Cat 3	NA	-	-	-	No

Notes:
[1]: Information as provided by WPP (on behalf of ATB). Safety data sheets (SDS) can be provided (as required)

[2]: Hazardous Classification acronyms used in column are as follows:
- SWA – SafeWork Australia
- STOT – Specific Target Organ Toxicity
- Cat – Shorthand for category

[3]: Closest distance to site boundary is based on **Appendix A**: Drawing Number 1638.B – DWG – 203 - 02004

Table 6 – Self-Bunded Diesel Tank (Capacity 10,000L) (Source: Advitech Pty Ltd)

Table 3: Self-Bunded Diesel Tank (Capacity 10,000 L)

Materials[1]	Hazardous Classification[2]	DG Class	Packing Group (PG)	Minimum Quantity from *Applying SEPP 33*	Closest Distance to Site Boundary[3]	SEPP 33 Triggered
Diesel Fuel	Hazardous (SWA) Flammable Liquid: Cat 4 Acute Toxicity (Inhalation): Cat 4 Skin Corrosion/Irritant: Cat 2 Carcinogenicity: Cat 2 STOT (Repeated Exposure): Cat 2 Aspiration Hazard Cat 1	C1[4]	-	100,000 L	~15 m	No

Notes:
[1]: Information as provided by WPP (on behalf of ATB). Safety data sheets (SDS) can be provided (as required)

[2]: Classification acronyms used in column are as follows:
- SWA – SafeWork Australia
- STOT – Specific Target Organ Toxicity
- Cat – Shorthand for category

[3]: Closest distance to site boundary is based on **Appendix A**: Drawing Number 1638.B – DWG – 203 - 02004

[4]: Diesel classified as C1, as it is to be stored in a separate self-bunded tank, as such it is considered not potentially hazardous. If it were to be stored with other flammable liquids i.e., Class 3 PG I, II or III, Diesel is treated as Class 3 PG III as under these circumstances may contribute fuel to a fire

The report makes the following key findings:

- Risk Screening:

The report finds that none of the screening thresholds were triggered by the proposal.

- Transportation Screening Thresholds:
  The report notes that, provided the vehicle movements are below the cumulative vehicle movements for each class, the potential risk is unlikely to be significant. In this respect, WPP notes that vehicle movements generated by the proposal will be well below the cumulative vehicle movements for each class.
- Amenity Screening:
  In considering whether the proposal is 'offensive', the report notes that, due to the location and with consideration to the overall area, it is unlikely for the proposed development to be deemed 'offensive' or considered to cause offense to sensitive receptors. In this respect, WPP notes that separate assessments of the air quality and noise and vibration as a result of the project have been completed. These assessments considered the relevant impact criteria based on legislative requirements, and determined that the project would meet the relevant amenity criteria throughout the life of the project provided that mitigation measures are implemented (where applicable). On this basis, the project is not considered to be 'potentially offensive'.

Overall, the report finds that Chapter 3 of the SEPP has not been triggered and preparation of a PHA is not required.

5.2.3.3 Chapter 4 – Remediation of land

Chapter 4 of the SEPP provides a state-wide planning approach for the remediation of land and aims to promote the remediation of contaminated land to reduce the risk of harm to human health or the environment. Clause 4.6(1) states:

> *(1) A consent authority must not consent to the carrying out of any development on land unless—*
> *(a) it has considered whether the land is contaminated, and*
> *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
> *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

The suitability of the site for the purpose of a concrete batching plant, relying on Council (**Appendix 23**) and EPA (**Appendix 19**) records is provided at **Section 7.12**.

5.2.4 State Environmental Planning Policy (Transport and Infrastructure) 2021

5.2.4.1 Chapter 2 – Infrastructure

Chapter 2 of SEPP (Transport and Infrastructure) 2021 aims to facilitate the effective delivery of infrastructure across NSW.

Clause 3.58 of the ISEPP refers to traffic-generating development as listed in Column 1 of Schedule 3. The proposal does not constitute 'traffic generating development'.

5.2.5 Central Coast Local Environmental Plan 2022

5.2.5.1 Land Use Zone and Zone Objectives

The proposed development is subject to the provisions of the *Central Coast Local Environmental Plan 2022* (CCLEP). As provided in **Figure 244**, the land is situated in the IN1 General Industrial Zone.

Figure 24 - CCLEP 2022 Land Zoning Map



The objectives of the IN1 General Industrial Zone are as follows:

- *To provide a wide range of industrial and warehouse land uses.*
- *To encourage employment opportunities.*
- *To minimise any adverse effect of industry on other land uses.*
- *To support and protect industrial land for industrial uses.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.*
- *To ensure retail, commercial or service land uses in industrial areas are of an ancillary nature.*

The findings and conclusions made in this EIS demonstrate the proposal is consistent with the objectives of the IN1 General Industrial Zone and involves a land use which is consistent with the purpose for which it is zoned.

5.2.5.2 Statutory Definition and Permissibility

Having regard to the standard land use definitions provided in the dictionary and *Planning Circular PS13-001 'How to Characterise Development*, the proposed development is most appropriately characterised as a general industry:

> ***general industry*** *means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.*
> ***Note.*** *General industries are a type of* ***industry****—see the definition of that term in this Dictionary.*
>
> ***industry*** *means any of the following:*
>
> *(a) general industry,*
> *(b) heavy industry,*
> *(c) light industry,*
> *but does not include:*
> *(d) rural industry, or*
> *(e) extractive industry, or*
> *(f) mining.*

The definition of an industrial activity is provided below.

> ***industrial activity*** *means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity.*

The activities and processes proposed within the subject site are considered to be consistent with the definition of an industrial activity. A general industry is an industry which is permitted with consent in the IN1 General Industrial Zone.

5.2.5.3 Central Coast LEP 2022 – Other Provisions

- **Principal Development Standards**

  There are no principal development standards (height or FSR) which apply to the subject land.

- **Clause 5.10 – Heritage conservation**

  The objectives of Clause 5.10 are:

  > *(a) to conserve the environmental heritage of the Central Coast,*
  >
  > *(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
  >
  > *(c) to conserve archaeological sites,*

(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Pursuant to Clause 5.10(2), consent is required for certain works to a heritage item; an Aboriginal object; or a building, work, relic or tree within a heritage conservation area.

The site does not contain a listed heritage item and is not within a heritage conservation area. An Archaeological Due Diligence Assessment (ADDA) has been prepared for the proposal by McCardle Cultural Heritage Pty Ltd (see **Appendix 9**). The ADDA found that no archaeological sites or Potential Archaeological Deposits were identified within the site, and provides standard mitigation measures to be employed on site (refer to **Section 7.7** of this EIS). Overall, the proposal is considered to be consistent with the objectives of Clause 5.10 and no further assessment is required.

- **Clause 7.6 – Essential Services**

Clause 7.6 requires the consent authority to be satisfied that adequate arrangements have been made for water, the supply of electricity, disposal and management of sewage, stormwater infrastructure and vehicular access are available to the development, or that adequate arrangements have been made to provide such services.

As detailed on the survey plan provided at **Appendix 2**, a full suite of services is available to the site. As discussed in **Section 4** of this EIS, adequate arrangements have been made with respect to stormwater drainage and vehicular access. Overall, the proposal is considered to comply with this clause.

- **Clause 7.12 – Development in Somersby Business Park**

This clause applies to land identified as "Somersby Business Park" on the Key Sites Map. It requires that:

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

(a) the development will maximise the opportunity for industrial development in Somersby Business Park to provide employment opportunities in the Central Coast, and

(b) the ecological and Aboriginal heritage characteristics of land in Somersby Business Park will be protected and appropriately managed, and

(c) the development is consistent with the DRAFT Plan of Management— Somersby Industrial Park dated June 2005 and published on the Council's website.

The site is identified as being within the Somersby Business Park on the Key Sites Map. The proposal is considered to comply with subclause (2) as:

- It involves an employment-generating industrial use of an existing industrial site, without creating adverse impacts on any industrial developments within the Park;

- The proposal will not result in any adverse impacts on ecological or Aboriginal heritage characteristics within the Park (refer to **Sections 7.7 and 7.9** of this EIS, respectively); and
- The proposal is consistent with the DRAFT Plan of Management— Somersby Industrial Park. In particular, the proposal will not adversely impact on the key identified economic, ecological and aboriginal heritage values of the Park. Importantly, the site is not mapped as containing significant habitat, or being within a significant Aboriginal Heritage Management Zone, Areas of Environmental and Cultural Value, Key Constraints or Management Zones.

5.2.6 Any Draft Environmental Planning Instruments

There are no Draft EPIs which require consideration in the assessment of the subject application.

5.3 Requirements under other relevant NSW Legislation

5.3.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) repeals the Threatened Species Conservation Act 1995, the Native Vegetation Act 2003, Nature Conservation Act 2001 and part 6 of the National Park and Wildlife Act 1974. As a result, the matters relating to the listing of threatened species, threatened ecological communities, key threatening processes, biodiversity impact assessment, offsetting and related offences are now contained within the BC Act.

The BC Act requires that for activities being assessed under Part 4 of the EP&A Act a Biodiversity Development Assessment Report (BDAR) must be prepared in accordance with the Biodiversity Assessment Methodology (BAM) by an assessor accredited under the BC Act, where it is determined that a development proposal is likely to have a significant impact on threatened species, ecological communities, or their habitats. Where a BDAR is required, it is taken to mean that the Biodiversity Offset Scheme (BOS) set out under the BC Act is triggered and applies to the project.

The site comprises predominately managed land and is located within an established industrial. The site is not mapped as land with high biodiversity value, with the nearest found approximately 500 metres to the south. While Council records indicate land to the east of the site is mapped as containing vegetation type 'Sandstone Hanging Swamp', part of an Endangered Ecological Community (EEC), no adverse impacts on this EEC are anticipated as a result of the proposal. The proposal will utilise existing / approved site infrastructure and will involve no vegetation removal and only minor construction works. Furthermore, an appropriate stormwater regime is will be implemented to minimise any adverse impacts on biodiversity values during operation of the proposal. Refer to **Section 7.9** of this EIS for further discussion.

Having regard to the above, it is considered that the proposal will not:

- Impact on any area of outstanding biodiversity value (as described by the Minister)
- Exceed the BOS threshold (as no native vegetation is proposed to be removed)
- Is not mapped on the biodiversity values map
- Have a significant impact on threatened species or endangered ecological communities

Accordingly, the BOS is not triggered and a BDAR is not required.

5.3.2 Contaminated Land Management Act 1997

NSW EPA's Contaminated Land Public Record register (under Section 58 of the CLM Act) lists sites for which the EPA has issued regulatory notices under the CLM Act. The register includes the details of current and former regulatory notices issued.

A search of this register on 20 December 2022 did not identify any reported contamination or any regulatory notices issued for the subject site. The search results are provided at **Appendix 19.**

NSW EPA's register of contaminated sites notified to the EPA under Section 60 of the CLM Act, provides an indication of the management status of that particular site. Under Section 60 of the CLM Act, properties must be registered with EPA if there is reason to suspect the land is contaminated, and one or more of the notification triggers in the Duty to Report guidelines exist at the site. Upon

receipt of a Section 60 notification, the EPA assesses the contamination status of the site to determine whether the contamination is significant enough to warrant regulation by the EPA.

A search of this public register did not return any records of reported contamination or any regulatory notices issued for the site or within the Somersby locality. Refer to **Section 7.12** of this EIS for further discussion.

5.3.3 Heritage Act 1977

The *Heritage Act 1977* is concerned with all aspects of conservation ranging from the most basic protection against indiscriminate damage and demolition of buildings, through to restoration and enhancement.

Heritage places and items of particular importance to the people of NSW are listed on the State Heritage Register. A search of Council's Section 10.7 certificate shows there to be no items of local or state heritage significance on or in the curtilage of the site. Refer to **Section 7.8** of this EIS for further discussion.

5.3.4 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides the basis for the legal protection and management of Aboriginal sites within NSW. Sections 84 and 90 of the NPW Act provide statutory protection for any physical/material evidence of Aboriginal occupation of NSW and places of cultural significance to the Aboriginal community. The key principles of the Act in relation to Aboriginal heritage are the prevention of unnecessary or unwarranted destruction of Aboriginal objects, and the active protection and conservation of objects which are of high cultural significance. It is an offence to knowingly disturb an Aboriginal object, irrespective of its nature or significance, without the prior consent of the Director-General of the NSW OEH.

An Archaeological Due Diligence Assessment (ADDA) has been prepared for the proposal by McCardle Cultural Heritage Pty Ltd (see **Appendix 9**). The ADDA found that no archaeological sites or Potential Archaeological Deposits were identified within the site. Accordingly, the ADDA found that there are no impacts on the archaeological record and further investigation and an AHIP are not required. Refer to **Section 7.77.8** of this EIS for further discussion.

5.3.5 Protection of the Environment Operations Act 1997

Activities required to obtain a licence under the *Protection of the Environment Operations Act 1997* (POEO Act) are detailed in Schedule 1 of the Act.

Relevantly, Clause 13 of Schedule 1 lists 'concrete works' as a scheduled activity in certain circumstances:

> ***13 Concrete works***
> *(1) This clause applies to concrete works, meaning the production of concrete products, but does not include the production of pre-mixed concrete (concrete batching).*
> *(2) The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to produce more than 30,000 tonnes per year of concrete products.*

As the proposal relates to concrete batching and does not involve the production of concrete products, it is not a scheduled activity pursuant to Clause 13 of Schedule 1. Accordingly, an Environmental Protection License is not required for the proposal prior to the commencement of operations.

5.3.6 Rural Fires Act 1997

The subject land is identified as being bushfire prone. Notwithstanding the proposal does not constitute a 'special fire protection purpose' as defined in Section 100B of the *Rural Fires Act 1997*. As such no approval or permit is required under this legislation. Notwithstanding, an assessment has been made to consider the likely impacts of bushfire on the proposed development as required under Section 4.15 of the EP&A Act (see **Appendix 13**).

5.3.7 Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) was established to assist in the achievement of the objectives of the POEO Act. The objectives of the WARR Act are to encourage the most efficient use of resources and to reduce environmental harm; apply resource management through avoidance, resource recovery and appropriate disposal, and provide for the continual reduction in waste generation.

The operation and construction of the proposal are not expected to generate large quantities of Waste. **Section 7.11** of this EIS provides an assessment of the potential waste sources, methods to avoid, reduce or recycle waste on site.

5.3.8 Water Management Act 2000

The *Water Management Act 2000* (WM Act) provides for the integrated and sustainable management of water in NSW. The WM Act is based on the concept for ecologically sustainable development to protect water resources and systems for current and future generations.

The major functions of the WM Act include licence of water extraction and the development of water management plans. Groundwater is not proposed to be used as a water supply for the proposed batching plant, as water will be sourced through onsite water storage (recycled water) and from reticulated water when necessary. As groundwater would not be encountered onsite nor affected by the proposal, approval under the WM Act is therefore not warranted.

It is also noted that the site is not within 40m of a mapped watercourse.

5.4 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation that provides a legal framework to protect and manage environmental values considered to be of national environmental significance.

The EPBC Act requires approval from the Commonwealth Minister for the Environment and Resources for actions that may have a significant impact on listed matters of national environmental significance (MNES).

An EPBC Act protected matters search was undertaken on 15 December 2022 for a 1 kilometre radius around the site (see **Appendix 21**). The results of the search are summarised in **Table 7** below. As no potential impacts are predicted, approval under the EPBC Act is not required.

Table 7 - EPBC Act protected matters located within one kilometre of the

Protected matter	Matter located within search radius	Comments	Potential impact
World Heritage Properties	None	There are no World Heritage Properties identified within a 1km radius of the proposal.	Nil
National Heritage Places	None	There are no National Heritage Places identified within a 1km radius of the proposal.	Nil
Wetlands of international significance (Ramsar sites)	None	There are no Wetlands of international significance (Ramsar sites) identified within a 1km radius of the proposal.	Nil
Great Barrier Reef Marine Park	None	The Great Barrier Reef Marine Park is not identified within a 1km radius of the proposal.	Nil
Commonwealth Marine Areas	None	There are no Commonwealth Marine Areas identified within a 1km radius of the proposal.	Nil
Listed threatened ecological communities	4	Four listed threatened ecological communities have been identified, however given that no vegetation clearing is proposed, and having regard to the mitigation measures proposed, no impacts are anticipated.	Nil
Listed threatened species	59	Fifty-nine listed threatened species have been identified, however given that no vegetation clearing is proposed, and having regard to the mitigation measures proposed, no impacts are anticipated.	Nil
Listed migratory species	18	Eighteen listed migratory species have been identified, however given that no vegetation clearing is proposed, and having regard to the mitigation measures proposed, no impacts are anticipated.	Nil

5.5 Central Coast Development Control Plan 2022

The relevant sections of the Central Coast DCP 2022 are addressed in **Appendix 17**. Any departures have been appropriately justified.

5.6 Summary of Approval Requirements

The proposal is permissible with development consent and is subject to Part 4 of the EP&A Act. A development application is to be submitted in accordance with the requirements of the EP&A Act and the CCLEP 2022. Council is the consent authority.

As the proposal is designated development, an EIS needs to accompany the development application. The requirements for the EIS are defined by the SEARs and the EP&A Regulation, as outlined in **Appendix 1** and **Section 5.1.4** of this EIS respectively.

The proposal does not constitute integrated development, as provided in Section 4.46 of the EP&A Act.

5.7 Strategic Context

5.7.1 Central Coast Regional Plan 2041

The *Central Coast Regional Plan 2041* (the CCRP), released by the NSW Government in 2022, is the regional strategy applying to the subject site. The CCRP Plan guides the NSW Government's land use planning priorities and decisions over the next 20 years.

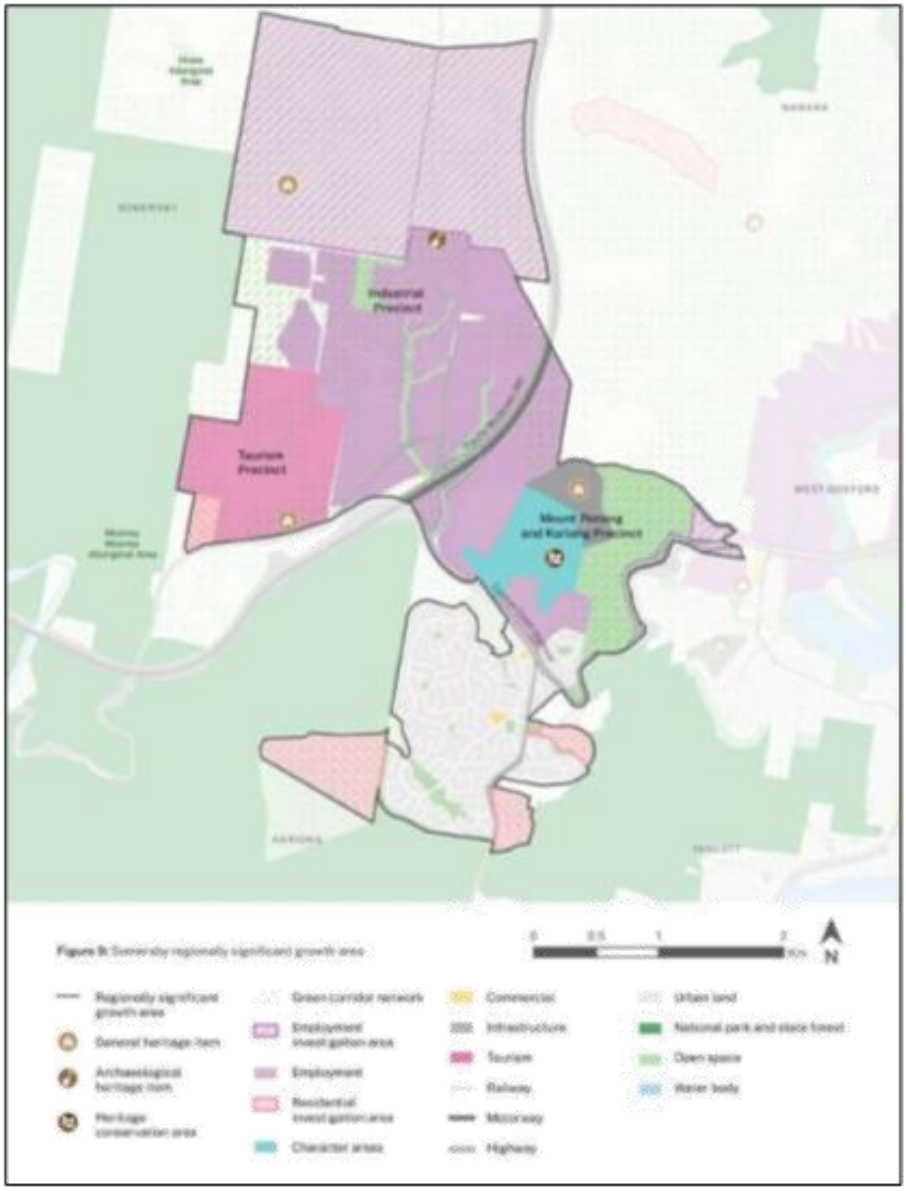
The proposed development is consistent with the vision for the Central Coast region set out in the CCRP, including to create more jobs close to home.

Under the CCRP, the site is identified as employment land within the 'Somersby regionally significant growth area', within the Somersby to Erina Growth Corridor.

The proposed development is consistent with Planning Priority 1 set out in the CCRP, to 'focus economic development in the Somersby to Erina Growth Corridor'. This priority aims to plan for the Somersby regionally significant growth area as the premier industrial area.

The proposal is consistent with the desired outcomes for the growth area. In particular, it will utilise an approved and cleared industrial site for industrial purposes. Detailed investigations have established that the site does not contain any Aboriginal cultural heritage values. The proposal also avoids regionally significant green corridors to the east and west.

Figure 25 - Somersby regionally significant growth area (Source: CCRP)



5.7.2 Central Coast Local Strategic Planning Statement 2020

Council's *Local Strategic Planning Statement* (LSPS) provides a land use vision that will guide sustainable growth and development across the Central Coast Region to 2036 and beyond.

The proposal is consistent with the LSPS vision for Somersby, within the Southern growth corridor, as a 'strong industry, manufacturing and logistics hub at Somersby'. A key priority of the SPS is to adopt and implement the Central Coast's Somersby to Erina Corridor Strategy.

5.7.3 Somersby to Erina Corridor Strategy

Council's *Somersby to Erina Corridor Strategy* (SECS) sets out a 20 year vision for the Somersby to Erina Corridor and has been prepared to guide growth and investment in the six centres of Somersby, Mount Penang and Kariong, West Gosford, Gosford City Centre, East Gosford and Point Frederick and Erina.

The proposal is consistent with the directions for the Somersby centre's study, including to:

- Protect Somersby Employment Area's history and landscape, including through the continues implementation of the Somersby Plan of Management
- ensure the ongoing success of the Somersby Industrial Area, retention of jobs, businesses and investment in the region and the Corridor

In particular, the proposal is consistent with the *Draft Plan of Management— Somersby Industrial Park* (outlined below) and will not adversely impact on the cultural or environmental heritage of the precinct. The proposal will involve the use of an approved industrial site for an employment-generating industrial land use, and will not adversely impact on existing businesses in the area.

5.7.4 Draft Plan of Management— Somersby Industrial Park 2005

The proposal is consistent with the *Draft Plan of Management— Somersby Industrial Park*. In particular, the proposal will not adversely impact on the key identified economic, ecological and aboriginal heritage values of the Park. Importantly, the site is not mapped as containing significant habitat, or being within a significant Aboriginal Heritage Management Zone, Areas of Environmental and Cultural Value, Key Constraints or Management Zones.

6 Stakeholder Consultation

In accordance with the SEARs issued for this project, consultation was undertaken with relevant public authorities, the community and Council. A summary of consultation is provided in the sections following.

6.1 Secretary's Environmental Assessment Requirements

In order for DPIE to consider the EIS suitable for public exhibition, the EIS demonstrates how the SEARs have been addressed below in **Table 8**. A full copy of the SEARs is included at **Appendix 1**.

Table 8 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 8 - Secretary's Requirements (SEARS)

Requirement	Where addressed in EIS
General	
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	**Section 5.1.4** of the EIS.
Key Issues	
The EIS must include an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts. As part of the EIS assessment, the following matters must also be addressed:	**Sections 7 and 8** of the EIS.
Strategic and statutory context – including: • A detailed justification for the proposal and suitability of the site for the development • A demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies • A list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out.	**Section 5** of the EIS.
Suitability of the site – including: • A detailed justification that the site can accommodate the proposed processing capacity, having regard to the scope of the operations and its environmental impacts and relevant mitigation measures • floor plans depicting and proposed internal layout, including the location of machinery and equipment.	**Sections 7 and 9.1.37.3** and **Appendix 5** of the EIS.
Air quality – including: • a description of all potential sources of air and odour emissions • an air quality impact assessment in accordance with relevant Environment Protection Authority guidelines • a description and appraisal of air quality impact mitigation and monitoring measures.	**Section 7.3** and **Appendix 11** of the EIS.
Noise and vibration – including: • A description of all potential noise and vibration sources during construction and operation, including road traffic noise	**Section 7.4** and **Appendix 12** of the EIS.

Requirement	Where addressed in EIS
• A noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines • A description and appraisal of noise and vibration mitigation and monitoring measures.	
Waste management – including: • Details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal • The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.	**Section 7.11** and **Appendix 16** of the EIS.
Traffic and transport – including: • Details of road transport routes and access to the site • Road traffic predictions for the development during construction and operation • Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site • An assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development.	**Section 7.1** and **Appendix 10** of the EIS.
Hazards and risk – including: • A preliminary risk screening completed in accordance with SEPP No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).	**Section 7.2** and **Appendix 8** of the EIS.
• An assessment of the risk of bushfire, including addressing the requirements of Planning for Bush Fire Protection 2019 (RFS). Any proposed Asset Protection Zones must not adversely affect environmental objectives (e.g. buffers)	**Section 7.10** and **Appendix 13** of the EIS.
• any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations to address this	**Section 7.57.3** and **Appendix 15** of the EIS.
Soil and water – including: • A description of local soils, topography, drainage and landscapes • Details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the Water Act 1912 and/or the Water Management Act 2000 • An assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment details of sediment and erosion controls • A detailed site water balance • An assessment of potential impacts on the quality and quantity of surface and groundwater resources • details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts • characterisation of the nature and extent of any contamination on the site and surrounding area • a description and appraisal of impact mitigation and monitoring measures.	**Section 7.5** and **Appendix 7** of the EIS.

Requirement	Where addressed in EIS
Biodiversity – including: • A description of any potential vegetation clearing needed to undertake the proposal • A detailed assessment of the potential impacts on any threatened species, populations, endangered ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements	**Section 7.9** of the EIS.
Visual – including: • an impact assessment at private receptors and public vantage points.	**Section 7.67.3** of the EIS.
Heritage – including: • Aboriginal and non-Aboriginal cultural heritage.	**Sections 7.7 and 7.8** and **Appendix 9** of the EIS.
Environmental Planning Instruments and other policies	
The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • SEPP (Infrastructure) 2007 and other policies • SEPP (Vegetation in Non-Rural Areas) 2017 • SEPP (Koala Habitat Protection) 2020 • SEPP No. 33 – Hazardous and Offensive Development • SEPP No. 55 – Remediation of Land • Gosford Local Environmental Plan 2014 • relevant development control plans and section 7.11 plans.	**Section 5** of the EIS.
Guidelines	
During the preparation of the EIS you should consult the Department's Register of Development Assessment Guidelines which is available on the Department's website at https://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Industries. Whilst not exhaustive, this Register contains some of the guidelines, policies, and plans that must be taken into account in the environmental assessment of the proposed development.	Addressed through EIS.
Consultation	
During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the: • Department of Planning, Industry and Environment, specifically the: ○ Environment, Energy and Science Group ○ Water Group ○ Environment Protection Authority • Transport for NSW • Fire & Rescue NSW • NSW Rural Fire Service • WaterNSW • Darkinjung Local Aboriginal Land Council • Central Coast Council • the surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.	**Section 6** of the EIS.

6.2 Agency Assessment Requirements

A number of agencies also provided recommendations to DPIE regarding issues to be addressed as part of the SEARs. Those recommendations, and a reference to where each has been addressed within the EIS, are presented in **Table 9** below. As outlined in Section 6.3 of this EIS, additional agency consultation was undertaken by the proponent during preparation of the EIS.

Table 9 - Agency Requirements (SEARS)

Agency	Requirement	Where addressed in EIS
EPA	1. Noise • Identify the existing noise environment (including any relevant noise assessment groupings) and identify applicable noise goals in line with relevant guidance/standards; • Identify potential noise and vibration sources and impacts during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to be incorporated for both stages to minimise noise and vibration emissions/impacts (with proposed timing), including validation monitoring, in line with relevant guidance/standards; and • Propose representative noise monitoring locations for determining compliance with applicable noise goals and where relevant noise goals would be set as representative limits. Note: this will require a detailed Noise Impact Assessment to be completed.	Refer to **Section 7.4** and **Appendix 12** of the EIS.
	2. Air • Identify the existing air quality environment and identify applicable air quality goals (i.e. ground level concentrations for pollutants and odour assessment criteria) in line with relevant guidance/standards; and • Identify potential air quality and odour sources and impacts (including point source emissions from any site-based plant and equipment and/or fugitive dust or other emissions) during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to minimise point and/or fugitive and/or odour emissions/impacts (with proposed timing), including monitoring, in line with relevant guidance/standards; and • Include an emission inventory of all sources of air emissions. Note: this will require a detailed Air Quality Impact Assessment to be completed.	Refer to **Section 7.3** and **Appendix 11** of the EIS.
	3. Water • Identify the condition of the local catchment and those immediate areas on and around the proposed development e.g. soils, erosion potential, vegetation cover, etc; and • Identify nearby water resources, the background water conditions (including river flow data, water flow/direction and quality data, the depth to groundwater, groundwater flow/gradient and quality data, reliance on water resources by surrounding users and by the environment) and relevant water quality objectives in line with relevant guidance/standards; and • Identify existing impacts to water resources (including other industrial discharges); and • Identify any water intakes, intake frequency and volumes related to the proposed development; and	Refer to **Section 7.5** and **Appendix 7** of the EIS.

Agency	Requirement	Where addressed in EIS
	• Identify any expected discharges (including stormwater), discharge quality, discharge frequency and volumes related to the proposed development; and • Identify all practical measures that can be taken to prevent any expected discharges or an explanation of why any specific discharges cannot be prevented; and • Identify potential impacts to surface and groundwater during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to protect surface and groundwater resources, particularly erosion and sediment controls during the construction stage and the rehabilitation stage and the inclusion of permanent erosion and sediment controls where required and applicable; and • Include a detailed water balance and discharge inventory; and • Include an assessment of any mixing zones; and • Include any proposed discharge limits. Note: this will require a detailed Water Assessment to be completed.	
	4. Land • Identify if the soils and groundwater in the area of the Proposal are contaminated or are acid forming (i.e. acid sulphate soils) and if so, identify best practice mitigation measures (pollution control) and strategies or remedial and/or disposal actions that will be required/undertaken if applicable in accordance with relevant guidance/standards. Investigations should be undertaken in accordance with (but not limited to) guidelines identified in Attachment B; and • Identify potential impacts to soils and groundwater /land resources as a result of the proposed development and identify best practice mitigation measures (pollution control) and strategies that will be required/undertaken if applicable in accordance with relevant guidance/standards. • A site auditor accredited under the Contaminated Land Management Act 1997 (CLM Act) should be engaged to provide a Section A site audit statement (SAS) and accompanying site audit report (SAR) certifying suitability of the land for the proposed land use. By engaging a site auditor to provide a Section ASAS, the site auditor will review the adequacy of the investigations, any remedial works or management plan required and confirm suitability of the land for the proposed use.	Refer to **Section 7.5** and **Appendix 15, Appendix 19** and **Appendix 23** of the EIS. Based on preliminary investigations a site audit has not been prepared in support of the proposal.
	5. Waste • Identify all waste types that will be generated as a result of the proposed development during both construction and operation, their classification and the ways in which they will be legally handled, stored, transported, reused, recycled or disposed of, including sampling/monitoring, record keeping, waste tracking, contingency measures and any other verification practices, in accordance with relevant guidance/standards; and • Identify options and strategies for waste minimisation; reuse and recycling across all activities and processes during both construction and operational stages.	Refer to **Section 7.11** and **Appendix 16** of the EIS.
	6. Storage and use of fuels / chemicals etc • Identify all fuels/chemicals/products/dangerous goods to be stored/used onsite; and	Refer to **Section 5.2.3.2** and **Appendix 8** of the EIS.

Agency	Requirement	Where addressed in EIS
	• Identify adequate handling, storage, control and usage requirements for any fuels/chemicals/products/dangerous to be stored/used onsite.	
	7. Incident Management • Identify adequate incident management procedures to be established including notification requirements to the Appropriate Regulatory Authority and other relevant authorities for incidents that cause or have the potential to cause material harm to the environment (Part 5.7 of the Protection of the Environment Operations Act 1997).	Refer to **Section 7.4** of the EIS.
	8. Cumulative impacts • Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute; and • Identify the cumulative impacts of the proposed development in a local context.	Refer to **Section 7.4**.
	9. Monitoring Programs • Include a detailed proposal of any noise, air, water, land, waste, meteorological etc monitoring during construction and operation to ensure and assumptions, predictions, goals, criteria etc are achieved. The proposal should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.	Refer to **Section 8** of the EIS.
TfNSW	TfNSW recommends that the Environmental Impact Statement (EIS) should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development: • Road and Related Facilities within the Department of Planning EIS Guidelines, and, Section 2 Traffic Impact Studies of Roads and Maritime's NSW's *Guide to Traffic Generating Developments 2002*. • Furthermore, a traffic and transport study shall be prepared in accordance with the RTA *Guide to Traffic Generating Developments*, RMS *Traffic Modelling Guidelines*, Austroads *Guide to Traffic Management, Part 6, Intersections, Interchanges and Crossings*, and Austroads *Guide to Traffic Management, Part 12, Integrated Transport Assessments for Developments*, and is to include (but not be limited to) the following: • Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject properties. • Current traffic counts for all of the traffic routes and intersections. • The anticipated additional vehicular traffic generated from both the construction and operational stages of the project. • The distribution on the road network of the trips generated by the proposed development. • It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation. • Consideration of the traffic impacts on existing and proposed intersections, in particular, the intersections Central Coast Highway and Kangoo Road, Intersection of Central Coast • Highway and Wiseman Ferry Road and intersection of Old Pacific Highway and Wisemans Ferry Road, and the capacity of the local and classified road network to safely and efficiently	Refer to **Section 7.1** and **Appendix 10** of the EIS.

Agency	Requirement	Where addressed in EIS
	• cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area. • Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. • In this regard, preliminary concept drawings shall be submitted with the EIS for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of Transport for NSW and Council. • Traffic analysis of any major / relevant intersections impacted, using SIDRA or similar traffic model, including: o Current traffic counts and 10 year traffic growth projections o With and without development scenarios o 95th percentile back of queue lengths o Delays and level of service on all legs for the relevant intersections o Electronic data for Transport for NSW review. • Any other impacts on the regional and state road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.	
NSW RFS	The NSW RFS has reviewed the information provided and advises that a bush fire report that demonstrates that the development meet the aim and objectives of *Planning for Bush Fire Protection 2019* and the provisions of Section 8.3.1 must be prepared for subsequent stages of the application.	Refer to **Section 7.10** and **Appendix 13** of the EIS.

6.3 Public Authorities and Community Groups

Consultation with relevant public and community groups involved emailing an overview of the project, along with a copy of the draft development plans and relevant technical input, requesting feedback. A copy of the letter template is provided at **Appendix 22**.

Consultation with Council involved a formal pre-lodgement meeting held on held on 20 April 2022.

A summary of the consultation undertaken to-date with Council, relevant public agencies and community groups is provided below. Several consultants have undertaken additional consultation with relevant parties during the preparation of their reports, as required.

Table 10 - Public Authorities - Summary of Issues Raised and Response

Consultation Required by SEARs	Summary of Consultation	Comment
Environment, Energy and Science Group (DPIE) [now Environment and Heritage]	Letter with attachments emailed to agency on 14/04/ 2022. No response received to date.	No further action required.
Water Group (DPIE)	Letter with attachments emailed to agency on 14/04/ 2022. Water Group emailed 19/04/2022 advising email has been forwarded to the licencing and approvals team, who will respond directly as required. No response received from the licensing department to date.	No further action required.
Environment Protection Authority (DPIE)	Letter with attachments emailed to agency on 14/04/ 2022. EPA emailed on 19/04/2022 advising no further comments.	No further action required.
Transport for NSW	Letter with attachments emailed to agency on 14/04/ 2022. No response received to date.	No further action required.
Fire & Rescue NSW	Letter with attachments emailed to agency on 14/04/ 2022. No response received to date.	No further action required.
NSW Rural Fire Service	Letter with attachments emailed to agency on 14/04/ 2022. No response received to date.	No further action required.
WaterNSW	Letter with attachments emailed to agency on 14/04/ 2022. WaterNSW (Enquires) emailed 14/04/2022 indicating they have no particular comments or requirements regarding the proposal. If there are any water licencing requirements, another team from WaterNSW will make direct contact. Water NSW (Regulation Specialist) emailed 27/04/2022 providing letter with requirements (see **Appendix 24**).	Water NSW's requirements are addressed in **Section 7.5** and **Appendix 7** of this EIS, as relevant.

Consultation Required by SEARs	Summary of Consultation	Comment
Darkinjung Local Aboriginal Land Council	Letter with attachments emailed to LALC on 14/04/ 2022. No response received to date.	No further action required.
Central Coast Council	Pre-lodgement meeting held on 20/04 2022.	Refer to **Section 6.3.1** below.

6.3.1 Central Coast Council

A formal pre-lodgement meeting was held with Council's development assessment team on 20 April 2022. A copy of the meeting minutes is provided at **Appendix 17**. **Table 11** provides a detailed summary of the key matters raised in these minutes and identifies where each of these matters has been addressed in this report and the accompanying technical studies.

Table 11 – Council Pre DA Meeting Minutes

Requirement	Where addressed in EIS
PLANNING As the proposal is classified as Designated Development under Schedule 3 of the EPA Regulations the DA must be accompanied with an Environmental Impact Statement (EIS) addressing the Departments SEARS and Council's requirements.	Throughout EIS.
Protection of the Environment Operations Act 1997 (POEO Act) The Environment Protection Authority (EPA) issues environment protection licences to the owners or operators of various industrial premises under the *Protection of the Environment Operations Act 1997* (POEO Act).	The proposal does not require an EPL, as outlined in **Section 5.3.5** of this EIS.
Rural Fires Act 1997 The proposed Development Application (DA) must be accompanied by a Bush Fire Assessment Report (BFAR) that explains how compliance with PBP 2019 is to be achieved.	Refer to **Section 7.10** and **Appendix 13** of this EIS.
State Environmental Planning Policy (Resilience and Hazards) 2021 *Chapter 3 Hazardous and Offensive Development* A person who proposes to make a development application to carry out development for the purposes of a potentially hazardous industry must prepare (or cause to be prepared) a preliminary hazard analysis in accordance with the current circulars or guidelines published by the Department of Planning and submit the analysis with the development application.	Refer to **Section** 5.2.3.2 and **Appendix 8** of this EIS.
Chapter 4 Remediation of Land Details of the potential contamination of the subject area need to be provided as part of the development application.	Refer to **Section 5.2.3.3** and **Appendix 19** of this EIS.
State Environmental Planning Policy (Transport and Infrastructure) 2021 Clause 2.121 – Traffic generating development The proposed development may be traffic generating development under Clause 104 of the SEPP therefore this application is required to be sent to Transport for NSW (Formally RMS) for their consideration.	Refer to **Section 5.2.4.1** of this EIS.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 The proposal needs to address the relevant planning provisions of this SEPP.	Refer to **Section 5.2.1** of this EIS.
Gosford Local Environmental Plan 2014 *Permissibility* Permissible with consent.	Refer to **Section 5.2.5** of this EIS. Note the site is not understood to contain ASS.

Requirement	Where addressed in EIS
Relevant Clauses Clause 7.1 – Acid Sulfate Soils: Clause 7.4 – Development in Somersby Business Park;	
The provisions of Draft Central Coast Local Environmental Plan 2018 (CCLEP) are to be addressed within the required EIS submitted with any Development Application.	Refer to **Section 5.2.5** of this EIS.
Gosford Development Control Plan 2013 Part 2.1 Character Part 3 Specific Controls and Development Types The following must be addressed: o Chapter 3.11 Industrial development Part 6 Environmental Controls o Clause 6.1 Acid sulfate soils o Clause 6.3 Erosion Sedimentation Control o Clause 6.6 Tree and vegetation management o Clause 6.7 Water Cycle Management Part 7 General Controls o Clause 7.1 – Car parking requirements o Clause 7.2 – Waste Management	Refer to **Section 5.5** of this EIS.
Include assessment of the social and economic impacts/benefits of the proposal and need for the development to support the construction industry.	Refer to **Section 9.1** of this EIS.
The suitability of the site for the development and the public interest	Refer to **Section 9.1**of this EIS
ENGINEERING Flooding & Drainage For DA submission a Stormwater Management Plan is required to be submitted, detailing the impact of the open stormwater hardstand catchment area (between the concrete silos / loading area and covered water treatment areas) upon the water treatment pit and tank capacities and overflows, for a full range of storm events (i.e., 20%, 10%, 5% and 1%), and the proposed overflow discharge point(s) for any (potentially contaminated) water in these events.	Refer to **Section 7.5** and **Appendix 7** of this EIS.
Earthworks Excavation will be required for the footings for the 2 x batching silos, which will likely be required to be piered. The site is classed 5 on Council's *Acid Works Sulphate Soils Planning Map*, however the works are not within 500m of adjacent Class 1, 2, 3, or 4 land or likely to lower the water table on these adjacent lands, and are well above 5.0m AHD (with an approx. min. EGL of 195.5m AHD on the site).	N/A - only minor earthworks are proposed. A review of Council mapping indicates the site is not affected by ASS.
Roads, Access, Traffic & Parking For DA submission, a Traffic & Parking Impact Assessment is required, addressing: traffic movement impacts on the surrounding public road network the potential for vehicular conflict at the site entry point and the proposed ongoing management of this issue to prevent entering vehicles having to queue on the public roadway whilst another vehicle is exiting the site, also considering the requirement for integration with the future Workshop B1 usage the provision of adequate employee parking on the site, noting: if usage of parking spaces within the front of the site (adjacent to Workshop B1, as approved under the associated CDC development) is proposed, safe pedestrian access to Workshop B2 will need to be established; or, the provision of additional employee car parking spaces within the rear area of the site may be required, preferably within the rear-left corner to	Refer to **Section 7.1** and **Appendix 10** of this EIS.

Requirement	Where addressed in EIS
minimise pedestrian / vehicular conflicts; and, any reliance upon onstreet car parking will not be supported.	
TfNSW Prior to DA lodgement, it is recommended comments should be sought from TfNSW, with this response to be included within the DA document bundle.	Refer to **Section 6** of this EIS.
Water & Sewer The development will require a Section 305 application to be submitted to Council under the *Water Management Act 2000* for a Section 307 Certificate of Compliance to be issued upon completion of works.	A Section 305 application will be obtained at CC stage.
Easements, 88B Requirements, etc	The proposal will not impact on easements within or adjoining the site.
ECOLOGY The site appears relatively clear of vegetation and is not mapped on the NSW Biodiversity Values Map. The proposal has the potential to impact the Coastal Upland Swamp EEC on the adjoining Lot to the east and north. The EEC is groundwater dependent, hydrological regimes must be maintained including water quality. The application is required to be supported by an Ecological Assessment in accordance with Council's Flora and Fauna Guidelines 2019. The proposed development will be assessed in accordance with the *Biodiversity Conservation Act 2016*.	Refer to **Section 7.9** of this EIS.
HERITAGE Refer Somersby Industrial Estate POM for additional information on known aboriginal heritage objects/sites.	Refer to **Section 7.7** and **Appendix 9** of this EIS.
WASTE MANAGEMENT A Waste management report would be required to support the EIS.	Refer to **Section 7.11** and **Appendix 16** of this EIS.
CONTRIBUTIONS ☒ No Section 7.11 or 7.12 contributions apply. ☒ Water and sewer developer contributions will be applicable for the development in accordance with the developer servicing plans.	Noted
ENVIRONMENTAL HEALTH Councils' records indicate that there have been no known environmental issues associated with the existing operational Redicrete site located at 3 Corella Close Berkeley Vale.	Noted.
Clause 13 of Schedule 1 of the *Protection of the Environment Operations Act* 1997 indicates that an Environmental Protection License from the NSW EPA is not required.	Noted.
Air/Stormwater/Liquid Wastes/Noise The applicant must address Clause 3.11.8.4 of the Gosford DCP relating to noise and air pollution impacts, as well as liquid wastes and stormwater pollution control.	Refer to **Appendix 17 – CCDCP 2022 Evaluation** of this EIS.
Contamination The applicant will need to address any contamination issues that currently exist on the site, as well as any potential sources of contamination from the proposed activity and any proposed mitigation control measures.	Refer to **Section 5.2.3.37.7** and **Appendix 19** of this EIS.
Fuels and Chemical Storage	Refer to **Section 5.2.3.2** and **Appendix 8** of this EIS.

Requirement	Where addressed in EIS
Details regarding the storage of fuels and other liquid chemicals onsite is to be provided, as well as bunding for these storage areas that includes provision for the refuelling and delivery areas. Details on how leaks, spills and other escapes of fuels and liquid chemicals will be managed is to be provided.	
Soils and Construction/ Water Soil and Water Management Plans are required to be submitted and approved by Council prior to consent in accordance with Clause 3.11.8.2 of the Gosford LEP and Clause 6.3 of the Gosford DCP.	Refer to **Section 7.57.7** and **Appendix 7** of this EIS.
Recommended/ Required Documentation The following documentation is to be submitted with any Development Application: • Architectural plans, including site plan, floor plans, elevations, sections and long sections. Provide dimensions, loading areas, and waste storage areas on floor plans. Existing and finished surface • level/earthworks plan • Survey plan. • Environmental Impact Statement (EIS) • Quantity Surveyors Report • Traffic and Parking Impact Assessment. • Water Cycle Management Plan/stormwater treatment system including design capacity for wet weather events. • Ecological Assessment (Flora and Fauna assessment). • Tree retention/tree removal plan/arborists Report. • Soil and Water management Plan. • A Bushfire Assessment Report in accordance with *Planning for Bushfire Protection 2019*. • Landscape Plan. • Acoustic Report. • Air quality assessment. • Acid sulphate soil assessment/management Plan. • Operational Management Plan (including timings, lighting, noise control, waste management, servicing, carparking and any other relevant information). • BCA Report. • Access Report. • Waste Management Plan using Council's template. • Swept Turning Path Overlays for all intended vehicles (waste collection and vehicles in parking building).	Relevant documentation attached to EIS.

6.4 Community

Consultation with the community involved mailing an overview of the project in April and May 2022, along with a copy of the draft development plans, to adjoining and nearby landowners / occupiers requesting feedback on the project (refer **Figure 26**). The surrounding landowners / occupiers contacted were selected on the basis of their proximity to the site, as identified on the map below, being the most likely to be impacted by the proposal.

To date, feedback was received from the owners of adjoining 6 Chivers Road, raising concern with the likely impacts of the proposal on existing industries situated on the site. Of note the likely impacts associated with the batching process on noise and vibration and dust were flagged. Consideration of the impacts of the development with respect to air quality and noise and dust on 6

Chivers Road are addressed in **Section 7.3** and **Section 7.4** of this EIS. Specific measures (**Section 8**) are proposed to reduce the impact of the proposal on 6 Chivers Road.

Figure 26 - Extent of Landowner / Occupier Consultation



6.5 Post Exhibition Consultation

The proposed development will be placed on public exhibition for 28 days in accordance with Section 8, Division 2 of Schedule 1 of the *Environmental Planning and Assessment Act 1979*. During the public exhibition period Council, State agencies and the public will have an additional opportunity to make submissions on the project.

6.6 Further Consultation

Should the project be approved, consultation with the community and identified stakeholders will continue in the lead up to, and during the construction of the project. This will ensure the stakeholders, including the community, remain informed of the projects progress and the outcomes of the development application.

Redicrete will continue to dispaly a contact phone number on the front gate of the site and its website to receive and respond to enquiries and complaints relating to the proposal during construction and operation of the project.

The community and local businesses will be provided with information on Redicrete's activities, as and when relevant to the project, via updates to the Redicrete website (https://redicrete.com.au/news-case-studies/).

The needs of the local community and businesses will be considered through the development and implementation of a range of operational procedures that aim to minimise amenity impacts in accordance with the range of environmental mitigation and management measures outlined in this EIS. A comprehensive list of relevant measures is provided in **Section 8** of this EIS.

7 Environmental Assessment

This section of the report assesses and responds to the anticipated environmental impacts associated with the construction and operation of the proposed development to address the matters for consideration set out in the SEARs (see **Section 6.1**). The Mitigation Measures proposed at **Section 8** complement the findings of this section.

7.1 Transport and Traffic

A Traffic and Parking Assessment (TPA) has been prepared for the proposal by Intersect Traffic (see **Appendix 10**). The TPA assessed the likely impact of the proposed development on traffic and parking matters taking into consideration the current and future local traffic environment, the (former) RTA's Guide to Traffic Generating Development (GTGD) and relevant planning legislation and standards. Key outcomes of the TPA are addressed in the following sections.

In summary, the TPA found that the proposal can be supported from a traffic and parking impact perspective as it will not adversely impact on the local or state road network and can comply with all relevant Council, Australian Standards, and TfNSW traffic and parking related requirements.

7.1.1 Existing Environment

The TPA outlines the key characteristics of the existing traffic environment, including:

- The subject site is located on the northern side of Gindurra Road, approximately 150 metres west of the M1 Motorway overpass, 500 metres east of the Wisemans Ferry Road / Gindurra Road / Somersby Falls Road roundabout intersection, 1.4 kilometres northeast of access to and from the north of the M1 Motorway, and 2.1 kilometres northeast of access to and from the south of the M1 Motorway.
- Wisemans Ferry Road is currently classified as a local collector road under a functional road hierarchy. Pre F3 freeway (and later M1 Motorway), it functionally operated as an arterial road and as such is constructed to a high standard. Near the site, south of Gindurra Road, Wisemans Ferry Road is a two lane two way sealed road separated by a 3 metre grassed median island. The north and southbound carriageways of this section of the road are approximately 5 metres wide between kerbs. Wisemans Ferry Road has a 60 km/h speed zoning at the roundabout. At the time of inspection, Wisemans Ferry Road was in good condition and considered suitable for use by heavy vehicles associated with the proposed development
- Gindurra Road is the eastern leg of the roundabout intersection with Wisemans Ferry Road. Under a classified road hierarchy, it is a local collector road and therefore under the care and control of Council. Near the site, Gindurra Road is a two way two lane industrial / urban style road. It has a 10 metre sealed carriageway between kerbs and, at the time of inspection, was observed to be in good condition. At the site, Gindurra Road has a 50km/h speed zoning.
- There are no known road upgrades proposed near the site that will increase the capacity of the local road network. Recent widening works on the M1 Pacific Motorway near the site have increased the capacity of the arterial road network around the site.
- To determine existing traffic volumes on the road network, the TPA uses previous manual intersection traffic counts carried out by Northern Transport Planning and Engineering for Intersect Traffic on the Wisemans Ferry Road / Gindurra Road / Somersby Falls Road

roundabout during the AM and PM peak traffic periods on Tuesday 15 September 2020. It was determined that the morning and evening mid-block peak hours were 8:00 am – 9:00am and 3:15pm – 4:15pm, respectively, which are the likely peak hour traffic periods for an industrial estate and would coincide with the peak hour traffic generation periods for the proposed development. The counts determined the following peak hour traffic volumes on the relevant road legs:

Table 12 -Mid-block peak hour traffic volumes from 2020 (Source: Intersect Traffic)

Road	Section	AM peak (vph)	PM peak (vph)
Wisemans Ferry Road	North of Somersby Falls Road	231	258
Wisemans Ferry Road	South of Somersby Falls Road	472	670
Gindurra Road	East of Wiseman's Ferry Road	268	462
Somersby Falls Road	West of Wiseman's Ferry Road	223	336

- The 2020 peak hour traffic figures were increased by 1.5% per annum (background traffic growth) for a further 2 years to estimate likely traffic volumes in 2022. The 2022 peak hour traffic figures were then been increased by 1.5% per annum for a further 10 years to estimate likely traffic volumes in 2032. The 2022 and 2032 mid-block peak hour traffic volumes adopted within this report for the road network capacity assessment are:

Table 13 – 2022 and predicted 2032 mid-block peak hour traffic volumes (Source: Intersect Traffic)

Road	Section	2022		2032 @ 1.5% p.a.	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
Wisemans Ferry Road	north of Gindurra Road	238	266	276	309
Wisemans Ferry Road	south of Gindurra Road	486	690	564	801
Gindurra Road	east of Wisemans Ferry Road	276	476	320	552
Somersby Falls Road	west of Wisemans Ferry Road	230	346	267	402

- Having regard to the GTGD, it is considered that the existing road network is likely to operate with a LoS C (1,800 vtph) or better which is considered acceptable. This is consistent with observations during peak traffic periods and shows that currently there is significant spare capacity for additional traffic on the local road network.
- Busways Gosford operates a limited public transport (bus) service to the area. The nearest bus stops are located on both sides of Gindurra Road, approximately 185 metres west of the site. The bus services connect to the West Gosford Shopping Centre and the major bus interchange at Gosford Station providing many bus routes or trains services for access for suburbs and facilities throughout the Central Coast and / or regional travel.
- There are no constructed hardstand footpaths or off road cycle ways in the area.

7.1.2 Potential Impacts

While the GTGD provides specific advice on the traffic generation potential of various land uses, updated data 'for business parks and industrial estates' provided in the RMS Technical Direction T2013 / 04 is considered more relevant in the current circumstances. The following traffic generation rates taken from this data have been adopted for this assessment:

- Daily vehicle trips = 7.83 per 100m2 gross floor area
- Evening peak hour vehicle trips = 0.78 per 100m2 gross floor area

Based on the proposal having an area of 694m2, the TPA estimates that the additional traffic generated by the proposal will be a maximum of 5 vtph in the AM peak and 6 vtph in the PM peak, with a maximum of 14 vtph in the AM peak and 16 vtph in the PM peak for the full site development. The likely trip distribution pattern of this traffic throughout the local road network is illustrated within the TPA.

The TPA makes the following key findings in relation to traffic and parking impacts:

- Road Network Capacity
  The addition of a maximum of 16 vtph in the peak traffic periods resulting from the overall development of the site will not result in the technical mid-block road capacity thresholds on the local road network being reached. Wisemans Ferry Road, Gindurra Road and Somersby Falls Road will continue to have mid-block traffic volumes less than their two way mid-block capacity (1,800 vtph) through to 2032 with the full development of the site.
- Intersection Capacity
  The main intersection impacted by the proposed development will be the Wisemans Ferry Road / Gindurra Road / Somersby Falls Road roundabout. All other intersections at the M1 Motorway are designed to cater for access for haulage trucks and would not be impacted by the development. SIDRA modelling shows that the Wisemans Ferry Road / Gindurra Road / Somersby Falls Road roundabout will continue to operate satisfactorily even with the additional traffic generated by the full development of the site and with background traffic growth through to 2032. The average delay, LoS, and queue lengths for all movements remain well within the thresholds determined by TfNSW as representing satisfactory operation. It is therefore concluded the proposed development will not adversely impact on the efficiency of the local and state road network which has sufficient spare capacity to cater for the development without any requirement for upgrading works aside from those required along the frontage of the site.
- Access
  The proposed vehicular access arrangements to the on-site car parking area and internal road system would comply with Council and Australian Standard requirements and are deemed suitably safe. Internal manoeuvring swept turning paths are provided with the TPA. While the swept turning paths shows conflict between entering and exiting B-Doubles, operational management measures are proposed to prevent such conflicts (see **Section 7.1.3** of EIS).
  Pedestrian and vehicular sight lines at the access as required by AS2890.1-2004 are achievable through good design and can be conditioned on any consent. Vehicle site distance from the accesses will be in excess of the desirable AS2890.1-2004 requirement of 70 metres for a 50 km/h frontage road speed.
- Servicing
  Waste collection will be via private contractor in a medium to heavy rigid waste collection vehicle at a frequency of approximately 1 - 2 collections per week. The site design allows this vehicle to easily manoeuvre on site whilst entering and exiting in a forward direction. The loading area and service delivery facilities provided on-site are considered satisfactory for the level of servicing required by the development.
- Off-street parking

Council's DCP provides the following parking rates relevant to the development:

- Factory – 1 space per 100m2 GFA
- Ancillary Office – 1 space per 40m2 GFA
- Disabled Park Space – 1 per 4 to 100 car parking spaces

Based on the DCP rates, a total of two on-site parking spaces are required for the development.

The proposal provides 3 on-site car spaces and an accessible space in the southern carpark, 1 space in excess of DCP car parking requirements. There are areas available for any small overflow of light vehicle parking which may occur during large orders, and truck drivers are also able to park their cars adjacent to the agitators.

A review of the proposed car park design indicates that it would comply with the minimum design dimensions for a private car park provided within AS2890.1-2004.

In terms of upgrade requirements, the TPA makes the following findings:

- The proposed development will not generate any significant external pedestrian traffic. Therefore no nexus exists for the provision of additional external pedestrian infrastructure.
- The proposed development will not generate increased patronage of the existing public transport system (buses). Changes to the existing public transport system or additional infrastructure are therefore not required.
- The proposed development will not generate any significant external bicycle traffic. Therefore, no nexus exists for the provision of additional external bicycle infrastructure.

7.1.3 Mitigation and Management Measures

The TPA recommends the following mitigation measure:

- To prevent conflict between entering and exiting B-Doubles, B-Double raw material deliveries will be programmed to occur between the hours of 8 pm and 6 am so as to avoid peak traffic periods. With a maximum of 4 deliveries occurring within these times, they will be programmed at least 2 hours apart. As such, within any one hour period there will only be the same vehicle entering and exiting the site.
- Provide pedestrian and vehicular sight lines at the access as required by AS2890.1-2004 through good design of the access i.e. low front fence lines and landscaping.

7.2 Hazards and Risks

This section presents a summary of the screening report prepared for the proposal by Advitech Pty Limited (see **Appendix 8**), which was undertaken in accordance with Chapter 3 'Hazardous and offensive development' of *State Environmental Planning Policy (Resilience and Hazards) 2021.*

7.2.1 Existing Environment

Chapter 3 'Hazardous and offensive development' requirements

The purpose of the screening report was to determine if the project is potentially hazardous using the SEPP risk screening process or potentially offensive using the quantity, nature significance of any discharge. The assessment was completed in accordance with the process outlined in Applying SEPP 33: Hazardous and Offensive Development Application Guidelines (NSW Government, 2011).

7.2.2 Potential Impacts

The report makes the following key findings:

- Risk Screening:
  The report finds that none of the screening thresholds were triggered by the proposal.
- Transportation Screening Thresholds:
  The report notes that, provided the vehicle movements are below the cumulative vehicle movements for each class, the potential risk is unlikely to be significant. In this respect, WPP notes that vehicle movements generated by the proposal will be well below the cumulative vehicle movements for each class.
- Amenity Screening:
  In considering whether the proposal is 'offensive', the report notes that, due to the location and with consideration to the overall area, it is unlikely for the proposed development to be deemed 'offensive' or considered to cause offense to sensitive receptors. In this respect, WPP notes that separate assessments of the air quality and noise and vibration as a result of the project have been completed. These assessments considered the relevant impact criteria based on legislative requirements, and determined that the project would meet the relevant amenity criteria throughout the life of the project provided that mitigation measures are implemented (where applicable). On this basis, the project is not considered to be 'potentially offensive'.

Overall, the report finds that Chapter 3 of the SEPP has not been triggered and preparation of a PHA is not required.

7.2.3 Mitigation and Management Measures

While the report does not find that any specific mitigation or management measures a required, the following measures are considered to be relevant:

- Minimise build-up of dust on-site
- Regularly inspect and maintain on-site plant and equipment

7.3 Air Quality

An Air Quality Impact Assessment (AQIA) has been prepared for the proposal by Advitech Pty Ltd (see **Appendix 11**). The AQIA provides an assessment of air quality impacts of the intended operation of the batching plant on site against the NSW EPA criteria contained in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (AMMAAP).

In summary, the AQIA found that the proposal would likely not cause any additional exceedances of the PM10, PM2.5 or TSP impact assessment criteria at the identified nearby sensitive receivers. No specific mitigation or management measures are required or proposed.

As only minimal construction works involving exposed surfaces are proposed as part of the proposal, air quality impact associated with construction are not assessed by the AQIA.

7.3.1 Existing Environment

Sensitive receptors

The closest receptors to the site assessed in the AQIA are identified below:

Table 14 - Location of Receptors – AQIA (Source: Advitech Pty Ltd)

Receiver ID	Address	Easting UTM (m)	Northing UTM (m)	Receiver Type
R1	242 Debenham Rd S, Somersby	342014	6301431	Private Residence
R2	Debenham Rd S, Somersby	342140	6301625	Private Residence
R3	12 Acacia Rd, Somersby	342057	6301280	Private Residence
R4	Ngaruki Gulgul Central School	341184	6300365	School
R5	227 Debenham Rd N, Somersby	341746	6302165	Private Residence
R6	63 Ulinga Rd, Somersby	341281	6302884	Private Residence
R7	281 Wisemans Ferry Rd, Somersby	340616	6302706	Private Residence
R8	126 Somersby Falls Rd, Somersby	339942	6302016	Private Residence
R9	36 Myoora Rd, Somersby	339856	6301403	Private Residence
R10	180 Wisemans Ferry Rd, Somersby	341192	6301944	Private Residence
R11	6 Chivers Rd, Somersby[1]	341407	6301575	Industrial Receptor

Relevant pollutants

Air quality may be impacted by a number of pollutants which come from a range of different emission sources. Dust and particular matter were identified as the pollutants most likely to impact nearby sensitive receptors during the construction and operation of the project.

Ambient air quality

A Level 1 assessment of particulate background concentrations has been prepared for the pollutants for the 2020 monitoring year to correspond with the meteorological data (see **Table 157** below). The Level 1 assessment has assumed a worst-case background concentration by using the maximum reported value.

Table 15 - Background air quality (Source: Advitech Pty Ltd)

Pollutant	Background Concentration	Units	Averaging Time
TSP	31.8[a]	µg/m³	Annual
PM_{10}	varies	µg/m³	24 Hours
	15.9	µg/m³	Annual
$PM_{2.5}$	varies	µg/m³	24 Hours
	5.6	µg/m³	Annual

[a] – Assumed from annual average PM_{10} background concentration (TSP = 2 x PM_{10}).

The maximum reported 24-hour average PM10 background concentration for the 2020 monitoring period was 90.5 µg/m3, which is above the NSW EPA impact assessment criteria. As such, the highest value below the PM10 criteria (50 µg/m3) of 47.7 µg/m3 was used in the level 1 assessment of the PM10 24-hour average and understand the cumulative impact of the proposed development. Th above figure displays the PM10 24-hour average background concentrations for 2020 and indicates exceedances of the NSW EPA impact assessment criteria. It should be noted that elevated background concentrations during January and February are likely a result of the prolonged bushfire season during the summer of 2019-2020.

Air quality assessment criteria

The AMMAAP presents the following ground level concentration (GLC) criteria for each applicable air pollutant:

Table 16 – NSW EPA Impact Assessment Criteria (Source: Advitech Pty Ltd)

Pollutant	NSW EPA Design Criteria	Units	Averaging Time
TSP[a]	90	µg/m³	Annual
PM_{10}[b]	50	µg/m³	24 hours
	25	µg/m³	Annual
$PM_{2.5}$[c]	25	µg/m³	24 hours
	8	µg/m³	Annual
Deposited Dust[d]	2[e]	g/m²/month	Annual
	4[f]		

[a] – Total suspended particulates.
[b] – Particulate materials with an aerodynamic diameter less than 10 µm.
[c] – Particulate materials with an aerodynamic diameter less than 2.5 µm.
[d] – Dust is assessed as insoluble solids as defined by AS 3580.10.1.
[e] – Maximum increase in deposited dust level.
[f] – Maximum total deposited dust level.

Emissions sources

The activities associated with the proposed concrete batching plant with the potential to generate dust are:

- Loading raw materials (cement, gravel, sand) from supply trucks into storage silos/bins;
- Conveying raw materials to/from storage silos and bins to mixer trucks; and
- Dust collection in storage silos.

Details of each emission source are provided in **Table 179** below. The emission factors and estimates are based on the Emission Estimation Technique (EET) Manual for Cement Manufacturing - Version 2.1 and Emission Estimation Technique (EET) Manual for Concrete Batching and Concrete Product Manufacturing – Version 1.0.

Table 17 - Emission Sources (Source: Advitech Pty Ltd)

Emitter Name	Emission Factor			Modelled days and hours (Days/hours)[1]	Emission Rate (g/s)		
	TSP	PM_{10}	Units		TSP	PM_{10}	$PM_{2.5}$
Aggregate (gravel and sand) Bin - Loading from trucks	0.02	0.014	kg/t	366 / 13	0.2489	0.187	0.028
Aggregate (gravel and sand) Conveyor Belt - Transfer Point	0.00032	0.00015	kg/t	366 / 13	0.0043	0.0020	0.0003
Loading mixer truck	0.03	0.020	kg/t	366 / 13	0.8890	0.667	0.100
Loading of cement silo	0.17	0.130	kg/t	366 / 13	1.1560	0.867	0.130
Dust collectors on cement silos	15	12	mg/m^3	366 / 13	0.0534	0.043	0.006

[1] – 2020 modelled year is a leap year (i.e., 366 days).

7.3.2 Potential Impacts

7.3.2.1 Particulate impacts – Residential Receivers

The predicted concentrations at selected sensitive r receivers of the annual average PM10, PM2.5 and TSP for the proposed concrete batching facility are presented in **Table 1820** below. The annual PM10, PM2.5 and TSP impact assessment criteria are not exceeded at any sensitive receiver.

Table 18 – Predicted annual average PM10, PM2.5 and TSP at sensitive receivers (worst case) (Source: Advitech Pty Ltd)

Receiver	Predicted Annual Average PM_{10} Increment + Background (µg/m³)	Predicted Annual Average $PM_{2.5}$ Increment + Background (µg/m³)	Predicted Annual Average TSP Increment + Background (µg/m³)
Background Concentration (µg/m³)	15.9	5.6	31.8
R1	16.2	5.7	32.1
R2	16.1	5.6	32.1
R3	16.1	5.6	32.0
R4	15.9	5.6	31.8
R5	16.1	5.6	32.0
R6	16.0	5.6	31.9
R7	16.0	5.6	31.9
R8	16.0	5.6	31.9
R9	16.0	5.6	31.8
R10	16.6	5.7	32.4
R11	21.8	6.5	39.2
Criteria	25	8	90

[1] – Background particulate concentrations using **Table 4**.

The predicted concentrations at selected sensitive receivers of the 24-hour average PM10 maximum increment for concrete batching facility are presented below. The exceedances at nearby sensitive receivers of the 24-hour average PM10 concentration presented below are likely a result of an elevated background PM10 concentration. A Level 2 contemporaneous impact and background assessment is required to determine any additional exceedances as a result of the proposed operation.

A summary of the 24-hour average PM10 contemporaneous impact and background assessment (Level 2 Assessment) for identified sensitive receivers is presented in **Table 1921** below. No additional exceedances have been predicted as a result of the emissions from the proposed concrete batching plant. It should be noted that high background concentrations occurred during January and February and are likely a result of the prolonged bushfire season during the summer of 2019-2020.

Table 19 - Summary of the 24-hour average PM10 contemporaneous impact and background (Source: Advitech Pty Ltd)

Date	PM_{10} 24-hour average (µg/m³)				Date	PM_{10} 24-hour average (µg/m³)			
	Highest Background[1]	Predicted Increment – Concrete Batching	Receiver	Total		Background[1]	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	90.5	1.3	R10	91.8	25/08/20	10.3	17.6	R10	27.9
24/01/20	83	1.4	R10	84.4	05/05/20	9	16.4	R10	25.4
05/01/20	68.5	0.0	R1	68.5	27/03/20	15.1	13.7	R10	28.8
04/01/20	59.5	0.6	R1	60.1	29/07/20	6.7	12.4	R10	19.1
04/09/20	54.9	0.5	R2	55.4	06/07/20	14.4	10.8	R10	25.2
12/01/20	47.7	0.0	R1	47.7	11/09/20	10.7	9.5	R10	20.2
25/01/20	47.3	1.9	R10	49.2	21/05/20	8.7	9.0	R10	17.7
01/01/20	46.6	1.8	R10	48.4	25/06/20	7.2	8.5	R10	15.7
23/01/20	45.3	0.6	R3	45.9	21/12/20	8.7	8.3	R1	17.0
04/02/20	44.2	1.2	R10	45.4	10/05/20	6.9	6.5	R3	13.4
27/01/20	42.2	0.5	R10	42.7	13/05/20	12.1	6.3	R5	18.4
11/01/20	41	0.2	R6	41.2	07/06/20	14.5	6.3	R3	20.8
02/01/20	40.6	1.9	R10	42.5	03/05/20	11.6	5.7	R5	17.3
17/11/20	40.4	1.7	R10	42.1	05/07/20	7.5	4.7	R5	12.2
03/01/20	38.7	0.2	R9	38.9	15/09/20	14.9	4.5	R3	19.4
29/11/20	37.4	0.4	R1	37.8	29/06/20	6.9	4.3	R10	11.2
01/12/20	36.8	0.5	R10	37.3	26/07/20	4.3	3.7	R5	8.0
19/02/20	36.3	0.8	R2	37.1	08/04/20	10	3.4	R10	13.4

[1] – Dates where the background 24-hour average PM_{10} concentration was already at the NSW EPA impact criteria were highlighted grey and discounted.

The predicted concentrations at selected sensitive receivers of the 24-hour average PM2.5 for the proposed operation are presented below. A maximum 24-hour PM2.5 background concentration of 22.7 µg/m3 has been applied to determine if further assessment is required. The exceedance at nearby sensitive receivers of the 24-hour average PM2.5 concentration are likely a result of an elevated background PM2.5 concentration. A Level 2 contemporaneous impact and background assessment is required to determine any additional exceedances as a result of the proposed operation.

Table 20 – Predicted maximum 24-hour average PM2.5 at sensitive receivers (Source: Advitech Pty Ltd)

Receiver	Subject Site Maximum Predicted Increment (µg/m³)	Maximum Background Concentration (µg/m³)[1]	Total (µg/m³)
R1	1.3	22.7	24.0
R2	0.4		23.1
R3	1.2		23.9
R4	0.1		22.8
R5	1.0		23.7
R6	0.5		23.2
R7	0.3		23.0
R8	0.4		23.1
R9	0.4		23.1
R10	3.1		**25.8**

[1] – The background concentration above 25 µg/m³ (refer to **Figure 4**) has been discounted as it is above the impact assessment criteria. Therefore, the next highest value of 22.7 µg/m³ was used.

A summary of the 24-hour average PM2.5 contemporaneous impact and background assessment (Level 2 Assessment) for identified sensitive receivers are presented below (**Table 23**). Modelling

indicates that there are no additional exceedances of the 24-hour PM2.5 impact assessment criteria at nearby sensitive receivers.

Table 21 - Summary of the 24-Hour Average PM2.5 Contemporaneous Impact and Background (source Advitech Pty Ltd

Date	$PM_{2.5}$ 24-hour average (µg/m³)				Date	$PM_{2.5}$ 24-hour average (µg/m³)			
	Highest Background	Predicted Increment – Concrete Batching	Receiver	Total		Background	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	43.9	0.2	R10	44.1	05/05/20	3.9	3.1	R10	7.0
03/01/20	42.6	0.0	R1	42.6	25/08/20	4.9	3.0	R10	7.9
24/01/20	32.6	0.2	R10	32.8	27/05/20	2.7	2.2	R10	4.9
04/01/20	26.8	0.1	R1	26.9	29/07/20	0.2	2.0	R10	2.2
12/01/20	26.1	0.0	R1	26.1	06/07/20	5.6	1.8	R10	7.4
11/01/20	22.7	0.1	R10	22.8	11/09/20	4.3	1.5	R10	5.8
02/01/20	20.8	0.3	R10	21.1	25/06/20	3.5	1.5	R10	5.0
27/01/20	20.4	0.1	R10	20.5	21/05/20	3	1.4	R10	4.4
06/02/20	19.9	0.2	R10	20.1	21/12/20	2.6	1.3	R1	3.9
01/01/20	18.6	0.3	R10	18.9	10/05/20	1.7	1.2	R3	2.9
29/01/20	17.2	0.2	R10	17.4	13/05/20	5.1	1.0	R6	6.1
03/01/20	16.4	0.0	R9	16.4	07/06/20	12	1.0	R3	13.0
07/08/20	15.6	0.2	R5	15.8	03/05/20	5.8	0.9	R5	6.7
09/01/20	15	0.3	R10	15.3	29/06/20	2.6	0.8	R10	3.4
07/01/20	14.7	0.0	R4	14.7	05/07/20	5.8	0.7	R5	6.5
10/01/20	14.1	0.1	R4	14.2	15/09/20	5	0.7	R3	5.7
11/01/20	13.9	0.0	R6	13.9	26/07/20	3.3	0.6	R5	3.9
03/09/20	13.5	0.1	R3	13.6	08/04/20	3.2	0.5	R10	3.7

– Dates where the background 24 hour average $PM_{2.5}$ concentration was already at the NSW EPA impact criteria were highlighted grey and discounted.

According to the NSW EPA guidance, mitigation measures or emission controls that reduce emissions are not required.

Dust Deposition

The predicted annual average dust deposition rates at selected sensitive receivers for the proposed operation are presented below. Dispersion modelling indicates there are no exceedances of the maximum increase in deposited dust level criteria of 2 g/m2/month at nearby sensitive receivers. The maximum predicted dust deposition increment is 7.6 g/m2/month (at the site location). According to the NSW EPA guidance, mitigation measures or emission controls that reduce emissions are not required.

Table 22 - Predicted dust deposition rates at sensitive receivers (Source: Advitech Pty Ltd)

Receiver	Subject Site Maximum Predicted Increment (g/m²/month)	Impact Assessment Criteria
R1	0.1	2 g/m²/month
R2	0.1	
R3	0.1	
R4	< 0.1	
R5	0.1	
R6	< 0.1	
R7	< 0.1	
R8	< 0.1	
R9	< 0.1	
R10	0.2	
R11	0.8	

7.3.2.2 Potential Impacts – Industrial (Work Place) Receivers

According to EPA Guidance a sensitive receptor is describes as a *"...location where people are likely to work or reside; this may include a dwelling, school, hospital, office or public recreational area"*.

6 Chivers Road adjoins the site to the immediate west, and presents as a workplace which may be impacted by dust and particulate matter associated with the operation of the Somersby CBP. The owners of 6 Chivers Road were notified of the proposal and amongst other matters raised concern with the potential impact of dust and particulate matter on 6 Chivers Road as a nearby receiver.

The AQIA (**Appendix 11**) notes likely exceedances of the 24 hour PM_{10} and $PM_{2.5}$ impact assessment criteria at nearby industrial receptors, including 6 Chivers Road (described as R11 in the AQIA). The results for the 24 hour PM_{10} are provided in **Table 25** and $PM_{2.5}$ in **Table 26** and in Appendix D of the AQIA (**Appendix 11**).

Table 23 - Predicted Maximum 24-Hour Average PM at R11 (6 Chivers Road) (Source: Advitech Pty Ltd

Date	PM₁₀ 24-hour average (µg/m³)				Date	PM₂.₅ 24-hour average (µg/m³)			
	Highest Background[1]	Predicted Increment – Concrete Batching	Receiver	Total		Background[1]	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	90.5	0.0	R11	90.5	**28/04/20**	**13.5**	**48.9**	R11	**62.4**
24/01/20	83	0.0	R11	83.0	**04/03/20**	**18.6**	**41.8**	R11	**60.4**
05/01/20	68.5	0.0	R11	68.5	**03/01/20**	**38.7**	**39.9**	R11	**78.6**
04/01/20	59.5	0.0	R11	59.5	**24/03/20**	**13.8**	**39.7**	R11	**53.5**
04/09/20	54.9	0.0	R11	54.9	**15/09/20**	**14.9**	**38.5**	R11	**53.4**
12/01/20	47.7	0.0	R11	47.7	21/12/20	8.7	38.2	R11	46.9
25/01/20	47.3	0.0	R11	47.3	12/08/20	9	36.9	R11	45.9
01/01/20	46.6	0.2	R11	46.8	**03/12/20**	**24**	**36.7**	R11	**60.7**
23/01/20	45.3	0.0	R11	45.3	09/07/20	9.3	36.3	R11	45.6
04/02/20	44.2	4.5	R11	48.7	**05/02/20**	**14.9**	**35.6**	R11	**50.5**
27/01/20	**42.2**	**16.1**	R11	**58.3**	**18/11/20**	**25.7**	**26.8**	R11	**52.5**
11/01/20	41	0.0	R11	41.0	**30/01/20**	**26.4**	**25.1**	R11	**51.5**
02/01/20	40.6	0.0	R11	40.6	**22/01/20**	**31.7**	**19.5**	R11	**51.2**
17/11/20	40.4	0.0	R11	40.4	**27/02/20**	**33.4**	**16.7**	R11	**50.1**

Table 24 - Summary of the 24-Hour Average PM2.5 Contemporaneous Impact and Background (6 Chivers Road) (source: Advitech Pty Ltd

Date	$PM_{2.5}$ 24-hour average (µg/m³)				Date	$PM_{2.5}$ 24-hour average (µg/m³)			
	Highest Background[1]	Predicted Increment – Concrete Batching	Receiver	Total		Background[1]	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	63.9	0.0	R10	63.9	28/04/20	3.6	7.5	R10	11.1
05/01/20	42.6	0.0	R10	42.6	04/03/20	3.4	6.4	R10	9.8
26/01/20	32.6	0.0	R10	32.6	03/01/20	16.4	6.1	R10	22.5
04/01/20	26.8	0.0	R10	26.8	24/03/20	4	6.1	R10	10.1
12/01/20	26.1	0.0	R10	26.1	15/09/20	5	5.9	R10	10.9
17/01/20	22.7	0.0	R10	22.7	21/12/20	2.6	5.8	R10	8.4
02/01/20	20.8	0.0	R10	20.8	03/12/20	5.4	5.6	R10	11.0
27/01/20	20.4	2.5	R10	22.9	12/08/20	6.1	5.6	R10	11.7
04/02/20	19.9	0.7	R10	20.6	09/07/20	4.6	5.5	R10	10.1
01/01/20	18.6	0.0	R10	18.6	05/02/20	6	5.5	R10	11.5
29/01/20	17.2	0.0	R10	17.2	10/06/20	2.9	5.4	R10	8.3
03/01/20	16.4	6.1	R10	22.5	16/12/20	6.4	5.2	R10	11.6
07/08/20	15.6	0.0	R10	15.6	07/09/20	4.4	5.2	R10	9.6
09/01/20	15	0.0	R10	15.0	29/06/20	2.6	5.1	R10	7.7

7.3.3 Mitigation and Management Measures

As outlined above, the AQIA found that mitigation measures or emission controls that reduce emissions are not required to mitigate impacts for receivers R1 – R10, however in accordance with NSW EPA guidance (NSW EPA 2016), mitigation measures are recommended to reduce the likelihood of exceedances at the nearby workplace receivers. The following measures are proposed to form part of the OEMP for the CBP to mitigate impacts on the nearby industrial receivers through reducing the likelihood of exceedances:

- Weekly use of sweeper trucks to sweep the yard and surrounding road boundary.
- Wash down the yard daily. Noting that during rain events a wash down may not be required and with additional wash down activities subject to the site supervisors' discretion.
- Increased use of dust suppression sprays during windy conditions and / or when visible dust can be seen leaving the site.

The proposed measures can be reasonably and practically implemented by the operator and do not require additional infrastructure or measures which go beyond 'best practice' for a contemporary CBP.

7.4 Noise and Vibration

A Noise and Vibration Assessment (NVA) has been prepared for the proposal by Rapt Consulting (see **Appendix 12**). The NVA assessed the potential impacts of the construction and operation of the proposal in accordance with relevant policies and guidelines, including the DECCW Interim Construction Noise Guidelines (ICNG), EPA's Noise Policy for Industry (NPfI) and DECCW NSW Road Noise Policy (RNP).

In summary, the NVA found that the project noise trigger levels will be complied with. A set of standard mitigation measures for operational noise are provided based on anticipated requirements of the proposal in the unlikely event of excessive noise emanating from the proposal. Based on the results of the assessment, it is considered the proposal is acceptable from a noise and vibrations perspective.

As no construction works are proposed as part of the proposal, with the exception of the installation of plant, noise and vibration construction impacts are not assessed by the NVA.

7.4.1 Existing Environment

Sensitive receivers

The closest receptors to the site assessed in the NVA are identified in **Table 257** and **Figure 277** below:

Table 25 - Nearest receptors (Source: Rapt Consulting)

Receiver ID	Address	Receptor Type	Easting	Northing
R1	180 Wisemans Ferry Road Somersby, NSW 2250	Residential	341189	6301942
R2	191 Wisemans Ferry Road Somersby, NSW 2250	Residential	341006	6301974
R3	6 Chivers Road, Somersby, NSW 2250	Commercial / Industrial	341460	6301622
R4	54 Gindurra Road, Somersby, NSW 2250	Commercial	341483	6301467

Figure 27 - Nearest Receptors (Source: Rapt Consulting)



Ambient noise environment

To establish background and ambient noise levels, noise monitoring was undertaken by RAPT Consulting from 11 March to 17 March 2022 at the south-western part of the overall site.

The RBL and ambient LAeq levels are provided below:

Table 26 - Background and ambient noise monitoring results (Source: Rapt Consulting)

Address	Rating background level, L_{A90}, dB(A)				Ambient noise levels, L_{Aeq} dB(A)			
	Day[1]	Evening[1]	Night[1]	Night (Shoulder)[1]	Day[1]	Evening[1]	Night[1]	Night (Shoulder)[1]
NM1 53 Gindurra Road	51	49	43	49	64	61	57	62

Note 1 Day: 7:00 to 18:00 Monday to Saturday and 8:00 to 18:00 Sundays & Public Holidays
Evening: 18:00 to 22:00 Monday to Sunday & Public Holidays
Night: 22:00 to 7:00 Monday to Saturday and 22:00 to 8:00 Sundays & Public Holidays
Night: Shoulder 5:00 to 7:00

Noise and vibration assessment criteria

The noise and vibration assessment criteria for the project are based on the Interim Construction Noise Guideline (ICNG), Noise Policy for Industry (NPI), and Road Noise Policy (RNP).

The NVA outlined the vibration guidelines for human exposure and building damage, including minimum working distances from sensitive receivers.

Based on the measured and adopted noise levels, the NVA outlined the intrusiveness noise levels for residential receivers (**Table 279**); the project amenity noise levels (LAeq,15min) for urban residences and other receptors (**Table** 2830); the project noise trigger levels for the day, evening, and night-time periods (**Table** 2931); the sleep disturbance criteria for the nearest noise sensitive residential receivers (**Table** 3032); and road noise goals for residences (**Table** 3133).

Table 27 - Intrusiveness noise levels (Source: Rapt Consulting)

Period	RBL, L_{A90}, dB(A)	Intrusiveness noise level (RBL + 5), dB(A)
Day[8]	51	56
Evening[8]	49	54
Night[8]	43 (49 Shoulder)	48 (54 Shoulder)

Note 8 Day 7:00 to 18:00 Monday to Saturday and 8:00 to 18:00 Sundays & Public Holidays
Evening: 18:00 to 22:00 Monday to Sunday & Public Holidays
Night: 22:00 to 7:00 Monday to Saturday and 22:00 to 8:00 Sundays & Public Holidays.
Night Shoulder 5:00 to 7:00

Table 28 - Project amenity noise levels (Source: Rapt Consulting)

Type of Receiver	Noise Amenity Area	Time of Day	Recommended Noise Level, dB(A)	
			$L_{Aeq,\ Period}$	$L_{Aeq,\ 15min}$
Residence	Urban	Day	60 – 5 = 55	55 + 3 = 58
		Evening	50 – 5 = 45	45 + 3 = 48
		Night	45 – 5 = 40	40 + 3 = 43
Commercial Premises	All	When in use	65 – 5 = 60	60 + 3 = 63
Industrial premises	All	When in use	70 – 5 = 65	65 + 3 = 68

Table 29 - Project noise trigger levels (Source: Rapt Consulting)

Type of receiver	Assessment period	Intrusiveness noise levels, $L_{Aeq,15min}$, dB(A)	Amenity noise levels, $L_{Aeq,15min}$, dB(A)	Project noise trigger levels, $L_{Aeq,15min}$, dB(A)
Residential Urban	Day	56	58	56
	Evening	54	48	48
	Night	48 (54 Shoulder)	43	43
Commercial premises	When in use	-	63	63
Industrial Premises	When in use	-	68	68

Table 30 - Sleep disturbance screening levels (Source: Rapt Consulting)

Receiver type	Assessment Level $L_{Aeq,15min}$, dB(A)	Assessment Level L_{Afmax}, dB(A)
Residential	40	52

Table 31 - Road noise policy goals (Source: Rapt Consulting)

Road Category	Day	Night
Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use development	60 $L_{Aeq(15hr)}$ External	55 $L_{Aeq(9hr)}$ External

7.4.2 Potential Impacts

Noise and Vibration modelling was undertaken using Bruel and Kjaer's "Predictor" to predict the effects of operational noise.

Based on previous measurements of batching plant operations undertaken by RAPT Consulting, the NVA determined that the most significant noise sources would be the following equipment:

Table 32 - Plant noise sound power levels SWL dB(A) (Source: Rapt Consulting)

Plant Item	Sound Power Level SWL dB(A)	Activity Level (per 15 minutes)
Batching Plant	103	100%
Concrete Truck Loading Material	108	100%
Concrete Truck Entering and Exiting Site	100	10km/hr 1 truck per 15 minutes
Front End Loader	103	100%
Raw Material Delivery	100	10 km/hr 1 delivery per 15 minutes

Attended noise measurements were undertaken on 12 January 2022 at the south-west boundary of ATB Morton's Redicrete facility at Branxton, NSW while the plant was fully operational inclusive of the batching plant itself, front end loader, cement and delivery trucks.

The modelled results are provided below:

Table 33 - Noise assessment results (Source: Rapt Consulting)

Location	Meteorological condition	Project noise trigger level, dB(A) Day/Evening/ Night	Predicted $L_{Aeq\ (15min)}$ noise level, dB(A) Day/Evening/Night	Exceedance Day/Evening/ Night
R1 180 Wisemans Ferry Road	Standard meteorological conditions	56 / 48 / 43	38 / 38/ 38	No / No / No
	Noise-enhancing meteorological conditions	56 / 48 / 43	40 / 40 / 40	No / No / No
R2 191 Wisemans Ferry Road	Standard meteorological conditions	56 / 48 / 43	24 / 24 / 24	No / No / No
	Noise-enhancing meteorological conditions	56 / 48 / 43	27 / 27 / 27	No / No / No
R3 6 Chivers Road	Standard meteorological conditions	63 / 68 (Commercial / Industrial)	51 / 51 / 51	No / No / No
	Noise-enhancing meteorological conditions	63 / 68 (Commercial / Industrial)	51 / 51 / 51/	No / No / No
R4 54 Gindurra Road	Standard meteorological conditions	63 (Commercial)	44 / 44 / 44	No / No / No
	Noise-enhancing meteorological conditions	63 (Commercial)	44 /44 / 44	No / No / No

The NVA determined that the results of the modelling indicate compliance can be expected during day evening and night at all nearest receivers in standard and noise enhance atmospheric conditions. The results of the assessment also indicate sleep disturbance noise goals are expected to be complied with as maximum noise levels were modelled for the assessment. Additionally, operations are only proposed from 6:00am.

In terms of road noise, the NVA finds that the number of vehicles on the road network as a result of the proposal is negligible and will not increase overall road traffic noise levels on the surrounding road network. Therefore, compliance is expected.

7.4.3 Mitigation and Management Measures

While compliance is expected to be achieved for the proposal, the NVA recommends that the proposal implement a construction noise management plan (NMP) as part of its operations to deal with the unlikely occurrence of excessive noise emanating from operations. The NMP would form part of the CEMP and provide the framework for the management of all potential noise impacts resulting from the proposed construction activities and would detail the environmental mitigation measures to be implemented throughout the works.

The NVA recommends that the following noise management and mitigation measures should be investigated and as required, implemented prior to the commencement of noise generating works:

Best practice measures when operating on construction site

- *Works should adopt Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices. BMP includes objectives to reduce noise emissions. BATEA practices involve incorporating the most advanced and affordable technology to minimise noise emissions.*
- *Where practical, simultaneous operation of dominant noise generating plant should be managed to reduce noise impacts, such as operating at different times or increase the distance between plant and the nearest identified receiver.*
- *Where possible, reversing beepers on mobile equipment would be replaced with low-pitch tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers.*
- *Equipment which is used intermittently should be shut down when not in use.*
- *All engine covers should be kept close while equipment is operating.*
- *The site would be arranged to minimise noise impacts by locating potentially noisy activities away from the nearest receivers wherever possible.*
- *To minimise heavy equipment handling noise, material stockpiles should be located as far as possible from the nearest receptors*
- *Loading and unloading areas should be located as far as possible from the nearest receptors.*
- *Where possible, trucks associated with the work area should not be left standing with their engine operating in a street adjacent to a residential area.*

In terms of vibration, the following mitigation measures are proposed:

- Comply with vibration guidelines for human exposure and building damage, including recommended minimum safe working distances for vibration intensive plant from sensitive receivers.
- During operation, if any 'Intensive Plant' activities are planned, they should be limited to vibratory roller <100 kN (2-4 tonne), and medium hydraulic hammer 900kg (12 to 18 t excavator).

7.5 Soil and Water

A Stormwater Management Plan (SWMP) has been prepared by SLR (**Appendix 7**) to assess the likely impacts of the proposed batching operations and includes:

- An evaluation of existing site catchment boundaries, conditions and discharge points;
- Assess the approved (under construction) stormwater management system;
- Identify potential risks to the receiving environment resulting from the operation of the stormwater management system;
- Recommend mitigation measures for management of identified potential impacts including any modifications to the CDC approved stormwater management system through modelling and verifying post development scenarios;

In preparing the SWMP consideration was given to the following technical guidelines:

- *'Water Cycle Management Guidelines'*, Gosford City Council, February 2007 (WCMG).
- *'Water Sensitive Urban Design Technical Guideline'*, Wyong Shire Council, November 2010 (TDG)
- *'NSW MUSIC Modelling Guidelines'*, BMT WBM, August 2015 (Music Modelling Guidelines).

In summary, the SWMP recommends minor modifications to the CDC approved stormwater management system and provides a concept plan detailing the recommended changes to ensure there is no increase in peak flow rates discharging from the site pollutant load reduction targets are met.

7.5.1 Existing Environment

The existing environment comprises a site under construction for works approved under a CDC for the site. The approved development plan includes an on-site dual-purpose detention / bioretention basin, located in the south eastern corner of the site, which will capture runoff from the site prior to discharging at the existing primary discharge location into the adjacent open channel. The approved basin encompasses a footprint of approximately 300 m2 and a storage capacity of approximately 220 m3. The approved basin outlet configuration consists of two 900 mm x 900 mm grated inlet pits, at elevations of 196.10 mAHD and 196.90 mAHD respectively. The low-level grated pit is designed to convey flows to a 150 mm diameter Reinforced Concrete Pipe (RCP) which then discharges into a junction with the higher level grated pit. Flows then discharge from the basin via a 375 mm RCP to the existing Inter-Allotment Drainage (IAD) pit before discharging into the adjacent open channel at the primary site discharge location.

The approved basin includes a 24 m2 bioretention footprint to provide filtration of site stormwater runoff.

Prior to works commencing under the CDC, the hydrologic model for the catchment is provided in **Figure 28,** and are described by SLR as follows:

Ground levels at the site range from 196 mAHD at the Gindurra Road frontage to 205 mAHD at the northern boundary. The site itself generally drains to two discharge locations on the Gindurra Road frontage. The primary point of discharge is the southwest corner of the site, where flows discharge into an existing vegetated open channel and subsequently to an existing culvert structure and into

the Gindurra Road stormwater network which traverses Gindurra Road, discharging to an open channel approximately 100 m west of the site. The secondary discharge location is at the southeast corner of the site, where flows discharge off site as overland flow before entering the Gindurra Road stormwater network via an existing pit structure.

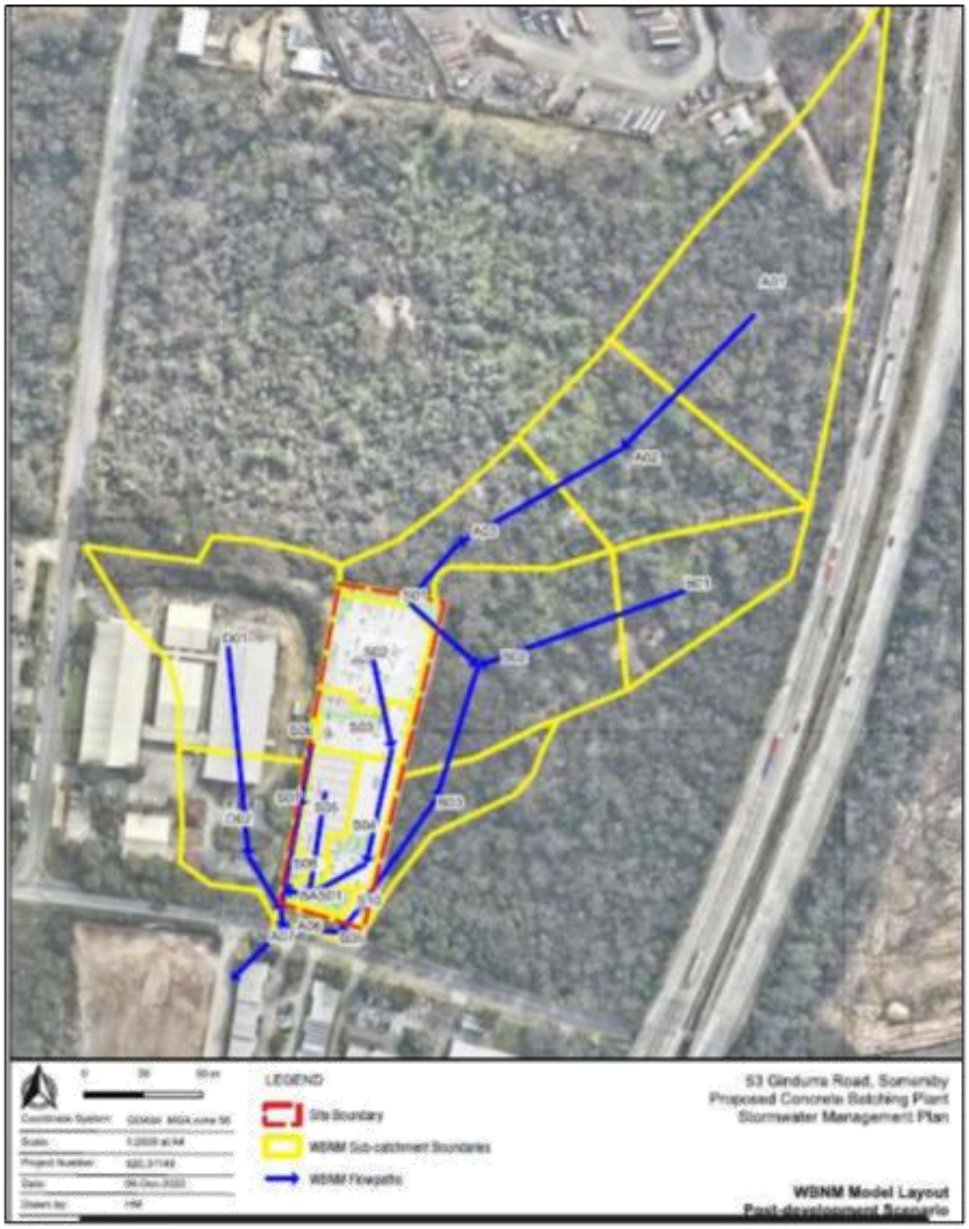
An external catchment, originating north of Debenham Road, currently drains through the site. The external catchment area is approximately 4.5 ha and generally consists of medium to dense bushland. Approximately 1.2 ha of the adjacent property at 6 Chivers Road also drains to the culvert structure downstream of the primary discharge point of the subject site.

Figure 28 -Hydrologic Model for Catchment (Source: SLR)



Following completion of the works under the CDC, the hydrologic model for the catchment is shown in **Figure 29**.

Figure 29 - Hydrological Model for Catchment - Completion of CDC Works (Source SLR)



7.5.2 Potential Impacts

Potential impacts include an increase in rainfall runoff as a result of changes to conditions associated with the batching plant, an increase in pollutant loads entering the downstream catchment as a result of the batching plant operations and changes to surface water flows upstream.

The SLR SWMP (**Appendix 7**) assesses the potential impacts through modelling pre and post development scenarios utilising industry standards modelling software for both stormwater quality

(Watershed Bounded Network Model v2019 (WBNM)) (TUFLOW) for a range of events and analysis of MUSIC file to establish the target water quality objectives for pollutants including suspended solids, phosphorus, nitrogen and gross pollutants.

Following analysis of pre and post development conditions are described below:

7.5.2.1 Stormwater Quantity

As provided in **Table 36**, modelling and analysis of discharge points A06, B05 and subcatchment A07 across a range of events indicates that post development flows will be no greater than pre development flows across all modelled AEP events. On this basis SLR conclude that the CBP will not cause in increase in peak discharge in downstream waterways when compared to pre development conditions.

Table 34 - WBNM Model Results (Source: SLR)

AEP	A06 Peak Flow (m^3/s)			B05 Peak Flow (m^3/s)			A07 Peak Flow (m^3/s)		
	Pre-dev	Post-dev	Diff	Pre-dev	Post-dev	Diff	Pre-dev	Post-dev	Diff
50%	0.2	0.2	-0.1	0.1	0.2	0.1	0.3	0.3	0.0
20%	0.6	0.3	-0.3	0.2	0.5	0.2	0.8	0.8	0.0
10%	0.8	0.5	-0.3	0.3	0.6	0.3	1.0	1.1	0.0
5%	1.0	0.6	-0.3	0.4	0.8	0.4	1.4	1.3	-0.1
2%	1.2	0.9	-0.3	0.5	1.1	0.6	1.7	1.7	-0.1
1%	1.5	1.1	-0.4	0.6	1.4	0.8	2.1	2.1	0.0

Additionally,. SLR do not predict any changes to upstream surface water conditions as a result of the CBP proposal.

7.5.2.2 Water Quality

As provided in **Table 37**, MUSIC results show the proposed treatment train, including modified arrangements to the stormwater basin will remove adequate volumes of pollutants from runoff associated with the CBP and other hardstand areas and thus will not have a detrimental effect on the quality of waters in the receiving environment / downstream catchment.

Table 35 - MUSIC results summary (Source: SLR / Forum)

Pollutant	Sources	Residual Load	% Reduction	% Reduction Target – WCMG WQO
Total Suspended Solids (kg/yr)	2,010	156	92.3	80
Total Phosphorus (kg/yr)	3.6	0.939	73.9	45
Total Nitrogen (kg/yr)	17.1	9.38	45.1	45
Gross Pollutants (kg/yr)	176	0	100	NA

7.5.3 Mitigation and Management Measures

7.5.3.1 Modifications to Detention and Bioretention Basins

To ensure the water quantity and quality targets are achieved, SLR recommend the following design changes to the CDC approved detention / bioretention basin:

- Minimum top-of-bank elevation of 197.5 mAHD;
- Overflow weir at the western end of the basin with crest level of 197.0 mAHD and width of 8 m;
- Bioretention basin to be located in the detention basin north-east corner with configuration of:
  - Filter media surface area 35 m2;
  - Filter media surface elevation 196.20 m AHD;
  - Overflow inlet pit elevation 196.40 m AHD;
  - Extended detention depth 200 mm to be achieved with inclusion of concrete nib wall around filter media area; and
  - 150 mm drainage outlet pipe with upstream invert elevation 195.60 mAHD.
- Detention basin high flow inlet pit as per previously approved design i.e.:
  - 900 mm x 900 mm grated inlet pit
  - Surface elevation 196.60 mAHD
  - Invert elevation 195.45 mAHD
  - Outlet pipe 375 mm RCP with upstream invert elevation 195.45 mAHD connecting to existing IAD pit.

Conceptually, the modifications are shown in **Figure 30**

Figure 30 - Concept Stormwater Management Plan (Source: SLR)



A concept plan, adopting the recommendations has been prepared by Forum Consulting Engineers and is provided at **Appendix 25**.

Should the project be approved detailed design plans adopting the design changes recommended by SLR, and as further modified by any conditions of consent prior to the release of a Construction Certificate for works associated with the CBP. Works would be completed and with 'Works as Executed' drawings verifying compliance prior to the release of an Occupation Certificate. An updated concept has been prepared by Forum Engineering, conceptually capturing the recommendations made by SLR and is provided at **Appendix 25**.

7.5.3.2 System Maintenance

The Operational Environmental Management Plan is to incorporate measures to require the ongoing maintenance of the approved stormwater management system. Proposed maintenance measures frequency will be in accordance with the maintenance requirements contained in Section 16 of the Central Coast Council Water Cycle Management Guidelines.

7.5.3.3 Water Quality Monitoring Plan

A water quality monitoring plan (WQMP) is to be prepared and implemented at the time of commissioning of the CBP and is to form part of the OEMP. The objective of the WQMP is to provide means to assess the effectiveness of the implemented water quality control measures. The WQMP shall draw on the findings of the SLR Stormwater Management Plan (**Appendix 7**) be prepared by a suitably qualified engineer and detail:

- Sampling locations;
- Sampling frequency;
- Sampling methodology;
- Analysis parameters;
- Assessment criteria;

7.6 Visual Amenity

This section presents an assessment of the potential visual impacts of the proposal on surrounding areas and identifies mitigation and management measures to minimise or reduce any identified impacts.

7.6.1 Existing Environment

The site is immediately surrounded by industrial and commercial land uses. It is bounded by a large undeveloped and vegetated allotment to the north and east, Gindurra Road to the south, and existing industrial warehouse development to the west. Light industrial units are found to the immediate south of the site, also fronting Gindurra Road.

The site has approval for two industrial workshops and ancillary offices, associated hardstand areas, parking, stormwater infrastructure and landscaping. The proposal will be positioned in the rear portion of the site, and will utilise approved infrastructure.

Existing view paths to the development area are described as follows:

- North - The site is adjoined by a large undeveloped and vegetated allotment to the north which obscures any views to the site from the north;
- East - The site is adjoined by a large undeveloped and vegetated allotment to the east which obscures any views to the site from the east;
- South – The southern part of the site has approval for a large industrial warehouse, hardstand areas, landscaping and ancillary works. Once constructed, this development will substantially obscure views to the development area from Gindurra Road to the south.
- West – Light industrial units are found to the immediate south of the site. The eastern most of these units (used as an air filter supply business) would have relatively unobscured views to the development area.

7.6.2 Potential Impacts

As the proposal will utilise approved infrastructure, its potential visual impacts will be limited to the installation of plant and equipment, most notably an approximately 22m high concrete batching plant.

The batching plant will be positioned centrally within the development area. Due to the size and scale of the approved warehouse in the southern part of the site, only obscured views of the plant will be available from the street. Although visible from the adjoining air filter supply business to the west, the majority of views would be from back of house areas rather than any administrative of show room areas.

Due to the highly industrialised setting within which the project is proposed, and the relatively non-obtrusive nature of the proposed works, visual amenity impacts from the proposal are considered negligible.

7.6.3 Mitigation and Management Measures

The following measures will be implemented to mitigate visual amenity impacts from the proposal:

- The new plant will be in a colour that is in keeping with the approved site buildings.

- The approved landscaping vegetation within the site will be maintained, where practicable, and any dead or dying vegetation will be replaced to ensure adequate screening is provided.

7.7 Aboriginal Cultural Heritage

An Archaeological Due Diligence Assessment (ADDA) has been prepared for the proposal by McCardle Cultural Heritage Pty Ltd (see **Appendix 9**). The ADDA was undertaken to meet the DECCW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, the OOEH Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW, and the Heritage NSW Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, as well as the SEARs and project brief.

The purpose of the ADDA was to assist the proponent to exercise due diligence when carrying out activities that may harm Aboriginal objects or Aboriginal places and to determine whether the proponent should apply for a consent to harm Aboriginal objects or Places through an Aboriginal Heritage Impact Assessment (AHIP).

As no archaeological sites or Potential Archaeological Deposits (PADs) were identified within the site, the ADDA provides standard mitigation measures to be employed on site.

7.7.1 Existing Environment

The ADDA notes that the site is situated in the Central Coast area on the Hawkesbury Sandstone geological formation consisting of sandstone and quartz with some shale. Consisting of a gentle slope, the site consists of the Somersby Soil Landscape. In terms of fresh water availability and survival, the project area is not resourced. Located approximately 350 metres east of a 1st order creek, 850 metres north east of a 2nd order creek (Piles Creek), the closest reliable fresh water source is Narara Creek which is located approximately 2.5 kilometres to the east. European settlers extensively cleared the original native vegetation in the 1800's and since then the site has been subject to additional clearing, may have been ploughed for pasture, and is currently a cleared paddock with tracks throughout as well as erosion and drainage controls, all of which would have impacted the landscape.

A search of the AHIMS register indicated there are 97 known Aboriginal sites currently recorded within 1.5 kilometres of the site (see **Figure** 31**31** below). Based on both the environmental and archaeological contexts, given the site is located 1.5 kilometres from a reliable water source, the ADDA considers that the site may have been utilised for transitory activities such as travel and hunting and gathering which is reflected in the archaeological record as very low-density artefacts scatters or isolated artefacts.

Figure 31 - Location of AHIMS sites (Source: McCardle Cultural Heritage Pty Ltd)



A visual inspection of the site was undertaken by MCH archaeologist Dr. Penny McCardle on 6 April 2022. The site was surveyed as one survey unit based on landform elements (slope). The survey identified that the site had been previously cleared, there was evidence of at least one ploughing event by the presence of pasture grass, large tracks, drainage and erosion control works.

Vegetation on site consisted of pasture grass with open woodland along the north and eastern boundary and parts of the western boundary. Ground surface visibility was 35% across the site with grass being the limiting visibility factor. No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey, which is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the site was unlikely to have been utilised for camping;
- The site may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

7.7.2 Potential Impacts

The Heritage NSW Code of Practice describes impacts to be rated as follows:

1) Type of harm: is either direct, indirect or none

2) Degree of harm is defined as either total, partial or none

3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

As no sites or PADs were identified, the ADDA finds that there are no impacts on the archaeological record and further investigation and an AHIP are not required.

7.7.3 Mitigation and Management Measures

The ADDA recommends the following general mitigation measures for the proposal:

1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974; and

2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

7.8 Non-Indigenous Heritage

This section presents an assessment of the potential impacts of the project on non-Indigenous heritage and identifies mitigation and management measures to minimise or reduce any identified impacts.

7.8.1 Existing Environment

Assessment approach and methodology

This non-Indigenous heritage assessment included:

A desktop search of relevant statutory and non-statutory registers and schedules to identify any items of non- Indigenous heritage significance in the site. This included a review of:

- NSW Heritage Office State Heritage Register and Inventory
- The Australian Heritage Database
- Central Coast LEP

No previous reports relating to the project site were available for review.

Desktop study

A search of the NSW Heritage Register was undertaken on 14 December 2022. This search revealed that the site does not contain a heritage listed item and is not located within a heritage conservation area.

A wider search of the area identified 1 state listed heritage item ('Mount Penang Parklands') and nine local-listed heritage items within the suburb of Somersby. Mount Penang Parklands is located more than 800m from the site, while the closest local heritage item (Remains of house, 'Belltrees') is more than 880m from the site.

7.8.2 Potential Impacts

Both heritage items identified above are visually and physically separated from the site by existing development, road infrastructure and dense vegetation. As such, the proposal is not expected to result in any impacts to items of heritage significance.

7.8.3 Mitigation and Management Measures

Given the distance of the nearest heritage items from the site, no mitigation or management measures are required or proposed.

7.9 Biodiversity

This section presents an assessment of the potential impacts of the project on biodiversity values and identifies mitigation and management measures to minimise or reduce any identified impacts.

7.9.1 Existing Environment

As outlined in **Section 2.3.4** of this EIS, historical imagery (NSW Government 2022) indicates native vegetation was cleared from the site prior to 1966 and the site has generally been retained as 'managed land' since this time.

Furthermore, the site is not, pursuant to Part 7 of the *Biodiversity Conservation Act 2016,* mapped as land with high biodiversity value, with the nearest found approximately 500 metres to the south. Notwithstanding, Council records indicate land to the east of the site is mapped as containing vegetation type 'Sandstone Hanging Swamp' (see Error! Reference source not found.**32**). Council records provided in the pre lodgement meeting (**Appendix 18**) held on 20 April 2022 observe that:

> *The land surrounding the site to the east and north has high biodiversity value. The Endangered Ecological Community (EEC), Coastal Upland Swamp is mapped and appears present along the eastern boundary of the subject site.*
>
> *The proposal has the potential to impact the Coastal Upland Swamp EEC on the adjoining Lot to the east and north. The EEC is groundwater dependent, hydrological regimes must be maintained including water quality.*

Figure 32 - CCC Vegetation Mapping (source: Central Coast Council)



7.9.2 Potential Impacts

As the proposal will utilise existing site infrastructure, with the exception of construction and installation of the plant (batching silos) and changes to the approved stormwater regime, no external construction works, earthworks or vegetation clearing is proposed. The approval provides for hardstand areas across the site with permitter fencing to prevent access onto adjoining land. The proposed plant will be located on approved hardstand areas within the site.

The proposal is supported by a comprehensive stormwater regime which will (see **Appendix 7** and **Section 7.5** of this EIS). Runoff from the batch plant will drain west into the water treatment area (as modified under this proposal). Overflows will ultimately discharge to the two discharge points along the site's southern frontage to Gindurra Road (see **Figure** 3**33** below). These discharge points direct stormwater to the south and west of the site, away from the mapped EEC to the east. In evaluating the potential impact of the proposal on the up stream catchments, including groundwater, SLR do not predict upstream or adjacent catchments will be affected by stormwater runoff.

Accordingly, the proposal will not result in any unreasonable adverse impact on the hydraulic regime of the mapped EEC.

Figure 33 - Local Catchment Extent (Source: SLR Consulting)



Overall, it is considered that construction and operation of the plant will not result in any adverse impacts on biodiversity.

7.9.3 Mitigation and Management Measures

The following mitigation and management measures will apply to the proposal:

- Ensuring all operations are to occur within sealed / hardstand areas of the site;
- Regular use of dust suppression infrastructure to prevent dust and other air bourne pollutants migrating off site to the east.
- Maintenance of stormwater management infrastructure in accordance with the OEMP developed for the site.

7.10 Bushfire

A Bushfire Attach Level Certificate (BALC) was prepared for the approved CDC by Firebird ecoSultants Pty Ltd (see **Appendix 13**). The BALC confirms that the CDC proposal complies with the relevant Bush Fire Protection Measures as outlined in Planning for Bushfire Protection (PBP).

The proposal does not involve the construction of any new buildings, or a change in 'class' of the approved buildings, and does not increase the bushfire risk at the site in anyway. Accordingly, the assessment and mitigation measures outlined in the BALC are considered to remain relevant to the current proposal.

7.10.1 Existing Environment

The site is mapped as bushfire prone land (predominately comprising 'Vegetation Buffer').

The BALC identified that vegetation to the east and north is classified as 'tall heath' (Heath-leaved Banksia - Coral Fern wet heath on sandstone ranges of the lower Central Coast) and occurs over cross-slope and upslope ground at a distance of >22m from the development.

7.10.2 Potential Impacts

The BALC assessed the CDC proposal as BAL-29 in accordance with Table A1.12.5 of PBP 2019. As the Building Code of Australia (BCA) does not provide for any bush fire specific performance requirements for this type of development, AS 3959 does not apply as a set of 'deemed to satisfy' provisions. The general fire safety construction provisions are taken as acceptable solutions.

The approved site development is currently under construction in accordance with relevant requirements. The site will be managed in accordance with relevant requirements, including installation and maintenance of any reticulated or bottled gas in accordance with AS/NZS 1596:2008.

7.10.3 Mitigation and Management Measures

The following mitigation and management measures will apply to the proposal:

- Manage the site in accordance with relevant requirements outlined in the BALC.

7.11 Waste Management

This section provides an assessment of the potential impacts associated with waste generation from both the operation of the CBP and during the construction of the plant and associated infrastructure. Details are provided on measures to manage waste to avoid unnecessary resource consumption and environmental risks associated with waste generation, handling and transportation.

The *NSW Waste Avoidance and Resource Recovery Strategy 2014-21 (WARRS)* (EPA, 2014) provides a framework for waste management over seven years, aligning with the NSW Governments' waste reforms in *NSW 2021: A Plan to Make NSW Number One*. The strategy identifies the following waste avoidance and resource recovery goals:

- Avoid unnecessary resource consumption, where possible, and reduce waste generation
- Increase recycling
- Divert more waste from landfill
- Reduce litter
- Reduce illegal dumping

A Waste Management Plan (WMP) (**Appendix 16**) has been prepared for the project, having regard to the aims, objectives and guidelines in the NSW WARRS . The Waste Management Plan includes a number of waste management measures that would be implemented during operation of the project. Should approval be granted, this plan will be updated by the construction contractor to include estimated construction waste quantities and management measures. Notwithstanding, a preliminary estimate is provided in WMP.

The types, estimated quantities and disposal methods for operational wastes are summarised in **Table 38**

Table 36 - Waste Management

Waste Stream	Typical Waste Quantity	Waste Management Process	Waste Destination
Rejected / Returned Concrete	2.4 tonnes per day ($1m^3$)	On return; Transferred directly into a designated waste bin and periodically transported to an appropriately licensed facility.	Licensed Contractor: Closest facility (4km): Recycled Concrete Products 18 Tathra Street West Gosford
Waste Water	2000 – 5000 litres per day	Waste water will be fully captured by the sites water settling pits and then reused back in the batching process	On site
Concrete Washout Waste	0.5 tonnes per day	Stored in washout pit and dried before transportation to an appropriately licensed facility.	Licensed Contractor Closest facility (4km): Recycled Concrete Products 18 Tathra Street West Gosford

Waste Stream	Typical Waste Quantity	Waste Management Process	Waste Destination
Settling Pit Silt	10 – 20 kg per day	Silt is extracted from pits and tanks by a vacuum truck and dewatered onsite in the above ground 'washout' basin	Licensed Contractor Closest facility (4km): Recycled Concrete Products 18 Tathra Street West Gosford
Empty Drums	1 – 2 drums per week	Removed and reused by Supplier	Reuse - Supplier
Steel	Small quantities. Limited to construction phase.	A steel skip bin will be located on-site during the construction phase of the batching plant. This will be removed from site as required by licenced contractor.	Contractor Closest Facility (4km) Sims Metal 21 Tathra Street West Gostord
Timber	Small quantities. Limited to construction phase.	Removed and reused by contractor or recycled offsite	Reuse or disposal at Licenced Facility: Nearby Facility (28.4km) North Wyong Recycling 5 Lucca Road, Wyong
Domestic Refuge	2 – 5kg per day.	Domestic refuse will be sorted into general waste and recycling then removed by a licensed contractor at regular intervals as required.	Contractor (e.g JJ Richards or Sulo)
Other Waste	Small quantities as generated	Segregated and removed from site where required and recycled by licensed contractor.	Licensed contractor. To be determined on an as needs basis.

The WMP would form part of the overarching OEMP to be developed for the project.

7.12 Contamination

Works associated with the erection of the batching plant will be constructed within a fully sealed hardstand surface (approved under the CDC) and as such contact with underlying soil and fill material is only likely during limited construction excavations.

7.12.1 Potential Impacts

There is no evidence or record to suggest potential contamination at the project area based on a desktop evaluation of Council and EPA records (**Appendix 19** and **23**). Furthermore contaminated material has not been encountered during excavation works associated with the CDC. While the subject site once formed part of a larger industrial holding, there is no history of other land-use

(record of historical approvals) such as industrial and chemical works or storages; or land filling activities which are activities commonly associated with contamination (DUAP and EPA 1998) at the site.

While there are historical and ongoing industrial and quarrying related activities in the locality which are listed as a potentially contaminating activity under the Managing Land Contamination Planning Guidelines, SEPP 55 – Remediation of Land (DUAP and EPA 1998), the likelihood of contamination resulting from these activities on the subject site is considered low.

While field and laboratory testing has not been undertaken to confirm the absence of contamination, it is not considered warranted based on the desktop investigation and works undertaken as part of the CDC. This preliminary investigation concludes there is no material evidence of contamination and, therefore, the project area is considered suitable for its intended use as a CBP.

7.12.2 Mitigation and Management Measures

The preliminary investigation did not identify any contaminating activities or features associated with historical land uses in the project area. Nonetheless, it is recommended that, if evidence of contamination is encountered during the construction phase of works (such as stained or odorous soil or demolition debris), advice should be sought from an appropriately qualified environmental consultant. In addition, the construction phase of works should be undertaken in a manner that ensures no contamination is introduced to the project area. This process is most appropriately documented in the form of an unexpected finds protocol.

8 Environmental Management and Monitoring

The mitigation and management measures outlined in the EIS will be incorporated into the construction and operation of the project. These measures will minimise any potential adverse impacts arising from the project on the surrounding environment. The mitigation and management measures are summarised in **Table 379** and are to be included in Construction (CEMP) and Operational Environmental Management Plans (OEMP).

The CEMP will be prepared by the principal contractor prior to the commencement of works required or described in this EIS and will address short term impacts associated with the construction phase of the project (100 days). The CEMP will form part of any induction process for personnel involved in the construction phase of the project and retained on site for the duration of the construction program.

The OEMP will include a framework for establishing how these measures will be implemented and who will be responsible for their implementation. All contractors and Redicrete personnel will be responsible to ensure that environmental protection measures are implemented and that the environment is protected to the highest standard during works. The OEMP will make provision for monitoring and improvement of the protection and mitigation measures will ensure that impacts on the environment are minimised. The OEMP is to be reviewed and where appropriate updated on an annual basis.

The site induction will refer to the OEMP. All personnel will be required to attend the environmental site induction. Copies of the OEMP will be kept on-site for ready access by all personnel.

Table 37 - Summary of proposed mitigation measures

Issue	Mitigation measure
Transport and traffic	• A Construction Traffic Management Plan (CTMP) shall form part of the CEMP. The CTMP will be prepared in accordance with the Australian Standard 1742.3-2002: Traffic Control for Works on Roads and the NSW Roads and Maritime Services QA Specification G10 "Traffic Control at Worksites". • A copy of the CTMP will be provided to Council. Other road authorities will be consulted, if required, such as Roads and Maritime and other transport/emergency services. • All site workers will be inducted into the relevant requirements of the CTMP as part of the site induction • The OEMP shall include provisions associated with the management of heavy vehicle movements. Raw Material Deliveries made in B -Double Vehicles between the hours of 8pm and 6am with a maximum of 4 deliveries made during this period.
Hazards, Fire and Incident Management	The OEMP is to include measures to: • minimise build up of dust on site; • require the regular maintenance of on site plant and equipment; • Ensure fire hydrants will be maintained in good working order. • Ensure fire extinguishers will be accessible and in good condition. • Develop an evacuation. • Ensure all fire protection devices will be maintained in accordance with the manufacturer's specifications. • Ensure any flammable liquids brought to site will be securely stored. • Spill kits will be made available in all work areas.

	• Incorporate a site incident response procedure
Air quality	The following measures shall be incorporated into the OEMP: • Weekly use of sweeper trucks to sweep the yard and surrounding road boundary. • Daily wash down the yard / impervious surfaces. • Increased use of dust suppression sprays during windy conditions and / or when visible dust can be seen leaving the site.
Noise and vibration	A Construction Noise Management Plan (NMP) shall form part of the CEMP and incorporate the following best practice measures: • Works should adopt Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices. BMP includes objectives to reduce noise emissions. BATEA practices involve incorporating the most advanced and affordable technology to minimise noise emissions. • Where practical, simultaneous operation of dominant noise generating plant should be managed to reduce noise impacts, such as operating at different times or increase the distance between plant and the nearest identified receiver. • Where possible, reversing beepers on mobile equipment would be replaced with low-pitch tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers. • Equipment which is used intermittently should be shut down when not in use. • All engine covers should be kept close while equipment is operating. • The site would be arranged to minimise noise impacts by locating potentially noisy activities away from the nearest receivers wherever possible. • To minimise heavy equipment handling noise, material stockpiles should be located as far as possible from the nearest receptors • Where possible, trucks associated with the work area should not be left standing with their engine operating in a street adjacent to a residential area. • Comply with vibration guidelines for human exposure and building damage, including recommended minimum safe working distances for vibration intensive plant from sensitive receivers. • During operation, if any 'Intensive Plant' activities are planned, they should be limited to vibratory roller <100 kN (2-4 tonne), and medium hydraulic hammer 900kg (12 to 18 t excavator).
Soil and water	• A soil erosion and sediment control plan prepared in accordance with the Managing Urban Stormwater: Soils and construction - Volume 1 and form part of the CEMP. All measures proposed are to be implemented prior to the commencement of construction works and maintained for the duration of the construction program. • The Operational Environmental Management Plan is to incorporate measures to require the ongoing maintenance of the approved stormwater management system. Proposed maintenance measures frequency will be in accordance with the maintenance requirements contained in Section 16 of the Central Coast Council Water Cycle Management Guidelines; • A water quality monitoring plan (WQMP) is to be prepared and form part of the OEMP. The WQMP is to implemented at the time of commissioning of the CBP. . The WQMP shall draw on the findings of the SLR Stormwater

	Management Plan (Appendix 7), be prepared by a suitably qualified engineer and detail: o Sampling locations; o Sampling frequency; o Sampling methodology; o Analysis parameters; o Assessment criteria;
Visual amenity	• The new plant will be finished in a colour that is in keeping with the approved site buildings. • The OEMP shall make provision for the ongoing maintenance of landscaped areas within the site.
Aboriginal cultural heritage	The CEMP and OEMP shall incorporate the following mitigation measures: *1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974; and* *2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.*
Biodiversity	The CEMP and OEMP shall include measures to ensure: • Ensuring all operations are to occur within sealed / hardstand areas of the site; • Regular use of dust suppression infrastructure to prevent dust and other air bourne pollutants migrating off site to the east. • Measures are specified for the maintenance of stormwater management systems.
Bushfire	The OEMP shall incorporate measures contained in the site specific BAL Certificate including: • Maintenance of access to a public road; • Maintain connection to a reticulated water supply; • Adequate fire hydrant coverage to the site; • Maintain a 10,000L water supply with 65mm metal Storz outlet with a gate or ball valve is provided for fire fighting purposes on the lot (the gate or ball valve, pipes and tank penetrations are to be designed to allow for a full 50mm inner diameter water flow through the Storz fitting and must be of a metal construction); • Mains electricity is to be connected
Waste management	The Waste Management Plan (**Appendix 16**) shall form part of the CEMP and OEMP prepared for the project.
Contamination	A site specific unexpected finds protocol is to be development for the site and form part of the CEMP and OEMP.

9 Conclusion and Justification

9.1 Project Justification

9.1.1 Project need

The primary need for the project is to meet the increasing demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney. The proposal would allow Redicrete to more efficiently service a greater catchment on the Central Coast than that afforded by its current capabilities at Berkeley Vale, some 25 minutes to the north.

9.1.2 Project benefits

The project will provide significant benefits by:

- Creating economic opportunities including direct employment opportunities and indirect benefits to other local businesses
- Supplying concrete products to the construction industry

9.1.3 Suitability of the site

The subject site is zoned IN1 General Industrial under *Central Coast LEP 2022*. The proposal would utilise existing / approved infrastructure with only minor upgrades required. It would result in no changes to the existing environment in terms of disturbance footprint.

The site is preferentially located within an industrial area and is unlikely to result in new environmental impacts to surrounding receivers. It is easily accessible to residential and commercial areas and key construction sites.

The site is visually and physical separated from sensitive receivers, thereby minimising the potential for adverse amenity impacts. The closest residential receiver is located along Wisemans Ferry Road, approximately 400m to the north-west of the site, and buffered by existing industrial development and dense vegetation.

9.1.4 The public interest

Pursuant to case law of *Ex Gratia P/L v Dungog Council (NSWLEC 148)*, the question that needs to be answered is "Whether the public advantages of the proposed development outweigh the public disadvantages of the proposed development".

There are no unreasonable impacts that will result from the proposed development. Therefore, the benefits of using the land for a permitted and employment-generating use outweigh any disadvantage and, as such, the proposed development will have an overall public benefit and therefore approval is thought to be in the public interest.

9.1.5 Consistency with EP&A Act objects

Table 3840 outlines the proposal's consistency with the objects of the EP&A Act.

Table 38 - Objects of the EP&A Act

Object	Comment
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,	The proposal will result in significant social and economic benefits, including through the creation of jobs, indirect benefits to other local businesses and supplying concrete products to the construction industry. As discussed in **Section 7** of this EIS, there will be no unreasonable adverse environmental impacts resulting from the proposal.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The proposal is consistent with the principles of ESD including through: - The assessment of the potential impacts of the project is considered to be consistent with the precautionary principle and it is considered that the assessments that have been undertaken are consistent with accepted scientific and assessment methodologies, and have taken into account relevant statutory and agency requirements. - The environmental impact assessment process has not identified any significant negative impacts that are likely to adversely impact on the health, diversity or productivity of the environment for future generations. - The project will not adversely impact surrounding ecosystems or habitats. The mitigation measures that will be implemented as part of the project will ensure there are no significant impacts on the wider environment. - environmental resources have been given appropriate valuation, including through the proposed mitigation measures which will result in an economic cost to Redicrete.
(c) to promote the orderly and economic use and development of land,	The proposal will facilitate the orderly and economic use and development of land as the site is of an appropriate size, location and land use zoning to accommodate a concrete batching plant in an approved industrial development within an existing industrial precinct. The proposal will utilise approved industrial infrastructure on the site, with only minimal modifications required.
(d) to promote the delivery and maintenance of affordable housing,	While not directly relevant to the proposal, affordable housing will be promoted through the provision of concrete for the construction industry.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	As discussed in **Section 7.9** of this EIS, there will be no unreasonable adverse environmental impacts resulting from the proposal.

(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	As discussed in **Sections 7.7 and 7.8** of this EIS, the proposal will have no adverse impacts on Aboriginal and non-Aboriginal cultural heritage. As such, the proposal will help promote the sustainable management of built and cultural heritage.
(g) to promote good design and amenity of the built environment,	The proposal will utilise approved industrial development. The new plant is compatible with surrounding development and will not impact upon the amenity of the built environment.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	Appropriate measures are proposed to ensure the maintenance of the approved plant and to protect the health and safety of future occupants. An incident management plan will be implemented onsite throughout the operation of the project.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The proposal promotes the sharing of the responsibility for environmental planning between different levels of government in the State. The final approval will have involved input from Council and a number of State departments.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	Consultation with the community and relevant government agencies was undertaken during preparation of this EIS. Details of this consultation are provided in **Section 6** of this EIS.

9.2 Conclusion

The proposal seeks approval for construction of a concrete batching plant with the capacity to produce more than 30,000 tonnes of concrete per annum (up to 47,000 tonnes or 20,000m3). As the proposal will utilise existing site infrastructure, with the exception of construction and installation of the plant (batching silos) and minor changes to the approved stormwater regime, no external construction works are proposed.

This EIS has assessed the environmental impacts of the project in accordance with Part 4 of the EP&A Act and has been prepared in accordance with the provisions of the EP&A Act, EP&A Regulations, and addresses the SEARs issued for the project.

As summarised in Section 9.1, approval of the proposal will help meet the increasing demand for concrete and concrete products associated with continued growth in the Central Coast Region, and also provide for the needs of the construction industry in the upper North Shore of Sydney.

The EIS has demonstrated that the site is suitable for the proposed use, and the proposal is in the public interest and consistent with the objects of the EP&A Act.

The EIS has documented the potential environmental impacts of the proposal, and proposed management and mitigation measures to protect the Environment where required. Based on this, the environmental and community impacts are considered to be minimal and the project benefits outweigh the negatives.

SHEET	REV	DRAWING
GENERAL		
01001	C	DRAWING INDEX
SITE PLANS		
02001	C	SITE ANALYSIS PLAN
02002	B	SITE SURVEY
02003	C	EXISTING APPROVED DEVELOPMENT
02004	C	SITE PLAN
02005	C	SOIL EROSION & SEDIMENT CONTROL PLAN
02006	B	SOIL EROSION & SEDIMENT CONTROL DETAILS
02007	B	SOIL EROSION & SEDIMENT CONTROL NOTES
02008	C	MANOEUVRING PLAN - MATERIAL DELIVERIES
02009	C	MANOEUVRING PLAN - CONCRETE AGITATORS
02010	C	FENCING PLAN
02011	C	FIRE CONCEPT PLAN
02012	C	HYDRANT COVERAGE PLAN
BUILDING PLANS		
03001	B	BATCH PLANT PLANS
03002	B	SLUMP STAND PLANS
ELEVATIONS		
04001	B	BATCH PLANT ELEVATIONS
DETAILS		
07001	B	MATERIAL BINS & WEDGE PIT PLANS
SERVICES		
09001	C	EXTERNAL LIGHTING LAYOUT

PROJECT: PROPOSED BATCHING PLANT

JOB No. : 1638.B

ADDRESS: No. 53, LOT 12 GINDURRA ROAD SOMERSBY NSW 2250

DP No. : DP 1189679



REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	12/08/2021	LF	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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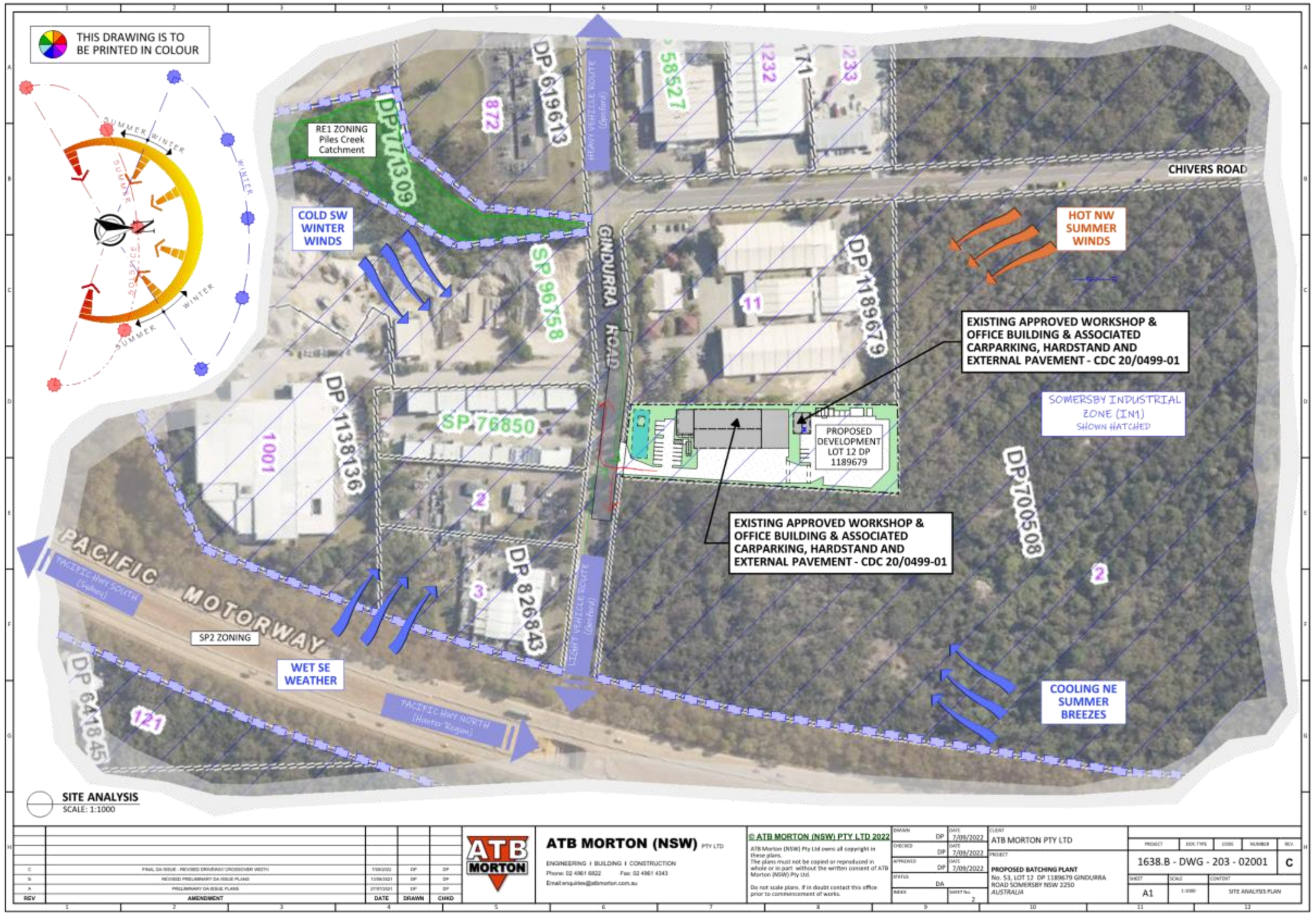
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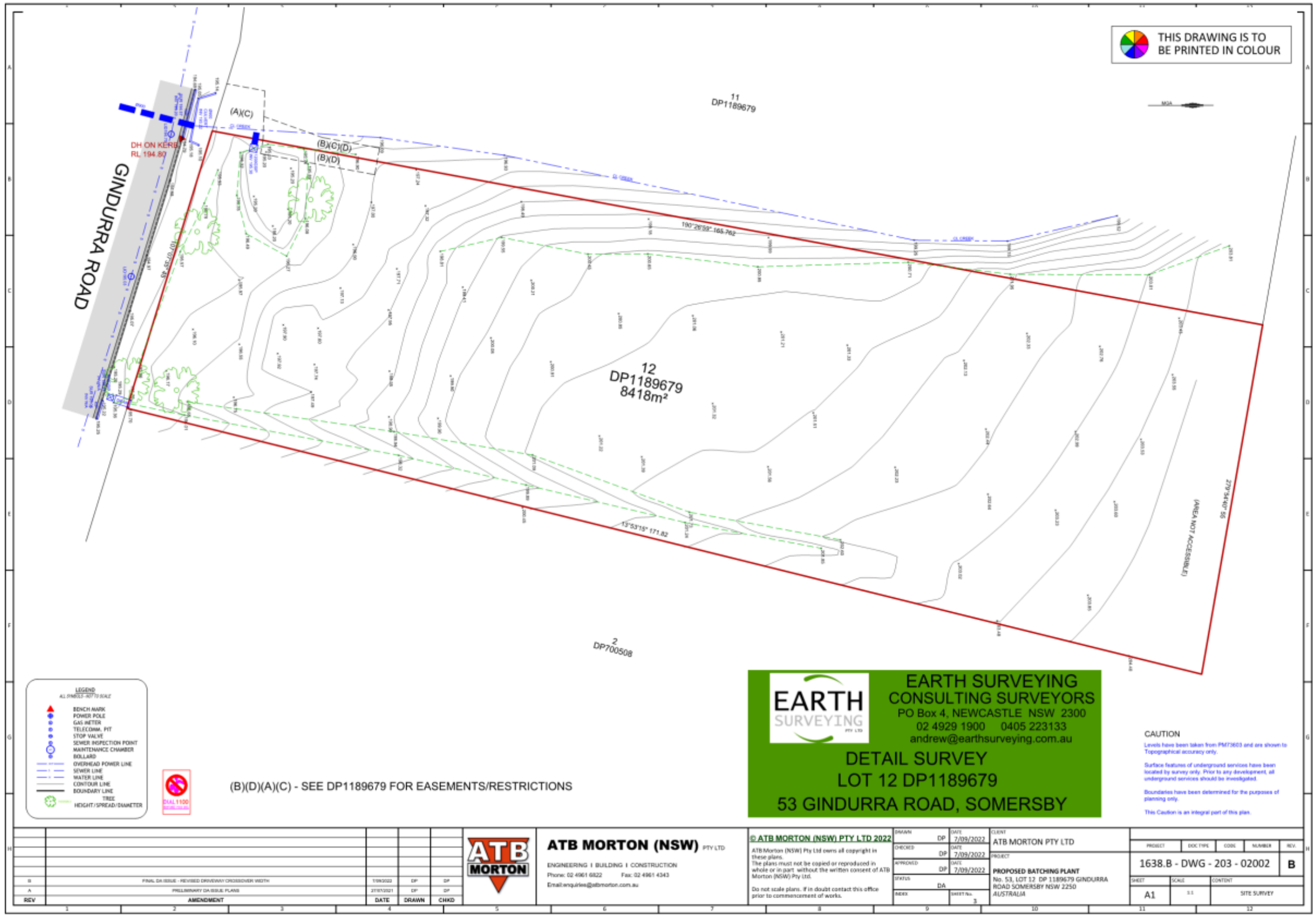
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APPROVED DP 7/09/2022
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INDEX SHEET No. 1

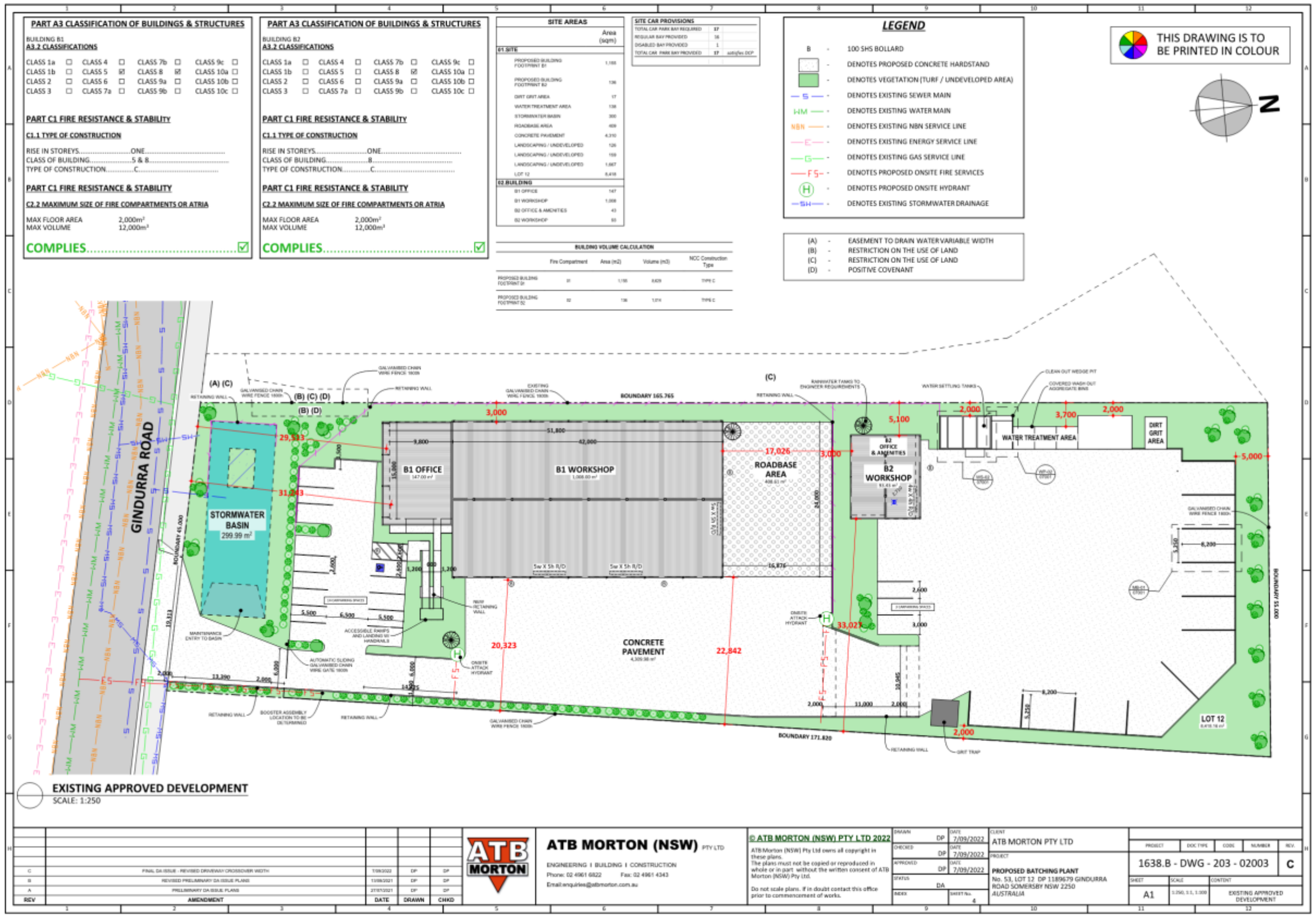
CLIENT: ATB MORTON PTY LTD
PROJECT: PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B	DWG	203	01001	C

SHEET	SCALE	CONTENT
A1	1:1	DRAWING INDEX


THIS DRAWING IS TO BE PRINTED IN COLOUR
SUMMER
WINTER
SOLSTICE
RE1 ZONING
Piles Creek Catchment
COLD SW WINTER WINDS
HOT NW SUMMER WINDS
CHIVERS ROAD
GINDURRA ROAD
DP 619613
DP 771309
SP 96758
DP 1189679
SP 76850
DP 1138136
DP 700508
DP 82683
DP 641845
EXISTING APPROVED WORKSHOP & OFFICE BUILDING & ASSOCIATED CARPARKING, HARDSTAND AND EXTERNAL PAVEMENT - CDC 20/0499-01
SOMERSBY INDUSTRIAL ZONE (IN1) SHOWN HATCHED
PROPOSED DEVELOPMENT LOT 12 DP 1189679
EXISTING APPROVED WORKSHOP & OFFICE BUILDING & ASSOCIATED CARPARKING, HARDSTAND AND EXTERNAL PAVEMENT - CDC 20/0499-01
PACIFIC MOTORWAY
PACIFIC Hwy SOUTH (Sydney)
PACIFIC Hwy NORTH (Hunter Region)
SP2 ZONING
WET SE WEATHER
COOLING NE SUMMER BREEZES
SITE ANALYSIS
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CHECKED DP 7/09/2022
APPROVED DP 7/09/2022
STATUS DA
CLIENT ATB MORTON PTY LTD
PROJECT PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA
1638.B - DWG - 203 - 02001 C
SHEET A1
SCALE 1:1000
CONTENT SITE ANALYSIS PLAN
C FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH 7/09/2022 DP DP
B REVISED PRELIMINARY DA ISSUE PLANS 13/09/2021 DP DP
A PRELIMINARY DA ISSUE PLANS 27/07/2021 DP DP
REV AMENDMENT DATE DRAWN CHKD


THIS DRAWING IS TO BE PRINTED IN COLOUR
GINDURRA ROAD
DH ON KERB RL 194.82
(A)(C)
(B)(C)(D)
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11 DP1189679
12 DP1189679 8418m²
2 DP700508
190°26'59" 165.762
13°53'15" 171.82
270°34'49" 56
(AREA NOT ACCESSIBLE)
LEGEND
BENCH MARK
POWER POLE
GAS METER
TELECOMM. PIT
STOP VALVE
SEWER INSPECTION POINT
MAINTENANCE CHAMBER
BOLLARD
OVERHEAD POWER LINE
SEWER LINE
WATER LINE
CONTOUR LINE
BOUNDARY LINE
TREE
HEIGHT/SPREAD/DIAMETER
DIAL 1100
(B)(D)(A)(C) - SEE DP1189679 FOR EASEMENTS/RESTRICTIONS
EARTH SURVEYING
CONSULTING SURVEYORS
PO Box 4, NEWCASTLE NSW 2300
02 4929 1900 0405 223133
andrew@earthsurveying.com.au
DETAIL SURVEY
LOT 12 DP1189679
53 GINDURRA ROAD, SOMERSBY
CAUTION
Levels have been taken from PM73603 and are shown to Topographical accuracy only.
Surface features of underground services have been located by survey only. Prior to any development, all underground services should be investigated.
Boundaries have been determined for the purposes of planning only.
This Caution is an integral part of this plan.
REV
AMENDMENT
DATE
DRAWN
CHKD
B FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH 7/09/2022 DP DP
A PRELIMINARY DA ISSUE PLANS 27/01/2021 DP DP
ATB MORTON (NSW) PTY LTD
ENGINEERING I BUILDING I CONSTRUCTION
Phone: 02 4961 6822 Fax: 02 4961 4343
Email:enquiries@atbmorton.com.au
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DRAWN DP 7/09/2022
CHECKED DP 7/09/2022
APPROVED DP 7/09/2022
STATUS DA
INDEX
SHEET No. 3
CLIENT ATB MORTON PTY LTD
PROJECT PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA
PROJECT 1638.B - DWG - 203 - 02002
REV B
SHEET A1
SCALE 1:1
CONTENT SITE SURVEY


PART A3 CLASSIFICATION OF BUILDINGS & STRUCTURES
BUILDING B1
A3.2 CLASSIFICATIONS
CLASS 1a ☐ CLASS 4 ☐ CLASS 7b ☐ CLASS 9c ☐
CLASS 1b ☐ CLASS 5 ☑ CLASS 8 ☑ CLASS 10a ☐
CLASS 2 ☐ CLASS 6 ☐ CLASS 9a ☐ CLASS 10b ☐
CLASS 3 ☐ CLASS 7a ☐ CLASS 9b ☐ CLASS 10c ☐
PART C1 FIRE RESISTANCE & STABILITY
C1.1 TYPE OF CONSTRUCTION
RISE IN STOREYS.....ONE.....
CLASS OF BUILDING.....5 & 8.....
TYPE OF CONSTRUCTION.....C.....
PART C1 FIRE RESISTANCE & STABILITY
C2.2 MAXIMUM SIZE OF FIRE COMPARTMENTS OR ATRIA
MAX FLOOR AREA 2,000m²
MAX VOLUME 12,000m³
COMPLIES.....☑
PART A3 CLASSIFICATION OF BUILDINGS & STRUCTURES
BUILDING B2
A3.2 CLASSIFICATIONS
CLASS 1a ☐ CLASS 4 ☐ CLASS 7b ☐ CLASS 9c ☐
CLASS 1b ☐ CLASS 5 ☐ CLASS 8 ☑ CLASS 10a ☐
CLASS 2 ☐ CLASS 6 ☐ CLASS 9a ☐ CLASS 10b ☐
CLASS 3 ☐ CLASS 7a ☐ CLASS 9b ☐ CLASS 10c ☐
PART C1 FIRE RESISTANCE & STABILITY
C1.1 TYPE OF CONSTRUCTION
RISE IN STOREYS.....ONE.....
CLASS OF BUILDING.....8.....
TYPE OF CONSTRUCTION.....C.....
PART C1 FIRE RESISTANCE & STABILITY
C2.2 MAXIMUM SIZE OF FIRE COMPARTMENTS OR ATRIA
MAX FLOOR AREA 2,000m²
MAX VOLUME 12,000m³
COMPLIES.....☑
SITE AREAS
Area (sqm)
01 SITE
PROPOSED BUILDING FOOTPRINT B1 1,155
PROPOSED BUILDING FOOTPRINT B2 136
DIRT GRIT AREA 17
WATER TREATMENT AREA 138
STORMWATER BASIN 300
ROADBASE AREA 409
CONCRETE PAVEMENT 4,310
LANDSCAPING / UNDEVELOPED 126
LANDSCAPING / UNDEVELOPED 159
LANDSCAPING / UNDEVELOPED 1,667
LOT 12 8,418
02 BUILDING
B1 OFFICE 147
B1 WORKSHOP 1,008
B2 OFFICE & AMENITIES 43
B2 WORKSHOP 93
SITE CAR PROVISIONS
TOTAL CAR PARK BAY REQUIRED 17
REGULAR BAY PROVIDED 16
DISABLED BAY PROVIDED 1
TOTAL CAR PARK BAY PROVIDED 17 autoflex DCP
BUILDING VOLUME CALCULATION
Fire Compartment Area (m2) Volume (m3) NCC Construction Type
PROPOSED BUILDING FOOTPRINT B1 01 1,155 8,629 TYPE C
PROPOSED BUILDING FOOTPRINT B2 02 136 1,014 TYPE C
LEGEND
B - 100 SHS BOLLARD
- DENOTES PROPOSED CONCRETE HARDSTAND
- DENOTES VEGETATION (TURF / UNDEVELOPED AREA)
S - DENOTES EXISTING SEWER MAIN
WM - DENOTES EXISTING WATER MAIN
NBN - DENOTES EXISTING NBN SERVICE LINE
E - DENOTES EXISTING ENERGY SERVICE LINE
G - DENOTES EXISTING GAS SERVICE LINE
FS - DENOTES PROPOSED ONSITE FIRE SERVICES
H - DENOTES PROPOSED ONSITE HYDRANT
SW - DENOTES EXISTING STORMWATER DRAINAGE
(A) - EASEMENT TO DRAIN WATER VARIABLE WIDTH
(B) - RESTRICTION ON THE USE OF LAND
(C) - RESTRICTION ON THE USE OF LAND
(D) - POSITIVE COVENANT
THIS DRAWING IS TO BE PRINTED IN COLOUR
N
GINDURRA ROAD
STORMWATER BASIN 299.99 m²
B1 OFFICE 147.00 m²
B1 WORKSHOP 1,008.00 m²
ROADBASE AREA 408.63 m²
CONCRETE PAVEMENT 4,309.98 m²
B2 OFFICE & AMENITIES
B2 WORKSHOP 93.43 m²
WATER TREATMENT AREA
DIRT GRIT AREA
LOT 12 8,418.78 m²
BOUNDARY 165.765
BOUNDARY 171.820
BOUNDARY 45.000
BOUNDARY 51.000
(A) (C)
(B) (C) (D)
(B) (D)
(C)
RETAINING WALL
GALVANISED CHAIN WIRE FENCE 1800h
EXISTING GALVANISED CHAIN WIRE FENCE 1800h
NEW RETAINING WALL
MAINTENANCE ENTRY TO BASIN
AUTOMATIC SLIDING GALVANISED CHAIN WIRE GATE 1800h
ACCESSIBLE RAMPS AND LANDING W/ HANDRAILS
ONSITE ATTACK HYDRANT
BOOSTER ASSEMBLY LOCATION TO BE DETERMINED
RAINWATER TANKS TO ENGINEER REQUIREMENTS
WATER SETTLING TANKS
CLEAN OUT WEDGE PIT
COVERED WASH OUT AGGREGATE BINS
GRIT TRAP
3,000
29,333
31,843
19,813
20,323
22,842
17,026
5,100
3,700
2,000
5,000
33,021
EXISTING APPROVED DEVELOPMENT
SCALE: 1:250
ATB MORTON (NSW) PTY LTD
ENGINEERING I BUILDING I CONSTRUCTION
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C FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH 7/09/2022 DP DP
B REVISED PRELIMINARY DA ISSUE PLANS 13/09/2021 DP DP
A PRELIMINARY DA ISSUE PLANS 27/07/2021 DP DP
REV AMENDMENT DATE DRAWN CHKD
DRAWN DP 7/09/2022
CHECKED DP 7/09/2022
APPROVED DP 7/09/2022
STATUS DA
INDEX SHEET No. 4
CLIENT ATB MORTON PTY LTD
PROJECT PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA
PROJECT 1638.B - DWG - 203 - 02003 C
SHEET A1
SCALE 1:250, 1:1, 1:200
CONTENT EXISTING APPROVED DEVELOPMENT

(A) - EASEMENT TO DRAIN WATER VARIABLE WIDTH
(B) - RESTRICTION ON THE USE OF LAND
(C) - RESTRICTION ON THE USE OF LAND
(D) - POSITIVE COVENANT

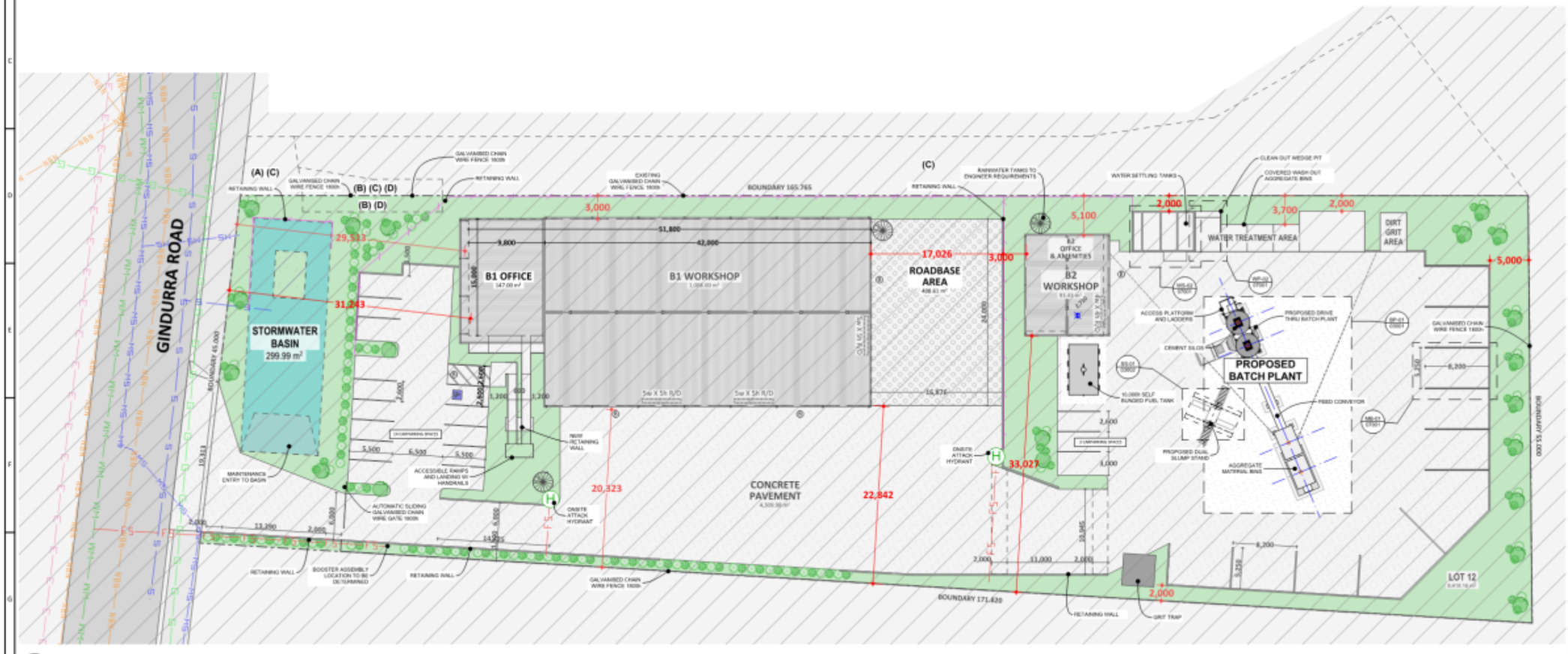
LEGEND

- DENOTES APPROVED STRUCTURES & DEVELOPMENT
(CDC No. 20/0499-01)

LEGEND

- B - 100 SHS BOLLARD
- CC - DENOTES PROPOSED CONCRETE HARDSTAND
- DENOTES VEGETATION (TURF / UNDEVELOPED AREA)
- S - DENOTES EXISTING SEWER MAIN
- WM - DENOTES EXISTING WATER MAIN
- NBN - DENOTES EXISTING NBN SERVICE LINE
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- G - DENOTES EXISTING GAS SERVICE LINE
- FS - DENOTES PROPOSED ONSITE FIRE SERVICES
- H - DENOTES PROPOSED ONSITE HYDRANT
- SW - DENOTES EXISTING STORMWATER DRAINAGE
- DENOTES EXISTING RETAINING WALL

THIS DRAWING IS TO BE PRINTED IN COLOUR



SITE PLAN
SCALE: 1:250

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/09/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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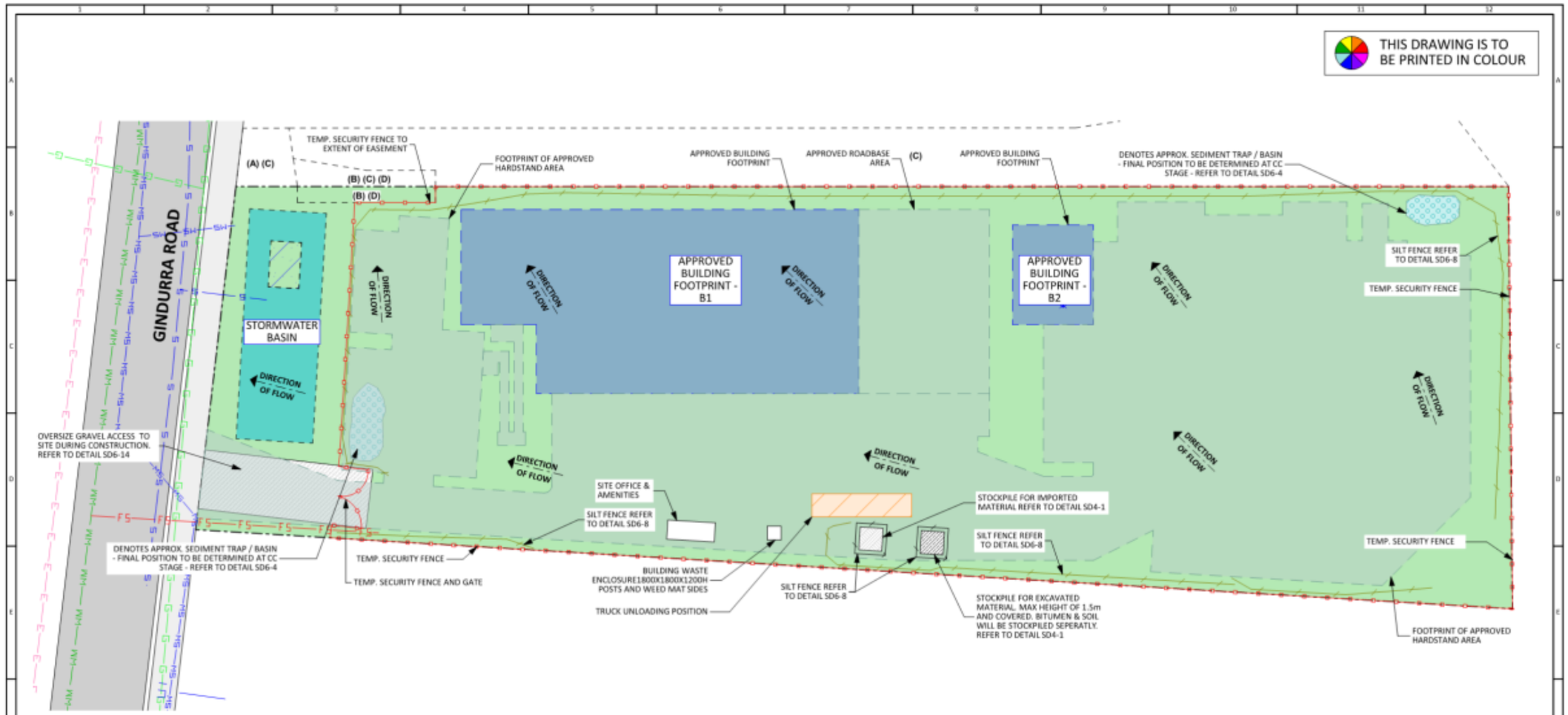
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APPROVED	DP	7/09/2022
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CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02004				C

SHEET	SCALE	CONTENT
A1	1:250	SITE PLAN



SOIL EROSION & SEDIMENT CONTROL
SCALE: 1:250

LEGEND

- B - 100 SHS BOLLARD
- DENOTES PROPOSED CONCRETE HARDSTAND
- DENOTES VEGETATION (TURF / UNDEVELOPED AREA)
- S - DENOTES EXISTING SEWER MAIN
- WM - DENOTES EXISTING WATER MAIN
- NBN - DENOTES EXISTING NBN SERVICE LINE
- E - DENOTES EXISTING ENERGY SERVICE LINE
- G - DENOTES EXISTING GAS SERVICE LINE
- FS - DENOTES PROPOSED ONSITE FIRE SERVICES
- (H) - DENOTES PROPOSED HYDRANT
- SW - DENOTES EXISTING STORMWATER DRAINAGE

- (A) - EASEMENT TO DRAIN WATER VARIABLE WIDTH
- (B) - RESTRICTION ON THE USE OF LAND
- (C) - RESTRICTION ON THE USE OF LAND
- (D) - POSITIVE COVENANT

SIZE & LOCATION OF SEDIMENT TRAP / BASIN TO BE DETERMINED AT CONSTRUCTION CERTIFICATE STAGE BASED ON SITE CONDITIONS IN CONSULTATIONS WITH CONSENT AUTHORITY AND SHALL BE INSTALLED & OPERATIONAL PRIOR TO ANY SOIL DISTURBANCE.

PLEASE REFER TO **1638.B-DWG-203-02006** FOR ALL SEDIMENT & EROSION CONTROL DETAILS

ALL SEDIMENT & EROSION CONTROL WORKS ARE TO BE CONDUCTED IN ACCORDANCE WITH THE DETAILED SEDIMENT AND CONTROL NOTES FOUND ON **1638.B-DWG-203-02007**

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/08/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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Phone: 02 4861 6822 Fax: 02 4861 4343
Email:enquiries@atbmorton.com.au

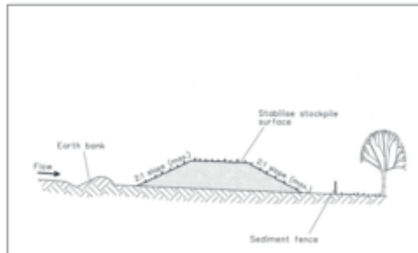
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APPROVED DP 7/09/2022
STATUS DA
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CLIENT ATB MORTON PTY LTD
PROJECT **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B	DWG	203	02005	C

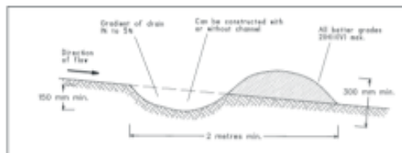
SHEET	SCALE	CONTENT
A1	1:250	SOIL EROSION & SEDIMENT CONTROL PLAN



Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES SD 4-1

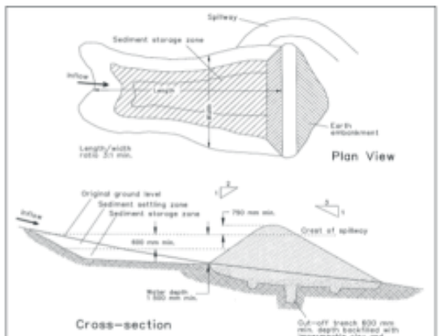


NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

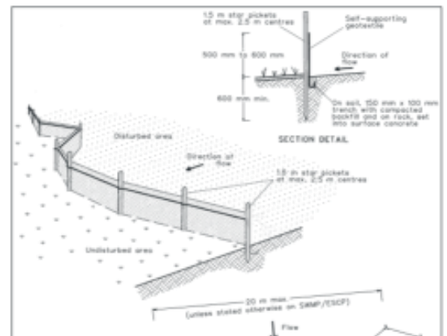
EARTH BANK (LOW FLOW) SD 5-5



Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 500 mm deep and 1,200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the riser crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

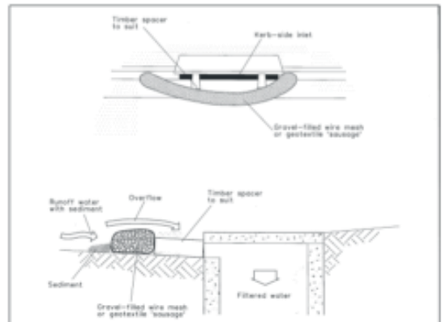
EARTH BASIN - WET SD 6-4
(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY)



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE SD 6-8

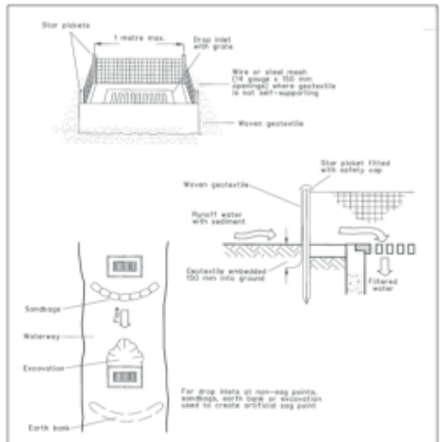


NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

1. Install fillers to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

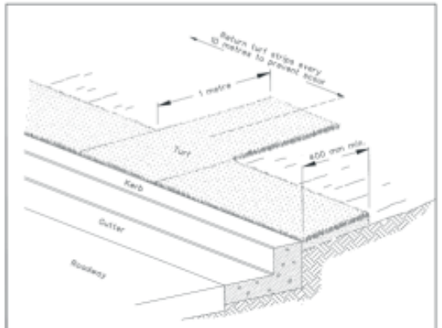
MESH AND GRAVEL INLET FILTER SD 6-11



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER SD 6-12



Construction Notes

1. Install a 400-mm minimum wide roll of turf on the footpath next to the kerb and at the same level as the top of the kerb.
2. Lay 1.4 metre long turf strips normal to the kerb every 10 metres.
3. Rehabilitate disturbed soil behind the

KERBSIDE TURF STRIP SD 6-13

REV	AMENDMENT	DATE	DRAWN	CHKD
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APPROVED	DP	7/09/2022
STATUS	DA	
INDEX	SHEET No.	7

CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02006				B

SHEET	SCALE	CONTENT
A1	1:1.05	SOIL EROSION & SEDIMENT CONTROL DETAILS

Erosion and Sediment Control Notes

The following notes may not be relevant to each development.

General

1. ESCP refers to Erosion and Sediment Control Plan or a Soil and Water Management Plan (SWMP).
2. ESC refers to erosion and sediment control.
3. Sediment, includes, but is not limited to, clay, silt, sand, gravel, soil, mud, cement, and ceramic waste.
4. Any reference to the Blue Book refers to Managing Urban Stormwater - Soils and Construction. Landcom, 2004.
5. Any reference to the IECA White Books (2008) refers to IECA 2008. Best Practice Erosion and Sediment Control. Books 1-6.International Erosion Control Association (Australasia). Picton NSW.
6. Any material deposited in any conservation area from works associated with the development shall be removed immediately by measures involving minimal ground and/or vegetation disturbance and no machinery, or following directions by Council and/or within a timeframe advised by Council.

The ESCP

7. The ESCP and its associated ESC measures shall be constantly monitored, reviewed, and modified as required to correct deficiencies. Council has the right to direct changes if, in its opinion, the measures that are proposed or have been installed are inadequate to prevent pollution.
8. Prior to any activities onsite, the responsible person(s) is to be nominated. The responsible person(s) shall be responsible for the ESC measures onsite. The name, address and 24 hour contact details of the person(s) shall be provided to Council in writing. Council shall be advised within 48 hours of any changes to the responsible person(s), or their contact details, in writing.
9. At least 14 days before the natural surface is disturbed in any new stage, the contractor shall submit to the Certifier, a plan showing ESC measures for that Stage. The degree of design detail shall be based on the disturbed area.
10. At any time during construction, the ESC measures onsite shall be appropriate for the area of disturbance and its characteristics including soils (in accordance with those required for the site as per DCP).
11. The implementation of the ESCP shall be supervised by personnel with appropriate qualifications and/or experience in ESC on construction sites.
12. The approved ESCP shall be available on-site for inspection by Council officers while work activities are occurring.
13. The approved ESCP shall be up to date and show a timeline of installation, maintenance and removal of ESC measures.
14. All ESC measures shall be appropriate for the Sediment Type(s) of the soils onsite, in accordance with the Blue Book, IECA White Books or other current recognised industry standard for ESC for Australian conditions.
15. Adequate site data, including soil data from a NATAapproved Laboratory, shall be obtained to allow the preparation of an appropriate ESCP, and allow the selection, design and specification of required ESC measures.
16. All works shall be carried out in accordance with the approved ESCP (as amended from time to time) unless circumstances arise where:
    a) compliance with the ESCP would increase the potential for environmental harm; or
    b) circumstances change during construction and those circumstances could not have been foreseen; or
    c) Council determines that unacceptable off-site sedimentation is occurring as a result of a land-disturbing activity. In either case, the person(s) responsible may be required to take additional, or alternative protective action, and/or undertake reasonable restoration works within the timeframe specified by the Council.
17. Additional ESC measures shall be implemented, and a revised ESCP submitted for approval to the certifier (within five business days of any such amendments) in the event that:
    a) there is a high probability that serious or material environmental harm may occur as a result of sediment leaving the site; or
    b) the implemented works fail to achieve Council's water quality objectives specified in these conditions; or
    c) site conditions significantly change; or
    d) site inspections indicate that the implemented works are failing to achieve the "objective" of the ESCP.
18. A copy of any amended ESCP shall be forwarded to an appropriate Council Officer, within five business days of any such amendments.

Site establishment including clearing and mulching

19. No land clearing shall be undertaken unless preceded by the installation of adequate drainage and sediment control measures, unless such clearing is required for the purpose of installing such measures, in which case, only the minimum clearing required to install such measures shall occur.
20. Bulk tree clearing and grubbing of the site shall be immediately followed by specified temporary erosion control measures (e.g. temporary grassing or mulching) prior to commencement of each stage of construction works.
21. Trees and vegetation cleared from the site shall be mulched onsite within 7 days of clearing.
22. Appropriate measures shall be undertaken to control any dust originating due to the mulching of vegetation onsite.
23. All office facilities and operational activities shall be located such that any effluent, including wash-down water, can be totally contained and treated within the site.
24. All reasonable and practicable measures shall be taken to ensure stormwater runoff from access roads and stabilised entry/exit systems, drains to an appropriate sediment control device.
25. Site exit points shall be appropriately managed to minimise the risk of sediment being tracked onto sealed, public roadways.
26. Stormwater runoff from access roads and stabilised entry/exit points shall drain to an appropriate sediment control device.
27. The Applicant shall ensure an adequate supply of ESC, and appropriate pollution clean-up materials are available on-site at all times.
28. All temporary earth banks, flow diversion systems, and sediment basin embankments shall be machine-compacted, seeded and mulched within ten (10) days of formation for the purpose of establishing a vegetative cover, or lined appropriately.
29. Sediment deposited off site as a result of on-site activities shall be collected and the area cleaned/rehabilitated as soon as reasonable and practicable.
30. Concrete waste and chemical products, including petroleum and oil-based products, shall be prevented from entering any internal or external water body, or any external drainage system, excluding those on-site water bodies specifically designed to contain and/or treat such material. Appropriate measures shall be installed to trap these materials onsite.
31. Brick, tile or masonry cutting shall be carried out on a pervious surface (e.g. grass or open soil) and in such a manner that any resulting sediment-laden runoff is prevented from discharging into a gutter, drain or water. Appropriate measures shall be installed to trap these materials onsite.
32. Newly sealed hard-stand areas (e.g. roads, driveways and car parks) shall be swept thoroughly as soon as practicable after sealing/surfacing to minimise the risk of components of the surfacing compound entering stormwater drains.
33. Stockpiles of erodible material shall be provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than 10 days.
34. Stockpiles, temporary or permanent, shall not be located in areas identified as no-go zones (including, but not limited to, restricted access areas, buffer zones, or areas of non-disturbance) on the ESCP.
35. No more than 150m of a stormwater, sewer line or other service trench shall to be open at any one time.
36. Site spoil shall be lawfully disposed of in a manner that does not result in ongoing soil erosion or environmental harm.
37. Wherever reasonable and practicable, stormwater runoff entering the site from external areas, and non-sediment laden (clean) stormwater runoff entering a work area or area of soil disturbance, shall be diverted around or through that area in a manner that minimises soil erosion and the contamination of that water for all discharges up to the specified design storm discharge.

Site Management including Dust

38. Priority shall be given to the prevention, or at least the minimisation, of soil erosion, rather than the trapping of displaced sediment. Such a clause shall not reduce the responsibility to apply and maintain, at all times, all necessary ESC measures.
39. Measures used to control wind erosion shall be appropriate for the location and prevent soil erosion at all times, including working hours, out of hours, weekends, public holidays, and during any other shutdown periods.
40. The application of liquid or chemical-based dust suppression measures shall ensure that sediment-laden runoff resulting from such measures does not create a traffic or environmental hazard.
41. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
42. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
43. All reasonable and practicable measures shall be taken to prevent, or at least minimise, the release of sediment from the site.
44. Suitable all-weather maintenance access shall be provided to all sediment control devices.
45. Sediment control devices, other than sediment basins, shall be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event, whether natural or artificial, if the device's sediment retention capacity falls below 75% of its design retention capacity.
46. All erosion and sediment control measures, including drainage control measures, shall be maintained in proper working order at all times during their operational lives.
47. Washing/flushing of sealed roadways shall only occur where sweeping has failed to remove sufficient sediment and there is a compelling need to remove the remaining sediment (e.g. for safety reasons). In such circumstances, all reasonable and practicable sediment control measures shall be used to prevent, or at least minimise, the release of sediment into receiving waters. Only those measures that will not cause safety and property flooding issues shall be employed. Sediment removed from roadways shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.
48. Sediment removed from sediment traps and places of sediment deposition shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.

Sediment Basins - installation, maintenance and removal including sediment traps

49. As-Constructed plans shall be prepared for all constructed Sediment Basins and associated emergency spillways. Such plans shall verify the basin's dimensions, levels and volumes comply with the approved design drawings. These plans may be requested by the Certifier or Council.
50. Sediment basins shall be constructed and fully operational prior to any other soil disturbance in their catchment.
51. Install an internal gated valve, or similar, in any outlet pipe once pipes installed, or install a sacrificial pipe from basin through wall to external outlet point. The valve shall be connected to a riser made from slotted pipe in the basin. The valve may be opened once captured water meets water quality requirements. The final setup for temporary internal outlet structures to be confirmed prior to construction with Council. This setup will enable discharge of treated water from site without need for pumping.
52. A sediment storage level marker post shall be with a cross member set just below the top of the sediment storage zone (as specified on the approved ESCP). At least a 75mm wide post shall be firmly set into the basin floor.
53. The Site Manager shall obtain the relevant approvals from the relevant organisations to discharge treated water from any existing basins. Organisations may include, but not be limited to, Hunter Water, and Council.
54. Where more than one stage is to be developed at one time, or before the preceding stage is complete, the sediment basin(s) for these stages shall have sufficient capacity to cater for all area directed to the basin(s).
55. Prior to any forecast weather event likely to result in runoff, any basins/traps shall be dewatered to provide sufficient capacity to capture sediment laden water from the site.
56. Sufficient quantities of chemicals/agents to treat captured water shall be placed such that water entering the basin mixes with the chemical/agents and is carried into the basin to speed up clarification.
57. Any basin shall be dewatered within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
58. Sufficient quantities of chemicals/agents to treat turbid water shall be securely stored on-site to provide for at least three complete treatments of all basins requiring chemically treatment onsite.
59. Prior to the controlled discharge (e.g. de-watering activities) from excavations and/or sediment basins, the following water quality objectives shall be achieved:
    a) Total Suspended Solids (TSS) to a maximum 50mg/L;
    b) water pH between 6.5 and 8.5, unless otherwise required by the Council;
    c) Turbidity (measured in NTUs) to a maximum of 60 NTU); and
    d) EC levels no greater than background levels.
60. The Development Approval may require testing of additional water quality elements prior to discharge. E.g. heavy metals.
61. A sample of the released treated water shall be kept onsite in a clear container with the sample date recorded on it.
62. Water quality samples shall be taken at a depth no less than 200mm below the water surface of the basin.
63. No Aluminium based products may be used treat captured water onsite without the prior written permission from an appropriate Council Officer. The applicant shall have a demonstrated ability to use such products correctly and without environmental harm prior to any approval.
64. The chemical/agent used in Type D and Type F basins to treat captured water captured in the basin shall be applied in concentrations sufficient to achieve Council's water quality objectives within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
65. All Manufacturers' Instructions shall be followed for any chemicals/agents used onsite, except where approved by the Responsible Person or an appropriate Council Officer.
66. The Applicant shall ensure that on each occasion a Type F or Type D basin was not de-watered prior to being surcharged by a following rainfall event, a report is presented to an appropriate Council officer within 5 days identifying the circumstances and proposed amendments, if any, to the basin's operating procedures.
67. Settled sediment shall be removed as soon as reasonable and practicable from any sediment basin if:
    a) it is anticipated that the next storm event is likely to cause sediment to settle above the basin's sediment storage zone; or
    b) the elevation of settled sediment is above the top of the basin's sediment storage zone; or
    c) the elevation of settled sediment is above the basins sediment marker line.
68. Scour protection measures placed on sediment basin emergency spillways shall appropriately protect the spillway chute and its side batters from scour, and shall extend a minimum of 3m beyond the downstream toe of the basin's embankment.
69. Suitable all-weather maintenance access shall be provided to all sediment control devices.
70. Materials, whether liquid or solid, removed from any ESC measure or excavation during maintenance or decommissioning, shall be disposed of in a manner that does not cause ongoing soil erosion, water pollution or environmental harm.
71. All sediment basins shall remain fully operational at all times until the basin's design catchment achieves 70% ground cover or surface stabilisation acceptable to Council.
72. The ESC measures installed during the decommissioning and rehabilitation of a sediment basin shall comply with same standards specified for the normal construction works.
73. A sediment basin shall not be decommissioned until all up-slope site stabilisation measures have been implemented and are appropriately working to control soil erosion and sediment runoff.
74. Immediately prior to the construction of the permanent stormwater treatment device, appropriate flow bypass conditions shall be established to prevent sediment-laden water entering the device.

Revegetation/Stabilisation

75. Temporary Stabilisation may be attained using vegetation, non rewettable soil polymers, or pneumatically applied erosion controls.
76. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
77. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
78. The LMCC Seed mix shall be used unless stated on the ESCP/SWMP.
79. The pH level of topsoil shall be appropriate to enable establishment and growth of specified vegetation prior to initiating the establishment of vegetation.
80. Non rewettable binder shall be used in all hydromulch/hydroseed/polymer mixes on slopes or works adjacent to a water course.
81. Soil ameliorants shall be added to the soil in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
82. Surface soil density, compaction and surface roughness shall be adjusted prior to seeding/planting in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
83. Procedures for initiating a site shutdown, whether programmed or un-programmed, shall incorporate revegetation of all soil disturbances unless otherwise approved by Council. The stabilisation works shall not rely upon the longevity of non-vegetated erosion control blankets, or temporary soil binders.

Site Monitoring and Maintenance

84. The Applicant shall ensure that appropriate procedures and suitably qualified personnel are engaged to plan and conduct site inspections and water quality monitoring throughout the construction and maintenance phase.
85. All ESC measures shall be inspected and any maintenance undertaken immediately:
    a) at least daily (when work is occurring on-site); and
    b) at least weekly (when work is not occurring on-site); and
    c) within 24hrs of expected rainfall; and
    d) within 18hrs of a rainfall event that causes runoff on the site.
86. Written records shall be kept onsite of ESC monitoring and maintenance activities conducted during the construction and maintenance periods, and be available to Council officers on request.
87. All environmentally relevant incidents shall be recorded in a field log that shall remain accessible to all relevant regulatory authorities.
88. All water quality data, including dates of rainfall, dates of testing, testing results and dates of water release, shall be kept in an on-site register. The register is to be maintained up to date for the duration of the approved works and be available on-site for inspection by [insert name of regulatory authority] on request.
89. At nominated instream water monitoring sites, a minimum of 3 water samples shall be taken and analysed, and the average result used to determine quality.

Instream Works

90. All instream works (including in or adjacent to watercourses natural or manmade, flowing or not) shall be carried out in accordance with the IECA White Books.

REV	AMENDMENT	DATE	DRAWN	CHKD
B	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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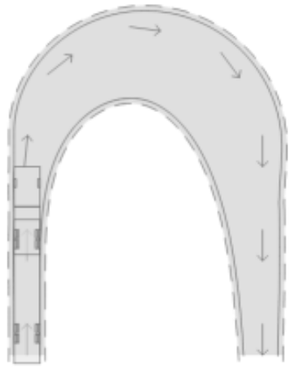
DRAWN	DP	DATE 7/09/2022
CHECKED	DP	DATE 7/09/2022
APPROVED	DP	DATE 7/09/2022
STATUS	DA	
INDEX		SHEET No. 8

CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 *AUSTRALIA*

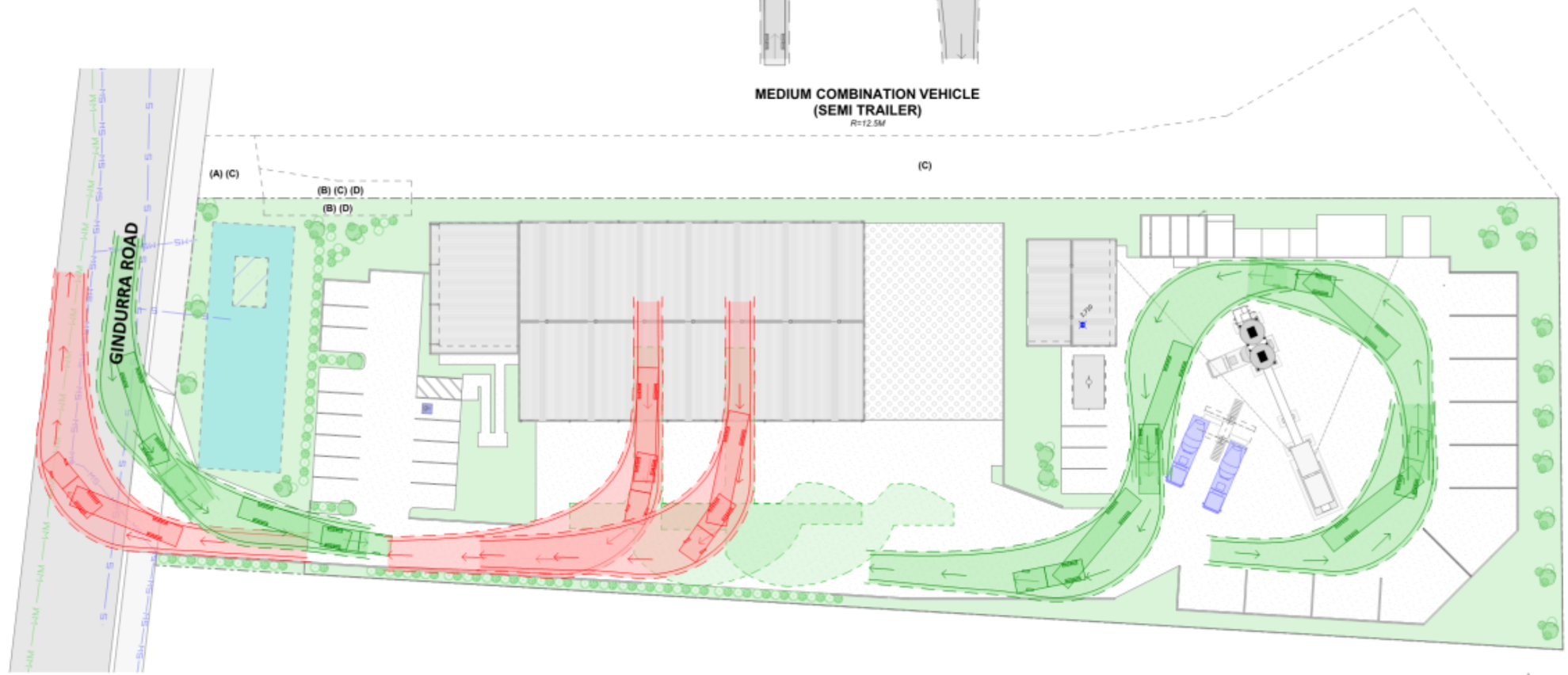
PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02007				B

SHEET	SCALE	CONTENT
A1	1:1	SOIL EROSION & SEDIMENT CONTROL NOTES

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MEDIUM COMBINATION VEHICLE
(SEMI TRAILER)
R=12.5M



MANOEUVRING PLAN - MATERIAL DELIVERIES
SCALE: 1:250

N

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/09/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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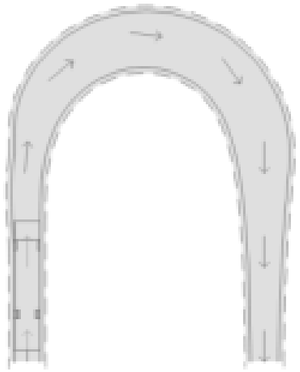
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CHECKED	DP	7/09/2022
APPROVED	DP	7/09/2022
STATUS	DA	
INDEX	SHEET No.	9

CLIENT: ATB MORTON PTY LTD
PROJECT: PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

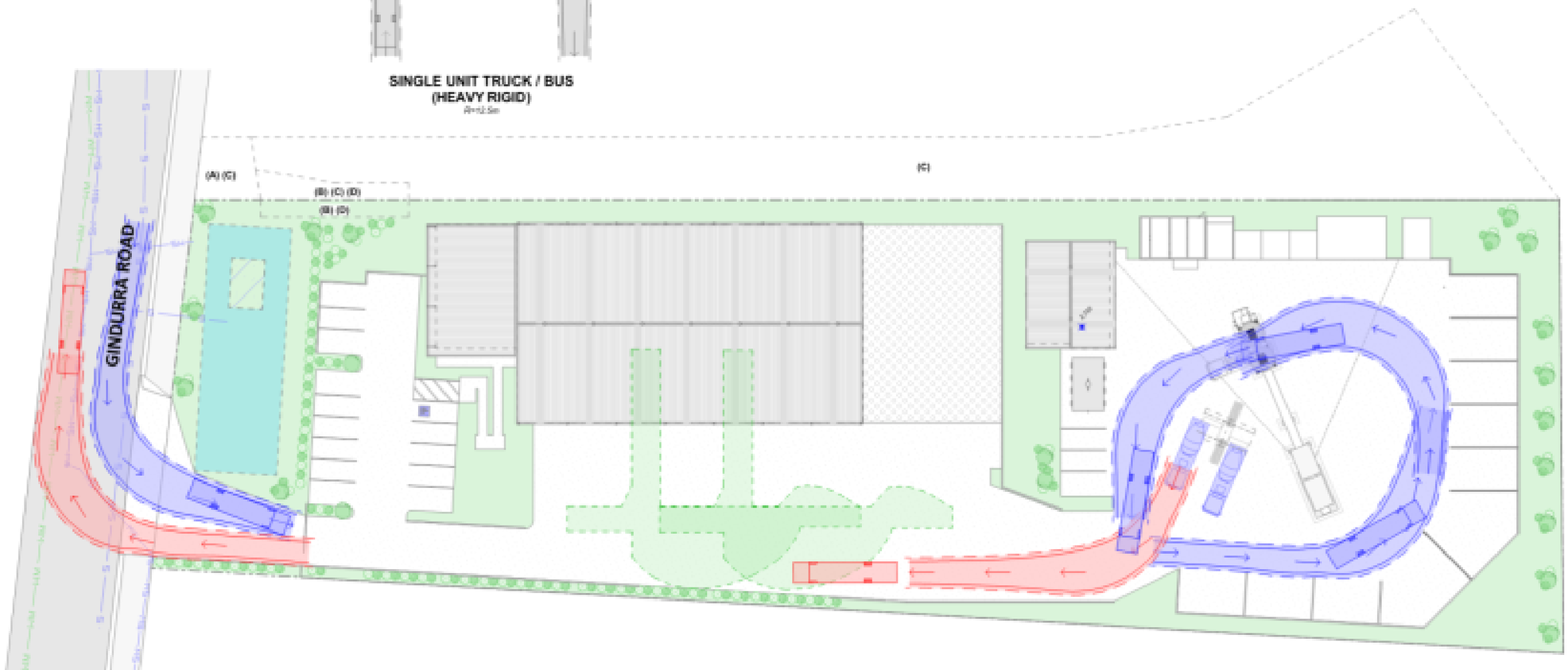
PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02008				C

SHEET	SCALE	CONTENT
A1	1:250	MANOEUVRING PLAN - MATERIAL DELIVERIES

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SINGLE UNIT TRUCK / BUS
(HEAVY RIGID)



MANOEUVRING PLAN - CONCRETE AGITATORS
SCALE: 1:250

N

REV	AMENDMENT	DATE	DRAWN	CHKD
C	Final, DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	12/08/2022	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2022	DP	DP

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APPROVED	DP	7/09/2022
STATUS	DA	
INDEX		SHEET No. 10

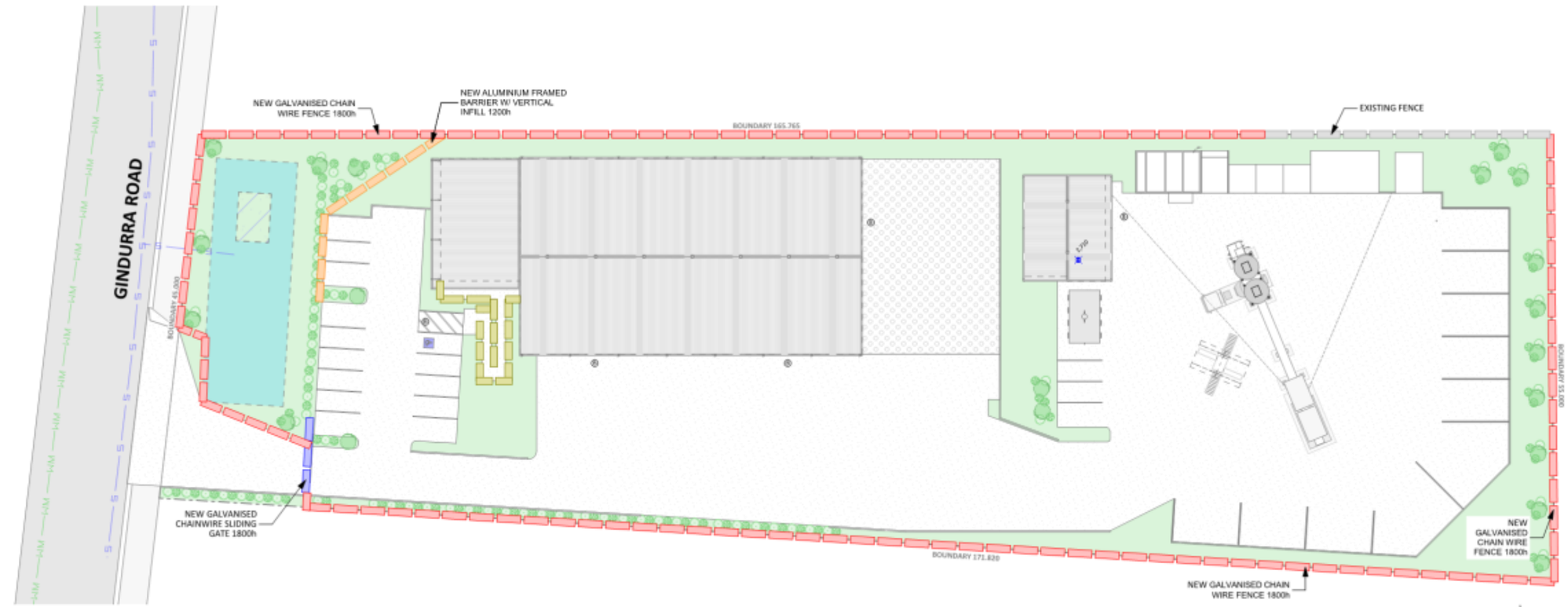
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No. 53, LOT 53 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02009				C
SHEET: A1	SCALE: 1:250	CONTENT: MANOEUVRING PLAN - CONCRETE AGITATORS		

FENCING LEGEND

- Galvanised Chain Mesh Fencing (1.8h w/ 3 Rows Barbed Wire Over)
- Galvanised Chain Mesh Sliding Gate (Manual Operation)
- Aluminium Framed Barrier (1.2h w/ Vertical Infill)
- Galvanised Steel Monowills Balustraude (1.0h w/ Mid Rail & 100mm Kick Plate)
- Existing Fencing to Remain (No allowance for repairs or patching of existing fence)

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FENCING PLAN
SCALE: 1:250

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/09/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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CLIENT: ATB MORTON PTY LTD
PROJECT: PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 02010				C

SHEET	SCALE	CONTENT
A1	1:250	FENCING PLAN

SITE AREAS

	Area (sqm)
01.SITE	
PROPOSED BUILDING FOOTPRINT B1	1,155
PROPOSED BUILDING FOOTPRINT B2	136
DIRT GRIT AREA	17
WATER TREATMENT AREA	138
STORMWATER BASIN	300
ROADBASE AREA	409
CONCRETE PAVEMENT	4,310
LANDSCAPING / UNDEVELOPED	126

SITE AREAS

	Area (sqm)
LANDSCAPING / UNDEVELOPED	159
LANDSCAPING / UNDEVELOPED	1,667
LOT 12	8,418
02.BUILDING	

N

Table 5 Type C construction: FRL of building elements

Building element	Class of building—FRL: (in minutes) Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
Less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
1.5 to less than 3 m	-/-/-	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—				
Less than 1.5 m	90/-/-	90/-/-	90/-/-	90/-/-
1.5 to less than 3 m	-/-/-	60/-/-	60/-/-	60/-/-
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
INTERNAL WALLS—				
Bounding public corridors, public lobbies and the like—	60/ 60/ 60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units—	60/ 60/ 60	-/-/-	-/-/-	-/-/-
Bounding a stair if required to be rated—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-

BUILDING VOLUME CALCULATION

	Fire Compartment	Area (m2)	Volume (m3)	NCC Construction Type
PROPOSED BUILDING FOOTPRINT B1	01	1,155	8,639	TYPE C
PROPOSED BUILDING FOOTPRINT B2	02	136	1,014	TYPE C

PART A3 CLASSIFICATION OF BUILDINGS & STRUCTURES

A3.2 CLASSIFICATIONS

CLASS 1a	☐	CLASS 4	☐	CLASS 7b	☐	CLASS 9c	☐
CLASS 1b	☐	CLASS 5	☑	CLASS 8	☑	CLASS 10a	☐
CLASS 2	☐	CLASS 6	☐	CLASS 9a	☐	CLASS 10b	☐
CLASS 3	☐	CLASS 7a	☐	CLASS 9b	☐	CLASS 10c	☐

PART C1 FIRE RESISTANCE & STABILITY

C1.1 TYPE OF CONSTRUCTION

RISE IN STOREYS.....ONE.....
CLASS OF BUILDING.....5 & 8.....
TYPE OF CONSTRUCTION.....C.....

PART C1 FIRE RESISTANCE & STABILITY

C2.2 MAXIMUM SIZE OF FIRE COMPARTMENTS OR ATRIA

MAX FLOOR AREA 2,000m²
MAX VOLUME 12,000m³

COMPLIES.....☑

SPECIFICATION C1.1 - FIRE RESISTING CONSTRUCTION

2.5 GENERAL CONCESSIONS

(a) STEEL COLUMNS;
- ☑ (i) ONLY 1 STOREY; OR
- ☐ (ii) 2 STOREYS IN SOME OF ITS PARTS AND 1 STOREY ONLY IN ITS REMAINING PARTS IF THE SUM OF THE FLOOR AREAS OF THE UPPER STOREYS OF ITS 2 STOREY PARTS DOES NOT EXCEED THE LESSER OF -
  - ☐ (A) 1/8 OF THE SUM OF THE FLOOR AREAS OF THE 1 STOREY PARTS; OR
  - ☐ (B) IN THE CASE OF A BUILDING TO WHICH ONE OF THE MAXIMUM FLOOR AREAS SPECIFIED IN TALE C2.2 IS APPLICABLE - 1/10 OF THAT AREA; OR
  - ☐ (C) IN THE CASE OF A BUILDING TO WHICH TWO OR MORE OF THE MAXIMUM FLOOR AREAS SPECIFIED IN TABLE C2.2 IS APPLICABLE - 1/10 OF THE LESSER OF THOSE AREAS.

PART E1 - FIRE FIGHTING EQUIPMENT

E1.3 FIRE HYDRANTS

(a) A FIRE HYDRANT MUST BE PROVIDED TO SERVE A BUILDING -
- (i) HAVING A TOTAL FLOOR AREA GREATER THAN 500m²; AND
- (ii) WHERE A FIRE BRIGADE STATION IS -
  - (A) NO MORE THAN 500M FROM THE BUILDING AS MEASURED ALONG ROADS; AND
  - (B) EQUIPPED WOTH EQUIPMENT CAPABLE F UTILISING A FIRE HYDRANT

E1.4 FIRE HOSE REELS

(b) A FIRE HOSE REEL SYSTEM MUST BE PROVIDED -
- (i) TO SERVE THE WHOLE BUILDING WHERE ONE OR MORE INTERNAL FIRE HYDRANTS ARE INSTALLED; OR
- (ii) WHERE INTERNAL FIRE HYDRANTS ARE NOT INSTALLED, TO SERVE ANY FIRE COMPARTMENT WITH FLOOR AREA GREATER THAN 500m²

NO TOTAL FLOOR AREA OR FIRE COMPARTMENT EXCEEDING 500m² PROPOSED

COMPLIES.....☑

LEGEND

B	-	100 SHS BOLLARD
	-	DENOTES PROPOSED CONCRETE HARDSTAND
	-	DENOTES VEGETATION (TURF / UNDEVELOPED AREA)
— S —	-	DENOTES EXISTING SEWER MAIN
— WM —	-	DENOTES EXISTING WATER MAIN
— NBN —	-	DENOTES EXISTING NBN SERVICE LINE
— E —	-	DENOTES EXISTING ENERGY SERVICE LINE
— G —	-	DENOTES EXISTING GAS SERVICE LINE
— FS —	-	DENOTES PROPOSED ONSITE FIRE SERVICES
H	-	DENOTES PROPOSED ONSITE HYDRANT
— SW —	-	DENOTES EXISTING STORMWATER DRAINAGE

(A)	-	EASEMENT TO DRAIN WATER VARIABLE WIDTH
(B)	-	RESTRICTION ON THE USE OF LAND
(C)	-	RESTRICTION ON THE USE OF LAND
(D)	-	POSITIVE COVENANT

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FIRE CONCEPT PLAN CHECKLIST

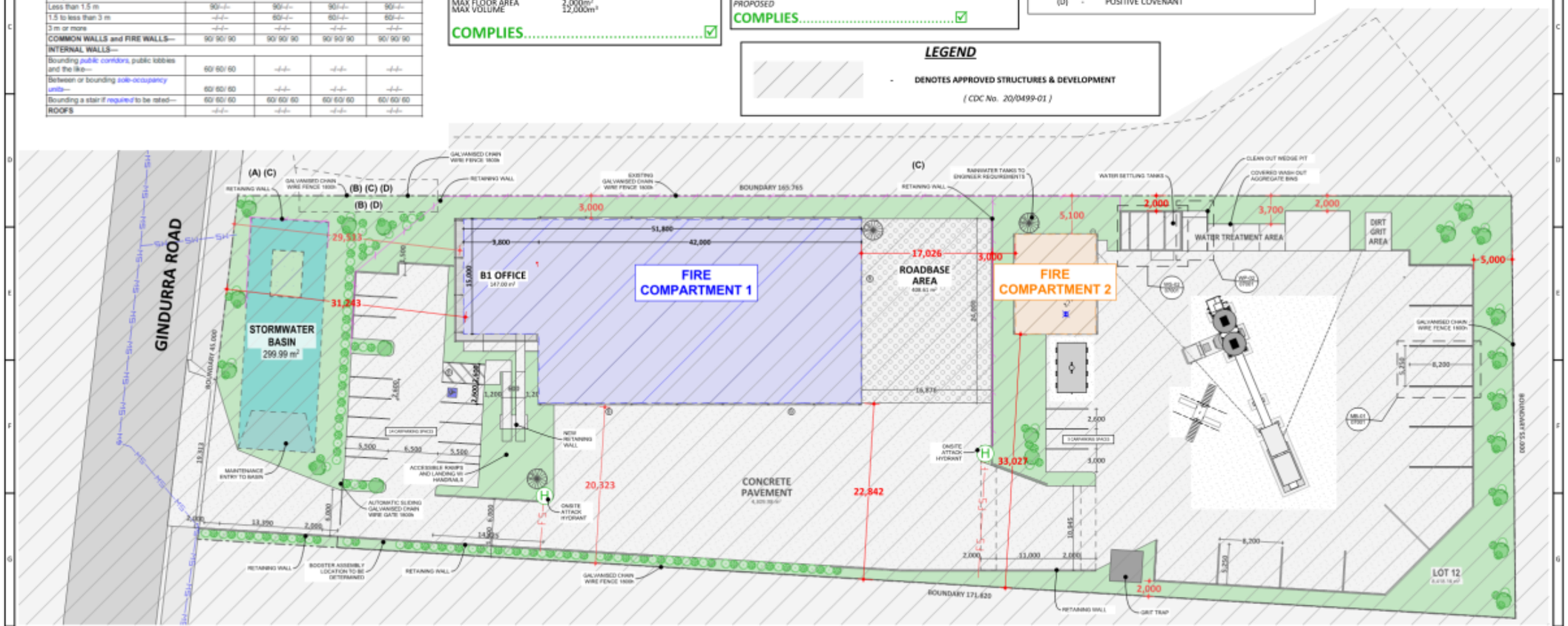
- ☑ A6.0 MULTI CLASSIFICATION EXEMPTION
- ☑ A3.2 CLASSIFICATIONS
- ☑ PART C1 FIRE RESISTANCE AREA & VOLUME CALC
- ☑ SPECIFICATION C1.1
  - ☑ *2.5 (a) GENERAL CONCESSIONS*
  - ☑ *2.6 (b) MEZZANINE CONCESSIONS*
  - ☑ *3.2 (a) CONCESSIONS FOR FLOORS*
  - ☑ *3.5(b) ROOF CONCESSIONS*
  - ☑ *3.7 (b) INTERNAL COLUMNS & WALLS CONCESSION*
- ☒ FIRE ENGINEERS PERFORMANCE REPORT REQUIRED.

COMPLIES.....☑

LEGEND

DENOTES APPROVED STRUCTURES & DEVELOPMENT

(CDC No. 20/0499-01)



FIRE CONCEPT PLAN

SCALE: 1:250

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/09/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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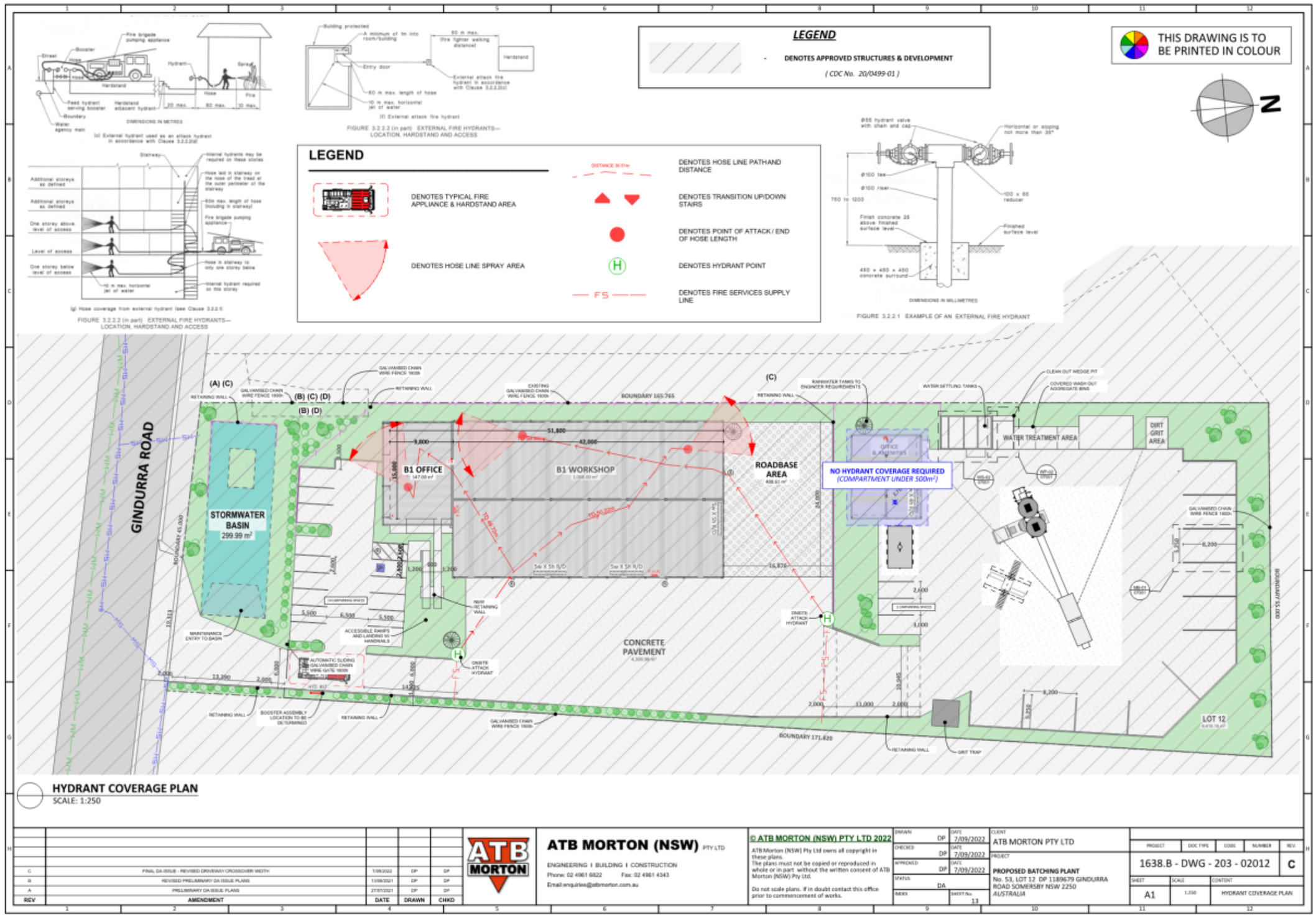
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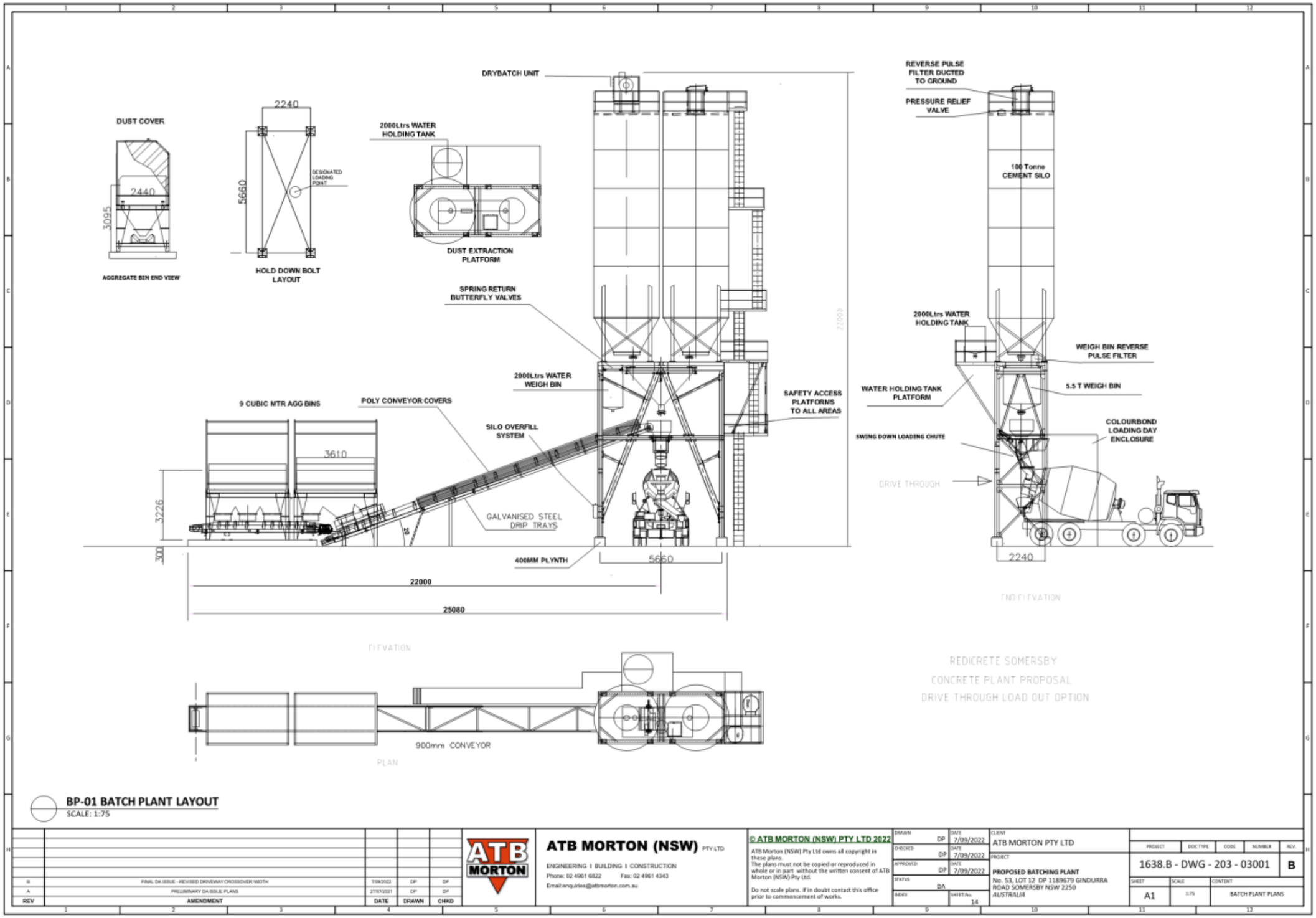
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APPROVED	DP	DATE 7/09/2022
STATUS	DA	
INDEX	SHEET No. 12	

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No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA

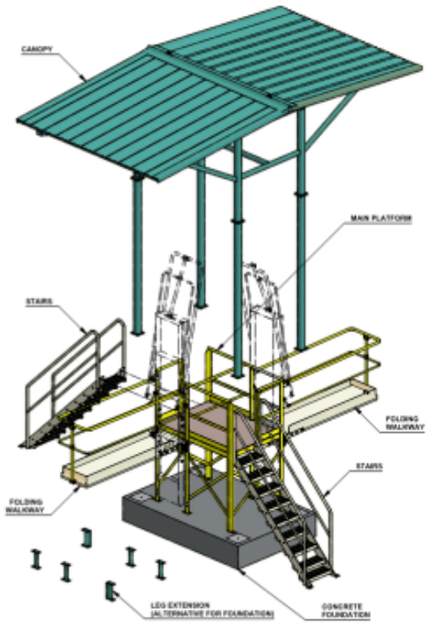
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1638.B - DWG - 203 - 02011				C

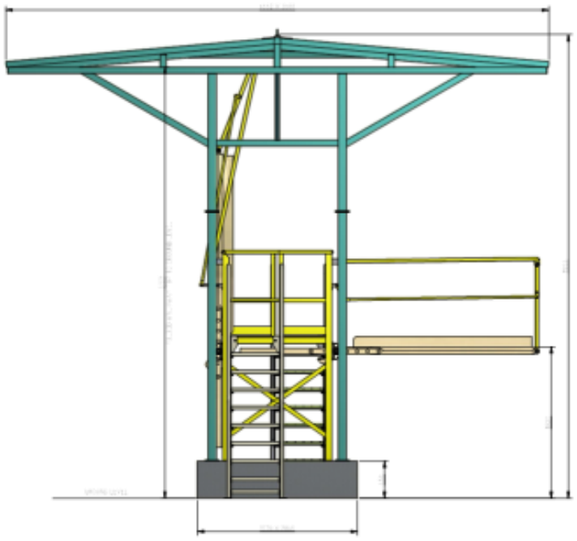
SHEET	SCALE	CONTENT
A1	1:250, 1:1	FIRE CONCEPT PLAN

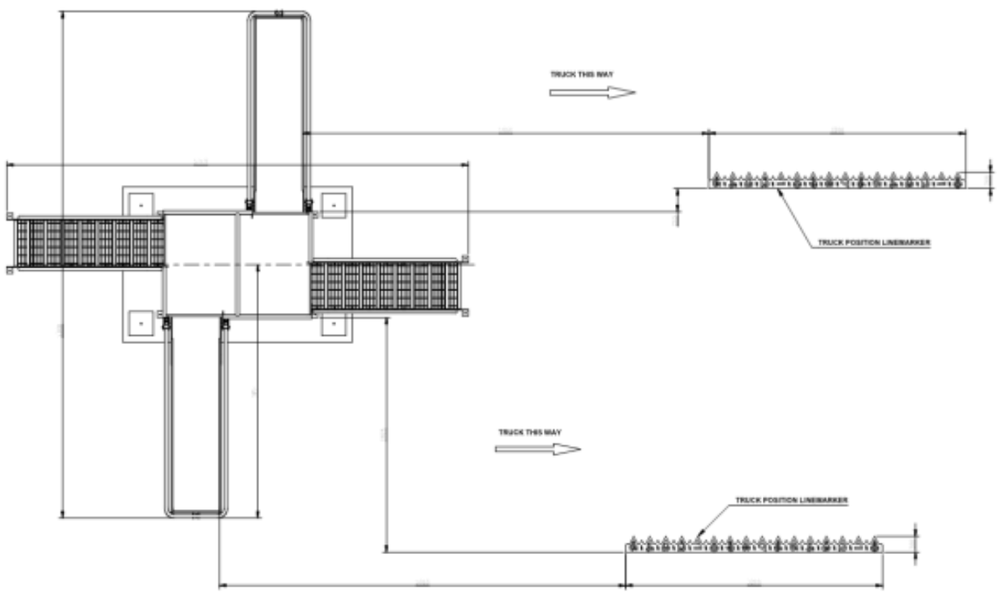

LEGEND
DENOTES APPROVED STRUCTURES & DEVELOPMENT
(CDC No. 20/0499-01)
THIS DRAWING IS TO BE PRINTED IN COLOUR
N
LEGEND
DENOTES TYPICAL FIRE APPLIANCE & HARDSTAND AREA
DENOTES HOSE LINE SPRAY AREA
DENOTES HOSE LINE PATHAND DISTANCE
DENOTES TRANSITION UP/DOWN STAIRS
DENOTES POINT OF ATTACK / END OF HOSE LENGTH
DENOTES HYDRANT POINT
DENOTES FIRE SERVICES SUPPLY LINE
FIGURE 3.2.2.2 (in part) EXTERNAL FIRE HYDRANTS— LOCATION, HARDSTAND AND ACCESS
FIGURE 3.2.2.1 EXAMPLE OF AN EXTERNAL FIRE HYDRANT
GINDURRA ROAD
STORMWATER BASIN
299.99 m²
B1 OFFICE
B1 WORKSHOP
ROADBASE AREA
CONCRETE PAVEMENT
NO HYDRANT COVERAGE REQUIRED
(COMPARTMENT UNDER 500m²)
WATER TREATMENT AREA
DIRT GRIT AREA
LOT 12
BOUNDARY 165.765
BOUNDARY 171.620
HYDRANT COVERAGE PLAN
SCALE: 1:250
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PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 AUSTRALIA
1638.B - DWG - 203 - 02012
C
A1
HYDRANT COVERAGE PLAN


DUST COVER
2440
3095
AGGREGATE BIN END VIEW
2240
5660
DESIGNATED LOADING POINT
HOLD DOWN BOLT LAYOUT
2000Ltrs WATER HOLDING TANK
DUST EXTRACTION PLATFORM
DRYBATCH UNIT
SPRING RETURN BUTTERFLY VALVES
2000Ltrs WATER WEIGH BIN
SAFETY ACCESS PLATFORMS TO ALL AREAS
9 CUBIC MTR AGG BINS
POLY CONVEYOR COVERS
SILO OVERFILL SYSTEM
3610
3226
300
GALVANISED STEEL DRIP TRAYS
400MM PLYNTH
5660
22000
25080
900mm CONVEYOR
PLAN
REVERSE PULSE FILTER DUCTED TO GROUND
PRESSURE RELIEF VALVE
100 Tonne CEMENT SILO
2000Ltrs WATER HOLDING TANK
WEIGH BIN REVERSE PULSE FILTER
5.5 T WEIGH BIN
WATER HOLDING TANK PLATFORM
COLOURBOND LOADING DAY ENCLOSURE
SWING DOWN LOADING CHUTE
DRIVE THROUGH
2240
REDICRETE SOMERSBY
CONCRETE PLANT PROPOSAL
DRIVE THROUGH LOAD OUT OPTION
BP-01 BATCH PLANT LAYOUT
SCALE: 1:75
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APPROVED DP 7/09/2022
STATUS DA
INDEX SHEET No. 14
CLIENT ATB MORTON PTY LTD
PROJECT PROPOSED BATCHING PLANT
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA
PROJECT 1638.B - DWG - 203 - 03001 B
SHEET A1
SCALE 1:75
CONTENT BATCH PLANT PLANS
B FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH 7/09/2022 DP DP
A PRELIMINARY DA ISSUE PLANS 27/07/2021 DP DP
REV AMENDMENT DATE DRAWN CHKD

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SS-01 SLUMP STAND DETAILS
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	CHKD
B	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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CHECKED	DP	7/09/2022
APPROVED	DP	7/09/2022
STATUS	DA	
INDEX	SHEET No.	15

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No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA

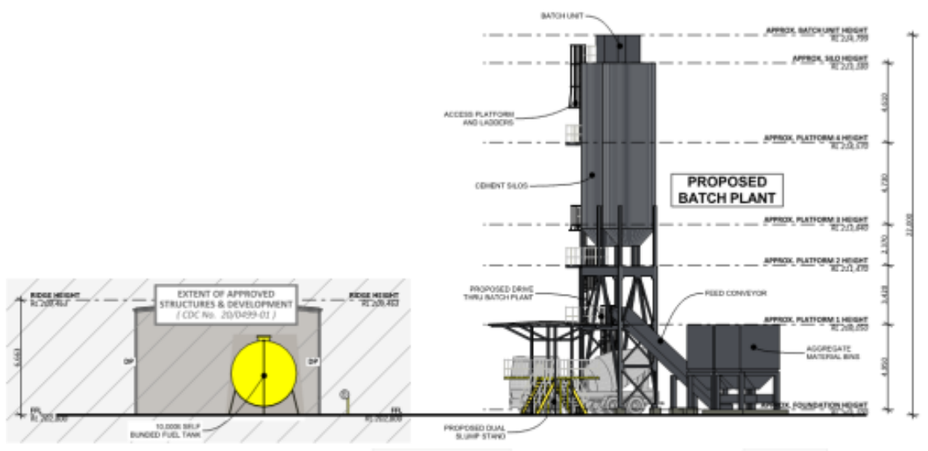
PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 03002				B

SHEET	SCALE	CONTENT
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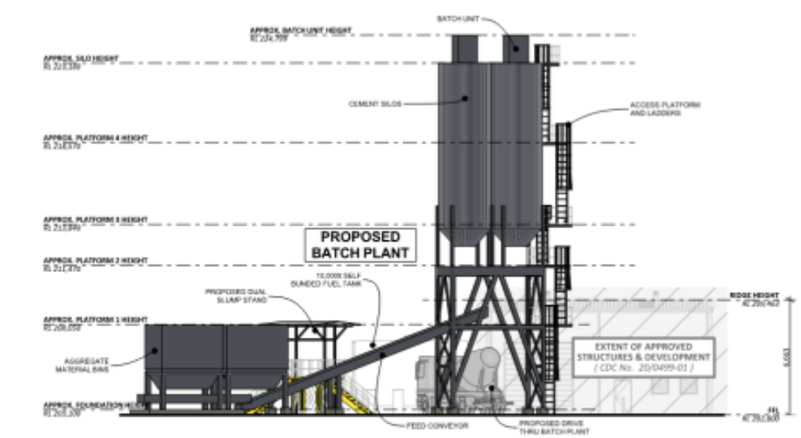
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- DENOTES APPROVED STRUCTURES & DEVELOPMENT
(CDC No. 20/0499-01)

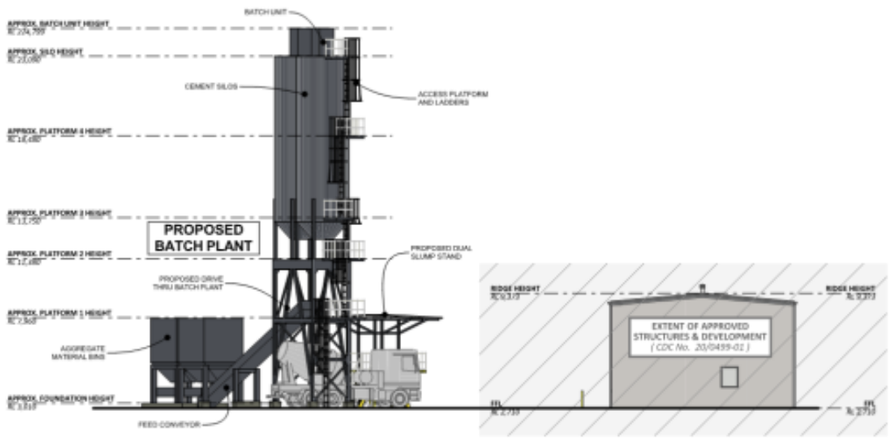
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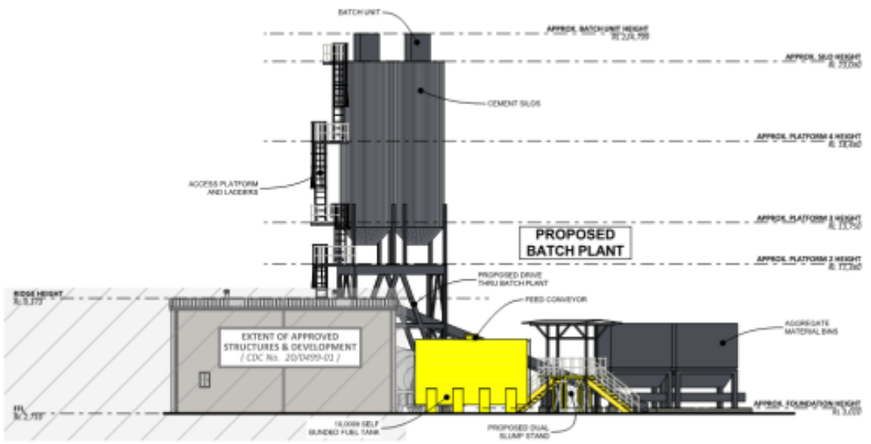
B2 **EAST ELEVATION**
SCALE: 1:150



B2 **NORTH ELEVATION**
SCALE: 1:150



B2 **WEST ELEVATION**
SCALE: 1:150



B2 **SOUTH ELEVATION**
SCALE: 1:150

REV	AMENDMENT	DATE	DRAWN	CHKD
B	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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APPROVED	DP	7/09/2022
STATUS	DA	
INDEX	SHEET No.	16

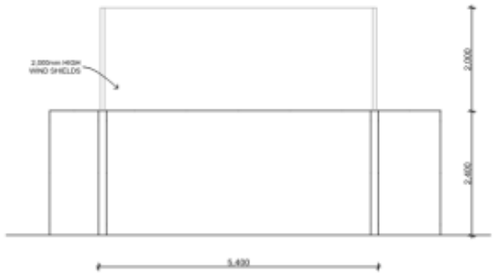
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PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 04001				B

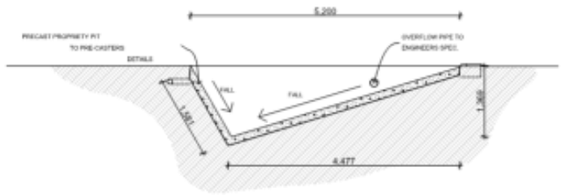
SHEET	SCALE	CONTENT
A1	1:150	BATCH PLANT ELEVATIONS



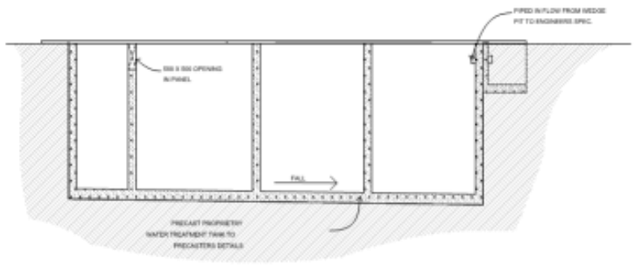
MB-03 **MATERIAL STORAGE BIN FRONT ELEVATION**
SCALE: 1:50



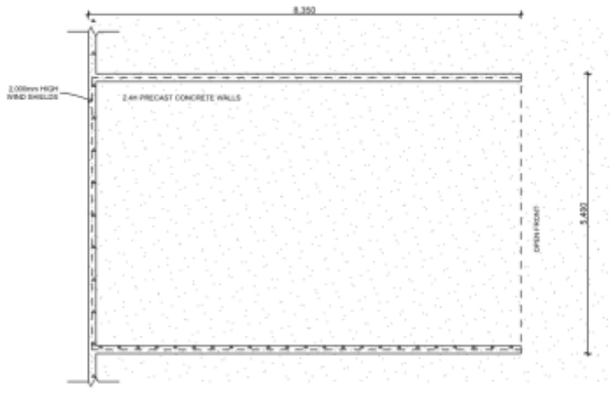
MB-02 **MATERIAL STORAGE BIN SIDE ELEVATION**
SCALE: 1:50



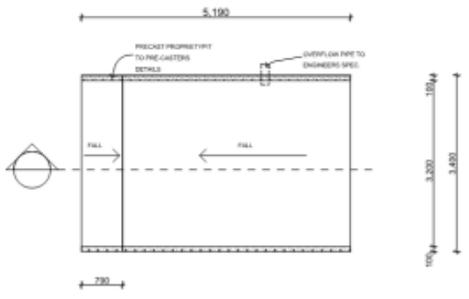
WP-02 **WEDGE PIT SECTION**
SCALE: 1:50



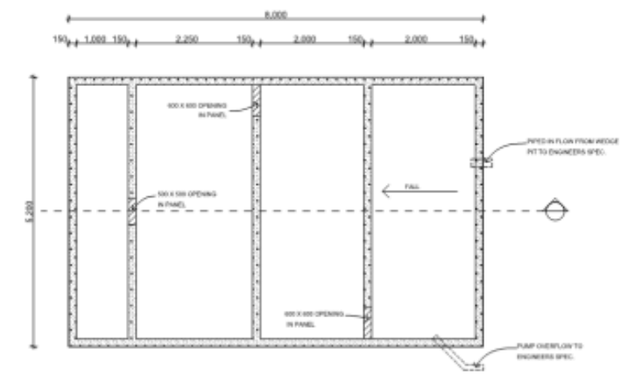
WS-02 **WATER SETTLING TANK SECTION**
SCALE: 1:50



MB-01 02004 **MATERIAL STORAGE BIN PLAN**
SCALE: 1:50



WP-01 02004 **WEDGE PIT PLAN**
SCALE: 1:50



WS-01 02004 **WATER SETTLING TANK PLAN**
SCALE: 1:50

REV	AMENDMENT	DATE	DRAWN	CHKD
B	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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APPROVED	DP	DATE 7/09/2022
STATUS	DA	
INDEX	SHEET No. 17	

CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250
AUSTRALIA

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 07001				B

SHEET	SCALE	CONTENT
A1	1:50	MATERIAL BINS & WEDGE PIT PLANS

(A) - EASEMENT TO DRAIN WATER VARIABLE WIDTH
(B) - RESTRICTION ON THE USE OF LAND
(C) - RESTRICTION ON THE USE OF LAND
(D) - POSITIVE COVENANT

LEGEND

- DENOTES APPROVED STRUCTURES & DEVELOPMENT

(CDC No. 20/0499-01)

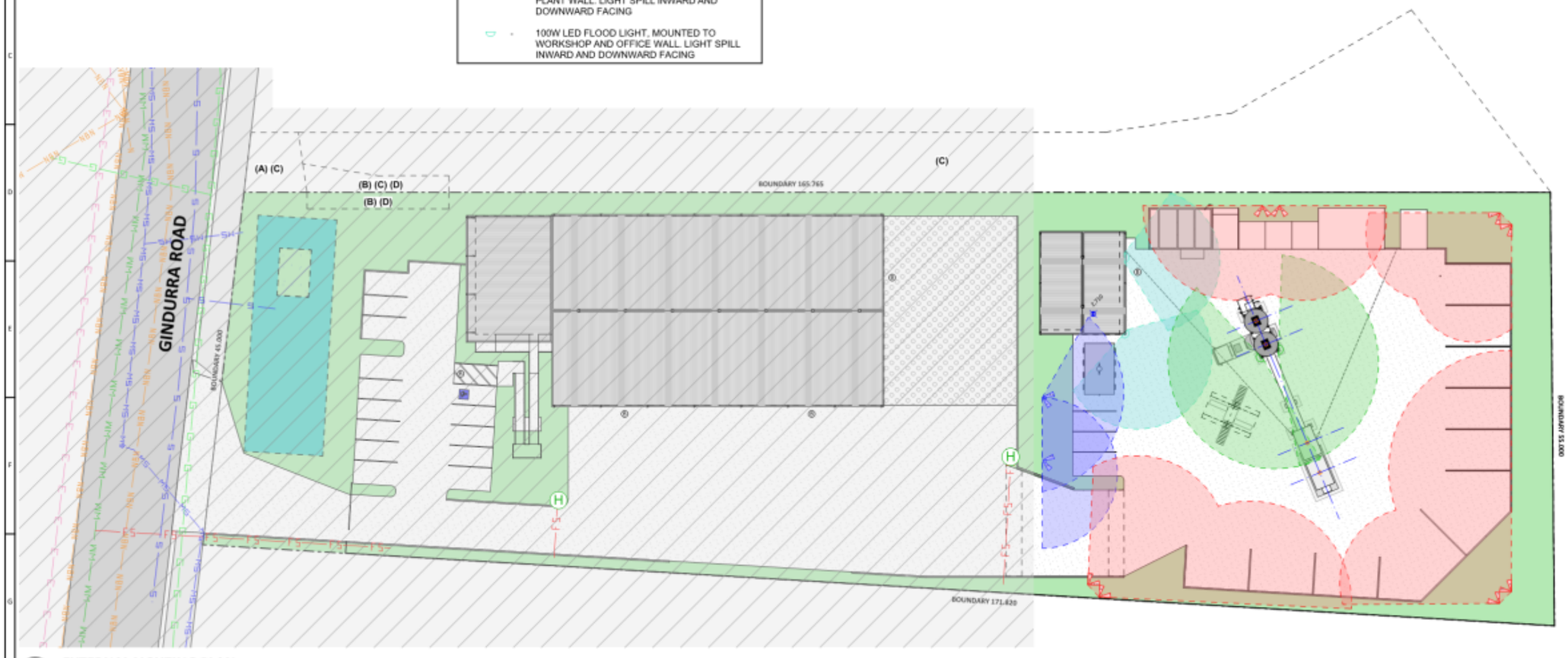
LEGEND

- 100W LED FLOOD LIGHTS (2 OFF), FIXED TO SUPPORT BRACKET AND POLE. LIGHT SPILL INWARD AND DOWNWARD FACING
- 50W LED FLOOD LIGHTS (2 OFF), FIXED SUPPORT BRACKET AND POLE. LIGHT SPILL INWARD AND DOWNWARD FACING
- 200W LED FLOOD LIGHT, MOUNTED TO BATCH PLANT WALL. LIGHT SPILL INWARD AND DOWNWARD FACING
- 100W LED FLOOD LIGHT, MOUNTED TO WORKSHOP AND OFFICE WALL. LIGHT SPILL INWARD AND DOWNWARD FACING

LEGEND

- B - 100 SHS BOLLARD
- CONC - DENOTES PROPOSED CONCRETE HARDSTAND
- DENOTES VEGETATION (TURF / UNDEVELOPED AREA)
- S - DENOTES EXISTING SEWER MAIN
- WM - DENOTES EXISTING WATER MAIN
- NBN - DENOTES EXISTING NBN SERVICE LINE
- E - DENOTES EXISTING ENERGY SERVICE LINE
- G - DENOTES EXISTING GAS SERVICE LINE
- FS - DENOTES PROPOSED ONSITE FIRE SERVICES
- H - DENOTES PROPOSED ONSITE HYDRANT
- SW - DENOTES EXISTING STORMWATER DRAINAGE

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EXTERNAL LIGHTING PLAN
SCALE: 1:250

REV	AMENDMENT	DATE	DRAWN	CHKD
C	FINAL DA ISSUE - REVISED DRIVEWAY CROSSOVER WIDTH	7/09/2022	DP	DP
B	REVISED PRELIMINARY DA ISSUE PLANS	13/09/2021	DP	DP
A	PRELIMINARY DA ISSUE PLANS	27/07/2021	DP	DP

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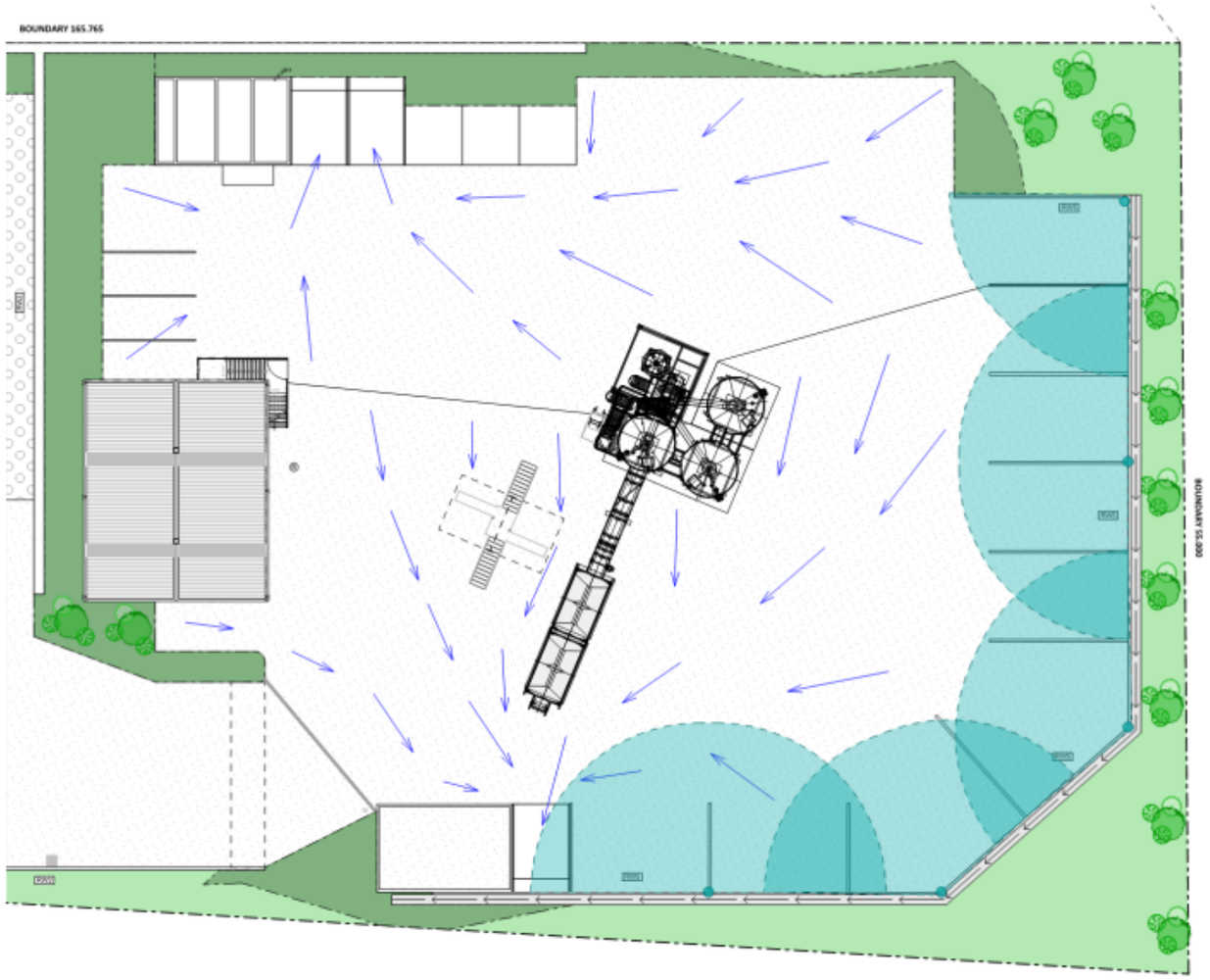
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APPROVED	DP	7/09/2022
STATUS	DA	
INDEX	SHEET No.	18

CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED BATCHING PLANT**
No. 53, LOT 12 DP 1189679 GINDURRA ROAD SOMERSBY NSW 2250 *AUSTRALIA*

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638.B - DWG - 203 - 09001				C

SHEET	SCALE	CONTENT
A1	1:250	EXTERNAL LIGHTING LAYOUT



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LEGEND

- DENOTES APPROXIMATE AUTOMATIC IMPACT SPRINKLER RADIUS FOR DUST SUPPRESSION
- DENOTES SPRINKLER LOCATION
- DENOTES DIRECTION OF PAVEMENT FALLS

CONNECT STOCKPILE SPRINKLERS TO ONSITE RECYCLED STORMWATER LINE WITH MAINS CUTOVER

DUST SUPPRESSION SYSTEM TO HAVE MANUAL TRIGGER / OVERRIDE FOR MANUAL ACTIVATION

MATERIAL STOCKPILE SPRINKLER PLAN
SCALE: 1:150

REV	AMENDMENT	DATE	DRAWN	CHKD
A	STOCKPILE SPRINKLER COVERAGE PLAN	2/07/2024	LF	DP

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DESCRIBE	DP	2/07/2024
APPROVED	DP	2/07/2024
STATUS	S4	
INDEX	SHEET No.	

CLIENT: ATB MORTON PTY LTD
PROJECT: **PROPOSED WAREHOUSE & OFFICE BUILDING**
LOT 12, DP 1189679 No. 53 GINDURRA ROAD SOMERSBY NSW 2250
(Central Coast Council)

PROJECT	DOC TYPE	CODE	NUMBER	REV.
1638 - DWG - 204 - 02003				A

SHEET	SCALE	CONTENT
A1	1:150	MATERIAL STOCKPILE SPRINKLER PLAN

Central Coast Council

Penmans Solicitors
DX 7202
GOSFORD

SECTION 10.7(2) AND (5) PLANNING CERTIFICATE

Under Section 10.7 of the Environmental Planning and Assessment Act, 1979

Fee paid:	$156.00
Receipt No:	18126907
Receipt Date:	9 January 2023
Property Address:	2/27 Carmel Crescent, KARIONG NSW 2250
Property Description:	Lot 2 SP 41775
Property Owner	T J Green
Certificate No:	56930
Reference No:	KR:221941:231023
Date of issue:	09-Jan-2023

The information contained within this certificate relates to the land.

Planning Certificate No. 56930

ADVICE PROVIDED PURSUANT TO S.10.7(2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

1	NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

(1) Environmental Planning Instruments and Development Control Plans which apply to the land

Central Coast Local Environmental Plan 2022

Central Coast Development Control Plan 2022

State Environment Planning Policy (Exempt and Complying Development Codes) 2008
State Environment Planning Policy (Building Sustainability Index: BASIX) 2004
State Environment Planning Policy No. 65 – Design Quality of Residential Apartment Development
State Environment Planning Policy (Primary Production) 2021
State Environment Planning Policy (Transport and Infrastructure) 2021
State Environment Planning Policy (Biodiversity and Conservation) 2021
State Environment Planning Policy (Resilience and Hazards) 2021
State Environment Planning Policy (Industry and Employment) 2021
State Environment Planning Policy (Resources and Energy) 2021
State Environment Planning Policy (Planning Systems) 2021
State Environmental Planning Policy (Housing) 2021

(2) Proposed Environmental Planning Instruments and Draft Development Control Plans which will apply to the land and is or has been the subject of community consultation or public exhibition

Proposed State Environmental Planning Policy (Transport and Infrastructure) 2021
Proposed State Environment Planning Policy (Building Sustainability Index: BASIX) 2004
Standard Instrument (Local Environmental Plans) Order 2006
Proposed State Environmental Planning Policy (Housing) 2021
Proposed State Environment Planning Policy (Planning Systems) 2021

2 ZONING AND LAND USE UNDER RELEVANT PLANNING INSTRUMENTS

(a) Identity of the Zone

Lot 2 SP 41775

R2 Low Density Residential

(b) For each of the environmental planning instruments referred to in clause 1, please refer to the attached land use table to determine (i), (ii) and (iii) listed below:

(i) development that may be carried out within the zone without the need for development consent,

(ii) development which may not be carried out within the zone except with development consent and

(iii) development which is prohibited within the zone.

(c) Whether additional permitted uses apply to the land

Additional Permitted Uses **do not** apply to this land.

(d) Development Standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house

There are no development standards applying to the land that fix minimum land dimensions for the erection of a dwelling-house on the land. However there are minimum lot sizes applying to the subdivision of land, and in some zones the entitlement to erect a dwelling-house, or carry out other types of residential development, is linked to that minimum lot size.

(e) Land includes or comprises critical habitat

No

(f) Land is in a conservation area

No

(g) Item of environmental heritage is situated on the land

None

Planning Certificate No. 56930

3	CONTRIBUTION PLANS

Central Coast Council Regional Section 7.12 Development Contributions Plan 2019.

4	COMPLYING DEVELOPMENT

Whether or not the land is land on which complying development can be carried out under each of the codes for complying development because of the provisions of clause 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008?*

HOUSING CODE

Complying Development under the Housing Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

RURAL HOUSING CODE

Complying development under the Rural Housing Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

LOW RISE HOUSING DIVERSITY CODE

Complying Development under the Low Rise Housing Diversity Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

GREENFIELD HOUSING CODE

Greenfield Housing Code **is not** applicable to this land.

HOUSING ALTERATIONS CODE

Complying development under the Housing Alterations Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

GENERAL DEVELOPMENT CODE

Complying development under the General Development Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

INDUSTRIAL AND BUSINESS ALTERATIONS CODE

Complying development under the Industrial and Business Alterations Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

INDUSTRIAL AND BUSINESS BUILDINGS CODE

Complying development under the Industrial and Business Buildings Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

CONTAINER RECYCLING FACILITIES CODE

Complying Development under the Container Recycling Facilities Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

SUBDIVISIONS CODE

Complying Development under the Housing Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

DEMOLITION CODE

Complying development under the Demolition Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

FIRE SAFETY CODE

Complying development under the Fire Safety Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

AGRITOURISM AND FARM STAY ACCOMMODATION CODE

Complying development under the Agricultural and Farm Stay Accommodation Code **may** be carried out on the land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

5	EXEMPT DEVELOPMENT

Whether or not the land is land on which exempt development may be carried out under each of the exempt development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* because of that Policy, clause 1.16(1) (b1)–(d) or 1.16A.

GENERAL EXEMPT DEVELOPMENT CODE

Exempt development under the General Exempt Development Code applies to this land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

ADVERTISING AND SIGNAGE EXEMPT DEVELOPMENT CODE

Exempt development under the Advertising and Signage Exempt Development Code applies to this land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

TEMPORARY USES AND STRUCTURES EXEMPT DEVELOPMENT CODE

Exempt development under the Temporary Uses and Structures Exempt Development Code applies to this land. This information needs to be read in conjunction with the whole of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

6	AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS (*BUILDING PRODUCT SAFETY ACT 2017*)

1(a) Is there any affected building notice of which the council is aware that is in force in respect of the land?

No

1(b) Is there any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

1(c) Is there any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding?

No

In this section—

affected building notice has the same meaning as in the *Building Products (Safety) Act 2017*, Part 4.

building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*

7	LAND RESERVED FOR ACQUISITION

The following environmental planning instruments and proposed environmental planning instruments make provisions for the acquisition of the land by a public authority as referred to in Section 3.15 of the Act:

Nil

8	ROAD WIDENING AND ROAD ALIGNMENT

(a) DIVISION 2 OF PART 3 OF THE *ROADS ACT 1993*

The land is not affected by road realignment or road widening under the above.

(b) ENVIRONMENTAL PLANNING INSTRUMENT

The land is not affected by road realignment or road widening under the above.

(c) COUNCIL RESOLUTIONS

The land is not affected by road realignment or road widening under the above.

9	FLOOD RELATED DEVELOPMENT CONTROLS

(1) The land or part of the land **is not** within the flood planning area and is **not** subject to flood related development controls.

(2) The land or part of the land **is not** between the flood planning area and the probable maximum flood and **is not** subject to flood related development controls.

(3) In this section—

flood planning area has the same meaning as in the Floodplain Development Manual.

Floodplain Development Manual means the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.

probable maximum flood has the same meaning as in the Floodplain Development Manual.

10	COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

This land **is** affected by a policy adopted by the council or other public authority that restricts the development of the land because of the likelihood of risk restrictions. This land **is** affected because:

Chapter 3.7 Geotechnical Requirements of Central Coast Development Control Plan 2022 applies to the land and the land may be subject to slip. When considering a development application, each circumstance will be considered, and development may be restricted.

In this section—

adopted policy means a policy adopted—

(a) by the council, or
(b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by the council.

11	BUSH FIRE PRONE LAND

The information currently available to Council indicates that this land **is not** bushfire prone land (as defined in the Act).

12	LOOSE-FILL ASBESTOS INSULATION

This land does not include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division. That register lists residential premises that contain or have contained loose-fill asbestos insulation.

13	MINE SUBSIDENCE

The land **IS NOT WITHIN** a Mine Subsidence District declared under section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

14	PAPER SUBDIVISION INFORMATION

(1) The name of any development plan adopted by a relevant authority that:
(a) applies to this land or
(b) that is proposed to be subject to a consent ballot.

Nil

(2) The date of any subdivision order that applies to this land.

Not applicable

Words and expressions used in this clause have the same meaning as they have in Part 10 of the *Environmental Planning and Assessment Regulation 2021* and Schedule 7 of the *Environmental Planning and Assessment Act 1979*.

15	PROPERTY VEGETATION PLANS

Council **has not** been notified by Local Land Services – Greater Sydney that the land is subject to a property vegetation plan approved under Part 4 of the Native Vegetation Act 2003.

16	BIODIVERSITY STEWARDSHIP SITES

Council **has not** been notified by the Director-General of the Department of Planning and Environment that the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the Biodiversity Conservation Act, 2016.

Note: Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995,* Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016,* Part 5.

17	BIODIVERSITY CERTIFIED LAND

The land **is not** biodiversity certified land within the meaning of Part 8 of the *Biodiversity Conservation Act, 2016.*

Note: Biodiversity certified land includes land certified under the *Threatened Species Conservation Act 1995,* Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016,* Part 8.

18	ORDERS UNDER *TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*

Council **has not** been notified of an Order issued under the Trees (Disputes between Neighbours) Act 2006.

NOTE: This advice is based on information provided by the Land and Environment Court

19	ANNUAL CHARGES UNDER *LOCAL GOVERNMENT ACT 1993* FOR COASTAL PROTECTION SERVICES THAT RELATE TO EXISTING COASTAL PROTECTION WORKS

The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works.

In this section—

existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.

Note—
Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

20	WESTERN SYDNEY AEROTROPOLIS

Not applicable to Central Coast Local Government Area

21	DEVELOPMENT CONSENT CONDITIONS FOR SENIORS HOUSING

Council **is not** aware of there being a current Site Compatibility Certificate (seniors housing) issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

22	SITE COMPATIBILITY CERTIFICATES AND DEVELOPMENT CONSENT CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Council **is not** aware of there being a valid Site Compatibility Certificate (affordable rental housing) issued by the Director-General of the Department of Planning and Environment in respect of the land.

NOTE: This advice is based on information provided by the NSW Department of Planning and Environment.

Planning Certificate No. 56930

NOTE

CONTAMINATED LAND MANAGEMENT ACT 1997

The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates is significantly contaminated land within the meaning of that Act - if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

No

(b) The land to which the certificate relates is subject to a management order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,
No

(c) The land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act - if it is the subject of such an approved proposal at the date when the certificate is issued,
No

(d) The land to which the certificate relates is subject to an ongoing maintenance order within the meaning of that Act - if it is subject to such an order at the date when the certificate is issued,
No

(e) The land to which the certificate relates is the subject of a site audit statement within the meaning of that Act - if a copy of such a statement has been provided at any time to the local authority issuing the certificate.
No

Planning Certificate No. 56930

ADVICE PROVIDED PURSUANT TO S.10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

NOTE: SECTION 10.7(6) OF THE ACT STATES THAT A COUNCIL SHALL NOT INCUR ANY LIABILITY IN RESPECT OF ANY ADVICE PROVIDED IN GOOD FAITH PURSUANT TO SUBSECTION (5).

For any enquiries regarding this Certificate, please contact Council's Customer Contact Centre on 1300 463 954.

Karen Hansen
Signed on Behalf of Central Coast Council

Planning Certificate No. 56930

LAND USE TABLE

Zone R2 Low Density Residential
Central Coast Local Environmental Plan 2022

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To encourage best practice in the design of low density residential development.
- To ensure that non-residential uses do not adversely affect residential amenity or place unreasonable demands on services.
- To maintain and enhance the residential amenity and character of the surrounding area.

2 Permitted without consent

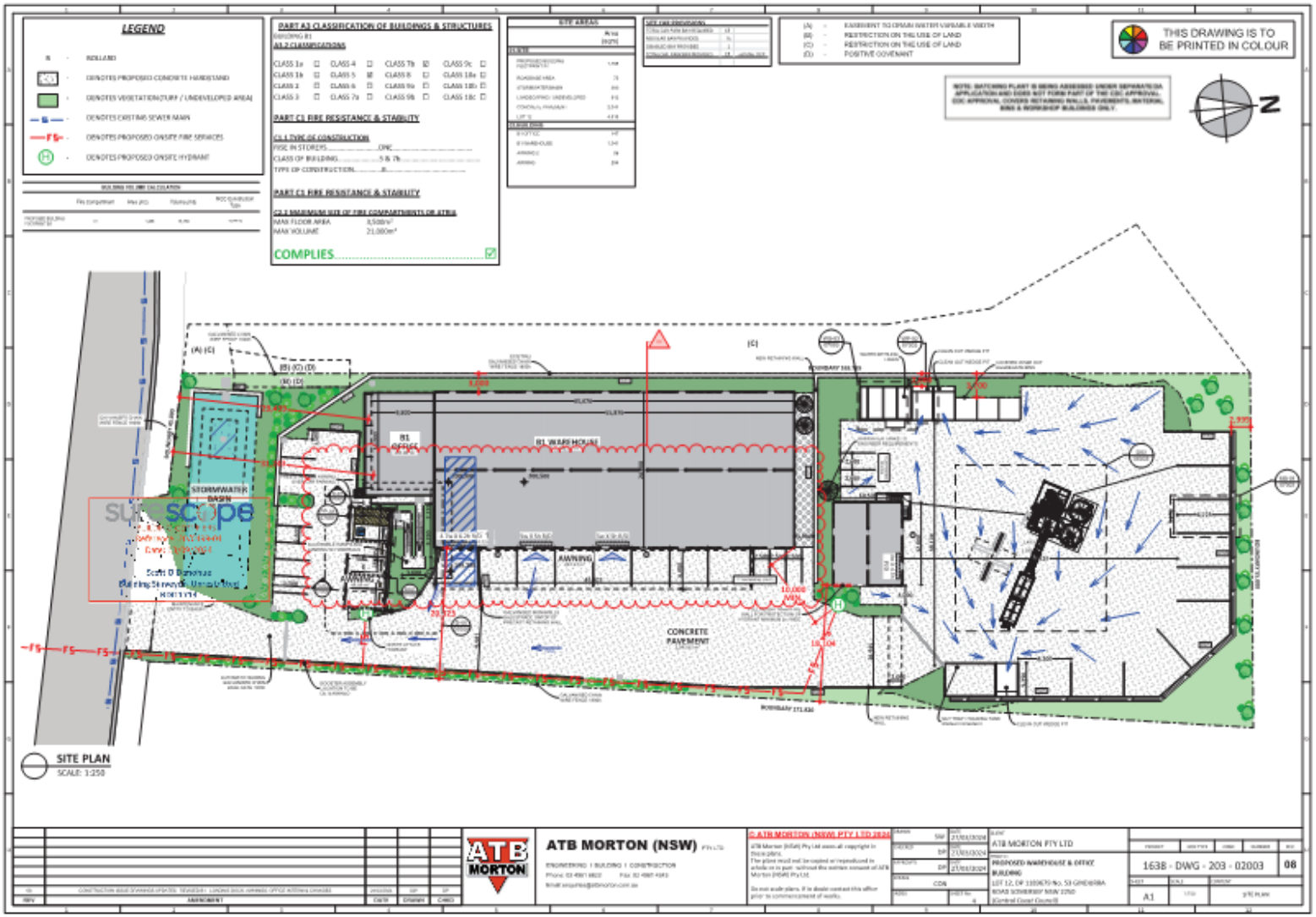
Home occupations; Recreation areas

3 Permitted with consent

Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Educational establishments; Emergency services facilities; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Information and education facilities; Jetties; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Sewage reticulation systems; Shop top housing; Tank-based aquaculture; Water recycling facilities; Water reticulation systems; Water storage facilities

4 Prohibited

Any development not specified in item 2 or 3


LEGEND
THIS DRAWING IS TO BE PRINTED IN COLOUR
COMPLIES
SITE PLAN
SCALE: 1:250
ATB MORTON (NSW)
B1 WARE HOUSE
B1 OFFICE
AWNING
CONCRETE PAVEMENT
STORMWATER BASIN
1638 - DWG - 203 - 02003
08

DOC23/89649-6

9 March 2023

Attn: Nathan Burr
Central Coast Council
91-99 Mann Street
Gosford NSW 2250

Email nathan.burr@centralcoast.nsw.gov.au

NSW Planning Portal Reference: CNR-51583

Dear Nathan Burr,

Development Application DA/4341/2022, Lot: 12 DP: 1189679, 53 GINDURRA ROAD SOMERSBY 2250

I refer to Development Application DA/4341/2022 that was referred to the NSW Environment Protection Authority ('EPA') via the NSW Government concurrence and referral request CNR-51583 on 7 February 2023.

The Development Application is made by ATB Morton (NSW) Pty Ltd to construct and operate (through its subsidiary Redicrete Pty Ltd) a concrete batching plant at 53 Gindurra Road, Somersby NSW 2250. Approval is sought for the proposed project to produce up to 47,000 tonnes of concrete per year and operate between 6:00am to 6:00pm Monday to Friday and 6:00am to 12:00pm on Saturdays.

Based on the information provided, the proposal does not appear require an environment protection licence, as the production of pre-mixed concrete (concrete batching) is not included in the activities under Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act). Consequently, this application is not considered an Integrated Development under the *Environmental Planning and Assessment Act 1979*. The EPA will be the appropriate regulatory authority (ARA) for the activity in accordance with clause 13(b) of the *Protection of the Environment Operations Regulations (General) 2022* because it will involve the production of pre-mixed concrete having a capacity to produce more than 30,000 tonnes of concrete per year.

Central Coast Council is the consent authority for the development application and if approved, the EPA will regulate the activity under the provisions of the POEO Act.

The EPA has reviewed the proposal. Please find in **Attachment A** the EPA's comments and recommended conditions of consent in that Council may wish to consider including, should approval be granted for this development.

Phone 131 555 **TTY** 133 677 Locked Bag 5022 4 Parramatta Square info@epa.nsw.gov.au
Phone +61 2 9995 5555 **ABN** 43 692 285 758 Parramatta 12 Darcy St, Parramatta www.epa.nsw.gov.au
(from outside NSW) NSW 2124 Australia NSW 2150 Australia

If you have any questions or require clarification, please contact Sonja Halbich on 0438 702 149 or at Sonja.Halbich@epa.nsw.gov.au.

Yours sincerely

09.03.2023



Claire Miles
A/Manager, Regulatory Operations Metro North
NSW Environment Protection Authority

ATTACHMENT A

The EPA has reviewed the following documents:

- Environmental Impact Statement (EIS), Proposed Concrete Batching Plant, 53 Gindurra Road, Somersby Lot 12 DP1189679, December 2022
- Appendix 7 – Stormwater Management Plan
- Appendix 11 – Air Quality Impact Assessment
- Appendix 12 – Noise and Vibration Assessment
- Appendix 16 – Waste Management Plan
- Appendix 25 – Stormwater Concept Plans

The EPA has the following comments and recommendations:

1. Matters to be addressed prior to determination

a. Water – Stormwater Management Plan and Groundwater

The EIS, Stormwater Management Plan (SLR, December 2022) and Stormwater Concept Plan (Forum Consulting Engineers) details the operational water management and stormwater design, though only partially addresses the EPA's SEARS and includes limited detail regarding mitigation measures, water monitoring and potential impacts.

Stormwater discharge

The proposed stormwater management plan ('SMP') is designed so that concrete wash water and run-off from the batch plant area is directed into a wedge pit and water settling tanks, where solids are settled, and the water is then re-used in the batching process. This is not a fully contained system and overflow is diverted via minor bunding and a grit trap to the detention / bioretention basin in the south-eastern corner of the premises. This basin has a capacity of 220 m^3 and uses biofiltration prior to discharge into the council's stormwater system.

The EPA notes that the discharge of overflow from a contaminated batch plant area, via the detention/bio-retention basin, is not in line with best practice as set out in the Environment Management Guideline for Concrete Batch Plants, Cement Concrete & Aggregates Australia (October, 2019). Further information about the treatment and properties of water discharge is required to assess whether this is an appropriate design to manage risk to the receiving environment.

While the SMP does outline discharge criteria in terms of annual TSS, Total Nitrogen, Total Phosphorus and gross pollutants, it does not provide the expected frequency, volume and identification of all pollutants in discharge to the stormwater system. TSS, Total Nitrogen, Total Phosphorus may not reflect the full range of pollutants that could be discharged at non-trivial levels to the downstream receiving environment. Notably there is no analysis of expected pH levels in discharge or testing for other pollutants, such as chromium, which is commonly present in concrete wash water.

The EPA SEAR's also required information regarding the condition of the local catchment and nearby water resources. There is limited detail of the downstream waterway and background water quality. A review of the surrounding landscape indicates that although the premises is within an industrial area, any discharged stormwater is likely to flow into rivers that run through the Brisbane Waters National Park, a sensitive environment with

high conservation value, prior to entering the Hawksbury River. The proponent has assessed water quality against the Water Cycle Management Guidelines (Gosford City Council, February 2007), rather than the objectives endorsed under the NSW Water Quality and River Flow Objectives, without providing justification as to why these alternative standards have been used.

Groundwater

The EIS states that geotechnical investigations found groundwater at 0.9 – 1.0m below the existing surface. As identified previously by Council, the premises is surrounded to the north and east by Sandstone Hanging Swamp (or Coastal Upland Swamp), an Endangered Ecological Community, which is groundwater dependent. While the proposed concrete batching process will take place on a hardstand area, the EPA notes that there is limited detail about the lining of the detention pit, which appears to be 0.8m deep and receives overflow from the concrete batching area.

The SMP states that no significant groundwater impacts are expected, however a detailed groundwater analysis may be required to confirm this. The proponent must ensure that any impact on groundwater is identified and managed.

Recommendation

The proponent should provide further details on the following:

i. Demonstrate that the settling pits and basins are sized appropriately, including an assessment of options for increasing onsite storage to enable increased reuse and avoiding or minimising the need for a discharge.
ii. If operational discharges from site are unavoidable, then a discharge characterisation impact assessment should be conducted by the proponent. The assessment should include, but not be limited to:
    I. estimate the expected frequency and volume of discharges.
    II. characterise the expected quality of the discharge in terms of the typical and maximum concentrations of all pollutants likely to be present at non-trivial levels.
    III. assess the potential impact of the proposed discharge on the environmental values of the receiving waterway consistent with the national Water Quality Guidelines (ANZG, 2018)
iii. The applicant should demonstrate how the proposed project will be designed and operated to:
    I. protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
    II. contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.
iv. A more detailed analysis of the impacts to groundwater from the construction and operation of the batching plant, including any leaching of contaminated water from the detention/bioretention basin.

2. Matters to be addressed with conditions

a. Water Quality

Subject to further information received in relation to point 1(a), the EPA recommends the following conditions on any Council consent for the proposal:

i. The development must comply with section 120 of the *Protection of the Environment Operations Act 1997*.

ii. A water quality management plan must be prepared and implemented by the proponent, including:
    I. a water quality monitoring plan, that details the sampling locations, frequency, methodology, analysis parameters and analysis criteria for monitoring.
    II. the use of best practice measures as benchmarked in the Environment Management Guideline for Concrete Batch Plants (Cement Concrete & Aggregates Australia, October 2019).

b. Air Quality

The Air Quality Impact Assessment ('AQIA') (Advitech, 23 December 2023) predicts an exceedance of the impact assessment criteria in the EPA guidelines *Approved Methods for Modelling and Assessment of Air Pollutants in NSW* (2016) for PM_{10} (24-hour average) at the industrial receptor R11. The highest predicted project increment of PM_{10} (24-hour average) to this receptor is 48.9µg/m^3 which is significant and close the impact assessment criteria of 50µg/m^3. The EPA considers that with the incorporation of management practices set out in the proposed conditions below, the potential impacts could be managed.

The EPA notes that the 2016 EPA guidelines were used by the AQIA, which apply to planning applications made before 9 September 2022. The impact assessment criteria in the 2022 EPA guidelines remain the same for PM10, PM2.5, TSP and deposited dust.

Clarification of air quality impact mitigation measures

The AQIA states that mitigations measures include the weekly use of sweeper trucks, daily yard wash down, and an increased use of dust suppression sprays during windy conditions and/or where visible dust is leaving the premises. Further, it appears that the aggregate material bin, silos and conveyer belt have been designed to be enclosed, though this is not clearly marked or identified in the EIS or AQIA.

While these proposals address some mitigation measures from the industry best practice, the proposed mitigation measures have not been benchmarked against best practice, set out in the Environment Management Guideline for Concrete Batch Plants (Cement Concrete & Aggregates Australia, October 2019). The EPA recommends the conditions below, which clarify the proposed mitigation measures are in line with best practice.

Recommended conditions

The EPA recommends the following conditions on any Council consent for the proposal:

i. The proponent must minimise the emission of offensive odours from the premises at all time.
ii. The premises must be maintained in a such a manner that prevents or minimises the emission of air pollutants from the premises. This includes but is not limited to maintaining sealed surfaces in a manner that prevents or minimises the generation and emission of wheel generated dust.
iii. All aggregate storage bays must be:
    I. Enclosed on three sides and fitted with screening, such as a shade cloth, over and above the wall heights.
    II. Fitted with automatic water sprinklers to prevent and minimise particulate matter emissions.
    III. Have storage piles not greater than 0.5m below the top of the smallest wall and 0.5m inside the open end of the bay.
iv. All conveyors and transfer points must be enclosed.

v. Cement and any supplementary cementitious materials, such as fly ash, must be pneumatically conveyed via sealed pipe transfer from enclosed delivery tankers to storage silos.
vi. Storage silos must be fitted with a particulate matter filter to treat conveying air from pneumatic transfers.
vii. Storage silos must be fitted with a high-level alarm and emergency shut off controls to prevent overfill.
viii. Aggregate feed hopper must be enclosed on three sides and roofed.
ix. Wheel tracking mitigation measures are implemented including:
    I. Weekly use of sweeper trucks to sweep the yard and surrounding road boundary.
    II. Daily wash down of the yard, subject to weather conditions.
    III. Increased use of dust suppression sprays during windy conditions and / or when visible dust can be seen leaving the site.
x. The proponent must prepare and implement an Air Quality Management Plan, which must include:
    I. Monitoring methods, including for PM_{10} (24-hour) at receptor R11.

c. Noise and Vibration

The EPA has undertaken a high-level review of the Noise and Vibration Assessment (NVA) (RAPT Consulting, December 2022) and considers the conclusions are adequate. The premises is located within an industrial zone and within 200m of the Pacific Highway. The NVA identifies that predicted noise levels of operation will be below the applicable criteria in the EPA's *Noise Policy for Industry*, and the operating hours are proposed between 6:00am – 6:00pm Monday to Friday and 6:00am – 12:00pm on Saturday. The NVA also notes that significant vibration activities are not expected as part of the proposal.

Construction

The EPA's SEARs required the identification of noise and vibration impacts for both construction and operation. The noise impacts of construction have not been addressed in the NVA. The EPA accepts that the impacts are likely to be minimal given the surrounding receivers and limited nature of construction work, which does not involve excavation and only includes the instillation of the plant (batching silos) and minor changes to the stormwater regime.

The proposed construction includes works on Saturdays from 1:00pm-6:00pm, which is outside the EPA's *Interim Construction Noise Guidelines* ('ICNG') (July 2009) for normal construction. Council may wish to consider if any complaints have been received about Saturday works for the current construction (per CDC60744/2021) and imposing a condition requiring compliance with the ICNG standard hours, as recommended below.

Recommended conditions

The EPA considers this a low-risk proposal with respect to noise and does not recommend that noise limits be included on any Council consent for the proposal. Regulatory tools are available to the EPA if noise should arise as an issue in the future.

The EPA notes the NVA sets out a noise management plan ('NMP'), which includes adopting best practice, replacing reverse beepers with low-pitch tonal beepers where possible and specific vibration mitigation measures.

The EPA recommends the following conditions on any Council consent for the proposal:

i. The proponent implements a construction and operational NMP per the recommendations set out in the NVA and in line with best practice as benchmarked in the Environmental Management Guideline for Concrete Batch Plants (2019).

ii. That all construction activities be carried out during the recommended standard hours in the EPA's *Interim Construction Noise Guidelines*, and that all feasible and reasonable noise mitigation and management measures be implemented to minimise construction noise impacts at sensitive receivers.
iii. Operation of concrete batching be limited to 6:00am – 6:00pm Monday to Friday and 6:00am – 12:00pm on Saturday.

Should Council consider it appropriate to impose noise limit conditions, such conditions might be framed as follows:

i. All works and activities undertaken at the premises must be undertaken in a manner that will minimise noise and vibration impacts at sensitive receivers.
ii. Noise generated at the premise should not exceed the project noise levels identified in the NVA.
iii. If noise emissions exceed the project noise levels in the NVA, the proponent must investigate the cause of the noise and implement reasonable and feasible measures to avoid a repeat of the exceedance.

d. Waste and contamination

The EPA has reviewed the Waste Management Plan (WPP, December 2022) and considers it adequate.

Contamination at the premises has been assessed in the EIS, and no significant issues were identified.

Recommended conditions

The EPA recommends the following conditions on any Council consent for the proposal:

i. Waste material transported from the premises during the construction and operational phases is classified and managed in accordance with the EPA's Waste Classification Guidelines and disposed at a waste facility that can lawfully receive that type of waste.

e. Chemical storage and handling

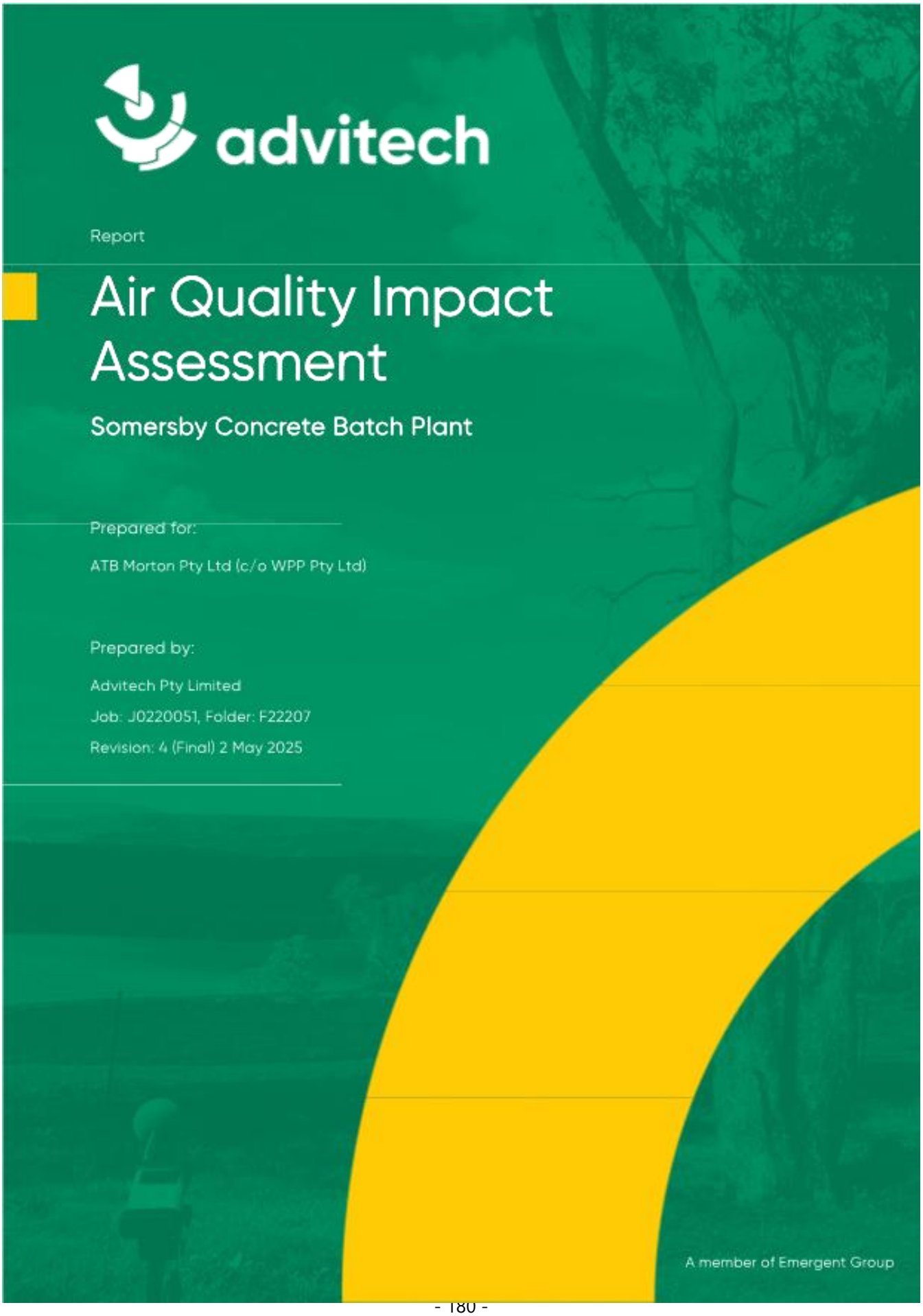
The EIS details several hazardous materials that are expected to be stored on-site, including a 10,000L diesel tank, which will be stored in a separate self-bunded tank.

Recommended conditions

The EPA recommends the following conditions on any Council consent for the proposal:

i. The proponent must develop and implement effective controls for the storage, processing and handling of material at the premises, in accordance with any applicable SafeWork NSW codes of practice. These controls should include operating and maintaining bunds or spill containment systems where necessary.

This concludes the EPA's submission on the proposal.


advitech
Report
Air Quality Impact Assessment
Somersby Concrete Batch Plant
Prepared for:
ATB Morton Pty Ltd (c/o WPP Pty Ltd)
Prepared by:
Advitech Pty Limited
Job: J0220051, Folder: F22207
Revision: 4 (Final) 2 May 2025
A member of Emergent Group

Document Details

Air Quality Impact Assessment

Filename: 22207 WPP Somersby Batch Plant AQIA Rev4.docx
2 May 2025, Job: J0220051, Folder: F22207, Revision: 4 (Final)

Client

Anthony Williams, Director, WPP Pty Ltd

Email: anthonywilliams@wppgroup.com.au, Phone: 0484 694 122
60 Denison Street Hamilton East NSW 2303

Author

Patrick McGaw, Experienced Process Engineer

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Email: patrick.mcgaw@advitech.com.au, Phone: 02 4924 5400

History

Date	Revision	Comments
17-05-2022	0	Final Issue
23-12-2022	1	Final Issue with revised model and added receptor
20-01-2023	2	Final Issue with revised model and updated receptor
13-03-2025	3	Final Issue – addressing peer review comments and modelling mitigation controls
02-05-2025	4	Final Issue – updated Table 9

Endorsements

Prepared By:		**Patrick McGaw** Experienced Process Engineer BE(Chem), MIEAust, M.AIDGC	02-05-2025
Checked and Authorised for Release By:		per **Dr Carl Fung** Group Lead – Process Engineering PhD, BE(Env), MIEAust, CPEng, NER, RPEQ, M.AIDGC	02-05-2025

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1. Introduction

Advitech Pty Limited (Advitech) was engaged by WPP Pty Ltd on behalf of ATB Morton Pty Ltd (ATB) to prepare an air quality impact assessment for the proposed construction and operation of a concrete batching plant at Somersby, NSW. The subject site is located within an industrial estate at Lot 12 DP1189679 – 53 Gindurra Road, Somersby NSW 2250 (the Site).

This report aims to provide assessment of air quality impacts of the intended operation of the batching plant on site against the NSW EPA criteria.

It should be noted that this report was prepared by Advitech Pty Limited for ATB Morton Pty Ltd (c/o WPP Pty Ltd) ("the customer") in accordance with the scope of work and specific requirements agreed between Advitech and the customer. This report was prepared with background information, terms of reference and assumptions agreed with the customer. The report is not intended for use by any other individual or organisation and as such, Advitech will not accept liability for use of the information contained in this report, other than that which was intended at the time of writing, which was to provide assessment of air quality impacts at the Site against the relevant NSW EPA criteria.

2. Background and Objectives

2.1 Project Description

ATB have proposed construction of a new concrete batching facility, set to be located on 8,418 m² of land within the Somersby Industrial Zone. The proposed development is located at Lot 12 DP1189679 and is presented in **Figure 1**. The proposed development is accessible from Gindurra Road, with the Pacific Highway lying in close proximity.

ATB have received approval for the construction of a workshop and office building, associated carparking, hardstand and external pavement on the designated lot. The addition of the concrete batching section will be located on the hardstand areas to the rear (north) of the site. The new plant is intended to process more than 20,000 cubic meters of concrete per annum.

The proposed concrete batching plant will consist of three (3) cement silos, two (2) aggregate material bins and a drive through truck loading bay. The concrete plant weighs sand, gravel and cement in weigh batchers and discharged into a mixer truck. Water is metered and discharged into the mixer truck (Refer to **Figure 1**).

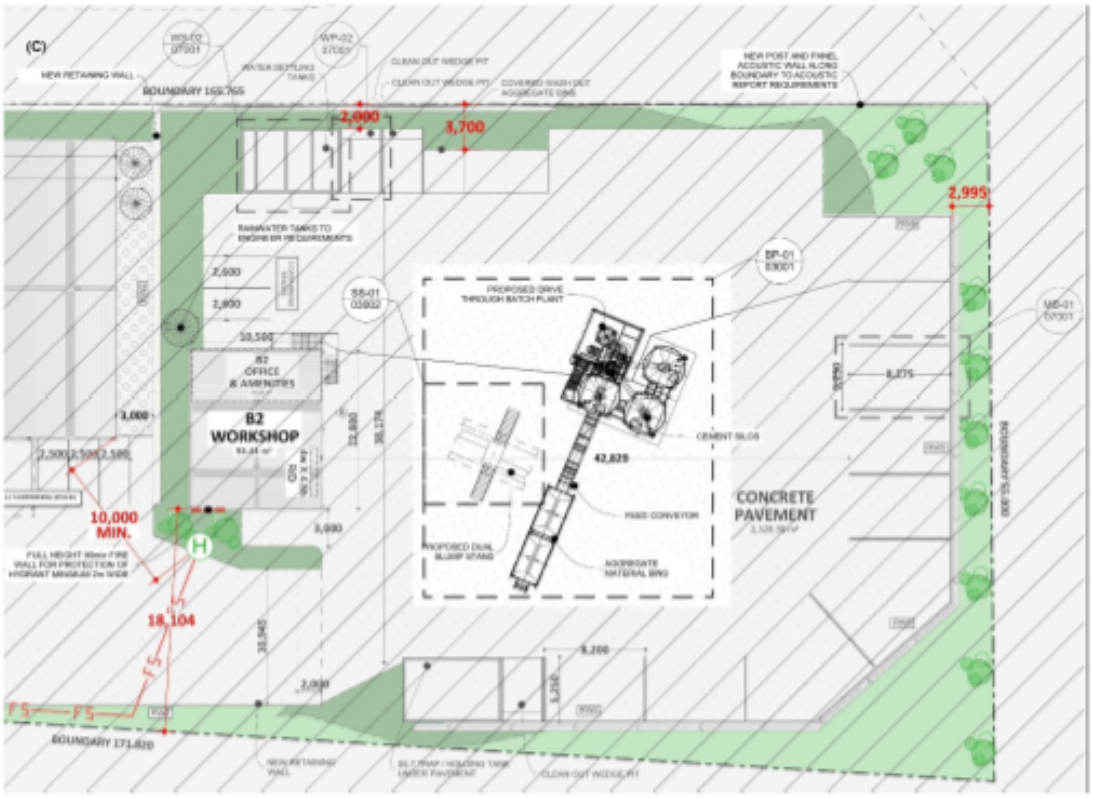


Figure 1: Gindurra Road Batch Plant Site Layout

2.2 Sensitive receivers

The nearest potentially affected residences to the Site, Figure 2, are located on Debenham Rd South, 500 m to the east. Between the proposed concrete plant and the nearest residences are other commercial and industrial operations. The receivers are provided in **Table 1**.

Table 1: Sensitive Receivers.

Receiver ID	Address	Easting UTM (m)	Northing UTM (m)	Receiver Type
R1	242 Debenham Rd S, Somersby	342014	6301431	Private Residence
R2	Debenham Rd S, Somersby	342140	6301625	Private Residence
R3	12 Acacia Rd, Somersby	342057	6301280	Private Residence
R4	Ngaruki Gulgul Central School	341184	6300365	School
R5	227 Debenham Rd N, Somersby	341746	6302165	Private Residence
R6	63 Ulinga Rd, Somersby	341281	6302884	Private Residence
R7	281 Wisemans Ferry Rd, Somersby	340616	6302706	Private Residence
R8	126 Somersby Falls Rd, Somersby	339942	6302016	Private Residence
R9	36 Myoora Rd, Somersby	339856	6301403	Private Residence
R10	180 Wisemans Ferry Rd, Somersby	341192	6301944	Private Residence
R11	6 Chivers Rd, Somersby	341407	6301575	Commercial Property



Figure 2: Site Location.

3. Air Quality Guidelines

The NSW Environment Protection Authority (EPA) specify the impact assessment criteria in the publication *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*, 2016. The relevant sections from this publication are reproduced below in **Table 2** which presents the ground level concentration (GLC) criteria for each applicable air pollutant.

Table 2: NSW EPA Impact Assessment Criteria.

Pollutant	NSW EPA Design Criteria	Units	Averaging Time
TSP[a]	90	µg/m³	Annual
PM_{10}[b]	50	µg/m³	24 hours
	25	µg/m³	Annual
$PM_{2.5}$[c]	25	µg/m³	24 hours
	8	µg/m³	Annual
Deposited Dust[d]	2[e]	g/m²/month	Annual
	4[f]		

[a] – Total suspended particulates.
[b] – Particulate materials with an aerodynamic diameter less than 10 µm.
[c] – Particulate materials with an aerodynamic diameter less than 2.5 µm.
[d] – Dust is assessed as insoluble solids as defined by AS 3580.10.1.
[e] – Maximum increase in deposited dust level.
[f] – Maximum total deposited dust level.

4. Meteorological Data

4.1 Bureau of Meteorology Data

To determine the most representative 12-month calendar period required for modelling air emissions from the concrete batching facility, historical Bureau of Meteorology (BOM) climate data taken from the Gosford Automatic Weather Station (AWS) (061425) was reviewed in **Table 3**. The Gosford AWS is located approximately 6.5 km east of the subject site. Historical BOM wind roses at Gosford from 2016 – 2020 and Mangrove Mountain from 2020 have been presented in **Appendix B**.

Table 3: Bureau of Meteorology (BoM) Climate Data History for Gosford (061425).

Year	Temperature (°C)				Rainfall (mm)	
	Maximum year average	Difference from long term average	Minimum year average	Difference from long term average	Yearly total	Percentage of long-term average
2016	23.8	0.5	13.5	0.3	1305	100%
2017	23.7	0.4	13.6	0.4	1105	84%
2018	23.3	0	13.1	-0.1	1110	85%
2019	24	0.7	13	-0.2	1087	83%
2020	22.9	-0.4	13.3	0.1	1328	101%
2021	22.4	-0.9	12.6	-0.6	1429	109%
2022	22.1	-1.2	13.2	0	2043	156%
2023	23.6	0.3	12.9	-0.3	978	75%
2024	23.8	0.5	13.9	0.7	1303	99%

A review of BOM climate and wind rose data suggests the years of the assessment period with the least deviation from the long-term average climate statistics are years 2017, 2018 and 2020. As a result of the review of climatic data (refer to **Table 3**) and wind rose data (refer to **Figure 3** and **Appendix B**), this report has adopted the year 2020 for air dispersion modelling purposes.

4.2 CALMET

Air dispersion modelling requires the creation of a three-dimensional (3D) CALMET meteorological data file that represents the weather and climate for the region (domain) modelled. In brief, CALMET is a meteorological model that develops hourly (or sub-hourly) wind and other meteorological fields on a 3D gridded modelling domain. Associated two-dimensional fields such as mixing height, surface characteristics, and dispersion properties are also included in the file produced by CALMET. The final time varying wind field thus reflects the influences of local topography and land uses.

Compilation of a 2020 3D meteorological data file for the Gosford area representative of the proposed site was obtained from the following data sources:

- Mesoscale Prognostic Weather Research and Forecasting (WRF) Model for 2020;
- Bureau of Meteorology (BoM) automatic weather stations at Gosford (99.9 % data availability), Mangrove Mountain (93.5% data availability) and Norah Head (99.6 % data availability) for 2020;
- NSW DECC 2007 Land Use NSW; and
- Terrain data set with SRTM1 30 m resolution topography data.

The Weather Research and Forecasting (WRF) Model is a next generation mesoscale numerical weather prediction system designed for both atmospheric research and operational forecasting applications. It features two (2) dynamic cores, a data assimilation system, and software architecture supporting parallel

computation and system extensibility. The model serves a wide range of meteorological applications across scales from tens of metres to thousands of kilometres.

The generated 3D meteorological file used in this report was developed using the hybrid mode (using WRF and observational data) in CALMET. The WRF wind field was used as an initial estimate in CALMET which was subsequently used to generate its wind. The initial wind was then adjusted to account for the kinematic and thermal effects of terrain and land use on wind.

Figure 3 shows the Somersby Batch Plant frequency of wind speed and direction for each season during the 2020 calendar year extracted from the CALMET generated file. The CALMET seasonal wind roses predict that the predominant winds are from east direction in summer, north in spring months and west in the autumn and winter months. The seasonal predominant wind directions align with the observational data from Mangrove Mountain AWS (presented in Appendix B), however there is the calm winds that are significantly less than observational data. This lower calm wind frequency is common within CALMET models using WRF data in hybrid or no-observation modelling configurations.

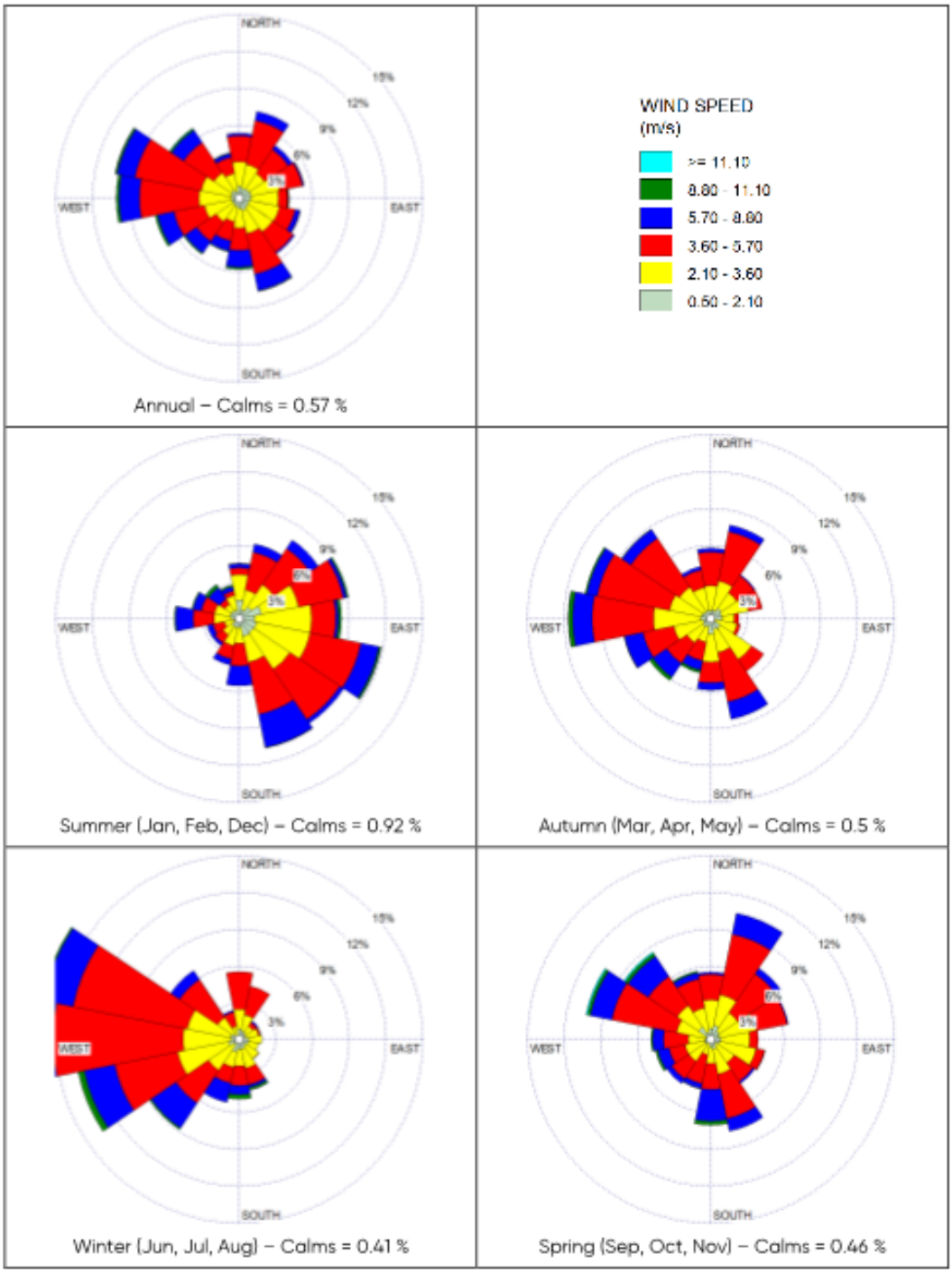


Figure 3: CALMET Extracted 2020 Somersby Seasonal Wind Roses

5. Modelling Approach/Methodology

5.1 Background Air Quality (Particulates)

Assessment of background air quality data has been undertaken for the proposed concrete batching facility.

The NSW Department of Planning and Environment (DPE) operate an air quality monitoring program that collects accurate real-time measurements of ambient level pollutants at 28 monitoring sites within the air quality monitoring network (AQMN), located around the greater metropolitan area of Sydney, the Illawarra, the Lower Hunter and selected rural sites around NSW (refer to **Section 8**, Reference 6). The nearest monitoring stations to the concrete batching facility are in Wyong (19 km north-east) and Rouse Hill (46 km south-west).

A Level 1 assessment of particulate background concentrations has been prepared for the pollutants listed in **Table 4** for the 2020 monitoring year to correspond with the meteorological data. The Level 1 assessment has assumed a worst-case background concentration by using the maximum reported value.

Table 4: Background Air Quality.

Pollutant	Background Concentration	Units	Averaging Time
TSP	31.8[9]	µg/m³	Annual
PM_{10}	varies	µg/m³	24 Hours
	15.9	µg/m³	Annual
$PM_{2.5}$	varies	µg/m³	24 Hours
	5.6	µg/m³	Annual

[9] – Assumed from annual average PM_{10} background concentration (TSP = 2 x PM_{10}).

The maximum reported 24-hour average PM_{10} background concentration for the 2020 monitoring period was 90.5 µg/m³, which is above the NSW EPA impact assessment criteria. As such, the highest value below the PM_{10} criteria (50 µg/m³) of 47.7 µg/m³ was used in the level 1 assessment of the PM_{10} 24-hour average to understand the cumulative impact of the proposed development. **Figure 4** displays the PM_{10} 24-hour average background concentrations for 2020 and indicates exceedances of the NSW EPA impact assessment criteria. It should be noted that elevated background concentrations during January and February are likely a result of the prolonged bushfire season during the summer of 2019-2020.

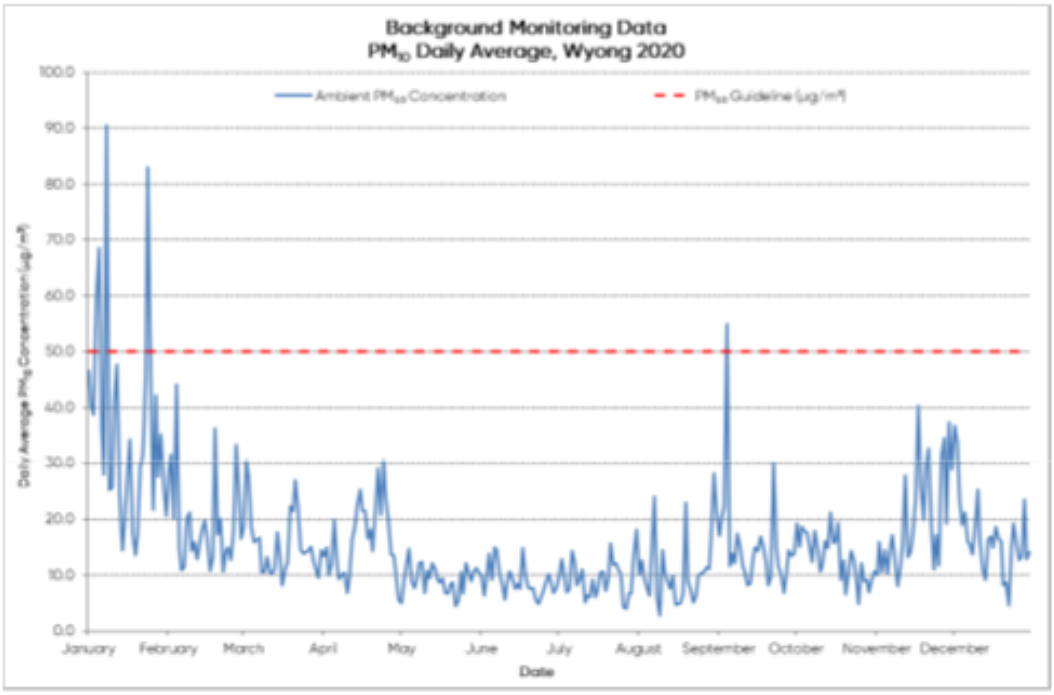


Figure 4: Daily Particulate Matter (PM_{10}) Concentrations for Wyong 2020.

The maximum reported 24-hour average $PM_{2.5}$ background concentration for the 2020 monitoring period was 64 µg/m³, which is above the NSW EPA impact assessment criteria. As such, the highest value below the $PM_{2.5}$ criteria (25 µg/m³) of 22.7 µg/m³ was used in the level 1 assessment of the $PM_{2.5}$ 24-hour average and understand the cumulative impact of the proposed development. **Figure 5** displays the $PM_{2.5}$ 24-hour average background concentrations for 2020 and indicates exceedances of the NSW EPA impact assessment criteria.

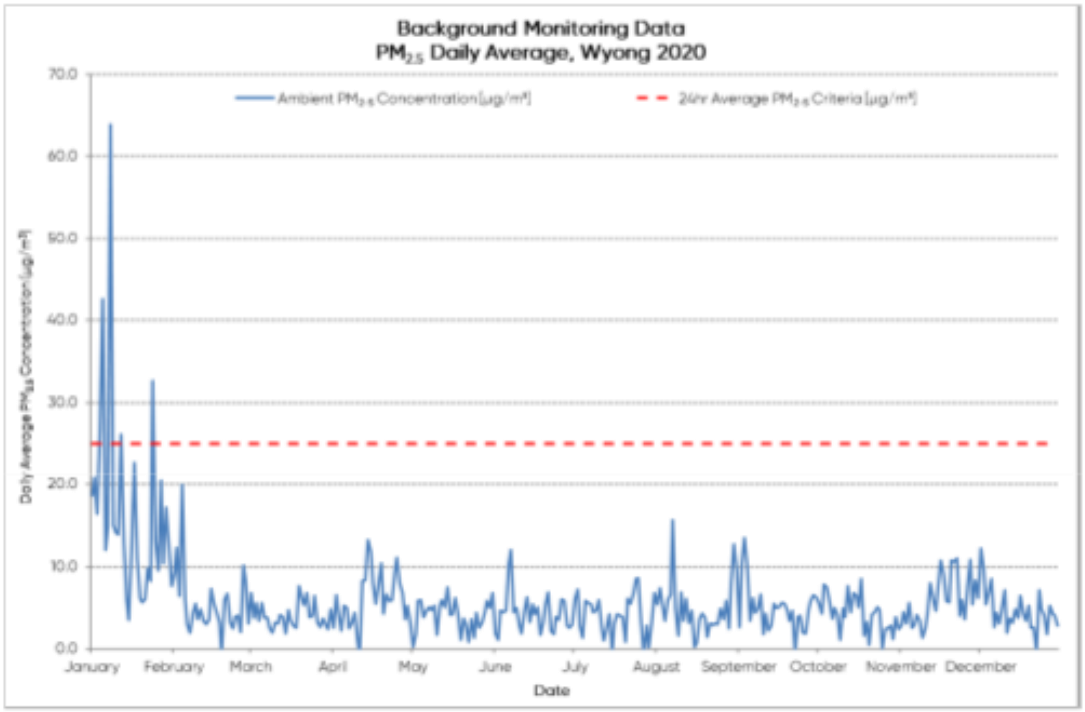


Figure 5: Daily Particulate Matter ($PM_{2.5}$) Concentrations for Wyong 2020.

5.2 Meteorological Model Configuration

Table 5 details the parameters used in the meteorological modelling to drive the CALMET model. The nearest BOM observational station at Gosford AWS is approximately 6.5 km east of the Site. After comparison of the local observational data with regional observational data, Advitech considered the local data suitable for meteorological modelling. Therefore, the CALMET model was undertaken in 'Hybrid' mode using prognostic MM5 data with local and regional meteorological observations.

Table 5: CALMET Meteorological Parameters used in this Report.

Identifier	Descriptor	Comment
WRF	Grid spacing	4 km
	Year of analysis	2020
	Time step	Hourly
CALMET (v 6.4.0)	Meteorological grid domain	16 km x 16 km
	Meteorological grid origin (SW corner)	332.6, 6293.4 km
	Meteorological grid resolution	0.2 km
	TERRAD value	5 km
	R1, R2 (km)	3 km
	RMax1, RMax2 (km)	5 km
	Cell Face Heights	0, 20, 40, 80, 160, 320, 640, 1000, 1500, 2000, 3000

5.3 Dispersion Modelling Configuration

CALPUFF is an advanced non-steady-state meteorological and air quality modelling system. The model advects 'puffs' of material emitted from modelled sources, simulating the dispersion and transformation processes along the way. The model has been adopted by the US Environmental Protection Agency (US EPA) in its guideline on air quality models. CALPUFF uses the 3D wind fields generated by CALMET with the primary output files from CALPUFF processed in CALPOST to produce time-based concentration or deposition fluxes evaluated at selected receiver locations.

Particulate concentrations were simulated for a regular Cartesian receiver grid covering a 16 km by 16 km computational domain, set within the CALMET modelling domain with a grid resolution of 0.2 km.

Section 5.4 outlines the assumptions made for the AQIA. **Appendix C** contains critical parameters required for the CALMET and CALPUFF dispersion models.

5.4 Assumptions

Assumptions used in the computation of GLCs and deposition for particulates using the CALPUFF dispersion model are listed below:

- Options within CALPUFF modelling reflect the *NSW OEH Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System guidelines* (refer to **Section 8**, Reference 5);
- Vehicle combustion (CO, NO_x, SO_x, $PM_{2.5}$, PM_{10} and VOCs) were not modelled as the emission rates are considered negligible compared to the dust emissions from other sources.
- Short term construction phase activities (i.e., land clearing) have not been modelled as these have largely been completed under the existing site development consent;
- VOC emissions from the fuel storage were considered to be negligible and were not modelled;
- Concrete production was modelled based on a 'worst case' maximum daily production rate of 650 m^3 per day. This production rate is seven times greater on an annual basis than the maximum annual production rate of 25,000 m^3 per year;
- The assumed concrete density used was 2.4 tonnes per cubic metre;
- The concrete mix ratio used for modelling purposes was 20 % cement, 40 % aggregate/sand and 40 % water;
- Concrete batches are mixed within the delivery trucks, and not mixed within the batching plant;
- The operating times for the proposed plant are Monday to Saturday 5 am to 6pm and Saturday 5am -12pm. The air quality model has conservatively modelled operations for Monday to Sunday 5 am to 6pm;
- Emissions from the concrete batching plant were calculated in accordance with the *Emission Estimation Technique manual for concrete batching and concrete product manufacturing*;
- Emissions from the dust collectors were calculated in accordance with the *Emission Estimation Technique manual for cement manufacturing version 2.1*; and
- For dust deposition modelling, a geometric mass mean diameter (GMMD) of 11.5 µm for TSP, 4.6 µm for PM_{10} and 1.4 µm for $PM_{2.5}$ with geometric standard deviation (GSD) of 2.8 µm for TSP, 2.3 µm for PM_{10} and 1.8 µm for $PM_{2.5}$ respectively was applied.

5.5 Emission Sources

The activities associated with the proposed concrete batching plant with the potential to generate dust are listed in Table 6 below.

Table 6: Potential Dust Emissions

Potential Dust Emission	Dust Mitigation Controls to be Implemented
Delivery of cement onto site and loading into cement silo	• Silos fitted with fully enclosed pneumatic transfers. • Silos fitted with high quality dust filters with reverse pulse air cleaning. • Silos fitted with high level indicators to prevent over filling.
Exhaust dust from the cement silo dust extraction system	• Silos fitted with high quality dust filters with reverse pulse air cleaning. • Regular maintenance of equipment and cleaning of dust collection systems to prevent dust buildup.
Delivery of aggregate materials and loading into aggregate storage bays.	• Ground level aggregate bays with walls extending 1.5 metres above the maximum storage height on three sides, and water sprays installed.
Wind generated dust from the aggregate storage bays	• Ground level aggregate bays with walls extending 1.5 metres above the maximum storage height on three sides, and water sprays installed. • Regular use of water sprays to dampen dust-prone areas, especially during dry and windy conditions.
Loading aggregate from the storage bays to the batching plant material bins	• Aggregate is unloaded in a damp condition, via provision of a water spray bar.
Loading the weigh hopper with cement from the silos	• Enclosure of conveyors, hoppers, and other dust-generating equipment.
Loading of concrete batches into mixer trucks	• Enclosure of conveyors, hoppers, and other dust-generating equipment. • Enclosure of the distribution chute at the top of the overhead storage bin on three sides.
Wheel generated dust from trucks entering and leaving the site.	• All trafficked areas, work areas or paved areas sealed and regularly swept and cleaned, with spillages cleaned up as soon as practicable. • Planning access and exit routes for heavy transport vehicles to minimise dust impacts.

Details of each emission source are given in **Table 7** and **Appendix C.** The emission factors and estimates are based on the *Emission Estimation Technique (EET) Manual for Cement Manufacturing - Version 2.1 and Emission Estimation Technique (EET) Manual for Concrete Batching and Concrete Product Manufacturing – Version 1.0.* The location of the emissions sources are presented in **Figure 6.**

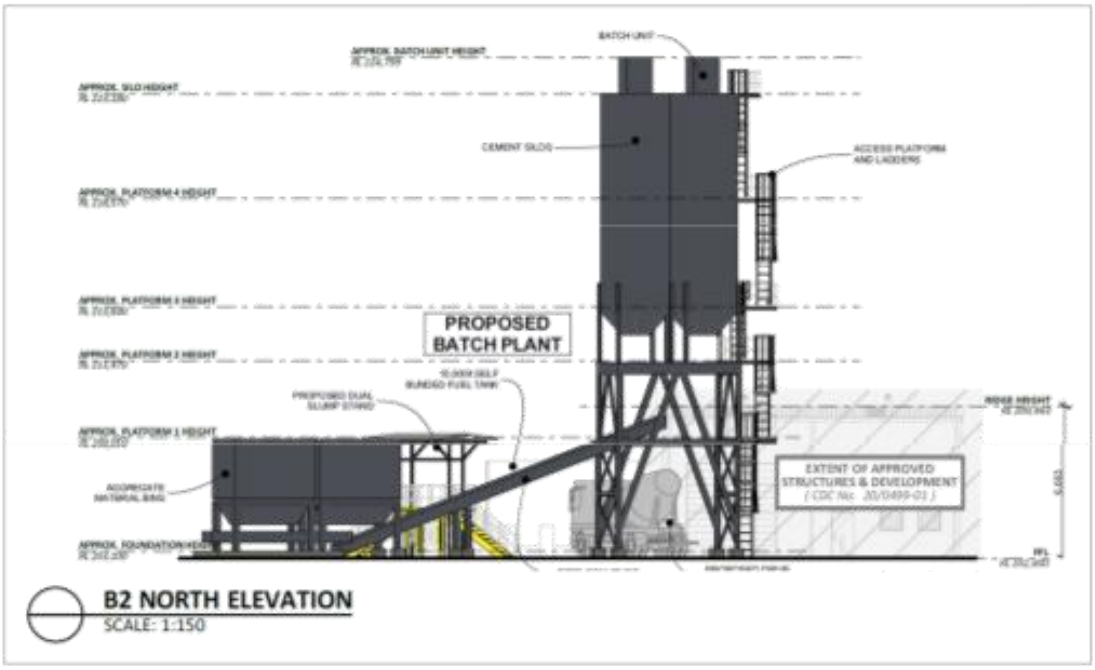


Figure 6: Concrete Batch Plant Layout (Extract from ATB Morton – DWG-203-4001)

Table 7: Calculated Emission Rates

Emitter Name	Emission Factor			Modelled days and hours (Days/hours)[1]	Emission Rate (g/s)		
	TSP	PM_{10}	Units		TSP	PM_{10}	$PM_{2.5}$
Aggregate (gravel and sand) Bin - Loading from trucks	0.02	0.014	kg/t	366 / 13	0.1244	0.0933	0.014
Aggregate (gravel and sand) Conveyor Belt - Transfer Point	0.0003	0.00015	kg/t	366 / 13	0.00043	0.0002	0.00003
Loading cement into the weigh hopper	0.015	0.01	kg/t	366 / 13	0.009	0.0067	0.001
Loading mixer truck	0.015	0.01	kg/t	366 / 13	0.044	0.0333	0.005
Wind erosion emissions from sand and aggregate storage piles (Bay 1 - Bay 10)	7.8	3.9	kg/ha/day	366 / 24	0.00004	0.000019	0.000003
Wheel generated dust from trucks entering and leaving site	1.57	0.3	kg/VKT	366 / 13	1.05	0.20	0.048
Dust collectors on cement silos (capturing dust during loading and unloading of cement)	15	12	mg/m^3	366 / 13	0.0534	0.04274	0.0064

[1] – 2020 modelled year is a leap year (i.e., 366 days).

6. Dispersion Modelling Results

6.1 Annual Average PM_{10}, $PM_{2.5}$ and TSP

The predicted concentrations at selected sensitive receivers of the annual average PM_{10}, $PM_{2.5}$ and TSP for the proposed concrete batching facility are presented in **Table 8**. Modelled contour plots have been presented in Appendix A.

Table 8: Predicted Annual Average PM_{10}, $PM_{2.5}$ and TSP at Sensitive Receivers (Worst Case)

Receiver	Predicted Annual Average PM_{10} Increment + Background (µg/m³)	Predicted Annual Average $PM_{2.5}$ Increment + Background (µg/m³)	Predicted Annual Average TSP Increment + Background (µg/m³)
Background Concentration (µg/m³)	15.9	5.6	31.8
R1	16.2	5.7	32.1
R2	16.1	5.6	32.1
R3	16.1	5.6	32.0
R4	15.9	5.6	31.8
R5	16.1	5.6	32.0
R6	16.0	5.6	31.9
R7	16.0	5.6	31.9
R8	16.0	5.6	31.9
R9	16.0	5.6	31.8
R10	16.6	5.7	32.4
R11	21.8	6.5	39.2
Criteria	25	8	90

[1] – Background particulate concentrations using **Table 4**.

Table 8 presents the predicted cumulative 100th percentile annual average PM_{10}, $PM_{2.5}$ and TSP for sensitive receivers respectively. The annual PM_{10}, $PM_{2.5}$ and TSP impact assessment criteria are not exceeded at any sensitive receiver.

6.2 24-Hour Average PM_{10}

The predicted concentrations at selected sensitive receivers of the 24-hour average PM_{10} maximum increment for concrete batching facility are presented in **Table 9**. Modelled contour plots have been presented in Appendix A.

Table 9: Maximum Impact of 24-Hour Average PM_{10}

Receiver	Maximum Predicted Increment (µg/m³)	Maximum Background Concentration (µg/m³)[1]	Total (µg/m³)
R1	5.0	47.7	52.7
R2	3.0		50.7
R3	2.6		50.3
R4	0.4		48.1
R5	5.3		53.0
R6	0.6		48.3
R7	0.5		48.2
R8	0.5		48.2
R9	0.6		48.3
R10	9.1		56.8
R11	17.0		64.7

[1] – The background concentration above 50 µg/m³ (refer to **Figure 4**) have been discounted as it is above the impact assessment criteria. Therefore, the next highest value of 47.7 µg/m³ was used.

The exceedances at nearby sensitive receivers of the 24-hour average PM_{10} concentration presented in **Table 9** are likely a result of an elevated background PM_{10} concentration. A Level 2 contemporaneous impact and background assessment is required to determine any additional exceedances as a result of the proposed operation.

A summary of the 24-hour average PM_{10} contemporaneous impact and background assessment (Level 2 Assessment) for identified sensitive receivers are presented in **Table** 10.

Table 10: Summary of the 24-Hour Average PM_{10} Contemporaneous Impact and Background

Date	PM_{10} 24-hour average (µg/m³)				Date	PM_{10} 24-hour average (µg/m³)			
	Highest Background[1]	Predicted Increment – Concrete Batching	Receiver	Total		Background[1]	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	**90.5**	**0.7**	**R2**	**91.2**	28/04/20	13.5	17.0	R11	30.5
24/01/20	**83**	**0.5**	**R10**	**83.5**	19/05/20	6.7	16.5	R11	23.2
05/01/20	**68.5**	**0.5**	**R5**	**69.0**	15/09/20	14.9	14.6	R11	29.5
04/01/20	**59.5**	**0.7**	**R1**	**60.2**	03/10/20	18.7	14.4	R11	33.1
04/09/20	**54.9**	**1.9**	**R11**	**56.8**	19/09/20	12.3	11.2	R11	23.5
12/01/20	47.7	0.8	R10	48.5	24/03/20	13.8	10.5	R11	24.3
25/01/20	47.3	0.8	R10	48.1	05/12/20	21.2	10.4	R11	31.6
01/01/20	46.6	0.6	R10	47.2	04/03/20	18.6	9.9	R11	28.5
23/01/20	45.3	0.2	R3	45.5	23/02/20	14.3	9.6	R11	23.9
04/02/20	44.2	0.4	R10	44.6	09/07/20	9.3	9.4	R11	18.7
27/01/20	**42.2**	**9.1**	**R10**	**51.3**	07/09/20	12.2	9.4	R11	21.6
11/01/20	41	0.7	R5	41.7	16/12/20	15	9.1	R11	24.1
02/01/20	40.6	1.0	R10	41.6	**27/01/20**	**42.2**	**9.1**	**R10**	**51.3**
17/11/20	40.4	1.0	R10	41.4	11/11/20	15.3	8.2	R11	23.5
03/01/20	38.7	6.0	R11	44.7	31/01/20	20.6	7.7	R11	28.3
29/11/20	37.4	0.6	R3	38.0	17/02/20	10.8	7.2	R10	18.0
01/12/20	36.8	1.1	R11	37.9	24/07/20	10.9	7.2	R11	18.1
19/02/20	36.3	0.5	R2	36.8	25/07/20	10.3	7.1	R11	17.4

[1] – Dates where the background 24-hour average PM_{10} concentration was already at the NSW EPA impact criteria were highlighted grey and discounted.

One additional exceedance has been predicted in **Table 10** as a result of the emissions from the proposed concrete batching plant. It should be noted that high background concentrations occurred during January and February are a result of the prolonged bushfire season during the summer of 2019-2020.

6.3 24-Hour Average $PM_{2.5}$

The predicted concentrations at selected sensitive receivers of the 24-hour average $PM_{2.5}$ for the proposed operation are presented in **Table 11**. Modelled contour plots have been presented in Appendix A. A maximum 24-hour $PM_{2.5}$ background concentration of 22.7 µg/m³ has been applied (refer to **Table 4**) to determine if further assessment is required.

Table 11: Predicted Maximum 24-Hour Average $PM_{2.5}$ at Sensitive Receivers

Receiver	Subject Site Maximum Predicted Increment (µg/m³)	Maximum Background Concentration (µg/m³)[1]	Total (µg/m³)
R1	0.8		23.5
R2	0.5		23.2
R3	0.4		23.1
R4	0.1		22.8
R5	0.8		23.5
R6	0.1	22.7	22.8
R7	0.1		22.8
R8	0.1		22.8
R9	0.1		22.8
R10	1.4		24.1
R11	2.6		**25.3**

[1] - The background concentration above 25 µg/m³ (refer to **Figure 4**) has been discounted as it is above the impact assessment criteria. Therefore, the next highest value of 22.7 µg/m³ was used.

The exceedance at nearby sensitive receivers of the 24-hour average $PM_{2.5}$ concentration presented in **Table 11** are likely a result of an elevated background $PM_{2.5}$ concentration. A Level 2 contemporaneous impact and background assessment is required to determine any additional exceedances as a result of the proposed operation.

A summary of the 24-hour average $PM_{2.5}$ contemporaneous impact and background assessment (Level 2 Assessment) for identified sensitive receivers are presented in **Table 12.**

Table 12: Summary of the 24-Hour Average $PM_{2.5}$ Contemporaneous Impact and Background

Date	$PM_{2.5}$ 24-hour average (µg/m³)				Date	$PM_{2.5}$ 24-hour average (µg/m³)			
	Highest Background[1]	Predicted Increment – Concrete Batching	Receiver	Total		Background[1]	Highest Predicted Increment – Concrete Batching	Receiver	Total
08/01/20	63.9	0.1	R2	64.0	28/04/20	3.6	2.6	R11	6.2
05/01/20	42.6	0.1	R5	42.7	19/05/20	1.1	2.5	R11	3.6
24/01/20	32.6	0.1	R10	32.7	15/09/20	5	2.2	R11	7.2
04/01/20	26.8	0.1	R1	26.9	03/10/20	7.8	2.2	R11	10.0
12/01/20	26.1	0.1	R10	26.2	19/09/20	4.6	1.7	R11	6.3
17/01/20	22.7	0.1	R5	22.8	24/03/20	4	1.6	R11	5.6
02/01/20	20.8	0.2	R10	21.0	05/12/20	8.5	1.6	R11	10.1
27/01/20	20.4	1.4	R10	21.8	04/03/20	3.4	1.5	R11	4.9
04/02/20	19.9	0.1	R10	20.0	23/02/20	2.5	1.5	R11	4.0
01/01/20	18.6	0.1	R10	18.7	09/07/20	4.6	1.4	R11	6.0
29/01/20	17.2	0.1	R10	17.3	07/09/20	4.4	1.4	R11	5.8
03/01/20	16.4	0.9	R11	17.3	16/12/20	6.4	1.4	R11	7.8
07/08/20	15.6	0.4	R11	16.0	27/01/20	20.4	1.4	R10	21.8
09/01/20	15	0.2	R5	15.2	11/11/20	4.3	1.2	R11	5.5
07/01/20	14.7	0.4	R11	15.1	31/01/20	7.6	1.2	R11	8.8
10/01/20	14.1	0.5	R11	14.6	24/07/20	8.5	1.1	R11	9.6
11/01/20	13.9	0.1	R5	14.0	17/02/20	4.4	1.1	R10	5.5
03/09/20	13.5	0.2	R3	13.7	25/07/20	8.6	1.1	R11	9.7

[1] – Dates where the background 24-hour average $PM_{2.5}$ concentration was already at the NSW EPA impact criteria were highlighted grey and discounted.

Modelling indicates that there are no additional exceedances of the 24-hour $PM_{2.5}$ impact assessment criteria at nearby sensitive receivers in Table **12** According to the NSW EPA guidance, additonal mitigation measures or emission controls that reduce emissions are not required.

6.4 Dust Deposition

The predicted annual average dust deposition rates at selected sensitive receivers for the proposed operation are presented in **Table 13**. Modelled contour plots have been presented in Appendix A.

Table 13: Predicted Dust Deposition at Sensitive Receivers

Receiver	Subject Site Maximum Predicted Increment (g/m²/month)	Impact Assessment Criteria
R1	0.1	2 g/m²/month
R2	< 0.1	
R3	< 0.1	
R4	< 0.1	
R5	< 0.1	
R6	< 0.1	
R7	< 0.1	
R8	< 0.1	
R9	< 0.1	
R10	0.1	
R11	0.5	

Dispersion modelling indicates there are no exceedances of the maximum increase in deposited dust level criteria of 2 g/m²/month at nearby sensitive receivers. The maximum predicted dust deposition increment is 5.3 g/m²/month (at the within the property boundary). According to the NSW EPA guidance, mitigation measures or emission controls that reduce emissions are not required.

7. Conclusions and Recommendations

Advitech modelled a worst-case operational scenario for the proposed concrete batching plant at 53 Gindurra Road, Somersby NSW 2250 (the Site) to assess the potential particulate impacts to sensitive receivers.

The results of the CALPUFF dispersion modelling indicates that particulate impacts from the proposed concrete batching plant will likely cause one additional exceedance of the 24 -hour average PM_{10} impact assessment criteria at the identified nearby sensitive receivers. It is not expected to cause any additional exceedances of the relevant $PM_{2.5}$ and TSP impact assessment criteria.

It is recommended that the following mitigation measures are implemented at the site and documented in an air quality management plan to minimise dust impacts to nearby industrial receptors:

- All trafficked areas, work areas or paved areas sealed and regularly swept and cleaned, with spillages cleaned up as soon as practicable.
- Silos sealed and fitted with bag filters and a reverse pulse air jet cleaning mechanism.
- Cement silos fitted with high level indicators to prevent over filling.
- Pneumatic lines blown through, and the ends capped after each delivery.
- Aggregate unloaded in a damp condition, via provision of spray bar.
- Ground level aggregate bays with walls extending 1.5 metres above the maximum storage height on three sides, and water sprays installed.
- Enclosure of conveyors, hoppers, and other dust-generating equipment.
- Enclosure of the distribution chute at the top of the overhead storage bin on three sides.
- Regular use of water sprays to dampen dust-prone areas, especially during dry and windy conditions.
- Use of barriers or windbreaks to reduce dust dispersion.
- Planning access and exit routes for heavy transport vehicles to minimise dust impacts.
- Regular maintenance of equipment and cleaning of dust collection systems to prevent dust buildup. .

Elevated background levels (during the 2019-2020 bushfire season) appear to be largely responsible for any predicted exceedances of the NSW EPA impact criteria.

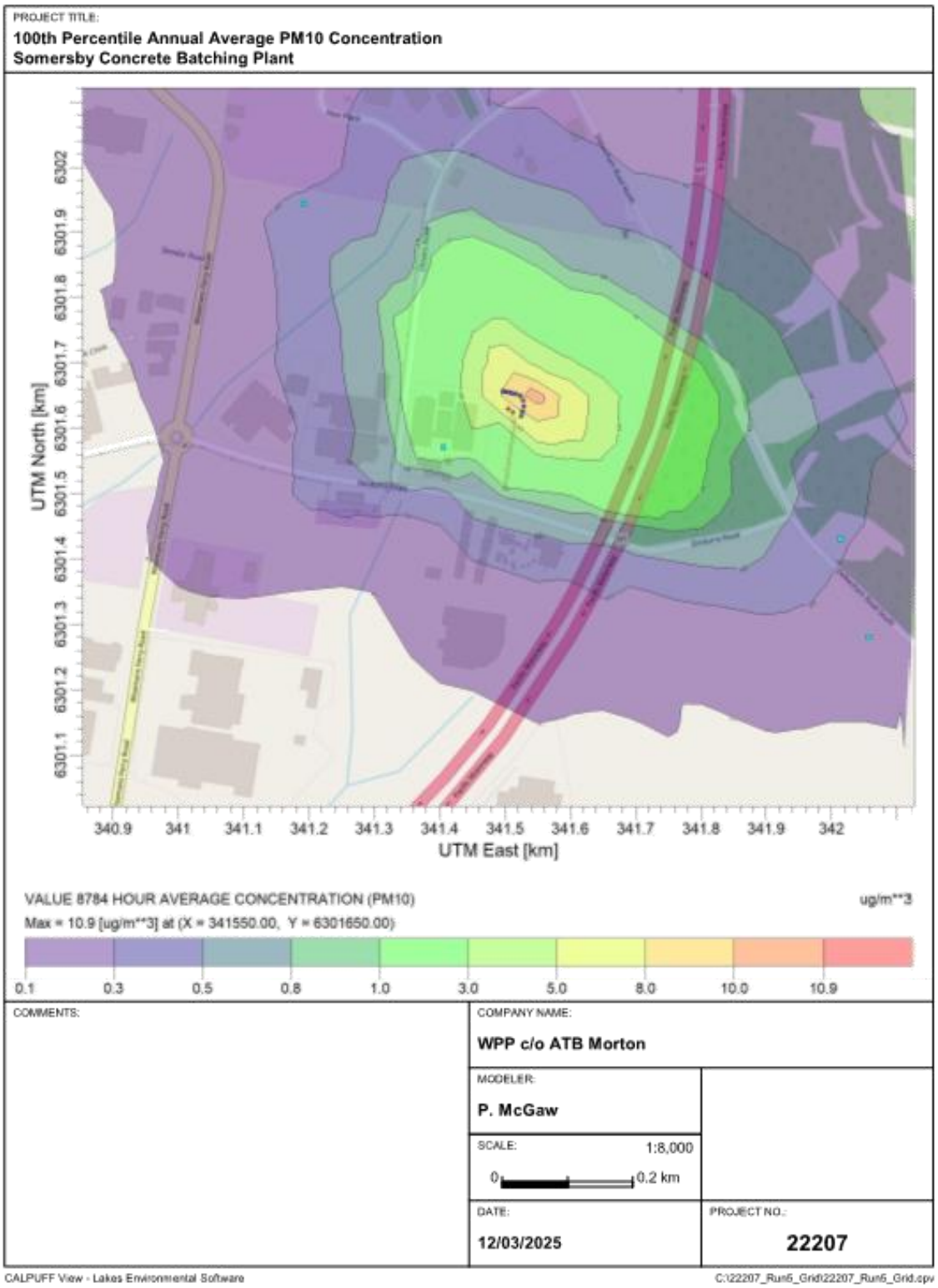
8. References

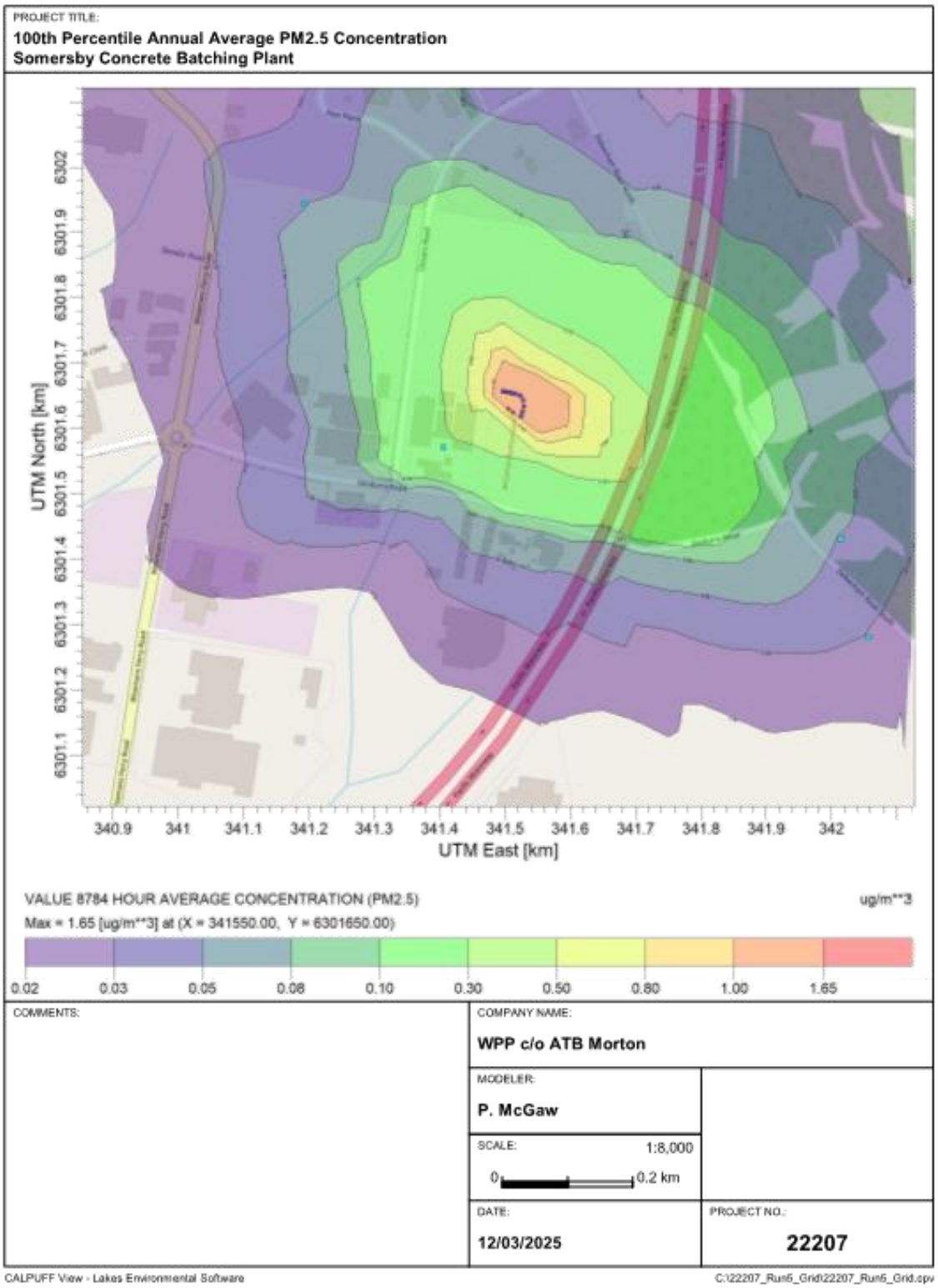
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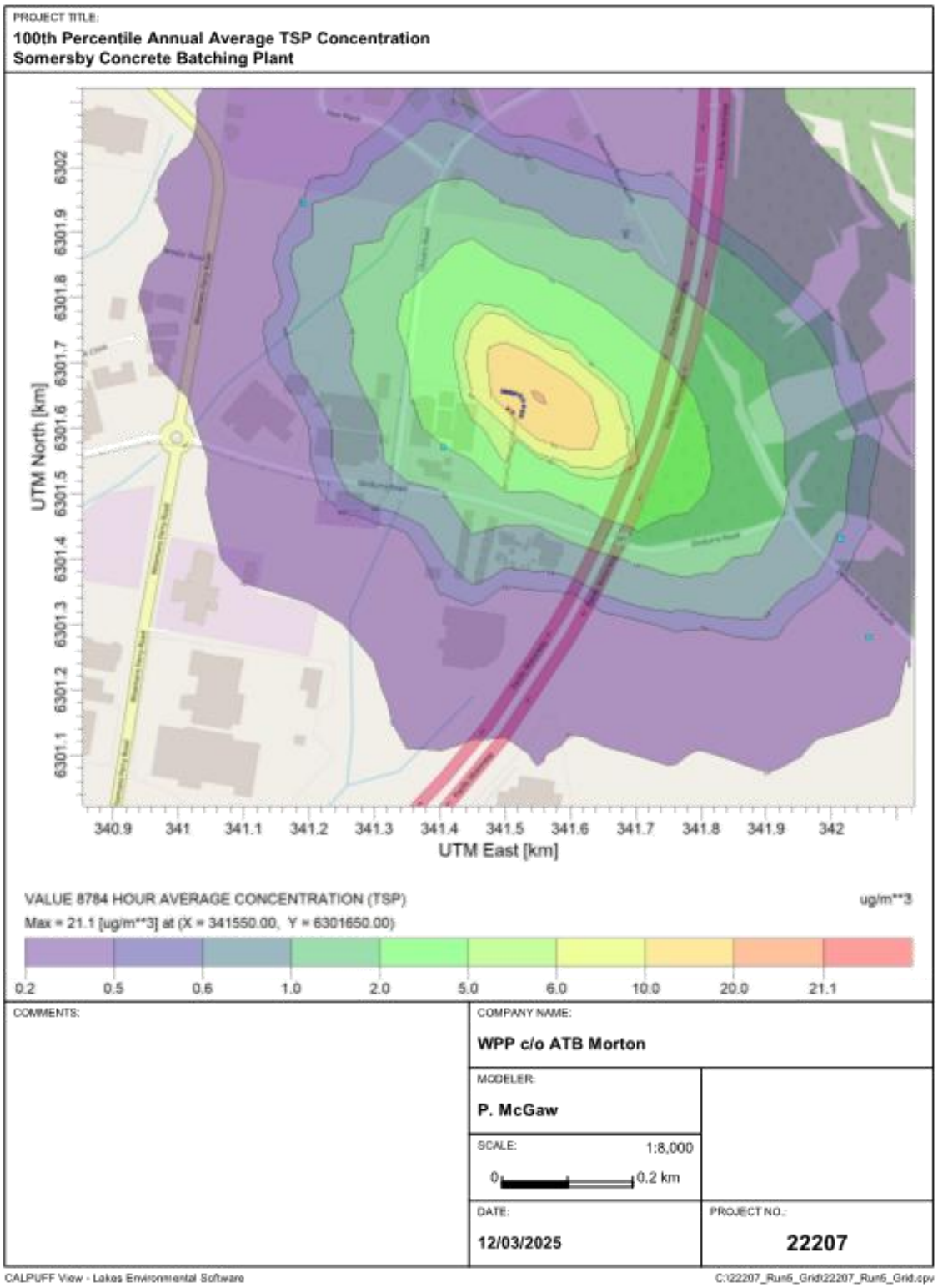
1. Bureau of Meteorology Climate Statistics accessed via http://www.bom.gov.au/climate/data/ on 4 April 2022.
2. Cement Concrete and Aggregates Australia, 2019. *Environmental Management Guideline for Concrete Batch Plants.*
3. Department of Sustainability, Environment, Water, Population and Communities, 2008. *Emission Estimation Technique (EET) Manual for Cement Manufacturing - Version 2.1.*
4. Department of Sustainability, Environment, Water, Population and Communities, 2008. *Emission Estimation Technique (EET) Manual for Concrete Batching and Concrete Product Manufacturing.*
5. Department of Sustainability, Environment, Water, Population and Communities, 2012. *Emission Estimation Technique (EET) Manual for Mining v3.1.*
6. NSW EPA, 2016. *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.*
7. NSW OEH, 2011. *Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion into the 'Approved Methods for the Modelling and Assessments of Air Pollutants in NSW, Australia'.*
8. NSW OEH, Air Quality Monitoring Network accessed via http://www.environment.nsw.gov.au/AQMS/ on 2 May 2022.
9. ATB Morton and WPP supplied information, drawings, and plans.

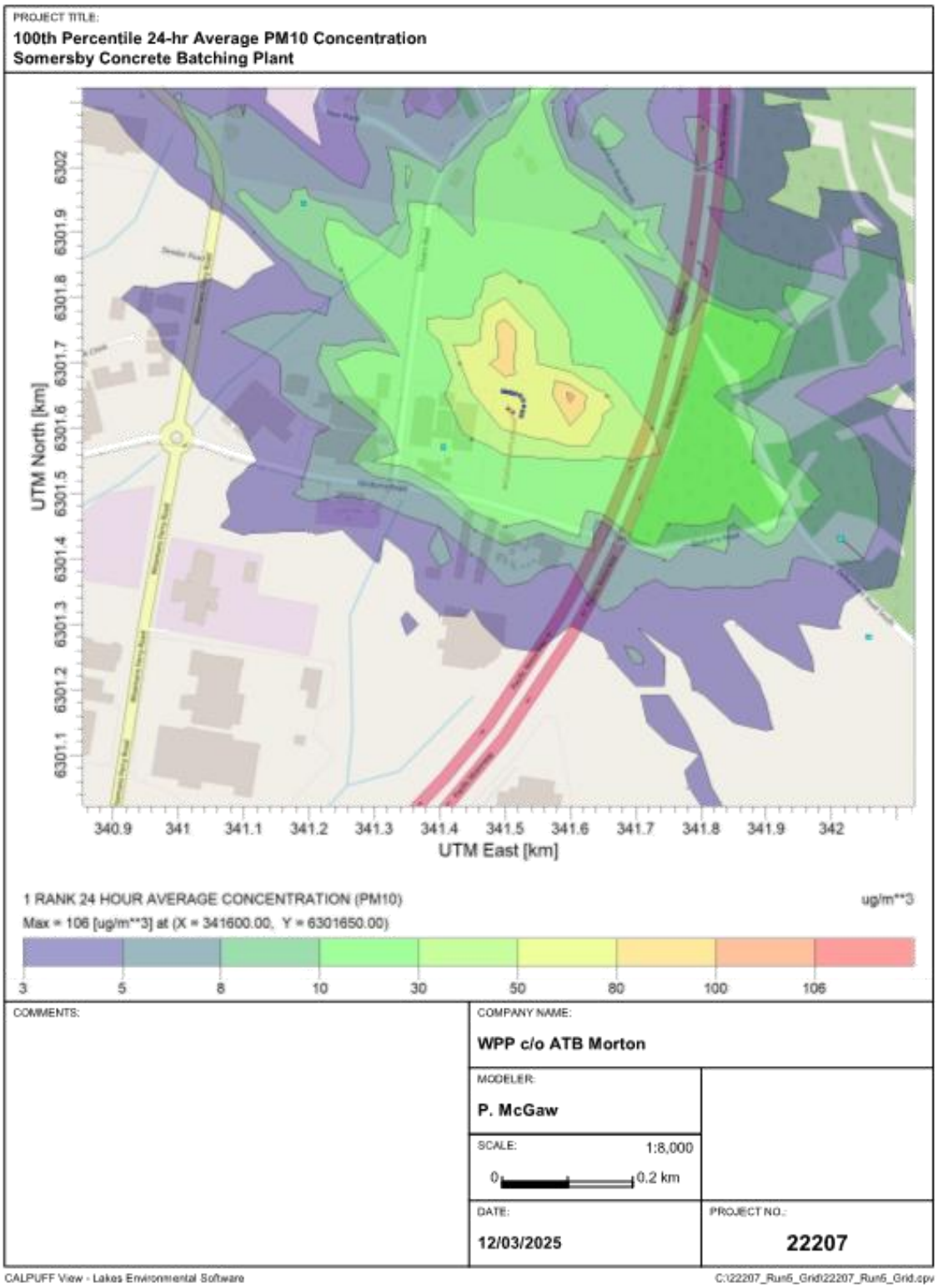
Appendix A

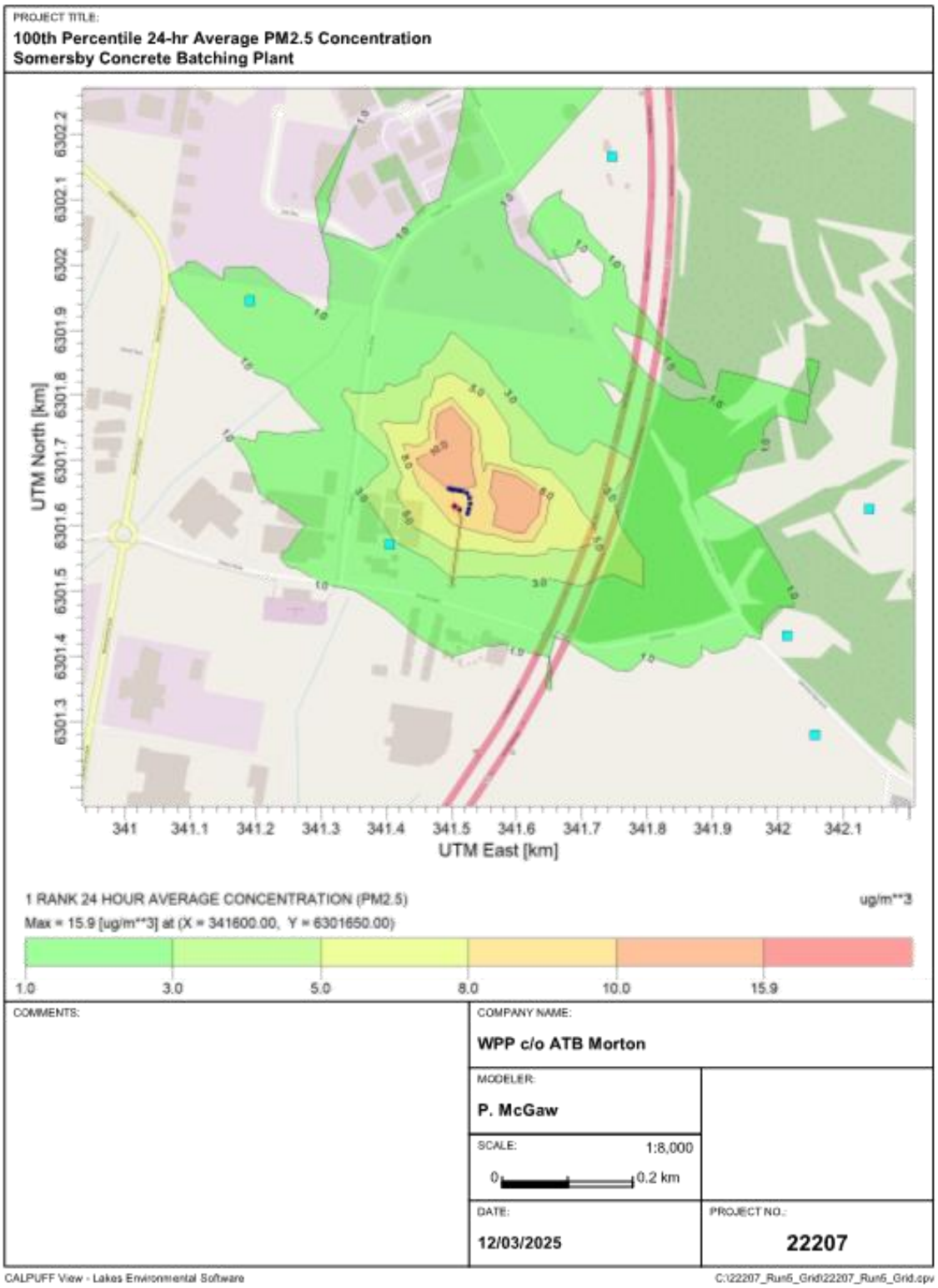
Contour Plots

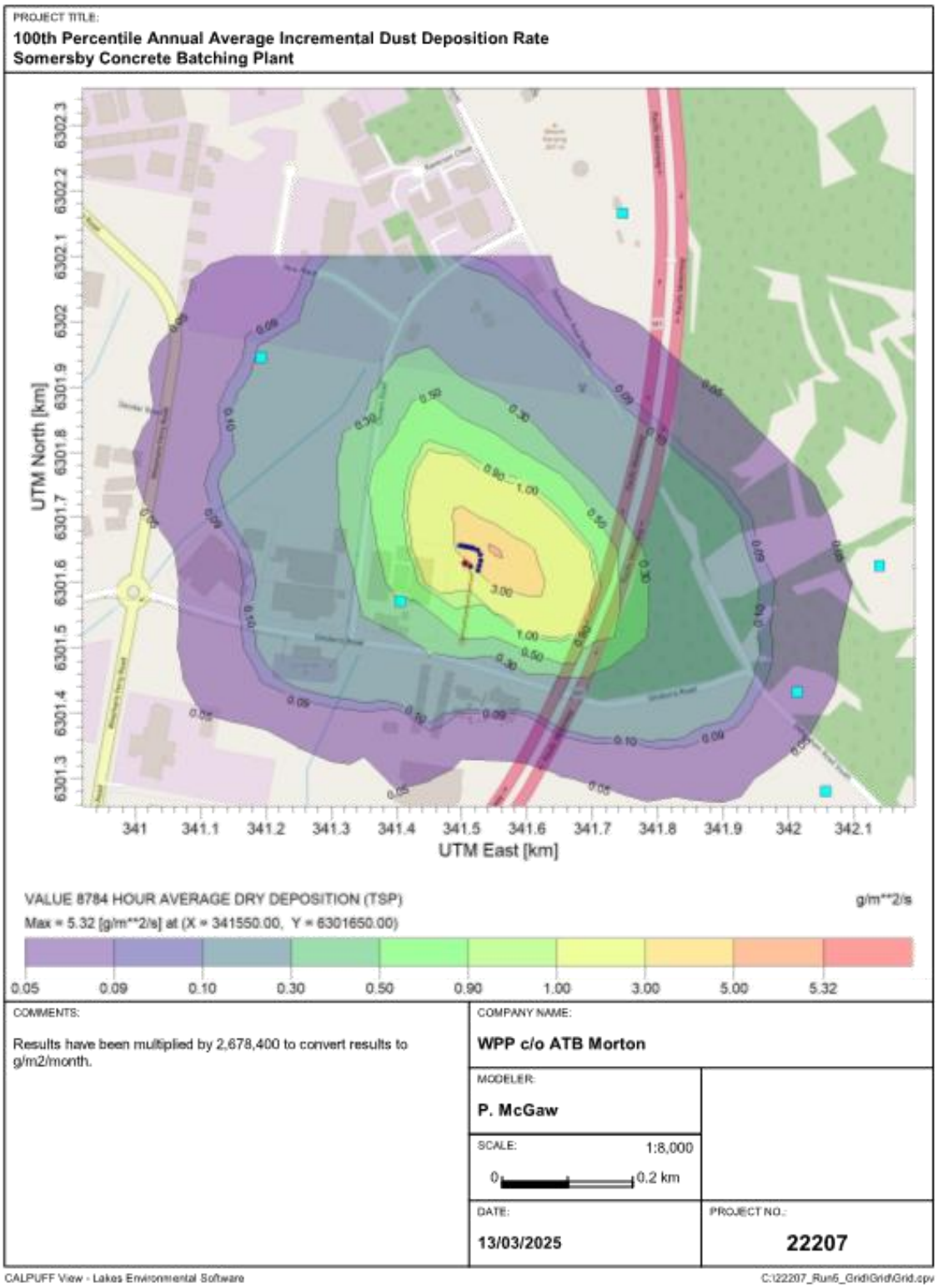

PROJECT TITLE:
100th Percentile Annual Average PM10 Concentration
Somersby Concrete Batching Plant
UTM North [km]
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
6301.2
6301.1
340.9
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
UTM East [km]
VALUE 8784 HOUR AVERAGE CONCENTRATION (PM10)
ug/m**3
Max = 10.9 [ug/m**3] at (X = 341550.00, Y = 6301650.00)
0.1
0.3
0.5
0.8
1.0
3.0
5.0
8.0
10.0
10.9
COMMENTS:
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
12/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\22207_Run5_Grid.cpv


PROJECT TITLE:
100th Percentile Annual Average PM2.5 Concentration
Somersby Concrete Batching Plant
UTM North [km]
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
6301.2
6301.1
340.9
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
UTM East [km]
VALUE 8784 HOUR AVERAGE CONCENTRATION (PM2.5)
ug/m**3
Max = 1.65 [ug/m**3] at (X = 341550.00, Y = 6301650.00)
0.02
0.03
0.05
0.08
0.10
0.30
0.50
0.80
1.00
1.65
COMMENTS:
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
12/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\22207_Run5_Grid.cpv


PROJECT TITLE:
100th Percentile Annual Average TSP Concentration
Somersby Concrete Batching Plant
UTM North [km]
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
6301.2
6301.1
340.9
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
UTM East [km]
VALUE 8784 HOUR AVERAGE CONCENTRATION (TSP)
ug/m**3
Max = 21.1 [ug/m**3] at (X = 341550.00, Y = 6301650.00)
0.2
0.5
0.6
1.0
2.0
5.0
6.0
10.0
20.0
21.1
COMMENTS:
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
12/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\22207_Run5_Grid.cpv

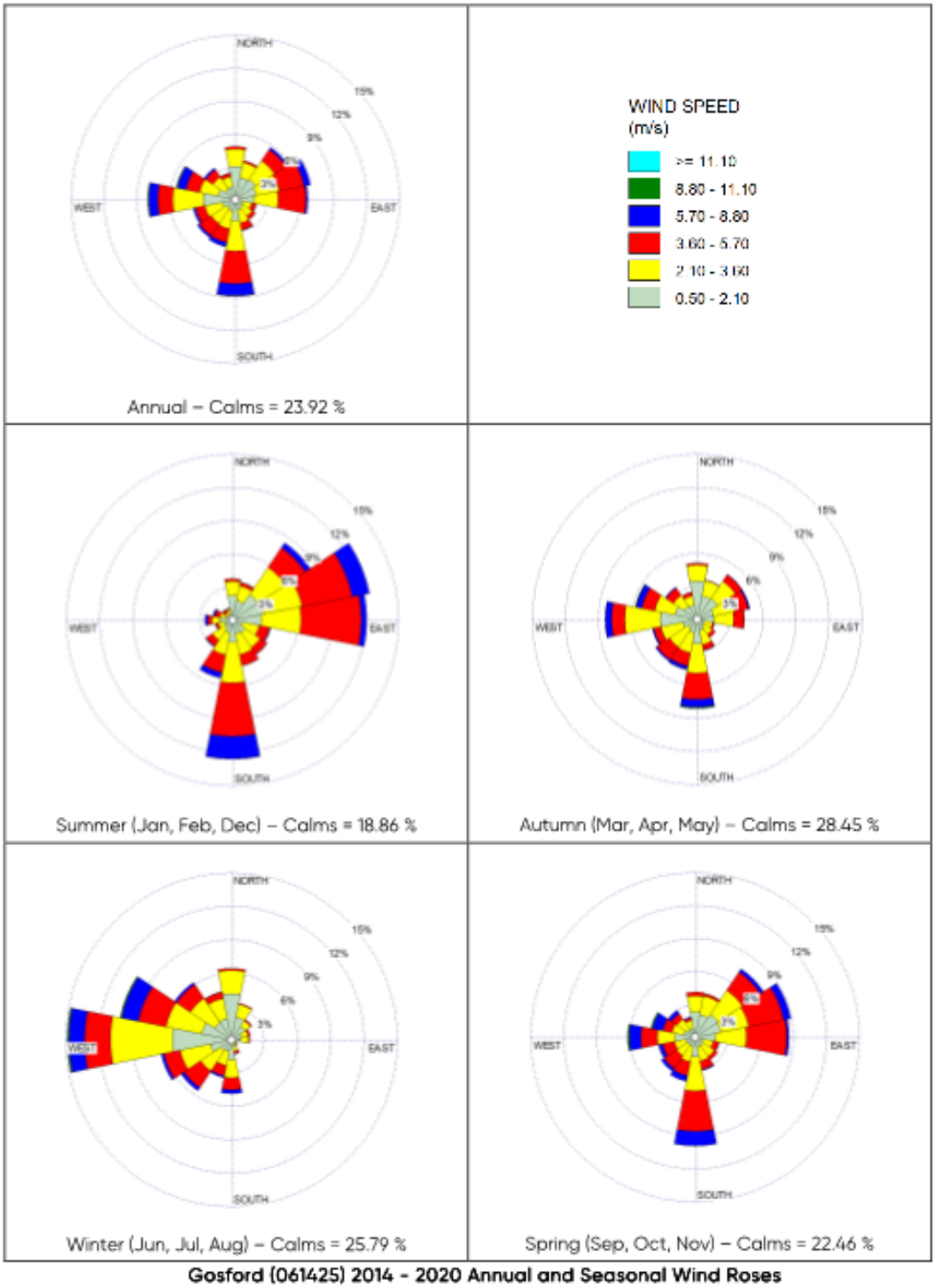

PROJECT TITLE:
100th Percentile 24-hr Average PM10 Concentration
Somersby Concrete Batching Plant
UTM North [km]
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
6301.2
6301.1
340.9
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
UTM East [km]
1 RANK 24 HOUR AVERAGE CONCENTRATION (PM10)
ug/m**3
Max = 106 [ug/m**3] at (X = 341600.00, Y = 6301650.00)
3
5
8
10
30
50
80
100
106
COMMENTS:
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
12/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\22207_Run5_Grid.cpv


PROJECT TITLE:
100th Percentile 24-hr Average PM2.5 Concentration
Somersby Concrete Batching Plant
UTM North [km]
6302.2
6302.1
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
342.1
UTM East [km]
1 RANK 24 HOUR AVERAGE CONCENTRATION (PM2.5)
ug/m**3
Max = 15.9 [ug/m**3] at (X = 341600.00, Y = 6301650.00)
1.0
3.0
5.0
8.0
10.0
15.9
COMMENTS:
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
12/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\22207_Run5_Grid.cpv

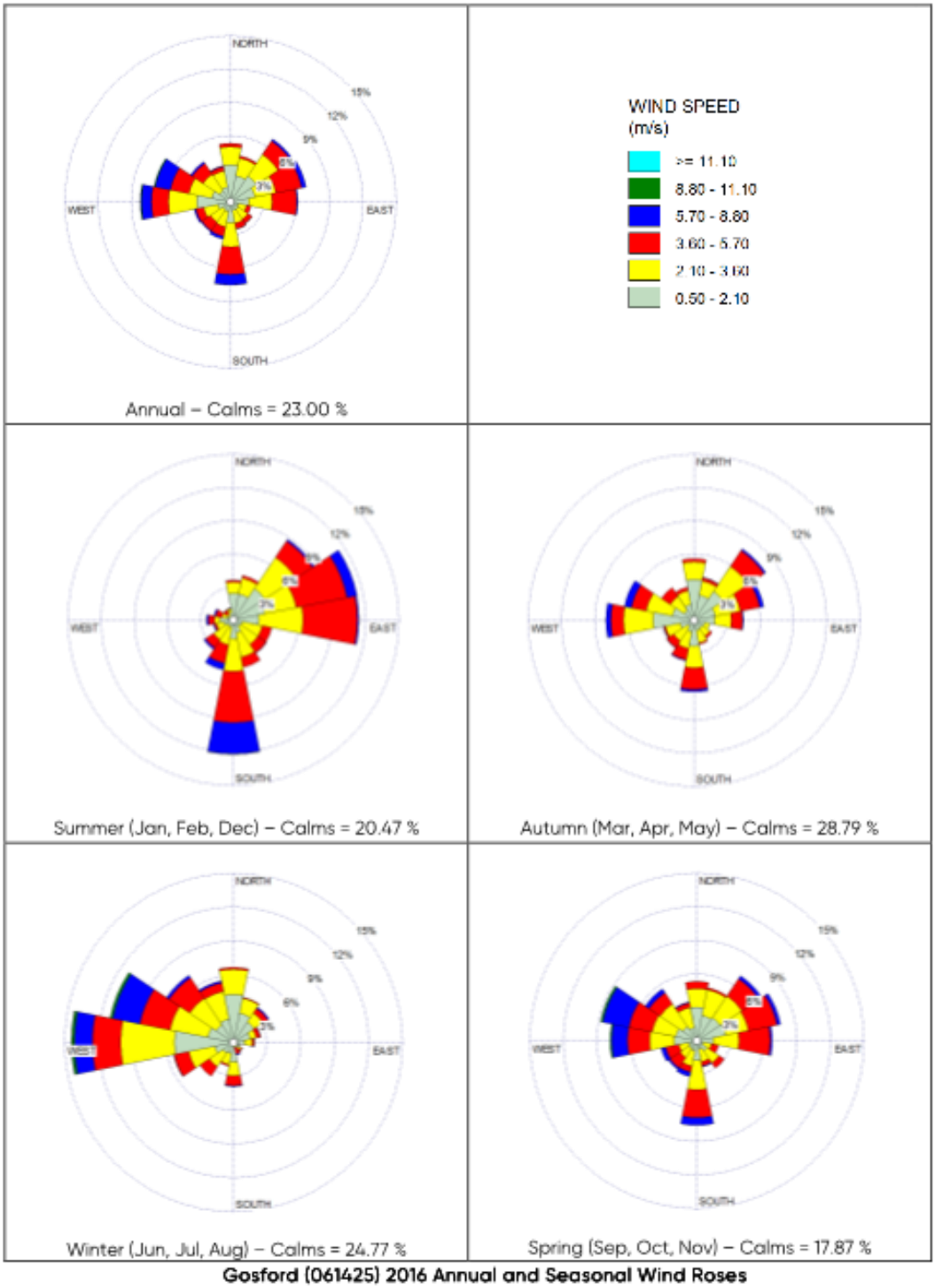

PROJECT TITLE:
100th Percentile Annual Average Incremental Dust Deposition Rate
Somersby Concrete Batching Plant
UTM North [km]
6302.3
6302.2
6302.1
6302
6301.9
6301.8
6301.7
6301.6
6301.5
6301.4
6301.3
341
341.1
341.2
341.3
341.4
341.5
341.6
341.7
341.8
341.9
342
342.1
UTM East [km]
VALUE 8784 HOUR AVERAGE DRY DEPOSITION (TSP)
g/m**2/s
Max = 5.32 [g/m**2/s] at (X = 341550.00, Y = 6301650.00)
0.05
0.09
0.10
0.30
0.50
0.90
1.00
3.00
5.00
5.32
COMMENTS:
Results have been multiplied by 2,678,400 to convert results to g/m2/month.
COMPANY NAME:
WPP c/o ATB Morton
MODELER:
P. McGaw
SCALE:
1:8,000
0
0.2 km
DATE:
13/03/2025
PROJECT NO.:
22207
CALPUFF View - Lakes Environmental Software
C:\22207_Run5_Grid\Grid\Grid.cpv

Appendix B

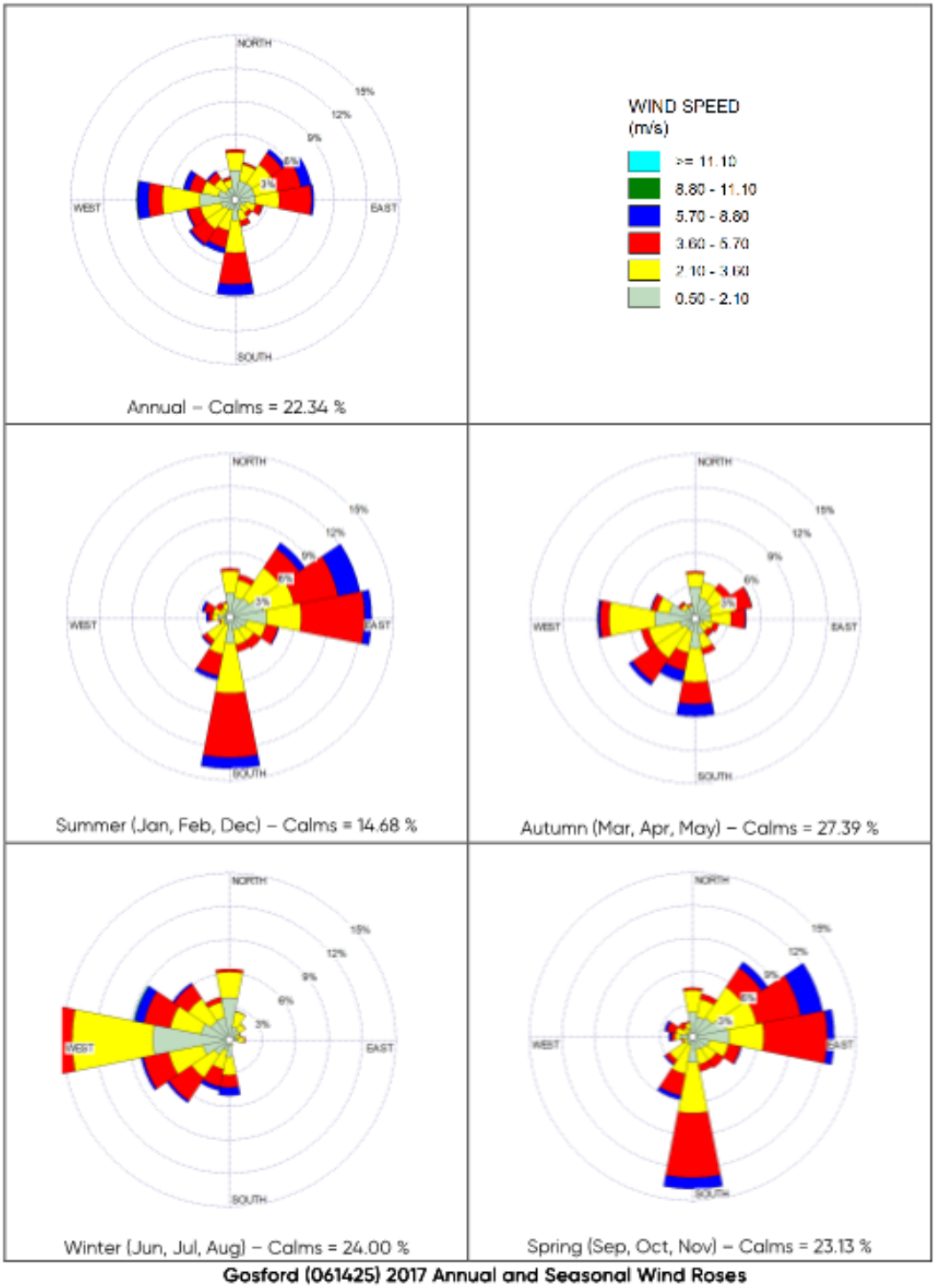
Gosford and Mangrove Mountain AWS – Wind Roses



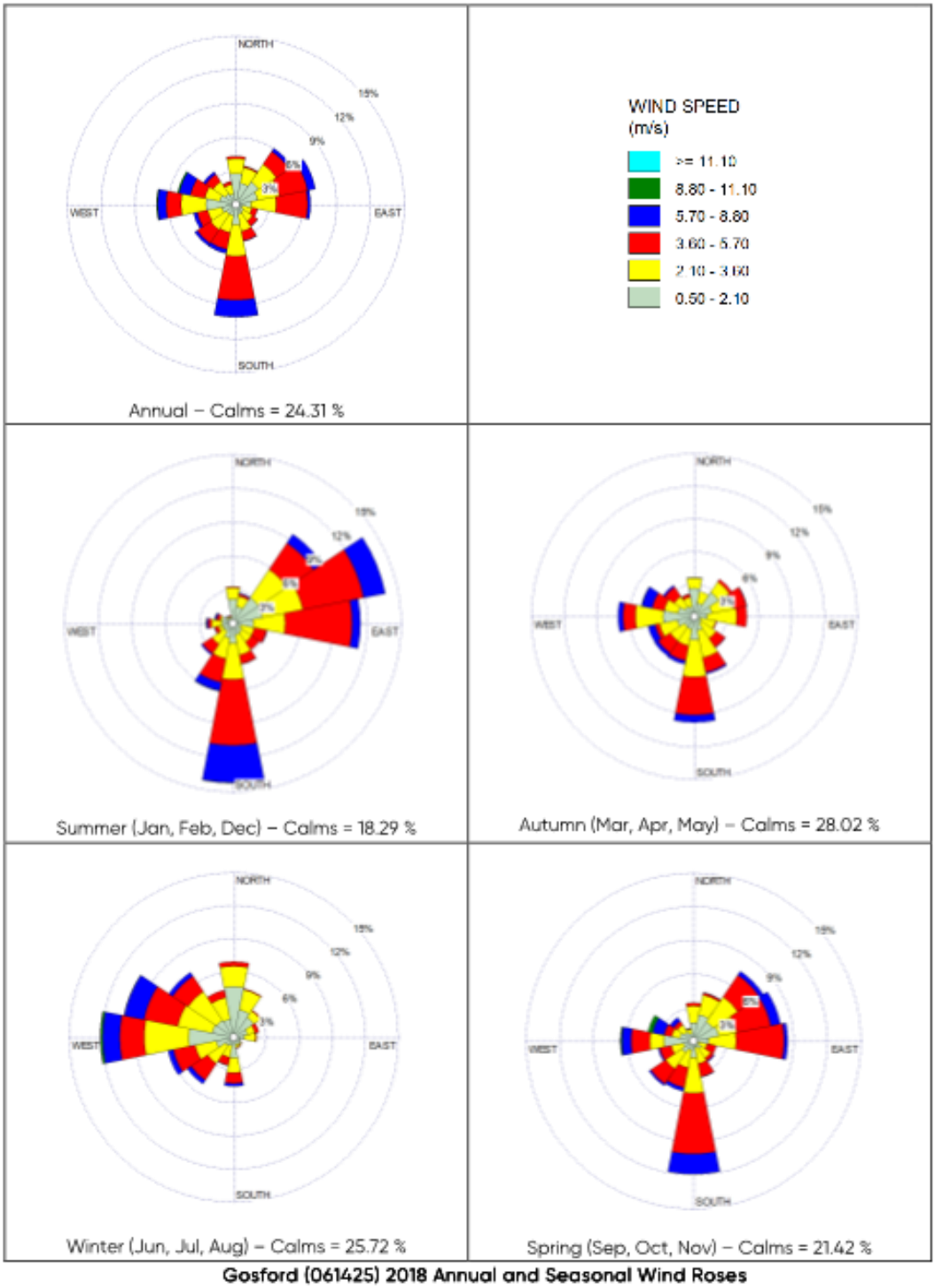
Gosford (061425) 2014 - 2020 Annual and Seasonal Wind Roses



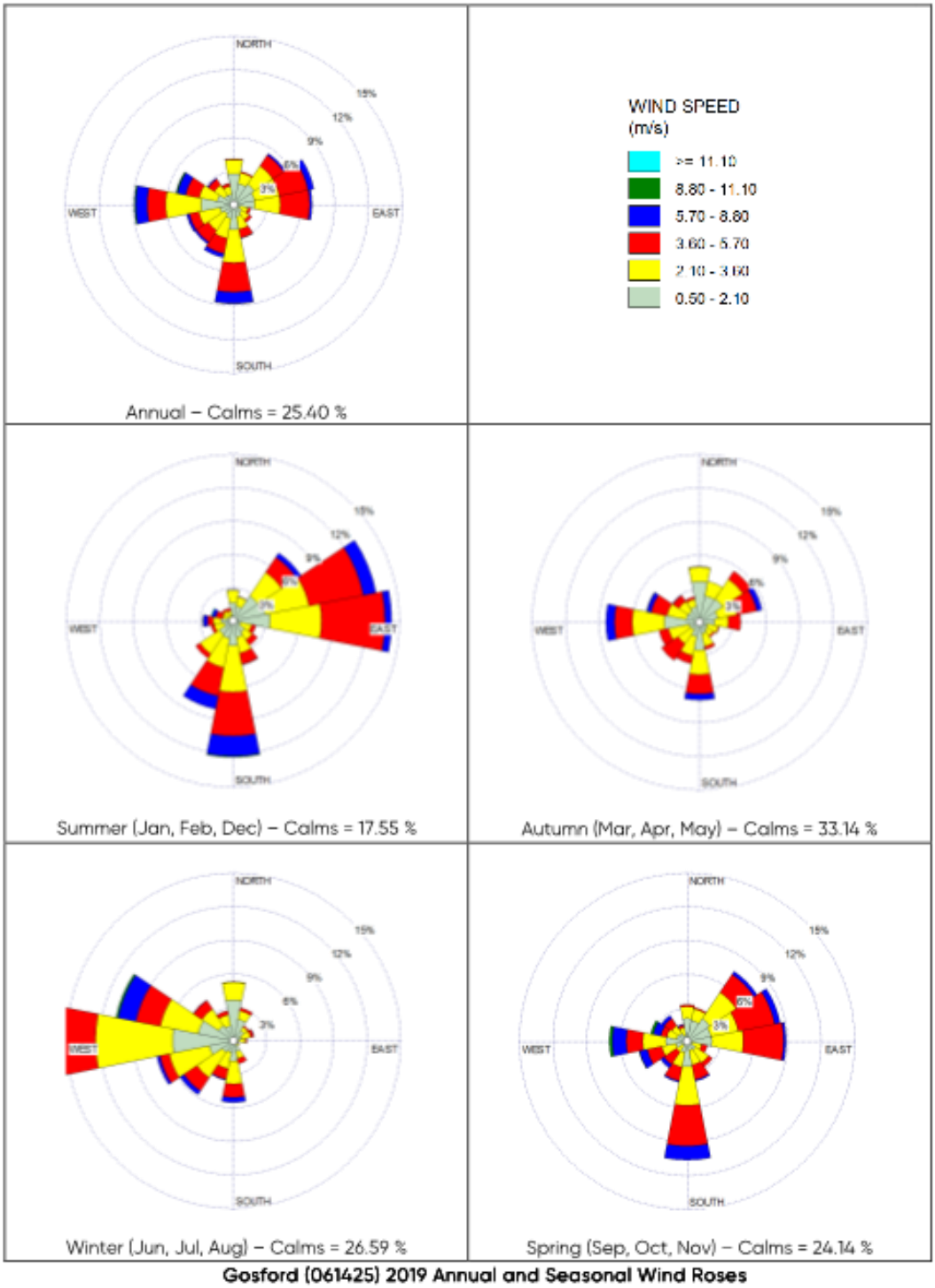
Gosford (061425) 2016 Annual and Seasonal Wind Roses



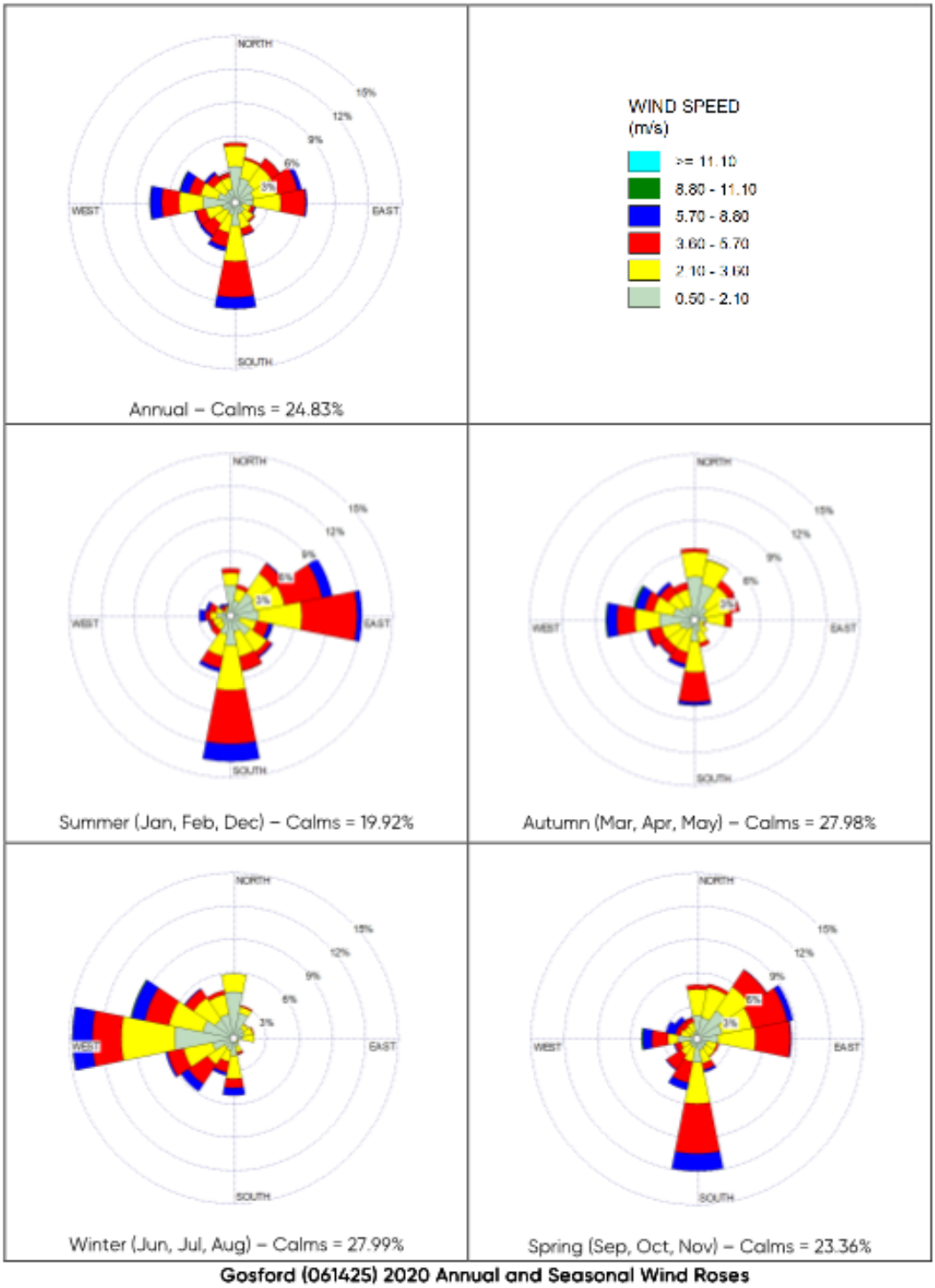
Gosford (061425) 2017 Annual and Seasonal Wind Roses



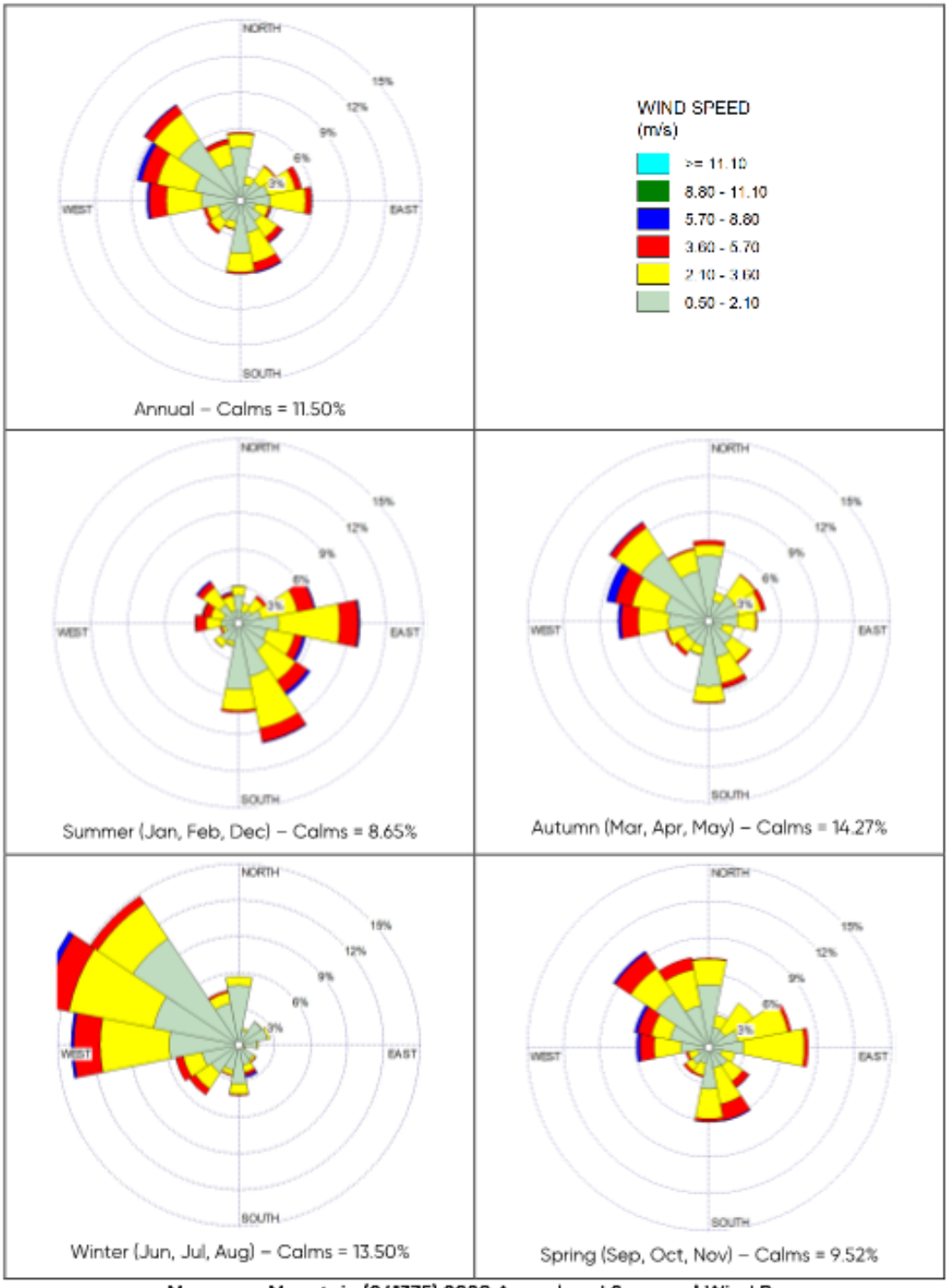
Gosford (061425) 2018 Annual and Seasonal Wind Roses



Gosford (061425) 2019 Annual and Seasonal Wind Roses



Gosford (061425) 2020 Annual and Seasonal Wind Roses



Mangrove Mountain (061375) 2020 Annual and Seasonal Wind Roses

Appendix C

CALMET & CALPUFF Model Inputs

Table 14: Applied CALMET Modelling Parameters

Parameter	Value Used	Comment
Terrain radius of influence (TERRAD)	5 km	TERRAD can be estimated as the typical ridge-to-ridge distance divided by two, and usually rounded up. Typical values of TERRAD are between 5-15 km with an upper limit of about 20 km.
Modelling mode (NOOBS)	1 (Hybrid)	Using WRF data and BoM station data from Gosford, Norah Head, Mangrove Mountain
Layer dependent weighting factor (BIAS)	-1, -1, -1, -1, -1, 0, 1, 1, 1, 1, 1	
Weighting parameter for Step 1 wind field vs. observations in Layer 1 (R1) and Layer 2 and above (R2)	3 km	
Maximum radius of influence for meteorological stations in layer 1 (Step 1) and layers aloft (Step 2) (RMax1 and RMax2)	5 km	
No. of vertical layers (NZ)	10	
Cell face heights in arbitrary vertical grid (ZFACE) (m)	0, 20, 40, 80, 160, 320, 640, 1000, 1500, 2000, 3000	

Note: CALMET input parameters not listed in the table are set as default values.

Table 15: Applied CALPUFF Modelling Parameters

Parameter	Value Used	Comment
Dry deposition modelled (MDRY)	1	Dry deposition was modelled. Geometric mass mean diameters applied are presented in **Section 5.4.1**.
Chemical transformation	0	Chemical transformation was not modelled
Method used to compute dispersion coefficients (MDISP)	2 (dispersion coefficients from internally calculated sigma v, sigma w using micrometeorological variables)	As recommended by the NSW Generic Guidance and Optimum Model Settings for CALPUFF.
Default minimum turbulence velocities sigma-v for each stability class over land and over water (m/s) (SVMIN)	0.2 m/s for all stability classes	As recommended by the NSW Generic Guidance and Optimum Model Settings for CALPUFF.
Emission Sources	5 Emission Sources	External VOLEMARB and PTEMARB file used.

Note: CALPUFF input parameters not listed in the table are set as default values.

Table 16: Modelled Volume/Road Source Parameters

Emitter Name	Location		Release Height (m)	σ_y (m)	σ_z (m)	Emission Factor (kg/tonne)			Emission Variable	Additional Emission Control	Emission Rate (g/s)		
	X co-ord (km)	Y co-ord (km)				TSP	PM_{10}	$PM_{2.5}$			TSP	PM_{10}	$PM_{2.5}$
Aggregate (gravel and sand) Bin - Loading from trucks	341.509	6301.628	5	1.67	1.16	0.02	0.014	0.002	624 tonnes of aggregate per day	Water Spray (50%)	0.1244	0.0933	0.014
Aggregate (gravel and sand) Conveyor Belt - Transfer Point	341.505	6301.63	5	0.47	1.16	0.0003	0.00015	0.00002	624 tonnes of aggregate per day	Enclosure (90 %)	0.00043	0.0002	0.00003
Loading cement into the weigh hopper	341.505	6301.63	8	1.4	1.86	0.015	0.01	0.002	314 tonnes of cement per day	Enclosure (90 %)	0.009	0.0067	0.001
Loading mixer truck	341.505	6301.63	5	1.4	1.16	0.015	0.01	0.002	1560 tonnes of concrete per day	Enclosure (90 %)	0.044	0.0333	0.005
Wind erosion emissions from sand and aggregate storage piles (Bay 1 - Bay 10)	341.497	6301.657	4	2.33	0.93	7.8 (kg/ha/day)	3.9 (kg/ha/day)	0.59 (kg/ha/day)	0.0043 hectares per bay	Enclosure (90 %)	0.00004	0.000019	0.000003
Wheel generated dust from trucks entering and leaving site	341.505	6301.63	1	3	2	1.57 (kg/VKT)	0.3 (kg/VKT)	0.072 (kg/VKT)	208 one-way trips per day 150 m per one-way trip	-	1.05	0.20	0.048

Table 17: Modelled Point Source Parameters

Emitter Name	Location		Release Height (m)	Velocity (m/s)	Emission Factor (kg/tonne)			Emission Variable	Additional Emission Control	Emission Rate (g/s)		
	X co-ord (km)	Y co-ord (km)			TSP	PM_{10}	$PM_{2.5}$			TSP	PM_{10}	$PM_{2.5}$
Dust collectors on cement silos (capturing dust during loading and unloading of cement)	341.505	6301.63	22	5.12	15 (mg/m^3)	12 (mg/m^3)	1.8 (mg/m^3)	30,000 m^3 per hour	Assumed in emission factor	0.0534	0.04274	0.0064

Appendix D

Peer Review Responses

Peer Review Comment: **Meteorological data and methods for inclusion.** *Meteorological data for the 2016 to 2020 period were sourced from a Bureau of Meteorology weather station located at Gosford, 6.5 km to the east of the Project site. The 2020 calendar year was identified as a representative year. Meteorological modelling (using CALMET) was carried out to produce a three-dimensional dataset that was the basis of the dispersion modelling (using CALPUFF). CALMET was setup in 'hybrid' mode using a combination of prognostic data from the WRF model and observation data from Gosford, Mangrove Mountain and Norah Head. Landuse data were derived from the DECC 2007 database. Terrain data were derived from the SRTM (30 m resolution) database. The Approved Methods requires that assessments are to be conducted using at least one year of site-specific data that is 90% (or more) complete. No information about the completeness of data is provided. The completeness of data should be provided along with confirmation that the data meets the EPA requirements.*
Advitech Response: Data completeness has now been provided in Section 4.1.

Peer Review Comment: **Meteorological data and methods for inclusion.** It is inferred that the meteorological modelling aims to produce "site representative" data, which is an approved approach. However, the Approved Methods requires assessments to demonstrate the data adequately describes the expected meteorological patterns at the site under investigation. This has not been done. There are significant differences between the observation data (at Gosford) and the output of the meteorological modelling for the site. For example, Figure 3 from the assessment (modelled data) shows prevailing winds from the west, few winds from the east and a low proportion of calm conditions (less than 1%). Appendix B from the assessment (observation data) shows prevailing winds from the south, a more significant proportion of winds from the east and a relatively high proportion of calm conditions (around 25%). No explanation for the differences is given. It is likely that the modelling has not given sufficient weighting to the observation data. The assessment should demonstrate that the modelled data adequately describes the expected meteorological patterns at the site under investigation. This is important because meteorology is one of the main factors for influencing air quality conditions around a project site.
Advitech Response: Advitech agrees with the lack of explanation regarding the differences in model outputs compared to observational data. The topography of the surrounding area indicates that the Gosford AWS is not the most representative station from the Somersby area. The Mangrove Mountain AWS is located approx. 15 km from the proposed batching plant, but is similarly located within the Central Coast Plateau and best represents that meteorological conditions expected at the site. A comparison of the historical wind rose at Mangrove Mountain and the subject site is presented below.

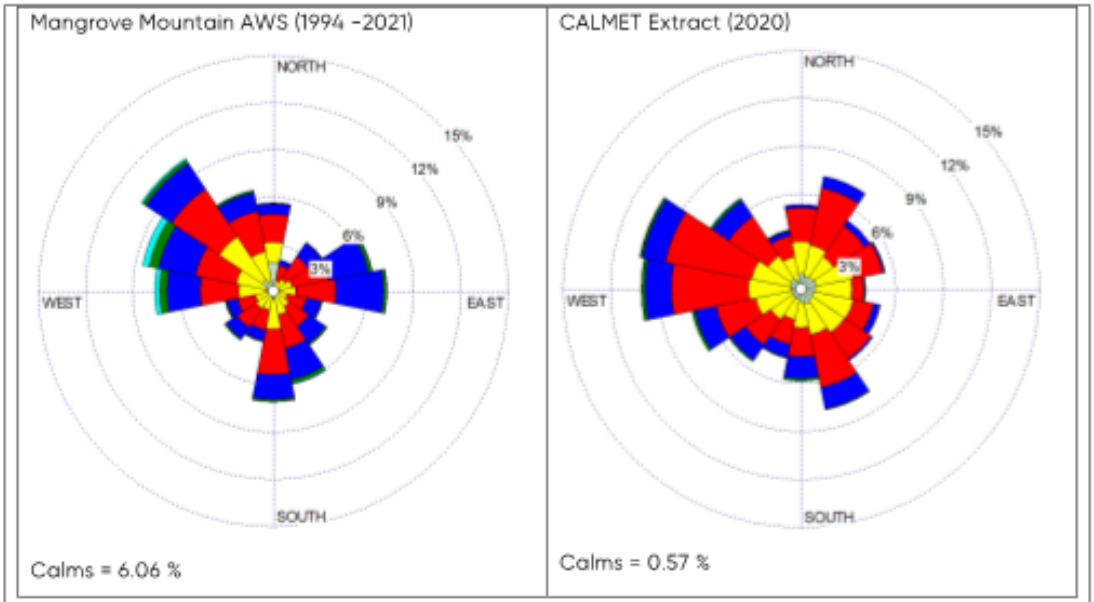


Figure 7: Review of Data Wind Roses

Figure 13 demonstrates similar trends with the wind profiles of Mangrove Mountain AWS and the modelling site data. The predominate winds from the west/north-west and south are represented in both wind roses. The CALMET extracted data does show "smoothing" of the observational data (e.g. less calms and less higher wind speeds).

Modifications of the weightings applied (i.e. R1, R1Max, TERRAD) to the CALMET may result in the model mimicking the data from the Gosford AWS. However, the weightings applied to the CALMET model are consistent with the NSW OEH *'Generic Guidance and Optimum Model Settings for the CALPUFF Modeling System'* and carefully consider the topographical features in the Gosford and Central Coast Plateau region.

Peer Review Comment:

Emissions, calculations, and source representation in the model.

Dust emission inventories were based on emission factors from NPI (1999). The assessment identifies the emission sources as loading from trucks to aggregate bin, aggregate conveyor belt transfer point, loading mixer truck, loading of cement silo, and dust collectors on cement silos. The assessment has not adequately justified the omission of vehicles travelling around site. It is stated that "wheel dust emissions were not modelled as the site transport paths will be paved". Some on-site emissions will occur from this activity (as per AP 42 Section 13.2.1) and the assessment should quantify these emissions and any potential effect on model results. In addition, the assessment has not included emissions from wind erosion from external material storage bays. Justification should be provided or else emissions from these sources should be included.

Advitech Response:

The emissions inventory has been updated to include wheel generated dust and wind erosion from material storage bays (refer to Section 5.5 and Appendix C).

Peer Review Comment: **Sensitive receptors.** Table 1 and Figure 2 identify various sensitive receptors around the Project site. Receptor R11 (6 Chivers Road) has been referred to as an "Industrial Receptor" and has been considered separately in the assessment. The Client has advised that their property is used for commercial purposes only.
Advitech Response: The receptor at 6 Chivers Road has now been referred to as a "commercial property" and included in modelling presented in the main body of the report.

Peer Review Comment: **Expected impacts and mitigation measures.** Section 8 of the assessment provides results from the dispersion modelling. These results have been assessed against the EPA's air quality impact assessment criteria for each relevant particulate matter classification. Appendix D provides a separate assessment for 6 Chivers Road, focussed on 24-hour average PM10 and PM2.5 concentrations. Potential impacts during construction have not been assessed. The construction period is estimated to be in the order of 3 months. Details of the proposed construction activities should be included as well as the measures to be implemented to make sure that air quality impacts do not occur at any surrounding sensitive receptors including at 6 Chivers Road.
Advitech Response: The dust generating activities such as earthworks have been completed under existing development approvals and the remaining activities (i.e. erecting the batching plant) will have minimal dust emissions. It is expected that the remaining construction has less dust generation potential than the operation of the batch plant.

Peer Review Comment: **Expected impacts and mitigation measures.** The patterns in the contour plots (Appendix A) indicate insufficient receptor resolution close to the project site. For example, Figure 10 shows rectangular shaped contours which would not accurately reflect the expected impacts close to the site. The assessment should discuss or show the model receptor grid to demonstrate that sufficient resolution is included for the contour plots.
Advitech Response: Revised contour plots have been provided in Appendix A with additional resolution close to the site.

Peer Review Comment: **Expected impacts and mitigation measures.** The modelled 24-hour average concentrations of PM10 and PM2.5 and at 6 Chivers Rd due to the CBP are high, relative to the assessment criteria. For example, Table 18 shows incremental 24-hour average PM10 concentrations up to 48.9 ug/m3 at 6 Chivers Road. This means that, according to the modelling, the CBP will likely cause additional exceedances of the EPA's air quality impact assessment criteria (i.e. 50 ug/m3). The modelling indicates at least 12 days of additional PM10 criterion exceedances. In these circumstances the EPA requires (EPA, 2022) that the modelling is revised to include various pollution control strategies until compliance is achieved. This has not been done. The assessment refers to recommended mitigation measures that include sweeper trucks, yard wash down and dust suppression sprays. The effectiveness of these measures has not been quantified and a demonstration that EPA assessment criteria can be met at surrounding sensitive receptors has not been done.
Advitech Response: Revised modelling has been undertaken to include additional dust emission sources and the implementation of pollution controls in-line with best practice environmental management for concrete batching plants (refer to Section 5.5 and Appendix C). The resulting modelling has reduced the predicted exceedances by 11 days (i.e. one exceedance of the 24-hour PM_{10} criteria over the remodelled 2020 period).

Biodiversity Assessment

53 Gindurra Road, Somersby

Prepared for

WPP Planning and ATB Morton Pty Ltd

Final V2 / March 2025

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DOCUMENT STATUS

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Approval for use:

Matt Doherty - Director

26 March 2025

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EXECUTIVE SUMMARY

MJD Environmental has been engaged by WPP Planning on behalf of ATB Morton Pty Ltd to prepare a Biodiversity Assessment (including a Test of Significance) to support the requirements of a designated Development Application (DA) to be assessed by Central Coast Council for a proposed concrete batching plant at Lot 12 in DP 1189679, 53 Gindurra Road, Somersby, hereafter referred to as the 'Site'. The site benefits from a complying development certificate (CDC) which allows for the construction of an industrial building, parking and manoeuvring areas and hardstand areas. The batching plant is to be erected and operate on a hardstand area approved under the CDC.

The objective of the assessment is also to examine the likelihood of the proposal having a significant impact on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the *EP&A Act 1979* as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also made with regard to those threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

An appraisal of the site to determine the appropriate assessment pathway under the BC Act determined the proposal on site does not trigger a Biodiversity Offset Scheme (BOS) entry threshold and on this basis, only a Test of Significance is required including application of the 5-part test.

The site has previously been cleared, the remnant vegetation within the site was described to not be consistent with any native PCT. The proposal will remove a maximum of:

- 0.024 ha of Disturbed vegetation

Flora

No threatened flora species listed under the BC Act and / or EPBC Act were recorded on site during survey efforts.

Fauna

No threatened fauna species listed under the BC Act and / or EPBC Act were recorded on site during survey efforts.

Threatened Ecological Communities

No Threatened Ecological Communities (TECs) listed under the BC Act and / or EPBC Act were recorded on site during survey efforts. However, the BC Act and EPBC Act listed Endangered TEC *Coastal Upland Swamp in the Sydney Basin Bioregion* occurs adjacent to the site. The indirect impact on these communities were assessed via a Test of Significance (refer to **Appendix 4**) and a Matters of National Environmental Significance (MNES) assessment (**Appendix 5**).

It is noted that the proposed water cycle management arrangements (refer to **Appendix 6**) sees run off captured from the batching plant area on an impervious hardstand which is then conveyed to a combined detention and bioretention basin that is to be lined with an impermeable liner material, to prevent any egress of dirty water to stormwater drains, groundwater sources and receiving waters. Providing such arrangements form part of the project approval, the proposal is unlikely to have an indirect impact on the adjacent Coastal Upland Swamp TEC.

No hollow bearing trees will be impacted under this proposal.

The assessment concluded that the proposal was unlikely to have a significant impact on the threatened entities assessed.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Term/ Abbreviation	Meaning
BC Act	Biodiversity Conservation Act 2016
BOS	Biodiversity Offset Scheme
Council	Central Coast Council
DoEE	Commonwealth Department of the Environment and Energy
DPIE	NSW Department of Planning, Industry and Environment
DPI Water	NSW Department of Primary Industries – Water
EEC	Endangered Ecological Community
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ha	hectare
HBT	Hollow-bearing Tree
LGA	Local Government Area
OEH	NSW Office of Environment and Heritage [*former*]
TEC	Threatened Ecological Community

1 Introduction

MJD Environmental has been engaged by WPP Planning on behalf of ATB Morton Pty Ltd to prepare a Biodiversity Assessment (including a Test of Significance) to support the requirements of a designated Development Application (DA) for a proposed concrete batching plant at Lot 12 in DP 1189679, 53 Gindurra Road, Somersby, hereafter referred to as the 'Site' (Refer to **Figure 1**). This assessment is to be assessed by Central Coast Council under Part 4 of the EP&A Act.

1.1 Description of Proposal

The proposal seeks approval for a concrete batching plant, intended to process up to 47,000 tonnes (20000 m^3) of concrete per annum, within the rear portion of a recently approved (via private CDC) industrial development.

The proposal comprises:

- Concrete batching plant.
- External storage.
- 3 parking spaces.
- Drainage.
- 4-5 employees plus about 4 delivery drivers.
- 3.42 m2 ancillary building.

Refer to **Appendix 1** for plans of the proposal.

1.2 Aims & Scope

The assessment aims to examine the likelihood of the proposed lead in services having a significant effect on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the EP&A Act 1979 as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also undertaken having regard to those threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The scope of this flora and fauna assessment is to:

- Determine the appropriate assessment pathway under the NSW BC Act;
- Identify vascular plant species occurring within the site, including any threatened species listed under the BC Act and/or EPBC Act;
- Identify and map the extent of vegetation communities within the site, including any Threatened Ecological Communities (TEC) listed under the BC Act or EPBC Act;
- Identify any fauna species including threatened and migratory species, populations or their habitats, occurring within the site and are known or likely to occur within 10 km of the Site (locality);
- Assess the potential of the proposed activity to have a significant impact on any threatened species, populations or ecological communities (or their habitats) identified from the site; and
- Describe measures to be implemented to avoid, minimise, manage or monitor potential impacts of the proposal.

In addition to survey work within the subject site, consideration has been afforded to habitats within the site in order to appreciate the broader environmental context. This includes assessment of potential direct and indirect impacts.

1.3 Site Particulars

Locality	The site is situated in along Gindurra Road Sommersby, NSW,
Land Title	Lot 12 DP 1189679
LGA	Central Coast Council
Area	Site – ~ 0.86 ha
Zoning	The site is E4 General Industrial
Boundaries	The site is situated to the north of Gundurra Road, with an industrial building to its west and native bushland to its north and east boundary.
Current Land Use	The site currently consists of native vegetation, cleared/disturbed land, a residential property and a business.
Topography	The site slopes gently from the north east corner (205 ASL) to the south west (195 ASL).

1.4 Qualifications & Licencing

Qualifications

This biodiversity assessment has been prepared by Robert Fay (B. Env. Sc. & Mgmt.), and Matt Doherty (BMLC) of MJD Environmental Pty Ltd.

Licencing

Research was conducted under the following licences:

- NSW National Parks and Wildlife Service Scientific Investigation Licence SL101684 (Valid 31 March 2026).
- Animal Research Authority (Trim File No: 16/170(3)) issued by NSW Department of Primary Industries (Valid 8 February 2027).
- Animal Care and Ethics Committee Certificate of Approval (Trim File No: 16/170) issued by NSW Department of Primary Industries (Valid 8 February 2025).



53 GINDURRA RD, SOMERSBY

FIGURE 1: SITE LOCATION

Legend

- Site Boundary
- Cadastral Boundary

0 20 40 60 80

Metres

1:1500

N W E S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, NSW Spatial Services (2023) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 28/08/2023 | Version: 1 | Z:\23033 - 53 Gindurra Rd, Somersby | This plan should not be relied upon for critical design dimension.

2 Biodiversity Assessment Pathway

The requirement to undertake a biodiversity assessment is a prerequisite for all Part 4 local developments (EPA Act), to assess potential impacts on threatened species and threatened ecological communities.

The NSW Biodiversity reforms have delivered a new assessment pathway based on the understanding of the amount of clearing proposed, how the proposal will avoid and minimise impacts, and if required provide a strategy to offset the impacts in the form of biodiversity credits.

The following section provides guidance on the biodiversity assessment pathway selected for this project to reflect the amount of clearing associated with the proposal.

2.1 Assessment Methodology

The current biodiversity assessment pathway for proposed development activities requires determining the extent of native vegetation clearing with consideration of the minimum lot size (as outlined in the Local Environment Policy (LEP) for the local government area (LGA) and whether the proposal will have a significant impact on threatened species and/or threatened ecological communities.

To determine the biodiversity assessment pathway required for the development activity, the Biodiversity Offset Scheme (BOS) threshold is used to determine whether the Biodiversity Assessment Method (BAM) is applied to assess the impacts of the proposal and calculate required biodiversity credits to ensure no net loss of biodiversity occurs in the locality.

The *Biodiversity Conservation Regulation 2017* outlines when clearing of native vegetation for a development exceeds the threshold, it will trigger entry into the Biodiversity Offset Scheme and the use of the BAM method.

Thresholds for BOS entry are:

- Whether the area of native vegetation being cleared exceeds a threshold area set out in section 7.2 (4); and/or
- Whether the impacts occur on an area mapped on the Biodiversity Values map published by the minister for the Environment.

In the cases where the extent of native vegetation clearing does not exceed the BOS entry threshold and the site is not mapped on the Biodiversity Values Map, a Test of Significance (ToS) is required to be carried in accordance with Section 7.3 of the *Biodiversity Conservation Act 2016*.

The proposal is understood to not require any native vegetation removal and will not directly impact any threatened species or communities.

Using the Table in Clause 7.2 (4) of the *Biodiversity Conservation Regulation 2017*, the proposed development:

- Has a minimum lot size of less than one hectare; and
- The development proposal does not exceed the 0.25 ha threshold of native vegetation clearing, and therefore does not exceed this BOS threshold.

Therefore, the proposal does not trigger automatic entry into the BOS and a Test of Significance Assessment is the applicable assessment pathway.

3 Methodology

This biodiversity assessment has been prepared in accordance with Section 7.3 of the *Biodiversity Conservation Act 2016*. All vegetation survey methods have been carried out in accordance with The Biodiversity Assessment Methodology (BAM 2020). Additional fauna surveys have utilised the *Threatened Biodiversity Survey and Assessment: Guidelines for development and activities* (DECC 2004), to inform fauna surveys that were carried out during field works.

The techniques employed to inform this impact assessment are described in further detail below.

3.1 Desktop Assessment

A review of ecological information was undertaken to provide context and understanding of ecological values occurring on the site. Information reviewed included:

Online database searches involving a 10-km buffer around the site were undertaken from the:

- NSW BioNet Atlas (Accessed 7th July 2023); and
- EPBC Act Protected Matters Search (Accessed 7th July 2023).

The searches provided a current list of potentially occurring threatened flora and fauna and migratory species under both the BC Act and EPBC Act.

3.2 Field Survey

A field survey was undertaken on the 18th of July 2023. The prevailing weather conditions during the survey are presented in **Table 1** below and were retrieved from the closest weather station: Gosford, NSW.

Table 1 Prevailing Weather Conditions

Date	Survey Times	Min Temp (°C)	Max Temp (°C)	Rain (mm)	Wind (km/h)	Sunrise-Sunset
18 July 2023	1000-1400	7.1	21.9	0.2	Calm to WNW 9km/h (Max WNW 20km/h)	0655-1707

Sources: http://www.bom.gov.au/climate/dwo/IDCJDW0200.shtml
http://www.ga.gov.au/bin/geodesy/run/sunrisenset

3.2.1 Vegetation & Significant Flora Survey

Desktop analysis of regional mapping of the site and its surrounds was informed by large-scale vegetation mapping projects and aerial photography, including:

- Preliminary consultation of the State Vegetation Type Mapping (SVTM) to determine the broad categorisation of the Project Area;
- GIS analysis including - Aerial Photograph Interpretation (API) and consultation of topographic map (Scale 1:25,000) layers for the site; and

Vegetation communities were delineated within the subject site based on the above-mentioned desktop information, coupled with ground truthing of vegetation and collection of vegetation data. Survey focussed on proposed boundary lines.

The following methods were utilised within the Subject Site:

- A random meander walkover was conducted over the subject site to delineate vegetation and opportunistically record flora.

- Threatened species survey was undertaken by method of Random Meander technique similar to that of Cropper (1993) and was undertaken to:
  - Identify potential habitat for known threatened flora species; and
  - Identify any threatened flora species known to occur within a 10km radius in accordance with the NSW Bionet Atlas.
- Assess the potential indirect impacts on adjacent vegetation.

Refer to **Figure 2** showing the location of all vegetation surveys. A list of flora species detected during surveys is provided as **Appendix 2**.

3.2.2 Fauna Survey

A desktop assessment of the potential use of the subject site by threatened fauna species (as listed under the BC Act and EPBC Act) identified from the vicinity was undertaken prior to the commencement of field surveys (Refer to **Section 3.1**).

A detailed fauna habitat assessment was carried out on site. The assessment sought to identify any significant terrestrial habitat features (hollow bearing trees, nests, rock outcrops, or termite terrariums).

Refer to **Figure 2** showing the location of all vegetation surveys. A list of fauna species observed during the site surveys is provided as **Appendix 2**.

Secondary Indications and Incidental Observations

Opportunistic sightings of secondary indications (scratches, scats, diggings, tracks etc.) of resident fauna were noted. Such indicators included:

- Distinctive scats left by mammals;
- Scratch marks made by various types of arboreal animals;
- Nests made by various guilds of birds;
- Feeding scars on Eucalyptus trees made by gliders;
- Whitewash, regurgitation pellets and prey remains from Owls;
- Auditory recognition of bird and frog calls;
- Skeletal material of vertebrate fauna; and
- Searches for indirect evidence of fauna (such as scats, nests, burrows, hollows, tracks, and diggings).

3.2.3 Habitat Survey

An assessment of the relative habitat value present within the subject site was undertaken, this was primarily conducted along the proposed boundary line adjustments. This assessment focused primarily on the identification of specific habitat types and resources in the subject site favoured by known threatened species from the locality. The assessment also considered the potential value of the subject site (and surrounds) for all major guilds of native flora and fauna. Habitat assessment included:

- presence, size and types of tree hollows;
- presence of rocks, logs, caves, rocky outcrops, leaf litter, overhangs and crevices;
- vegetation complexity, structure and quality;
- presence of freshwater or estuarine aquatic habitats, noting permanency;
- connectivity to adjacent areas of habitat;
- extent and types of disturbance;

- presence of foraging opportunities such as flowering eucalypts, fruits, seeds or other nectar bearing native plants; and
- presence and abundance of various potential prey species.

Habitat assessment was based on the specific habitat requirements of each threatened fauna species with regard to home range, feeding, roosting, breeding, movement patterns and corridor requirements. Consideration was given to contributing factors including topography, soil, light and hydrology for threatened flora and assemblages.

3.3 Limitations

Limitations associated with this Biodiversity Assessment report are presented herewith. The limitations have been taken into account specifically in relation to threatened species assessments, results and conclusions.

Seasonality & Conditions

Threatened flora species should be surveyed within their respective flowering periods to ensure accurate identification.

The flowering and fruiting plant species that attract some nomadic or migratory threatened species, often fruit or flower in cycles spanning a number of years. Furthermore, these resources might only be accessed in some areas during years when resources more accessible to threatened species fail. As a consequence, threatened species may be absent from some areas where potential habitat exists for extended periods, and this might be the case for nomadic and opportunistic species. For this reason, it is important to apply the precautionary principle, with this having been done through this assessment.

Data Availability & Accuracy

The collated threatened flora and fauna species records provided by Bionet Species Sightings Search of NSW Wildlife are known to vary in accuracy and reliability. This is usually due to the reliability of information provided to the National Parks and Wildlife Service (NPWS) for collation and/or the need to protect specific threatened species locations. During the review of threatened species records sourced from OEH BioNet Atlas, consideration has been given to the date and accuracy of each threatened species record in addition to an assessment of habitat suitability within the site.

Similarly, EPBC Protected Matters Searches provide a list of threatened species and communities that have been recorded within 10 km of the subject site, or which have suitable habitat within the wider area, and are subject to the same inherent inaccuracy issues as the State derived databases.

In order to address these limitations in respect to data accuracy, threatened species records have only been used to provide a guide to the types of species that occur within the locality of the subject site. Consequently, habitat assessment and the results of surveys conducted within the site have been used to assess the likelihood of occurrence of threatened species, populations and ecological communities to occur therein.



53 GINDURRA RD, SOMERSBY

FIGURE 2: SURVEY EFFORTS

Legend

- Site Boundary
- Cadastral Boundary
- Survey Transect

0 10 20 30 40

Metres

1:600

N
W E
S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, NSW Spatial Services (2023) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 29/08/2023 | Version: 1 | Z:\23033 - 53 Gindurra Rd, Somersby | This plan should not be relied upon for critical design dimension.

4 Results

4.1 Desktop Assessment

Using the NSW BioNet Atlas, and EPBC Act Protected Matters Search (Accessed 7th July 2023), a list of potentially occurring threatened species, populations and ecological communities from the locality (10 km radius) has been compiled (**Table 2**). A total of 181 entities have been recorded of which 43 threatened flora species, 82 fauna species, 30 ecological communities, 25 migratory species and 1 marine species have either been detected or have the potential to occur within the locality.

Note: Included in **Table 2** below are the numbers of records (not the number of individuals) for each species within the locality taken from the NSW BioNet Atlas. The EPBC Act Protected Matters Search Tool (PMST) does not provide number of records within the locality. Therefore, the record count related only to those BC Act listed species that were detected within 10 km of the site. It is also noted that due to the terrestrial nature of the site, pelagic marine species were not considered under this ecological assessment and have not been included in the list.

Table 2 Threatened Flora & Fauna Database Search Results.

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Notes & Source
Threatened Ecological Communities					
Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions		E	-	K	Community known to occur within area
Blue Gum High Forest in the Sydney Basin Bioregion		CE	-	K	Community known to occur within area
Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community		-	E	K	Community known to occur within area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland		-	E	L	Community likely to occur within area
Coastal Upland Swamp in the Sydney Basin Bioregion		E	E	K	Community known to occur within area
Duffys Forest Ecological Community in the Sydney Basin Bioregion		E	-	K	Community known to occur within area
Eastern Suburbs Banksia Scrub in the Sydney Basin Bioregion		CE	-	K	Community known to occur within area
Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions		E	-	K	Community known to occur within area
Kincumber Scribbly Gum Forest in the Sydney Basin Bioregion		CE	-	K	Community known to occur within area
Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Low woodland with heathland on indurated sand at Norah Head		E	-	K	Community known to occur within area
Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions		E	-	K	Community known to occur within area
Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions		E	-	K	Community known to occur within area
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion		E	-	K	Community known to occur within area
Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion		-	E	L	Community likely to occur within area
Quorrobolong Scribbly Gum Woodland in the Sydney Basin Bioregion		E	-	K	Community known to occur within area
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria		-	CE	K	Community known to occur within area
River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Shale Sandstone Transition Forest in the Sydney Basin Bioregion		CE	-	P	Community predicted to occur within area
Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion		E	-	P	Community predicted to occur within area
Subtropical and Temperate Coastal Saltmarsh		-	V	L	Community likely to occur within area
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Sydney Freshwater Wetlands in the Sydney Basin Bioregion		E	-	K	Community known to occur within area
Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion		CE	-	K	Community known to occur within area
Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Community known to occur within area
Umina Coastal Sandplain Woodland in the Sydney Basin Bioregion		E	-	K	Community known to occur within area
Western Sydney Dry Rainforest in the Sydney Basin Bioregion		E	-	P	Community predicted to occur within area
Flora					
Acacia bynoeana	Bynoe's Wattle	E	V	1	Recorded within 10km of the site[1]. Species or species habitat may occur within area[2]
Acacia pubescens	Downy Wattle, Hairy Stemmed Wattle	-	V	1	Species or species habitat may occur within area[2]
Acacia terminalis subsp. Eastern Sydney-(Acacia terminalis subsp. Terminalis) (G.P.Phillips 126)	Sunshine Wattle (Sydney region)	-	E	-	Species or species habitat may occur within area[2]
Ancistrachne maidenii		V	-	1	Recorded within 10km of the site[1]
Asterolasia elegans	null	-	E	-	Species or species habitat may occur within area[2]
Astrotricha crassifolia	Thick-leaf Star-hair	-	V	1	Species or species habitat known to occur within area[2]
Baloskion longipes	Dense Cord-rush	V	V	2	Recorded within 10km of the site[1] Species or species habitat may occur within area[2]
Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs	-	V	-	Species or species habitat likely to occur within area[2]
Callistemon linearifolius	Netted Bottle Brush	V		20	Recorded within 10km of the site[1]

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Notes & Source
Cryptostylis hunteriana	Leafless Tongue Orchid	V	V	1	Recorded within 10km of the site[1] Species or species habitat likely to occur within area[2]
Cynanchum elegans	White-flowered Wax Plant	-	E	-	Species or species habitat likely to occur within area[2]
Darwinia biflora	null	-	V	-	Species or species habitat may occur within area[2]
Darwinia glaucophylla		V	-	829	Recorded within 10km of the site[1]
Diuris bracteata		E	X	2	Recorded within 10km of the site[1]
Diuris praecox	Newcastle Doubletail	-	V	-	Species or species habitat likely to occur within area[2]
Epacris purpurascens var. purpurascens		V	-	4	Recorded within 10km of the site[1]
Eucalyptus camfieldii	Camfield's Stringybark	V	V	20	Recorded within 10km of the site[1]. Species or species habitat known to occur within area[2]
Eucalyptus glaucina	Slaty Red Gum	V	V	1	Recorded within 10km of the site[1]
Genoplesium baueri	Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid	-	E	-	Species or species habitat likely to occur within area[2]
Grevillea shiressii		V	V	1227	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Haloragis exalata subsp. exalata	Wingless Raspwort, Square Raspwort	-	V	-	Species or species habitat may occur within area[2]
Hibbertia procumbens	Spreading Guinea Flower	E	-	2063	Recorded within 10km of the site[1]
Hibbertia puberula		E	-	2	Recorded within 10km of the site[1]
Kunzea rupestris	null	-	V	-	Species or species habitat may occur within area[2]
Lasiopetalum joyceae	null	-	V	-	Species or species habitat likely to occur within area[2]
Melaleuca biconvexa	Biconvex Paperbark	V	V	210	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Melaleuca deanei	Deane's Paperbark	V	V	4	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Micromyrtus blakelyi	null	-	V	-	Species or species habitat known to occur within area[2]
Persicaria elatior	Knotweed, Tall Knotweed	-	V	-	Species or species habitat may occur within area[2]
Persoonia hirsuta	Hairy Geebung	E	E	1	Recorded within 10km of the site[1] Species or species habitat may occur within area[2]
Pimelea curviflora var. curviflora	null	-	V	-	Species or species habitat likely to occur within area[2]
Prostanthera askania	Tranquillity Mintbush	E	E	398	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Prostanthera densa	Villous Mintbush	-	V	-	Species or species habitat may occur within area[2]
Prostanthera junonis	Somersby Mintbush	E	E	1099	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Rhizanthella slateri	Eastern Underground Orchid	-	E	-	Species or species habitat may occur within area[2]
Rhodamnia rubescens	Scrub Turpentine	CE	CE	144	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Rhodomyrtus psidioides	Native Guava	-	CE	8	Species or species habitat known to occur within area[2]
Rutidosis heterogama	Heath Wrinklewort	-	V	-	Species or species habitat may occur within area[2]
Syzygium paniculatum	Magenta Lilly Pilly	E	V	43	Recorded within 10km of the site[1]. Species or species habitat known to occur within area[2]
Tetratheca glandulosa		V	-	96	Recorded within 10km of the site[1]
Tetratheca juncea	Black-eyed Susan	-	V	1	Species or species habitat known to occur within area[2]
Thelymitra adorata	Wyong Sun Orchid	-	CE	-	Species or species habitat may occur within area[2]
Thesium australe	Austral Toadflax, Toadflax	-	V	-	Species or species habitat likely to occur within area[2]
Birds					
Anthochaera phrygia	Regent Honeyeater	CE	CE	10	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	10	Recorded within 10km of the site[1]
Botaurus poiciloptilus	Australasian Bittern	-	E	1	Species or species habitat known to occur within area[2]
Burhinus grallarius	Bush Stone-curlew	E	-	328	Recorded within 10km of the site[1]
Calidris canutus	Red Knot, Knot	-	E	-	Species or species habitat known to occur within area[2]
Calidris ferruginea	Curlew Sandpiper	-	CE	-	Species or species habitat known to occur within area[2]
Callocephalon fimbriatum	Gang-gang Cockatoo	V	E	27	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	120	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Charadrius leschenaultii	Greater Sand-plover	V	V	1	Recorded within 10km of the site[1] Species or species habitat likely to occur within area[2]
Circus assimilis	Spotted Harrier	V	-	1	Recorded within 10km of the site[1]
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	-	V	1	Species or species habitat likely to occur within area[2]
Daphoenositta chrysoptera	Varied Sittella	V	-	37	Recorded within 10km of the site[1]
Erythrotriorchis radiatus	Red Goshawk	-	E	-	Species or species habitat may occur within area[2]
Falco hypoleucos	Grey Falcon	-	V	-	Species or species habitat may occur within area[2]
Gallinago hardwickii	Latham's Snipe	-	-	7	Recorded within 10km of the site[1]
Glossopsitta pusilla	Little Lorikeet	V	-	23	Recorded within 10km of the site[1]
Grantiella picta	Painted Honeyeater	-	V	21	Species or species habitat known to occur within area[2]
Haematopus longirostris	Pied Oystercatcher	E	-	138	Recorded within 10km of the site[1]

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Notes & Source
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	-	95	Recorded within 10km of the site[1]
Hieraaetus morphnoides	Little Eagle	V	-	14	Recorded within 10km of the site[1]
Hirundapus caudacutus	White-throated Needletail	-	V	62	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Ixobrychus flavicollis	Black Bittern	V	-	9	Recorded within 10km of the site[1]
Lathamus discolor	Swift Parrot	E	CE	16	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit	-	V	-	Species or species habitat known to occur within area[2]
Lophoictinia isura	Square-tailed Kite	V	-	46	Recorded within 10km of the site[1]
Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)	-	E	-	Species or species habitat may occur within area[2]
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	-	1	Recorded within 10km of the site[1]
Neophema chrysostoma	Blue-winged Parrot	-	V	-	Species or species habitat likely to occur within area[2]
Neophema pulchella	Turquoise Parrot	V	-	2	Recorded within 10km of the site[1]
Nettapus coromandelianus	Cotton Pygmy-Goose	E	-	1	Recorded within 10km of the site[1]
Ninox connivens	Barking Owl	V	-	11	Recorded within 10km of the site[1]
Ninox strenua	Powerful Owl	V	-	213	Recorded within 10km of the site[1]
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	-	CE	85	Species or species habitat known to occur within area[2]
Pandion cristatus	Eastern Osprey	V	-	77	Recorded within 10km of the site[1]
Petroica boodang	Scarlet Robin	V	-	1	Recorded within 10km of the site[1]
Petroica phoenicea	Flame Robin	V	-	1	Recorded within 10km of the site[1]
Pluvialis fulva	Pacific Golden Plover	-	-	2	Recorded within 10km of the site[1]
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	-	2	Recorded within 10km of the site[1]
Ptilinopus magnificus	Wompoo Fruit-Dove	V	-	2	Recorded within 10km of the site[1]
Pycnoptilus floccosus	Pilotbird	-	V	-	Species or species habitat known to occur within area[2]
Rostratula australis	Australian Painted Snipe	-	E	-	Species or species habitat likely to occur within area[2]
Stagonopleura guttata	Diamond Firetail	-	V	-	Species or species habitat likely to occur within area[2]
Sternula nereis nereis	Australian Fairy Tern	-	V	-	Species or species habitat may occur within area[2]
Tringa nebularia	Common Greenshank	-	-	4	Recorded within 10km of the site[1]
Turnix maculosus	Red-backed Button-quail	V	-	2	Recorded within 10km of the site[1]
Tyto novaehollandiae	Masked Owl	V	-	20-	Recorded within 10km of the site[1]
Tyto tenebricosa	Sooty Owl	V	-	136	Recorded within 10km of the site[1]
Mammals					
Cercartetus nanus	Eastern Pygmy-possum	V	-	71	Recorded within 10km of the site[1]
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	7	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll	V	E	113	Recorded within 10km of the site[1]. Species or species habitat known to occur within area[2]
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	-	21	Recorded within 10km of the site[1]
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	-	28	Recorded within 10km of the site[1]
Miniopterus australis	Little Bent-winged Bat	V	-	75	Recorded within 10km of the site[1]
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	-	74	Recorded within 10km of the site[1]
Myotis macropus	Southern Myotis	V	-	50	Recorded within 10km of the site[1]
Notamacropus parma	Parma Wallaby	-	V	-	Species or species habitat likely to occur within area
Petauroides volans	Southern Greater Glider	E	E	12	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Petaurus australis	Yellow-bellied Glider	V	V	20	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Petaurus norfolcensis	Squirrel Glider	V	-	13	Recorded within 10km of the site[1]
Petrogale penicillata	Brush-tailed Rock-wallaby	-	V	-	Species or species habitat may occur within area
Phascolarctos cinereus	Koala	E	E	46	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Potorous tridactylus	Long-nosed Potoroo	V	V	6	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Pseudomys gracilicaudatus	Eastern Chestnut Mouse	V	-	3	Recorded within 10km of the site[1]
Pseudomys novaehollandiae	New Holland Mouse, Pookila	-	V	-	Species or species habitat known to occur within area[2]
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	137	Recorded within 10km of the site[1]Roosting known to occur within area[2]
Scoteanax rueppellii	Greater Broad-nosed Bat	V	-	26	Recorded within 10km of the site[1]
Vespadelus troughtoni	Eastern Cave Bat	V	-	14	Recorded within 10km of the site[1]
Herpetofauna					
Heleioporus australiacus	Giant Burrowing Frog	V	V	97	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Hoplocephalus bungaroides	Broad-headed Snake	E	V	1	Recorded within 10km of the site[1] Species or species habitat likely to occur within area[2]
Litoria aurea	Green and Golden Bell Frog	-	V	5	Species or species habitat known to occur within area[2]

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Notes & Source
Litoria brevipalmata	Green-thighed Frog	V	-	1	Recorded within 10km of the site[1]
Litoria littlejohni	Littlejohn's Tree Frog, Heath Frog	-	E	-	Species or species habitat likely to occur within area[2]
Mixophyes balbus	Stuttering Frog	E	V	4	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Mixophyes iteratus	Giant Barred Frog	E	E	2	Recorded within 10km of the site[1] Species or species habitat known to occur within area[2]
Pseudophryne australis	Red-crowned Toadlet	V	-	170	Recorded within 10km of the site[1]
Varanus rosenbergi	Rosenberg's Goanna	V	-	1	Recorded within 10km of the site[1]
Listed Migratory Species					
Migratory Terrestrial Birds					
Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo	-	-	1	Species or species habitat know occur within area[2]
Hirundapus caudacutus	White-throated Needletail	-	V	62	Species or species habitat known to occur within area[2]
Monarcha melanopsis	Black-faced Monarch	-	-	-	Species or species habitat known to occur within area[2]
Motacilla flava	Yellow Wagtail	-	-	-	Species or species habitat likely to occur within area[2]
Myiagra cyanoleuca	Satin Flycatcher	-	-	-	Species or species habitat known to occur within area[2]
Rhipidura rufifrons	Rufous Fantail	-	-	-	Species or species habitat known to occur within area[2]
Symposiachrus trivirgatus	Spectacled Monarch	-	-	-	Species or species habitat known occur within area[2]
Migratory Wetland Birds					
Actitis hypoleucos	Common Sandpiper	-	-	2	Species or species habitat known to occur within area
Calidris acuminata	Sharp-tailed Sandpiper	-	-	-	Species or species habitat known to occur within area
Calidris canutus	Red Knot, Knot	-	E	-	Species or species habitat known to occur within area
Calidris ferruginea	Curlew Sandpiper	E	CE	-	Species or species habitat known to occur within area
Calidris melanotos	Pectoral Sandpiper	-	-	-	Species or species habitat known to occur within area
Charadrius bicinctus	Double-banded Plover	-	-	-	Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	V	V	-	Species or species habitat likely to occur within area
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	-	-	7	Species or species habitat likely to occur within area
Gallinago megala	Swinhoe's Snipe	-	-	-	Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura	Pin-tailed Snipe	-	-	-	Foraging, feeding or related behaviour likely to occur within area
Limosa lapponica	Bar-tailed Godwit	-	-	37	Species or species habitat known to occur within area
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	-	CE	85	Species or species habitat known to occur within area
Numenius minutus	Little Curlew, Little Whimbrel	-	-	-	Foraging, feeding or related behaviour likely to occur within area
Numenius phaeopus	Whimbrel	-	-	18	Foraging, feeding or related behaviour known to occur within area
Pandion haliaetus	Osprey	-	-	77	Species or species habitat known to occur within area
Pluvialis fulva	Pacific Golden Plover	-	-	2	Foraging, feeding or related behaviour known to occur within area
Tringa brevipes	Grey-tailed Tattler	-	-	5	Foraging, feeding or related behaviour known to occur within area
Tringa nebularia	Common Greenshank, Greenshank	-	-	4	Species or species habitat likely to occur within area
Listed Marine Species					
Birds					
Apus pacificus	Fork-tailed Swift	-	-	-	Species or species habitat likely to occur within area[2]

Key:

V = Vulnerable M = Migratory A= Marine
E = Endangered CE = Critically Endangered

K = Known where there are confirmed records, specimens or otherwise verified sightings in any CMA subregion overlapping the search area

P = Predicted where there is high expectation by relevant experts that a species is likely to be present in any CMA subregion overlapping the search area, based on known presence of suitable habitat and distribution with adjoining subregions

1 – NSW BioNet Atlas, Office of Environment and Heritage (Accessed 7-07-2023).
2 - Commonwealth Protected Matters Search Tool, Department of the Environment (Accessed 7-07-2023)

4.2 Flora Survey

4.2.1 Vegetation Mapping & Delineation

A detailed walkover was undertaken over the site to characterise the floristic composition and structure of vegetation communities present. The majority of the site already been cleared with remaining vegetation predominantly made up of exotic weed species reestablishing within the site. The west of the site contained a drainage line which was infested with exotic weed species, with limited native species occurring in these areas.

Random Data Points were taken within the adjacent vegetation to confirm the vegetation within this area. The vegetation to the east of the site was in good condition and is consistent with PCT 3924 Sydney Coastal Upland Swamp Heath. This vegetation is also associated with commensurate with the BC and EPBC Act listed TEC Coastal Upland Swamp in the Sydney Basin Bioregion. The adjacent vegetation particularly the south east had relatively few eucalypt species with a dominant shrub layer containing *Banksia ericifolia* (Heath-leaved Banksia), *Leptospermum polygalifolium* (Tantoon), *Acacia longifolia, Acacia oxycedrus* (Spike Wattle) with a groundcover containing *Gleichenia dicarpa* (Pouched Coral Fern), *Lepidosperma laterale* (Variable Sword-sedge), Lepyrodia scariosa, Lomandra longifolia (Spiny-headed Mat-rush)

The extant vegetation within the development footprint has been described below. Refer to **Figure 3 and Table 3**. A summary of vegetation community by area is presented in **Table 3** below.

Table 3 Vegetation Description

Disturbed Vegetation	
PCT ID	NA
Condition Class	Low
Area within site	0.024 ha
Vegetation Formation / Class	N/A
Survey Effort	Detailed Walkover
Floristic Description	The vegetation across the site has been described as disturbed. It contains a high volume of exotic vegetation in these areas, with very minimal native species. The majority of the site has already been cleared with few remnant areas still containing vegetation along the boundaries of the site. The western boundary contains the most remnant vegetation along the drainage line which partially occurs within the lot of the proposal. This area is dominated by exotic species *Lantana camara* (Lantana), *Rubus fruticosus* (Blackberry complex), *Ligustrum sinense* (Small-leaved Privet), *Ageratina adenophora* (Crofton Weed). With other exotics including *Cinnamomum camphora* (Camphor Laurel), *Pinus sp.*, *Solanum nigrum* (Black-berry Nightshade), *Senecio madagascariensis* (Fireweed), *Paspalum urvillei* (Vasey Grass), *Cyperus Eragrostis* (Umbrella Sedge). The drainage line contains a small number of native species which include *Casuarina glauca* (Swamp Oak), *Glochidion ferdinandi* (Cheese Tree), *Pteridium esculentum* (Bracken) and *Acacia longifolia*.
Condition within Development Site	Poor
Justification for PCT Selection	N/A
Status	BC Act: No EPBC Act: No

Disturbed Vegetation



Plate 1. Disturbed Vegetation



53 GINDURRA RD, SOMERSBY

FIGURE 3: VEGETATION

Legend

- Site Boundary
- Cadastral Boundary
- Disturbed Vegetation

0 10 20 30 40

Metres

1:600

N W E S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, NSW Spatial Services (2023) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 29/08/2023 | Version: 1 | Z:\23033 - 53 Gindurra Rd, Somersby | This plan should not be relied upon for critical design dimension.

4.3 Fauna Survey

The following section provides the fauna results from the subject site survey. A total of seven (7) fauna species were observed opportunistically during the survey period. A full list of the fauna species recorded within the site is provided as **Appendix 2**.

4.3.1 Avifauna

Species observed during the diurnal surveys include *Anthochaera chrysoptera (Little Wattlebird)*, *Dacelo novaeguineae* (Laughing Kookaburra), *Manorina melanocephala* (Noisy Miner), *Malurus cyaneus* (Superb Fairywren), Grallina cyanoleuca (Magpie Lark), *Sericornis frontalis* (White-Browed Scrubwren) and *Trichoglossus moluccanus* (Rainbow Lorikeet)

4.3.2 Herpetofauna

No herpetofauna were observed within the subject site.

4.3.3 Mammals

No mammals were observed within the subject site.

4.4 Habitat Survey

Arboreal and Terrestrial Habitat

Fauna habitat surveys results are summarised as:

- No hollow bearing trees were present within the site.
- No burrows or dens;
- The native trees provide seasonal blossom for nectar feeding species, and other bird species may forage for insects among the trees;
- The ground cover was sparse across the majority of the site
- Vegetation within the drainage line to the west of the site has the potential to provide habitat for small terrestrial fauna in the form of foraging or shelter; and

Watercourses

There was one disturbed drainage line to the west of the site.

Connectivity

The site provides minimal connectivity within the broader landscape as it has previously been cleared and contains very few canopy species. The only vegetation within the site occurs along its western boundary, however this is in low quality and contains minimal canopy species. As the site has already been cleared, the proposal will not impact connectivity in the local area.

Further to this, there is high quality continuous vegetation that runs along the northern and eastern boundaries of the site, these areas provide consistent north south and east west connectivity within the local area.

5 Impact Assessment

The following section provides an overview of the potential direct and indirect impacts associated with the proposal. This overview has been used to inform a likelihood of occurrence and potential for impacts to occur to threatened species, populations and ecological communities. In such instances, this has determined the need for further Test of Significance (5-part test).

5.1 Potential Impacts

Based on the ecological survey results over the subject site, the following direct and indirect impacts have been generated to inform impact assessment related to the proposal.

Direct Impacts

There are no direct impacts associated with the proposal, as the site has predominantly been cleared.

Flora

No threatened flora species were detected during fieldwork.

Fauna

No threatened fauna species were detected during fieldwork.

Habitat

No hollow bearing trees will be impacted under this proposal.

Indirect Impacts

The proposal may result in the following indirect impacts associated with the development:

- Introduction and dispersal of exotic flora species from machinery
- Potential for increased sediment flows during construction if erosion and nutrient control devices are not installed to industry best practice and maintained for the duration of construction / soil stabilisation works.
- Contamination to adjacent vegetation if overland water flow is not correctly managed. A Storm Water Management Plan has been developed to mitigate the risks associated with the proposal.

  The proposed water cycle management arrangements (refer to **Appendix 6**) sees run off captured from the batching plant area on an impervious hardstand which is then conveyed to a combined detention and bioretention basin that is to be lined with an impermeable liner material, to prevent any egress of dirty water to stormwater drains, groundwater sources and receiving waters.
- The plan also includes a water treatment area for the batching plant which includes wedge pits and a settling tank with measures in place for overflow events to be channelled to grit traps and filtered into the proposed detention/bioretention basin. External water coming from outside the site is managed through an external clean water diversion drain which runs along the northern and eastern boundaries of the site before being discharged into storm water.

5.2 Threatened Species & Communities Likelihood of Occurrence Assessment

Threatened flora and fauna species (listed under the BC Act and/or EPBC Act) that have been gazetted and recorded within a 10 kilometres radius of the site have been considered within the assessment contained in **Appendix 3**. Each species / community is considered for its likelihood to occur on the site and potential for impact arising from the proposal. Where a potential for impact is considered, the entity has been nominated for further assessment under a Test of Significance (ToS) in **Appendix 4**.

'**Species / Community**' – Lists each threatened species / TEC known from the locality (10 km radius). The status and number of records along with source and notes for each threatened entity under the BC Act and the EPBC Act are also provided.

'**Habitat / Species Descriptions**' – for up to date threatened species profiles including habitat descriptions and other key ecological information reference is made to the following online resources:

- NSW OEH Threatened Species Profile Search - http://www.environment.nsw.gov.au/threatenedSpeciesApp/
- Commonwealth Biodiversity: Species Profile and Threats Database (SPRAT) - http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

'**Likelihood of Occurrence on Site**' – Assesses the likelihood of each locally recorded species and TEC to occur within the Site, using knowledge of each species' habitat and lifecycle requirements and with regard the habitat types present within the Site, results of the literature review and database searches and field investigations. The location and number of records of the species (NSW Bionet Species Sightings Search were also considered in determining probability of occurrence.

'**Potential for Impact**' – Assesses the likelihood of impacts to each species / community that would result from the proposed development, considering direct and indirect short and long-term impacts.

Database searches were conducted of the NSW Bionet Atlas Species Sightings Search (7-07-2023) and Commonwealth Protected Matters Search Tool (7-07-2023).

'Test of Significance Species' –

One (1) threatened ecological community has been assessed within the likelihood of occurrence and impact table **(Appendix 3)** to have the potential to be impacted under this proposal. This TEC was the Coastal Upland Swamp in the Sydney Basin Bioregion which is listed under the BC Act as Endangered (E). This community was considered under the 5-Part Test of Significance (BC Act) **(Appendix 4).**

'Matters of National Environmental Significance' –

One (1) threatened ecological community has been assessed within the likelihood of occurrence and impact table (Appendix 3) to have the potential to be impacted under this proposal. This TEC was the Coastal Upland Swamp in the Sydney Basin Bioregion which is listed under the EPBC Act as Endangered (E). This community was considered under the EPBC Matters of National Environmental Significance (MNES) **(Appendix 5).**

Note: Pelagic marine species (bird, reptile, fish, mammal) recorded on the Protected Matters Search have not been listed or assessed herewith.

5.3 Other Legislative Considerations

5.3.1 Key Threatening Processes

A Key Threatening Process (KTP) is defined in the BC Act as a process that "adversely affects threatened species or ecological communities, or it could cause species or ecological communities that are not threatened to become threatened." They are listed under Schedule 4 of the BC Act and may adversely affect threatened species, populations or ecological communities or could cause species, populations or ecological communities that are not threatened to become threatened.

Seven (7) KTP's have the potential to operate within the subject site and require consideration under the site proposal:

1. Competition and grazing by the feral European Rabbit (*Oryctolagus cuniculus*)
2. Invasion of native plant communities by exotic perennial grasses
3. Introduction and establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae
4. Invasion, establishment and spread of Lantana
5. Infection of native plants by *Phytophthora cinnamomi*
6. Predation by the European Red Fox (*Vulpes vulpes*)
7. Predation by the Feral Cat (*Felis catus*)

Competition and grazing by the feral European Rabbit (Oryctolagus cuniculus)

No signs of this KTP were detected during surveys, however, there is no suitable foraging habitat within the site for the species.

It is considered this KTP is likely to continue to operate in the locality, however the proposal is unlikely to generate additional significant foraging areas for this species. As such the proposal is unlikely to contribute to an increase in abundance and activity of the European Rabbit.

Invasion of native plant communities by exotic perennial grasses

This KTP already exists based on the presence of exotic grass species within the site. The KTP was observed throughout the subject site in low-moderate levels where vegetation remains. As the site has already been cleared, it is unlikely additional works will increase the operation of this KTP within the site beyond current levels.

Introduction and establishment of Exotic Rust Fungi of the order *Pucciniales pathogenic* on plants of the family *Myrtaceae;*

The exotic rust pathogen of the order Pucciniales spores can be dispersed by wind, water-splash, on plant material including seed, on people and their clothing and equipment and has been known to infect plants of the family Myrtaceae. No evidence of Myrtle rust fungus was observed within the site during field surveys.

Invasion, establishment and spread of *Lantana camara* (Lantana)

This species was observed within the subject site during field surveys in areas of high disturbance. As the site has already been cleared, it is unlikely additional works will increase the operation of this KTP within the site beyond current levels.

Infection of native plants by *Phytophthora cinnamomi.*

The soil born pathogen *Phytophthora cinnamomi* spreads in plant roots and has been known to infect a number of native plants. There was no evidence observed of *P. cinnamomi* impact within the site

during the survey period. Given the proposal will increase vehicle / machinery movements within the subject site during construction and operations, it is possible that contamination of the subject site with the pathogen may occur. Due to this risk of contamination, it is considered the proposal has potential to contribute to this KTP, but industry standard decontamination procedures will reduce the risk of this KTP impacting the surrounding vegetation communities.

Predation by the European Red Fox *Vulpes vulpes* (Linnaeus, 1758)

No signs of this KTP were detected during surveys and the installation of a perimeter fence is likely to exclude the species from the site. It is considered this KTP is likely to continue to operate in the locality, however the proposal is unlikely to generate additional significant foraging areas for this species. As such the proposal is unlikely to contribute to an increase in abundance and activity of the European Red Fox.

Predation by the Feral Cat *Felis catus* (Linnaeus, 1758)

No signs of this KTP were detected during surveys, however, marginal suitable foraging habitat occurs within the subject site. This KTP is able to operate in all types of environments and conditions, with the development unlikely to increase or decrease its ability to hunt within the area. As such it is considered that while this KTP is likely to operate within the subject site, the proposal is unlikely to contribute to an increase in abundance and activity of the Feral Cat.

5.3.2 SEPP (Biodiversity and Conservation) 2021

The *State Environmental Planning Policy (Biodiversity and Conservation) 2021* commenced on 1 March 2022 and combines 11 separate SEPPs into one consolidated document. SEPP (Biodiversity and Conservation) 2021 replaces and repeals those consolidated SEPPs, which includes amongst others, both the SEPP (Koala Habitat protection) 2020 and SEPP (Koala Habitat protection) 2021. The Biodiversity and Conservation SEPP 2021 provides the existing provisions as separate chapters.

The principles of the Biodiversity and Conservation SEPP 2021 are unchanged from the previous Koala SEPP 2020 and 2021 and aim to:

- Encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline.
- Help reverse the decline of koala populations by ensuring koala habitat is properly considered during the development assessment process.
- Provide a process for councils to strategically manage koala habitat through the development of koala plans of management.

The Biodiversity and Conservation SEPP 2021 reflects the policy framework of previous Koala SEPP 2020 (Chapter 3) and 2021 (Chapter 4) for Local Government Areas (LGA) in NSW. At this stage:

- In nine of these LGAs – Metropolitan Sydney (Blue Mountains, Campbelltown, Hawkesbury, Ku-Ring-Gai, Liverpool, Northern Beaches, Hornsby, Wollondilly) and the Central Coast LGA – **Chapter 4** of the Biodiversity and Conservation SEPP 2021 applies to **all zones**.
- In all other identified LGAs, **Chapter 3** of the Biodiversity and Conservation SEPP 2021 **applies** to land zoned RU1 Primary Production, RU2 Rural Landscape or RU3 Forestry.

The SEPP applies in accordance with *Part 4.2 Clause 4.9 – Development assessment process – no approved koala plan of management for land.*

(1) This clause applies to land to which this policy applies if the land –

a) Has an area of at least 1 hectare (including adjoining land within the same ownership), and

The lot in which the site occurs is less than 1 ha.

b) Does not have an approved koala plan of management applying to the land.

No koala plan of management occurs within the Central Coast Council LGA.

As the lot is less than 1 ha and the site has already been cleared, the proposal does not need to be assessed under the SEPP.

5.3.3 Commonwealth EPBC Act

An EPBC Act Protected Matters Search (accessed 7-07-2023) was undertaken to generate a list of those Matters of National Environmental Significance (MNES) from within 10 km of the subject site. An assessment of those MNES relevant to biodiversity has been undertaken in accordance with EPBC Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (DoE, 2013). The Matters of National Environmental Significance protected under national environment law include:

- Listed threatened species and communities;
- Listed migratory species;
- Ramsar wetlands of international importance;
- Commonwealth marine environment;
- World heritage properties;
- National heritage places;
- The Great Barrier Reef Marine Park;
- Nuclear actions; and
- A water resource, in relation to coal seam gas development and large coal mining development.

Listed Threatened Species and Communities

A total of 100 threatened species and 6 threatened ecological communities listed under the EPBC Act have been recorded on the protected matters search. A likelihood of occurrence assessment has been completed in **Appendix 3.**

The likelihood of occurrence assessment identified *Coastal Upland Swamp in the Sydney Basin Bioregion* TEC has the potential to be impacted by the proposal. An assessment of significance for was completed (see **Appendix 5),** and determined that as long as correct mitigation measures are followed, it is unlikely to be indirectly impacted.

Listed Migratory Species

The protected matters search nominated 60 migratory species or species habitat that may occur with the 10km site buffer search area. Although migratory species may intermittently be present on site, no habitat on the site is critical to the survival of a listed migratory species. Therefore, it is unlikely that the proposal over the subject site will impact migratory species.

Wetlands of International Significance (declared Ramsar wetlands):

The subject site is not located in close proximity to a wetland of international significance or declared Ramsar wetland.

Commonwealth Marine Areas:

The site is not part of or within close proximity to any Commonwealth Marine Area.

World Heritage Properties:

The site is not a World Heritage area and is not in close proximity to any such area.

National Heritage Places:

The site is not a National Heritage area and is not in close proximity to any such area.

Great Barrier Reef Marine Parks:

The site is not part of or within close proximity to any Great Barrier Reef Marine Park.

Nuclear Actions:

The proposal over the site is not and does not form part of a nuclear action.

Water Resources in relation to Coal Mining and CSG:

The proposal over the site does not form part of a coal mining and/or CSG proposal.

Summary

In summary the proposed action is unlikely to have an impact to MNES assessed in this report and as such Commonwealth referral under the EPBC Act is not required.

6 Recommendations

The following recommendations have been generated with due consideration of the proposed disturbance within the site and to mitigate potential indirect impacts to occur outside of the site.

General Mitigation Measures for the Construction Phase

While it is noted that as a result of the approved CDC only a limited scope of construction works are required to enable the operation of the concrete batching plant, the following mitigation measures have been provided for implementation to ensure best practice environmental management throughout the construction phase, including appropriate location and management of construction materials:

- All contractors will be specifically advised of the designated work area. The following activities are not to occur outside of designated work areas to minimise environmental impacts:
- Storage and mixing of materials;
- Liquid disposal;
- Machinery repairs and/or refuelling;
- Combustion of any material; and
- Any filling or excavation including trenching, topsoil skimming and/or surface excavation.
- All construction vehicles/machinery are to use the designated access from main roads. Speeds will be limited to reduce the potential of fauna strike and to reduce dust generation;
- Plant and machinery would be cleaned of any foreign soil and seed prior to being transported to the site to prevent the potential spread of weeds and *Phytophthora cinnamomi*;
- If machinery is transported from an area of confirmed infection of *Phytophthora cinnamomi* to the site, stringent wash down must be completed before leaving the area, removing all soil and vegetative material from cabins, trays, and under carriages;
- All liquids (fuel, oil, cleaning agents, etc.) will be stored appropriately and disposed of at suitably licensed facilities. Spill management procedures will be implemented as required;
- Rubbish will be collected and removed from the site; and
- During the creation of access tracks, erosion or sediment measures will be considered and installed as required.

Erosion and Sedimentation Control

Erosion and sediment control measures shall be implemented in accordance with the approved Sediment and Erosion control plan to be prepared prior to commencement of civil works on site. In general, erosion and sediment control measures include:

- Identification of potential erosion areas;
- Installation and maintenance of flow, erosion, sediment and nutrient control within the site during construction ahead of pavement and kerb establishment;
- Separation of 'dirty' construction water from the 'clean' natural overland flow water;
- The flow of surface water from the site into adjacent vegetation should be prevented;
- Sediment controls should be in place to prevent foreign material entering adjacent vegetation.
- All water that falls on the site or is utilised in the production process will need to be managed on site as per the storm water management plans and council water management guidelines.
- Coordinated work practices aimed at minimising land disturbance;
- Minimise vegetation disturbance to surrounding retained vegetation; and

- Routine site inspections of drains, channels, sediment control structures and water quality.

Ensure the extent of clearing is clearly marked in the field prior to the commencement of vegetation clearing. Ensure that only the minimum vegetation clearing required is undertaken.

Site Establishment & Pre-clearance works

The following recommendations are provided to mitigate potential impacts on all biodiversity values within the site with particular focus on any species, population or ecological community listed under the BC Act and/or EPBC Act:

- The extent of vegetation clearing is to be clearly identified on construction plans.
- Clearing limits are to be demarcated with highly visible flicker tape to ensure clearing does not extend beyond the proposed clearing area.

Weed Control

- Control the establishment of weeds on the site which could spread into adjacent native vegetation

Operational Mitigation Measures – Water Cycle Management

- To reduce the likelihood of the proposal having indirect impacts on the Coastal Upland TEC, groundwater and receiving waters the proposed stormwater management arrangements, as detailed at **Appendix 6**, shall be completed prior to the commencement of concrete batching activities on site.

7 Conclusion

MJD Environmental has been engaged by WPP Planning on behalf of ATB Morton Pty Ltd to prepare a Biodiversity Assessment (including a Test of Significance) to support the requirements of a designated Development Application (DA) to be assessed by Central Coast Council for a proposed concrete batching plant at Lot 12 in DP 1189679, 53 Gindurra Road, Somersby, hereafter referred to as the 'Site'.

The objective of the assessment is also to examine the likelihood of the proposal having a significant impact on any threatened species, populations or ecological communities listed under the *NSW Biodiversity Conservation Act 2016* (BC Act). This assessment recognises the relevant requirements of the *EP&A Act 1979* as amended by the *NSW Environmental Planning and Assessment Amendment Act 1997*. Preliminary assessment was also made with regard to those threatened entities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

An appraisal of the site to determine the appropriate assessment pathway under the BC Act determined the proposal on site does not trigger a Biodiversity Offset Scheme (BOS) entry threshold and on this basis, only a Test of Significance is required including application of the 5-part test.

The site has previously been cleared, the remnant vegetation within the site was described to not be consistent with any native PCT. The proposal will remove a maximum of:

- 0.024 ha of Disturbed vegetation

Flora

No threatened flora species listed under the BC Act and / or EPBC Act were recorded on site during survey efforts.

Fauna

No threatened fauna species listed under the BC Act and / or EPBC Act were recorded on site during survey efforts.

Threatened Ecological Communities

No Threatened Ecological Communities (TECs) listed under the BC Act and / or EPBC Act were recorded on site during survey efforts. However, the BC Act and EPBC Act listed Endangered TEC *Coastal Upland Swamp in the Sydney Basin Bioregion* occurs adjacent to the site. The indirect impact on these communities were assessed via a Test of Significance (refer to **Appendix 4**) and a Matters of National Environmental Significance (MNES) assessment (**Appendix 5**).

It is noted that the proposed water cycle management arrangements (refer to **Appendix 6**) sees run off captured from the batching plant area on an impervious hardstand which is then conveyed to a combined detention and bioretention basin that is to be lined with an impermeable liner material, to prevent any egress of dirty water to stormwater drains, groundwater sources and receiving waters. Providing such arrangements form part of the project approval, the proposal is unlikely to have an indirect impact on the adjacent Coastal Upland Swamp TEC.

No hollow bearing trees will be impacted under this proposal.

The assessment concluded that the proposal was unlikely to have a significant impact on the threatened entities assessed.

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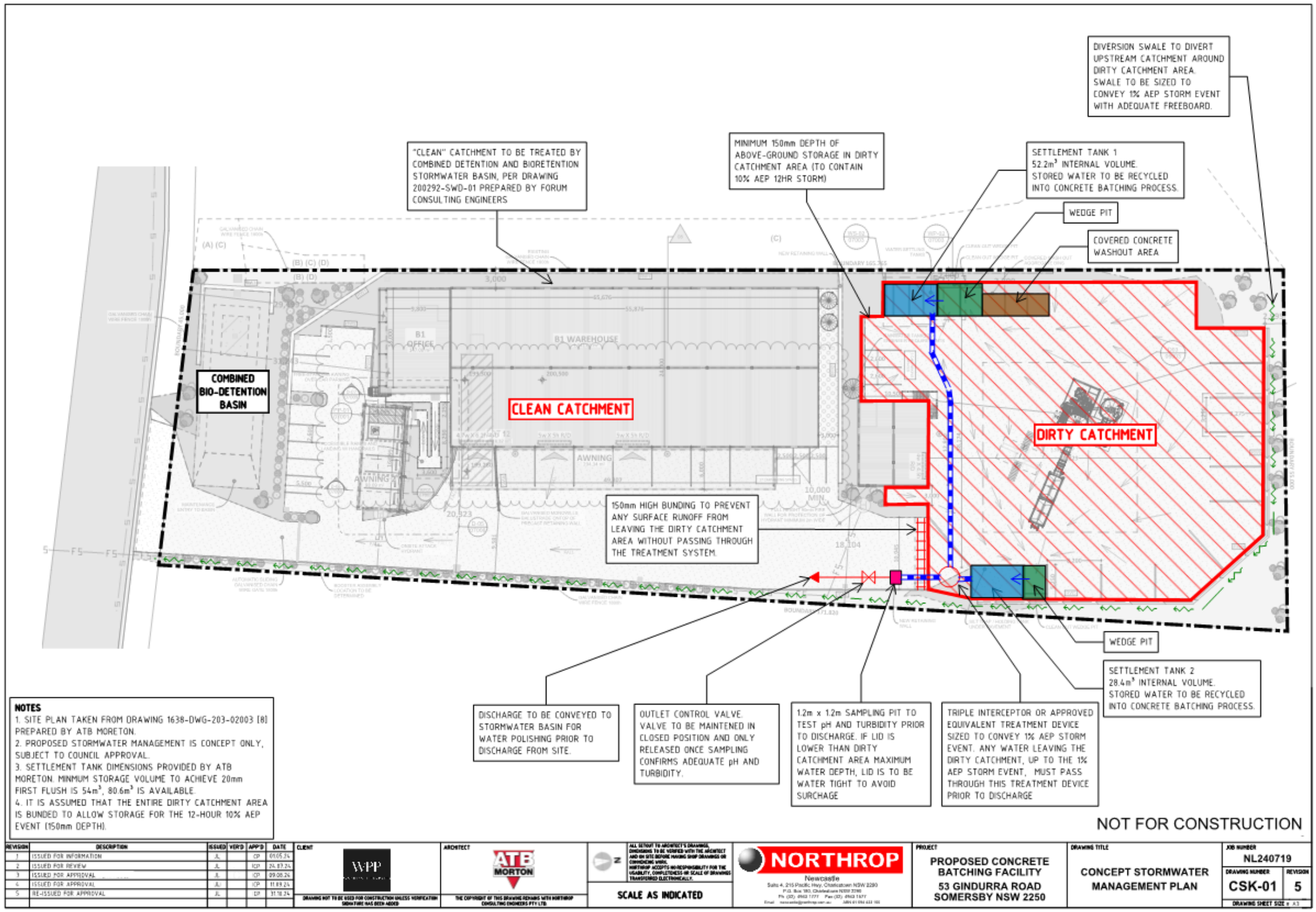
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Appendix 1 Plan of Proposal


DIVERSION SWALE TO DIVERT UPSTREAM CATCHMENT AROUND DIRTY CATCHMENT AREA. SWALE TO BE SIZED TO CONVEY 1% AEP STORM EVENT WITH ADEQUATE FREEBOARD.
"CLEAN" CATCHMENT TO BE TREATED BY COMBINED DETENTION AND BIORETENTION STORMWATER BASIN, PER DRAWING 200292-SWD-01 PREPARED BY FORUM CONSULTING ENGINEERS
MINIMUM 150mm DEPTH OF ABOVE-GROUND STORAGE IN DIRTY CATCHMENT AREA (TO CONTAIN 10% AEP 12HR STORM)
SETTLEMENT TANK 1 52.2m³ INTERNAL VOLUME. STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
WEDGE PIT
COVERED CONCRETE WASHOUT AREA
COMBINED BIO-DETENTION BASIN
CLEAN CATCHMENT
DIRTY CATCHMENT
B1 WAREHOUSE
B1 OFFICE
AWNING
150mm HIGH BUNDING TO PREVENT ANY SURFACE RUNOFF FROM LEAVING THE DIRTY CATCHMENT AREA WITHOUT PASSING THROUGH THE TREATMENT SYSTEM.
WEDGE PIT
SETTLEMENT TANK 2 28.4m³ INTERNAL VOLUME. STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
DISCHARGE TO BE CONVEYED TO STORMWATER BASIN FOR WATER POLISHING PRIOR TO DISCHARGE FROM SITE.
OUTLET CONTROL VALVE. VALVE TO BE MAINTENED IN CLOSED POSITION AND ONLY RELEASED ONCE SAMPLING CONFIRMS ADEQUATE pH AND TURBIDITY.
1.2m x 1.2m SAMPLING PIT TO TEST pH AND TURBIDITY PRIOR TO DISCHARGE. IF LID IS LOWER THAN DIRTY CATCHMENT AREA MAXIMUM WATER DEPTH, LID IS TO BE WATER TIGHT TO AVOID SURCHAGE
TRIPLE INTERCEPTOR OR APPROVED EQUIVALENT TREATMENT DEVICE SIZED TO CONVEY 1% AEP STORM EVENT. ANY WATER LEAVING THE DIRTY CATCHMENT, UP TO THE 1% AEP STORM EVENT, MUST PASS THROUGH THIS TREATMENT DEVICE PRIOR TO DISCHARGE
NOTES
1. SITE PLAN TAKEN FROM DRAWING 1638-DWG-203-02003 [8] PREPARED BY ATB MORETON.
2. PROPOSED STORMWATER MANAGEMENT IS CONCEPT ONLY, SUBJECT TO COUNCIL APPROVAL.
3. SETTLEMENT TANK DIMENSIONS PROVIDED BY ATB MORETON. MINMUM STORAGE VOLUME TO ACHIEVE 20mm FIRST FLUSH IS 54m³, 80.6m³ IS AVAILABLE.
4. IT IS ASSUMED THAT THE ENTIRE DIRTY CATCHMENT AREA IS BUNDED TO ALLOW STORAGE FOR THE 12-HOUR 10% AEP EVENT (150mm DEPTH).
NOT FOR CONSTRUCTION
REVISION 1 DESCRIPTION ISSUED FOR INFORMATION JL CP 01.05.24
REVISION 2 DESCRIPTION ISSUED FOR REVIEW JL ICP 24.07.24
REVISION 3 DESCRIPTION ISSUED FOR APPROVAL JL CP 09.08.24
REVISION 4 DESCRIPTION ISSUED FOR APPROVAL JL CP 11.09.24
REVISION 5 DESCRIPTION RE-ISSUED FOR APPROVAL JL DP 31.10.24
CLIENT WPP
ARCHITECT ATB MORTON
SCALE AS INDICATED
NORTHROP Newcastle
PROJECT PROPOSED CONCRETE BATCHING FACILITY 53 GINDURRA ROAD SOMERSBY NSW 2250
DRAWING TITLE CONCEPT STORMWATER MANAGEMENT PLAN
JOB NUMBER NL240719
DRAWING NUMBER CSK-01
REVISION 5

Appendix 2 Flora & Fauna Species List

Fauna List	
Scientific Name	**Common Name**
Anthochaera chrysoptera	Little Wattlebird
Dacelo novaeguineae	Laughing Kookaburra
Manorina melanocephala	Noisy Miner
Malurus cyaneus	Superb Fairywren
Grallina cyanoleuca	Magpie Lark
Sericornis frontalis	White-Browed Scrubwren
Trichoglossus moluccanus	Rainbow Lorikeet

Flora List			
Scientific Name	**Common Name**	**Onsite**	**Adjacent Vegetation**
Acacia longifolia	Sydney Golden Wattle	x	
Acacia oxycedrus	Spike Wattle		x
Acacia ulicifolia	Prickly Moses		x
Actinotus minor	Lesser Flannel Flower		x
*Ageratina adenophora**	Crofton Weed		x
*Asparagus aethiopicus**	Ground Asparagus	x	
Banksia ericifolia	Heath-leaved Banksia		x
*Bidens pilosa**	Cobbler's Pegs	x	
Boronia ledifolia	Sydney boronia		x
Casuarina glauca	Swamp Oak		x
Caustis flexuosa	Curly Wig		x
*Cinnamomum camphora**	Camphor Laurel	x	
*Cirsium vulgare**	Spear Thistle	x	
*Conyza canadensis**		x	
*Cyperus Eragrostis**	Umbrella Sedge	x	
Darwinia fascicularis			x
Epacris pulchella	Wallum Heath		x
Eucalyptus piperita	Sydney Peppermint		x
Eucalyptus punctata	Grey Gum		x
Gahnia clarkei	Tall Saw-sedge		x
Gleichenia dicarpa	Pouched Coral Fern		x
Glochidion ferdinandi	Cheese Tree	x	x
Hakea dactyloides	Finger Hakea		x
Hibbertia fasciculata			x
*Hypochaeris radicata**	Catsear	x	
*Lantana camara**	Lantana	x	

Lepidosperma laterale	Variable Sword-sedge		x
Lepidosperma limicola	Razor Sedge		x
Leptospermum polygalifolium	Tantoon		x
Lepyrodia scariosa			x
*Ligustrum sinense**	Small-leaved Privet	x	
Lomandra longifolia	Spiny-headed Mat-rush		x
Panicum simile	Two-colour Panic		x
*Paspalum urvillei**	Vasey Grass		x
Persicaria decipiens	Slender Knotweed	x	
*Phytolacca octandra**	Inkweed	x	
Pimelea linifolia	Slender Rice Flower		x
*Pinus Sp.**		x	
*Plantago lanceolata**	Lamb's Tongues	x	
Pteridium esculentum	Bracken		x
Pultenaea divaricata	Sandpaper Bush-pea		x
*Rubus fruticosus**	Blackberry complex	x	
*Senecio madagascariensis**	Fireweed	x	
*Setaria parviflora**	Slender Pigeon Grass	x	
*Solanum nigrum**	Black-berry Nightshade	x	
*Trifolium repens**	White Clover	x	

* = non-native species

Appendix 3 Likelihood of Occurrence and Impact Assessment

Likelihood of Occurrence and Impact Assessment

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Threatened Ecological Communities								
Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions		E	-	K	Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions is currently known from parts of the Local Government Areas of Sutherland, Wollongong, Shellharbour, Kiama, Shoalhaven, Eurobodalla and Bega Valley but may occur elsewhere in these bioregions. It is known to occur within a number of conservation reserves, including Royal, Seven Mile Beach, Conjola, Meroo, Murramarang, Eurobodalla and Biamanga National Parks, though these areas are often exposed to degradation by visitor overuse due to their proximity to popular beaches and camping areas.	Low. Not recorded within the site	Low	No
Blue Gum High Forest in the Sydney Basin Bioregion		CE	-	K	It only occurs in small remnants of which the largest is less than 20 hectares. The remnants mainly occur in the Lane Cove, Willoughby, Ku-ring-gai, Hornsby, Baulkham Hills, Ryde and Parramatta local government areas. The community also occurs on soils associated with localised volcanic intrusions, 'diatremes' .	Low. Not recorded within the site	Low	No
Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	This community occurs in the intertidal zone along the NSW coast.	Low. Not recorded within the site	Low	No
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community		-	E	K	The ecological community occurs in sub-tropical, sub-humid and temperate climatic zones from Curtis Island, north of Gladstone, in Queensland to Bermagui in southern New South Wales. The ecological community occurs in coastal catchments, mostly at elevations of less than 20 m above sea-level (ASL) that are typically found within 30 km of the coast. However, this distance varies by catchment	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland		-	E	L	The ecological community is associated with forested palustrine wetlands, or swamp forests, found in the temperate to subtropical coastal valleys of Australia's east coast, and occurs between the Great Dividing Range and the coastline from near Gladstone in Queensland, through to the south coast of New South Wales.	Low. Not recorded within the site	Low	No
Coastal Upland Swamp in the Sydney Basin Bioregion		E	E	K	Coastal Upland Swamps occur primarily on impermeable sandstone plateaux with shallow groundwater aquifers in the headwaters and impeded drainage lines of streams, and on standstone benches with abundant seepage moisture. The Coastal Upland Swamp is generally associated with soils that are acidic and vary from yellow to grey mineral sandy loams with a shallow organic horizon to highly organic spongy black peats with pallid subsoils.	Moderate. This TEC occurs to the east of the site. It will not be directly impacted however, further assessment is required to determine potential indirect impacts.	Moderate	Yes
Duffys Forest Ecological Community in the Sydney Basin Bioregion		E	-	K	Extensively fragmented distribution, occurring primarily within Warringah, and Ku-ring-gai Local Government Areas (LGA) with minor occurrences in the Pittwater (Ingleside and Bilgola Plateau), Manly (Seaforth Oval) and Hornsby (South Turramura and Epping North) LGAs. Occurs in association with shale lenses and lateritic soils in Hawkesbury Sandstone. Rock outcrops are usually absent from this community, except on the fringes, where it adjoins typical sandstone vegetation, generally characterised by extensive sandstone outcrops.	Low. Not recorded within the site	Low	No
Eastern Suburbs Banksia Scrub in the Sydney Basin Bioregion		CE	-	K	Predominantly a sclerophyllous heath or scrub community although, depending on site topography and hydrology, some remnants contain small patches of woodland, low forest or limited wetter areas. Occurs on disjunct patches of nutrient poor aeolian (wind blown) dune sand. The community possesses soil seed bank and has been observed to regenerate naturally on cleared sand where the soil profile remains intact.	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Floristic composition and structural diversity is influenced by the size and disturbance history of the remnant.			
Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	This community is known from along the majority of the NSW coast.Associated with coastal areas subject to periodic flooding and in which standing fresh water persists for at least part of the year in most years. Typically occurs on silts, muds or humic loams in low-lying parts of floodplains, alluvial flats, depressions, drainage lines, backswamps, lagoons and lakes but may also occur in backbarrier landforms where floodplains adjoin coastal sandplains. Generally occur below 20 m elevation on level areas.	Low. Not recorded within the site	Low	No
Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions		E	-	K	Occurs between Muswellbrook, Beresfield, Mulbring and Cessnock in the Lower Hunter in the Sydney Basin and North Coast bioregions. It has been recorded from the Maitland, Cessnock, Port Stephens, Muswellbrook and Singleton LGAs, but may occur elsewhere in these bioregions. Probably less than 500 hectares of this community remains.	Low. Not recorded within the site	Low	No
Kincumber Scribbly Gum Forest in the Sydney Basin Bioregion		CE	-	K	Kincumber Scribbly Gum Forest is restricted to a small area on the Bouddi Peninsula on the NSW Central Coast south of Kincumber. It occurs in the Gosford LGA. The total remaining area of Kincumber Scribbly Gum Forest to thought to be less than 100 ha. within an area of about 4 km2	Low. Not recorded within the site	Low	No
Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Littoral Rainforest occurs only on the coast and is found at locations in the NSW North Coast Bioregion, Sydney Basin Bioregion and South East Corner Bioregion. Littoral Rainforest is very rare and occurs in many small stands. Occurs on sand dunes and on soil derived from underlying rocks. Stands on headlands exposed to strong wind-action may take the form of dense, wind-pruned thickets. Most stands occur within two	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					kilometres of the sea, though are occasionally found further inland within reach of the maritime influence.			
Low woodland with heathland on indurated sand at Norah Head		E	-	K	The community occurs on indurated (hardsetting) sand with a range of local variation in drainage conditions. The community has been reported from areas in the Local Government Area of Wyong, principally east of Wilfred Barrett Drive near Norah Head. The Scientific Committee noted that general information on the Low woodland with heathland community is contained in the draft Vegetation survey for Wamberal Lagoon Nature Reserve, Wyrrabalong National Park and Munmorah State Conservation Area, April, 1997, prepared for the National Parks and Wildlife Service by Robert Payne. The community on indurated (hardsetting) sand is found nowhere else in the area, other sites having been destroyed by urban expansion, and is probably the only site left of this nature in the Sydney Basin Bioregion, according to Payne (1997).	Low. Not recorded within the site	Low	No
Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions		E	-	K	Restricted to a range of approximately 65 km by 35 km centred on the Cessnock - Beresfield area in the Central and Lower Hunter Valley. Within this range, the community was once widespread. A fragmented core of the community still occurs between Cessnock and Beresfield. Remnants occur within the Local Government Areas of Cessnock, Maitland, Singleton, Lake Macquarie, Newcastle and Port Stephens but may also occur elsewhere within the bioregion	Low. Not recorded within the site	Low	No
Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions		E	-	K	Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions is an ecological community of subtropical rainforest and some related, structurally complex forms of dry rainforest.	Low. Not recorded within the site	No	No
Pittwater and Wagstaffe Spotted Gum Forest in the Sydney Basin Bioregion		E	-	K	Occurs entirely within the Pittwater Local Government Area, on the Barrenjoey Peninsula and Western Pittwater Foreshores. Remnants are typically small and	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					on private property, however there are a few remnants in Council reserves and one remnant within Ku-ring-gai Chase NP. Occurs in association with shale derived soils with high rainfall on lower hillslopes on the Narrabeen Group - Newport Formations on the Barrenjoey Peninsula and western Pittwater Foreshores. Assemblage diversity must take into account species likely to be present in the soil seedbank. Structural form is typically open-forest but may now exist as woodland or remnant trees. Floristic composition and structural diversity influenced by the remnant size, disturbance history and fire severity and frequency.			
Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion	-	E	L		Posidonia australis is a sub-tidal meadow-forming seagrass species. The nationally-listed ecological community is the assemblage of plants, animals and micro-organisms associated with seagrass meadows dominated by Posidonia australis occurring in the warm temperate Manning Shelf and Hawkesbury Shelf bioregions, on the east coast of Australia. The ecological community typically occurs in subtidal waters at depths ranging from less than 1m to 10 m, on sand and silty mud substrate. The Posidonia australis Seagrass Meadows of the Manning-Hawkesbury Ecoregion ecological community occurs mostly within the sheltered environments of permanently open estuaries, from Wallis Lake to Port Hacking. Posidonia australis dominated seagrass meadows occurring around islands within the geographical range are also included within the nationally-listed ecological community	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Quorrobolong Scribbly Gum Woodland in the Sydney Basin Bioregion		E	-	K	Currently known from only a small area between Quorrobolong and Mulbring in the Cessnock local government area, but may also occur elsewhere within the Hunter Valley. The current known extent is about 70 hectares; the pre-European extent is estimated to have been only 160 hectares, reflecting the limited area of the sand deposit on which it occurs. Not known to occur within any conservation reserves. Occupies gentle slopes and rises on a residual sand deposit overlying the Permian clay sediments of the Hunter Valley floor.	Low. Not recorded within the site	Low	No
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria		-	CE	K	The River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria is found in the South East Corner (SEC) and Sydney Basin (SYB) IBRA bioregions. This encompasses the area from around Sale on the south-east coast of Victoria to around Raymond Terrace, just north of Newcastle on the New South Wales east coast.	Low. Not recorded within the site	Low	No
River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	This community is found on the river flats of the coastal floodplains. It has a tall open tree layer of eucalypts, which may exceed 40 m in height, but can be considerably shorter in regrowth stands or under conditions of lower site quality. While the composition of the tree stratum varies considerably, the most widespread and abundant dominant trees include *Eucalyptus tereticornis* (forest red gum), *E. amplifolia* (cabbage gum), *Angophora floribunda* (rough-barked apple) and *A. subvelutina* (broad-leaved apple). *Eucalyptus baueriana* (blue box), *E. botryoides* (bangalay) and *E. elata* (river peppermint) may be common south from Sydney, *E. ovata* (swamp gum) occurs on the far south coast, *E. saligna* (Sydney blue gum) and *E. grandis* (flooded gum) may occur north of Sydney, while *E. benthamii* is restricted to the Hawkesbury floodplain.	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Shale Sandstone Transition Forest in the Sydney Basin Bioregion		CE	-	P	Occurs at the edges of the Cumberland Plain, where clay soils from the shale rock intergrade with earthy and sandy soils from sandstone, or where shale caps overlay sandstone. Well adapted to fire, being often close to sandstone areas. Some species in areas with greater shale influence regenerate from profuse annual seeding and underground tubers. High-sandstone-influence sites have poor rocky soils, and many shrubs which rely on nitrogen-fixing root nodules and soil/root fungi to obtain nutrients. High-shale-influence sites often have a diverse and moderately dense groundcover stratum, with grasses a prominent and diverse component. Shrubs are usually less abundant and less diverse in shale sites.	Low. Not recorded within the site	Low	No
Southern Sydney sheltered forest on transitional sandstone soils in the Sydney Basin Bioregion		E	-	P	Southern Sydney sheltered forest on transitional sandstone soils is found within an estimated total extent of less than 45 000 ha, bounded approximately by Hurstville, Carss Park, Bundeena, Otford, Stanwell Tops, Darkes Forest, Punchbowl Creek and Menai. The terrain is primarily gentle, with slopes not often exceeding 10°, and where sandstone outcrops occur infrequently. The community is typically associated with sheltered heads and upper slopes of gullies on transitional zones where sandstone outcrops may exist, but where soils are influenced by lateral movement of moisture, nutrients and sediment from more fertile substrates.	Low. Not recorded within the site	Low	No
Subtropical and Temperate Coastal Saltmarsh		-	V	L	This EEC occurs within a relatively narrow margin of the Australian coastline, within the subtropical and temperate climatic zones south of the South-east Queensland IBRA bioregion boundary at 23° 37' latitude along the east coast and south of (and including) Shark Bay at 26° on the west coast. It is typically restricted to the upper intertidal environment, occurring in areas within the astronomical tidal limit,	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					often between the elevation of the mean high tide and the mean spring tide. Associated sediments generally consist of poorly-sorted anoxic sandy silts and clays, and may have salinity levels that are much higher than seawater due to evaporation.			
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	The Swamp Oak EEC ranges along the coast of NSW and partially inland in the Hunter to Wollongong region, from Tweed Heads to Bega Valley. Associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains. Generally occurs below 20 m (rarely above 10 m) elevation.	Low. Not recorded within the site	Low	No
Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	The Swamp Sclerophyll Forest EEC ranges along the coast of NSW, from Tweed Heads to Shoalhaven. Associated with humic clay loams and sandy loams, on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains. Generally occurs below 20 m (though sometimes up to 50 m) elevation.	Low. Not recorded within the site	Low	No
Sydney Freshwater Wetlands in the Sydney Basin Bioregion		E	-	K	Occurs on sand dunes and low-nutrient sandplains along coastal areas in the Sydney Basin bioregion. It is known from the Lake Macquarie, Wyong, Gosford, Pittwater, Warringah, Woollahra, Waverley, Botany, Rockdale, Randwick, Sutherland and Wollongong local government areas, but is likely to occur elsewhere within the bioregion. Largely restricted to freshwater swamps in swales and depressions on sand dunes and low nutrient sandplains such as those of the Warriewood and Tuggerah soil landscapes. Swampy areas on alluvium with a saline influence do not fall within this community.	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion		CE	-	K	Open forest, with dominant canopy trees including Turpentine *Syncarpia glomulifera*, Grey Gum *Eucalyptus punctata*, Grey Ironbark *E. paniculata* and Thin-leaved Stringybark *E. eugenoides*. Occurs close to the shale/sandstone boundary on the more fertile shale influenced soils, in higher rainfall areas on the higher altitude margins of the Cumberland Plain, and on the shale ridge caps of sandstone plateaus. A transitional community, between Cumberland Plain Woodland in drier areas and Blue Gum High Forest on adjacent higher rainfall ridge.	Low. Not recorded within the site	Low	No
Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions		E	-	K	Themeda Grassland on seacliffs and coastal headlands is found on a range of substrates in the NSW North Coast, Sydney Basin and South East Corner bioregions. Stands on sandstone are infrequent and small. Larger stands are found on old sand dunes above cliffs, as for example at Cape Banks and Henry Head in Botany Bay National Park, and on metasedimentary headlands, as for example at McCauleys Headland in Coffs Coast Regional Park, Look-at-me-now Headland, Dammerels Head and Bare Bluff in Moonee Beach Nature Reserve and Wilson's Headland in Yuraygir National Park. The community is found on a range of substrates, although stands on sandstone are infrequent and small.	Low. Not recorded within the site	Low	No
Umina Coastal Sandplain Woodland in the Sydney Basin Bioregion		E	-	K	Largely restricted to coastal sands on the Umina, Woy Woy and Ettalong Sandplain, a beach ridge system within the Gosford local government area. Including ecotonal areas, less than 10% (being less than 10 hectares) of the community's estimated original cover of about 80 hectares remains. This comprises four main remnants at Umina, while a few smaller remnant patches and scattered trees around Pearl Beach and Patonga and elsewhere on the 'Peninsula' indicate its former distribution. Occurs on sandy soils (iron podzols)	Low. Not recorded within the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					of the Woy Woy Soil Landscape which are distinguished from the humus podsols generally associated with foothill talus slopes further away from the coast on which Angophora costata predominates.			
Western Sydney Dry Rainforest in the Sydney Basin Bioregion		E	-	P	A dry vine scrub community of the Cumberland Plain, western Sydney. Canopy trees include Prickly Paperbark (Melaleuca styphelioides), Hickory Wattle (Acacia implexa) and Native Quince (Alectryon subcinereus). Restricted to hilly country where it occurs on the sheltered lower slopes and in gullies. Generally found at higher elevation, in areas receiving higher rainfall than much of the Cumberland Plain Woodland. Occurs on clay soils derived from Wianamatta shale. Rainforest plants within this vegetation are fire sensitive and dependent on the sheltered aspect and density of vegetation for protection.	Low. Not recorded within the site	Low	No
Flora								
Acacia bynoeana	Bynoe's Wattle	E	V	1	Bynoe's wattle is found in central eastern NSW, from the Hunter District (Morisset) south to the Southern Highlands and west to the Blue Mountains. The species is currently known from about 30 locations in heath or dry sclerophyll forest on sandy soils. Seems to prefer open, sometimes slightly disturbed sites such as trail margins, edges of roadside spoil mounds and in recently burnt patches. Associated overstorey species include Red Bloodwood, Scribbly Gum, Parramatta Red Gum, Saw Banksia and Narrow-leaved Apple.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The conspicuous species was not identified during surveys of the site. The species is unlikely to be impacted by the proposal.	Low	No
Acacia pubescens	Downy Wattle, Hairy Stemmed Wattle	V	V	1	Occurs on alluviums, shales and at the intergrade between shales and sandstones. The soils are characteristically gravely soils, often with ironstone. Occurs in open woodland and forest, in a variety of plant communities, including Cooks River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland. Longevity is unknown,	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The conspicuous species was not identified during	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					but clonal species have been known to survive for many decades. Flowers from August to October. Pollination of Acacia flowers is usually by insects and birds. The pods mature in October to December.	surveys of the site. The species is unlikely to be impacted by the proposal.		
Acacia terminalis subsp. Eastern Sydney- (Acacia terminalis subsp. Terminalis)	Sunshine Wattle (Sydney region)	E	E	-	An erect or spreading shrub, 1-5 metres tall, with pale yellow flowers and seed pods 3-11 cm long. Coastal scrub and dry sclerophyll woodland on sandy soils. Habitat is generally sparse and scattered. Most areas of habitat or potential habitat are small and isolated. Most sites are highly modified or disturbed due to surrounding urban development. Flowers in autumn but may be through to early winter. Small birds and bees are natural pollinators. Seeds mature in November and are dispersed by ants. Seed viability is high and recruitment occurs mainly after fire. A fire temperature of 60 degrees is required for optimum germination. Although plants are killed by fire, they have been recorded sprouting from the base.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The conspicuous species was not identified during surveys of the site. The species is unlikely to be impacted by the proposal.	Low	No
Ancistrachne maidenii	-	V	-	1	*Ancinstrachne maidenii* is known from thirteen localities across New South Wales, including the Hawkesbury sandstones and Clarence Sandstones, where it is locally common in several locations. Habitat requirements appear to be specific, with populations occurring in distinct bands in areas associated with a transitional geology between Hawkesbury and Watagan soil landscapes. Flowers in summer. Grows in dry sclerophyll forest on skeletal sandstone-derived soils.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Asterolasia elegans	null	E	E	-	Occurs north of Sydney, in the Baulkham Hills, Hawkesbury and Hornsby local government areas. Also likely to occur in the western part of Gosford local government area. Known from only seven populations, only one of which is wholly within a conservation reserve. Occurs on Hawkesbury sandstone. Found in sheltered forests on mid- to lower slopes and	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					valleys, e.g. in or adjacent to gullies which support sheltered forest. The canopy at known sites includes Turpentine (Syncarpia glomulifera subsp. glomulifera), Smooth-barked Apple (Angophora costata), Sydney Peppermint (Eucalyptus piperita), Forest Oak (Allocasuarina torulosa) and Christmas Bush (Ceratopetalum gummiferum).	unlikely to be impacted by the proposal.		
Astrotricha crassifolia	Thick-leaf Star-hair	V	V	1	Occurs near Patonga (Gosford LGA), and in Royal NP and on the Woronora Plateau (Sutherland and Campbelltown LGAs). There is also a record from near Glen Davis (Lithgow LGA). Occurs in dry sclerophyll woodland on sandstone. It flowers in spring. Resprouter from root suckers or basal stem buds after fire.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Baloskion longipes	Dense Cord-rush	V	V	2	Dense Cord-rush has been recorded from the Kanangra-Boyd area to the Southern Tablelands and mainly within National Parks. Commonly found in swamps or depressions in sandy alluvium, sometimes growing with sphagnum moss. Also occurs in swails within tall forest, and in Black Gum (Eucalyptus aggregata) Woodland.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two historic Bionet records from 2003 within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs	E	V	-	The Thick Lip Spider Orchid is known from the Sydney area (old records), Wyong, Ulladulla and Braidwood in NSW. Populations in Kiama and Queanbeyan are presumed extinct. Generally found in grassy sclerophyll woodland on clay loam or sandy soils, though the population near Braidwood is in low woodland with stony soil. The single leaf regrows each year.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Callistemon linearifolius	Netted Bottle Brush	V	-	20	Recorded from the Georges River to Hawkesbury River in the Sydney area, and north to the Nelson Bay area of NSW. Recorded in 2000 at Coalcliff in the northern	Low. There is no suitable habitat for the species on site. Most of the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Illawarra. Grows in dry sclerophyll forest on the coast and adjacent ranges.	has been cleared with small areas of disturbed vegetation remaining. There are 20 Bionet records within a 10km search area, the closest of which is approximately 600m from the site. The conspicuous species was not identified during survey of the site, therefore the species is unlikely to be impacted by the proposal.		
Cryptostylis hunteriana	Leafless Tongue Orchid	V	V	1	Does not appear to have well defined habitat preferences and is known from a range of communities, including swamp-heath and woodland. The larger populations typically occur in woodland dominated by Scribbly Gum (*Eucalyptus sclerophylla*), Silvertop Ash (*E. sieberi*), Red Bloodwood (*Corymbia gummifera*) and Black Sheoak (*Allocasuarina littoralis*); appears to prefer open areas in the understorey of this community and is often found in association with the Large Tongue Orchid (*C. subulata*) and the Tartan Tongue Orchid (*C. erecta*).	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Cynanchum elegans	White-flowered Wax Plant	E	E	-	Restricted to eastern NSW where it is distributed from Brunswick Heads on the north coast to Gerroa in the Illawarra region. The species has been recorded as far west as Merriwa in the upper Hunter River valley. The White-flowered Wax Plant usually occurs on the edge of dry rainforest vegetation. Other associated vegetation types include littoral rainforest.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Darwinia biflora	null	V	V	-	An erect to spreading shrub to 80cm high. Flowers are green, surrounded by two red bracteoles, and are mostly in pairs. Occurs on the edges of weathered shale-capped ridges, where these intergrade with Hawkesbury Sandstone. Associated overstorey species include *Eucalyptus haemastoma*, *Corymbia gummifera*	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					and/or *E. squamosa*. The vegetation structure is usually woodland, open forest or scrub-heath. Longevity is thought to be 15-20 years. Flowering occurs throughout the year but is concentrated in autumn, with mature fruits being produced from May to August.	There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Darwinia glaucophylla	-	V	-	829	Known from approximately 15 sites, several within or near to Brisbane Waters NP and one within Popran NP. Occurs entirely within the Gosford Local Government Area of the Sydney Basin Bioregion.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 829 Bionet record within a 10km search area, the closest of these occurs approximately 1 km from the site. Despite the high number of records the species is unlikely to be impacted by the proposal, due to the lack of suitable habitat.	Low	No
Diuris bracteata	-	E	X	2	Extant populations from north-west of Gosford have been recorded and this area is now the only known area of occurrence of the species. All known plants fall within the Gosford and Wyong Local Government Areas. Dry sclerophyll woodland and forest with a predominantly grassy understorey.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two historic Bionet records within a 10km search area, however the species is presumed to be extinct. The species is unlikely to be impacted by the proposal.	Low	No
Diuris praecox	Newcastle Doubletail	V	V		The Rough Doubletail is known from between Bateau Bay and Smiths Lake. Grows on hills and slopes of near-coastal districts in open forests which have a grassy to fairly dense understorey.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Epacris purpurascens var. purpurascens	-	V		4	Recorded from Gosford in the north, to Narrabeen in the east, Silverdale in the west and Avon Dam vicinity in the South. Found in a range of habitat types, most of which have a strong shale soil influence. Lifespan is recorded to be 5-20 years, requiring 2-4 years before seed is produced in the wild. Killed by fire and re-establishes from soil-stored seed.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. *Epacris pulchella* was identified in the adjacent vegetation but not within the site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Eucalyptus camfieldii	Camfield's Stringybark	V	V	20	Restricted distribution in a narrow band with the most northerly records in the the Raymond Terrace area south to Waterfall. Localised and scattered distribution includes sites at Norah Head (Tuggerah Lakes), Peats Ridge, Mt Colah, Elvina Bay Trail (West Head), Terrey Hills, Killara, North Head, Menai, Wattamolla and a few other sites in Royal National Park. Occurs mostly in small scattered stands near the boundary of tall coastal heaths and low open woodland of the slightly more fertile inland areas. Associated species frequently include stunted species of E. oblonga Narrow-leaved Stringybark, E. capitellata Brown Stringybark and E. haemastoma Scribbly Gum.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 20 Bionet records within a 10km search area, the closest of which is approximately 600m from the site. The conspicuous species was not identified during survey of the site, therefore the species is unlikely to be impacted by the proposal.	Low	No
Eucalyptus glaucina	Slaty Red Gum	V	V	1	Found only on the north coast of NSW and in separate districts: near Casino where it can be locally common, and farther south, from Taree to Broke, west of Maitland. Grows in grassy woodland and dry eucalypt forest. Grows on deep, moderately fertile and well-watered soils.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There was one Bionet record within a 10km search area, the closest of which is approximately 800 m north west of the site. The conspicuous species was not identified during survey of the site, therefore the	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
						species is unlikely to be impacted by the proposal.		
Genoplesium baueri	Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid	E	E	-	Genoplesium baueri has been recorded between Ulladulla and Port Stephens and is mainly found in National Parks. Grows in dry sclerophyll forest and moss gardens over sandstone.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Grevillea shiressii	-	V	V	1227	Grows along creek banks in wet sclerophyll forest; sandy soil on Hawkesbury sandstone, restricted to the Gosford area.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 1227 Bionet records within a 10km search area, the closest of these occurs approximately 2.6 km south of the site. Despite the high number of records the species is unlikely to be impacted by the proposal, due to the lack of suitable habitat.	Low	No
Haloragis exalata subsp. exalata	Wingless Raspwort, Square Raspwort	V	V	-	Square Raspwort occurs in 4 widely scattered localities in eastern NSW. It is disjunctly distributed in the Central Coast, South Coast and North Western Slopes botanical subdivisions of NSW. Square Raspwort appears to require protected and shaded damp situations in riparian habitats.	Low. There is marginal suitable habitat for the species in the drainage line to the west of the site, however this area is highly disturbed and dominated by exotic species. There are no Bionet records within a 10km search area. Due to the lack of species records and low quality potential habitat, the species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Hibbertia procumbens	Spreading Guinea Flower	E	-	2063	Within NSW, known from several locations only on the Central Coast in the Gosford and Wyong local government areas. These populations are at Bumble Hill near Yarramalong in Wyong LGA. Majority of known populations occur within Banksia ericifolia–Angophora hispida–Allocasuarina distyla scrub/heath on skeletal sandy soils. May also be found associated with 'hanging swamp' vegetation communities on sandy deposits. Flowers in summer. Is capable of resprouting following fire and has a persistent soil-stored seed bank.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 2063 Bionet records within a 10km search area, the closest of these occurs approximately 0.3 km north of the site. Despite the high number of records the species is unlikely to be impacted by the proposal, due to the lack of suitable habitat and it not being detected during survey.	Low	No
Hibbertia puberula		E	-	2	Flowers yellow, single or rarely in a cluster of up to three. Habitats are typically dry sclerophyll woodland communities, although heaths are also occupied. One of the recently (2012) described subspecies also favours upland swamps. It extends from Wollemi National Park south to Morton National Park and the south coast near Nowra.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Kunzea rupestris	null	V	V	-	Grows in shallow depressions on large flat sandstone rock outcrops. Characteristically found in short to tall shrubland or heathland. Flowering occurs in spring. It has indehiscent fruits which resist soil entrapment and so may disperse many metres per week. Resprouts from the base after fire or mechanical damage. Seedlings have also been observed after fire.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Lasiopetalum joyceae	null	V	V	-	Has a restricted range occurring on lateritic to shaley ridgetops on the Hornsby Plateau south of the Hawkesbury River. It is currently known from 34 sites between Berrilee and Duffys Forest. Seventeen of these are reserved. Grows in heath on sandstone.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
						unlikely to be impacted by the proposal.		
Melaleuca biconvexa	Biconvex Paperbark	V	V	210	Biconvex Paperbark is only found in NSW, with scattered and dispersed populations found in the Jervis Bay area in the south and the Gosford-Wyong area in the north. Biconvex Paperbark generally grows in damp places, often near streams or low-lying areas on alluvial soils of low slopes or sheltered aspects.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 210 Bionet records within a 10km search area, the closest of which is approximately 350 m south west of the site. The conspicuous species was not identified during survey of the site, therefore the species is unlikely to be impacted by the proposal.	Low	No
Melaleuca deanei	Deane's Paperbark	V	V	4	The species occurs mostly in ridgetop woodland, with only 5% of sites in heath on sandstone. Deane's Paperbark occurs in two distinct areas, in the Ku-ring-gai/Berowra and Holsworthy/Wedderburn areas respectively. There are also more isolated occurrences at Springwood (in the Blue Mountains), Wollemi National Park, Yalwal (west of Nowra) and Central Coast (Hawkesbury River) areas.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are four Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Micromyrtus blakelyi	null	V	V	-	Typically occurs within heathlands in shallow sandy soil in cracks and depressions of sandstone rock platforms. Flowers in Spring from September to November and produces fruit (an indehiscent nut) October to November. Fire sensitive, with adults killed by fire and recruitment occurring from a soil seed bank. It is not known whether germination occurs in the absence of disturbance.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Persicaria elatior	Knotweed, Tall Knotweed	V	V		In northern NSW it is known from Raymond Terrace (near Newcastle) and the Grafton area (Cherry Tree and Gibberagee State Forests). The species also occurs in Queensland. This species normally grows in damp places, especially beside streams and lakes. Occasionally in swamp forest or associated with disturbance.	Low. There is marginal suitable habitat for the species in the drainage line to the west of the site, however this area is highly disturbed and dominated by exotic species. There are no Bionet records within a 10km search area. Due to the lack of species records and low quality potential habitat, the species is unlikely to be impacted by the proposal.	Low	No
Persoonia hirsuta	Hairy Geebung	E	E	1	Persoonia hirsuta has a scattered distribution around Sydney. The species is distributed from Singleton in the north, along the east coast to Bargo in the south and the Blue Mountains to the west. Persoonia hirsuta has a large area of occurrence, but occurs in small populations, increasing the species' fragmentation in the landscape. The Hairy Geebung is found in clayey and sandy soils in dry sclerophyll open forest, woodland and heath, primarily on the Mittagong Formation and on the upper Hawkesbury Sandstone.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one historic Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Pimelea curviflora var. curviflora	null	V	V	-	Confined to the coastal area of the Sydney and Illawarra regions. Populations are known between northern Sydney and Maroota in the north-west. New population discovered at Croom Reserve near Albion Park in Shellharbour LGA in August 2011. Occurs on shaley/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes amongst woodlands. Also recorded in Illawarra Lowalnd Grassy Woodland habitat at Albion Park on the Illawaraa coastal plain. Flowers October to May. Has an inconspicuous cryptic habit as it is fine and scraggly and often grows amongst dense grasses and sedges. It may not always be visible at a site as it appears to survive for some time without any foliage	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					after fire or grazing, relying on energy reserves in its tuberous roots.			
Prostanthera askania	Tranquility Mintbush	E	E	398	Occurs over a very restricted geographic range (of less than 12 km) in the upper reaches of creeks that flow into Tuggerah Lake or Brisbane Water within the Wyong and Gosford local government areas. Occurs adjacent to, but not immediately in, drainage lines on flat to moderately steep slopes formed on Narrabeen sandstone and alluvial soils derived from it. Occurs in moist sclerophyll forest and warm temperate rainforest communities, and the ecotone between them. These communities are generally tall forests with a mesic understorey; Sydney Blue Gum Eucalyptus saligna and Turpentine Syncarpia glomulifera are usually present, though canopy species present can be highly variable.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 398 Bionet records within a 10km search area, the closest of these records occurs approximately 3.5 km north east of the site. The species is unlikely to be impacted by the proposal.	Low	No
Prostanthera densa	Villous Mintbush	V	V	-	Prostanthera densa generally grows in sclerophyll forest and shrubland on coastal headlands and near coastal ranges, chiefly on sandstone, and rocky slopes near the sea. Plants regenerate from rootstock after fire and flower within the first year or two.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Prostanthera junonis	Somersby Mintbush	E	E	1099	Has a north-south range of approximately 19 km on the Somersby Plateau in the Gosford and Wyong local government areas. The species is restricted to the Somersby Plateau. It occurs on both the Somersby and Sydney Town soil landscapes on gently undulating country over weathered Hawkesbury sandstone within open forest/low woodland/open scrub. It occurs in both disturbed and undisturbed sites.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 1099 Bionet records within a 10km search area, the closest of these records occurs approximately 200 m north east of the site. As there is no suitable habitat, the species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Rhizanthella slateri	Eastern Underground Orchid	V	E	-	The Eastern Underground Orchid occurs from south-east Queensland to south-east NSW. In NSW, currently known from fewer than 10 locations, including near Bulahdelah, the Watagan Mountains, the Blue Mountains, Wiseman's Ferry area, Agnes Banks and near Nowra. Habitat requirements are poorly understood and no particular vegetation type has been associated with the species, although it is known to occur in sclerophyll forest.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Rhodamnia rubescens	Scrub Turpentine	CE	CE	144	Occurs in coastal districts north from Batemans Bay in New South Wales, approximately 280 km south of Sydney, to areas inland of Bundaberg in Queensland. Populations of R. rubescens typically occur in coastal regions and occasionally extend inland onto escarpments up to 600 m a.s.l. in areas with rainfall of 1,000-1,600 mm. Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 144 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Rhodomyrtus psidioides	Native Guava	CE	CE	8	Occurs from Broken Bay, approximately 90 km north of Sydney, New South Wales, to Maryborough in Queensland. Populations are typically restricted to coastal and sub-coastal areas of low elevation however the species does occur up to c. 120 km inland in the Hunter and Clarence River catchments and along the Border Ranges in NSW. Pioneer species found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest often near creeks and drainage lines.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are eight Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Rutidosis heterogama	Heath Wrinklewort	V	V	-	Recorded from near Cessnock to Kurri Kurri with an outlying occurence at Howes Valley. On the Central Coast it is located north from Wyong to Newcastle. There are north coast populations between Wooli and Evans Head in Yuraygir and Bundjalung National Parks. It also occurs on the New England Tablelands from Torrington and Ashford south to Wandsworth	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					south-west of Glen Innes. Grows in heath on sandy soils and moist areas in open forest,and has been recorded along disturbed roadsides.	unlikely to be impacted by the proposal.		
Syzygium paniculatum	Magenta Lilly Pilly	E	V	43	The Magenta Lilly Pilly is found only in NSW, in a narrow, linear coastal strip from Upper Lansdowne to Conjola State Forest. On the central coast Magenta Lilly Pilly occurs on gravels, sands, silts and clays in riverside gallery rainforests and remnant littoral rainforest communities.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 43 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Tetratheca glandulosa		V		96	Associated with shale-sandstone transition habitat where shale-cappings occur over sandstone, with associated soil landscapes such as Lucas Heights, Gymea, Lambert and Faulconbridge. Topographically, the plant occupies ridgetops, upper-slopes and to a lesser extent mid-slope sandstone benches. Soils are generally shallow, consisting of a yellow, clayey/sandy loam. Stony lateritic fragments are also common in the soil profile on many of these ridgetops. Vegetation structure varies from heaths and scrub to woodlands/open woodlands, and open forest. Vegetation communities correspond broadly to Benson & Howell's Sydney Sandstone Ridgetop Woodland (Map Unit 10ar). Common woodland tree species include: *Corymbia gummifera, C. eximia, Eucalyptus haemastoma, E. punctata, E. racemosa*, and/or *E. sparsifolia*, with an understorey dominated by species from the families Proteaceae, Fabaceae, and Epacridaceae.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 96 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Tetratheca juncea	Black-eyed Susan	V	V	1	Confined to the northern portion of the Sydney Basin bioregion and the southern portion of the North Coast bioregion in the local government areas of Wyong, Lake Macquarie, Newcastle, Port Stephens, Great Lakes and Cessnock. It is usually found in low open	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one historic Bionet record	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					forest/woodland with a mixed shrub understorey and grassy groundcover. However, it has also been recorded in heathland and moist forest. The majority of populations occur on low nutrient soils associated with the Awaba Soil Landscape. While some studies show the species has a preference for cooler southerly aspects, it has been found on slopes with a variety of aspects. It generally prefers well-drained sites below 200m elevation and annual rainfall between 1000 - 1200mm. The preferred substrates are sandy skeletal soil on sandstone, sandy-loam soils, low nutrients; and clayey soil from conglomerates, pH neutral.	within a 10km search area. The species is unlikely to be impacted by the proposal.		
Thelymitra adorata	Wyong Sun Orchid	CE	CE	-	Some reports suggest that the species may also occur within the margin of two other vegetation types where these adjoin or constitute portions of the remnant vegetation areas in which the orchid has been recorded. Alluvial Redgum Footslopes Forest (Bell 2002) adjoins Dooralong Spotted Gum - Ironbark Forest at one population, and may constitute habitat for the species. Alluvial Floodplain Shrub Swamp Forest (Bell 2002) also adjoins Dooralong Spotted Gum - Ironbark Forest at one extant population with a report of a small orchid colony on the margin (B. Branwhite pers. comm.), and one apparently extinct population occurred in vegetation probably assignable to this type near Warnervale. A number of sites where the species occurs are subject to past and ongoing disturbance, including sites on the edges of roads that contain a mixture of native and introduced species in the understorey, though competition with invasive introduced species is a threat."	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Thesium australe	Austral Toadflax, Toadflax		V	-	Austral Toad-flax is found in very small populations scattered across eastern NSW, along the coast, and from the Northern to Southern Tablelands. It is also found in Tasmania and Queensland and in eastern	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Asia. Although originally described from material collected in the SW Sydney area, populations have not been seen in a long time. It may persist in some areas in the broader region. Occurs in grassland on coastal headlands or grassland and grassy woodland away from the coast.	There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Birds								
Anthochaera phrygia	Regent Honeyeater	CE	CE	10	The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier coastal woodlands and forests in some years. Range is between north-eastern Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In the last 10 years Regent Honeyeaters have been recorded in urban areas around Albury where woodlands tree species such as Mugga Ironbark and Yellow Box were planted 20 years ago. The Regent Honeyeater is a generalist forager, although it feeds mainly on the nectar from a relatively small number of eucalypts that produce high volumes of nectar.	Low. There is no suitable habitat for the species on site. The site is not listed on the important areas mapping for the species. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 10 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	10	The Dusky Woodswallow is a woodland dependant bird. It is found in woodlands and dry open sclerophyll forests, usually dominated by eucalypts, including mallee associations. It has also been recorded in shrublands and heathlands and various modified habitats, including regenerating forests. Common habitat requirements are an open understorey with sparse eucalypt saplings, acacias and other shrubs, including heath. The ground cover may consist of grasses, sedges or open ground, often with coarse woody debris. Birds are also often observed in farm	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 10 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					land, road sides and golf courses, usually at the edges of forest or woodland or wind breaks with dead timber.			
Botaurus poiciloptilus	Australasian Bittern	E	E	1	Favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (Typha spp.) and spikerushes (Eleocharis spp.). Hides during the day amongst dense reeds or rushes and feed mainly at night on frogs, fish, yabbies, spiders, insects and snails. Feeding platforms may be constructed over deeper water from reeds trampled by the bird; platforms are often littered with prey remains. Breeding occurs in summer from October to January; nests are built in secluded places in densely-vegetated wetlands on a platform of reeds; there are usually six olive-brown eggs to a clutch.	Low. There is no suitable habitat for the species on site, there are no wetlands within the site. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Burhinus grallarius	Bush Stone-curlew	E	-	328	The Bush Stone-curlew is found throughout Australia except for the central southern coast and inland, the far south-east corner, and Tasmania. Only in northern Australia is it still common however and in the south-east it is either rare or extinct throughout its former range. Inhabits open forests and woodlands with a sparse grassy groundlayer and fallen timber.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 328 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Calidris canutus	Red Knot, Knot	-	E	-	The Red Knot is common in all the main suitable habitats around the coast of Australia. They mainly inhabit intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs. They move south, mostly along coasts, with some inland records from September–November and arrive in south-west Australia from September.	Low. There is no suitable habitat for the species on site in the form of intertidal mudflats, sandflats and sandy beaches of sheltered coasts. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Calidris ferruginea	Curlew Sandpiper	E	CE	-	In Australia, Curlew Sandpipers occur around the coasts and are also quite widespread inland, though in smaller numbers. Records occur in all states during the	Low. There is no suitable habitat for the species on site in the form of intertidal mudflats in sheltered	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					non-breeding period, and also during the breeding season when many non-breeding one year old birds remain in Australia rather than migrating north. Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. Occasionally they are recorded around floodwaters.	coastal areas. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Callocephalon fimbriatum	Gang-gang Cockatoo	V	E	27	The Gang-gang Cockatoo is distributed from southern Victoria through south- and central-eastern New South Wales. In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. It occurs regularly in the Australian Capital Territory. It is rare at the extremities of its range, with isolated records known from as far north as Coffs Harbour and as far west as Mudgee. In spring and summer, generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands,particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 27 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	V	V	120	South-eastern glossy black cockatoos are uncommon but widespread. They can be found from Mitchell, Queensland, through eastern New South Wales to East Gippsland, Victoria. Their distribution is continuous through the forested parts of the Great Dividing Range but becomes more scattered inland, to as far west as	Low. There is marginal foraging habitat for the species on site the edge of the site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 120 Bionet records within	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					the Riverina in New South Wales (Higgins 1999; Garnett et al. 2011).	a 10km search area. The species is unlikely to be impacted by the proposal.		
Charadrius leschenaultii	Greater Sand-plover	V	V	1	In Australia, the Greater Sand Plover occurs in coastal areas in all states. n the non-breeding grounds in Australasia, the species is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons, and inshore reefs, rock platforms, small rocky islands or sand cays on coral reefs.	Low. There is no suitable habitat for the species on site. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Circus assimilis	Spotted Harrier	V	-	1	The Spotted Harrier occurs throughout the Australian mainland, except in densly forested or wooded habitats of the coast, escarpment and ranges, and rarely in Tasmania. Individuals disperse widely in NSW and comprise a single population. Occurs in grassy open woodland including Acacia and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	V	V	1	The Brown Treecreeper is endemic to eastern Australia and occurs in eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. It is less commonly found on coastal plains and ranges. The western boundary of the range of the species runs approximately through Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell. The eastern subspecies lives in eucalypt woodlands through central NSW and in coastal areas with drier open woodlands. Found in eucalypt woodlands (including Box-Gum Woodland) and dry open forest; mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					understorey; also found in mallee and River Red Gum (Eucalyptus camaldulensis) Forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses; usually not found in woodlands with a dense shrub layer; fallen timber is an important habitat component for foraging.			
Daphoenositta chrysoptera	Varied Sittella	V	-	37	The Varied Sittella is sedentary and inhabits most of mainland Australia except the treeless deserts and open grasslands. distribution in NSW is nearly continuous from the coast to the far west. Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 37 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Erythrotriorchis radiatus	Red Goshawk	CE	E	-	The Red Goshawk occurs from the north-west to north-east coast of Australia. The Red Goshawk occurs in coastal and sub-coastal areas in wooded and forested lands of tropical and warm-temperate Australia. This species prefers forest and woodland with a mosaic of vegetation types, large prey populations (birds), and permanent water. The vegetation types include eucalypt woodland, open forest, tall open forest, gallery rainforest, swamp sclerophyll forest, and rainforest margins. In NSW favoured habitat is mixed subtropical rainforest and Melaleuca forest along coastal rivers, often in rugged terrain.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Falco hypoleucos	Grey Falcon	V	V	-	The Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Gallinago hardwickii	Latham's Snipe	-	-	7	Latham's Snipe is a non-breeding visitor to south-eastern Australia, and is a passage migrant through northern Australia. The species has been recorded along the east coast of Australia from Cape York Peninsula through to south-eastern South Australia. In Australia, Latham's Snipe occurs in permanent and ephemeral wetlands up to 2000 m above sea-level. They usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies) . However, they can also occur in habitats with saline or brackish water, in modified or artificial habitats, and in habitats located close to humans or human activity. The structure and composition of the vegetation that occurs around these wetlands is not important in determining the suitability of habitat (Naarding 1983).	Low. There is no suitable habitat for the species on site, as there are no wetlands present. There are seven Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Glossopsitta pusilla	Little Lorikeet	V	-	23	The Little Lorikeet is distributed widely across the coastal and Great Divide regions of eastern Australia from Cape York to South Australia. NSW provides a large portion of the species' core habitat, with lorikeets found westward as far as Dubbo and Albury. Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Isolated flowering trees in open country, e.g. paddocks, roadside remnants and urban trees also help sustain viable populations of the species.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 23 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Grantiella picta	Painted Honeyeater	V	V	21	The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. During the winter it is more likely to be found in the north of its distribution. Inhabits Boree,	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 21 historic Bionet records	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Brigalow and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus Amyema.	within a 10km search area. The species is unlikely to be impacted by the proposal.		
Haematopus longirostris	Pied Oystercatcher	E	-	138	The Pied Oystercatcher is distributed around the entire Australian coastline, with only small population across the NSW coast. Favours intertidal flats of inlets and bays, open beaches and sandbanks. Forages on exposed sand, mud and rock at low tide, for molluscs, worms, crabs and small fish. Nests mostly on coastal or estuarine beaches although occasionally they use saltmarsh or grassy areas. Nests are shallow scrapes in sand above the high tide mark, often amongst seaweed, shells and small stones.	Low. There is no suitable habitat for the species on site, the species typically inhabits intertidal flats of inlets and bays, open beaches and sandbanks. There are 138 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Haliaeetus leucogaster	White-bellied Sea-Eagle	V		95	The White-bellied Sea-Eagle is distributed along the coastline (including offshore islands) of mainland Australia and Tasmania. It also extends inland along some of the larger waterways, especially in eastern Australia. The habitats occupied by the sea-eagle are characterised by the presence of large areas of open water (larger rivers, swamps, lakes, the sea and sewage ponds). Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, forest (including rainforest) and even urban areas. Breeding territories are located close to water, and mainly in tall open forest or woodland, although nests are sometimes located in other habitats such as dense forest (including rainforest), closed scrub or in remnant trees on cleared land.	Low. There is no suitable habitat for the species on site, there are no large waterbodies present within the site and no nests detected during survey. There are 95 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Hieraaetus morphnoides	Little Eagle	V		14	The Little Eagle is found throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. It occurs as a single population throughout NSW. Occupies open eucalypt forest, woodland or open woodland. Sheoak or Acacia woodlands and riparian woodlands of interior NSW are	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 14 historic Bionet records within a 10km search area. The	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					also used. Nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter.	species is unlikely to be impacted by the proposal.		
Hirundapus caudacutus	White-throated Needletail	-	V	62	The White-throated Needletail is widespread in across the coast of eastern and south-eastern Australia, and Tasmania. White-throated Needletails only occur as vagrants in the Northern Territory and in Western Australia. In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Because they are aerial, it has been stated that conventional habitat descriptions are inapplicable (Cramp 1985), but there are, nevertheless, certain preferences exhibited by the species. They are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this the species is almost exclusively aerial. There are 62 historic Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Ixobrychus flavicollis	Black Bittern	V	-	9	The Black Bittern has a wide distribution, from southern NSW north to Cape York and along the north coast to the Kimberley region. The species also occurs in the south-west of Western Australia. In NSW, records of the species are scattered along the east coast, with individuals rarely being recorded south of Sydney or inland. inhabits both terrestrial and estuarine wetlands, generally in areas of permanent water and dense vegetation. Where permanent water is present, the species may occur in flooded grassland, forest, woodland, rainforest and mangroves.	Low. There is no suitable habitat for the species as there are no wetlands present within the site. There are nine Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Lathamus discolor	Swift Parrot	E	CE	16	Breeds in Tasmania during spring and summer, migrating in the autumn and winter months to south-eastern Australia from Victoria and the eastern parts of South Australia to south-east Queensland. In NSW mostly occurs on the coast and south west slopes. Migrates to the Australian south-east mainland between March and October. On the mainland they occur in	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 16 Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Favoured feed trees include winter flowering species such as *Swamp Mahogany Eucalyptus robusta*, Spotted Gum *Corymbia maculata*, Red Bloodwood *C. gummifera*, Mugga Ironbark *E. sideroxylon*, and White Box *E. albens*. Commonly used lerp infested trees include Inland Grey Box *E. microcarpa*, Grey Box *E. moluccana* and Blackbutt *E. pilularis*. Return to some foraging sites on a cyclic basis depending on food availability. Following winter they return to Tasmania where they breed from September to January, nesting in old trees with hollows and feeding in forests dominated by Tasmanian Blue Gum Eucalyptus globulus.	unlikely to be impacted by the proposal.		
Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit	-	V	-	The Bar-tailed Godwit has been recorded in the coastal areas of all Australian states. The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips, although it is commonly recorded in paddocks at some locations overseas.	Low. There is no suitable habitat for the species as it usually occurs in coastal habitats such as large intertidal sandflats, banks, mudflats and estuaries which are not present within the site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Lophoictinia isura	Square-tailed Kite	V	-	46	The Square-tailed Kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west-flowing river systems. Found in a variety of timbered habitats	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 46 Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					including dry woodlands and open forests. Shows a particular preference for timbered watercourses. In arid north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland.	unlikely to be impacted by the proposal.		
Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)	V	E	-	The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places, and rarely found on the coast. Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses. Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	-	1	The eastern subspecies extends south from central Queensland, through NSW, Victoria into south eastern South Australia, though it is very rare in the last state. In NSW it is widespread, with records from the tablelands and western slopes of the Great Dividing Range to the north-west and central-west plains and the Riverina. It is rarely recorded east of the Great Dividing Range, although regularly observed from the Richmond and Clarence River areas. It has also been recorded at a few scattered sites in the Hunter, Central Coast and Illawarra regions, though it is very rare in the latter. Occupies mostly upper levels of drier open forests or woodlands dominated by box and ironbark eucalypts, especially Mugga Ironbark (Eucalyptus sideroxylon), White Box (E. albens), Inland Grey Box (E. microcarpa), Yellow Box (E. melliodora), Blakely's	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Red Gum (E. blakelyi) and Forest Red Gum (E. tereticornis). Also inhabits open forests of smooth-barked gums, stringybarks, ironbarks, river sheoaks (nesting habitat) and tea-trees			
Neophema chrysostoma	Blue-winged Parrot	-	V	-	Blue-winged Parrots are nomadic, moving to different areas depending on the availability of grasses and herbs. Habitat includes woodlands, coastal heaths and grasslands.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Neophema pulchella	Turquoise Parrot	V	-	2	The Turquoise Parrot's range extends from southern Queensland through to northern Victoria, from the coastal plains to the western slopes of the Great Dividing Range. Lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	Yes
Nettapus coromandelianus	Cotton Pygmy-Goose	E	-	1	Although once found from north Queensland to the Hunter River in NSW, the Cotton Pygmy-Goose is now only a rare visitor to NSW. Uncommon in Queensland. Freshwater lakes, lagoons, swamps and dams, particularly those vegetated with waterlilies and other floating and submerged aquatic vegetation. The Cotton Pygmy-goose uses tall standing dead trees with hollows located close to water for roosting and breeding.	Low. There is no suitable habitat for the species on site, as there are no waterbodies typical of the species usual habitat. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Ninox connivens	Barking Owl	V	-	11	The Barking Owl is found throughout continental Australia except for the central arid regions and now occurs in a wide but sparse distribution in NSW. Core populations exist on the western slopes and plains (especially the Pilliga) and in some northeast coastal	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					and escarpment forests. Sometimes extend their home range into urban areas, hunting birds in garden trees and insects attracted to streetlights. Inhabits woodland and open forest, including fragmented remnants and partly cleared farmland. It is flexible in its habitat use, and hunting can extend in to closed forest and more open areas. Sometimes able to successfully breed along timbered watercourses in heavily cleared habitats (e.g. western NSW) due to the higher density of prey on these fertile soils. Roost in shaded portions of tree canopies, including tall midstorey trees with dense foliage such as Acacia and Casuarina species.	bearing trees present within the site. There are 11 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Ninox strenua	Powerful Owl	V	-	213	The Powerful Owl is endemic to eastern and south-eastern Australia, mainly on the eastern side of the Great Dividing Range, from south-eastern Queensland to Victoria. The Powerful Owl is found in open forests and woodlands, as well as along sheltered gullies in wet forests with dense understoreys, especially along watercourses. Will sometimes be found in open areas near forests such as farmland, parks and suburban areas, as well as in remnant bushland patches. Needs old growth trees to nest.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 213 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	-	CE	85	Within Australia, the Eastern Curlew has a primarily coastal distribution. The species is found in all states and rarely inland. The Eastern Curlew is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often recorded among saltmarsh and on mudflats fringed by mangroves, and sometimes use the mangroves. The birds are also found in saltworks and sewage farms.	Low. There is no suitable habitat for the species as it usually occurs in coastal lakes, inlets, bays and estuarine habitats which are not present within the site. There are 85 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Pandion cristatus	Eastern Osprey	V	-	77	Eastern Ospreys are found right around the Australian coast line, except for Victoria and Tasmania. They are common around the northern coast, especially on rocky shorelines, islands and reefs, with a few records from inland NSW. Favour coastal areas, especially the mouths of large rivers, lagoons and lakes.	Low. There is no suitable habitat for the species as it tends to favour coastal areas, especially the mouths of large rivers, lagoons and lakes. There are 77 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Petroica boodang	Scarlet Robin	V	-	1	The Scarlet Robin is found from south east Queensland to south east South Australia and also in Tasmania and south west Western Australia. In NSW, it occurs from the coast to the inland slopes. After breeding, some Scarlet Robins disperse to the lower valleys and plains of the tablelands and slopes. Some birds may appear as far west as the eastern edges of the inland plains in autumn and winter. The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. Scarlet Robin habitat usually contains abundant logs and fallen timber: these are important components of its habitat. The Scarlet Robin breeds on ridges, hills and foothills of the western slopes, the Great Dividing Range and eastern coastal regions; this species is occasionally found up to 1000 metres in altitude. The Scarlet Robin is primarily a resident in forests and woodlands, but some adults and young birds disperse to more open habitats after breeding. In autumn and winter many Scarlet Robins live in open grassy woodlands, and grasslands or grazed paddocks with scattered trees.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Petroica phoenicea	Flame Robin	V		1	The Flame Robin is endemic to south eastern Australia, and ranges from near the Queensland border to south	Low. There is no suitable habitat for the species on site. Most of the site	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					east South Australia and also in Tasmania. In NSW, it breeds in upland areas and in winter, many birds move to the inland slopes and plains. Breeds in upland tall moist eucalypt forests and woodlands, often on ridges and slopes. Prefers clearings or areas with open understoreys. The groundlayer of the breeding habitat is dominated by native grasses and the shrub layer may be either sparse or dense. Occasionally occurs in temperate rainforest, and also in herbfields, heathlands, shrublands and sedgelands at high altitudes. In winter, birds migrate to drier more open habitats in the lowlands (i.e. valleys below the ranges, and to the western slopes and plains). Often occurs in recently burnt areas; however, habitat becomes unsuitable as vegetation closes up following regeneration. In winter lives in dry forests, open woodlands and in pastures and native grasslands, with or without scattered trees. In winter, occasionally seen in heathland or other shrublands in coastal areas.	has been cleared with small areas of disturbed vegetation remaining. There is one Bionet record within a 10km search area. The species is unlikely to be impacted by the proposal		
Pluvialis fulva	Pacific Golden Plover	-	-	2	Within Australia, the Pacific Golden Plover is widespread in coastal regions, though there are also a number of inland records, sometimes far inland and usually along major river systems, especially the Murray and Darling Rivers and their tributaries. Most occur along the east coast. Pacific Golden Plovers usually occur on beaches, mudflats and sandflats	Low. There is no suitable habitat for the species as it tends to favour beaches, mudflats and sandflats, which are not present within the site. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	-	2	The eastern subspecies (temporalis occurs from Cape York south through Queensland, NSW and Victoria and formerly to the south east of South Australia. This subspecies also occurs in the Trans-Fly Region in southern New Guinea. In NSW, the eastern sub-species occurs on the western slopes of the Great Dividing Range, and on the western plains reaching as far as Louth and Balranald. It also occurs in woodlands	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					in the Hunter Valley and in several locations on the north coast of NSW. It may be extinct in the southern, central and New England tablelands. Inhabits open Box-Gum Woodlands on the slopes, and Box-Cypress-pine and open Box Woodlands on alluvial plains. Woodlands on fertile soils in coastal regions.			
Ptilinopus magnificus	Wompoo Fruit-Dove	V	-	2	Occurs along the coast and coastal ranges from the Hunter River in NSW to Cape York Peninsula. It is rare south of Coffs Harbour. Three subspecies are recognised, with the most southerly in NSW and south-eastern Queensland. It used to occur in the Illawarra, though there are no recent records. Occurs in, or near rainforest, low elevation moist eucalypt forest and brush box forests.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No
Pycnoptilus floccosus	Pilotbird	-	V	-	"Pilotbirds are endemic to south-east Australia. Upland Pilotbirds occur above 600 m in the Brindabella Ranges in the Australian Capital Territory, and in the Snowy Mountains in New South Wales and north-east Victoria, where Lowland Pilotbirds occur in forests from the Blue Mountains west of Newcastle, around the wetter forests of eastern Australia, to Dandenong near Melbourne."	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No
Rostratula australis	Australian Painted Snipe	E	E	-	Most records of the Australian Painted Snipe are from the south east, particularly the Murray Darling Basin, with scattered records across northern Australia and historical records from around the Perth region in Western Australia. In NSW many records are from the Murray-Darling Basin including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp and more recently, swamps near Balldale and Wanganella. Other important locations with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open	Low. There is no suitable habitat for the species on site, in the form of wetland habitats. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					timber. Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds.			
Stagonopleura guttata	Diamond Firetail	V	V	-	The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. It is widely distributed in NSW, with a concentration of records from the Northern, Central and Southern Tablelands, the Northern, Cental and South Western Slopes and the North West Plains and Riverina. Not commonly found in coastal districts, though there are records from near Sydney, the Hunter Valley and the Bega Valley. This species has a scattered distribution over the rest of NSW, though is very rare west of the Darling River. Found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum Eucalyptus pauciflora Woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities. Often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No
Sternula nereis nereis	Australian Fairy Tern	-	V	-	Within Australia, the Fairy Tern occurs along the coasts of Victoria, Tasmania, South Australia and Western Australia; occurring as far north as the Dampier Archipelago near Karratha. The subspecies has been known from New South Wales (NSW) in the past, but it is unknown if it persists there.	Low. There is no suitable habitat for the species as it tends to favour sheltered sandy beaches, spits and banks. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No
Tringa nebularia	Common Greenshank	-	-	4	The Common Greenshank does not breed in Australia, however, the species occurs in all types of wetlands across Australia. The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass.	Low. There is no suitable habitat for the species as it tends to favour inland wetlands and sheltered coastal habitats. There are four Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Turnix maculosus	Red-backed Button-quail	V	-	2	In Australia, the Red-backed Button-quail extends discontinuously along the coast, but is mainly a species of coastal and subcoastal regions. The Red-backed Button-quail is recorded only infrequently in NSW, with most records from the North Coast Bioregion; there are historical records south as far as Sydney. Over their Australian range, Red-backed Button-quail inhabit grasslands, open and savannah woodlands with grassy ground layer, pastures and crops of warm temperate areas, typically only in regions subject to annual summer rainfall greater than 400 mm. In NSW, said to occur in grasslands, heath and crops. Said to prefer sites close to water, especially when breeding. The species has been observed associated with the following grasses (in various vegetation formations): speargrass Heteropogon, Blady Grass Imperata cylindrica, Triodia, Sorghum, and Buffel Grass Cenchrus ciliaris.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal	Low	No
Tyto novaehollandiae	Masked Owl	V		20	Extends from the coast where it is most abundant to the western plains. Overall records for this species fall within approximately 90% of NSW, excluding the most arid north-western corner. There is no seasonal variation in its distribution. Lives in dry eucalypt forests and woodlands from sea level to 1100 m. A forest owl, but often hunts along the edges of forests, including roadsides. Roosts and breeds in moist eucalypt forested gullies, using large tree hollows or sometimes caves for nesting.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 20 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Tyto tenebricosa	Sooty Owl	V		136	Occupies the easternmost one-eighth of NSW, occurring on the coast, coastal escarpment and eastern tablelands. Territories are occupied permanently. Occurs in rainforest, including dry rainforest, subtropical and warm temperate rainforest, as well as moist eucalypt forests. Roosts by day in the hollow of a tall forest tree or in heavy vegetation; hunts by night for	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 136 Bionet records within	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					small ground mammals or tree-dwelling mammals such as the Common Ringtail Possum (*Pseudocheirus peregrinus*) or Sugar Glider (*Petaurus breviceps*). Nests in very large tree-hollows.	a 10km search area. The species is unlikely to be impacted by the proposal.		
Mammals								
Cercartetus nanus	Eastern Pygmy-possum	V		71	The Eastern Pygmy-possum is found in south-eastern Australia, from southern Queensland to eastern South Australia and in Tasmania. In NSW it extents from the coast inland as far as the Pilliga, Dubbo, Parkes and Wagga Wagga on the western slopes. Found in a broad range of habitats from rainforest through sclerophyll (including Box-Ironbark) forest and woodland to heath, but in most areas woodlands and heath appear to be preferred, except in north-eastern NSW where they are most frequently encountered in rainforest. Shelters in tree hollows, rotten stumps, holes in the ground, abandoned bird-nests, Ringtail Possum (*Pseudocheirus peregrinus*) dreys or thickets of vegetation, (e.g. grass-tree skirts).	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 71 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	7	Found mainly in areas with extensive cliffs and caves, from Rockhampton in Queensland south to Bungonia in the NSW Southern Highlands. It is generally rare with a very patchy distribution in NSW. There are scattered records from the New England Tablelands and North West Slopes. Roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (*Petrochelidon ariel*), frequenting low to mid-elevation dry open forest and woodland close to these features. Found in well-timbered areas containing gullies.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no caves present or within proximity to the site. There are seven Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Dasyurus maculatus	Spotted-tailed Quoll	V	E	113	Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees,	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites.	Further to this there are no hollow bearing trees present within the site. There are 113 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	-	21	The Eastern False Pipistrelle is found on the south-east coast and ranges of Australia, from southern Queensland to Victoria and Tasmania. Prefers moist habitats, with trees taller than 20 m. Generally roosts in eucalypt hollows, but has also been found under loose bark on trees or in buildings.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 21 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	-	28	The Eastern Freetail-bat is found along the east coast from south Queensland to southern NSW. Occur in dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. Roost mainly in tree hollows but will also roost under bark or in man-made structures. Usually solitary but also recorded roosting communally, probably insectivorous.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 28 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Miniopterus australis	Little Bent-winged Bat	V	-	75	East coast and ranges of Australia from Cape York in Queensland to Wollongong in NSW. Moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas. Little Bentwing-bats roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day, and at	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 75 Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					night forage for small insects beneath the canopy of densely vegetated habitats.	unlikely to be impacted by the proposal.		
Miniopterus orianae oceanensis	Large Bent-winged Bat	V		74	Large Bent-winged Bats occur along the east and north-west coasts of Australia. Caves are the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures. Form discrete populations centred on a maternity cave that is used annually in spring and summer for the birth and rearing of young. Maternity caves have very specific temperature and humidity regimes. At other times of the year, populations disperse within about 300 km range of maternity caves. Cold caves are used for hibernation in southern Australia. Breeding or roosting colonies can number from 100 to 150,000 individuals. Hunt in forested areas, catching moths and other flying insects above the tree tops.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 74 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Myotis macropus	Southern Myotis	V		50	The Southern Myotis is found in the coastal band from the north-west of Australia, across the top-end and south to western Victoria. It is rarely found more than 100 km inland, except along major rivers. Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 50 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Notamacropus parma	Parma Wallaby	V	V	-	A small wallaby, with a head and body length up to 52 cm. Preferred habitat is moist eucalypt forest with thick, shrubby understorey, often with nearby grassy areas, rainforest margins and occasionally drier eucalypt forest. Typically feed at night on grasses and herbs in more open eucalypt forest and the edges of nearby grassy areas. During the day they shelter in dense cover.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Petauroides volans	Southern Greater Glider	E	E	12	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 m above sea level. The greater glider favours forests with a diversity of eucalypt species, due to seasonal variation in its preferred tree species. Roosts in tree hollows and is more common in areas abundant in tree hollows.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 12 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Petaurus australis	Yellow-bellied Glider	V	V	20	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. Occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 20 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Petaurus norfolcensis	Squirrel Glider	V		13	The species is widely though sparsely distributed in eastern Australia, from northern Queensland to western Victoria. Inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas. Prefers mixed species stands with a shrub or Acacia midstorey.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 13 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Petrogale penicillata	Brush-tailed Rock-wallaby	E	V	-	The range of the Brush-tailed Rock-wallaby extends from south-east Queensland to the Grampians in western Victoria, roughly following the line of the Great Dividing Range. However the distribution of the species across its original range has declined significantly in the	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					west and south and has become more fragmented. In NSW they occur from the Queensland border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit. Occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north. Browse on vegetation in and adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	10km search area. The species is unlikely to be impacted by the proposal.		
Phascolarctos cinereus	Koala	E	E	46	The Koala has a fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. Inhabit eucalypt woodlands and forests.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 46 Bionet records within a 10km search area. The majority of these records are historic with only 10 records occurring in the last 10 years. The species is unlikely to be impacted by the proposal.	Low	No
Potorous tridactylus	Long-nosed Potoroo	V	V	6	The long-nosed potoroo is found on the south-eastern coast of Australia, from Queensland to eastern Victoria and Tasmania, including some of the Bass Strait islands. There are geographically isolated populations in western Victoria. In NSW it is generally restricted to coastal heaths and forests east of the Great Dividing Range, with an annual rainfall exceeding 760 mm. Inhabits coastal heaths and dry and wet sclerophyll forests. Dense understorey with occasional open areas is an essential part of habitat, and may consist of grass-trees, sedges, ferns or heath, or of low shrubs of tea-trees or melaleucas. A sandy loam soil is also a common feature.	Low. There is no suitable habitat for the species on site as the species favours areas where a dense understory is present. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are six Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Pseudomys gracilicaudatus	Eastern Chestnut Mouse	V	-	3	In NSW the Eastern Chestnut Mouse mainly occurs north from the Hawkesbury River area as scattered records along to coast and eastern fall of the Great Dividing Range extending north into Queensland. There are however isolated records in the Jervis bay area. In NSW the Eastern Chestnut Mouse is mostly found, in low numbers, in heathland and is most common in dense, wet heath and swamps. In the tropics it is more an animal of grassy woodlands. Optimal habitat appears to be in vigorously regenerating heathland burnt from 18 months to four years previously. By the time the heath is mature, the larger Swamp Rat becomes dominant, and Eastern Chestnut Mouse numbers drop again.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are three Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Pseudomys novaehollandiae	New Holland Mouse, Pookila	-	V	-	The New Holland Mouse has a fragmented distribution across Tasmania, Victoria, NSW and Queensland. The species is now largely restricted to the coast of central and northern NSW, with one inland occurrence near Parkes. The New Holland Mouse has been found from coastal areas and up to 100 km inland on sandstone country. The species has been recorded from sea level up to around 900 m above sea level. Soil type may be an important indicator of suitability of habitat for the New Holland Mouse, with deeper top soils and softer substrates being preferred for digging burrows (Wilson & Laidlaw 2003). In Victoria, the species has been recorded on deep siliceous podsols, sandy clay, loamy sands, sand dunes and coastal dunes. Due to the largely granivorous diet of the species, sites where the New Holland Mouse is found are often high in floristic diversity, especially leguminous perennials. The mouse is known to inhabit open heathland, open woodland with a heathland understorey and vegetated sand dunes.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	137	Grey-headed Flying-foxes are generally found within 200 km of the eastern coast of Australia, from Rockhampton in Queensland to Adelaide in South Australia. In times of natural resource shortages, they may be found in unusual locations. Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source and are commonly found in gullies, close to water, in vegetation with a dense canopy.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no camps present within the site and the nearest camp is in Gosford, located approximately 7 km east of the site. There are 137 Bionet records within a 10km search area. Despite the large amount of records, the species is unlikely to be impacted by the proposal the lack of quality habitat.	Low	No
Scoteanax rueppellii	Greater Broad-nosed Bat	V		26	The Greater Broad-nosed Bat is found mainly in the gullies and river systems that drain the Great Dividing Range, from north-eastern Victoria to the Atherton Tableland. It extends to the coast over much of its range. In NSW it is widespread on the New England Tablelands, however does not occur at altitudes above 500 m. Utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest. Although this species usually roosts in tree hollows, it has also been found in buildings. Forages after sunset, flying slowly and directly along creek and river corridors at an altitude of 3 - 6 m. Open woodland habitat and dry open forest suits the direct flight of this species as it searches for beetles and other large, slow-flying insects; this species has been known to eat other bat species.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no hollow bearing trees present within the site. There are 26 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Vespadelus troughtoni	Eastern Cave Bat	V		14	The Eastern Cave Bat is found in a broad band on both sides of the Great Dividing Range from Cape York to Kempsey, with records from the New England Tablelands and the upper north coast of NSW. The western limit appears to be the Warrumbungle Range,	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this there are no caves	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					and there is a single record from southern NSW, east of the ACT. A cave-roosting species that is usually found in dry open forest and woodland, near cliffs or rocky overhangs; has been recorded roosting in disused mine workings, occasionally found along cliff-lines in wet eucalypt forest and rainforest.	present or within proximity to the site. There are 14 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Herpetofauna								
Heleioporus australiacus	Giant Burrowing Frog	V	V	97	The Giant Burrowing Frog is distributed in south eastern NSW and Victoria, and appears to exist as two distinct populations: a northern population largely confined to the sandstone geology of the Sydney Basin and extending as far south as Ulladulla, and a southern population occurring from north of Narooma through to Walhalla, Victoria. Found in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based.	Low. There is no suitable habitat for the species on site, the species generally occurs in heath, woodland and open dry sclerophyll forest. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are 97 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Hoplocephalus bungaroides	Broad-headed Snake	E	V	1	The Broad-headed Snake is largely confined to Triassic and Permian sandstones, including the Hawkesbury, Narrabeen and Shoalhaven groups, within the coast and ranges in an area within approximately 250 km of Sydney. Nocturnal. Shelters in rock crevices and under flat sandstone rocks on exposed cliff edges during autumn, winter and spring. Moves from the sandstone rocks to shelters in crevieces or hollows in large trees within 500m of escarpments in summer. Feeds mostly on geckos and small skinks; will also eat frogs and small mammals occasionally.	Low. There is no suitable habitat for the species within the site, some exposed rocky areas have been anthropogenically created through the clearing of the site but it is unlikely the specie would occupy this area. There is one Bionet record within a 10km search area, which is located approximately 9km north east of the site. The species is unlikely to be impacted by the proposal.	Low	No
Litoria aurea	Green and Golden Bell Frog	E	V	5	The Green and Golden Bell Frog main populations in NSW are located around the metropolitan areas of Sydney, Shoalhaven and mid north coast (one an island population). There is only one known population on the NSW Southern Tablelands. Inhabits marshes,	Low. There is no suitable habitat for the species on site, the species generally occurs in marshes, dams and stream-sides. Most of the site has been cleared with small areas	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					dams and stream-sides, particularly those containing bullrushes (*Typha spp.*) or spikerushes (*Eleocharis spp.*). Optimum habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (*Gambusia holbrooki*), have a grassy area nearby and diurnal sheltering sites available. Some sites, particularly in the Greater Sydney region occur in highly disturbed areas.	of disturbed vegetation remaining. There are five Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Litoria brevipalmata	Green-thighed Frog	V	-	1	Isolated localities along the coast and ranges from just north of Wollongong to south-east Queensland. Green-thighed Frogs occur in a range of habitats from rainforest and moist eucalypt forest to dry eucalypt forest and heath, typically in areas where surface water gathers after rain. It prefers wetter forests in the south of its range, but extends into drier forests in northern NSW and southern Queensland.	Low. There is no suitable habitat for the species on site, the species generally occurs rainforest, moist eucalypt forest, dry eucalypt forest and heath. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one historic Bionet record (1991) within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Litoria littlejohni	Littlejohn's Tree Frog, Heath Frog	E	E	-	Littlejohn's Tree Frog has a distribution that includes the plateaus and eastern slopes of the Great Dividing Range from Watagan State Forest (90 km north of Sydney) south to Buchan in Victoria. This species breeds in the upper reaches of permanent streams and in perched swamps. Non-breeding habitat is heath based forests and woodlands where it shelters under leaf litter and low vegetation, and hunts for invertebrate prey either in shrubs or on the ground.	Low. There is no suitable habitat for the species on site, the species generally occurs in heath based forests and woodlands where it shelters under leaf litter and low vegetation. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Mixophyes balbus	Stuttering Frog, Southern	E	V	4	Found in rainforest and wet, tall open forest in the foothills and escarpment on the eastern side of the Great Dividing Range. Outside the breeding season adults live in deep leaf litter and thick understorey	Low. There is no suitable habitat for the species on site, the species generally occurs in rainforest and wet, tall open forest where it	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
	Barred Frog (in Victoria)				vegetation on the forest floor. Stuttering Frogs occur along the east coast of Australia from southern Queensland to north-eastern Victoria. It is the only Mixophyes species that occurs in south-east NSW and in recent surveys it has only been recorded at three locations south of Sydney, and Dorrigo being the stronghold.	shelters in deep leaf litter and thick understorey vegetation on the forest floor under leaf litter and low vegetation. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Mixophyes iteratus	Giant Barred Frog, Southern Barred Frog	E	V	2	The Giant Barred Frog is distributed along the coast and ranges from Eumundi in south-east Queensland to Warrimoo in the Blue Mountains. Declines appear to have occurred at the margins of the species' range, with no recent records south of the Hawkesbury River and disappearances from a number of streams in QLD. Northern NSW, particularly the Coffs Harbour-Dorrigo area, is a stronghold. Giant Barred Frogs are found along freshwater streams with permanent or semi-permanent water, generally (but not always) at lower elevation. Moist riparian habitats such as rainforest or wet sclerophyll forest are favoured for the deep leaf litter that they provide for shelter and foraging, as well as open perching sites on the forest floor. However, Giant Barred Frogs will also sometimes occur in other riparian habitats, such as those in drier forest or degraded riparian remnants, and even occasionally around dams.	Low. There is no suitable habitat for the species on site, the species generally occurs along freshwater streams with permanent or semi-permanent water and moist riparian habitats. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are two historic Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Pseudophryne australis	Red-crowned Toadlet	V		170	The Red-crowned Toadlet has a restricted distribution. It is confined to the Sydney Basin, from Pokolbin in the north, the Nowra area to the south, and west to Mt Victoria in the Blue Mountains. Occurs in open forests, mostly on Hawkesbury and Narrabeen Sandstones. Inhabits periodically wet drainage lines below sandstone ridges that often have shale lenses or	Low. There is marginal suitable habitat for the species on site, as there is a disturbed drainage line on the western edge of the site. This area has no clearing associated with it. There are 170 Bionet records within a 10km search area. some of which are in close proximity to the	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					cappings. Shelters under rocks and amongst masses of dense vegetation or thick piles of leaf litter.	site. The species is unlikely to be impacted by the proposal.		
Varanus rosenbergi	Rosenberg's Goanna	V		1	Rosenberg's Goanna occurs on the Sydney Sandstone in Wollemi National Park to the north-west of Sydney, in the Goulburn and ACT regions and near Cooma in the south. Found in heath, open forest and woodland. Associated with termites, the mounds of which this species nests in and requires a large habitat range.	Low. There is no suitable habitat for the species on site, the species generally occurs heath, open forest and woodland. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Listed Migratory Species								
Migratory Terrestrial Birds								
Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo	-	-	1	This species migrates to the north and east coasts of Australia during the non-breeding season over winter. Mainly inhabiting forests, the Oriental cuckoo occurs in mixed, deciduous and coniferous forest. It is present at all levels of the forest canopy, and can be found at a range of elevations, occasionally being recorded in mountains as high up as 1,100 metres.	Low. There is no suitable habitat for the species on site, the species generally occurs mixed, deciduous and coniferous forest. Most of the site has been cleared with small areas of disturbed vegetation remaining. There is one historic Bionet record (2000) within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Hirundapus caudacutus	White-throated Needletail	-	V	62	The White-throated Needletail is widespread in across the coast of eastern and south-eastern Australia, and Tasmania. White-throated Needletails only occur as vagrants in the Northern Territory and in Western Australia. In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Because they are aerial, it has been stated that conventional habitat descriptions are inapplicable (Cramp 1985), but there are, nevertheless, certain preferences exhibited	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. Further to this the species is almost exclusively aerial. There are 62 historic Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					by the species. They are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland.			
Monarcha melanopsis	Black-faced Monarch	-	-	-	The Black-faced Monarch is widespread in eastern Australia. In Queensland, it is widespread from the islands of the Torres Strait and on Cape York Peninsula, south along the coasts (occasionally including offshore islands) and the eastern slopes of the Great Divide, to the New South Wales border. In New South Wales and the Australian Capital Territory, the species occurs around the eastern slopes and tablelands of the Great Divide, inland to Coutts Crossing, Armidale, Widden Valley, Wollemi National Park, Wombeyan Caves and Canberra. The Black-faced Monarch mainly occurs in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and (occasionally) cool temperate rainforest.	Low. The site lacks the preferred rainforest habit for the species. There are no OEH Bionet records of the species within 10 km of the site. It is unlikely the species will be impacted by the proposal.	Low	No
Motacilla flava	Yellow Wagtail	-	-	-	Occurs throughout Australia. Can be found in a range of land uses including pastures, wetlands, shrublands, grasslands and man made environments. The yellow wagtail typically forages in damp grassland and on relatively bare open ground at edges of rivers, lakes and wetlands, but also feeds in dry grassland and in fields of cereal crops.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Myiagra cyanoleuca	Satin Flycatcher	-	-	-	The Satin Flycatcher is widespread in eastern Australia and vagrant to New Zealand (Blakers et al. 1984; Coates 1990a). In Queensland, it is widespread but scattered in the east, being recorded on passage on a	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					few islands in the western Torres Strait. Satin Flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, and on migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests. Satin Flycatchers mainly inhabit eucalypt forests, often near wetlands or watercourses. They generally occur in moister, taller forests than the Leaden Flycatcher, *Myiagra rebecula*, often occurring in gullies. They also occur in eucalypt woodlands with open understorey and grass ground cover, and are generally absent from rainforest.	There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.		
Rhipidura rufifrons	Rufous Fantail	-	-	-	The Rufous Fantail occurs in coastal and near coastal districts of northern and eastern Australia. In east and south-east Australia, the Rufous Fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by eucalypts such as Tallow-wood (*Eucalyptus microcorys*), Mountain Grey Gum (*E. cypellocarpa*), Narrow-leaved Peppermint (*E. radiata*), Mountain Ash (*E. regnans*), Alpine Ash (*E. delegatensis*), Blackbutt (*E. pilularis*) or Red Mahogany (*E. resinifera*); usually with a dense shrubby understorey often including ferns. They also occur in subtropical and temperate rainforests; for example near Bega in south-east NSW, where they are recorded in temperate Lilly Pilly (*Acmena smithi*) rainforest, with Grey Myrtle (*Backhousia myrtifolia*), Sassafras (*Doryphora sassafras*) and Sweet Pittosporum (*Pittosporum undulatum*) subdominants. They occasionally occur in secondary regrowth, following logging or disturbance in forests or rainforests. When on passage, they are sometimes recorded in drier sclerophyll forests and woodlands, including Spotted Gum (*Eucalyptus maculata*), Yellow Box (*E. melliodora*), ironbarks or stringybarks, often with a shrubby or heath understorey. They are also recorded from parks and gardens when	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					on passage. In north and north-east Australia, they often occur in tropical rainforest and monsoon rainforests, including semi-evergreen mesophyll vine forests, semi-deciduous vine thickets or thickets of Paperbarks (*Melaleuca spp.*) (Higgins et al. 2006).			
Symposiachrus trivirgatus	Spectacled Monarch	-	-	-	This species occurs around the coast of NSW. The Spectacled Monarch prefers thick understorey in rainforests, wet gullies and waterside vegetation, as well as mangroves.	Low. There is no suitable habitat for the species on site. Most of the site has been cleared with small areas of disturbed vegetation remaining. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Migratory Wetland Birds								
Actitis hypoleucos	Common Sandpiper	-	-	2	The Common Sandpiper is found along all coastlines of Australia and in many areas inland. The species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. The Common Sandpiper has been recorded in estuaries and deltas of streams, as well as on banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. The muddy margins utilised by the species are often narrow, and may be steep. The species is often associated with mangroves, and sometimes found in areas of mud littered with rocks or snags.	Low. There is no suitable habitat for the species on site. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Calidris acuminata	Sharp-tailed Sandpiper	-	-	-	The Sharp-tailed Sandpiper spends the non-breeding season in Australia with small numbers occurring regularly in New Zealand. Most of the population migrates to Australia, mostly to the south-east and are widespread in both inland and coastal locations and in both freshwater and saline habitats. Many inland	Low. There is no suitable habitat for the species on site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					records are of birds on passage. In Australasia, the Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans and hypersaline saltlakes inland. They also occur in saltworks and sewage farms. They use flooded paddocks, sedgelands and other ephemeral wetlands, but leave when they dry. They use intertidal mudflats in sheltered bays, inlets, estuaries or seashores, and also swamps and creeks lined with mangroves. They tend to occupy coastal mudflats mainly after ephemeral terrestrial wetlands have dried out, moving back during the wet season. They may be attracted to mats of algae and water weed either floating or washed up around terrestrial wetlands, and coastal areas with much beachcast seaweed. Sometimes they occur on rocky shores and rarely on exposed reefs.			
Calidris canutus	Red Knot, Knot	-	E	-	The Red Knot is common in all the main suitable habitats around the coast of Australia. They mainly inhabit intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs. They move south, mostly along coasts, with some inland records from September–November and arrive in south-west Australia from September.	Low. There is no suitable habitat for the species on site. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Calidris ferruginea	Curlew Sandpiper	E	CE	-	In Australia, Curlew Sandpipers occur around the coasts and are also quite widespread inland, though in smaller numbers. Records occur in all states during the non-breeding period, and also during the breeding season when many non-breeding one year old birds remain in Australia rather than migrating north. Curlew	Low. There is no suitable habitat for the species on site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. Occasionally they are recorded around floodwaters.			
Calidris melanotos	Pectoral Sandpiper	-	-	-	the Pectoral Sandpiper is widespread, but scattered. Records exist east of the Great Divide, from Casino and Ballina, south to Ulladulla. West of the Great Divide, the species is widespread in the Riverina and Lower Western regions. In Australasia, the Pectoral Sandpiper prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	Low. There is no suitable habitat for the species on site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Charadrius bicinctus	Double-banded Plover	-	-	-	The Double-banded Plover can be found in both coastal and inland areas. During the non-breeding season, it is common in eastern and southern Australia, mainly between the Tropic of Capricorn and western Eyre Peninsula. The Double-banded Plover is found on littoral, estuarine and fresh or saline terrestrial wetlands and also saltmarsh, grasslands and pasture. It occurs on muddy, sandy, shingled or sometimes rocky beaches, bays and inlets, harbours and margins of fresh or saline terrestrial wetlands such as lakes, lagoons and swamps, shallow estuaries and rivers. The species is sometimes associated with coastal lagoons, inland saltlakes and saltworks.	Low. There is no suitable habitat for the species on site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Charadrius leschenaultii	Greater Sand Plover,	V	V	-	In Australia, the Greater Sand Plover occurs in coastal areas in all states. n the non-breeding grounds in Australasia, the species is almost entirely coastal,	Low. There is no suitable habitat for the species on site. There are is one Bionet record within a 10km search	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
	Large Sand Plover				inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons, and inshore reefs, rock platforms, small rocky islands or sand cays on coral reefs.	area. The species is unlikely to be impacted by the proposal.		
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	-	-	7	Latham's Snipe is a non-breeding visitor to south-eastern Australia, and is a passage migrant through northern Australia. The species has been recorded along the east coast of Australia from Cape York Peninsula through to south-eastern South Australia. In Australia, Latham's Snipe occurs in permanent and ephemeral wetlands up to 2000 m above sea-level. They usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies) . However, they can also occur in habitats with saline or brackish water, in modified or artificial habitats, and in habitats located close to humans or human activity. The structure and composition of the vegetation that occurs around these wetlands is not important in determining the suitability of habitat (Naarding 1983).	Low. There is no suitable habitat for the species on site, as there are no wetlands present. There are seven Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Gallinago megala	Swinhoe's Snipe	-	-	-	Swinhoe's Snipe occurs along the coast of Australia during the non-breeding season. During the non-breeding season Swinhoe's Snipe occurs at the edges of wetlands, such as wet paddy fields, swamps and freshwater streams. The species is also known to occur in grasslands, drier cultivated areas (including crops of rapeseed and wheat) and market gardens. Habitat specific to Australia includes the dense clumps of grass and rushes round the edges of fresh and brackish wetlands. This includes swamps, billabongs, river pools, small streams and sewage ponds. They are also	Low. There is no suitable habitat for the species on site, as there are no wetlands present. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					found in drying claypans and inundated plains pitted with crab holes			
Gallinago stenura	Pin-tailed Snipe	-	-	-	The Pin-tailed Snipe's distribution within Australia is not well understood, in NSW a single banded bird was reported near West Wyalong. During non-breeding period in Australia, the Pin-tailed Snipe occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation. The species is also found in drier, more open wetlands such as claypans in more arid parts of species' range. It is also commonly seen at sewage ponds; not normally in saline or inter-tidal wetlands.	Low. There is no suitable habitat for the species on site, as there are no wetlands present. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Limosa lapponica	Bar-tailed Godwit	-	-	37	The Bar-tailed Godwit has been recorded in the coastal areas of all Australian states. The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips, although it is commonly recorded in paddocks at some locations overseas.	Low. There is no suitable habitat for the species as it usually occurs in coastal habitats such as large intertidal sandflats, banks, mudflats and estuaries which are not present within the site. There are 37 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	-	CE	85	Within Australia, the Eastern Curlew has a primarily coastal distribution. The species is found in all states and rarely inland. The Eastern Curlew is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often	Low. There is no suitable habitat for the species as it usually occurs in coastal lakes, inlets, bays and estuarine habitats which are not present within the site. There are 85 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					recorded among saltmarsh and on mudflats fringed by mangroves, and sometimes use the mangroves. The birds are also found in saltworks and sewage farms.			
Numenius minutus	Little Curlew, Little Whimbrel	-	-	-	Little Curlews generally spend the non-breeding season in northern Australia from Port Hedland in Western Australia to the Queensland coast (Minton 2002 pers. comm.). There are records of the species from inland Australia, and widespread but scattered records on the east coast. The species has also been recorded on Lord Howe Island, Cocos-Keeling Island and Christmas Island.	Low. There is no suitable habitat for the species on site. There are no Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Numenius phaeopus	Whimbrel	-	-	18	The Whimbrel is a regular migrant to Australia and New Zealand, with a primarily coastal distribution. There are also scattered inland records of Whimbrels in all regions. It is found in all states but is more common in the north. The Whimbrel is often found on the intertidal mudflats of sheltered coasts. It is also found in harbours, lagoons, estuaries and river deltas, often those with mangroves, but also open, unvegetated mudflats. It is occasionally found on sandy or rocky beaches, on coral or rocky islets, or on intertidal reefs and platforms. It has been infrequently recorded using saline or brackish lakes near coastal areas. It also used saltflats with saltmarsh, or saline grasslands with standing water left after high spring-tides, and in similar habitats in sewage farms and saltfields. There are a small number of inland records from saline lakes and canegrass swamps.	Low. There is no suitable habitat for the species on site. There are 18 Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Pandion haliaetus	Osprey	-	-	77	The breeding range of the Eastern Osprey extends around the northern coast of Australia (including many offshore islands) from Albany in Western Australia to Lake Macquarie in NSW; with a second isolated breeding population on the coast of South Australia, extending from Head of Bight east to Cape Spencer and Kangaroo Island. Eastern Ospreys occur in littoral	Low. There is no suitable habitat for the species as it tends to favour coastal areas, especially the mouths of large rivers, lagoons and lakes. There are 77 Bionet records within a 10km search area. The species is	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They require extensive areas of open fresh, brackish or saline water for foraging.	unlikely to be impacted by the proposal.		
Pluvialis fulva	Pacific Golden Plover	-	-	2	Within Australia, the Pacific Golden Plover is widespread in coastal regions, though there are also a number of inland records, sometimes far inland and usually along major river systems, especially the Murray and Darling Rivers and their tributaries. Most occur along the east coast. Pacific Golden Plovers usually occur on beaches, mudflats and sandflats	Low. There is no suitable habitat for the species on site. There are two Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Tringa brevipes	Grey-tailed Tattler	-	-	5	In NSW the Grey-tailed Tattler is distributed along most of the coast from the Queensland border, south to Tilba Lake. It is more heavily distributed along coastal regions north of Sydney. It is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. The Grey-tailed Tattler arrives in Australia mostly in August, however, they sometimes appear south of the breeding range as early as July.	Low. There is no suitable habitat for the species on site. There are five Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Tringa nebularia	Common Greenshank, Greenshank	-	-	4	The Common Greenshank does not breed in Australia, however, the species occurs in all types of wetlands across Australia. The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass.	Low. There is no suitable habitat for the species on site. There are four Bionet records within a 10km search area. The species is unlikely to be impacted by the proposal.	Low	No
Listed Marine Species								
Birds								
Apus pacificus	Fork-tailed Swift	-	-	-	In NSW, the Fork-tailed Swift is recorded in all regions. Many records occur east of the Great Divide; however, a few populations have been found west of the Great Divide. The Fork-tailed Swift is almost exclusively	Low. There is no suitable habitat for the species on site. Further to this the species is almost exclusively aerial. There are three Bionet	Low	No

Scientific Name	Common Name	BC Act	EPBC Act	No. of Records	Habitat Description	Likelihood of Occurrence	Potential Impacts	ToS Required
					aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas. They often occur over cliffs and beaches and also over islands and sometimes well out to sea. They also occur over settled areas, including towns, urban areas and cities. They mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes. The sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines.	records within a 10km search area. The species is unlikely to be impacted by the proposal.		

Key:

V = Vulnerable M = Migratory A= Marine
E = Endangered CE = Critically Endangered P=Protected

K = Known where there are confirmed records, specimens or otherwise verified sightings in any CMA subregion overlapping the search area

P = Predicted where there is high expectation by relevant experts that a species is likely to be present in any CMA subregion overlapping the search area, based on known presence of suitable habitat and distribution with adjoining subregions

1 – NSW BioNet Atlas, Office of Environment and Heritage (Accessed 7-07-2023).
2 – Commonwealth Protected Matters Search Tool, Department of the Environment (Accessed 7-07-2023).

Appendix 4 Test of Significance 5-Part Test

Section 7.3 of the BC Act lists five factors that must be taken into account in the determination of whether proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats (threatened biota) listed under the BC Act. The '5-part test' is used to determine whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats and thus whether the Biodiversity Offset Scheme will apply to the proposed development in which case a Biodiversity Development Assessment Report will be required.

The significance of the impacts on those threatened species and TECs which have been recorded in the site or are likely to occur and are likely to utilise habitat to be potentially impacted by the proposal have been assessed.

The following threatened entities have been considered:

Threatened Ecological Communities

- *Coastal Upland Swamp in the Sydney Basin Bioregion (E).*

a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

N/A

b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

ii. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

iii. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.

No vegetation within the site is commensurate with any TECs, however, adjacent vegetation has been described as *Coastal Upland Swamp in the Sydney Basin Bioregion* which is listed under the BC Act as Endangered (E). The proposal will not directly impact this TEC however, there is potential for this TEC to be indirectly impacted if drainage across the site is not adequately addressed as part of the design. The proposal is unlikely to impact the TEC provided that surface waters from the site are correctly managed and there is no infiltration of site stormwater. The site generally sits at a lower elevation than the adjacent vegetation. The elevation of the site slopes in a south/ south west direction away from the TEC, therefore surface water will naturally flow to the south of the site, away from the TEC. The proposed storm water management plan looks to manage all water within the site through a water treatment area for the batching plant which includes wedge pits and a settling tank. There are additional measures in place for overflow events to be channelled to grit traps and filtered into the proposed detention/bioretention basin. External water coming from outside the site is managed through an external clean water diversion drain. As long as mitigation measures are correctly implemented which prevent runoff from entering the adjacent vegetation or groundwater there is unlikely to be impacts to this TEC.

c) In relation to the habitat of a threatened species or ecological community:

i. the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity;

Under the proposal, no habitat for this TEC is to be removed.

ii. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity; and

The proposal will not lead to this TEC from becoming fragmented or isolated. No vegetation from this community will be removed as a result of this proposal.

iii. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.

Under the proposal, no habitat is to be removed, modified, fragmented or isolated. The TEC survival in the locality is not affected.

d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value

No declared areas of outstanding biodiversity value occur within the site or within 10km of the locality.

e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of, a key threatening process.

A Key Threatening Process (KTP) is listed under Schedule 4 of the BC Act. KTPs considered relevant to the proposal are described in Section 5.3.1. This assessment concluded that there are KTPs already operating on site and that the proposal is unlikely to change the operation of these KTPs.

Appendix 5 Assessment of Significance

Ecological Communities

Coastal Upland Swamp in the Sydney Basin Bioregion (E).	
Significant Impact Guideline	Assessment
Reduce the extent of an ecological community	The *Coastal Upland Swamp in the Sydney Basin Bioregion* Endangered Ecological Community does not exist within the site and therefore the proposal will not reduce the extent of this community.
Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines	The proposal will not fragment or increase fragmentation of this ecological community, as it does not exist within the site.
Adversely affect habitat critical to the survival of an ecological community	The proposal will not directly affect habitat critical to the survival of the ecological community. There is potential for indirect impacts to occur if correct mitigation measures aren't implemented to prevent surface waters from flowing back into the TEC or if contaminated water could enter the ground water. However, it appears these have been addressed in the proposed storm water management plan.
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns	Any change in hydrology within the site has been proposed within a stormwater management plan to allow for the management of onsite water and prevent it from flowing back towards the TEC or into ground water. If the stormwater management plan achieves its objective, it is unlikely to impact the adjacent vegetation. Additionally, the site in its current form sits at a lower elevation to the TEC and thus would not usually be reliant on surface waters flowing from the site towards the TEC.
Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting	It is unlikely the proposal will cause a decline or loss of functionality, as long as the correct mitigation measures have been followed and are adequate to prevent surface waters flowing from the site into the adjacent vegetation community or into groundwater.
Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: – Assisting invasive species, that are harmful to the listed ecological community, to become established, or	The site already contains multiple invasive species which will not be exacerbated by the proposal.
Causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or	As discussed above, if correct mitigation measures are followed which will prevent run off entering the adjacent TEC or groundwater, then it is unlikely the proposal will cause an increase in chemicals or pollutants from entering the TEC. There is a proposed storm water management plan in place which appears to manage on site water through the use of water treatment areas, grit traps and a detention/ biofiltration basin. It looks to prevent contaminated water from flowing offsite and if implemented correctly should prevent chemicals or pollutants from entering adjacent vegetation.
Introduce disease that may cause the species to decline, or	The site has already been cleared and no machinery will enter the adjacent TEC, therefore it is unlikely to introduce disease to the ecological community.
Interfere with the recovery of the ecological community.	Listed threats to the species include mining, microclimate modification, alteration of fire regimes and habitat loss due to developments. The proposal is unlikely to directly interfere with the recovery of this ecological community within the region as long as correct mitigation measures are in place, as discussed above.

Conclusion	Non-significant impact

Appendix 6 Response to EPA RFI Stormwater Management Plan and Groundwater

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8 August 2024

NL240719

Nathan Burr
Central Coast Council
91-99 Mann Street
Gosford NSW 2250

Dear Nathan,

Re: Proposed Concrete Batching Facility – 53 Gindurra Road, Somersby
Response to EPA RFI DOC23/89649-6 – Stormwater & Groundwater Management

Northrop Consulting Engineers (Northrop) have been engaged by ATB Morton to undertake Civil Engineering services to assist in preparation of response to the NSW Environmental Protection Authority's comments made in relation to DA/4341/2022 for the proposed concrete batching facility, located at 53 Gindurra Road, Somersby, NSW 2250.

The purpose of this letter is to provide response to the comments raised in NSW Environmental Protection Authority's letter DOC23/89649-6; in particular, comment 1a, pertaining to the Stormwater Management Plan and Groundwater, summarised below:

EPA DOC23/89649-6, 1.a. Water – Stormwater Management Plan and Groundwater

> *"The EIS, Stormwater Management Plan (SLR, December 2022) and Stormwater Concept Plan (Forum Consulting Engineers) details the operational water management and stormwater design, though only partially addresses the EPA's SEARS and includes limited detail regarding mitigation measures, water monitoring and potential impacts.*
>
> *Stormwater discharge*
>
> *The proposed stormwater management plan ('SMP') is designed so that concrete wash water and run-off from the batch plant area is directed into a wedge pit and water settling tanks, where solids are settled, and the water is then re-used in the batching process. This is not a fully contained system and overflow is diverted via minor bunding and a grit trap to the detention / bioretention basin in the south-eastern corner of the premises. This basin has a capacity of 220 m^3 and uses biofiltration prior to discharge into the council's stormwater system.*
>
> *The EPA notes that the discharge of overflow from a contaminated batch plant area, via the detention/bio-retention basin, is not in line with best practice as set out in the Environment Management Guideline for Concrete Batch Plants, Cement Concrete & Aggregates Australia (October 2019). Further information about the treatment and properties of water discharge is required to assess whether this is an appropriate design to manage risk to the receiving environment.*
>
> *While the SMP does outline discharge criteria in terms of annual TSS, Total Nitrogen, Total Phosphorus and gross pollutants, it does not provide the expected frequency, volume and identification of all pollutants in discharge to the stormwater system. TSS, Total Nitrogen, Total Phosphorus may not reflect the full range of pollutants that could be discharged at non-trivial levels to the downstream receiving environment. Notably there is no analysis of expected pH levels in discharge or testing for other pollutants, such as chromium, which is commonly present in concrete wash water.*

The EPA SEAR's also required information regarding the condition of the local catchment and nearby water resources. There is limited detail of the downstream waterway and background water quality. A review of the surrounding landscape indicates that although the premises is within an industrial area, any discharged stormwater is likely to flow into rivers that run through the Brisbane Waters National Park, a sensitive environment with high conservation value, prior to entering the Hawksbury River. The proponent has assessed water quality against the Water Cycle Management Guidelines (Gosford City Council, February 2007), rather than the objectives endorsed under the NSW Water Quality and River Flow Objectives, without providing justification as to why these alternative standards have been used.

Groundwater

The EIS states that geotechnical investigations found groundwater at 0.9 – 1.0m below the existing surface. As identified previously by Council, the premises is surrounded to the north and east by Sandstone Hanging Swamp (or Coastal Upland Swamp), an Endangered Ecological Community, which is groundwater dependent. While the proposed concrete batching process will take place on a hardstand area, the EPA notes that there is limited detail about the lining of the detention pit, which appears to be 0.8m deep and receives overflow from the concrete batching area.

The SMP states that no significant groundwater impacts are expected, however a detailed groundwater analysis may be required to confirm this. The proponent must ensure that any impact on groundwater is identified and managed.

Recommendation

The proponent should provide further details on the following:

- *i. Demonstrate that the settling pits and basins are sized appropriately, including an assessment of options for increasing onsite storage to enable increased reuse and avoiding or minimising the need for a discharge.*
- *ii. If operational discharges from site are unavoidable, then a discharge characterisation impact assessment should be conducted by the proponent. The assessment should include, but not be limited to:*
  - *I. estimate the expected frequency and volume of discharges.*
  - *II. characterise the expected quality of the discharge in terms of the typical and maximum concentrations of all pollutants likely to be present at non-trivial levels.*
  - *III. assess the potential impact of the proposed discharge on the environmental values of the receiving waterway consistent with the national Water Quality Guidelines (ANZG, 2018)*
- *iii. The applicant should demonstrate how the proposed project will be designed and operated to:*
  - *I. protect the Water Quality Objectives for receiving waters where they are currently being achieved; and contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.*
- iv. *A more detailed analysis of the impacts to groundwater from the construction and operation of the batching plant, including any leaching of contaminated water from the detention/bioretention basin."*

Northrop Response:

1.0 Stormwater Discharge

In response to the comments and recommendations raised by the EPA, Northrop proposes a number of modifications and additions to the existing stormwater management plan, developed by SLR Consulting. In order to prevent water from clean and polluted/contaminated areas from intermixing, the modified strategy relies upon the segregation of the site into three isolated catchments – external, clean and contaminated. The updated management strategy for the site is presented in the *Concept Stormwater Management Plan* (ref: NL240719-CSK-01) and *Concept Stormwater Treatment Train Schematic* (ref: NL240719-CSK-02) prepared by Northrop Consulting Engineers, which can be found in Appendices A and B, respectively. The revised stormwater management strategy for each segregated site area is outlined below. A schematic showing the separation of the external, clean and contaminated catchments is presented below in Figure 1:

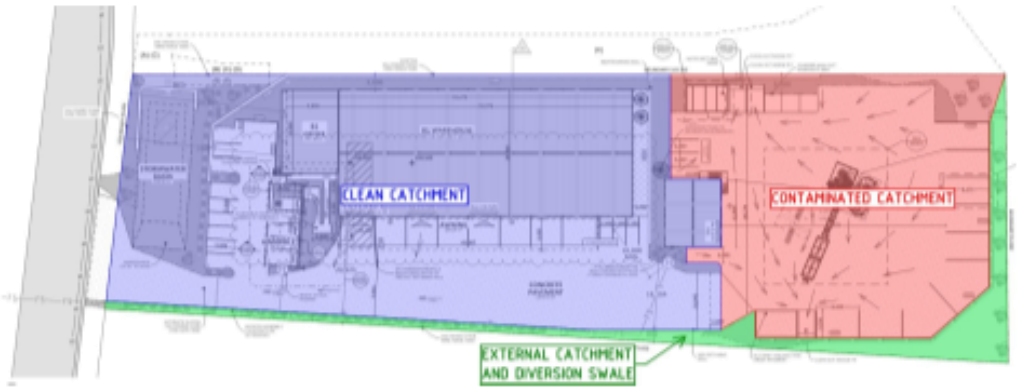


Figure 1: Site Catchment Separation Schematic
(Background: ATB Morton, ref: 1638.B-DWG-203-02003)

1.1 External Catchment

As in the originally proposed strategy, the 4.43ha of external catchment areas is proposed to be diverted around the site area via a clean water diversion swale/vee-drain, constructed along the site's northern and eastern boundaries. The swale is to be sized to accommodate the 1% AEP peak flow and is to subsequently discharge into Council's existing stormwater network along Gindurra Road.

1.2 Clean Catchment

Runoff generated from areas of the site where stormwater runoff is unlikely to become contaminated with concrete-related pollutants such as sand, cement, admixtures or wastewater are classified as 'clean areas', which include the site's carparking, landscaped, workshop roof and office roof areas.

Runoff generated atop any roof area is to be conveyed into a rainwater tank located adjacent to each building for subsequent reuse; either in the concrete batching process, for truck and equipment washing, or for irrigation of landscaped areas. Overflows exceeding the tank's storage capacity are to be conveyed via an underground pit and pipe network toward the combined bioretention and detention basin, located to the South-West of site.

As shown in the Civil Concept Plans prepared by Forum Consulting Engineers (ref: 200292-SWD, Revision L), the hardstand surface within the clean area is to be graded to direct surface runoff towards stormwater pits, which subsequently convey runoff via underground piping into the combined bioretention and detention basin.

In accordance with the requirements outlined in Central Coast Council's *Civil Works Specification Design Guideline (2020)* and the Stormwater Management Plan developed by SLR Consulting, on-site detention (OSD) will be sized to limit post-development flows from the proposed development site to mimic natural, pre-developed flows for all storm events up to and including the 1% Annual Exceedance Possibility (AEP) storm event.

Additionally, to minimise adverse impacts upon the ecology of the downstream watercourses, the bioretention system will be designed such that annual pollutant loads achieve the minimum reduction targets set out in CSIRO's *Urban Stormwater: Best Practice Environmental Management Guidelines (BPEMG)* and the Engineers Australia publication - *Australian Runoff Quality (Wong, 2006) - A Guide to Water Sensitive Urban Design,* outlined in Table 1 below:

Table 1 – Pollutant Reduction Targets

Pollutant	% Target Reduction
Total Suspended Solids (TSS)	80
Total Phosphorous (TP)	45
Total Nitrogen (TN)	45
Gross Pollutants (GP)	90

1.3 Contaminated Catchment

Areas of the site where stormwater runoff is likely to become contaminated with pollutants that may have a cementitious component are classified as 'contaminated'. For the proposed site layout, the contaminated catchment is to occupy the northern portion of the site as indicated in the attached *Concept Stormwater Management Plan* (ref: NL240719-CSK-01); containing the batching platform, aggregate storage, water treatment infrastructure and associated hardstand.

The treatment system is to operate based on a first flush system, such that during rainfall events, the first 20 mm of rainfall within the contaminated catchment area during a rain event over 24 hours will be retained and treated for subsequent reuse. Once the 'first flush' has been captured, subsequent rainwater impacting the contaminated catchment during more significant rainfall events is to be diverted by a high-flow bypass, appropriately treated, and subsequently discharged off site.

As shown in the Civil Concept Plan prepared by Forum Consulting Engineers (ref: 200292-SWD), the hardstand underlying the contaminated area is to be graded and bunded to ensure no water tracks into the clean area, and to direct all process water and runoff toward front-end loader accessible wedge pits, which are to provide initial separation of suspended sediments and aggregates. Subsequently, flows are to discharge into a sediment settlement tanks to ensure solids are settled out of suspension. Treated waters stored within the tanks should not contain more than 50 mg/L of suspended solids in the design rainfall event.

Once solids have been settled out of suspension via the settlement tanks, it can then be reused in the concrete batching process. It is noted that water from the first flush system should be the first used in the production process to maintain the system's capacity, which is to be included in the batching plant's Operational Environmental Management Plan (OEMP).

To ensure effective operation of the first flush system, the wedge pits and sediment ponds have been designed with sufficient capacity to capture, at a minimum, the first 20 mm of rainfall within the contaminated catchment during a rain event over 24-hours. Based on IFD data retrieved from the Bureau of Meterology's *Design Rainfall Data System (2016),* a 54 m^3 combined volume is required to contain the required first-flush volume. It is noted that settlement tank dimensions have been provided by ATB Moreton and achieve a total of 80.6 m^3; thereby providing ample freeboard and additional capacity for reuse.

Accumulated slurry within the wedge pits is to be cleaned out by front-loader regularly and deposited within the washout area to dry prior to removal off-site to an authorised disposal site. Drainage bungs are to be provided to the rear of the washout area to allow contaminated water to settle out, prior to discharge into the sediment settlement ponds. As is to be noted in the OEMP, the drainage bungs are to be regularly cleaned out to ensure they remain free of slurry build up.

Furthermore, it is to be noted in the OEMP that load slumping and washing of trucks is to be conducted atop the batching platform to ensure cementitious contaminants are not tracked outside the contaminated area by vehicular movements. The slumping and truck washing process is to utilise only recycled process water or rainwater, sourced either from the settling tanks or roof area rainwater reuse tanks.

If the sedimentation ponds fill to capacity during larger storm events, any subsequent rainwater impacting the contaminated area is to be diverted at the wedge pit by a high-level bypass valve and conveyed via an isolated pipe network to a triple interceptor (or equivalent) treatment device. The triple interceptor system is to be sized to treat peak discharge flows up-to and including the 1% AEP storm event.

Following discharge from the triple interceptor device, flows are to be contained within a 1.2m x 1.2m sampling pit via an outlet control valve. Flows may only be released from the pit once the pH levels and nephelometric turbidity have been measured and adjusted (if required), with complete pH and NTU records to be kept on-site.

The provision of minimum 150mm depth of bunding surrounding the contaminated area, in combination with the volume of the sampling pit, provides sufficient capacity to contain the 10% AEP 12-hour storm event. Therefore, should significant rainfall occur overnight, staff will have adequate time to arrive on-site and verify the water quality monitoring data prior to discharging any flows. Protocols for verifying water quality are to be incorporated into the OEMP.

Following release from the sampling pit, flows will subsequently be directed into the combined detention and bioretention basin, which will provide attenuation of peak discharged flow rates and additional removal of residual pollutants.

1.4 Assessment of Contaminated Discharge Volume

Based on data sourced from the Bureau of Meteorology (BoM), Gosford's Narara Research Station (located ~5km from site) experiences an average of 33.8 days exceeding 10mm of rainfall, and 14.3 days exceeding 25mm annually. Linear interpolation of this data suggests the Site will experience approximately 21 days of rainfall exceeding 20mm over a 24-hour period each year.

Any storm events up-to and including the 12-hour 10% AEP storm event (i.e. 144mm over 12 hours) will be appropriately treated, and the water turbidity/pH verified prior to discharge. It is noted that any storm event up-to and including the 1% AEP (for any duration) will be treated by the triple interceptor device, however, may not be wholly tested and verified prior to discharge.

Analysis of the rainfall depths provided in the BoM's *Design Rainfall Data System (2016)* for Somersby give an indication of the total volumes, and maximum possible untested volumes discharging from the contaminated area for various storm events. A summary of these values is presented in Table 2 below:

Table 2 – Estimated Total, Untreated and Untested Discharge Volumes for Various Storm Events

AEP Storm Event	Duration	Rainfall Depth [mm]	Total Discharge [m^3]	Max. Untreated Discharge [m^3]	Max. Untested Discharge [m^3]
10%	12-hour	144	255.6	0	0
	24-hour	199	375.0	0	119.4
	72-hour	307	601.3	0	345.7
5%	12-hour	171	316.1	0	60.5
	24-hour	236	452.6	0	197
	72-hour	365	722.8	0	467.2
2%	12-hour	209	395.9	0	140.3
	24-hour	286	557.6	0	302
	72-hour	439	878.9	0	623.3
1%	12-hour	240	461	0	205.4
	24-hour	327	643.7	0	388.1
	72-hour	496	998.6	0	743

1.3 *Water Pollution Discharge Assessment*

The *Protection of the Environment Operations Act 1997* (POEO Act) provides the statutory framework for managing water pollution in NSW, with key policy and technical frameworks for managing and assessing water pollution being the national *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018* (the National WQO) and the *NSW Water Quality and River Flow Objectives*.

It is noted that the land at Lot 12, DP 1189679 lies within the Hawksbury-Nepean catchment, for which *NSW Water Quality and River Flow Objectives* are not published. As such, the appropriate environmental values have been identified with reference to the National WQO and the EPA website on '*Water Pollution Discharge Assessments*', which provides guidance to industry on the implementation of this framework and assessment of the local catchment; noting that the overall level of assessment is to be commensurate with the risks.

Given that the first 20mm of rainfall within any 24-hour period is to be entirely retained on-site for re-use in the batching process, and any additional rainfall up-to and including the 1% AEP storm event is to be a treated by a triple interceptor device, and then additionally by the bioretention basin, it is reasoned that the possibility of untreated water discharging from the contaminated area has been mitigated as far as is practicable. Moreover, it is noted for any rainfall depths up-to and including that of the 12-hour 10% AEP storm event, 100% of discharged water from the contaminated catchment is to be tested to verify that turbidity and pH are within acceptable limits prior to discharge off-site.

Given this controlled and mitigated stormwater management strategy, which is in alignment with the practices recommended in the *Best Practice Environmental Management Guidelines (BPEMG)* and the *Environmental Management Guideline for Concrete Batch Plants* (Cement Concrete and Aggregates Australia, 2019), it is reasoned that the potential risks of discharging contaminated stormwater have been adequately mitigated, and no further assessment of environmental impacts is required.

NORTHROP

2.0 Groundwater

As identified by Council, the premises is surrounded to the north and east by Sandstone Hanging Swamp (or Coastal Upland Swamp), an Endangered Ecological Community, which is groundwater dependent. As the proposed concrete batching process is entirely situated upon impervious hardstand, the development is not anticipated to have any significant impact on groundwater. In addition, the combined detention and bioretention basin is to be fully lined with an impermeable liner material, to prevent any egress of contaminated water to nearby stormwater drains, groundwater sources and receiving waters.

3.0 Conclusion

Given the results of the above investigations, it is reasoned that the comments raised by the EPA have been adequately addressed by the modified stormwater management strategy, and as the probability of untreated, contaminated water discharging site via either surface or groundwater flows has been minimised wherever practicable.

We trust this letter and its associated civil design documentation meets your expectations.

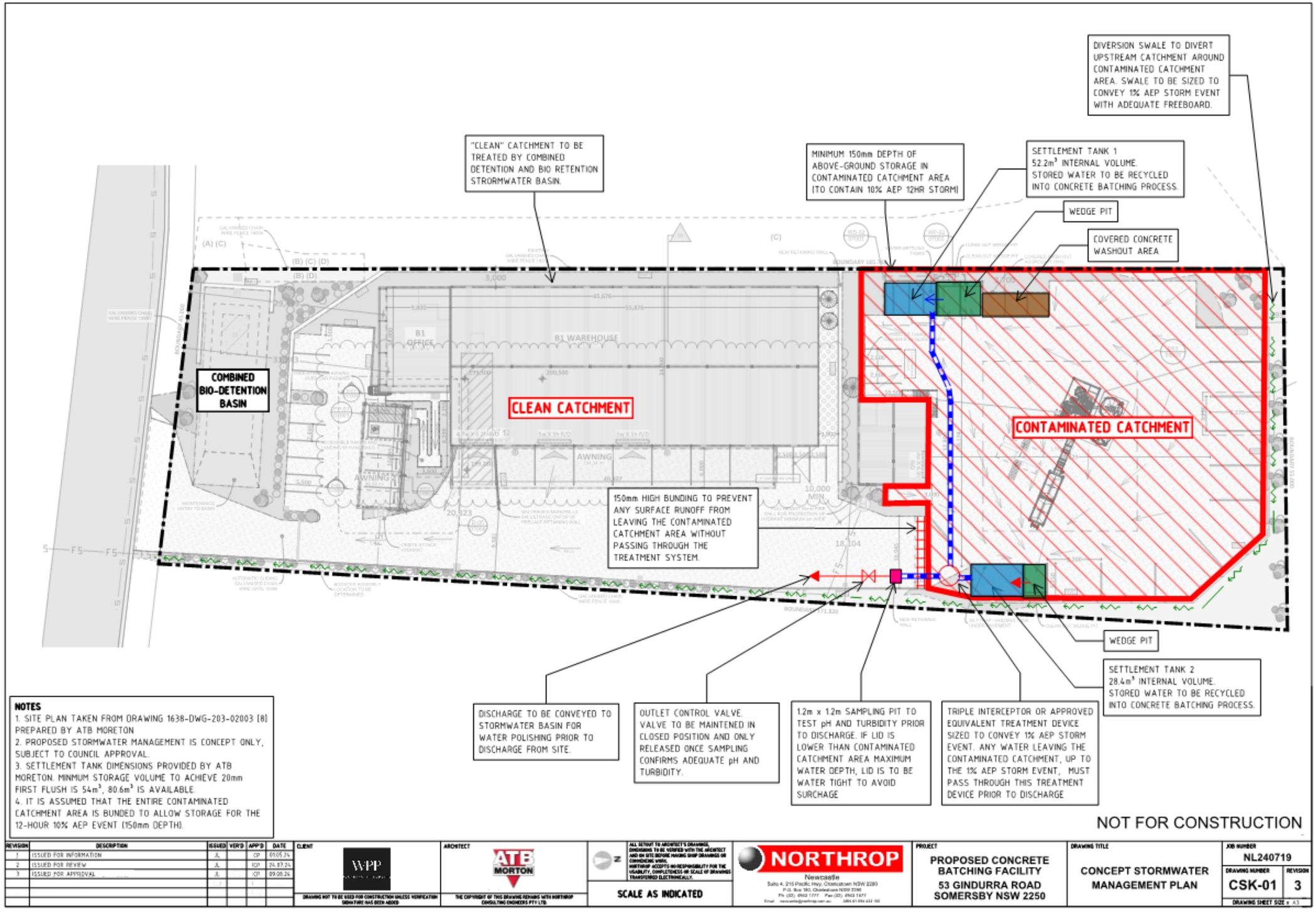
Should you have any queries, please do not hesitate to contact the undersigned.

Yours sincerely,

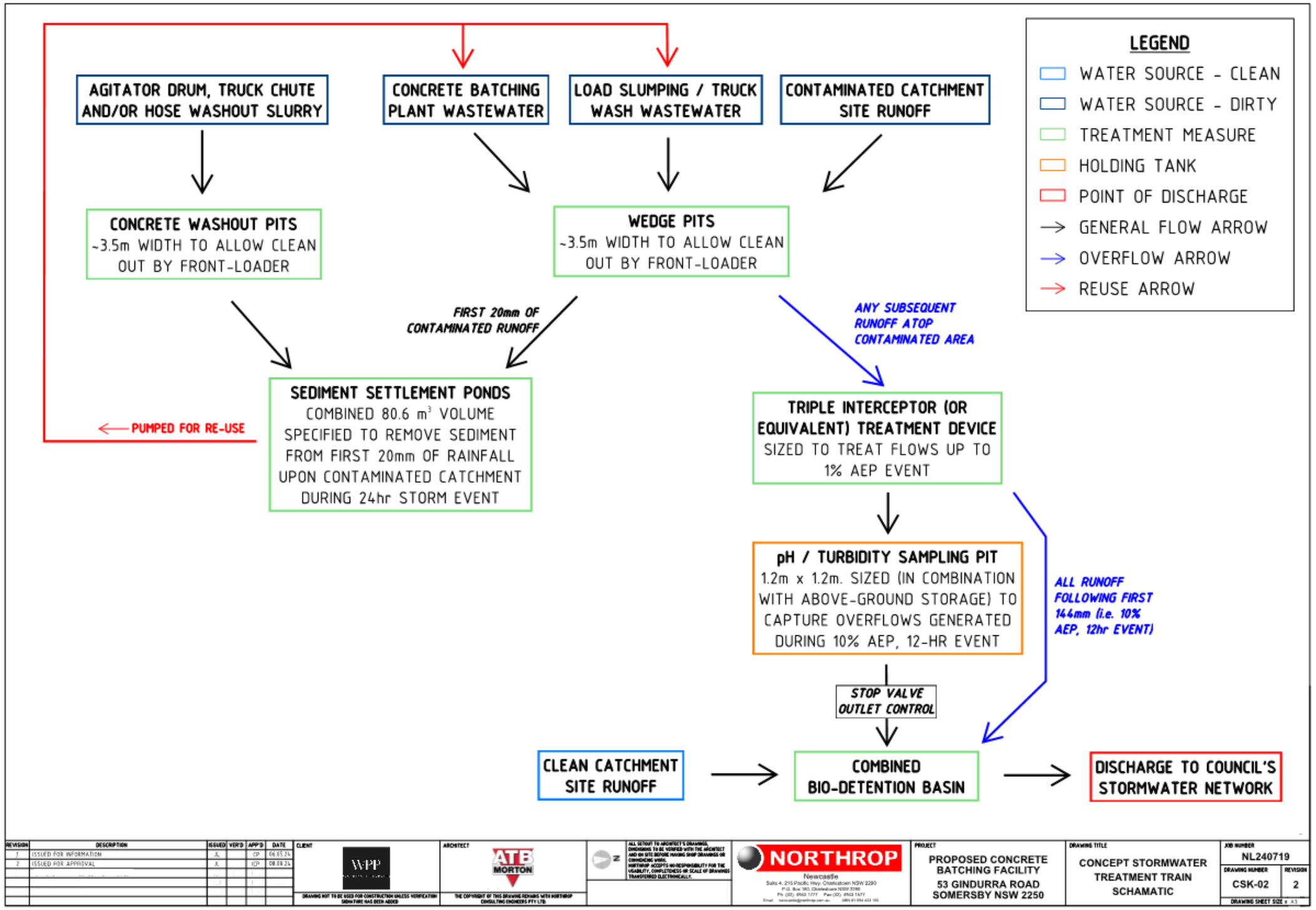


Chris Piper
Principal | Senior Civil Engineer
BEng (Civil) (Hons) MIEAust CPEng NER (Civil) RPEQ
On behalf of Northrop Consulting Engineers

Appendix A - Concept Stormwater Management Plan


DIVERSION SWALE TO DIVERT UPSTREAM CATCHMENT AROUND CONTAMINATED CATCHMENT AREA. SWALE TO BE SIZED TO CONVEY 1% AEP STORM EVENT WITH ADEQUATE FREEBOARD.
"CLEAN" CATCHMENT TO BE TREATED BY COMBINED DETENTION AND BIO RETENTION STRORMWATER BASIN.
MINIMUM 150mm DEPTH OF ABOVE-GROUND STORAGE IN CONTAMINATED CATCHMENT AREA (TO CONTAIN 10% AEP 12HR STORM)
SETTLEMENT TANK 1
52.2m³ INTERNAL VOLUME.
STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
WEDGE PIT
COVERED CONCRETE WASHOUT AREA
COMBINED BIO-DETENTION BASIN
CLEAN CATCHMENT
CONTAMINATED CATCHMENT
150mm HIGH BUNDING TO PREVENT ANY SURFACE RUNOFF FROM LEAVING THE CONTAMINATED CATCHMENT AREA WITHOUT PASSING THROUGH THE TREATMENT SYSTEM.
WEDGE PIT
SETTLEMENT TANK 2
28.4m³ INTERNAL VOLUME.
STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
DISCHARGE TO BE CONVEYED TO STORMWATER BASIN FOR WATER POLISHING PRIOR TO DISCHARGE FROM SITE.
OUTLET CONTROL VALVE. VALVE TO BE MAINTENED IN CLOSED POSITION AND ONLY RELEASED ONCE SAMPLING CONFIRMS ADEQUATE pH AND TURBIDITY.
1.2m x 1.2m SAMPLING PIT TO TEST pH AND TURBIDITY PRIOR TO DISCHARGE. IF LID IS LOWER THAN CONTAMINATED CATCHMENT AREA MAXIMUM WATER DEPTH, LID IS TO BE WATER TIGHT TO AVOID SURCHAGE
TRIPLE INTERCEPTOR OR APPROVED EQUIVALENT TREATMENT DEVICE SIZED TO CONVEY 1% AEP STORM EVENT. ANY WATER LEAVING THE CONTAMINATED CATCHMENT, UP TO THE 1% AEP STORM EVENT, MUST PASS THROUGH THIS TREATMENT DEVICE PRIOR TO DISCHARGE
B1 OFFICE
B1 WAREHOUSE
AWNING
NOTES
1. SITE PLAN TAKEN FROM DRAWING 1638-DWG-203-02003 [8] PREPARED BY ATB MORETON
2. PROPOSED STORMWATER MANAGEMENT IS CONCEPT ONLY, SUBJECT TO COUNCIL APPROVAL.
3. SETTLEMENT TANK DIMENSIONS PROVIDED BY ATB MORETON. MINMUM STORAGE VOLUME TO ACHIEVE 20mm FIRST FLUSH IS 54m³, 80.6m³ IS AVAILABLE.
4. IT IS ASSUMED THAT THE ENTIRE CONTAMINATED CATCHMENT AREA IS BUNDED TO ALLOW STORAGE FOR THE 12-HOUR 10% AEP EVENT (150mm DEPTH).
NOT FOR CONSTRUCTION
REVISION 1 DESCRIPTION ISSUED FOR INFORMATION ISSUED JL VER'D APP'D CP DATE 09.05.24
REVISION 2 DESCRIPTION ISSUED FOR REVIEW ISSUED JL VER'D APP'D ICP DATE 24.07.24
REVISION 3 DESCRIPTION ISSUED FOR APPROVAL ISSUED JL VER'D APP'D CP DATE 09.08.24
CLIENT WPP
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED
ARCHITECT ATB MORTON
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PROJECT
PROPOSED CONCRETE BATCHING FACILITY
53 GINDURRA ROAD
SOMERSBY NSW 2250
DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN
JOB NUMBER NL240719
DRAWING NUMBER CSK-01
REVISION 3
DRAWING SHEET SIZE = A3

Appendix B - Concept Stormwater Treatment Train Schematic


AGITATOR DRUM, TRUCK CHUTE AND/OR HOSE WASHOUT SLURRY
CONCRETE BATCHING PLANT WASTEWATER
LOAD SLUMPING / TRUCK WASH WASTEWATER
CONTAMINATED CATCHMENT SITE RUNOFF
CONCRETE WASHOUT PITS
~3.5m WIDTH TO ALLOW CLEAN OUT BY FRONT-LOADER
WEDGE PITS
~3.5m WIDTH TO ALLOW CLEAN OUT BY FRONT-LOADER
FIRST 20mm OF CONTAMINATED RUNOFF
ANY SUBSEQUENT RUNOFF ATOP CONTAMINATED AREA
PUMPED FOR RE-USE
SEDIMENT SETTLEMENT PONDS
COMBINED 80.6 m³ VOLUME SPECIFIED TO REMOVE SEDIMENT FROM FIRST 20mm OF RAINFALL UPON CONTAMINATED CATCHMENT DURING 24hr STORM EVENT
TRIPLE INTERCEPTOR (OR EQUIVALENT) TREATMENT DEVICE
SIZED TO TREAT FLOWS UP TO 1% AEP EVENT
pH / TURBIDITY SAMPLING PIT
1.2m x 1.2m. SIZED (IN COMBINATION WITH ABOVE-GROUND STORAGE) TO CAPTURE OVERFLOWS GENERATED DURING 10% AEP, 12-HR EVENT
ALL RUNOFF FOLLOWING FIRST 144mm (i.e. 10% AEP, 12hr EVENT)
STOP VALVE OUTLET CONTROL
CLEAN CATCHMENT SITE RUNOFF
COMBINED BIO-DETENTION BASIN
DISCHARGE TO COUNCIL'S STORMWATER NETWORK
LEGEND
WATER SOURCE - CLEAN
WATER SOURCE - DIRTY
TREATMENT MEASURE
HOLDING TANK
POINT OF DISCHARGE
GENERAL FLOW ARROW
OVERFLOW ARROW
REUSE ARROW
REVISION
1 ISSUED FOR INFORMATION JL CP 06.05.24
2 ISSUED FOR APPROVAL JL ICP 08.08.24
CLIENT WPP
ARCHITECT ATB MORTON
NORTHROP Newcastle
PROJECT PROPOSED CONCRETE BATCHING FACILITY 53 GINDURRA ROAD SOMERSBY NSW 2250
DRAWING TITLE CONCEPT STORMWATER TREATMENT TRAIN SCHAMATIC
JOB NUMBER NL240719
DRAWING NUMBER CSK-02
REVISION 2

RAPT CONSULTING

Noise and Vibration Assessment – 53 Gindurra Road, Somersby NSW.

Prepared for
WPP

June 2025

Relationships Attention Professional Trust

Document Details

Noise and Vibration Assessment – 53 Gindurra Road, Somersby NSW

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RAPT CONSULTING

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1. Introduction

1.1 Background

RAPT Consulting has been engaged to undertake a noise and vibration impact assessment (NVIA) for ATB Morton C/O WPP to inform an Environmental Impact Statement (EIS) for the proposed concrete batching plant located at 53 Gindurra Road, Somersby (Lot 12 DP1189679) in the Central Coast Local Government area.

The site location and surrounding area is shown in Figure 1-1.



Figure 1-1 Site and Surrounding Area

Based on information provided, it is understood the plant will be serviced by:

1. Concrete hardstand area with paved vehicular access from Gindurra Road (suitable for access by semi-trailer and heavy rigid vehicles)
2. three parking spaces
3. external material storage bays

4. water treatment area (comprising water settling tanks, clean out wedge pit and covered washout aggregate bins)
5. dirt grit area, and
6. 93.42m2 ancillary maintenance / administration space including an operations control room and staff amenities.

As the proposal will utilise existing site infrastructure, with the exception installation of the plant, no external construction works, earthworks or vegetation clearing is proposed.

The preliminary operational details are as follows:

Table 1-1 Operational Details

Factor	Details
Operating Hours	Generally 6:00am to 6:00pm, Monday to Friday, and 6:00am to 12:00pm on Saturdays. Raw materials would usually be received during weekday operations.
Staff numbers	1 -2 plant supervisors, 3 concrete batchers and 4 delivery drivers. Typically a maximum of 9 staff would be on site at any time.
Primary Raw Materials Usage	Coarse aggregate (gravel) per annum, fine aggregate (sand) and cement will generally sourced from suppliers in the Central Coast, Hunter and Sydney regions. Will be sourced from mains supply and runoff from hardstand areas. All water from the batching facility is proposed to be collected and treated on site for reuse in the batching process.
Vehicular movements	Approximately 130 concrete agitator (heavy rigid) and 25 raw material delivery vehicles (semi trailer) would access the site per week. Truck movements are anticipated to occur consistently throughout the day Finished concrete product will be delivered to current and future markets in the Central Coast, Hunter and Sydney regions via the Pacific Motorway.

The site is currently zoned Zone IN1 General Industrial under Gosford Local Environmental Plan 2014 (GLEP). The proposed development is most appropriately characterised as a general industry, a land use which is permissible with consent in the IN1 zone under the GLEP.

A draft site layout is shown in Figure 1-2.

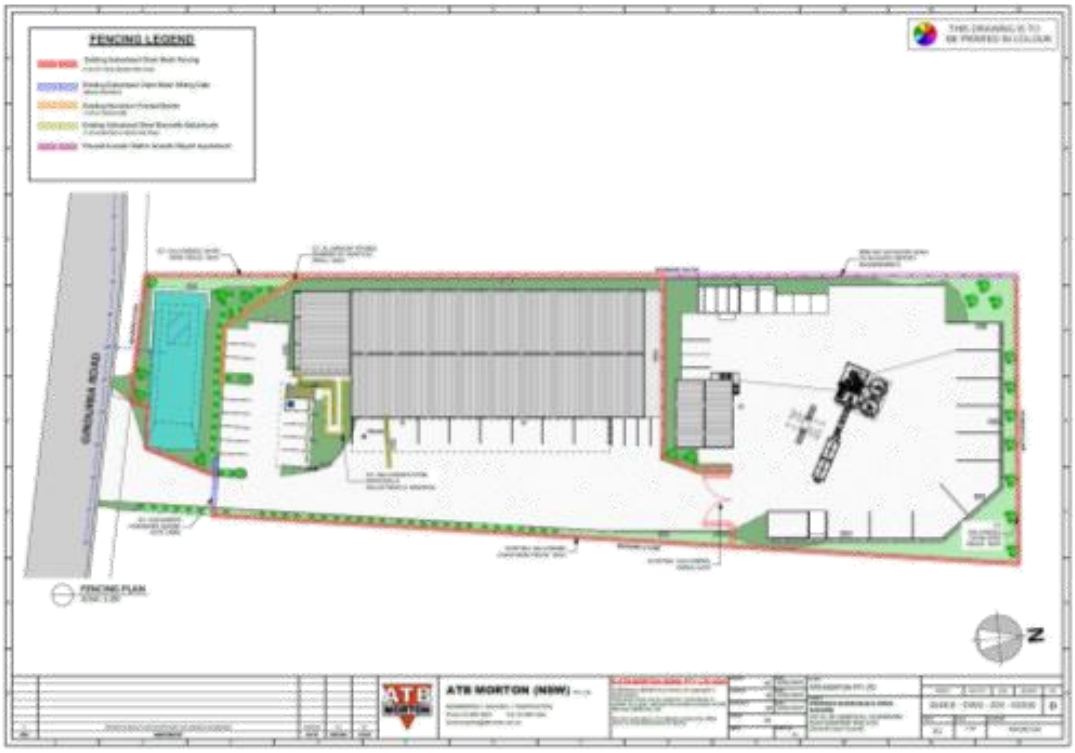


Figure 1-2 Draft Site Layout (Source ATB Morton)

1.2 SEARS and where Addressed

In preparing this NVIA, the Secretary's Environmental Assessment Requirements (SEARs), issued for the project (SEAR 1537) on 17 March 2021, have been addressed. The key matters raised by the SEARs for consideration in the Noise and Vibration assessment and where this report addresses these matters are outlined in Table 1-2.

Table 1-2: SEARs and where addressed

Requirement	Where addressed
A description of all potential noise and vibration sources during construction and operation, including road traffic noise	**Section 4**
A noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines	**This Document**
A description and appraisal of noise and vibration mitigation and monitoring measures.	**Section 4**

1.3 Assessment Objectives

This Noise and Vibration assessment considers the potential impacts of the construction and operation of the proposal. The purpose is to assess potential noise and vibration from the project and to recommend mitigation measures where required.

The outcomes of this assessment include recommendations for potential noise and vibration mitigation and management measures designed to achieve an acceptable noise amenity for residential (dwelling) occupants and other sensitive receivers surrounding the study area.

1.4 Scope

The Noise and Vibration assessment scope of work included:

- Initial desk top review to identify noise sensitive receptors from aerial photography
- Undertake noise measurements to determine ambient and background noise levels
- Establish project noise goals for the construction and operation of the proposed project
- Identify the likely principal noise sources during construction, operation and their associated noise levels
- assessment of potential noise, vibration and sleep disturbance impacts associated with construction and operation aspects of the project
- provide recommendations for feasible and reasonable noise and vibration mitigation and management measures, where noise or vibration objectives may be exceeded.

1.5 Relevant Guidelines

The relevant policies and guidelines for noise and vibration assessments in NSW that have been considered during the preparation of this assessment include:

- Interim Construction Noise Guideline (ICNG), Department of Environment and Climate Change, 2009
- Assessing Vibration: A Technical Guideline, Department of Environment and Conservation (DEC), 2006
- British Standard BS7385.2 - 1993 Evaluation and Measurement for Vibration in Buildings, Part 2 - Guide to damage levels from ground borne vibration 1993
- DIN 4150: Part 3-1999 Structural vibration – Effects of vibration on structures 1999
- NSW Road Noise Policy (RNP), Department of Environment, Climate Change and Water (DECCW), 2011
- Noise Policy for Industry (NPfI), Environment Protection Authority (EPA), 2017.

1.6 Limitations

The purpose of the report is to provide an independent Noise and Vibration assessment for the proposal.

It is not the intention of the assessment to cover every element of the Noise and Vibration environment, but rather to conduct the assessment with consideration to the prescribed work scope.

The findings of the Noise and Vibration assessment represent the findings apparent at the date and time of the assessment undertaken. It is the nature of environmental assessments that all variations in environmental conditions cannot be assessed and all uncertainty concerning the conditions of the ambient environment cannot be eliminated. Professional judgement must be exercised in the investigation and interpretation of observations.

In conducting this assessment and preparing the report, current guidelines for Noise and Vibrations, noise were referred to. This work has been conducted in good faith with RAPT Consulting's understanding of the client's brief and the generally accepted consulting practice.

No other warranty, expressed or implied, is made as to the information and professional advice included in this report. It is not intended for other parties or other uses.

2. Existing Environment

2.1 Current Land Use

The site is currently zoned E4 General Industrial. A map showing the land use zonings in the vicinity of the proposal are shown in Figure 2-1.

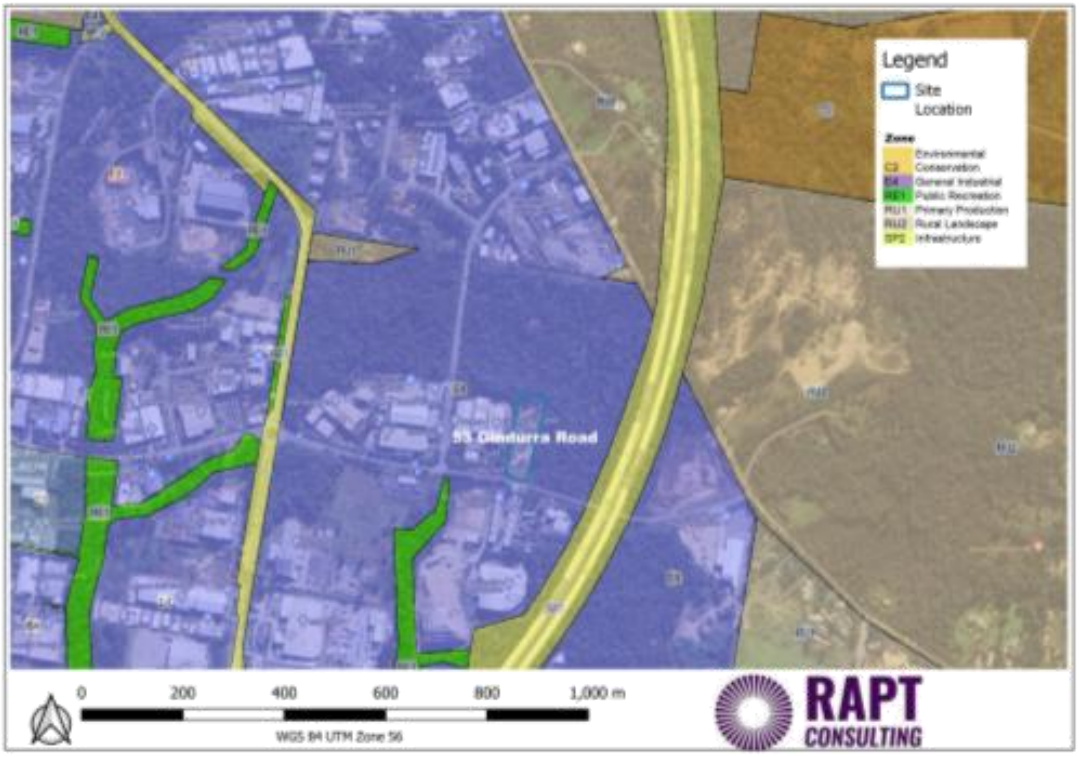


Figure 2-1 Land Use Zonings

2.2 Receptors

Nearest representative receptors to the proposal assessed in this acoustic assessment are identified in Table 2-1 and Figure 2-2. Other receptors are located in these areas however the locations selected are considered representative of the localised noise environment in the vicinity of the locations selected.

Closest receptors to the proposal assessed in this assessment are identified in Table 2-1 and Figure 2-2.

Table 2-1 Nearest Receptors

Receiver ID	Address	Receptor Type	Easting	Northing
R1	180 Wisemans Ferry Road Somersby, NSW 2250	Residential	341189	6301942
R2	191 Wisemans Ferry Road Somersby, NSW 2250	Residential	341006	6301974
R3	6 Chivers Road, Somersby, NSW 2250	Commercial / Industrial	341460	6301622
R4	54 Gindurra Road, Somersby, NSW 2250	Commercial	341483	6301467
R5	227 Debenham Road North, Somersby, NSW 2250	Residential	341746	6302165
R6	242 Debenham Road South, Somersby, NSW 2250	Residential	342014	6301431

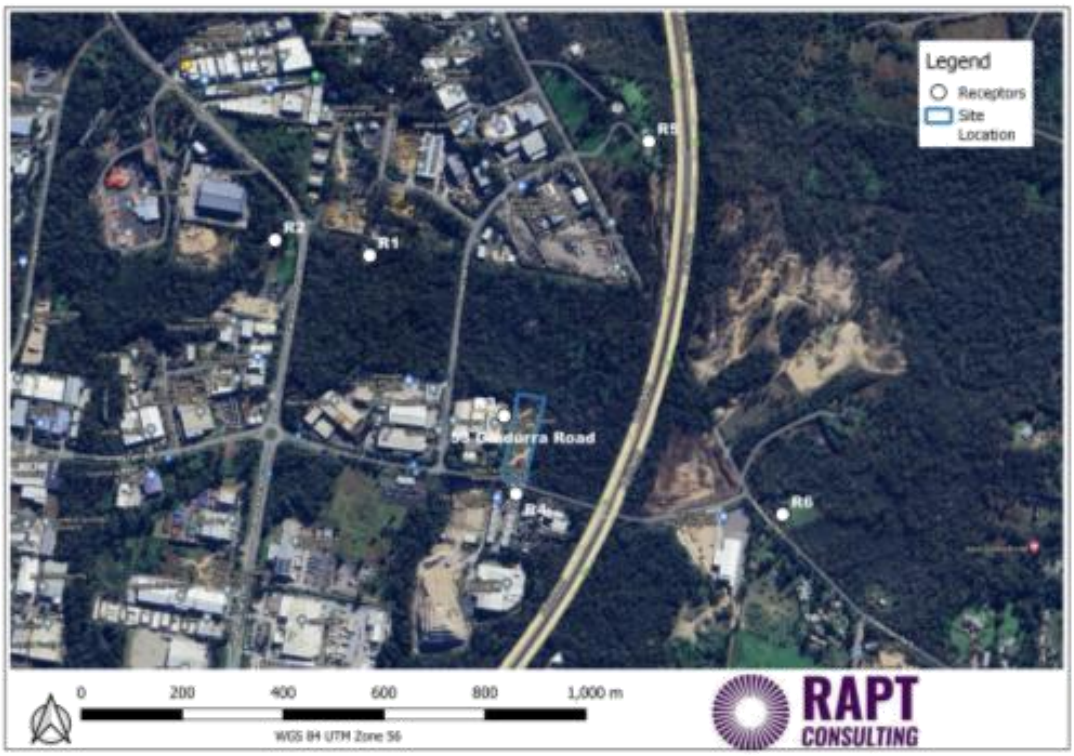


Figure 2-2 Assessed Receptors

2.3 Background and Ambient Noise

To establish background and ambient noise levels, noise monitoring was undertaken by RAPT Consulting from 6 June to 13 June 2025 just south of the R2 Property Boundary. Attempts were made to contact R1 and R2 to gain permission for property access however no responses were receive from either of these properties. Attended observations noted R2 is currently vacant. Site observations noted the location was considered indicative of the local ambient noise environment and this site also presented as a reasonably secure location thereby minimising the risk of theft or vandalism to the monitoring equipment.

During field visits in the vicinity of the project area, this location was deemed as appropriate for background noise monitoring and representative of the nearest residential receivers being R1 and R2 which are already influenced by existing commercial and road noise sources. R5 is located within 70 metres of the Pacific Motorway and R6 lies to the east of the Pacific Motorway while the proposal lies to the west of the Pacific Motorway. While residential receptors in the vicinity of the project are Zoned RU1 and RU2, field observations noted that these areas are considered Urban from an acoustic perspective consistent with the definition of an urban noise environment contained in the NSW NPfI.

Urban – an area with an acoustical environment that:

- is dominated by 'urban hum' or industrial source noise, where urban hum means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources
- has through-traffic with characteristically heavy and continuous traffic flows during peak periods
- is near commercial districts or industrial districts
- has any combination of the above.

Additionally, it was considered as an acceptable location for determination of the background noise with consideration to the NSW Environment Protection Authority's (EPA's) – Noise Policy for Industry (NPfI). During site visits it was noted that the ambient noise environment is complex and influenced by road traffic noise, a variety of industrial activity, wildlife sources and an underlying urban 'hum' which primarily described the ambient noise environment and is indicative of an urban noise environment.

The monitoring location is shown in Figures 2-2 – 2-3.

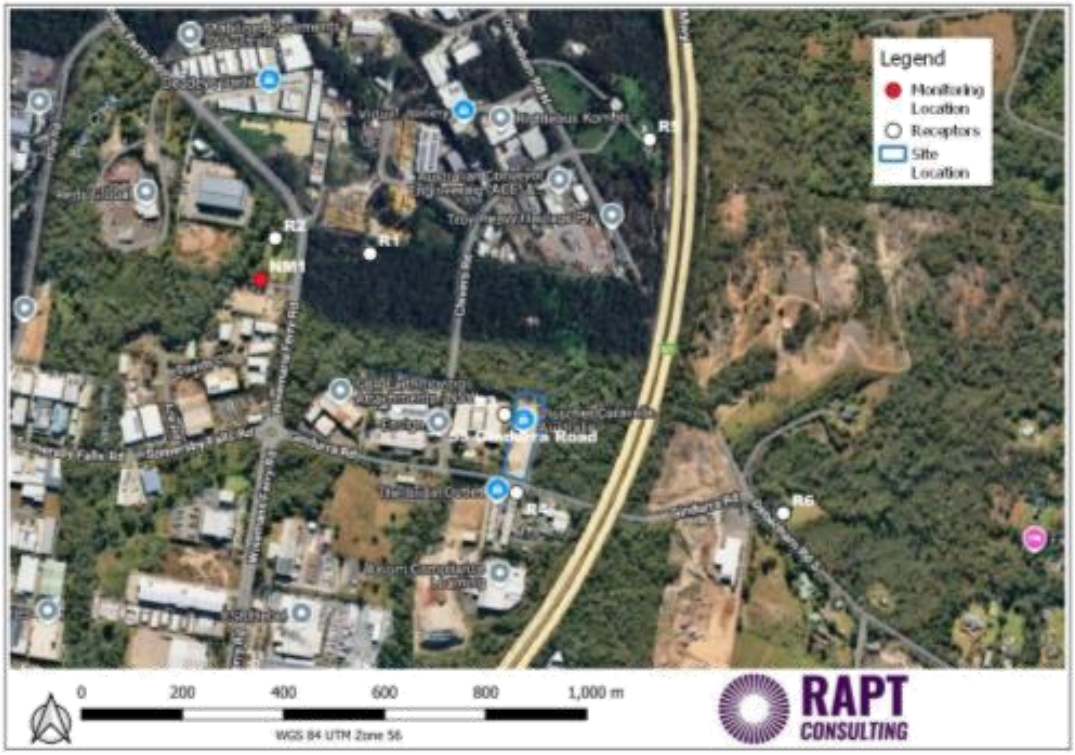


Figure 2-3 Monitoring Location.



Figure 2-4 Noise Monitoring Location

Monitoring was undertaken using a RION NL-43 noise logger with Type 2 Precision. Calibration was checked prior to and at the conclusion of the measurements with no significant drift. These loggers are capable of measuring continuous sound pressure levels and are able to record L_{Amin}, L_{A90}, L_{A10}, L_{Amax} and L_{Aeq} noise descriptors. The instrument was programmed to accumulate environmental noise data continuously over sampling periods of 15 minutes for the entire monitoring period.

The L_{A90} descriptor is used to measure the background noise level. This descriptor represents the noise level that is exceeded for 90 percent of the time over a relevant period of measurement. In line with the procedures described in the EPA's NPfI, the assessment background level (ABL) is established by determining the lowest tenth-percentile level of the L_{A90} noise data acquired over each period of interest. The background noise level or rating background level (RBL) representing the day, evening and night-time assessment periods is based on the median of individual ABL's determined over the entire monitoring duration. The RBL is representative of the average minimum background sound level, or simply the background level.

The L_{Aeq} is the equivalent continuous noise level which would have the same total Noise and Vibration energy over the measurement period as the varying noise actually measured, so it is in effect an energy average.

Logged data was reviewed and filtered to exclude any extraneous data during the monitoring period. Weather information for the unattended noise logging was obtained from the Bureau of Meteorology Gosford all weather station for the monitoring period and any data adversely affected by rain, wind (more than 5 m/s as per NPfI) were discarded.

The RBL and ambient LAeq levels are provided in Table 2-2 below. Charts of the noise monitoring are provided in Appendix B.

Table 2-2 Background and Ambient Noise Monitoring Results

Address	Rating background level, L_{A90}, dB(A)				Ambient noise levels, L_{Aeq} dB(A)			
	Day[1]	Evening[1]	Night[1]	Night (Shoulder)[1]	Day[1]	Evening[1]	Night[1]	Night (Shoulder)[1]
NM1	45	41	38	45	52	47	47	51

Note 1 Day: 7:00 to 18:00 Monday to Saturday and 8:00 to 18:00 Sundays & Public Holidays
Evening: 18:00 to 22:00 Monday to Sunday & Public Holidays
Night: 22:00 to 7:00 Monday to Saturday and 22:00 to 8:00 Sundays & Public Holidays
Night: Shoulder 5:00 to 7:00

3. Noise and Vibration Objectives

3.1 Construction Noise

Construction noise is assessed with consideration to DECCW Interim Construction Noise Guidelines (ICNG) (July 2009). The ICNG is a non-mandatory guideline that is usually referred to by local councils and other NSW government entities when construction / demolition works require development approval. The ICNG recommend standard hours for construction activity as detailed in Table 3-1.

Table 3-1 ICNG Recommended Construction Hours

Work type	Recommended standard hours of work
Normal construction	Monday to Friday: 7 am to 6 pm. Saturday: 8 am to 1 pm. No work on Sundays or Public Holidays.
Blasting	Monday to Friday: 9 am to 5 pm. Saturday: 9 am to 1 pm. No work on Sundays or Public Holidays.

The ICNG provides noise management levels for construction noise at residential and other potentially sensitive receivers. These management levels are to be calculated based on the adopted rating background level (RBL) at nearby locations, as shown in Table 3-2.

Table 3-2 ICNG Noise Guidelines at Receivers

Period	Management Level $L_{Aeq(15\ min)}$
Residential Recommended standard hours	Noise affected level: RBL + 10 Highly noise affected level: 75 dB(A)
Residential Outside recommended standard hours	Noise affected level: RBL + 5
Classrooms at schools and other educational institutions	Internal Noise Level 45 dB(A) (applies when properties are being used)
Active recreation areas (characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion)	65 dB(A)
Offices, retail outlets (external)	70 dB(A)
industrial premises (external)	75 dB(A)

The above levels apply at the boundary of the most affected residences / offices or within 30 m from the residence where the property boundary is more than 30 m from the residence.

The *noise affected level* represents the point above which there may be some community reaction to noise. Where the *noise affected level* is exceeded all feasible and reasonable work practices to minimise noise should be applied and all potentially impacted residents should be informed of the nature of the works, expected noise levels, duration of works and a method of contact. The *noise affected level* is the background noise level plus 10 dB(A) during recommended standard hours and the background noise level plus 5 dB(A) outside of recommended standard hours.

The *highly noise affected level* represents the point above which there may be strong community reaction to noise and is set at 75 dB(A). Where noise is above this level, the relevant authority may require respite periods by restricting the hours when the subject noisy activities can occur, considering:

- Times identified by the community when they are less sensitive to noise (such as mid-morning or mid-afternoon for works near residences).
- If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.

It is understood installation of plant is to take place however no other construction works are planned as part of this proposal and therefore is not considered further in this assessment.

3.2 Vibration Guidelines

3.2.1 Human Exposure

Vibration goals were sourced from the DECCW's *Assessing Vibration: a technical guideline*, which is based on guidelines contained in British Standard (BS) 6472–1992, *Evaluation of human exposure to vibration in buildings (1–80 Hz)*.

Vibration, at levels high enough, has the potential to cause damage to structures and disrupt human comfort. Vibration and its associated effects are usually classified as continuous, impulsive or intermittent as follows:

- continuous vibration continues uninterrupted for a defined period and includes sources such as machinery and continuous construction activities
- impulsive vibration is a rapid build up to a peak followed by a damped decay. It may consist of several cycles at around the same amplitude, with durations of typically less than two seconds and no more than three occurrences in an assessment period. This may include occasional dropping of heavy equipment or loading activities
- intermittent vibration occurs where there are interrupted periods of continuous vibration, repeated periods of impulsive vibration or continuous vibration that varies significantly in magnitude. This may include intermittent construction activity, impact pile driving, jack hammers.

The preferred and maximum values for continuous and impulsive vibration are defined in Table 2.2 of the guideline and are reproduced in Table 3-3 for the applicable receivers.

Table 3-3 Preferred and Maximum Levels for Human Comfort

Location	Assessment Period[2]	Preferred Values		Maximum Values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Continuous vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Residences	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Impulsive vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14

Note 2 Daytime is 7:00am to 10:00pm and Night-time is 10:00pm to 7:00am

The acceptable vibration dose values (VDV) for intermittent vibration are defined in Table 2.4 of the guideline and are reproduced in Table 3-4 for the applicable receiver type.

Table 3-4 Acceptable Vibration Dose Values for Intermittent Vibration (m/s1.75)

Location	Daytime [3]		Night-time [3]	
	Preferred value	Maximum value	Preferred value	Maximum value
Critical areas[4]	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

Note 3 Daytime is 7:00 to 22:00 and night-time is 22:00 to 7:00: and
Note 4 Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. These criteria are only indicative, and there may be needed to assess intermittent values against the continuous or impulsive criteria for critical areas.

3.2.2 Building Damage

Currently, there is no Australian Standard that sets the criteria for the assessment of building damage caused by vibration. Guidance of limiting vibration values is attained from reference to the following International Standards and Guidelines:

- British Standard BS7385.2 - 1993 *Evaluation and Measurement for Vibration in Buildings*, Part 2 - Guide to damage levels from ground borne vibration
- German Standard DIN 4150-3: 1999-02 Structural Vibration – Part 3: *Effects of vibration on structures.*

The recommended Peak Particle Velocity (PPV) guidelines for the possibility of vibration induced building damage are derived from the minimum vibration levels above which any damage may occur are presented in Table 3-5 for DIN 4150-3: 1999-02 and Table 3-6 for BS7385.2 – 1993.

Table 3-5 DIN 4150-3 Guideline values for vibration velocity to be used when evaluating the effects of short-term vibration on structures

Type of Structure	Peak Component Particle Velocity, mm/s			
	Vibration at the foundation at a frequency of			Vibration of horizontal plane of highest floor at all frequencies
	1 Hz to 10 Hz	10 Hz to 50 Hz	50 Hz to 100 Hz*	
Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20-40	40-50	40
Dwellings and buildings of similar design and/or occupancy	5	5-15	15-20	15
Structures that, because of their sensitivity to vibration, do not correspond to those listed in lines 1 and 2 of table 5-7 and are of great intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

Note 5 At frequencies above 100Hz, the values given in this column may be used as minimum values

Table 3-6 BS7385.2 Transient Vibration Guideline Values for Potential building - Cosmetic Damage

Building Type[7]	Peak component particle velocity in frequency range of predominant pulse	
	4 Hz to 15 Hz[5]	15 Hz and above[6]
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings.	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Note 6 Values referred to are at the base of the building: and
Note 7 For transient vibration effecting unreinforced or light framed structures at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) should not be exceeded.

Unlike noise which travels through air, the transmission of vibration is highly dependent on substratum conditions between the source/s and receiver. Also dissimilar to noise travelling through air, vibration levels diminish quickly over distance, thus an adverse impact from vibration on the broader community is not typically expected. Vibration during works is considered an intermittent source associated with two main types of impact: disturbance at receivers and potential architectural/structural damage to buildings. Generally, if disturbance issues are controlled, there is limited potential for structural damage to buildings.

Ground Vibration – Minimum Working Distances from Sensitive Receivers

The Transport for NSW Construction Noise and Vibration Strategy (CNVS) provides guidance for minimum working distances. As a guide, minimum working distances from sensitive receivers for typical items of vibration intensive plant are listed in Table 20 of the CNVS. The minimum distances are quoted for both "cosmetic" damage (refer BS 7385) and human comfort (refer OH&E's Assessing Vibration - a technical guideline). DIN 4150 has criteria of particular reference for heritage structures. Table 3-7 provides the recommended minimum safe working distances for vibration intensive plant from sensitive receivers.

Table 3-7 Recommended Minimum Safe Working Distances for Vibration Intensive Plant from Sensitive Receiver

Plant Item	Rating / Description	Minimum Distance Cosmetic Damage		Minimum Distance Human Response (NSW EPA Guideline)
		Residential and Light Commercial (BS 7385)	Heritage Items (DIN 4150, Group 3)	
Vibratory Roller	<50 kN (1-2 tonne)	5m	11m	15m to 20m
	<100 kN (2-4 tonne)	6m	13m	20m
	<200 kN (4-6 tonne)	12m	15m	40m
	<300kN (7-13 tonne)	15m	31m	100m
	>300kN (13-18 tonne)	20m	40m	100m
	>300kN (>18 tonne)	25m	50m	100m
Small Hydraulic Hammer	300kg (5 to 12 t excavator)	2m	5m	7m
Medium Hydraulic Hammer	900kg (12 to 18 t excavator)	7m	15m	23m
Large Hydraulic Hammer	1600kg (18 to 34 t excavator)	22m	44m	73m
Vibratory Pile Driver	Sheet Piles	2m to 20m	5m to 40m	20m
Pile Boring	≤ 800mm	2m (nominal)	5m	4m
Jack Hammer	Hand Held	1m (nominal)	3m	2m

While significant vibration generating activities are not expected as part of the proposal, during operation it is recommend if any of the above activities are planned, they be limited to vibratory roller <100 kN (2-4 tonne), and medium hydraulic hammer 900kg (12 to 18 t excavator).

3.3 Operational Noise – NSW Noise Policy for Industry

The NPfI provides guidance on the assessment of operational noise impacts associated with the project's operation. The NPfI assessment procedure has two components:

- Controlling intrusive noise impacts in the short-term for residences
- Maintaining noise level amenity for residences and other land uses.

Project Intrusiveness Noise Levels

According to the NPfI, the intrusiveness of a noise source may generally be considered acceptable if the equivalent continuous (energy-average) A-weighted level of noise from the source (represented by the $L_{Aeq,15min}$ descriptor) does not exceed the background noise level measured in the absence of the source by more than 5 dB(A). The project intrusiveness noise level, which is only applicable to residential receivers, is determined as follows:

$L_{Aeq,15minute}$ Intrusiveness noise level = Rating Background Level ('RBL') plus 5 dB(A)

Fact Sheet A3 NPfI

Fact Sheet A3 of the NPfI provides guidance pertaining to 'shoulder' periods. It states, "There will be situations that call for different assessment periods. For example, where early morning (5 am to 7 am) operations are proposed, it may be unreasonable to expect such operations to be assessed against the night-time project noise trigger levels – especially if existing background noise levels are steadily rising in these early morning hours." This is the case for this proposal as operations are proposing to commence at 6:00am. Therefore, shoulder period RBL's are also provided.

Based on the measured and adopted noise levels outlined in Table 2-2, The intrusiveness noise levels for residential receivers are provided in Table 3-8.

Table 3-8 Intrusiveness Noise Levels

Period	RBL. L_{A90}, dB(A)	Intrusiveness noise level (RBL + 5), dB(A)
Day[8]	45	50
Evening[8]	41	46
Night[8]	38 (45 Shoulder)	43 (50 Shoulder)

Note 8 Day 7:00 to 18:00 Monday to Saturday and 8:00 to 18:00 Sundays & Public Holidays
Evening: 18:00 to 22:00 Monday to Sunday & Public Holidays
Night: 22:00 to 7:00 Monday to Saturday and 22:00 to 8:00 Sundays & Public Holidays,
Night Shoulder 5:00 to 7:00

Amenity Noise Levels

The project amenity noise levels for different time periods of day are determined with consideration to Section 2.4 of the NPfI. The NPfI recommends amenity noise levels ($L_{Aeq,period}$) for various receivers including residential, commercial, industrial receivers and

sensitive receivers such as schools, hotels, hospitals, churches and parks. These "recommended" amenity noise levels represent the objective for total industrial noise experienced at a receiver location. However, when assessing a single industrial development and its impact on an area, "project" amenity noise levels apply.

The NPfI recommended amenity noise levels are shown in Table 3-9 below.

Table 3-9 NPfI Recommended Amenity Noise Levels

Type of Receiver	Noise Amenity Area	Time of Day[9, 10]	Recommended amenity noise level, LAeq, dB(A)[11, 12]
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks	See column 4	See column 4	5 dB(A) above the recommended amenity noise level for a residence for the relevant noise amenity area and time of day
School classroom (internal)	All	Noisiest 1-hour period when in use	35[13]
Hospital ward	All		
- Internal		Noisiest 1-hour	35
- External		Noisiest 1-hour	50
Place of worship (internal)	All	When in use	40
Passive recreation (e.g. national park)	All	When in use	50
Active recreation (e.g. school playground, golf course)	All	When in use	55
Commercial premises	All	When in use	65
Industrial premises	All	When in use	70
Industrial interface (applicable only to residential noise amenity areas)	All	When in use	Add 5 dB(A) to recommended noise amenity area

Note 9 Daytime 7.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 7.00 am.

Note 10 On Sundays and Public Holidays, Daytime 8.00 am - 6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 8.00 am.

Note 11 The LAeq index corresponds to the level of noise equivalent to the energy average of noise levels occurring over a measurement period.

Note 12 The recommended amenity noise levels refer only to noise from industrial sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated

Note 13 In the case where existing schools are affected by noise from existing industrial noise sources, the acceptable LAeq noise level may be increased to 40 dB LAeq(1hr)

The nearest residential receivers are considered 'Urban'. This is consistent with attended observations and measurement results for this current proposal. Additionally, it is consistent with the NPfI classification for urban which states in Table 2.3 for determining which or the receiver categories applies:

Urban – an area with an Noise and Vibrational environment that:

- is dominated by 'urban hum' or industrial source noise, where urban hum means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources
- has through-traffic with characteristically heavy and continuous traffic flows during peak periods
- is near commercial districts or industrial districts
- has any combination of the above.

Consistent with the recommendations contained within the NPfI, the Urban residential category has been utilised for the purposes of this assessment.

To ensure that the total industrial noise level (existing plus new) remain within the recommended amenity noise levels for an area, the project amenity noise level that applies for each new industrial noise source is determined as follows:

Project amenity noise level = Recommended amenity noise level (Table 3-9) – 5dB(A)

Additionally, given that the intrusiveness noise level is based on a 15-minute assessment period and the project amenity noise level is based on day, evening and night assessment periods, the NPfI provides the following guidance on adjusting the $L_{Aeq,(period)}$ level to a representative $L_{Aeq,15minute}$ level in order to standardise the time periods.

$L_{Aeq(15minute)} = L_{Aeq(period)} + 3dB(A)$

The project amenity noise levels ($L_{Aeq,15min}$) for urban residences and other receptors applied for this project are shown in Table 3-10.

Table 3-10 Project Amenity Noise Levels

Type of Receiver	Noise Amenity Area	Time of Day	Recommended Noise Level, dB(A)	
			$L_{Aeq,\ Period}$	$L_{Aeq,\ 15min}$
Residence	Urban	Day	60 – 5 = 55	55 + 3 = 58
		Evening	50 – 5 = 45	45 + 3 = 48
		Night	45 – 5 = 40	40 + 3 = 43
Commercial Premises	All	When in use	65 – 5 = 60	60 + 3 = 63
Industrial premises	All	When in use	70 – 5 = 65	65 + 3 = 68

Project Noise Trigger Levels

The project noise trigger level is the lower of the intrusiveness and the amenity noise levels. Provided in Table 3-11 are the established project noise trigger levels for the assessment locations within the study area. Table 3-11 presents the project noise trigger levels for the day, evening, and night-time periods.

Table 3-11 Project Noise Trigger Levels

Type of receiver	Assessment period	Intrusiveness noise levels, $L_{Aeq,15min}$, dB(A)	Amenity noise levels, $L_{Aeq,15min}$, dB(A)	Project noise trigger levels, $L_{Aeq,15min}$, dB(A)
Residential Urban	Day	50	58	**50**
	Evening	46	48	**46**
	Night	43 (50 Shoulder)	43	**43**
Commercial premises	When in use	-	63	**63**
Industrial Premises	When in use	-	68	**68**

Maximum Noise Level Assessment

The NPfI requires the potential for sleep disturbance to be assessed by considering maximum noise levels events during the night-time period.

Where the subject development/premises night-time noise levels at a residential location exceed the following screening levels a detailed maximum noise level event assessment should be undertaken:

- $L_{Aeq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{AFmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater.

The detailed assessment should cover the maximum noise level, the extent to which the maximum noise level exceeds the RBL, and the number of times this happens during the night-time period.

Based on the background noise levels during the night, the sleep disturbance criteria for the nearest noise sensitive residential receivers are provided in Table 3-12.

Table 3-12 Night-Time Sleep Disturbance Screening Levels

Receiver type	Assessment Level $L_{Aeq,15min}$, dB(A)	Assessment Level L_{AFmax}, dB(A)
Residential	54	64

The RNP (DECCW 2011) provides additional information on sleep disturbance and concludes that:

- *Maximum internal noise levels below 50–55 dB(A) are unlikely to awaken people from sleep*
- *One or two noise events per night, with maximum internal noise levels of 65–70 dB(A), are not likely to affect health and wellbeing significantly.*

The above references identify that internal noise levels of 50 to 55 dB(A), are unlikely to cause awakenings. On the assumption that there is a 10 dB(A) outside-to-inside noise loss through an open window (see Section 2.6 of the NPfI, p15), this indicates that external noise levels of LAmax 60 to 65 dB(A) are unlikely to cause awakening reactions.

3.4 NSW Road Noise Policy (RNP)

The NSW Road Noise Policy (RNP) recommends various criteria for different road and residential developments and uses. Although it is not mandatory to achieve the noise assessment criteria in the RNP, proponents will need to provide justification if it is not considered feasible or reasonable to achieve them. Based on the definitions in the RNP, Gindurra Road is considered to be a sub-arterial road. Based on this, the following noise goals for residences taken from Table 3 of the RNP are provided in Table 3-13 Below.

Table 3-13 Road Noise Policy Goals

Road Category	Day	Night
Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use development	60 $L_{Aeq(15hr)}$ External	55 $L_{Aeq(9hr)}$ External

For existing residences and other sensitive land uses affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise level should be limited to 2 dB above that of the corresponding 'no build option'.

4. Assessment of Potential Impacts

4.1 Operational Noise

Noise and Vibration modelling was undertaken using Bruel and Kjaer's "Predictor" to predict the effects of operational noise. Predictor is a computer program for the calculation, assessment and prognosis of noise propagation. Predictor calculates environmental noise propagation according to ISO 9613-2, "Noise and Vibrations – Attenuation of sound during propagation outdoors". Terrain topography, ground absorption, atmospheric absorption and relevant shielding objects are taken into account in the calculations.

Modelling results are based on available information provided and should only be used as a guide for comparative purposes. Site layout and building structures were based on information provided at the time of the assessment.

Batching Operations

Generally concrete batching operations will consist of:

- Deliveries of sand, and aggregate received into yard by dump truck
- Deliveries of cement and fly ash received into yard by tanker truck
- Use of a front end loader to load the components of concrete into the sand and aggregate weigh batch hopper, which will deliver them to the agitator by conveyer
- The other components of concrete (cement and fly ash) are loaded into a concrete truck located under the silos
- Truck drives away, mixing concrete en-route to delivery site

Noise Emissions

The most significant noise sources are anticipated to be the following equipment based on previous measurements of batching plant operations undertaken by RAPT Consulting.

Table 4-1 Plant Noise Sound Power Levels SWL dB(A)

Plant Item	Sound Power Level SWL dB(A)	Activity Level (per 15 minutes)
Batching Plant	103	100%
Concrete Truck Loading Material	108	100%
Concrete Truck Entering and Exiting Site	100	10km/hr 1 truck per 15 minutes
Front End Loader	103	100%
Raw Material Delivery	100	10 km/hr 1 delivery per 15 minutes

Attended noise measurements were undertaken on 12 January 2022 at the south-west boundary of ATB Morton's Redicrete facility at Branxton, NSW while the plant was fully operational inclusive of the batching plant itself, front end loader, cement and delivery trucks. The purpose was to measure/assess source contribution C- and A-weighted Leq,T levels over same time period to ascertain whether low frequency noise may be a factor associated with the noise emanating from the proposed facility. The results of the measurement are provided in Table 4-2.

Table 4-2 Plant Noise Measurement Results

Location	Noise Level dB		
	L_{Aeq}	L_{Ceq}	Difference
South West of Plant 10:30am – 10:45am	68.5	77.5	9.0

All of the noise sources were operating and have been assessed, based on the noise data available, for annoying noise characteristics. The proposed operational noise sources are generally broadband in nature and have not demonstrated annoying characteristics as per the guidance contained in Fact Sheet C of the NPfI.

Noise Barrier

The modelling undertaken has also included a 3 metre high noise barrier running north to south along the western boundary of the site. Acoustic fences / noise barriers are impervious to the ground to the recommended height and are generally constructed from lapped and capped timber, bricks, hebel power panel, concrete blocks. No gaps should exist in the fence. There are other options available, and the higher the fence, the greater the density and being as close as possible to the source in question make an acoustic fence more effective. A material surface density of atleast 10 kg/m2 is typically sufficient with consideration to ISO 9613.

Enhancing Weather Conditions

Fact Sheet D of the NPfI provides guidance for accounting for noise-enhancing weather conditions. Two options are available to consider meteorological effects:

1. Adopt the noise-enhancing meteorological conditions for all assessment periods for noise impact assessment purposes without an assessment of how often these conditions occur – a conservative approach that considers source-to-receiver wind vectors for all receivers and F class temperature inversions with wind speeds up to 2 m/s at night. Or

2. Determine the significance of noise-enhancing conditions. This involves assessing the significance of temperature inversions (F and G class stability categories) for the night-time period and the significance of light winds up to and including 3 m/s for all assessment periods during stability categories other than E, F or G. Significance is based on a threshold of occurrence of 30% determined in accordance with the provisions in this policy. Where noise-enhancing meteorological conditions occur for less than 30% of the time, standard meteorological conditions may be adopted for the assessment.

As a detailed analysis of the significance of noise enhancing conditions has not been undertaken, option 1 has been utilised. Therefore, modelling for standard and noise enhancing weather conditions has been undertaken, Table D1 from the NPfI is reproduced in Table 4-1 and shows the noise enhancing meteorological conditions that have been adopted for this assessment

Table 4-3 Noise Enhancing Meteorological Conditions

Meteorological Conditions	Meteorological Parameters
Noise-enhancing meteorological conditions	Daytime/evening: stability category D with light winds (up to 3 m/s at 10 m AGL). Night-time: stability category F with winds up to 2 m/s at 10 m AGL.

Note 14 m/s = metres per second; m = metres; AGL = above ground level; where a range of conditions is nominated, the meteorological condition delivering the highest-predicted noise level should be adopted for assessment purposes. However, feasible and reasonable noise limits in consents and licences derived from this process would apply under the full range of meteorological conditions nominated under standard or noise-enhancing conditions as relevant. All wind speeds are referenced to 10 m AGL. Stability categories are based on the Pasquill–Gifford stability classification scheme.

Other assumptions in the model include:

- topographical information was obtained from NSW Government Spatial Services
- all cleared areas were modelled considering a conservative ground factor of 0.8 to account for grassed areas
- all residential receivers were modelled at 1.5 metres above the ground surface

All items of plant mentioned above were modelled operating simultaneously to simulate a reasonable worst-case scenario for day, evening and night-time periods. The modelled results are provided in figure 4-1 – 4-4 and in table 4-3.



Figure 4-1 Daytime Weather Enhanced Operational Modelled Results dB(A) Leq(15min)



Figure 4-2 Evening Weather Enhanced Operational Modelled Results dB(A) Leq(15min)



Figure 4-3 Night-Time Weather Enhanced Operational Modelled Results dB(A) Leq(15min)

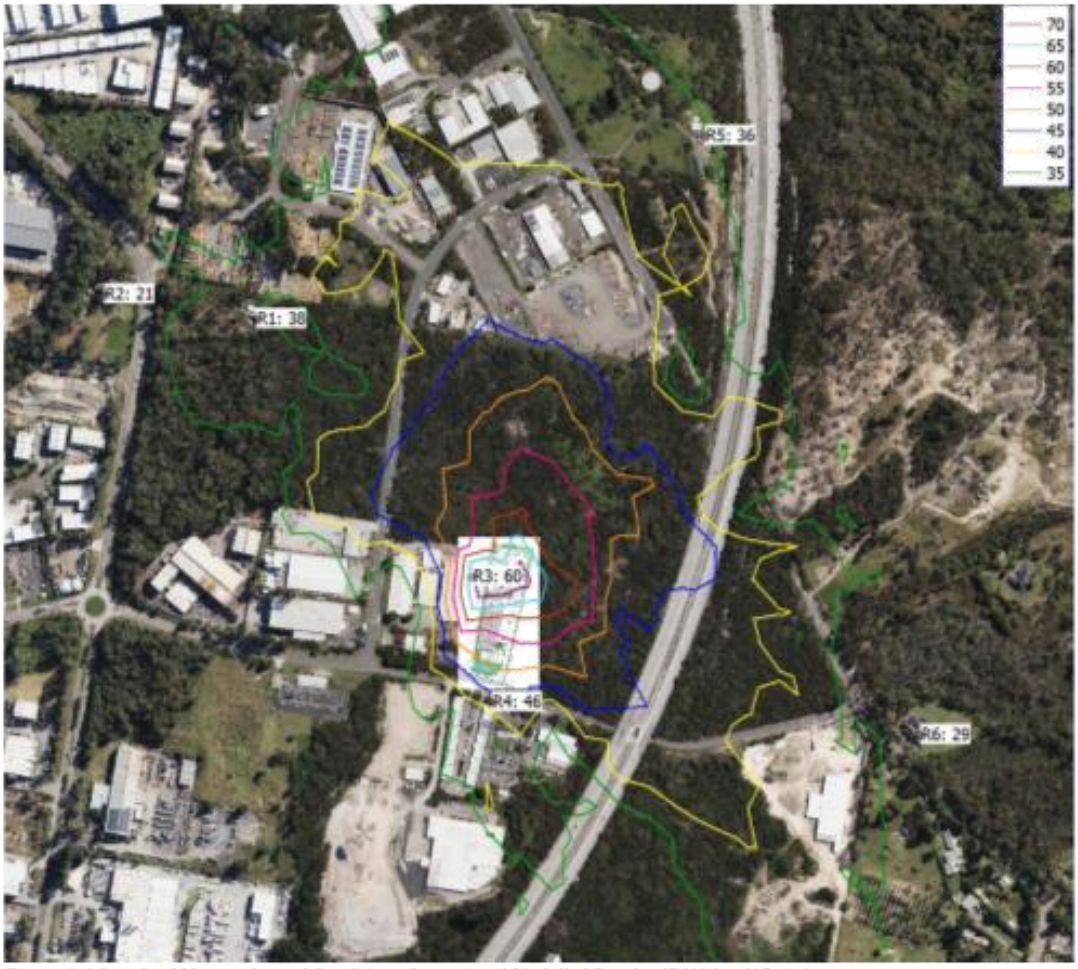


Figure 4-4 Standard Meteorological Conditions Operational Modelled Results dB(A) Leq(15min)

Table 4-4 Noise Assessment Results

Location	Meteorological condition	Project noise trigger level, dB(A) Day/Evening/ Night	Predicted $L_{Aeq\ (15min)}$ noise level, dB(A) Day/Evening/Night	Exceedance Day/Evening/ Night
R1 180 Wisemans Ferry Road	Standard meteorological conditions	50 / 46 / 43	38 / 38/ 38	No / No / No
	Noise-enhancing meteorological conditions	50 / 46 / 43	40 / 40 / 40	No / No / No
R2 191 Wisemans Ferry Road	Standard meteorological conditions	50 / 46 / 43	21 / 21 / 21	No / No / No
	Noise-enhancing meteorological conditions	50 / 46 / 43	24 / 24 / 24	No / No / No
R3 6 Chivers Road	Standard meteorological conditions	63 / 68 (Commercial / Industrial)	60 / 60 / 60	No / No / No
	Noise-enhancing meteorological conditions	63 / 68 (Commercial / Industrial)	60 / 60 / 60	No / No / No
R4 54 Gindurra Road	Standard meteorological conditions	63 (Commercial)	46 / 46 / 46	No / No / No
	Noise-enhancing meteorological conditions	63 (Commercial)	46 /46 / 46	No / No / No
R5 227 Debenham Road North	Standard meteorological conditions	50 / 46 / 43	36 / 36/ 36	No / No / No
	Noise-enhancing meteorological conditions	50 / 46 / 43	39 / 39 / 39	No / No / No
R6 242 Debenham Road South	Standard meteorological conditions	50 / 46 / 43	29 / 29 / 29	No / No / No
	Noise-enhancing meteorological conditions	50 / 46 / 43	29 / 29 / 29	No / No / No

The results of the modelling indicate compliance can be expected during day evening and night at all nearest receivers in standard and noise enhancing atmospheric conditions.

The results of the assessment also indicate sleep disturbance noise goals are expected to complied with as maximum noise levels were modelled for the assessment. Additionally, operations are only proposed from 6:00am.

While compliance is expected to be achieved for the proposal, it is recommended that the proposal implement an operational noise management plan as part of its operations to deal with the unlikely occurrence of excessive noise emanating from operations.

4.2 Noise Management Plan

A Noise Management Plan (NMP) could be prepared prior to the commencement of works and implemented through all phases of the proposal. The NMP would provide the framework for the management of all potential noise impacts resulting from the proposed works and would detail the environmental mitigation measures to be implemented throughout the works.

4.2.1 Planning and design of operational works

The following noise management and mitigation measures should be investigated and as required, implemented prior to the commencement of noise generating works.

Best practice measures when operating on construction site

- Works should adopt Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices. BMP includes objectives to reduce noise emissions. BATEA practices involve incorporating the most advanced and affordable technology to minimise noise emissions.
- Where practical, simultaneous operation of dominant noise generating plant should be managed to reduce noise impacts, such as operating at different times or increase the distance between plant and the nearest identified receiver.
- Where possible, reversing beepers on mobile equipment would be replaced with low-pitch tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers.
- Equipment which is used intermittently should be shut down when not in use.
- All engine covers should be kept close while equipment is operating.
- The site would be arranged to minimise noise impacts by locating potentially noisy activities away from the nearest receivers wherever possible.
- To minimise heavy equipment handling noise, material stockpiles should be located as far as possible from the nearest receptors
- Loading and unloading areas should be located as far as possible from the nearest receptors.
- Where possible, trucks associated with the work area should not be left standing with their engine operating in a street adjacent to a residential area.

Road Noise

Approximately 130 concrete agitator (heavy rigid) and 25 raw material delivery vehicles (semi-trailer) would access the site per week. Truck movements are anticipated to occur

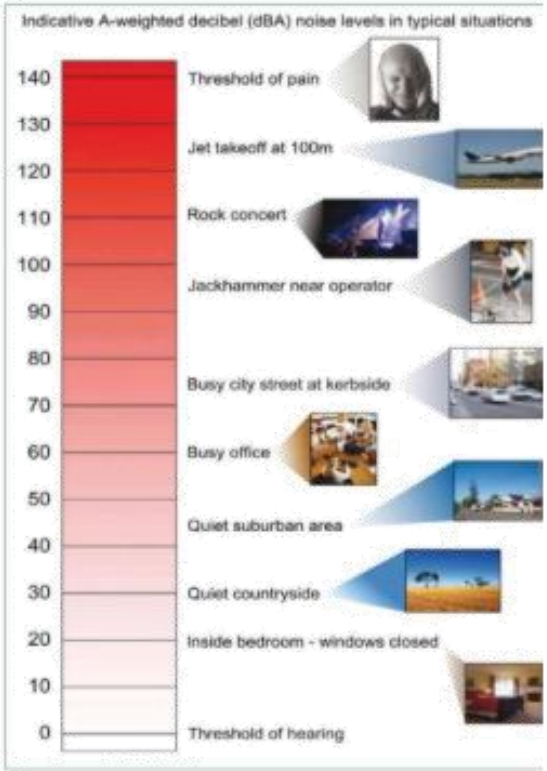
consistently throughout the day. Gindurra Road and associated road network is heavily trafficked. Site traffic will have blended in with local traffic by the time it goes past the nearest sensitive receivers. To increase noise levels by 2dB(A) one would have to increase the cumulative traffic volume by 60%. The number of vehicles on the road network is negligible and will not increase overall traffic noise levels on the surrounding road network. Therefore, compliance is expected.

5. Conclusion

This Noise and Vibration assessment has been undertaken for ATB Morton C/O WPP to inform an Environmental Impact Statement (EIS) for the proposed concrete batching plant located at 53 Gindurra Road, Somersby (Lot 12 DP1189679) in the Central Coast Local Government area.

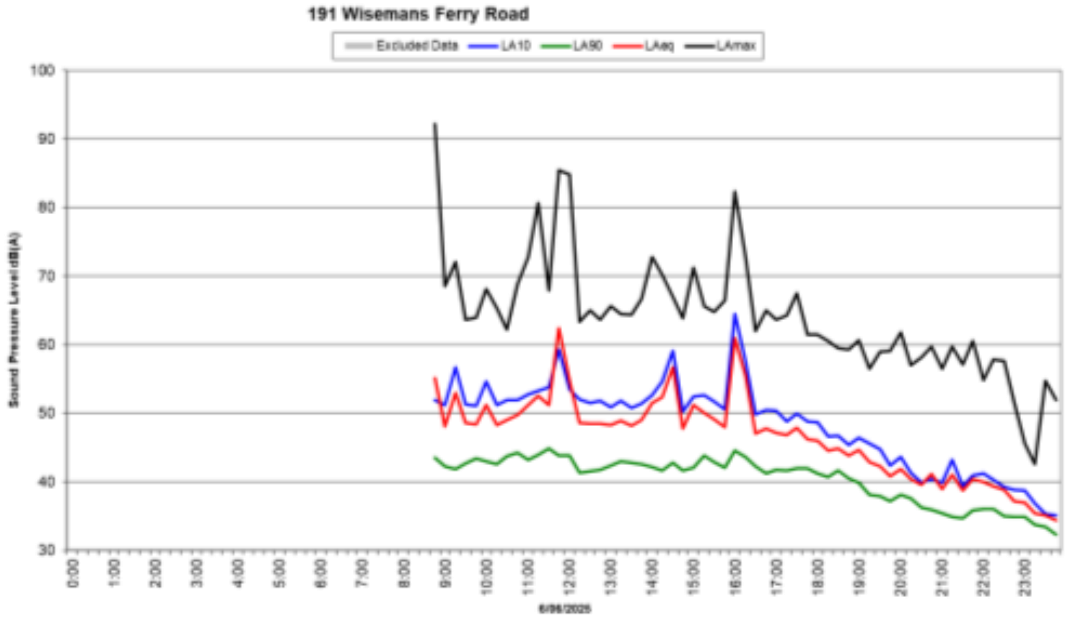
The results of the assessment outlined in this report indicates that project noise trigger levels will be complied with. A set of standard mitigation measures for operational noise have been provided based on anticipated requirements of the proposal in the unlikely event of excessive noise emanating from the proposal. Based on the results of the assessment, it is considered the proposal is acceptable from and Noise and Vibrations perspective.

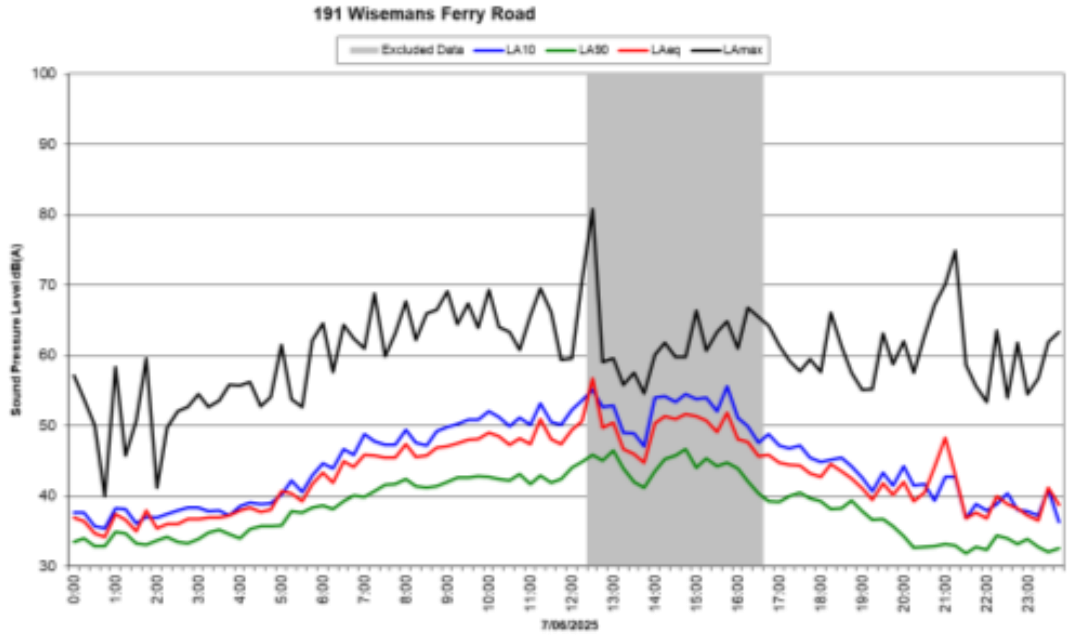
Appendix A: Glossary of Noise and Vibration Terms

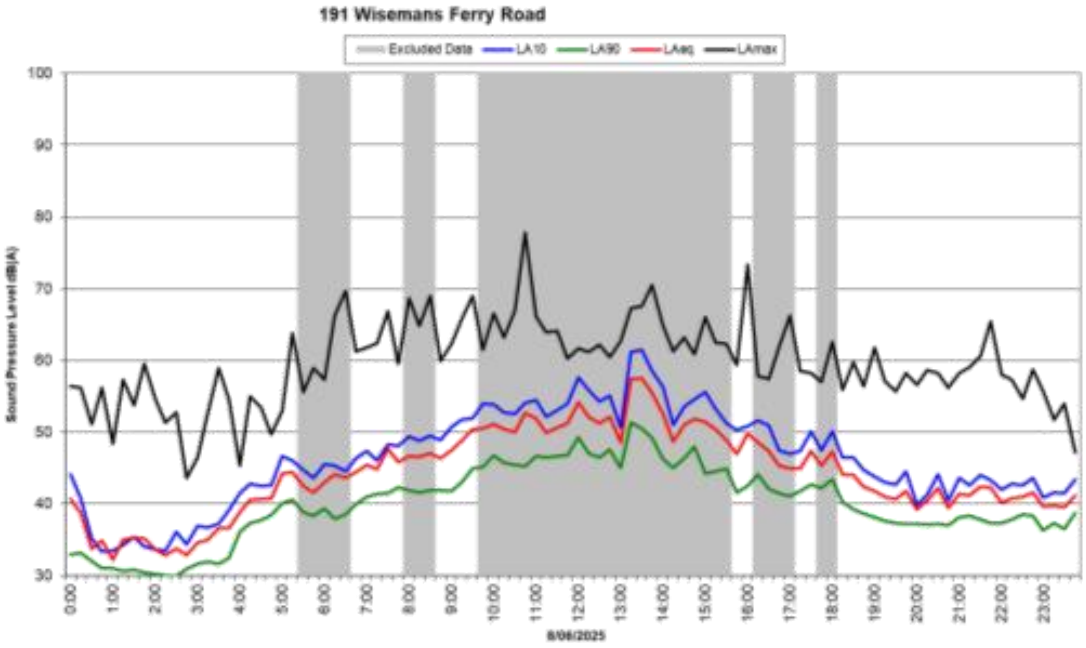
Term	Definition
dB	Decibel is the unit used for expressing the sound pressure level (SPL) or power level (SWL) in Noise and Vibrations. The picture below indicates typical noise levels from common noise sources. 
dB(A)	Frequency weighting filter used to measure 'A-weighted' sound pressure levels, which conforms approximately to the human ear response, as our hearing is less sensitive at very low and very high frequencies.
$L_{Aeq(period)}$	Equivalent sound pressure level: the steady sound level that, over a specified period of time, would produce the same energy equivalence as the fluctuating sound level actually occurring.
$L_{A10(period)}$	The sound pressure level that is exceeded for 10% of the measurement period.
$L_{A90(period)}$	The sound pressure level that is exceeded for 90% of the measurement period.
L_{Amax}	The maximum sound level recorded during the measurement period.

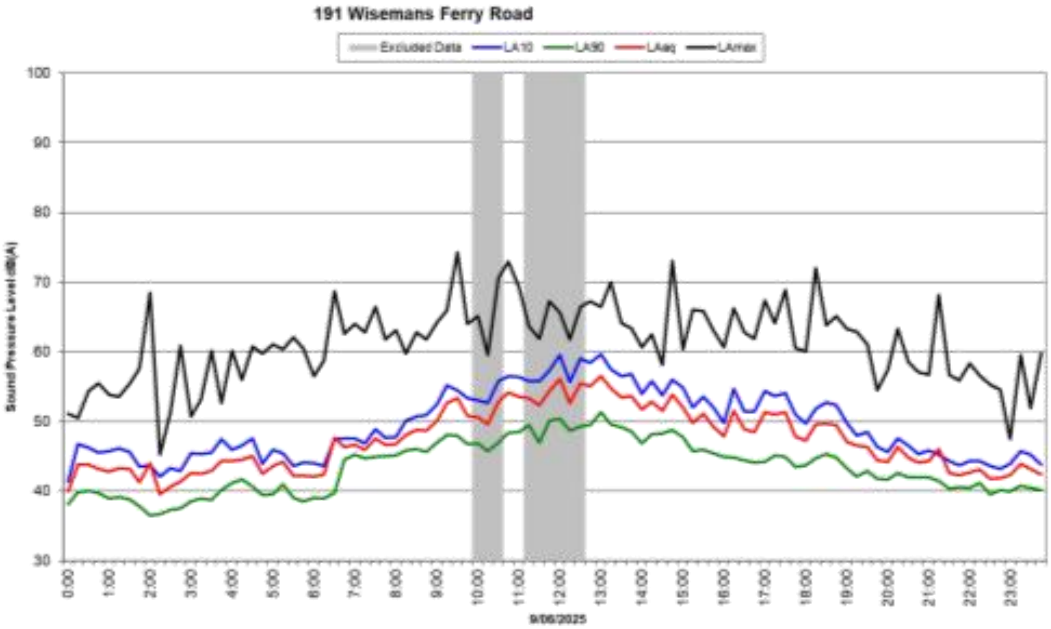
Noise sensitive receiver	An area or place potentially affected by noise which includes: A residential dwelling. An educational institution, library, childcare centre or kindergarten. A hospital, surgery or other medical institution. An active (e.g. sports field, golf course) or passive (e.g. national park) recreational area. Commercial or industrial premises. A place of worship.
Rating Background Level (RBL)	The overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period.
Feasible and Reasonable (Noise Policy for Industry Definition)	**Feasible** mitigation measure is a noise mitigation measure that can be engineered and is practical to build and/or implement, given project constraints such as safety, maintenance and reliability requirements. Selecting **Reasonable** measures from those that are feasible involves judging whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the mitigation measure. To make a judgement, consider the following: Noise impacts Noise mitigation benefits Cost effectiveness of noise mitigation Community views.
Sound power level (SWL)	The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in dB(A).

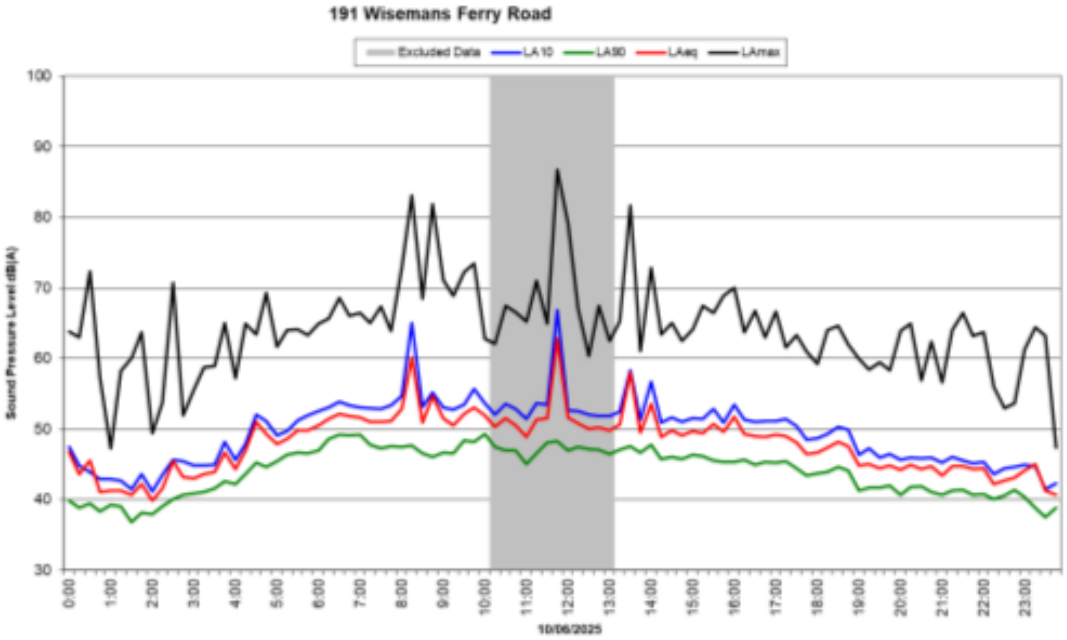
Appendix B Noise Monitoring Charts

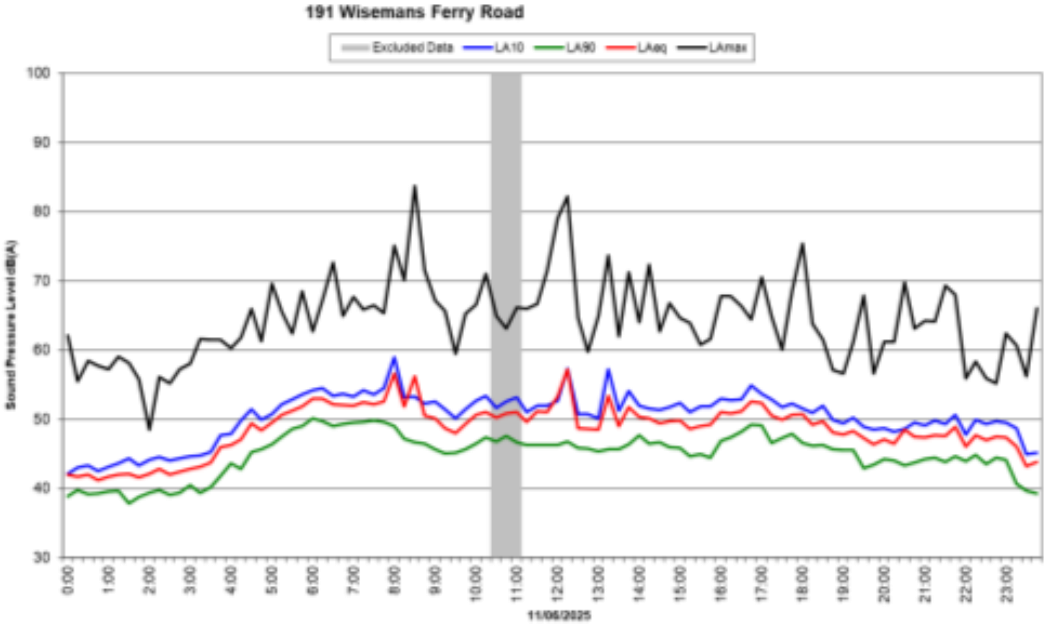


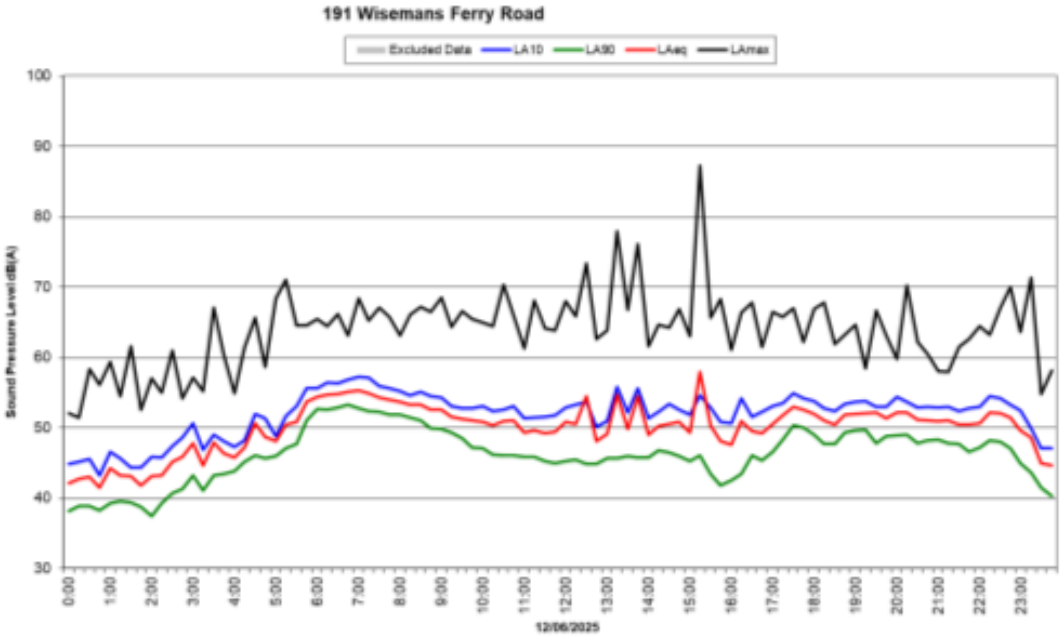


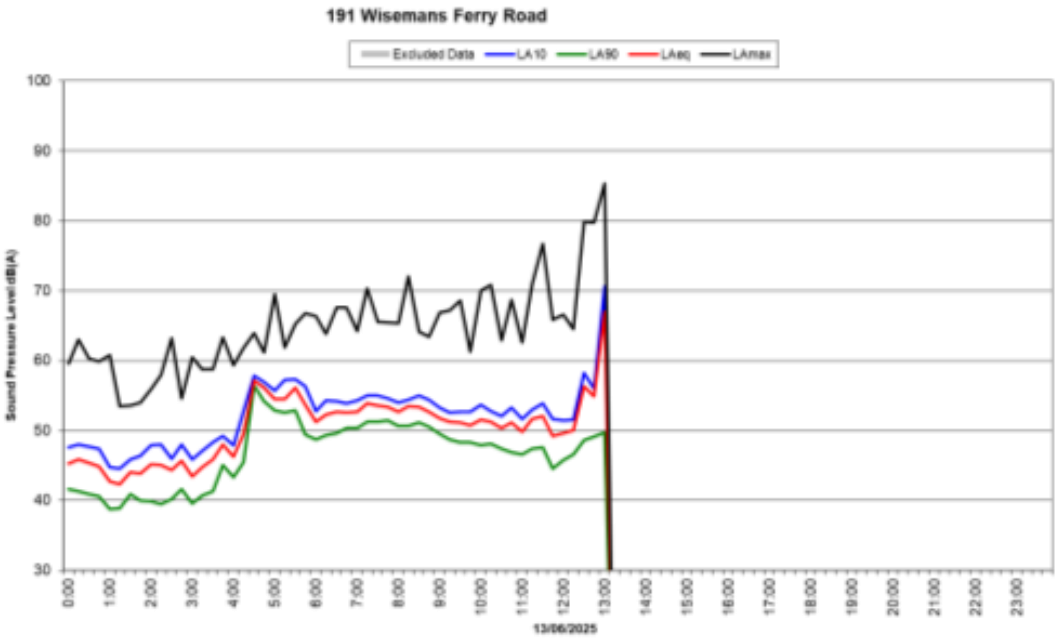

191 Wisemans Ferry Road
Excluded Data
LA10
LA90
LAeq
LAmax
Sound Pressure Level dB(A)
8/06/2025


191 Wisemans Ferry Road
Excluded Data
LA10
LA90
LAeq
LAmax
Sound Pressure Level dB(A)
9/06/2025


191 Wisemans Ferry Road
Excluded Data
LA10
LA90
LAeq
LAmax
Sound Pressure Level dB(A)
10/06/2025


191 Wisemans Ferry Road
Excluded Data
LA10
LA90
LAeq
LAmax
Sound Pressure Level dB(A)
11/06/2025


191 Wisemans Ferry Road
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LA90
LAeq
LAmax
Sound Pressure Level dB(A)
12/06/2025


191 Wisemans Ferry Road
Excluded Data
LA10
LA90
LAeq
LAmax
Sound Pressure Level dB(A)
13/06/2025

ATB Morton Pty Ltd

53 Gindurra Rd, Somersby

LGA: Central Coast

Archaeological Due Diligence Assessment

7 April 2022

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McCARDLE
CULTURAL HERITAGE

Report No: J202241 DD	
Approved by:	Penny McCardle
Position:	Director
Signed:	
Date:	7 April 2022

This report has been prepared in accordance with the scope of services described in the contract or agreement between McCardle Cultural Heritage Pty Ltd (MCH), ACN: 104 590 141, ABN: 89 104 590 141, and the proponent. The report relies upon data, surveys, measurements and specific times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the proponent. Furthermore, the report has been prepared solely for use by the proponent and MCH accepts no responsibility for its use by other parties.

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EXECUTIVE SUMMARY

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by ATB Morton Pty Ltd to undertake an Archaeological Due Diligence Assessment for the Planning Secretary's Environmental Assessment Requirements (SEARs) for the Concrete Works (Concrete Batching Plant) located at 53 Gindurra Road Somersby (Lot 12 DP1189679).

The project area is situated in the Central Coast area on the Hawkesbury Sandstone geological formation consisting of sandstone and quartz with some shale. Consisting of a gentle slope, the project area consists of the Somersby Soil Landscape. In terms of fresh water availability and survival, the project area is not resourced. Located approximately 350 metres east of a 1st order creek, 850 metres north east of a 2nd order creek (Piles Creek) and the closest reliable fresh water source is Narara Creek which is located approximately 2.5 kilometres east of the project area. European settlers extensively cleared the original native vegetation in the 1800's and since then the project area has been subject to additional clearing, may have been ploughed for pasture and is currently a cleared paddock with tracks throughout as well as erosion and drainage controls, all of which would have impacted the landscape.

A search of the AHIMS register indicate there are 97 known Aboriginal sites currently recorded within one and a half kilometres of the project area. Based on both the environmental and archaeological contexts, given that fresh water was necessary for survival and the project area is located 1.5 kilometres from a reliable water source, the project area may have been utilised for transitory activities such as travel and hunting and gathering which is reflected in the archaeological record as very low-density artefacts scatters or isolated artefacts.

The project area was surveyed as one survey unit based on landform elements (slope). The survey identified that the project area had been previously cleared, there was evidence of at least one ploughing event by the presence of pasture grass, large tracks, drainage and erosion control works. Vegetation consisted of pasture grass with open woodland along the north and eastern boundary and parts of the western boundary. Ground surface visibility was 35% across the project area with grass being the limiting visibility factor. No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

As no sites or PADs were identified, there are no impacts on the archaeological record and the following recommendations are provided:

1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974; and

2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

GLOSSARY

Aboriginal Place: are locations that have been recognised by the Minister (and gazetted under the *National Parks and Wildlife Act 1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Artefact: any object that is physically modified by humans.

Artefact scatter: a collection of artefacts scattered across the surface of the ground (also referred to as open camp sites).

Assemblage: a collection of artefacts associated by a particular place or time, assumed generated by a single group of people, and can comprise different artefact types.

Backed artefact: a stone tool where the margin of a flake is retouched at a steep angle and that margin is opposite a sharp edge.

Background scatter: a term used to describe low density scatter of isolated finds that are distributed across the landscape without any obvious focal point.

Core: a chunk of stone from which flakes are removed and will have one or more negative flake scars but no positive flake scars. The core itself can be shaped into a tool or used as a source of flakes to be formed into tools.

Debitage: small pieces of stone debris that break off during the manufacturing of stone tools. These are usually considered waste and are the by-product of production (also referred to as flake piece).

Flake: any piece of stone struck off a core and has a number of characteristics including ring cracks showing where the hammer hit the core and a bulb of percussion. May be used as a tool with no further working, may be retouched or serve as a platform for further reduction.

Flaked piece/waste flake: an unmodified and unused flake, usually the by-product of tool manufacture or core preparation (also referred to as debitage).

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

In situ: archaeological items are said to be "in situ" when they are found in the location where they were last deposited.

Retouched flake: a flake that has been flaked again in a manner that modified the edge for the purpose of resharpening that edge.

Typology: the systematic organization of artefacts into types on the basis of shared attributes.

ACRONYMS

ACHA	Aboriginal Cultural Heritage Assessment
ACHMP	Aboriginal Cultural Heritage Management Plan
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit

AHIMS SITE ACRONYMS

ACD	Aboriginal ceremonial and dreaming
AFT	Artefact (stone, bone, shell, glass, ceramic and metal)
ARG	Aboriginal resource and gathering
ART	Art (pigment or engraving)
BOM	Non-human bone and organic material
BUR	Burial
CFT	Conflict site
CMR	Ceremonial ring (stone or earth)
ETM	Earth mound
FSH	Fish trap
GDG	Grinding groove
HAB	Habitation structure
HTH	Hearth
OCQ	Ochre quarry
PAD	Potential archaeological deposit.
SHL	Shell
STA	Stone arrangement
STQ	Stone quarry
TRE	Modified tree (carved or scarred)
WTR	Water hole

1 INTRODUCTION

1.1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by ATB Morton Pty Ltd to undertake an Archaeological Due Diligence Assessment for the Planning Secretary's Environmental Assessment Requirements (SEARs) for the Concrete Works (Concrete Batching Plant) located at 53 Gindurra Road Somersby (Lot 12 DP1189679).

The assessment has been undertaken to meet the Heritage NSW, Department of Premier & Cabinet - Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, SEARs requirements and the brief.

The purpose of a due diligence assessment is to assist proponents to exercise due diligence when carrying out activities that may harm Aboriginal objects or Aboriginal places and to determine whether the proponent should apply for a consent to harm Aboriginal objects or Places through an Aboriginal Heritage Impact Assessment (AHIP). The purpose of this due diligence report is to demonstrate that all reasonable and practicable measures have been undertaken to prevent harm to any Aboriginal objects and/or place within the project area. This report has met the requirements and considered the relevant environmental and archaeological information, the project land condition, the nature of the proposed development activity and impacts, as well as preparing appropriate recommendations.

1.2 THE PROJECT AREA

The project area is located at 53 Gindurra Road Somersby (Lot 12 DP1189679). The location of the project area is shown in Figures 1.1 to 1.3.

Figure 1.1 Regional location of the project area



Figure 1.2 Local location of the project area



Figure 1.3 Aerial photograph of the project area (Nearmap October 2021)

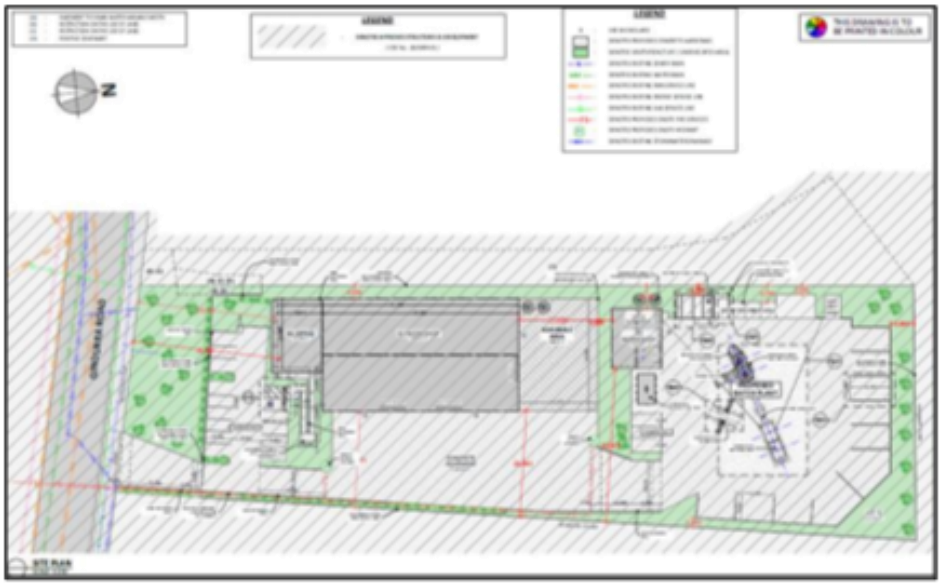


1.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

Approval for two industrial workshops and ancillary offices, associated hardstand areas, parking, stormwater infrastructure and landscaping was recently obtained for the site under Complying Development Certificate No. CDC60744/2021, approved on 12/03/2021.

ATB Morton is seeking approval for the construction and operation of a batching plant at the site, which is intended to process more than 30,000 tonnes of concrete per anum (up to 47,000 tonnes or 20000m^3). The new plant is proposed to be located on the approved hardstand areas in the rear (northern) part of the site. As provided in the plan below (Figure 1.4), the plant will comprise of a 'drive thru' area, two overhead cement silos with access platform and ladders, aggregate material bins, feed conveyor and dual stump stand.

Figure 1.4 Plan



The plant will be serviced by:

- Concrete hardstand area with paved vehicular access from Gindurra Road (suitable for access by semi-trailer and heavy rigid vehicles);
- three parking spaces;
- external material storage bays;
- 10,000L self-bunded fuel tank;
- water treatment area (comprising water settling tanks, clean out wedge pit and covered washout aggregate bins);
- dirt grit area; and
- 93.42m2 ancillary maintenance / administration space including an operations control room and staff amenities (approved Workshop B2).

As the proposal will utilise existing site infrastructure, with the exception of construction and installation of the plant, no external construction works, earthworks or vegetation clearing is proposed.

1.4 OBJECTIVES OF THE DUE DILIIGENCE ASSESSMENT

The objectives and primary tasks of this due diligence assessment were to:

- Undertake a search of the Aboriginal Heritage Management System (AHIMS) and other relative registers;
- Undertake preliminary research into the environmental and archaeological contexts of the project area;
- Develop a predictive model of site location for the project area;
- Undertake a field survey of the project area;
- Assess the potential impacts of the proposed development on any identified Aboriginal sites or potential archaeological deposits (PADs) identified within the project area;
- Assess the significance of any identified Aboriginal objects or sites identified within the project area;
- Complete and submit site cards to AHIMS for any Aboriginal sites identified; and
- Provide appropriate recommendations.

1.5 LEGISLATIVE CONTEXT

The following overview of the legislative framework is provided solely for information purposes for the client, and should not be interpreted as legal advice. MCH will not be liable for any actions taken by any person, body or group as a result of this general overview and MCH recommends that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the general summary below.

Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation. Although there are a number of Acts and regulations protecting Aboriginal heritage, including places, sites and objects within NSW, the three main ones include:

- National Parks and Wildlife Act (1974, as amended)
- National Parks and Wildlife Regulation (2019)
- Environmental Planning and Assessment Act (1979)

1.5.1 NATIONAL PARKS AND WILDLIFE ACT (1974, AS AMENDED)

The National Parks and Wildlife Act (1974), amended 2010, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. The NPW Act protects Aboriginal heritage (places, sites and objects) within NSW and the Protection of Aboriginal heritage is outlined in s86 of the Act, as follows:

- "A person must not harm or desecrate an object that the person knows is an Aboriginal object" s86(1)
- "A person must not harm an Aboriginal object" s86(2)
- "A person must not harm or desecrate an Aboriginal place" s86(4)

Penalties apply for harming an Aboriginal object, site or place. The penalty for knowingly harming an Aboriginal object (s86[1]) and/or an Aboriginal place (s86[4]) is up to $550,000 for an individual and/or imprisonment for 2 years; and in the case of a corporation the penalty is up to $1.1 million. The penalty for a strict liability offence (s86[2]) is up to $110,000 for an individual and $220,000 for a corporation.

Harm under the National Parks and Wildlife Act (1974, as amended) is defined as any act that; destroys defaces or damages the object, moves the object from the land on which it has been situated, or causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate that;

1) harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) (and the permit was properly followed), or
2) the proponent exercised due diligence in respect to Aboriginal heritage.

The 'due diligence' defence (s87[2]), states that if a person or company has applied due diligence to determine that no Aboriginal object, site or place was likely to be harmed as a result of the activities proposed for the Project Area, then liability from prosecution under the NPW Act 1974 will be removed or mitigated if it later transpires that an Aboriginal object, site or place was harmed. If any Aboriginal objects are identified during the activity, then works should cease in that area and Heritage NSW, Department of Premier & Cabinet notified (DECCW 2010:13). The due diligence defence does not allow for continuing harm or as defence to s.86(1) or (4).

The archaeological due diligence assessment and report has been carried out in compliance with the NSW DECCW 2010 Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW.

1.5.2 NATIONAL PARKS AND WILDLIFE REGULATION (2019)

The National Parks and Wildlife Regulation 2019 provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The Regulation (2019) recognises various due diligence codes of practice, including the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes.

1.5.3 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 (EP&A ACT)

The EP&A Act establishes the statutory framework for planning and environmental assessment in NSW and the implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils. The EP&A Act contains three parts which impose requirements for planning approval:

- Part 3 of the EP&A Act relates to the preparation and making of Environmental Planning Instruments (EPIs), State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).
- Part 4 of the EP&A Act establishes the framework for assessing development under an EPI. The consent authority for Part 4 development is generally the local council, however the consent authority may by the Minister, the Planning Assessment Commission or a joint regional planning panel depending upon the nature of the development.
- Part 4, Division 4.1 of the EP&A Act establishes the assessment pathway for State significant development (SSD) declared by the State Environmental Planning Policy (State and Regional

Development) 2011 (NSW). Once a development is declared as SSD, the Secretary's Environmental Assessment Requirements (SEARs) will be issued outlining what issues must be considered in the EIS.

- Part 5 of the EP&A Act provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority. Development under Part 5 that are likely to significantly affect the environment is required to have an EIS prepared for the proposed activity.
- Part 5.1 of the EP&A Act establishes the assessment pathways for State significant infrastructure (SSI). Development applications made for SSI can only be approved by the Minister. Once a development is declared as SSI, the SEARs will be issued outlining what issues must be addressed in the EIS.

The applicable approval process is determined by reference to the relevant environmental planning instruments and other controls, LEPs and State Environmental Planning Policies (SEPPs). This project falls under Part 4.

1.6 ABORIGINAL COMMUNITY CONSULTATION

A due diligence assessment relates to the physical identification of Aboriginal objects, sites and places. Community consultation is only required once Aboriginal objects, sites or places have been identified and an Aboriginal Heritage Impact Permit (AHIP) is deemed necessary. Section 5.2 of the 2010 Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW specifically states that;

> *'consultation with the Aboriginal community is not a formal requirement of the due diligence process' (2010:8).*

1.7 QUALIFICATIONS OF THE INVESTIGATOR

Dr. Penny McCardle: Principal Archaeologist & Forensic Anthropologist has 22 years experience in Indigenous archaeological assessments, excavation, research, reporting, analysis and consultation and 19 years in skeletal identification, biological profiling and skeletal trauma identification for NPWS, NSW Police and the NSW Department of Forensic Medicine.

- BA (Archaeology and Palaeoanthropology): Indigenous archaeology, University of New England 1999
- Hons (Archaeology and Palaeoanthropology): Physical Anthropology, University of New England 2001
- Forensic Anthropology Course, University of New England 2003
- Armed Forces Institute of Pathology Forensic Anthropology Course, Ashburn, VA 2008
- Analysis of Bone trauma and Pseudo-Trauma in Suspected Violent Death Course, Erie College, Pennsylvania, 2009
- Documenting Scenes of War and Human Rights Violations. Institute for International Criminal Investigations, 2018
- PhD, University of Newcastle, 2019

1.8 REPORT STRUCTURE

The report includes Section 1 which outlines the project, Section 2 presents the environmental and archaeological context, Section 3 provides the results and discussion and Section 4 presents the Impact Assessment, Section 5 discusses the mitigation measures and Section 6 provides the management recommendations.

2 ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXT

The archaeological due diligence process and assessment requires that the available knowledge and information in relation to the environmental and archaeological contexts is considered. The purpose of this is to assist in identifying whether Aboriginal objects, sites or places are likely to be present within the project area based on archaeological predictive modelling and in what condition they may be found in given the environmental impacts.

2.1 LOCAL ENVIRONMENT

Past site location and land use are closely linked to the environment including the landform, geology, geomorphology, soils, waterways and associated resources. The environmental context is important to identify potential factors relating to past Aboriginal land use patterns.

The project area is situated in the Central Coast area on the Hawkesbury Sandstone geological formation consisting of sandstone and quartz with some shale (Sydney Geological Sheet 1:250,000, 1966). Consisting of a gentle slope, the project area consists of the Somersby Soil Landscape.

In areas where slopes are gentle soils often exceed 300 cm in depth whilst the shallowest soils (50–100 cm) are often found on the steeper slopes. Friable sandstone bedrock can extend to many metres below the soil and ironstone nodules and rock fragments are common on the crests and upper slopes and are often absent in lower slope positions. Up to 30 cm of loose dark brown loamy sand (A horizon) overlies up to 300 cm of earthy yellowish brown sandy clay loam (B horizon). Often up to 100 cm pallid grey sandy clay loam (appears as B or C horizon) and >100 cm of friable sandstone (C Horizon) occurs below the B horizon (Murphy 1993: 31-33).

The geomorphology of the Central Coast is complex and include an upper soil Horizon A and underlying B (referred to as duplex soils (Galloway 1963; Hughes 1984). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts.

In terms of fresh water availability and survival, the project area is not resourced. Located approximately 350 metres east of a 1st order creek, 850 metres north east of a 2nd order creek (Piles Creek) and the closest reliable fresh water source is Narara Creek which is located approximately 2.5 kilometres east of the project area.

European settlers extensively cleared the original native vegetation in the 1800's and since then the project area has been subject to additional clearing, may have been ploughed for pasture and is currently a cleared paddock with tracks throughout as well as erosion and drainage controls. In terms of these land uses and impacts on the landscape and cultural materials that may be present, early vegetation clearing included the uprooting of trees by chaining which will disturbed or destroy that may be present near, or underneath trees and vegetation (Wood 1982). Farming and agricultural activities also disturbed the landscape.

Although pastoralism is a comparatively low impact activity, it does result in disturbances due to vegetation clearance and the trampling and compaction of grazed areas. These factors accelerate the natural processes of sheet and gully erosion, which in turn can cause the horizontal and lateral displacement of artefacts. Furthermore, grazing by hoofed animals can affect the archaeological record due to the displacement and breakage of artefacts resulting from trampling (Yorston et al 1990). Pastoral land uses are also closely linked to alterations in the landscape due to the construction

of dams, fence lines and associated structures. As a sub-set of agricultural land use, ploughing typically disturbs the top 10-12 centimetres of topsoil (Koettig 1986) depending on the method and machinery used during the process. Ploughing increases the occurrence of erosion and can also result in the direct horizontal and vertical movement of artefacts, thus causing artificial changes in artefact densities and distributions. In fact, studies undertaken on artefact movement due to ploughing (e.g., Roper 1976; Odell and Cowan 1987) has shown that artefact move between one centimetre up to 18 metres laterally depending on the equipment used and horizontal movement. Ploughing may also interfere with other features and disrupt soil stratigraphy (Lewarch and O'Brien 1981). Ploughing activities are typically evidenced through 'ridges and furrows' however a lengthy cessation in ploughing activities dictates that these features may no longer be apparent on the surface.

Additional disturbances would have derived from natural processes. The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of erosion is generally high, artefacts deposited in such an environment will be eroded downslope after being abandoned. Additionally, bioturbation processes such as the redistribution and mixing of cultural deposits occurs as a result of burrowing and mounding by earthworms, ants and other species of burrowing animals. Artefacts can move downwards through root holes as well as through sorting and settling due to gravity, and translocation can also occur as a result of tree falls (Balek 2002; Peacock and Fant 2002:92).

The project area is located within an environment that provided limited resources. Without a fresh water supply to enable camping, the project area may have been utilised for more transitory activities such as travel and hunting and gathering on the way to reliable water and associated subsistence resources. Such past Aboriginal land uses are manifest in the archaeological record as a background scatter of discarded artefacts (such as isolated artefacts and/or very low-density artefact scatters). In relation to modern alterations to the landscape, the previous large-scale clearing, possible ploughing and grazing can be expected to have had moderate impacts upon the archaeological record.

2.2 ARCHAEOLOGICAL CONTEXT

A review of the archaeological literature of the region, and more specifically the local area and the results of an AHIMS search provide essential contextual information for the current assessment.

2.2.1 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

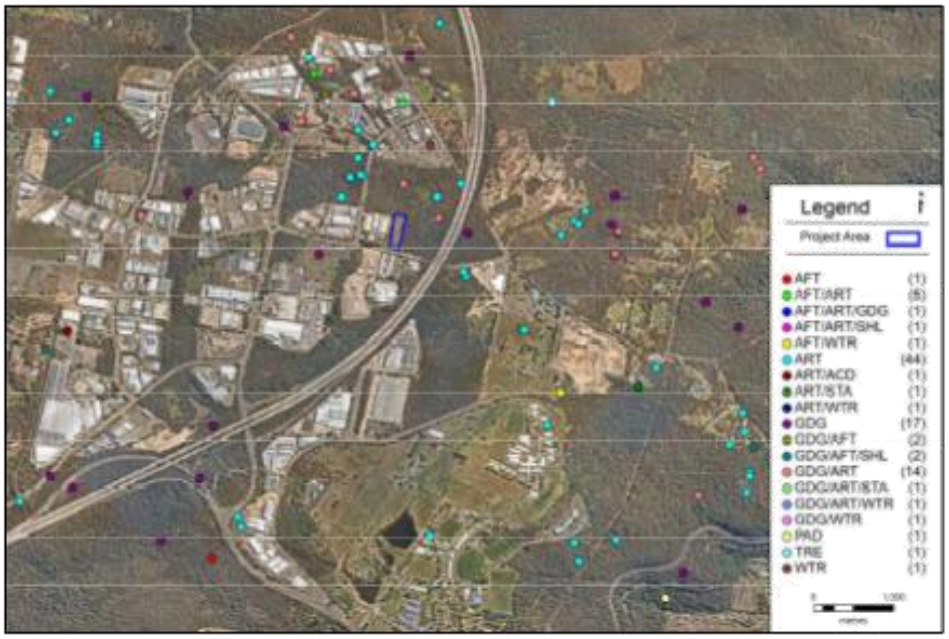
It must be noted that there are many limitations with an AHIMS search including incorrect site coordinates due to errors and changing of computer systems at AHIMS over the years that failed to correctly translate old coordinate systems to new systems. Secondly, AHIMS will only provide up to 110 sites per search, thus limiting the search area surrounding the project area and enabling a more comprehensive analysis and finally, few sites have been updated on the AHIMS register to notify if they have been subject to a s87 or s90 and as such what sites remain in the local area and what sites have been destroyed, to assist in determining the cumulative impacts, is unknown. In addition to this, other limitations include the number of studies in the local area, high levels of erosion have proven to disturb sites, site contents, and the extent of those disturbances is unknown. Thus, the AHIMS search is limited and provides a basis only that assists in predictive modelling.

A search of the AHIMS register (Appendix A) indicate there are 97 known Aboriginal sites currently recorded within one and a half kilometre of the project area and are summarised in Table 2.2 and their approximate location provided in Figure 2.1. There are no registered sites or Aboriginal Places within the project area.

Table 2.1 Summary of AHIMS results

Site type	Frequency	Percent
AFT	1	1%
TRE	1	1%
WTR	1	1%
PAD	1	1%
HAB	0	0%
GDG	17	18%
ART	44	45%
ART/STA	1	1%
ART/ACD	1	1%
ART/WTR	1	1%
AFT/WTR	1	1%
GDG/WTR	1	1%
GDG/ART/WTR	1	1%
GDG/ART	14	14%
AFT/ART	5	5%
GDG/AFT/SHL	2	2%
GDG/AFT	2	2%
AFT/ART/SHL	1	1%
AFT/ART/GDG	1	1%
GDG/ART/STA	1	1%
Subtotal	**97**	**100%**

Figure 2.1 Location of AHIMS sites



2.2.2 HERITAGE REGISTER LISTINGS

The National Heritage List, the Commonwealth Heritage List, the Australian Heritage Database, Australia's National Heritage List, The National Trust Heritage Register State Heritage Inventory the and the relevant Local Environmental Plan have no Aboriginal objects, sites or places listed.

2.2.3 SUMMARY OF THE REGIONAL ARCHAEOLOGICAL CONTEXT

The majority of archaeological surveys and excavations throughout the region have been undertaken in relation to environmental assessments for developments across the Central Coast. A review of the two most relevant regional investigations (Vinnicombe 1980; Dallas *et al* 1987) illustrates consistency in site type and location across the region as well as a possible bias in the results due to a focus on specific landforms. The corpus of recorded sites is described and assessed qualitatively in MCH (2005) who undertook a regional based desk top study of the Gosford/Wyong region for Sydney Gas. Following an AHIMS site search, 251 known Aboriginal sites were registered within a twenty-four-kilometre-wide by twenty-nine-kilometre-long search area. Following a detailed review of all assessments and site cards, MCH provide an overview of the archaeology for the wider Gosford/Wyong area and found that in the sandstone country of the Sydney Basin certain topographic zones may be more or less likely to contain certain types of archaeological evidence. For example, it is generally held that shelter sites are more likely to be located on slopes, and grinding grooves are commonly found ridge tops. Indeed, 97% of the shelter sites for which landform was recorded are situated on ridge or slope formations, a trend which is largely a reflection of the fact that sites of this type require the presence of sandstone structures which are rarely found outside these topographical contexts. Similarly, in order to establish grinding grooves, the appropriate sandstone outcrops and water resources must be available. In relation to the high proportion of grinding grooves identified in the locality, MCH found that a relatively high proportion of these sites

were recorded as part of "personal study" or "private research" and were not identified during the course of a systematic archaeological survey. It is therefore likely that although some grinding groove sites were recorded in the course of systematic surveys, they are over-represented within the sample. The over-representation of grinding grooves is apparently a manifestation of biased sampling practices and, given that grinding groove sites are generally closely linked to water supplies, it follows that proximity to water will be identified as an archaeologically important trait. However, when grinding groove sites are exempted from the analysis, it is apparent that the majority of sites are located between 51 and 100 meters from water, with sites within ten meters of water comprising approximately 18% of the total sites examined, a finding which is concurrent with the regional pattern identified by Vinnicombe (1980) and others.

A number of issues were identified in relation to the relationship between site location and water sources. First and foremost are the fact that reliable/permanent water sources may not necessarily consist of creeks or waterways. Rather, within the sandstone country sinkholes/cistern within the sandstone formations can act as water catchment locations and provide a ready supply of water. Importantly, features of this type can only be identified in the course of survey activity and will not be apparent on a topographic map. Given the ubiquity of water supplies within the area, MCH raised the question of whether it is therefore worthwhile questioning whether the location of sites in close proximity to water is reflective of the fact that water resources are a selective factor in site selection and location. However, within well-watered locations other factors may have assumed higher importance in regard to site selection. For example, within a swamp environment, water is readily available across the area, and therefore elevation assumes greater importance. "Visually impressive" sites are frequently recorded as the result of isolated recording events rather than systematic surveys. Dallas *et al* (1987:16) and Kinhill (1995:331) suggest that surveying for the purposes of identifying rock shelters and art sites dictates that less blatant archaeological evidence in the form of artefact scatters, may not be identified or recorded. This suggestion is concurrent with the apparent and somewhat surprising lack of open artefact scatters and isolated finds identified within the region. Furthermore, it is widely acknowledged that the Narrabeen geological formation and, more specifically, the valley bottom landforms within this unit have been largely ignored by systematic surveys (Vinnicombe 1980, Kinhill Engineers 1995, Silcox 1995a, 1995b, 1996, McDonald 1988; MCH 2005). Consequently, although it is speculated that valley bottoms were utilised as routes of movement thought the sandstone country and would hence have greater concentrations of archaeological material and site types such as open camps (Attenbrow 1981, Dallas et al 1987, Vinnicombe 1980:X:13), but this is yet to be tested. The fact that the valley bottoms are an alluvial formation subject to high-rate deposition also dictates that there is a high likelihood that archaeological deposits in this landform will have been quickly buried beneath alluvium and colluvium. Yet, there has been little or no sub-surface testing within the valley bottoms and consequently it is possible that the relative lack of open campsites is representative of the biases of past sampling strategies rather than a 'true' archaeological pattern. Consequently, predictive statements and assessments of archaeological significance must be prefaced by the assertion that we are working within the confines of an unknown data set, where the parameters (and often reliability) of the "sampling universe" are rarely known and can never be assumed (Rowland 1995: 361).

Based on the data available a broad range of site types are represented including isolated artefacts, open campsites, shelters, grinding grooves, engravings and shelters with art and/or deposit. Within the areas covered by the regional studies, a range of available landforms has been sampled. In regional terms, site distribution is extremely closely linked to topography, with ridge sides, ridge tops and valley bottoms with access to reliable water exhibiting the highest concentrations of sites. However, it must be emphasised that the vast majority of the areas assessed by the afore-mentioned regional studies are in a variety of topographic and geological contexts and some vary considerably from the specific project area.

2.2.4 SUMMARY OF THE LOCAL ARCHAEOLOGICAL CONTEXT

All archaeological surveys throughout the local area have been undertaken in relation to environmental assessments for developments. The most relevant investigations indicate differing results and observations based on surface visibility and exposure, alterations to the landscape, proximity to water sources and geomorphology.

Previous assessments of the local area (J. C. L & Associates 1980, 1981, 1983; Koettig & McDonald 1983; McDonald 1984; Du Cros & Rich 1986; Silcox 1989a, b; Biosis 2003, Roberts & Pross 2008; MCH 2019) have identified that art sites and art sites in association with grinding grooves and water hales as well as artefacts are the most common site type sin the sandstone. These assessments have also identified that both landform and distance to water were important factors in past Aboriginal land use. Elevated landforms within 50 metres of reliable water appear to have been the most favoured. The higher the stream order (and more reliable water source) the higher the numbers of sites and site densities and both decrease with distance from the resource. A number of sites were also found in the sandstone country in association with water holes that were utilised following rain.

2.3 SYNTHESIS OF ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXTS

The site types identified throughout the area appear to be either low density/small occupation activities or sites that were associated with more secular activities. The broader landform assessment also suggests that larger sites indicative of larger camping groups may be located on the valley floors mainly due to available room compared to the limited and uneven surfaces of the sandstone areas where by large scale habitation is not possible, but may have been utilised as activity areas away from the main camp. Based on information gained from previous studies, both regionally and locally, within a 1.5 -kilometre radius of our project area, it can be expected that:

- the likelihood of locating sites increases with proximity to available water; either creeks/rivers along valley floors or sinkholes/cistern within sandstone formations;
- the likelihood of finding large sites increases markedly with proximity to reliable water;
- natural landforms will be utilised in the sandstone country including rock shelters and suitable sandstone surfaces for art/engravings;
- grinding grooves will be located along or near water sources or near sinkholes/cistern within sandstone formations;
- a variety of stone artefact types will be located though the majority will be flakes, flaked pieces and debitage;
- a variety of raw materials utilised in stone tool manufacture will be represented, though the majority of sites will be predominated by mudstone and silcrete;
- the likelihood of finding scarred trees is dependent on the level of clearing in an area; and
- the majority of sites will be subject to disturbances including human and natural.

2.4 MODELS OF PAST ABORIGINAL LAND USE

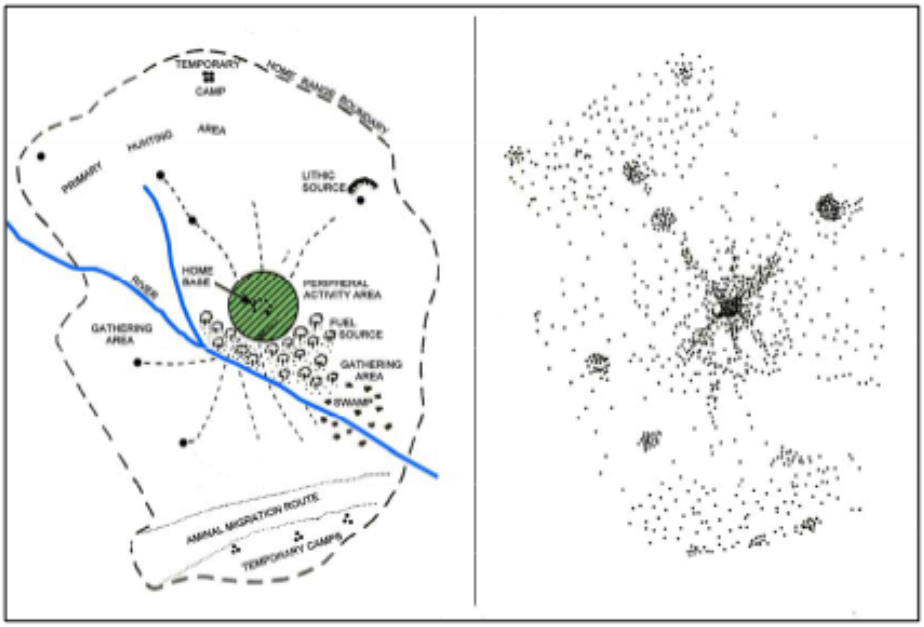
The main aim of this project is to attempt to define both the nature and extent of occupation across the area. As a result, the nature of the analysis will focus on both the landform units and sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area treating assemblages as a continuous scatter of cultural material across the landscape. In doing this, it is possible to identify variation across the landscape,

landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. Thus, the nature of activities and occupation can be identified through the analysis of stone artefact distributions across a landscape. A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral "activity locations".

Basically, the home base is the focus of attention and many activities and the activity locations are situated away from the home base and are the focus of specific activities (such as tool manufacturing). This pattern is illustrated in Figure 2.2. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials etc). The degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return to sites and hence the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area). Activity locations occur within the foraging radius of a home base camp (approximately 10 km); (Renfrew and Bahn 1991).

Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages.

Figure 2.2 Foley's model (L) and its manifestation in the archaeological record (R), (Foley 1981).



2.4.1 MODEL OF OCCUPATION FOR THE LOCAL AREA

Occupation models often aim to identify and explain archaeological patterning in site type, content and distribution. General theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence. A number of models developed and reviewed (Koettig 1994; Rich 1995; Kuskie and Kamminga 2000) and the most commonly accepted model is summarised and adapted to for the present project area. Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. Used as a starting point, it makes a general set of factors that are consistent with other studies (e.g., White and McDonald 2010, Nelson 1991). The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities. Combining this information with a general review of assemblage contents from a sample of excavated sites within the region, a baseline of settlement activities may be determined (Barton 2001). The model provides a number of archaeological expectations that may be tested. For example, the presence of features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time. The presence of grindstones is also a reliable indicator of low mobility and extended occupation. Seed grinding requires a large investment of time and effort (Cane 1989). In most ethnographic examples, seed grinding is an activity that takes place over an entire day to provide adequate energetic returns (Cane 1989; Edwards and O'Connell 1995). Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation. It may also have been the case that the location of particular activities could not be predicted by tool users, adding to the increased low-density scattering of artefacts over the landscape. Also, if individuals were opting to carry a number of stone tools during hunting and gathering activities and maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high. Table 2.2 has been adapted from Kuskie and Kamminga (2000).

Table 2.2 Site descriptions (Kuskie & Kamminga 2000).

Occupation Pattern	Activity Location	Proximity to water	Proximity to food	Archaeological expectations
Transitory movement	all landscape zones	not important	not important	• assemblages of low density & diversity • evidence of tool maintenance & repair • evidence for stone knapping
Hunting &/or gathering without camping	all landscape zones	not important	near food resources	• assemblages of low density & diversity • evidence of tool maintenance & repair • evidence for stone knapping • high frequency of used tools
Camping by small groups	associated with permanent & temporary water	near (within 100m)	near food resources	• assemblages of moderate density & diversity • evidence of tool maintenance & repair • evidence for stone knapping & hearths
Nuclear family base camp	level or gently undulating ground	near reliable source (within 50m)	near food resources	• assemblages of high density &diversity • evidence of tool maintenance, repair, casual knapping • evidence for stone knapping • heat treatment pits, stone lined ovens • grindstones

Community base camp	level or gently undulating ground	near reliable source (within 50m)	near food resources	• assemblages of high density & diversity • evidence of tool maintenance, repair, casual knapping • evidence for stone knapping • heat treatment pits, stone lined ovens • grindstones & ochre • large area >100sqm with isolated camp sites

To identify the specific activity areas through analysis of the composition of patterning of lithic assemblages, is utilised. However, this is applied to excavated materials as they provide more realistic data due to the lesser degree of disturbances, removal and breakages.

2.5 PREDICTIVE MODEL FOR THE PROJECT AREA

An archaeological predictive model is established to identify areas of archaeological sensitivity so it can be used as a basis for the planning and management of Aboriginal heritage. It involves reviewing existing literature to identify basic site distribution patters. These patterns are then modified according to the specific environment of the project area to form a predictive model for site location within the specific project area. A sampling strategy is then used to test the model and the results of the survey used to confirm, refute or modify the model.

Land-systems and environmental factors are commonly used factors in predictive modelling based on the assumption that they provide distinctive sets of constraints and opportunities that influenced past Aboriginal land use patterns. As land use patterns may differ between zones (due to different environmental conditions), this may result in the physical manifestation of different spatial distributions and forms of archaeological evidence. The predictive model presented here is based on landform units, previous archaeological assessments conducted within the region, distribution of known sites and site densities and traditional Aboriginal land use patterns. Also taken into consideration are land use impacts (both natural and anthropomorphic) that may have resulted in a disturbed landscape and associated archaeological record.

Given that fresh water was necessary for survival and the project area is located 1.5 kilometres from a reliable water source, the project area would not have been suitable for camping. The project area may have been utilised for more transitory activities such as travel and hunting and gathering which is reflected in the archaeological record as very low-density artefacts scatters or isolated artefacts. Grinding grooves, art sites and water holes are not expected to be in the project area due to the absence of exposed sandstone surfaces. Brief descriptions of the site types that may occur in the project area are presented below.

- **Artefact scatters**

Also described as open campsites, artefact scatters and open sites, these deposits have been defined at two or more stone artefacts within 50 metres of each other and will include archaeological remains such as stone artefacts and may be found in association with camping where other evidence may be present such as shell, hearths, stone lined fire places and/or heat treatment pits. These sites are usually identified as surface scatters of artefacts in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing, grazing) and access ways can also expose surface campsites. Artefact scatters may represent evidence of;

- Large camp sites, where everyday activities such as habitation, maintenance of stone or wooden tools, manufacturing of such tools, management of raw materials, preparation and consumption of food and storage of tools has occurred;
- Medium/small camp sites, where activities such as minimal tool manufacturing occurred;

- Hunting and/or gathering events;
- Other events spatially separated from a camp site, or
- Transitory movement through the landscape.

Artefact scatters are a common site type in the locality and the broader region. There is potential for very low-density artefact scatters to occur within the project area and be representative of transitory activities. There is also the potential for such sites to be impacted on through past land uses including continued clearing, possible ploughing and grazing.

- **Isolated finds**

Isolated artefacts are usually identified in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing) and access ways can also expose surface artefacts. Isolated finds may represent evidence of;

- Hunting and/or gathering events; or
- Transitory movement through the landscape.

Isolated finds are a common site type in the locality and the broarder region. There is potential for isolated artefacts to occur across the project area and across all landforms. There is also the potential for such sites to be impacted on through past land uses including continued clearing, possible ploughing and grazing.

3 RESULTS AND DISCUSSION

To comply with the due diligence requirement that a visual inspection of the project area be undertaken, an archaeological survey across the project area was undertaken by MCH archaeologist Dr. Penny McCardle on 6th April 2022. The survey focused on areas of high ground surface visibility and exposures (erosional features, tracks, cleared areas).

3.1 SURVEY UNITS

The project area, consisting a simple south facing slope was surveyed as one survey unit based on landform elements (following McDonald *et al* 1984). The survey identified that the project area had been previously cleared, there was evidence of at least one ploughing event by the presence of pasture grass, large tracks, drainage and erosion control works. Vegetation consisted of pasture grass with open woodland along the north and eastern boundary and parts of the western boundary. Ground surface visibility (GSV) was 35% across this property with grass being the limiting visibility factor. Examples of the project area are provided in Figures 3.1 to 3.3.

Figure 3.1 Southern end facing north



Figure 3.2 Middle of the project area facing north



Figure 3.3 North eastern corner facing south



As shown if Table 3.1 the total effective coverage for the project area was 3,150m², or 35% reflecting the good surface visibility.

Table 3.1 Effective coverage for the investigation area

SU	Landform	Area (m2)	Vis. %	Exp. %	Exposure type	Previous disturbances	Present disturbances	Limiting visibility factors	Effective coverage (m2)
1	slope	9,000	35%	100%	erosion, tracks	clearing, ploughing, grazing	rubbish, erosion, drainage, tracks	grass, leaf litter	3,150
Totals		**9,000**							**3,150**
								Effective coverage %	**35.00%**

The level and nature of the effective survey coverage is considered satisfactory to provide an effective assessment of the project area. The coverage was comprehensive for obtrusive site types (e.g., grinding grooves and scarred trees) but somewhat limited for the less obtrusive surface stone artefact sites by surface visibility constraints that included vegetation cover and minimal exposures.

3.2 ARCHAEOLOGICAL SITES AND PADS

No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

In view of the predictive modelling and the results obtained from the effective coverage, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the project. The survey results demonstrate the absence of Aboriginal objects within the project area. The results are consistent with those obtained from other studies in the local area in similar environmental contexts. The results indicate a number of possible past Aboriginal land use within the project area;

- No Aboriginal occupation
- Ground disturbances having disturbed or removed evidence

Considering general models of occupation for the locality, the results of this and local investigations, the locality may have been utilised by Aboriginal people. As the project area itself is located over 1.5 kilometres from reliable water and associated resources, the project area is unlikely to have been utilised more than a low intensity usage such as transitory movement or hunting/gathering activities.

3.3 CONCLUSION

It is well established that proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of the tributaries. The project area is located approximately 1.5 kilometres from Narara Creek and associated subsistence resources. The project area was unsuitable for sustained camping but may have been utilised for transitory movement or hunting/gathering activities only.

In relation to modern alterations to the landscape, previous large-scale clearing, ploughing and grazing can be expected to have had moderate impacts upon the archaeological record. Natural factors such as erosion would also have impacted on the archaeological record, all of which would have displaced cultural materials and the likelihood of in situ cultural materials is very low.

4 ASSESSMENT OF IMPACTS

The archaeological record is a non-renewable resource that is affected by many processes and activities. As outlined in Section 2 and Section 3, the various natural processes and human activities have impacted on archaeological deposits through both site formation and taphonomic processes.

4.1 IMPACTS

The Heritage NSW Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (2010:21) describes impacts to be rated as follows:

1) Type of harm: is either direct, indirect or none
2) Degree of harm is defined as either total, partial or none
3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

As no sites or PADs were identified, there are no impacts on the archaeological record.

5 MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies, as outlined through the Heritage NSW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), and the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010c), are considered below for the management of the identified site within the project area.

5.1 CONSERVATION/PROTECTION

Conservation is the first avenue and is suitable for all sites, especially those considered high archaeological significance and/or cultural significance. Conservation includes the processes of looking after an indigenous site or place so as to retain its significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

As no sites or PADs were identified conservation/protection is not required.

5.2 FURTHER INVESTIGATION

An Aboriginal Heritage Impact Permit (AHIP) is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW). Subsurface testing is appropriate when a PAD has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity.

As no sites or PADs were identified further investigations are not justified.

5.3 AHIP

If harm will occur to an Aboriginal object or Place, then an AHIP should be sought from Heritage NSW, Department of Premier & Cabinet as a defence to that harm. If a systematic excavation of the known site could provide benefits and information for the Aboriginal community and/or archaeological study of past Aboriginal occupation, a salvage program, and, or community collection, may be an appropriate strategy to enable the salvage of cultural objects.

As no sites or PADs were identified an AHIP is not required.

6 RECOMMENDATIONS

6.1 GENERAL

1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974; and

2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

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APPENDIX A

AHIMS Search Results

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Somersby
Client Service ID : 672740

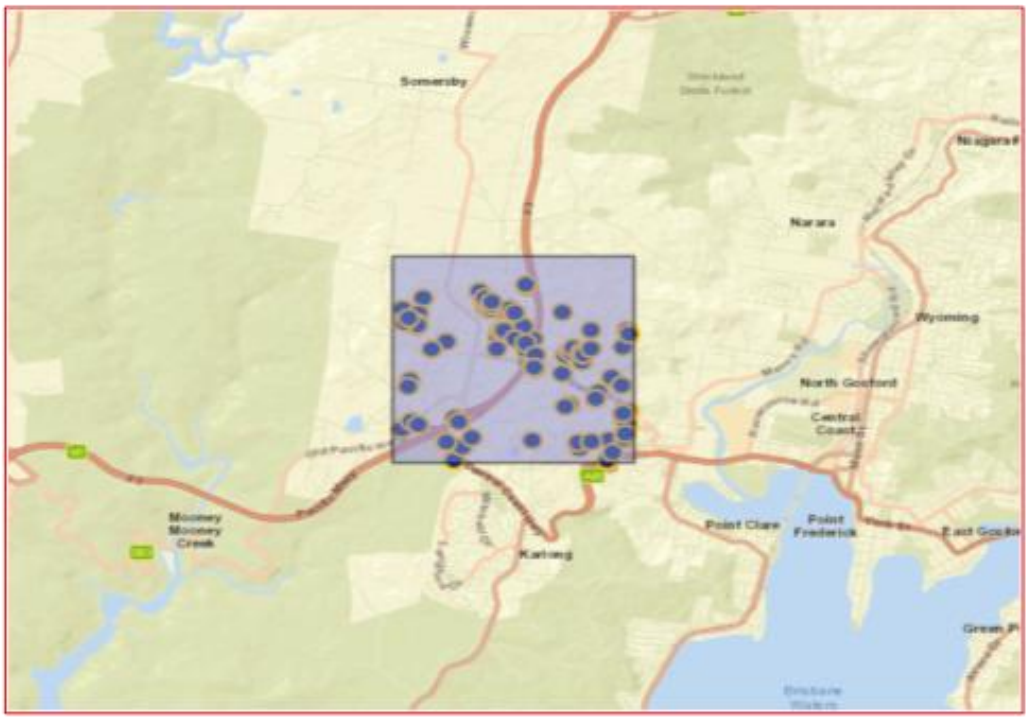
Penny Mccardle
Po Box 166
Adamstown New South Wales 2289
Attention: Penny Mccardle
Email: penny@mcheritage.com.au

Date: 04 April 2022

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 340000.0 - 343000.0, Northings : 6300000.0 - 6303000.0 with a Buffer of 0 meters, conducted by Penny Mccardle on 04 April 2022.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

97	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-3-1439	Melinga;Ca-K-29;	AGD	56	340000	6300260	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	**Recorders**	ASRSYS					**Permits**		
45-3-3284	Somersby, GG	GDA	56	340115	6302017	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -		
	Contact T Russell	**Recorders**	Warren Bluff,Ms.Collette Douchkov					**Permits**		
45-3-0442	Flood Creek;	AGD	56	340094	6300985	Closed site	Valid	Grinding Groove : -, Shell : -, Artefact : -	Axe Grinding Groove,Shelter with Midden	
	Contact	**Recorders**	R.A Buchan					**Permits**		
45-3-2117	Somersby; SOUTHERN SWA	GDA	56	340281	6301968	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	**Recorders**	Warren Bluff,Ms.Collette Douchkov					**Permits**		
45-3-3364	KA 3A	GDA	56	340775	6300001	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Jakub Czastka					**Permits**		
45-3-3351	SIE 13	GDA	56	341125	6302407	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Gavin Martin,Ms.Collette Douchkov					**Permits**		
45-3-3356	SIE 20 SWA	GDA	56	341301	6301832	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Gavin Martin,Ms.Collette Douchkov					**Permits**		
45-3-1403	Mazoe;Belltrees;	GDA	56	341310	6302233	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Rock Engraving	
	Contact	**Recorders**	ASRSYS,Ms.Collette Douchkov					**Permits**		
45-3-4443	CHIVERS RD BIRD GROUP ENG	GDA	56	341353	6301836	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Ms.Collette Douchkov					**Permits**		
45-3-0468	Old Gosford Road;	AGD	56	341330	6302060	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	**Recorders**	McKenzie					**Permits**		
45-3-0039	Old Gosford Road;Piles Creek; SIM SITE 2/35, MCCARTHY U27 ENG	GDA	56	341747	6301809	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	**Recorders**	ASRSYS,Ms.Collette Douchkov					**Permits**		
45-3-0620	Old Gosford Road;	AGD	56	342012	6301113	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	**Recorders**	ASRSYS					**Permits**		

Report generated by AHIMS Web Service on 04/04/2022 for Penny Mccardle for the following area at Datum :GDA, Zone : 56, Eastings : 340000.0 - 343000.0, Northings : 6300000.0 - 6303000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 97

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-3-0031	Piles Creek (Gosford)	AGD	56	342397	6300115	Open site	Valid	Art (Pigment or Engraved) : -, Shell : -, Artefact : -	Midden,Rock Engraving	492
	Contact	**Recorders**	ASRSYS					**Permits**		
45-3-3303	KG PAD 2	AGD	56	342600	6299840	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact T Russell	**Recorders**	Jo McDonald Cultural Heritage Management see GML					**Permits**		
45-3-1409	Belltrees;	AGD	56	341030	6302070	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	**Recorders**	J.C Lough					**Permits**		
45-3-4439	CHIVERS RD SEALION ENG	GDA	56	341306	6301826	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Ms.Collette Douchkov					**Permits**		
45-3-4440	CHIVERS RD RAY WHALE ENGS	GDA	56	341343	6301845	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Ms.Collette Douchkov					**Permits**		
45-3-4417	GINDURRA RD S ENG	GDA	56	341773	6301368	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Ms.Collette Douchkov					**Permits**		
45-3-1495	Narara Creek;site 243;	AGD	56	342250	6300010	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	**Recorders**	J.C Lough					**Permits**		
45-3-0619	Old Gosford Road;	AGD	56	342474	6300848	Open site	Valid	Art (Pigment or Engraved) : -, Stone Arrangement : -	Rock Engraving,Stone Arrangement	
	Contact	**Recorders**	ASRSYS					**Permits**		
45-6-1598	DEBENHAM RD KENDALL GLEN AGGS	GDA	56	342724	6300335	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Rock Engraving	
	Contact	**Recorders**	Jenny Hanrahan,Ms.Collette Douchkov					**Permits**		
45-3-1314	Mt Penang; AGGS AT DAM	GDA	56	342876	6301706	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98683
	Contact	**Recorders**	Unknown Author,Ms.Collette Douchkov					**Permits**		
45-3-1315	Mt Penang; GRINDING GROOVE CLUSTER	GDA	56	342919	6301958	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	98683
	Contact	**Recorders**	Unknown Author,Ms.Collette Douchkov					**Permits**		
45-3-4479	SOMERSBY MCARTHY U61A SNAKE ENG	GDA	56	340089	6302224	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	**Recorders**	Ms.Collette Douchkov					**Permits**		

Report generated by AHIMS Web Service on 04/04/2022 for Penny Mccardle for the following area at Datum :GDA, Zone : 56, Eastings : 340000.0 - 343000.0, Northings : 6300000.0 - 6303000.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 97

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-3-0028	Piles Creek; LOUGH CA-K-7	GDA	56	340772	6300630	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	100932,100999
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-3354	SIE 16 AGGS	GDA	56	341195	6302230	Open site	Valid	Artefact : -, Grinding Groove : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-3647	Somersby RFS1	GDA	56	341648	6302577	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Sharon Hodgetts					Permits		
45-3-3663	ES11	GDA	56	342105	6302207	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-0043	Old Gosford Road;Piles Creek;	AGD	56	342112	6300658	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	102848
	Contact	Recorders	LM Sim					Permits		
45-3-1317	Mt Penang; TWO FISH ENG	GDA	56	342905	6300640	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-2435	Kangoo Rd.; RESERVOIR TRAIL ENGS	GDA	56	342929	6300446	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Brad Welsh,Ms.Collette Douchkov					Permits		
45-3-1951	Strickland State Forest; WHITE EMU SWA	GDA	56	342948	6301901	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff,Ms.Collette Douchkov					Permits		
45-3-1436	Melinga;Ca-K-20;	AGD	56	340120	6300380	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	J.C Lough					Permits		
45-3-1442	Melinga;Ca-K-33;	AGD	56	340210	6300330	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	287,1159
	Contact	Recorders	ASRSYS					Permits		
45-3-2114	Somersby;	AGD	56	340240	6302200	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1333
	Contact	Recorders	Warren Bluff					Permits		
45-3-1408	Belltrees; SHARK MAN ENG	GDA	56	341053	6302500	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -, Water Hole : -	Axe Grinding Groove,Rock Engraving,Water Hole/Well	
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-3353	SIE 14	GDA	56	341148	6302326	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov,Ms.Collette Douchkov					Permits		
45-3-4412	CHIVERS RD ART GROVE SWA	GDA	56	341301	6301832	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-4441	CHIVERS RD INDETERMINATE ENGS	GDA	56	341331	6301928	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-3659	ES9	GDA	56	342153	6301568	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-4416	KOWARA RD AGGS	GDA	56	342740	6301260	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-0611	Old Gosford Road;	AGD	56	342845	6300580	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	McKenzie					Permits		
45-3-3349	SIE 11	GDA	56	340464	6301637	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-4431	SIE 10; FORMER SITE 45-5-0015 SITE SOMERSBY	GDA	56	340650	6301750	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-1441	Piles Creek;Ca-K-31;	AGD	56	340720	6300380	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	ASRSYS					Permits		
45-3-0030	Piles Creek. KANGOO RD WALLABY SIM SITE 2/27	GDA	56	340876	6300200	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	492
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-3347	SIE 12	GDA	56	341053	6302500	Open site	Valid	Stone Arrangement : -, Art (Pigment or Engraved) : -, Grinding Groove : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-0040	Old Gosford Road;Piles Creek;	AGD	56	341010	6302180	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	1157
	Contact	Recorders	J.C Lough					Permits		
45-3-0612	Old Gosford Road;	AGD	56	341390	6301990	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	J.C Lough					Permits		
45-3-3626	SIE MCH2	GDA	56	341619	6301992	Open site	Valid	Water Hole : 1		102848

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Jeffrey Hill,RPS East Australia Pty Ltd - Echuca Victoria					Permits		
45-3-0037	Old Gosford Road;Piles Crk/Ca-K-11;	AGD	56	341650	6300121	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Fred McCarthy					Permits		
45-3-3658	ES7	GDA	56	342204	6301638	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-3655	ES6	GDA	56	342222	6301623	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-3657	ES8	GDA	56	342249	6301687	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-3656	ES5	GDA	56	342368	6301481	Open site	Valid	Grinding Groove : -, Water Hole : -		
	Contact	Recorders	Mr.Lance Syme,Ms.Collette Douchkov					Permits		
45-3-1319	Mt Penang; KOWARA RD JUNCTION ENGS	GDA	56	342545	6300940	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Unknown Author,Ms.Collette Douchkov					Permits		
45-3-0306	KG 3 (Kariong)	AGD	56	342670	6299960	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	757
	Contact	Recorders	Doctor.Jo McDonald,Laura-Jane Smith					Permits		
45-3-3350	SIE 5	GDA	56	340294	6302159	Open site	Valid	Artefact : -, Grinding Groove : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-0038	Old Gosford Rd; Piles Creek; K-O-34	GDA	56	341660	6301644	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	LM Sim,OzArk Environmental and Heritage Management - Dubbo,OzArk Environm					Permits		
45-3-3625	SIE MCH1	GDA	56	342163	6300816	Open site	Valid	Art (Pigment or Engraved) : 1, Water Hole : 1		102848
	Contact	Recorders	Mr.Jeffrey Hill,RPS East Australia Pty Ltd - Echuca Victoria					Permits		
45-3-3219	PN-EN-1	AGD	56	342230	6300100	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Rebecca Simon					Permits		
45-3-0044	Old Gosford Road;Piles Creek;	AGD	56	342365	6301760	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	LM Sim					Permits		
45-3-0035	Piles Creek	AGD	56	342397	6300115	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	492
	Contact	Recorders	LM Sim					Permits		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-3-4418	DEBENHAM RD SOUTH AGGS	GDA	56	342872	6301140	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-2437	Kangoo Rd; FISH ENG	GDA	56	342918	6300351	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Brad Welsh,Ms.Collette Douchkov					Permits		
45-6-1599	DEBENHAM RD SOUTH ENGS	GDA	56	342929	6300446	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	J.C Lough,Ms.Collette Douchkov					Permits		
45-3-3348	SIE 3	GDA	56	340115	6302026	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-3668	SIE 35	GDA	56	340177	6301079	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Sharon Hodgetts					Permits		
45-3-2115	Somersby; NORTHERN SWA	GDA	56	340281	6302020	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff,Ms.Collette Douchkov					Permits		
45-3-2116	Somersby; MIDDLE SWA	GDA	56	340282	6301987	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff,Ms.Collette Douchkov					Permits		
45-3-0029	Piles Creek Mt. Penang	AGD	56	340890	6300150	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1014
	Contact	Recorders	Elizabeth Rich,Hillary Du Cros					Permits		
45-3-0041	Old Gosford Road;Piles Creek; SIM 2/42 2/43 ENG	GDA	56	341053	6302500	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Rock Engraving	
	Contact	Recorders	LM Sim,Ms.Collette Douchkov					Permits		
45-3-2339	None Specified	AGD	56	341100	6302100	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	Unknown Author					Permits		
45-3-0016	Floods Falls.	AGD	56	341182	6301463	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1424
	Contact	Recorders	LM Sim					Permits		
45-3-0456	Old Gosford Road;	AGD	56	341268	6301739	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	McKenzie					Permits		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-3-3355	SIE 19 ENG	GDA	56	341505	6302190	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -		
	Contact	Recorders	Gavin Martin,Ms.Collette Douchkov					Permits		
45-3-4442	CHIVERS RD ENG AND AGGS	GDA	56	341516	6301804	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-4413	DEBENHAM RD BIRDMAN ENG	GDA	56	341652	6301747	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-4410	K-0-38/SIE25	GDA	56	341778	6301572	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	OzArk Environmental and Heritage Management - Dubbo,Mr.Kirwan Williams					Permits		
45-3-3661	Sims 2/46	GDA	56	342382	6301584	Open site	Valid	Art (Pigment or Engraved) : -, Water Hole : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-0032	Old Gosford Road;Kendall's Rock; DEBENHAM RD ENGS	GDA	56	342895	6300729	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	98683
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-6-1600	Un-named; DEBENHAM RD SOUTH ENGRAVINGS	GDA	56	342929	6300446	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	J.C Lough,Ms.Collette Douchkov					Permits		
45-3-1316	Mt Penang; SHELTER WITH SHELL	GDA	56	342945	6300570	Closed site	Valid	Shell : -, Artefact : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Midden	98683
	Contact	Recorders	Unknown Author,Ms.Collette Douchkov					Permits		
45-3-0015	Floods Falls; SIM 2/7 2/8 2/9 ENGS	GDA	56	340115	6302026	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1218
	Contact	Recorders	I.M Sim,Ms.Collette Douchkov					Permits		
45-3-2118	Somersby; FAINT FISH ENG	GDA	56	340167	6302090	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1333
	Contact	Recorders	Warren Bluff,Ms.Collette Douchkov					Permits		
45-3-0017	SIE11 THREE FIGURES ENGS AND AGGS	GDA	56	340464	6301637	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	1424
	Contact	Recorders	Mr.Neville Baker,I.M Sim,Sydney Water-Parramatta,Ms.Collette Douchkov					Permits		
45-3-0446	Piles Creek;	AGD	56	340569	6300079	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Webb					Permits		
45-3-1407	Belltrees; INDETERMINATE ENG	GDA	56	341125	6302407	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Somersby
Client Service ID : 672740

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-1406	Belltrees; VERE RD ENGRAVING SITE	GDA	56	341212	6302348	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-1386	Belltrees K-O-37;	AGD	56	341530	6302420	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	ASRSYS					Permits		
45-3-4505	Kariong SIE 26	GDA	56	341763	6301389	Open site	Not a Site	Art (Pigment or Engraved) : -		
	Contact	Recorders	Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats					Permits		
45-3-3660	ES10	GDA	56	342353	6301623	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	Mr.Lance Syme					Permits		
45-3-0042	Old Gosford Road;Piles Creek; SIM SITE 2/45 ENGS	GDA	56	342384	6301590	Open site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	Margrit Koettig,Ms.Collette Douchkov					Permits		
45-3-1313	Mt Penang;	AGD	56	342370	6301486	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	
	Contact	Recorders	ASRSYS					Permits		
45-3-1318	Mt Penang; DEBENHAM RD SOUTH ENGS	GDA	56	342895	6300729	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	98683
	Contact	Recorders	ASRSYS,Ms.Collette Douchkov					Permits		
45-3-4396	KENDALL GLEN PENANG WHALE ENG	GDA	56	342929	6300427	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Ms.Collette Douchkov					Permits		
45-3-0045	Old Gosford Road Piles Creek Strickland S.F. SIM SITE 2/48	GDA	56	342948	6301901	Closed site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving,Shelter with Art	492
	Contact	Recorders	LM Sim,Ms.Collette Douchkov					Permits		

**** Site Status**
Valid - The site has been recorded and accepted onto the system as valid
Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.
Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground
Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

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[redacted]

From: [redacted]
Sent:
To: Central Coast Council
Cc:
Subject: [redacted]

Attachments: Objection ReNotification.pdf

Follow Up Flag: Flag for follow up
Flag Status: Completed

Categories:
Record Number: [redacted]

[EXTERNAL EMAIL] Do not click any links or attachments unless you have checked the sender and trust the content is safe. If you are unsure, please report this to I&T Service Desk via the Portal.

Herewith an objection to the Re-Notification of DA4341/2022. Please acknowledge receipt.

An objection and submission in respect of the original application has been previously lodged.

The substance of that objection and submission is that there would be no objection to the project if it was demonstrated that and that any consent included conditions to the effect that:

- noise/vibration goals for the operation of the batching plant are will during the operation of the development those applicable under EPA standards (from time to time) to a 'sensitive' 'commercial receptor';
- EPA 'Best Practices' from time to time are applied at all times in the operation of the development:
- EPA 'Best Practices' mitigation measures from time to time for concrete batching plant are implemented, and applied at all times during the operation of the development;
- Any consent includes an Environmental Management Plan:
    - applying the above principles and
    - updated EPA requirements from time to time in accordance with EPA Best Practices
    - requiring environmental monitoring during hours of operation; and
    - reporting to Council and owner of Property 6 Chivers Road.

It is noted that the 'Re- Notification' is triggered by what is really a 'variation, to the original application without any environmental planning assessment of the changes or of the operation of the proposed development as proposed to be changed.

[redacted]

[redacted]

Development Application: 4341/2022
Property Address: 53 Gindurra Road, SOMERSBY
Applicant: Wpp Pty Ltd
Consent Authority: Central Coast Council
Proposed Development: Re-Notified Industrial development consisting of Concrete Batching Plant
Designated Development: Under Clause 17 of Schedule 3 of the Environmental Planning and Assessment Regulation2021 (EPA Regulation).

Notified Development Application DA: 4341/2022

OBJECTION

The proposed changes to Development Application 4341/2022 are described in a letter dated 4 December 2024 to General Manager Central Coast Council from WPP Planning & Property

Proposed Amendments to DA/4341/2022
Pursuant to Section 37 of the Environmental Planning and Assessment Regulation 2021, Redis and wish to amend the development application as follows:
- Amend the orientation of the proposed batching silos;
- Introduce an additional silo;
- Removal of the on site self bunded fuel tank.

Reasons for Objection

1. The Objector has lodged an Objection to DA 4341/2022 as originally lodged.
2. The Objector was not notified of the original DA 4341/2022 as required by law:
3. The Environmental planning effects of the works sought to approved by DA 4341/2022 as originally lodged were and are not appropriately assessed as required by law.
4. The Objector objects to the 'Re-notification due to Amended Plans and Supporting Documents :
    a. generally; and
    b. on the basis that there is no environmental assessment of the environmental planning effects of the:
        i. development as proposed to be amended; nor of the;
        ii. proposed amendments themselves.

[redacted]

NSW GOVERNMENT | Planning, Industry & Environment

17 March 2021

Mr Samuel Newman
ATB Morton
PO Box 186 HRMC
NSW 2310

EF21/228
SEAR 1537

Dear Mr Newman

Concrete Works (Concrete Batching Plant)
53 Gindurra Road Somersby (Lot 12 DP1189679)
Planning Secretary's Environmental Assessment Requirements (SEAR) 1537

Thank you for your request for the Planning Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the above development proposal. I have attached a copy of these requirements.

In support of your application, you indicated that your proposal is designated development under Part 4 of the *Environmental Planning and Assessment Act 1979*. In preparing the SEARs, the Department of Planning, Industry and Environment (the Department) has consulted with the Environment Protection Authority and Transport for NSW. A copy of their requirements is attached.

The Department has also consulted with the NSW Rural Fire Service. A copy of their additional requirements for the EIS are attached.

If any integrated approvals are identified before the Development Application (DA) is lodged, you must undertake direct consultation with the relevant agencies, and address their requirements in the EIS.

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Commonwealth Department of Agriculture, Water and the Environment on (02) 6274 1111.

Should you have any further enquiries, please contact Zoe Halpin, Planning and Assessment, at the Department on (02) 9995 6430 or via zoe.halpin@planning.nsw.gov.au.

Yours sincerely

Chris Ritchie
Director
Industry Assessments
as delegate of the Planning Secretary

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*.
Schedule 3 of the Environmental Planning and Assessment Regulation 2000.

Designated Development

SEAR Number	1537
Proposal	The construction and operation of a concrete batching plant that will process more than 30, 000 tonnes per year of concrete.
Location	53 Gindurra Rd, Somersby (Lot 12 DP1189679) in the Central Coast local government area.
Applicant	ATB Morton
Date of Issue	17 March 2021
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.
Key Issues	The EIS must include an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts. As part of the EIS assessment, the following matters must also be addressed: • **strategic and statutory context** – including: – a detailed justification for the proposal and suitability of the site for the development – a demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies – a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out. • **suitability of the site** – including: – a detailed justification that the site can accommodate the proposed processing capacity, having regard to the scope of the operations and its environmental impacts and relevant mitigation measures – floor plans depicting and proposed internal layout, including the location of machinery and equipment. • **air quality** – including: – a description of all potential sources of air and odour emissions – an air quality impact assessment in accordance with relevant Environment Protection Authority guidelines – a description and appraisal of air quality impact mitigation and monitoring measures. • **noise and vibration** – including: – a description of all potential noise and vibration sources during construction and operation, including road traffic noise – a noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines – a description and appraisal of noise and vibration mitigation and monitoring measures. • **waste management** – including:

	– details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal – the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21.* • **traffic and transport** – including: – details of road transport routes and access to the site – road traffic predictions for the development during construction and operation – swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site – an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development. • **hazards and risk** – including: – a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011). – an assessment of the risk of bushfire, including addressing the requirements of *Planning for Bush Fire Protection 2019* (RFS). Any proposed Asset Protection Zones must not adversely affect environmental objectives (e.g. buffers) – any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations to address this • **soil and water** – including: – a description of local soils, topography, drainage and landscapes – details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the *Water Act 1912* and/or the *Water Management Act 2000* – an assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment – details of sediment and erosion controls – a detailed site water balance – an assessment of potential impacts on the quality and quantity of surface and groundwater resources – details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts – characterisation of the nature and extent of any contamination on the site and surrounding area – a description and appraisal of impact mitigation and monitoring measures. • **biodiversity** – including: – a description of any potential vegetation clearing needed to undertake the proposal – a detailed assessment of the potential impacts on any threatened species, populations, endangered ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements • **visual** – including an impact assessment at private receptors and public vantage points. • **heritage** – including Aboriginal and non-Aboriginal cultural heritage.
Environmental Planning Instruments	The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • State Environmental Planning Policy (Infrastructure) 2007

and other policies	• State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 • State Environmental Planning Policy (Koala Habitat Protection) 2020 • State Environmental Planning Policy No. 33 – Hazardous and Offensive Development • State Environmental Planning Policy No. 55 – Remediation of Land • Gosford Local Environmental Plan 2014 • relevant development control plans and section 7.11 plans.
Guidelines	During the preparation of the EIS you should consult the Department's Register of Development Assessment Guidelines which is available on the Department's website at https://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Industries. Whilst not exhaustive, this Register contains some of the guidelines, policies, and plans that must be taken into account in the environmental assessment of the proposed development.
Consultation	During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the: • Department of Planning, Industry and Environment, specifically the: ○ Environment, Energy and Science Group ○ Water Group ○ Environment Protection Authority • Transport for NSW • Fire & Rescue NSW • NSW Rural Fire Service • WaterNSW • Darkinjung Local Aboriginal Land Council • Central Coast Council • the surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.
Further consultation after 2 years	If you do not lodge an application under Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* within 2 years of the issue date of these SEARs, you must consult with the Planning Secretary in relation to any further requirements for lodgement.

Department of Planning Industry and Environment
Industry Assessments
4 Parramatta Square, 12 Darcy Street
Parramatta, NSW, 2124

By email: maryellen.trimble@planning.nsw.gov.au

Attention: Mary Ellen Trimble

Notice Number 1605145

Date 20 January 2021

RE: Concrete Works (Concrete Batching Plant) - 53 Gindurra Road, Somersby - SEAR 1537

I refer to your request to the Environment Protection Authority's (EPA) dated 13 January 2021, seeking the EPA's Secretary's Environmental Assessment Requirement (SEAR's) to assist with the preparation of an Environmental Impact Statement (EIS) for the proposal of a concrete batching plant at 53 Gindurra Road, Somersby.

The EPA has considered the proposal and provides the information in **Attachment A** it requires to properly assess the proposal. The EPA's key information requirements for the proposal include an adequate assessment of:

1. Potential noise impacts due to construction and operation;
2. Potential air quality impacts due to construction and operation;
3. Impacts on water quality and site wide water management; and
4. Waste management and disposal.

In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in **Attachment B** and any relevant industry codes of practice and best practice management guidelines.

Please note that this response does not cover biodiversity or Aboriginal cultural heritage issues, which are the responsibility of the Office of Environment and Heritage.

The Proponent should be made aware that any commitments made in the EIS may be formalised as approval conditions and may also be placed as formal licence conditions.

If you have any questions about this matter, please contact Rhys Acker on 02 4908 6858 or by email at RegOps.MetroRegulation@epa.nsw.gov.au.

Yours sincerely

Karen Gallagher
Acting Unit Head
Regulatory Operations Metropolitan North
(by Delegation)

ATTACHMENT A: EIS REQUIREMENTS FOR

Concrete Works (Concrete Batching Plant) - 53 Gindurra Road, Somersby

How to use these requirements

The EPA requirements have been structured in accordance with the DIPNR EIS Guidelines, as follows. It is suggested that the EIS follow the same structure:

A. Executive summary

B. The proposal

C. The location

D. Identification and prioritisation of issues

E. The environmental issues

F. List of approvals and licences

G. Compilation of mitigation measures

H. Justification for the proposal

The EIS should address the specific requirements outlined under each heading below and asses impacts in accordance with the relevant guidelines/standards at **Attachment B**

A Executive summary

The document's executive summary should include a discussion of the proposed development, the key environmental risks, the identified mitigation measures, and an overall conclusion and justification for the proposal.

B The proposal

The proposed development must be adequately described and should clearly state and refer to:

a) the type, the nature and size of the proposed development, including proposed average and maximum annual production rates that are expected to occur;
b) the type, the nature and amount of the processes and the products to be used, including the plant and equipment proposed for use, fuel and chemicals required and proposed methods for their transportation, storage, use and their emergency management provisions, including relevant process flow diagrams;
c) the by-products produced and/or wastes produced, including the fate of such products;
d) the staging and timing of the proposal, including any construction works and any plans for potential future expansion plans and the proposed construction and operational hours, including and heavy vehicle movements;
e) the anticipated benefits to relevant industry, community, etc; and
f) the proposal's relationship to any other facility or industry both locally and abroad.

C The location

Provide an overview of the setting in which the proposed development is to take place in its local and regional environmental context including:

a) the location of the proposed facility, its layout, including plant and equipment, and details of the surrounding environment, including land use zoning with appropriate maps/diagrams;
b) the topography;
c) meteorological data (e.g. temperature, wind (prevailing wind direction and strength), rainfall, evaporation, etc);
d) surrounding land uses, including ownership details of any residence and/or land likely to be affected by the proposed facility with appropriate maps/diagrams;
e) ecological information (vegetation, fauna, waters) with appropriate maps/diagrams; and
f) availability of services and the accessibility of the site for passenger and freight transport.

D List of approvals and licences

Identify all approvals, licences or permits required to undertake the proposed development as well as those already obtained and those to be obtained.

E Identification and prioritisation of issues / scoping of impact assessment

Identify a scoping risk assessment methodology, undertake a risk assessment, and identify and prioritise key issues.

F The environmental issues

1. Noise

- Identify the existing noise environment (including any relevant noise assessment groupings) and identify applicable noise goals in line with relevant guidance/standards;
- Identify potential noise and vibration sources and impacts during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to be incorporated for both stages to minimise noise and vibration emissions/impacts (with proposed timing), including validation monitoring, in line with relevant guidance/standards; and
- Propose representative noise monitoring locations for determining compliance with applicable noise goals and where relevant noise goals would be set as representative limits.

Note: this will require a detailed Noise Impact Assessment to be completed.

2. Air

- Identify the existing air quality environment and identify applicable air quality goals (i.e. ground level concentrations for pollutants and odour assessment criteria) in line with relevant guidance/standards; and
- Identify potential air quality and odour sources and impacts (including point source emissions from any site-based plant and equipment and/or fugitive dust or other emissions) during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to minimise point and/or fugitive and/or odour emissions/impacts (with proposed timing), including monitoring, in line with relevant guidance/standards; and
- Include an emission inventory of all sources of air emissions.

Note: this will require a detailed Air Quality Impact Assessment to be completed.

3. Water

- Identify the condition of the local catchment and those immediate areas on and around the proposed development e.g. soils, erosion potential, vegetation cover, etc; and
- Identify nearby water resources, the background water conditions (including river flow data, water flow/direction and quality data, the depth to groundwater, groundwater flow/gradient and quality data, reliance on water resources by surrounding users and by the environment) and relevant water quality objectives in line with relevant guidance/standards; and
- Identify existing impacts to water resources (including other industrial discharges); and
- Identify any water intakes, intake frequency and volumes related to the proposed development; and
- Identify any expected discharges (including stormwater), discharge quality, discharge frequency and volumes related to the proposed development; and
- Identify all practical measures that can be taken to prevent any expected discharges or an explanation of why any specific discharges cannot be prevented; and
- Identify potential impacts to surface and groundwater during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to protect surface and groundwater resources, particularly erosion and sediment controls during the construction stage and

the rehabilitation stage and the inclusion of permanent erosion and sediment controls where required and applicable; and
- Include a detailed water balance and discharge inventory; and
- Include an assessment of any mixing zones; and
- Include any proposed discharge limits.

Note: this will require a detailed Water Assessment to be completed.

4. Land

- Identify if the soils and groundwater in the area of the Proposal are contaminated or are acid forming (i.e. acid sulphate soils) and if so, identify best practice mitigation measures (pollution control) and strategies or remedial and/or disposal actions that will be required/undertaken if applicable in accordance with relevant guidance/standards. Investigations should be undertaken in accordance with (but not limited to) guidelines identified in Attachment B ; and
- Identify potential impacts to soils and groundwater /land resources as a result of the proposed development and identify best practice mitigation measures (pollution control) and strategies that will be required/undertaken if applicable in accordance with relevant guidance/standards.
- A site auditor accredited under the *Contaminated Land Management Act* 1997 (CLM Act) should be engaged to provide a Section A site audit statement (SAS) and accompanying site audit report (SAR) certifying suitability of the land for the proposed land use. By engaging a site auditor to provide a Section A SAS, the site auditor will review the adequacy of the investigations, any remedial works or management plan required and confirm suitability of the land for the proposed use.

5. Waste

- Identify all waste types that will be generated as a result of the proposed development during both construction and operation, their classification and the ways in which they will be legally handled, stored, transported, reused, recycled or disposed of, including sampling/monitoring, record keeping, waste tracking, contingency measures and any other verification practices, in accordance with relevant guidance/standards; and
- Identify options and strategies for waste minimisation; reuse and recycling across all activities and processes during both construction and operational stages.

6. Storage and use of fuels / chemicals etc

- Identify all fuels/chemicals/products/dangerous goods to be stored/used onsite; and
- Identify adequate handling, storage, control and usage requirements for any fuels/chemicals/products/dangerous to be stored/used onsite.

7. Incident Management

- Identify adequate incident management procedures to be established including notification requirements to the Appropriate Regulatory Authority and other relevant authorities for incidents that cause or have the potential to cause material harm to the environment (Part 5.7 of the *Protection of the Environment Operations Act* 1997).

8. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute; and
- Identify the cumulative impacts of the proposed development in a local context.

9. Monitoring Programs

- Include a detailed proposal of any noise, air, water, land, waste, meteorological etc monitoring during construction and operation to ensure and assumptions, predictions, goals, criteria etc are achieved. The proposal should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

G. Compilation of mitigation measures

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (e.g. outline of an environmental management plan).
- Include any Statement of Commitments to be made by the Proponent.

H. Justification for the proposed development and conclusion

Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

Attachment B - EPA's Guidance Material (not exhaustive)

Legislation	
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Protection of the Environment Operations(Noise Control) Regulation 2017	https://legislation.nsw.gov.au/#/view/regulation/2017/449
Protection of the Environment Operations(Clean Air) Regulation 2010	https://legislation.nsw.gov.au/#/view/regulation/2010/428
Protection of the Environment Operations(Waste) Regulation 2014	https://legislation.nsw.gov.au/#/view/regulation/2014/686

Waste Avoidance and Resource Recovery Act 2001	https://legislation.nsw.gov.au/#/view/act/2001/58
Contaminated Land Management Act 1997	http://www.legislation.nsw.gov.au/#/view/act/1997/140
Licensing	
Licensing Requirements	https://www.epa.nsw.gov.au/licensing-and-regulation/licensing
Noise/Vibration	
Interim Construction Noise Guideline (DECC, 2009)	https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/interim-construction-noise-guideline
Assessing Vibration: a technical guideline (DEC, 2006)	https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/assessing-vibration
Noise Policy for Industry (2017) and Implementation and Transitional arrangements for the Noise Policy for Industry (2017)	https://www.epa.nsw.gov.au/publications/noise/17p0524-noise-policy-for-industry https://www.epa.nsw.gov.au/publications/noise/17p0293-implement-transition-arrange-noise-pol-industry
NSW Road Noise Policy (DECCW, 2011)	http://www.epa.nsw.gov.au/resources/noise/2011236nswroadnoisepolicy.pdf
Air/Odour	
Approved methods for the Modelling and Assessment of Air Pollutants in NSW (2016)	http://www.epa.nsw.gov.au/resources/epa/approved-methods-for-modelling-and-assessment-of-air-pollutants-in-NSW-160666.pdf
Approved methods for the Sampling and Analysis of Air Pollutants in NSW (2007)	http://www.epa.nsw.gov.au/resources/air/07001amsaap.pdf
National Environment Protection (Ambient Air Quality) Measure	http://www.nepc.gov.au/nepms/ambient-air-quality
No EPA specific guidance material exists for the control of dust from construction sites. Consideration should be given to the POEO Act and the Local Government Air Quality Toolkit (DECC, 2007)	http://www.epa.nsw.gov.au/air/lgaqt.htm
Technical Framework - Assessment and Management of Odour from	http://www.epa.nsw.gov.au/air/odour.htm http://www.epa.nsw.gov.au/air/odour.htm

Stationary Sources in NSW (DEC, 2006) and Technical Notes - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)	
Water/Soils	
ANZECC Guidelines for Fresh and Marine Water Quality (2018)	https://www.waterquality.gov.au/guidelines/anz-fresh-marine
NSW Water Quality and River Flow Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/water/approvedmethods-water.pdf
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	https://www.shop.nsw.gov.au/publication/soil-and-landscape-issues-in-environmental-impact-assessment-technical-report-no-34-1324-6860-839
Managing urban stormwater: soils and construction, vol. 1 (Landcom, 2004) and Addendum Publications (Various)	http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide Risk Management (2007)	http://www.australiangeomechanics.org/resources/downloads/
Site Investigations for Urban Salinity (DLWC, 2002)	http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf
Dryland Salinity Resources (Various)	http://www.environment.nsw.gov.au/salinity/solutions/urban.htm
Contaminated Sites Assessment and Remediation	
Contaminated Land – EPA website	https://www.epa.nsw.gov.au/your-environment/contaminated-land
Managing land Contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.epa.nsw.gov.au/clm/planning.htm
Guidelines for the NSW Site Auditor Scheme – 3rd	https://www.epa.nsw.gov.au/publications/contaminatedland/17p0269-guidelines-for-the-nsw-site-auditor-scheme-third-edition

Edition (EPA, 2017)	
Consultants reporting on contaminated land, Contaminated Land Guidelines (EPA 2020)	https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/contaminated-land/20p2233-consultants-reporting-on-contaminated-land-guidelines.pdf?la=en&hash=EBB6758A2DE448534B6FDD5057D280523E423CC7
Sampling Design Guidelines (EPA, 1995)	http://www.epa.nsw.gov.au/resources/clm/95059sampgdlne.pdf
National Environment Protection (Assessment of Site Contamination) Measure	http://www.nepc.gov.au/nepms/assessment-site-contamination
Waste	
NSW Waste Avoidance and Resource Recovery Strategy 2014-2021	http://www.epa.nsw.gov.au/wastestrategy/warr.htm
Waste Classification Guidelines – 4 Parts (EPA, 2014)	http://www.epa.nsw.gov.au/wasteregulation/classify-waste.htm
Chemical and Fuel Storage	
Storage and Handling of Dangerous Goods – Code of Practice (WorkCover, 2005)	http://www.safework.nsw.gov.au/__data/assets/pdf_file/0005/50729/storage-handling-dangerous-goods-1354.pdf

Transport for NSW

CR2021/000091
SF2021/006297
KK

27 January 2021

Department of Planning, Industry & Environment
Industry Assessments
GPO Box 39
SYDNEY NSW 2001

Attention: Mary Ellen Trimble

SEARS REQUEST - CONCRETE WORKS (CONCRETE BATCHING PLANT) 53 GINDURRA ROAD, SOMERSBY (LOT: 12 DP:1189679)- SEARS 1537

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 transport 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 13 January 2021 TfNSW accepted the referral by the Department of Planning, Industry and Environment (DPIE) via email regarding the abovementioned application. DPIE referred the application to TfNSW for comment. This letter is a submission in response to that referral.

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.

TfNSW have reviewed the *Form A* SEARs application form submitted by ATB Morton and dated 15 December 2920, *Site Plan* (Drawing No 1638 - DWG - 203 – 02003) Rev A prepared by ATB Morton and dated 06 August 2020, and, *Site Analysis Plan* (Drawing No 1638 - DWG - 203 – 02001) Rev A , ATB Morton and dated 06 August 2020. It is understood that the proposal be for construction of concrete batching plant that will produce up to 40,000 tonnes of concrete per year at 53 Gindurra Road, Somersby.

Vehicular access will be from Gindurra Road (Local Road) however details of the driveway crossing and type of vehicles or traffic generated by the development has not been included in the information received with the referral.

Transport for NSW
Level 8, 266 King Street, Newcastle NSW 2300 | Locked Bag 2030, Newcastle NSW 2300 | **W** transport.nsw.gov.au | ABN 18 804 239 602

TfNSW response & requirements

TfNSW recommends that the Environmental Impact Statement (EIS) should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development:

- Road and Related Facilities within the Department of Planning EIS Guidelines, and,
- Section 2 Traffic Impact Studies of Roads and Maritime's NSW's *Guide to Traffic Generating Developments 2002*.

Furthermore, a traffic and transport study shall be prepared in accordance with the RTA *Guide to Traffic Generating Developments*, RMS *Traffic Modelling Guidelines*, Austroads *Guide to Traffic Management, Part 6, Intersections, Interchanges and Crossings*, and Austroads *Guide to Traffic Management, Part 12, Integrated Transport Assessments for Developments,* and is to include (but not be limited to) the following:

- Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject properties.
- Current traffic counts for all of the traffic routes and intersections.
- The anticipated additional vehicular traffic generated from both the construction and operational stages of the project.
- The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.
- Consideration of the traffic impacts on existing and proposed intersections, in particular, the intersections Central Coast Highway and Kangoo Road, Intersection of Central Coast Highway and Wiseman Ferry Road and intersection of Old Pacific Highway and Wisemans Ferry Road, and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area.
- Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. In this regard, preliminary concept drawings shall be submitted with the EIS for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of Transport for NSW and Council.
- Traffic analysis of any major / relevant intersections impacted, using SIDRA or similar traffic model, including:
  - Current traffic counts and 10 year traffic growth projections
  - With and without development scenarios

- 95th percentile back of queue lengths
- Delays and level of service on all legs for the relevant intersections
- Electronic data for Transport for NSW review.

- Any other impacts on the regional and state road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.

On determination of this matter, please forward a copy to TfNSW for record and / or action purposes. Should you require further information please contact Kumar Kuruppu, Development Services Case Officer, on 0429 07 333 or by emailing development.hunter@rms.nsw.gov.au.

Yours sincerely

Peter Marler
A/Manager
Development Services North

NSW GOVERNMENT | NSW RURAL FIRE SERVICE

Department of Planning and Environment (Sydney Offices)
GPO Box 39
Sydney NSW 2001

Your reference: SEAR 1537
Our reference: DA20210114000137-SEARS-1

ATTENTION: Mary Ellen Trimble

Date: Friday 29 January 2021

Dear Sir/Madam,

Development Application
State Significant – SEARS – Industry
53 Gindurra Road Somersby NSW 2250, 12//DP1189679

I refer to your correspondence regarding the above proposal which was received by the NSW Rural Fire Service on 13/01/2021.

The referral relates to a request for Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the construction of a concrete batching plant that will produce up to 40,000 tonnes of concrete per year.

The NSW RFS has reviewed the information provided and advises that a bush fire report that demonstrates that the development meet the aim and objectives of *Planning for Bush Fire Protection 2019* and the provisions of Section 8.3.1 must be prepared for subsequent stages of the application.

For any queries regarding this correspondence, please contact Emma Jensen on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese
Team Leader, Dev. Assessment & Planning
Planning and Environment Services

Postal address
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

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

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

NORTHROP

STORMWATER DRAINAGE INFRASTRUCTURE – OPERATION AND MAINTENANCE PLAN

To

ATB Morton Pty Ltd

For

53 Gindurra Road, Somersby

		Date
Prepared by	EH	20/05/2025
Checked by	CP	20/05/2025
Admin	HB	20/05/2025

NORTHROP
Level 1, 215 Pacific Highway
Charlestown NSW 2290
02 4943 1777
newcastle@northrop.com.au
ABN 81 094 433 100

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NORTHROP

1 Introduction

ATB Morton received development consent from the Central Coast Council for the proposed works, located at 53 Gindurra Road, Somersby, NSW 2250. As part of the development, and to achieve compliance with Council Consent Conditions, a stormwater drainage network is to be constructed. The drainage network will consist of a pit and pipe system, concrete washout pits, wedge pits, sediment settlement tanks, triple interceptor treatment device and a bio-detention basin.

The purpose of this plan is to document the processes required to operate and maintain the stormwater drainage network. It is noted that this is a conceptual plan to be revised and developed once the final site design is completed. Ongoing review and amendment to this report should be undertaken as required to ensure compliance with all regulatory requirements.

Site Description

The site is located at Lot 12 DP 1189679 which has a total area of approximately 0.83 ha. The site is bordered by Gindurra Road to the south, Commercial buildings to the west, and dense bushland to the north and east. Most of the site drains towards Council's existing stormwater infrastructure within Gindurra Road.

Contact Information

In the event of an emergency the following should be contacted:

Position	Name	Contact Number
Site Maintenance Manager		
Plumber		
Police		000
Ambulance		000
Fire		000
NSW SES		132 500

2. Stormwater Management Summary

The design drawings included in Appendix B show the location and nature of the drainage system.

Rainwater Tank

Runoff generated atop any roof area is to be conveyed into a rainwater tank located adjacent to each building for subsequent reuse; either in the concrete batching process, for truck and equipment washing, or for irrigation of landscaped areas. Overflows exceeding the tank's storage capacity are to be conveyed via an underground pit and pipe network toward the combined bioretention and detention basin, located to the South-West of site.

Vegetated Swales

The 4.43ha of external catchment areas is proposed to be diverted around the site area via a clean water diversion swale/vee-drain, constructed along the site's northern and eastern boundaries.

Stormwater Treatment

A series of treatment devices are proposed, prior to stormwater runoff discharging from site. These include:

- Concrete Washout Pits
- Wedge Pits
- Sediment Settlement Tanks
- Triple Inceptor Treatment Device
- Combined Bio-Detention Basin

Water Quality Monitoring

The quality of water at the batching plant is to be monitored for Physio-Chemical and Nutrient pollutants every quarter. The monitoring methodology is further detailed in Section 3 Part D. of this plan.

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3. Monitoring and Maintenance

a. Access

The above ground rainwater tank is defined as a confined space by SafeWork NSW and therefore only personnel with suitable Confined Space training and certification may perform internal maintenance. Fuel pumps and engines must not be used in proximity to the tanks due to carbon monoxide poisoning.

The swales will have vegetated embankments graded no stepper than 1 in 4, allowing access for maintenance.

b. Establishment Phase Maintenance Tasks

It is likely that plants and trees within the biofiltration system will require irrigation during the establishment phase. Irrigation should be applied directly to the surface of the filter media. The use of 'ag pipes' for irrigation is not recommended as it encourages the creation of a short-circuit pathway/preferential flow path through the filter material, which reduces the long term pollutant removal effectiveness of the filter media.

Young trees and plants are often supported by tree stakes during their establishment phase. Once the plants are sufficiently established the tree stakes should be removed and the holes filled with filter media. If the holes are not filled, stormwater can flow into these voids, rather than ponding on the surface, effectively bypassing the pollutant removal process of the filter media.

It is important to ensure the reinstatement of the disturbed and turfed areas during construction to prevent sediment laden water leaving the site.

All building waste and debris must be removed from all pits and pipes to ensure the stormwater system functions as designed.

c. Ongoing/Long Term Maintenance Tasks

Schedule of visits -

Regular inspections and maintenance shall be carried out to ensure the system functions as designed. It is recommended that all inspections be undertaken at approximately 3-monthly intervals during the initial period of operation. A less frequent schedule may be adopted after the system is fully established, depending on the outcomes of the initial inspections. It is also recommended that inspections take place before predicted rain events and as soon as possible after any heavy rain or major storm events.

Inspection/Monitoring and Maintenance Tasks -

Routine inspection and maintenance tasks shall generally include;

- A thorough cleanout of all pit and pipe networks, and the Triple Interceptor every three months and before any foreseeable rain events. This includes removal of any debris or garbage from grates, flushing any sediment from stormwater pits and pipes and the removal grates to inspect and clean.
- A thorough clean out of all concrete washout pits and wedge pits daily. This includes removal of any debris or garbage and flushing of any sediment.
- A thorough clean out of all sediment settlement tanks every week. This includes the removal of any sediment and the accumulation of sludge in the bottom.
- Inspection of the biofiltration profile to identify any areas of obvious increased sediment deposition, scouring of the basin, rill erosion of the batters and clogging of the biofiltration trench.
- Removal of sediment, especially where it is smothering vegetation, and if necessary, re-profiling the system and re-vegetating to the original design specification;
- Inspection of vegetation health, including the invasion of weeds and other unwanted plant species.
- Inspection of inlet and outlet points to identify areas of litter build up and blockages.
- Annual cleanout of subsoil drainage.
- Removal of all litter and other gross pollutants.

- Examination every 2-3 years for the accumulation of sludge in the bottom or the rain tank.

A summary of the routine inspections and maintenance tasks is shown below in Table 1. A detailed 'Maintenance Schedule' is also included in Appendix A.

d. Batching Plant Water Quality Monitoring

Redicrete will engage a suitably qualified consultant to undertake water quality monitoring at three (3) locations. Monitoring will continue in dry and wet periods with monitoring reports summarising the rainfall prior to sampling events to give context for the interpretation of results.

Water quality monitoring will be done on a quarterly basis. The parameters to be tested include:

- pH (units)
- Turbidity (NTU)
- Temperature (°C)
- Dissolved oxygen (DO) (% saturation, mg/L)
- Electrical conductivity (EC) (µS/cm)
- Total nitrogen (TN) (mg/L)
- Total phosphorus (TP) (mg/L)

Monitoring results will be compared to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC) 2000 Guidelines to assess the effectiveness of the site's soil and water management strategies.

The water quality monitoring will be assessed against the ANZECC default trigger levels for lowland streams, as seen overleaf. Monitoring will also record water temperature. Results are to be published on a project specific website and made publicly available.

Physio-Chemical Criteria:

Parameter	Measure	Default Trigger Level
Electrical Conductivity	µS/cm	125 - 2200
Turbidity	NTU	6 - 50
pH	pH	6.5 - 8
Dissolved Oxygen	%	80 - 110

Nutrient Criteria:

Parameter	Measure	Default Trigger Level
Total Phosphorous	(mg/L)	50
Total Nitrogen	(mg/L)	500
Nitrogen Oxides	(mg/L)	20

The monitoring points used for water quality are described in this report and shown in **Figure 1.**

Table 1: Monitoring Points for Water Quality

Monitoring Point	Description
MP1	At 'Discharge Pit A', the sampling pit located within the lot
MP2	At 'Discharge Point B', the discharge point from the water quality basin
MP3	At 'Discharge Point C', the discharge point for the clear water diversion drain



Figure 1: Monitoring Locations - Water Quality

Table 2 - Monitoring and Maintenance Tasks

Item to be Monitored	Monitoring Task	Purpose of Monitoring	Maintenance Action
General			
Inlet and outlet pits	• Ensure inflow areas and grates over pits, floor wastes and trench drains are clear of litter and are in good/safe condition. • Check for dislodged or damaged pit covers and ensure general structural integrity.	• If the pits or inlets become blocked it is likely to cause local flooding. This could lead to damaged property, specifically vehicles in the basement level carpark and increase the risks of mould growth. • Dislodged or damaged pit covers can be a safety hazard.	• To be conducted regularly every three months and before any foreseeable storm event. • Remove debris and contact the appropriate strata authority to organise repair of the structural damage.
Litter	• Check for litter in and around drainage areas and structures.	• Litter can potentially block the inlet and outlet structures resulting in flooding.	• Address source of litter with appropriate action. • Remove litter.
Above Ground Rainwater Tank			
First Flush Device	• Check for accumulation of litter or debris. Remove end cap on first flush device and remove all captured sediment and debris.	• The first flush device is designed to capture litter and debris from the drainage system before it enters, and contaminates, the rainwater tank. If this is not cleaned regularly, it can become blocked and allow contaminants into the rainwater tank.	• Remove any litter or debris to ensure the system is free flowing.
Leaf Screen	• Check for accumulation of litter or debris.	• The leaf screen is designed to prevent litter and debris that passes the first flush device from clogging the low flow outlet. If this is not cleaned regularly, it can become blocked and allow contaminants into the rainwater tank.	• Remove any litter or debris to ensure the system is free flowing.
Storage Areas	• Inspect storage areas to ensure in good condition.	• Damage to the storage area could cause the rainwater tank to not function correctly.	• Remove any litter or debris and repair as required.

Item to be Monitored	Monitoring Task	Purpose of Monitoring	Maintenance Action
Combined Bio-filtration and On-site Detention Basin			
Underdrains	• Ensure that underdrain pipes are not blocked to prevent filter media and plants from becoming waterlogged.	• If the underdrain pipes become blocked, percolation of water through the system may be reduced, resulting in poor treatment performance and permanent waterlogging of the plants and filter media.	• Flush underdrains with potable water. • Inspection of pipelines using a remote camera could be useful to identify blockages if flushing is unsuccessful.
Sediment build up	• Check for build-up of sediment in pre-treatment devices and on the biofiltration media. • If sediment build up is noted, identify source of sediment.	• If sediment accumulates on the biofiltration media surface, percolation of water into the media may be reduced, resulting in poor treatment performance.	• Once sediment source is identified and stabilised, remove accumulated sediment and replace top 100mm of filter media from the biofiltration system with appropriate filter media. • Lightly spread and compact replaced filter media using hand tools. • Replace any damaged plants to meet the design plant schedule.
Erosion or scour	• Check for erosion and scour around all drainage structures. • If scour is noted check for source of scour.	• Erosion impairs biofiltration systems by changing the bed profile and preventing uniform distribution of flow across the media. • If left untreated, small concentrations of erosion can quickly spread over large areas becoming costly to repair.	• Once source of damage is identified and rectified, infill any holes with appropriate filter media. • Lightly spread and compact replaced filter media using hand tools. • Provide energy dissipation measures if required. • Replace any damaged plants to meet the design plant schedule.

Item to be Monitored	Monitoring Task	Purpose of Monitoring	Maintenance Action
Surface porosity	• Inspect for an accumulation of an impermeable layer (such as oily or clayey sediment) that may have formed on the surface of the filter media. A potential symptom is water ponding on the surface of biofiltration system for more than a few hours after a rain event.	• Percolation into the filter media may be reduced by the build-up of an impermeable layer.	• Repair minor accumulations by raking away any mulch on the surface and scarifying the surface of the filter media between plants.
Weeds and invasive plants	• Identify the presence of any rapidly spreading weeds or invasive plants.	• The growth of weeds can impair a biofiltration system's performance by: - Changing flow paths across the biofiltration system; - Shading and out-competing plant species that are important for water treatment and filter stability. • Weeds can spread to downstream environments, compromising ecosystem health. • Weeds can compromise the visual amenity of the biofiltration system.	• Hand remove weed species or conduct spot spraying with a herbicide. Application of herbicide should be restricted to a minimum.
Concrete Washout Pits			
Concrete Hardened Waste	• Check for excessive accumulation of hardened concrete	• Prevent reduced capacity and obstruction of use	• Remove and dispose of hardened concrete appropriately
Sediment Accumulation	• Monitor and measure the buildup of concrete slurry and solids	• Prevent overflow and maintain pit capacity	• Remove hardened concrete and accumulated solids as needed

Item to be Monitored	Monitoring Task	Purpose of Monitoring	Maintenance Action
Drainage System	• Check for proper drainage and inspect for blockages	• Ensure water runoff is properly managed and prevent environmental contamination	• Clear blockages, repair drainage channels or filters
Wedge Pits			
Sediment Accumulation	• Measure sediment levels inside the pit	• Prevent clogging and maintain storage capacity	• Remove excess sediment periodically
Drainage System	• Check for blockages or damage in drainage pipes and outlets	• Ensure proper drainage and prevent water buildup	• Clean or repair blocked drains as needed
Sediment Settlement Tank			
Sediment Accumulation	• Measure sediment depth at regular intervals	• Maintain tank efficiency and prevent clogging	• Remove accumulated sediment before it exceeds capacity
Drainage System & Outlets	• Check for blockages, leaks, or damage in outlet pipes	• Ensure proper water discharge and prevent overflow	• Clean, repair, or replace damaged drainage components
Inlet Structure	• Inspect for obstructions and proper flow distribution	• Prevent excessive turbulence and ensure even sedimentation	• Remove debris, adjust baffles or screens if needed
Sludge Removal	• Inspect sludge pumps, scrapers, or dredging equipment	• Maintain efficient sludge removal and prevent clogging	• Service pumps, replace worn parts, schedule sludge removal
pH / Turbidity Sampling Pit			
Water Quality	• Regularly test pH and turbidity levels	• Ensure compliance with environmental standards	• Adjust treatment processes if values exceed limits
Sediment Accumulation	• Measure and record sediment levels inside the pit	• Prevent clogging and maintain sampling accuracy	• Remove excess sediment periodically
Triple Inceptor			
Atlan Triceptor	• Refer to Appendix D		

APPENDIX A

Maintenance Schedule

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NL240719
53 Gindurra Road, Somersby
Stormwater Maintenance Schedule

Inspected by: .....
Date of Inspection: .....
Next Inspection: .....

Items to be Inspected	Frequency	Performed by	Inspected		Maintenance Needed		Maintenance Procedure	Initial
			Yes	No	Yes	No		
General								
Eaves/Box Guttering System and Downpipes	6 Monthly/ After Major Storm	Owner / Maintenance Contractor					Inspect and remove any build up of sediment, debris, litter and vegetation within gutter system.	
Stormwater surface inlet and junction pits	6 Monthly/ After Major Storm	Owner / Maintenance Contractor					Remove grate and inspect internal walls and base, repair where required. Remove any collected sediment, debris, litter and vegetation. (e.g. Vacuum/eductor truck) Inspect and ensure grate is clear of sediment, debris, litter and vegetation. Ensure flush placement of grate on revetment.	
General inspection of complete stormwater drainage system (that's visible)	Bi-annually	Owner / Maintenance Contractor					Inspect all drainage structures noting any dilapidation, carry out required repairs.	
Rainwater Tank								
First Flush Device	3 Monthly	Owner / Maintenance Contractor					Inspect first flush device to ensure correct operation. Remove accumulated litter & debris in accordance with the manufacturers specification. If device is not functioning properly, contact the manufacturer, repair or replace.	
Leaf Screen	6 Monthly	Owner / Maintenance Contractor					Inspect litter screen to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace.	
Leaf Eater Device	6 Monthly	Owner / Maintenance Contractor					Inspect leaf eater device to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace.	
Tank and tank roof	Annually	Owner / Maintenance Contractor					Check structural integrity of tank including roof and access covers. Any dilapidation including holes or gaps are to be noted and repaired.	
Outlet	Annually	Owner / Maintenance Contractor					Inspect outlet pipes to ensure in good condition with no deterioration present. If required provide repairs.	
Combined Bio-filtration and On-site Detention Basin								
Macrophyte (plant) Coverage	6 Monthly	Owner / Maintenance Contractor					Check for healthy coverage of macrophytes. Take note of any water logging, die back or scour. Re-plant as required as per original planting specification.	
Weeds or Invasive Plants	6 Monthly	Owner / Maintenance Contractor					Check for the presence of weeds. Remove by hand and re-plant as required as per original planting specification.	
Filter Media	6 Monthly	Owner / Maintenance Contractor					Inspect for any sediment accumulation, erosion damage, ponding or litter. Replace filter material and plants as required, remove any litter and address the source.	
Underdrains	Annually	Owner / Maintenance Contractor					Flush all pipes, utilising cleanout points. Monitor discharge from subsoil pipe into outlet pit until water runs clean.	
Outlet	If problem suspected	Owner / Maintenance Contractor					Inspect outlet pipes to ensure in good condition with no deterioration present. If required provide repairs. Due to limited access this should only be done if a problem is suspected and flushing has not resolved the issue.	
Inlet	Anually	Owner / Maintenance Contractor					Inspect inlet to ensure in good condition with no deterioration present. If required provide repairs.	
Outlet	6 Monthly	Owner / Maintenance Contractor					Inspect outlet pipe to ensure in good condition with no deterioration present. Flush outlet pipe to ensure it drains freely. If required provide repairs.	
Orifice	6 Monthly	Owner / Maintenance Contractor					Remove grate and trash screen to inspect orifice. See plan for location of discharge outlet pit. If required provide repairs.	
Orifice	Annually	Maintenance Contractor					Remove grate and trash screen. Check attachment of orifice plate to wall of pit (gaps less than 5mm). Ensure plate mounted securely, tighten fixings if required. Seal gaps as required.	
Orifice	5 Yearly	Maintenance Contractor					Remove grate and trash screen. Compare orifice diameter to design (see Work-as-Executed) and ensure edge is not pitted or damaged. If required provide repairs.	

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NL240719
53 Gindurra Road, Somersby
Stormwater Maintenance Schedule

Inspected by: .....
Date of Inspection: .....
Next Inspection: .....

Trash Screen	6 Monthly	Owner / Maintenance Contractor					Remove grate and trash screen and inspect. Clean screen if required.	
Trash Screen	Annually	Maintenance Contractor					Remove grate and trash screen and inspect. Ensure screen fixings are secure and examine for rust or corrosion, especially at corners or welds. If required provide repairs.	
Pit Sump	6 Monthly	Owner / Maintenance Contractor					Remove grate and screen to inspect pit sump. Remove sediment/sludge build-up as required.	
Grate Access Cover	6 Monthly	Owner / Maintenance Contractor					Check both sides of grate for corrosion (especially corners and welds), damage or blockage. If required provide repairs.	
Storage Areas	6 Monthly	Owner / Maintenance Contractor					Inspect storage areas to ensure in good condition. Remove debris and floatable material likely to be carried to grates as required.	
Pit Walls	Annually	Maintenance Contractor					Remove grate to inspect internal walls for cracks or spalling. Repair as required.	
Step Irons	6 Monthly	Maintenance Contractor					Remove grate and ensure fixings secure prior to placing weight on step iron. Also check for any corrosion or damage. Repair as necessary.	
Storage Volume	Annually	Maintenance Contractor					Compare actual storage available with Work-as-Executed plans. If volume loss is greater than 5%, arrange for reconstruction to replace the volume lost. Council to be notified of the proposal. Check along drainage lines and at pits for subsidence likely to indicate leakages.	
Grassed Swales								
Damage or removal of pits	Annually	Owner / Maintenance Contractor					Rectification works for structural issues to be undertaken immediately.	
Erosion	Annually	Owner / Maintenance Contractor					Re-profiling using hand tools or light machinery. Replant if required.	
Plant health	Annually	Owner / Maintenance Contractor					Variable weekly watering for the first 6-8 weeks (until plants are established and actively growing) especially in dry weather. If required, mow grass/trim plants using a catcher. Any trimmed or removed plant material must be taken off-site and disposed of appropriately.	
Plant cover	Annually	Owner / Maintenance Contractor					Carry out infill planting as required (using the original planting density scheduled – refer landscape plans).	
Litter and debris	Annually	Owner / Maintenance Contractor					Manually remove litter.	
Sediment accumulation	Annually	Owner / Maintenance Contractor					Remove by flat shovel, rake treatment surface and restore to design levels if required. Vegetation replacement may be required.	
Standing water or boggy conditions	Annually	Owner / Maintenance Contractor					Ensure swale is sloped towards the outlet so water can drain. Regrade any local depressions or mounds so the swale/ buffer is as even as possible. Replant if necessary.	
Weeds	Annually	Owner / Maintenance Contractor					Remove weeds by using small shovels, mattocks or similar. Any trimmed or removed plant material must be taken off-site and disposed of appropriately.	
Surface levels	Annually	Owner / Maintenance Contractor					Ensure swale is sloped towards the outlet so water can drain. Regrade any local depressions or mounds so the swale/ buffer is as even as possible. Replant if necessary.	
Inlet and outlet blockages	Annually	Owner / Maintenance Contractor					Clear inlet of sediment and debris.	
Concrete Washout Pits								
	Daily	Owner / Maintenance Contractor						
	Daily	Owner / Maintenance Contractor						
Wedge Pits								

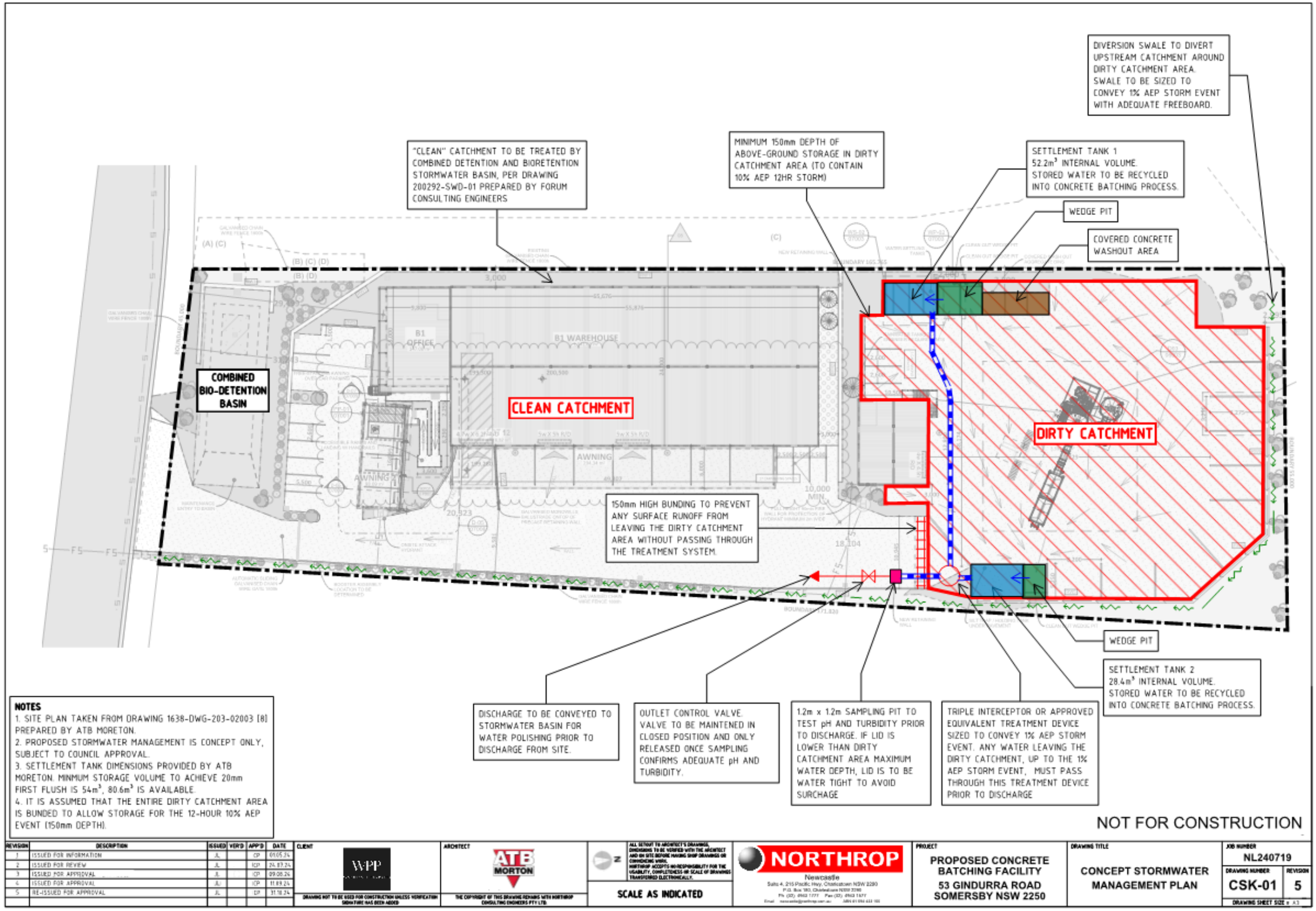
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NL240719
53 Gindurra Road, Somersby
Stormwater Maintenance Schedule

Inspected by: .....
Date of Inspection: .....
Next Inspection: .....

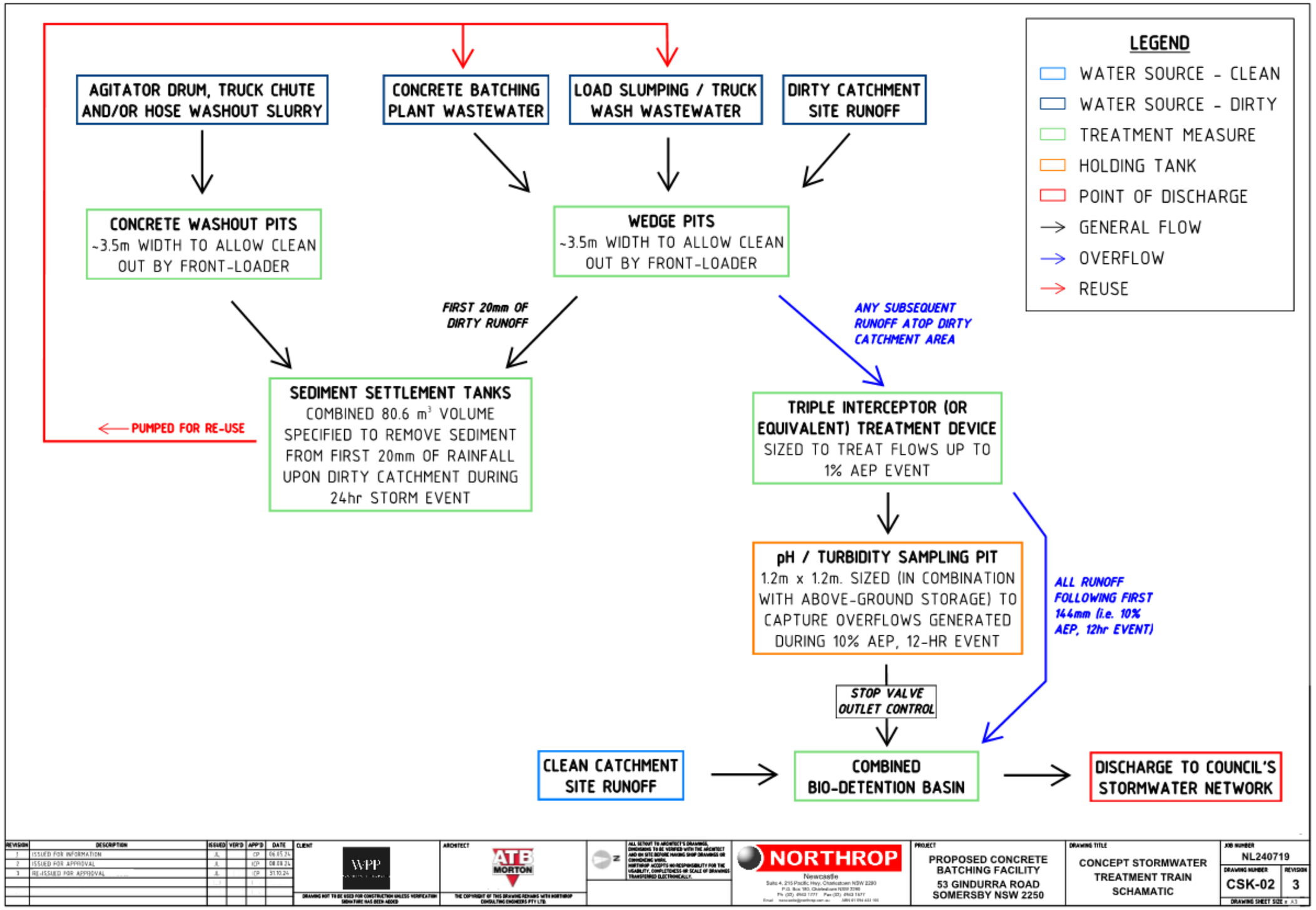
	Daily	Owner / Maintenance Contractor						
	Daily	Owner / Maintenance Contractor						
Sediment Settlement Tank								
	Weekly	Owner / Maintenance Contractor						
	Weekly	Owner / Maintenance Contractor						
pH/Turbidity Sampling Pit								
	Before release	Owner / Maintenance Contractor						
	Before release	Owner / Maintenance Contractor						

APPENDIX B
Design Drawings


DIVERSION SWALE TO DIVERT UPSTREAM CATCHMENT AROUND DIRTY CATCHMENT AREA. SWALE TO BE SIZED TO CONVEY 1% AEP STORM EVENT WITH ADEQUATE FREEBOARD.
"CLEAN" CATCHMENT TO BE TREATED BY COMBINED DETENTION AND BIORETENTION STORMWATER BASIN, PER DRAWING 200292-SWD-01 PREPARED BY FORUM CONSULTING ENGINEERS
MINIMUM 150mm DEPTH OF ABOVE-GROUND STORAGE IN DIRTY CATCHMENT AREA (TO CONTAIN 10% AEP 12HR STORM)
SETTLEMENT TANK 1 52.2m³ INTERNAL VOLUME. STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
WEDGE PIT
COVERED CONCRETE WASHOUT AREA
COMBINED BIO-DETENTION BASIN
CLEAN CATCHMENT
DIRTY CATCHMENT
B1 WAREHOUSE
B1 OFFICE
AWNING
150mm HIGH BUNDING TO PREVENT ANY SURFACE RUNOFF FROM LEAVING THE DIRTY CATCHMENT AREA WITHOUT PASSING THROUGH THE TREATMENT SYSTEM.
WEDGE PIT
SETTLEMENT TANK 2 28.4m³ INTERNAL VOLUME. STORED WATER TO BE RECYCLED INTO CONCRETE BATCHING PROCESS.
DISCHARGE TO BE CONVEYED TO STORMWATER BASIN FOR WATER POLISHING PRIOR TO DISCHARGE FROM SITE.
OUTLET CONTROL VALVE. VALVE TO BE MAINTENED IN CLOSED POSITION AND ONLY RELEASED ONCE SAMPLING CONFIRMS ADEQUATE pH AND TURBIDITY.
1.2m x 1.2m SAMPLING PIT TO TEST pH AND TURBIDITY PRIOR TO DISCHARGE. IF LID IS LOWER THAN DIRTY CATCHMENT AREA MAXIMUM WATER DEPTH, LID IS TO BE WATER TIGHT TO AVOID SURCHAGE
TRIPLE INTERCEPTOR OR APPROVED EQUIVALENT TREATMENT DEVICE SIZED TO CONVEY 1% AEP STORM EVENT. ANY WATER LEAVING THE DIRTY CATCHMENT, UP TO THE 1% AEP STORM EVENT, MUST PASS THROUGH THIS TREATMENT DEVICE PRIOR TO DISCHARGE
NOTES
1. SITE PLAN TAKEN FROM DRAWING 1638-DWG-203-02003 [8] PREPARED BY ATB MORETON.
2. PROPOSED STORMWATER MANAGEMENT IS CONCEPT ONLY, SUBJECT TO COUNCIL APPROVAL.
3. SETTLEMENT TANK DIMENSIONS PROVIDED BY ATB MORETON. MINMUM STORAGE VOLUME TO ACHIEVE 20mm FIRST FLUSH IS 54m³, 80.6m³ IS AVAILABLE.
4. IT IS ASSUMED THAT THE ENTIRE DIRTY CATCHMENT AREA IS BUNDED TO ALLOW STORAGE FOR THE 12-HOUR 10% AEP EVENT (150mm DEPTH).
NOT FOR CONSTRUCTION
REVISION 1 DESCRIPTION ISSUED FOR INFORMATION ISSUED JL VER'D APP'D CP DATE 01.05.24
REVISION 2 DESCRIPTION ISSUED FOR REVIEW ISSUED JL VER'D APP'D KP DATE 24.07.24
REVISION 3 DESCRIPTION ISSUED FOR APPROVAL ISSUED JL VER'D APP'D CP DATE 09.08.24
REVISION 4 DESCRIPTION ISSUED FOR APPROVAL ISSUED JL VER'D APP'D CP DATE 11.09.24
REVISION 5 DESCRIPTION RE-ISSUED FOR APPROVAL ISSUED JL VER'D APP'D DP DATE 31.10.24
CLIENT WPP
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED
ARCHITECT ATB MORTON
THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD
ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
SCALE AS INDICATED
NORTHROP
Newcastle
Suite 4, 215 Pacific Hwy, Charlestown NSW 2290
P.O. Box 180, Charlestown NSW 2290
Ph (02) 4963 1777 Fax (02) 4963 1677
Email newcastle@northrop.com.au ABN 81 094 433 100
PROJECT
PROPOSED CONCRETE BATCHING FACILITY
53 GINDURRA ROAD
SOMERSBY NSW 2250
DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT PLAN
JOB NUMBER NL240719
DRAWING NUMBER CSK-01
REVISION 5
DRAWING SHEET SIZE A1

APPENDIX C

Treatment Train Schematic


AGITATOR DRUM, TRUCK CHUTE AND/OR HOSE WASHOUT SLURRY
CONCRETE BATCHING PLANT WASTEWATER
LOAD SLUMPING / TRUCK WASH WASTEWATER
DIRTY CATCHMENT SITE RUNOFF
CONCRETE WASHOUT PITS
~3.5m WIDTH TO ALLOW CLEAN OUT BY FRONT-LOADER
WEDGE PITS
~3.5m WIDTH TO ALLOW CLEAN OUT BY FRONT-LOADER
FIRST 20mm OF DIRTY RUNOFF
ANY SUBSEQUENT RUNOFF ATOP DIRTY CATCHMENT AREA
PUMPED FOR RE-USE
SEDIMENT SETTLEMENT TANKS
COMBINED 80.6 m³ VOLUME SPECIFIED TO REMOVE SEDIMENT FROM FIRST 20mm OF RAINFALL UPON DIRTY CATCHMENT DURING 24hr STORM EVENT
TRIPLE INTERCEPTOR (OR EQUIVALENT) TREATMENT DEVICE
SIZED TO TREAT FLOWS UP TO 1% AEP EVENT
pH / TURBIDITY SAMPLING PIT
1.2m x 1.2m. SIZED (IN COMBINATION WITH ABOVE-GROUND STORAGE) TO CAPTURE OVERFLOWS GENERATED DURING 10% AEP, 12-HR EVENT
ALL RUNOFF FOLLOWING FIRST 144mm (i.e. 10% AEP, 12hr EVENT)
STOP VALVE OUTLET CONTROL
CLEAN CATCHMENT SITE RUNOFF
COMBINED BIO-DETENTION BASIN
DISCHARGE TO COUNCIL'S STORMWATER NETWORK
LEGEND
WATER SOURCE - CLEAN
WATER SOURCE - DIRTY
TREATMENT MEASURE
HOLDING TANK
POINT OF DISCHARGE
GENERAL FLOW
OVERFLOW
REUSE
REVISION
DESCRIPTION
ISSUED
VER'D
APP'D
DATE
1 ISSUED FOR INFORMATION JL CP 06.05.24
2 ISSUED FOR APPROVAL JL CP 08.08.24
3 RE-ISSUED FOR APPROVAL JL CP 31.10.24
CLIENT
WPP
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGN HAS BEEN ADDED
ARCHITECT
ATB MORTON
THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD
ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
NORTHROP
Newcastle
Suite 4, 215 Pacific Hwy, Charlestown NSW 2290
P.O. Box 180, Charlestown NSW 2290
Ph (02) 4942 1777 Fax (02) 4942 1677
Email newcastle@northrop.com.au
ABN 81 094 433 100
PROJECT
PROPOSED CONCRETE BATCHING FACILITY
53 GINDURRA ROAD
SOMERSBY NSW 2250
DRAWING TITLE
CONCEPT STORMWATER TREATMENT TRAIN SCHAMATIC
JOB NUMBER
NL240719
DRAWING NUMBER
CSK-02
REVISION
3
DRAWING SHEET SIZE A3

APPENDIX D

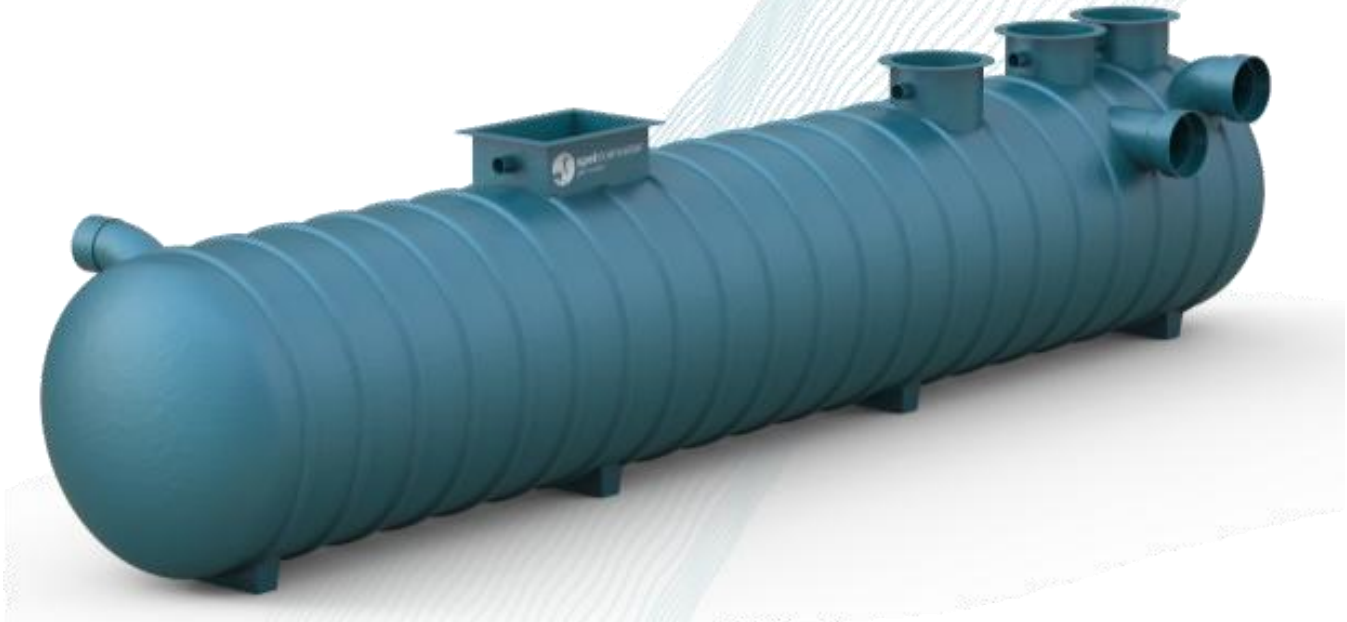
ATLAN (SPEL) Triceptor Operations & Maintenance Manual

spelstormwater

Operations & Maintenace Manual

Spel Triceptor®

Stormwater Treatment & Hydrocarbon Capture High & Medium Risk



spel.com.au

Introduction

Congratulations on your purchase of a SPEL Environmental Stormwater Quality Improvements Device. With proper care and by following a few simple guide lines your system will give you many years of dependable service.

Important

Only qualified personnel should maintain, operate and repair you Stormwater system. Any wiring of equipment should be performed by a qualified electrician.

Warning

Operation may cause injury. Take all necessary precautions, wear protective equipment, refer to Engineers Department. For your own safety, read all instruction manuals prior to working on equipment.

Safety Precautions

- Follow all "occupation, health and safety" regulations.
- Ensure maintenance personnel are aware of "Confined Spaces" guidelines, which must be followed.
- Make sure that there is sufficient oxygen and that there are no poisonous gases present.
- Check the explosion risk before wielding or using electric hand tools.
- Do not ignore health hazards. Observe strict cleanliness.
- Ensure that the lifting equipment (where required) is in good condition.
- All personnel who are to work with these systems should be vaccinated against diseases that can occur.
- Keep a first aid kit handy.

Health & Safety

Maintenace should be carried out by a competent contractor in accordance with the above procedures. Health and Safety at Work legislation and good building practice.
A warning notice should be visible at the top of each access shaft - 'danger, harmful fumes' and ' respirators should be worn in this tank.' Before entering persons must be qualified in accordance with 'confined space' requirements



Information contained in this data sheet is approximate and for general guidance only. In accordance with the companies policy of constant improvement and development SPEL Products reserves the right to change the specification without prior notice.

Triceptor Class 1

Operation and Maintenance Manual

Service Stations

Fuel Depots

Windfarms

Switchyards

Sub Stations

Power Stations

Industrial Locations

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SPEL Triceptor - How it works page 2
SPEL Maintenance page 3
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Stormwater Treatment & Hydrocarbon Capture High & Medium Risk

The SPEL Triceptor is a combination of the Stormceptor and Puraceptor functions and features in the one treatment device. The benefit of the Triceptor is that with one treatment device you can treat both the high and low risk areas of a catchment.

The Triceptor has the hydrocarbon spill containment function of the Puraceptor whilst also incorporating the treatment quality and high flow bypass functions of the Stormceptor.


BP Eastlink, VIC


BP Eastlink, VIC

APPLICATIONS

- Car Parks & Shopping Centres
- Tunnels
- Highways & Transport Corridors
- Recycling Yards
- Airport Aprons & Tarmacs
- Service Stations
- Re-Fuelling Areas
- Substations & Switchyards
- Asphalt Plants

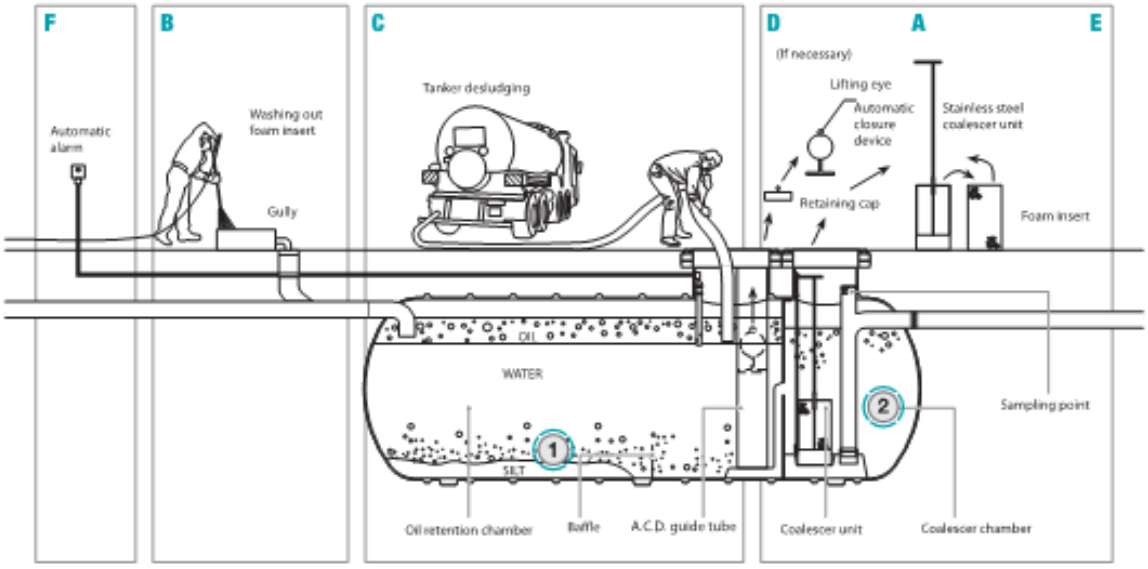


SPEL PURACEPTOR™

Puraceptors™ should be inspected at three - six - or twelve monthly intervals depending on site conditions, to determine the depth of retained pollutants and silt in both chambers and the correct operating of the ACD (automatic closure device). When the depth of the oil/fuel retained has reached the predetermined design level, (approx. 50mm) or after a spill it should be cleaned out.

1 **CONTAINMENT CHAMBER:** Where silt, sediments, sludge, gross pollutants settle out and light liquids are retained. The auto closure device operates in its retaining tube next to the oil alert sensor probe.

2 **COALESCER CHAMBER:** Where light liquids separation is enhanced prior to discharge and where the coalescer unit is incorporated, the coalescer should be removed and cleaned in accordance with the requirements set out in the coalescer data sheet.



MAINTENANCE PROCEDURE

A Coalescer unit
Use the lifting handle or the chain and lift the coalescer unit out of the tank and place it near the Puraceptor™. In a retained area so pollutants do not escape.

B Cleaning foam insert
Remove foam insert and wash with normal water pressure ensuring the dirty water runs into the Puraceptor™.

C Sucking out oil/fuel and silt
Suck off the retained oil from both chambers of the Puraceptor™ and then the silt deposited on the bottom, leaving sufficient water to ensure the (auto closure device) ACD remains floating.

D Sucking out complete contents (if necessary)
If the quantity of pollutants exceeds recommended level, the complete contents of the Puraceptor™ may need to be removed. After sucking out completely, remove the ACD. Using a pole with a hook, lift out the ACD using the lifting eye on the float, if fitted.

Important note:
When cleaning out, ensure both chambers are sucked out equally starting with the first chamber and then the second chamber and back again. Ensuring even water pressure against baffle wall.

E Re-insert coalescer unit and ACD
Re-insert the foam insert into the stainless steel coalescer unit and re-insert the coalescer unit into the Puraceptor™ as provided with the SPEL lifting/location/locking system.

Partially fill the Puraceptor™ with clean water (if necessary) to ensure the ACD when re-inserted remains floating. Re-insert the ACD.

Finally check the ACD is floating after it has been replaced to safeguard against its removal by unauthorised persons, unless depth of tank precludes doing so from ground level.

F SPEL automatic alarm/monitoring system
The SPEL automatic alarm/monitoring system probe should be lifted out of the probe protection tube, wiped clean and re-inserted. the system should now be reset according to instructions.

SPEL STORMCEPTOR™ CLASS 1& 2

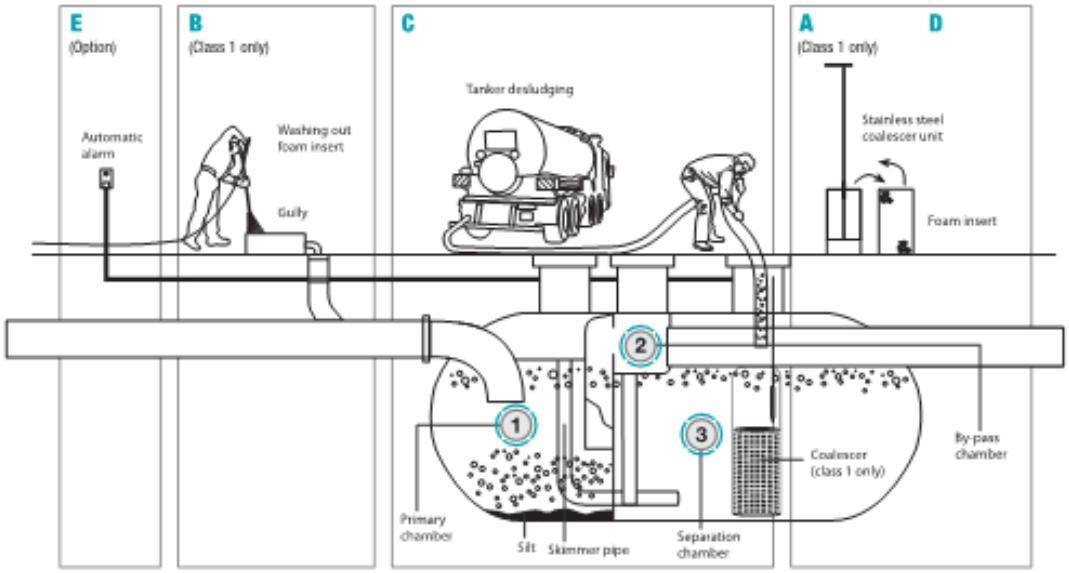
Stormceptors™ should be inspected at three - six - or twelve monthly intervals depending on site conditions, to determine the depth of retained pollutants and silt in both chambers. When the depth of the pollutants retained has reached the predetermined design level, (approx. 50mm) it should be cleaned out.

1 **PRIMARY CHAMBER:** The inlet connects directly into chamber 1 - the primary chamber where silt etc. is deposited and light liquids are skimmed off to be transferred to the main separation chamber, chamber 3.

Maintenance requires the removal of accumulated silt etc., checking the skim pipe is not blocked and removing floating debris.

2 **BY-PASS CHAMBER:** This is the junction chamber where the clean water passing out of the main separation chamber and the storm flow over the weir from the primary chamber meet and pass to the outlet. This chamber is an approved sampling point if samples are required for analysis. As it is mainly clean water passing through the chamber, maintenance is confined to checking the weir plate is free of debris.

3 **SECONDARY/SEPARATION CHAMBER:** The separation chamber is where the light liquids are retained and in the case of "Class 1" Stormceptors™ , where the coalescer units are incorporated.
If coalescer units are incorporated, these should be removed and cleaned in accordance with the requirements set out in the coalescer Data Sheet.
Retained light liquids should be removed from the top and any sediment from the bottom.



MAINTENANCE PROCEDURE

A Coalescer unit
(Class 1 only)
Use the lifting handle or chain and lift the coalescer unit out of the tank and place in a retained area so pollutants do not escape.

B Cleaning foam insert
(Class 1 only)
Remove foam insert and wash with normal water pressure ensuring the dirty water runs into the Stormceptor™.

C Sucking out oil/fuel and silt
Suck off the retained oil from both chambers of the Stormceptor™ and then the silt deposited on the bottom of each chamber.

Important note:
When cleaning out, ensure both chambers are sucked out equally starting with the first chamber and then the second chamber and back again. Ensuring even water pressure against baffle wall.

D Re-insert coalescer unit
Re-insert the foam insert into the stainless steel coalsescer unit and re-insert the coalescer unit into the Stormceptor™ as provided with the SPEL lifting/location/locking system.

There is no need to top-up the Stormceptor™ with clean water as it will self level at the next rain event.
Note: The Stormceptor™ may need filling if for some reason the unit was totally emptied.

E SPEL automatic alarm/monitoring system (option)
The SPEL automatic alarm/monitoring system probe should be lifted out of the probe protection tube, wiped clean and re-inserted. the system should now be reset according to instructions.

SPEL COALESCER UNITS

The SPEL Puraceptor™ Class 1 separator and the SPEL Stormceptor™ Class 1 by-pass separators incorporate coalescer units. The coalescer units provide a coalescence process for the separation of small globules of light liquid pollutants before final discharge to the surface water drain.

Coalescers are found in the second chamber of the SPEL Puraceptor™ and the second chamber of the SPEL Stormceptor™ Class 1

Prior to installation

1. Remove any strapping / ropes which have been used to hold the coalescer units from shifting in transit.
2. The access shaft(s) above the coalescer units should be covered to prevent ingress of concrete, dust, debris etc., which could clog the foam inserts.
3. On completion of installation, check that the coalescer unit is inserted securely into the base socket.

On heavily polluted sites silt and contaminants may build up in the coalescer unit foam inserts and add significantly to it's weight. Use lifting chain sets that are on hooks at ground level for safe lifting with a tripod or hoist.

Installation

During installation, it is important that the foam inserts are not clogged with dust, debris or drops of wet concrete. To safeguard against this, we recommend covering the access shaft with a sheet of polythene, if not already covered.

Commissioning

On completion of installation, check the foam insert is fitted inside the stainless steel coalescer unit and the coalescer unit is inserted securely into the base socket.

Maintenance

1. Lift handle and coalescer unit out of the tank and place in a retained area so pollutants do not escape.
2. Remove foam insert and wash with normal water pressure ensuring the dirty water runs into the Puraceptor™ / Stormceptor™.
3. Make sure the hole in the centre of the coalescer foam is facing towards the manhole when installed in the tank.
4. Re-insert the foam insert into the stainless steel coalescer unit and re-insert the coalescer into the Puraceptor™ / Stormceptor™. After the tank has been cleaned.

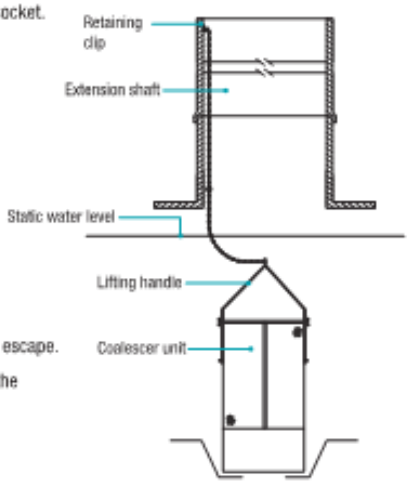


Figure 1. Coalescer unit with lifting chains

SPEL COALESCER UNITS GUIDE RAIL SYSTEM/LIFTING, LOCATING AND LOCKING SYSTEM

SPEL coalescer unit guide rail system

This facilitates easy insertion and removal of coalescer units. The system is robust, manufactured throughout in stainless steel and is action positive, leaving no doubt the coalescer unit is located properly.

Brackets fixed to the top and bottom of the coalescer unit simply engage the stainless steel guide rail fixed to the top of the stub access shaft. The coalescer is then lowered in the normal way, being guided at the correct angle into the conical base unit which finally locates the coalescer unit into it's final position.

Extension guide rails can be incorporated into the SPEL extension shafts to suit (preferably when ordered with the separator).

However, when the separator is full of water, debris or sludge accumulated over a period could prevent the coalescer unit from re-seating correctly after servicing.

The coalescer unit lifting / locating / locking system ensures the coalescer unit is seated correctly and can be locked into position to prevent tampering.

The stainless steel lifting handle can be extended to suit deep tank inverts and provide easy access for lifting manually or with a tripod and hoist utilising the lifting hook.

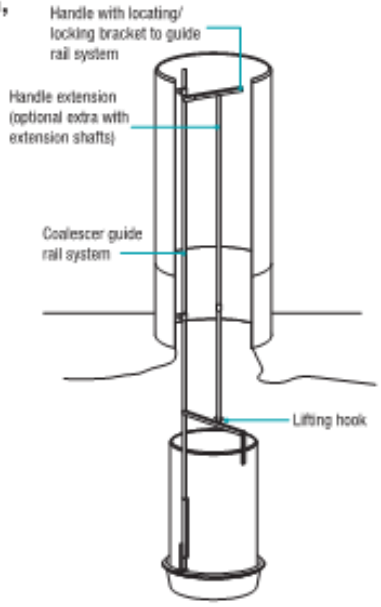


Figure 2. SPEL coalescer unit guide rail system/lifting, locating and locking system

SPEL AUTO CLOSURE DEVICE (ACD)

• SPEL ACDThe Automatic Closure Device (ACD) is found in the first chamber of a Puraceptor™. The purpose of the ACD is to close the separator off automatically when the maximum storage capacity of light liquid is attained.

The ACD is to ensure that in the event of a major spillage, pollutants do not pass into the drainage system; it should not be regarded as a substitute for an automatic alarm / monitoring system.

Prior to installation

Prior to installation the ACD retaining tube should be covered to prevent ingress of concrete etc., which could fall onto the ACD and upset it's calibration.

Operation and Maintenance

If the tank should fill with light liquid, the ACD which is calibrated for a specific gravity of 0.85, will automatically sink and close off the SPEL Puraceptor™.

Normally routine maintenance would include removing light liquid intercepted within the Puraceptor™. If a SPEL automatic alarm / monitoring system is incorporated, it will automatically indicate when the Puraceptor™ should be emptied. Only in an emergency will the Puraceptor™ fill to it's maximum and operate the ACD.

In such an event the Puraceptor™ should be completely sucked out and the ACD lifted out. Check that the ACD is in good working condition – ie. Lifting hook secure and sealed; float not leaking; knuckle joint free and clean; sealing ring intact and complete. Clean with warm soapy water before re-inserting.

To re-insert the ACD, partially fill the Puraceptor™ with clean water (if necessary) to ensure the ACD when re-inserted remains floating. Re-insert the ACD.

Finally check the ACD is floating after it has been replaced to safeguard against it's removal by unauthorised persons, unless depth of tank precludes doing so from ground level.

SPEL Puraceptor™ Class 1 separators – Two Chamber Models

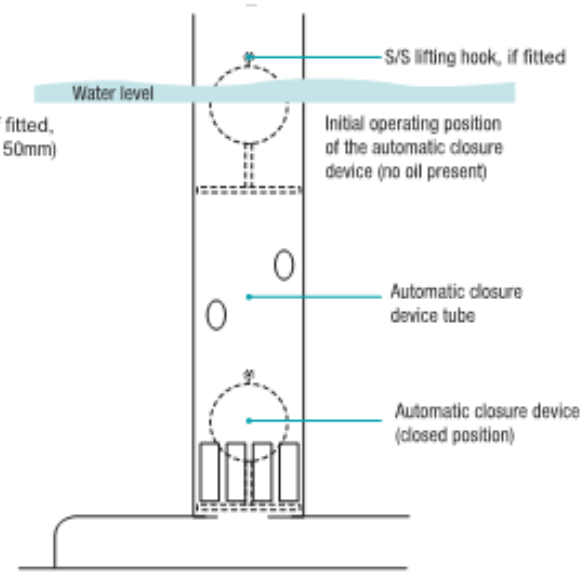
Commissioning

After the tank has been installed, leave the water in.

1. Remove the ACD from the packing box, taking care not to cause damage.
2. Insert the ACD into the retaining tube using the lifting eye, if fitted, ensuring it floats correctly with the float (top section approx. 50mm) just visible above the water level.

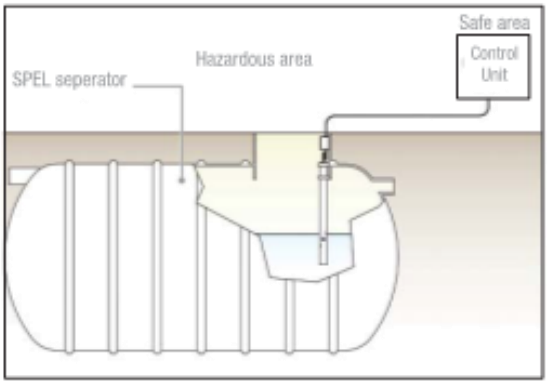
Note: If the tank's invert depth exceeds 1metre, it is advisable to remove the retaining cap prior to installation and only replace after inserting the ACD, if it is possible to do so from ground level.

Automatic closure device SPEL Puraceptor™ Class 1 separators (two chamber)



SPEL Automatic Alarm/Monitoring System

The SPEL automatic alarm/monitoring system provides a audible warning alarm when the level of the oil in the SPEL separator reaches approximately 10% of the storage volume under static liquid level conditions. This is a early warning system that is used for spills or lack of maintenance.
The system comprises of a probe mounted in the main separation chamber which senses when the designed volume of light liquids has accumulated and sends a signal to the electronic control unit activating a red 'empty now' warning light and an audible alarm,



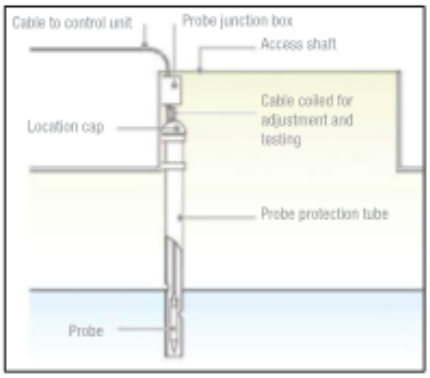
Operation

The probe is freely suspended in the probe protection tube in the separator at the correct level. When the oil-layer or depth of hydrocarbons reaches the predetermined level, the top of the probe will be immersed in the oil, breaking the circuit and activating the alarm. It is a 'fail-safe' system providing complete assurance that it is operative. If a fault occurs it will be signalled immediately.

Installation

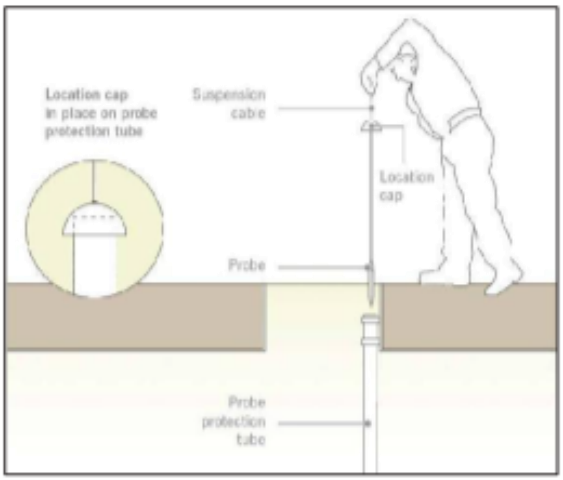
Control unit (general positioning)

The control unit has been designed to be located indoors and outdoors, within a nonhazardous area. It should be wall mounted and positioned such that the LED display and push switches on the front panel can be readily seen and accessed. The unit can be secured to the wall by using the four mounting holes provided. Included within the control is an intrinsically safe circuit (approved according to ATEX Directive 94/9/EC), to which the probe unit is connected.



Maintenance

When the separator is maintained, lift the probe out of the probe protection tube, check it operates the alarm (see under Tests Ref. 10.2) and at the same time wipe oil and contaminants from the probe to prevent a fake alarm after re-inserting.



Insert probe onsite

The probe protection tube is factory fitted and the probe matched to ensure the alarm is activated when the light liquids reach approximately 10% of the storage volume the SPEL separator is designed for.

All that is required on site is to undertake the electrical installation in accordance with the instructions provided and lower the probe with the pre-fixed location cap into the probe protection tube. When the cap locates onto the top of the probe protection tube, the probe is suspended at the correct level.

SPEL Automatic Alarm/Monitoring System

Control unit (electrical connections)

1. Mains voltage connection;

The control unit should be connected to a suitable 220/240V AC supply and fused at 3 amps.

Note: This appliance must be earthed.

2. Control unit/probe junction box connection

Wiring from the control unit to the probe junction box in the separator chamber requires a 3-core screened. 0.75mm core section cable.

Maximum cable length: 300 metres.

3. Probe connection

A 5 metre 3-core probe cable is normally fitted to the junction box and the probe.

After all connections have been made, the cables must be secured by tightening each entry gland.

Probe

The probe is installed freely suspended in the SPEL separator within the probe protection tube. The 3-core cable is connected into the junction box mounted in the access shaft above the probe protection tube. Extra cable is provided to enable raising the junction box where extension shafts are incorporated.

Important note: In all cases good, standard electrical practice should be followed and the installation must conform to the Australian Wiring Rules – AS 3000 – 2007. In essence, the installation must be such that the intrinsic safety is no compromised by:

- Exposure to risk of mechanical damage
- Unauthorised modification of interference
- Exposure to moisture, dust and foreign bodies
- Excessive heat
- Invasion of intrinsically safe circuit by other electrical equipment or circuitry

Certificate of conformity

The alarm device has been approved to be used in explosion-hazardous areas. The control unit and probe are approved according to ATEX Directive 94/9/EC. These approvals mean that the probes can be installed in Zone 0, which is continuously explosion-hazardous.

The SPEL oilset control unit must be located in the safe area, but it can be connected to the probe without any barrier.

Tests (10.2)

The function can be tested by lifting the probe within the probe protection tube. In approximately 5 seconds, the alarm is given by a red light and audible signal. Both relays release. Push the RESET button - the buzzer goes off and relay pulls in.

When the probe is placed in water again, relay pulls in and the red light goes off.

Cable break and short circuit test

Also the function can be tested in case of cable fault or short circuit. First cause short circuit in probe cable terminals 1 and 2. Then the yellow light of short circuit is lit. Both the relays pick up and the buzzer goes on. Remove the short circuit and reset the buzzer.

Simulated Function Test

The function of probe, cable and electronics can be tested. Push the TEST button for 2 to 5 seconds. Both relays pick up, and the red light is lit. When the TEST button is released, the red light goes off and relay returns to its normal position. The buzzer and relay must be reset.

Installation

Important note: It is important that installation is carried out by a competent technician familiar with this type of equipment or contact our Special Products Division for installation, commissioning and maintenance service.

SPARE PARTS LIST

DATE: _____

INVOICE NO: _____

TYPE: _____

MODEL: _____

SERIAL NO: _____

JOB NO: _____

LINE	DESCRIPTION	QTY	PART No.
1			
2			
3			
4			
5			
6			
7			
8			

For all spare parts enquiries, please ring 13 SPEL or 13 77 35

MAINTENANCE SERVICE LEDGER

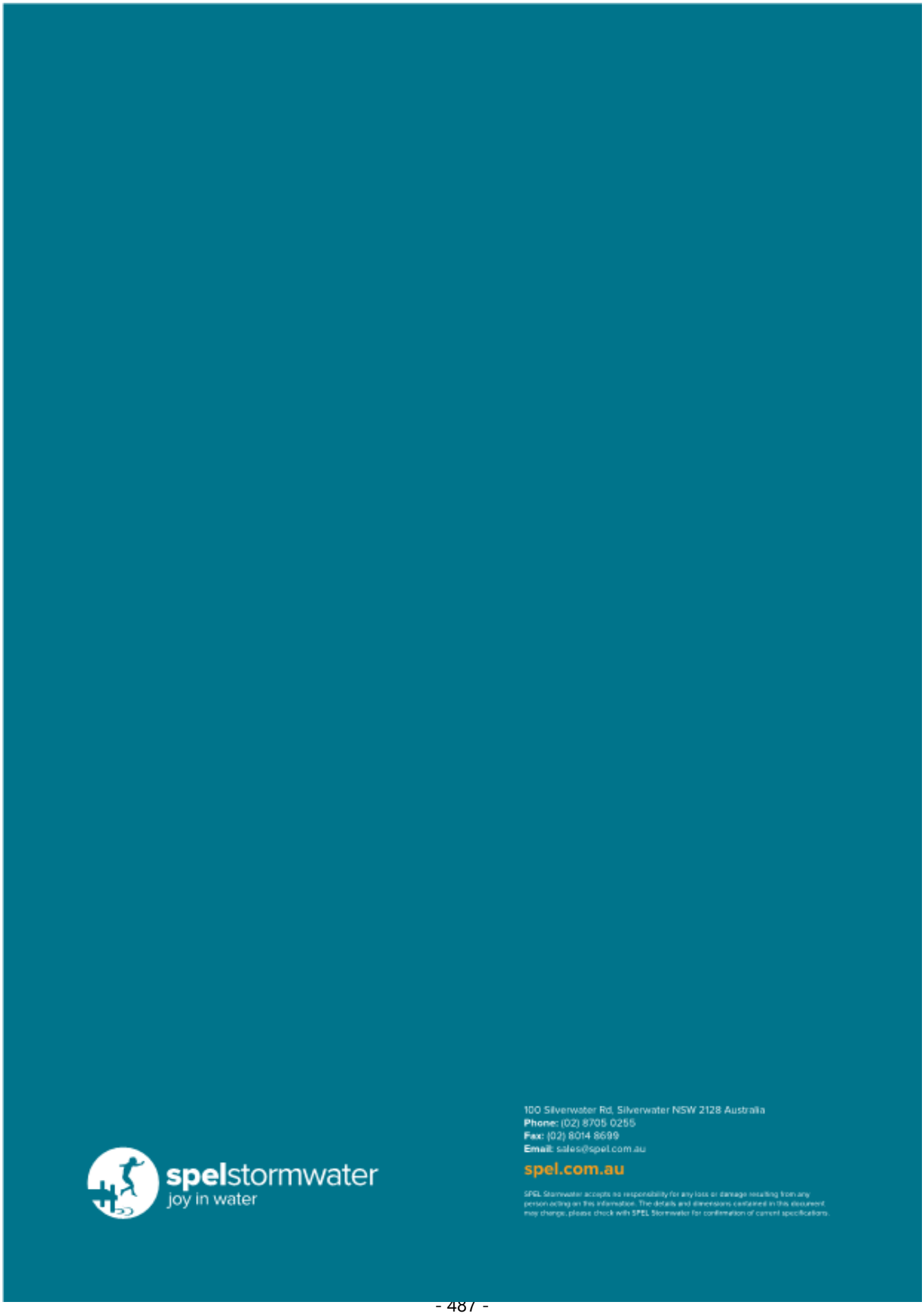
MODEL No	
INSTALLATION ADDRESS	
INITIAL OPERATING DATE	
WORKING CAPACITY	
PRIMARY CHAMBER SPILL CAPACITY	
OIL ALERT PROBE trigger threshold	
MINUMUM MAINTENANCE FREQUENCIES	*ANNUALLY from the initial operational date or if indicated by the oil alert probe alarm*

Note: Oil Alert Probe alarm is triggered when fuel/oil hydrocarbons reaches 10% of primary chamber capacity.

MAINTENANCE RECORD

SERVICE DATE	COALESCER FLUSHED	PRIMARY CHAMBER SEDIMENT REMOVED & HYDROCARBONS SKIMMED	SECONDARY CHAMBER SEDIMENT REMOVED & HYDROCARBONS SKIMMED	OIL ALERT PROBE CLEANED & ALARM CHECKED	SERVICE MANAGER NAME & SIGNATURE

MAINTENANCE RECORD					
SERVICE DATE	COALESCER FLUSHED	PRIMARY CHAMBER SEDIMENT REMOVED & HYDROCARBONS SKIMMED	SECONDARY CHAMBER SEDIMENT REMOVED & HYDROCARBONS SKIMMED	OIL ALERT PROBE CLEANED & ALARM CHECKED	SERVICE STATION MANAGER NAME & SIGNATURE


spelstormwater
joy in water
100 Silverwater Rd, Silverwater NSW 2128 Australia
Phone: (02) 8705 0255
Fax: (02) 8014 8699
Email: sales@spel.com.au
spel.com.au
SPEL Stormwater accepts no responsibility for any loss or damage resulting from any person acting on this information. The details and dimensions contained in this document may change, please check with SPEL Stormwater for confirmation of current specifications.

Date:	17 July 2025
Responsible Officer:	Emma Brown
Location:	53 Gindurra Road, SOMERSBY NSW 2250 Lot 12 DP 1189679
Owner:	ATB Morton Pty Ltd
Applicant:	Wpp Pty Ltd
Date of Application:	22 December 2022
Application No:	DA/4341/2022
Proposed Development:	Industrial - Concrete Batching Plant (Designated Development) intended to process > 30,000 tonnes of concrete per annum (up to 47,000 tonnes or 20,000m3). New 'drive thru' area, overhead cement silos with access platform and ladders, aggregate material bins, a feed conveyor and a dual stump stand. Nine employees including 1 - 2 plant supervisors, 3 concrete batchers and 4 delivery drivers. Hours of operation 6:00am to 6:00pm Monday to Friday, 6:00am to 12:00pm on Saturday.
Land Area:	8326m^2
Existing Use:	Vacant land (partly constructed under Surescope Building Certifiers Reference: 20/0499-01 Complying Development Certificate (CDC), dated 12 March 2021)

PROPOSED CONDITIONS

1.PARAMETERS OF THIS CONSENT

1.1 **Approved Plans and Supporting Documentation**

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

Plan No.	Revision No.	Plan Title	Drawn By	Dated
1638 - DWG - 203 - 02003	6	Proposed Workshop and Office Buildings Plan	ATB Morton	11 August 2023
01001	C	Architectural Plans Drawing Index	ATB Morton	7 September 2022
1638 - DWG - 204 - 02003	A	Dust Supression Plan	ATB Morton	2 July 2024

Document Title	Version No.	Prepared by	Dated
Environmental Impact Statement	2	Wpp Pty Ltd	23 December

			2022
Bushfire Level Certificate Attack Certificate		Firebird ecoSultants Pty Ltd	3 December 2020
Noise and Vibration Impact Assessment	3	RAPT Consulting	June 2025
NSW EPA Correspondence – Comments and Recommended Conditions & Response to Submissions and Recommended Conditions		NSW EPA	9 March 2023 24 February 2025
Biodiversity Assessment	2	MJD Environmental	26 March 2025
Archaeological Due Diligence Assessment		McCardle Cultural Heritage	7 April 2022
Air Quality Impact Assessment	4	Advitech	13 March 2025
Stormwater Drainage Infrastructure - Operation and Maintenance Plan	C	Northrop	20 May 2025
Geotechnical Investigation		Network Geotechnics	22 June 2015
SEPP 33 Screening Report		Advitech	30 March 2022
NSW Rural Fire Services – Correspondence and Recommended Conditions		NSW Rural Fire Services	2 April 2025

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

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

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

1.3 Comply with NSW RFS recommendations and conditions as per letter dated 2 April 2025.

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

2.3 Submit to the Registered Certifier responsible for issuing the construction certificate for works within the development site detailed design drawings and design reports for the following engineering works:

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

b) Construction of a stormwater detention system. Design in accordance with Chapter 3.1 Part C of Central Coast Development Control Plan 2022 and Council's *Civil Works Specifications*. The stormwater detention system must limit post development peak flows from the proposed development to less than or equal to predevelopment peak flows for all storms events up to and including the 1% Annual Exceedance Probability (AEP) storm event. A runoff routing model/method must be used. An on-site stormwater detention report including an operation and maintenance plan must accompany the design. On-site stormwater detention is not permitted within private courtyards, drainage easements, and / or secondary flow paths. The design shall be generally in accordance with the Stormwater Management Plan ("SMP") prepared by SRL Consulting Australia (Ref: 620.31140.00000-R01 Version -v2.0 dated 22 December 2022), the stormwater plans prepared by Forum Consulting Engineers (Drawing No's 200292-SWD - 01 Rev I dated 21.12.22 & 200292-SWD - 02 Rev C dated 21.12.22), and the 'Response to EPA RFI DOC23/89649-6 – Stormwater & Groundwater Management' dated 12 November 2024.

c) Construction of nutrient and pollution control measures. Design in accordance with Chapter 3.1 Part C of Central Coast Development Control Plan 2022. A nutrient and pollution control report including an operation and maintenance plan must accompany the design. The design shall be generally in accordance with the Stormwater Management Plan ("SMP") prepared by SRL Consulting Australia (Ref: 620.31140.00000-R01 Version -v2.0 dated 22 December 2022), the stormwater plans prepared by Forum Consulting Engineers (Drawing No's 200292-SWD - 01 Rev I dated 21.12.22 & 200292-SWD - 02 Rev C dated 21.12.22), and the 'Response to EPA RFI DOC23/89649-6 – Stormwater & Groundwater Management' dated 12 November 2024).

d) Construction of on-site stormwater retention measures. Design in accordance with Chapter 3.1 Part C of Central Coast Development Control Plan 2022. A report detailing the method of stormwater harvesting, sizing of retention tanks for re-use on the site

and an operation and maintenance plan must accompany the design. The design shall be generally in accordance with the Stormwater Management Plan ("SMP") prepared by SRL Consulting Australia (Ref: 620.31140.00000-R01 Version -v2.0 dated 22 December 2022), the stormwater plans prepared by Forum Consulting Engineers (Drawing No's 200292-SWD - 01 Rev I dated 21.12.22 & 200292-SWD - 02 Rev C dated 21.12.22), and the 'Response to EPA RFI DOC23/89649-6 – Stormwater & Groundwater Management' dated 12 November 2024.

e) Construction stormwater drainage collection and piping of all stormwater runoff from areas within the site via an on-site stormwater detention facility and interallotment drainage easement to the approved connection with Council's drainage system located in Gindurra Road. The design shall be generally in accordance with the Stormwater Management Plan ("SMP") prepared by SRL Consulting Australia (Ref: 620.31140.00000-R01 Version -v2.0 dated 22 December 2022), the stormwater plans prepared by Forum Consulting Engineers (Drawing No's 200292-SWD - 01 Rev I dated 21.12.22 & 200292-SWD - 02 Rev C dated 21.12.22), and the 'Response to EPA RFI DOC23/89649-6 – Stormwater & Groundwater Management' dated 12 November 2024.

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

Detailed design drawings and design reports acceptable to the Registered Certifier must be included in the Construction Certificate documentation.

2.4 All civil engineering works including the access driveway and stormwater works required under the Complying Development Certificate issued by Surescope Building Certifiers, Ref: Certificate No 20/0499-04 dated 13 September 2024, must be completed prior to the issue of a construction certificate for the subject development.

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

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

2.6 Prepare a Construction Environmental Management Plan (CEMP) for the development in accordance with the requirements of to the satisfaction of the Registered Certifier.

The CEMP must include measures to address or incorporate:

a) Construction Traffic Management PlanErosion and Sediment Control PlanConstruction Noise ManagementCommunity Consultation and Complaints HandlingWater Cycle ManagementConstruction Air Quality and Noise and Vibration ManagementUnexpected Finds Protocol.

The Applicant must not commence construction of the development until the CEMP is approved by the Registered Certifier

2.7 The required Construction Environmental Management Plan (CEMP) is to include the mitigation measures outlined in the Revised Biodiversity Assessment Report, Final Version 2, by MJD Environmental, dated 26 March 2025 and the Environmental Impact Statement (EIS) by WPP dated 23rd December 2022.

2.8 Prior to the issuing of any construction certificate submit to Council for approval a routine storm water quality monitoring program developed by a duly qualified person. The monitoring program must include validation testing and ongoing testing occurring every month for a period of 3 months, at a minimum. Water samples must be analysed by a NATA accredited laboratory, the analytical results must be reviewed against ANZECC water quality guidelines for all contaminants of concern and corrective actions must be included for elevated results.

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 Engage a suitably qualified Ecologist to oversee the protection of the Endangered Ecological Community and retained bushland on the adjoining lands. This is to include placement of temporary 1.8 metre high man proof fencing along the northern and eastern property boundaries prior to any works, if the permanent fencing shown in the plans is not installed. The Ecologist must certify the fencing and protection measures in writing to Councils Ecologist, including photographs and other evidence, within 5 working days and prior to commencement of any works.

3.3 Implement the recommendations of the Revised Biodiversity Assessment Report, Final Ver. 2, by MJD Environmental, dated 26 March 2025 and the Environmental Impact Statement (EIS) by WPP dated 23rd December 2022. Where the recommendations contained within Biodiversity Assessment Report are inconsistent, the conditions of consent prevail.

3.4 A Plan of Operational Management is to be submitted to address operations and mitigation measures where required. Provision for monitoring and improvement of the protection and mitigation measures will ensure that impacts on the environment are minimised. The plan is to be reviewed and where appropriate updated on an annual basis. The site induction will refer to the plan. All personnel will be required to attend the environmental site induction. Copies of the plan will be kept on-site for ready access by all personnel. Operation of the development is to be in accordance with EPA recommended conditions.

3.5 A Noise Management Plan is to be submitted to deal with the unlikely occurrence of excessive noise emanating from operations and address RAPT Noise and Vibration Assessment Version 2.

3.6 A Water Quality management plan must be prepared and include the following:

a) A water quality monitoring plan, that details the sampling locations, frequency, methodology, analysis parameters and analysis criteria for monitoring.

b) The use of best practice measures as benchmarked in the Environment Management Guideline for Concrete Batch Plants (Cement Concrete & Aggregates Australia, October 2019).

c) The bioretention and retention basin is to be fully lined with an impermeable linear material, to prevent any egress of contaminated water to nearby stormwater drains, groundwater, and surface waters.

4. DURING WORKS

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

4.2 Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

4.3 The principal certifier must ensure that building work, demolition or vegetation removal is only carried out between:

7.00 am and 5.00 pm on Monday to Saturday.

The principal certifier must ensure building work, demolition or vegetation removal is not carried out on Sundays and public holidays, except where there is an emergency.

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

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

4.4 Implement dust suppression measures on-site during bulk earthworks to suppress dust generated by vehicles and equipment. Dust must also be suppressed at all other stages of construction to comply with the *Protection of the Environment Operations Act 1997*.

4.5 No vegetation or natural landforms are to be disturbed outside of the property boundary.

4.6 Implement the recommendations of the Revised Biodiversity Assessment Report, Final Version 2, by MJD Environmental, dated 26 March 2025 and the Environmental Impact

Statement (EIS) by WPP dated 23rd December 2022. Where the recommendations contained within Biodiversity Assessment Report, are inconsistent, the conditions of consent prevail.

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

In this condition:

"relic" means any deposit, artefact, object, or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) is of State or local heritage significance; and

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

4.8 Implement and maintain all erosion and sediment control measures at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.

4.9 Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the Principal Certifier or an officer of Council. 4.10 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*.

4.11 NSW EPA recommends that the combined detention and bioretention basin is to be fully lined with an impermeable linear material, to prevent any egress of contaminated waste to nearby stormwater drains, groundwater and surface waters.

4.12 The Principal Contractor must ensure that a registered surveyor carries out check surveys and provides survey certificates confirming the location of the building(s), ancillary works, flood protection works and the stormwater drainage system relative to

the boundaries of the site and that the height of buildings, ancillary works, flood protection works and the stormwater drainage system relative to Australian Height Datum complies with this consent at the following critical stages.

The Principal Contractor must ensure that work must not proceed beyond each of the following critical stages until compliance has been demonstrated to the Principal Certifier's satisfaction.

4.13 The Northrop Construction and Operational Plan of Management will be implemented for the civil construction and ongoing operation of the plant.

4.14 NSW EPA recommends:

a) Waste material transported from the premises during the construction and operational phases is classified and managed.

b) Classification Guidelines and disposed at a waste facility that can lawfully receive that type of waste.

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

5.3 Repair any damage to Council's infrastructure and road reserve as agreed with Council. Damage not shown in the dilapidation report submitted to Council before the development works had commenced will be assumed to have been caused by the development works unless the Developer can prove otherwise.

5.4 Complete the civil engineering works within the development site in accordance with the detailed design drawings and design reports plans within the construction certificate.

5.5 Amend the Deposited Plan (DP) for lot 12 DP 1189679 to:

1. Include an Instrument under the *Conveyancing Act 1919* for the following restrictive covenants; with Council having the benefit of these covenants and having sole authority to release and modify. Wherever possible, the extent of land affected by these covenants must be defined by bearings and distances shown on the plan. The plan and instrument must:

    a. Create a 'Restriction on the use of Land' over all lots containing an on-site stormwater detention system and / or a nutrient / pollution facility restricting

any alteration to such facility or the erection of any structure over the facility or the placement of any obstruction over the facility.

2. Include an instrument under the Conveyancing Act 1919 for the following positive covenants; with Council having the benefit of these covenants and having sole authority to release and modify. Covenant(s) required:

a) To ensure on any lot containing on-site stormwater detention system and / or a nutrient / pollution facility that:

i. the facility will remain in place and fully operational.
ii. the facility is maintained in accordance with the operational and maintenance plan so that it operates in a safe and efficient manner.
iii. Council's officers are permitted to enter the land to inspect and repair the facility at the owner's cost.
iv. Council is indemnified against all claims of compensation caused by the facility.

Note: Standard wording, acceptable to Council, for covenants can be obtained by contacting Council Subdivision Certificate Officer.

Submit to the Principal Certifier copies of registered title documents showing the restrictive and positive covenants.

5.6 Obtain the Section 307 Certificate of Compliance under the *Water Management Act 2000* for water and sewer requirements for the development from Central Coast Council as the Water Supply Authority, prior to issue of the Occupation Certificate.

5.7 Prepare an Operational Environmental Management Plan (OEMP) for the proposed development prepared by a suitably qualified and experienced environmental consultant, to manage and control potential environmental pollution risks (air, water, noise, and land emissions) for the proposed activities in accordance with the *Protection of Environment Operations Act 1997*.

The OEMP must include all the recommendations included in the site-specific environmental reports and assessments. The guideline for the plan is outlined below. The level of detail of the EMP must be appropriate having regard to the operational scale of the proposed development. The plan must include a date, revision number, and be submitted to Council's Environmental Health Officer for review and signature. Information to be included in the Plan is as follows:

1. Written procedures outlining management of:

a) stormwater, run-off and all water used on the site (including treatment and disposal)
b) maintenance and testing requirements of the stormwater treatment system
c) dangerous and hazardous goods storage and handling.
d) solid and liquid waste (including storage, treatment, and disposal)

e) emergency spill response
f) managing noise emissions
g) managing air (dust) emissions
h) community consultation and complaints protocol.

2. A list of legislation applicable to the activities conducted on site, including how legal updates will be accessed.

3. Records of environmental training undertaken or to be undertaken by employees of the organisation in the areas of:

a) identifying potential environmental hazards
b) prevention of pollution and environmental damage
c) spill control
d) hazardous material storage and handling
e) best practice in waste management
f) consequences of non-compliance with legislation.

4. Establishment of a periodic review of all information contained within this Plan to ensure currency and continued compliance.

5.8 Provide an operational water quality monitoring program that validates the stormwater treatment systems and provide routine ongoing monitoring and testing of the stormwater discharged from the site. All contaminants of concern are to be tested, samples are to be analysed at a NATA Accredited Laboratory and criteria/discharge limits are to be set in accordance with ANZECC Guidelines and *POEO Act* 1997. Testing frequency, reporting, contingency plan, and noncompliance protocol are to be included. *Note: This can be included in the Operational Environmental Management Plan.*

5.9 Prior to the issuing of any occupation certificate an independent, suitably qualified, and currently practising acoustic consultant who is a member of the Association of Australasian Acoustical Consultants must provide an acoustic compliance certificate to the Principal Certifying Authority, which demonstrates that the construction of the proposed in accordance with the recommendations in the Noise and Vibration Impact Assessment (NVIA, RAPT Consulting, February 2025).

5.10 Prior to the issuing of any occupation certificate an independent, suitably qualified, and currently practising air quality consultant must provide a compliance certificate to the Principal Certifying Authority, which demonstrates that the construction of the proposed in accordance with the recommendations in the Air Quality Impact Assessment (AQIA) (Advitech, 13 March 2025).

5.11 The required Operational Environmental Management Plan (OEMP) is to include the mitigation measures outlined in the Revised Biodiversity Assessment Report, Final Ver. 2, by MJD Environmental, dated 26 March 2025 and the Environmental Impact Statement (EIS) by WPP dated 23rd December 2022.

5.12 Implement the following Crime Prevention through Environmental Design (CPTED) principles and strategies to minimise the opportunity for crime.

a) Provide adequate lighting to common areas as required under Australian Standard AS 1158: *Lighting for roads and public spaces.*
b) Design the development to avoid foot holes or natural ladders to minimise unlawful access to the premises.
c) Provide signage within the development to identify all facilities, entry / exit points and direct movement within the development.
d) Install a system of Closed Circuit Television of a type and in locations on the site that will record high-quality images of all public areas within the site.

5.13 Provide an operational water quality monitoring program that validates the stormwater treatment systems and provide routine ongoing monitoring and testing of the stormwater discharged from the site. All contaminants of concern are to be tested, samples are to be analysed at a NATA Accredited Laboratory and criteria/discharge limits are to be set in accordance with ANZECC Guidelines and *POEO Act* 1997. Testing frequency, reporting, contingency plan, and noncompliance protocol are to be included. *Note: This can be included in the Operational Environmental Management Plan.*

5.14 Prior to the issuing of any occupation certificate, provide certification and detailed designs to Council from a duly qualified person of the oil water separator/treatment device installed at the premises.

6. ONGOING

6.1. All heavy vehicle movements associated with the development must be left in / right out of the development i.e., from & to the Wisemans Ferry Road / Gindurra Road intersection.

.2 Operate the site in accordance with the Operational Environmental Management Plan (OEMP), Air Quality Impact Assessment, Noise and Vibration Noise Assessment, Dust Supression Plan and the Northrop Construction and Operational Plan of Management (OPoM) which will be implemented for the civil construction and ongoing operation of the plant.

a) The EIS outlines appropriate plant management and mitigation measures which will be incorporated into the construction and operation of the batching plant.

a) All contractors and Redicrete personnel will be responsible to ensure that environmental protection measures are implemented and that the environment is protected to the highest standard during works.

b) The OEMP will make provision for monitoring and improvement of the protection and mitigation measures will ensure that impacts on the environment are minimised.

c) The OEMP is to be reviewed and where appropriate updated on an annual basis. The site induction will refer to the OEMP.

d) All personnel will be required to attend the environmental site induction.

e) Mitigation measures proposed will have the effect of bringing the air quality impacts from the proposed development within acceptable levels.

6.3 A copy of the Operational Environmental Management Plan (OEMP), Air Quality Impact Assessment, Noise and Vibration Noise Assessment, Dust Supression Plan, EPA recommended conditions, and the Northrop Construction and Operational Plan of Management (OPoM) is to be kept on site at all times and provided upon request and ready access by all personnel, EPA and Council. The objectives of the plans are to identify potential environmental impacts of the concrete batching plant, detail environmental controls to minimise impacts of the establishment and operation of the plant and address any relevant project specific conditions regarding planning approvals.

6.4 The hours of operation of any future use are restricted to those times listed below:

(a) Monday – Friday: 6.00am to 6.00pm

(b) Saturdays: 6.00am to 12.00pm

(c) Sundays and Public Holidays: Closed.

Any variation to these hours is subject to the prior consent of Council.

6.5 Maintain the installed system of Closed Circuit Television (CCTV) that monitors / records all public areas within the site.

6.6 Noise associated with the operation of any plant, machinery, or other equipment on the subject site, shall not exceed 5dB(A) above the background noise level when measured at the boundary of the subject site. Noise generated in an industrial area is to accord with the industrial noise criteria within the '*Noise Policy for Industry (2017)*' prepared by the Environment Protection Authority.

6.7 Maintain the western boundary noise barrier fence as a 3 metre solid acoustic noise barrier, the barrier is to be free of any visible air gaps.

6.8 Implement the approved routine storm water quality monitoring program and submit monthly reports to Council for a minimum 3 months.

6.9 NSW EPA recommends:

a) Waste material transported from the premises during operational phases is classified and managed.

b) Classification Guidelines and disposed at a waste facility that can lawfully receive that type of waste.

6.10 NSW EPA recommends:

b) The proponent must minimise the emission of offensive odours from the premises at all time.

c) The premises must be maintained in a such a manner that prevents or minimises the emission of air pollutants from the premises. This includes but is not limited to maintaining sealed surfaces in a manner that prevents or minimises the generation and emission of wheel generated dust.

d) All aggregate storage bays must be:

I. Enclosed on three sides and fitted with screening, such as a shade cloth, over and above the wall heights.
II. Fitted with automatic water sprinklers to prevent and minimise particulate matter emissions.
III. Have storage piles not greater than 0.5m below the top of the smallest wall and 0.5m inside the open end of the bay.

e) All conveyors and transfer points must be enclosed.
f) Cement and any supplementary cementitious materials, such as fly ash, must be pneumatically conveyed via sealed pipe transfer from enclosed delivery tankers to storage silos.
g) Storage silos must be fitted with a particulate matter filter to treat conveying air from pneumatic transfers.
h) Storage silos must be fitted with a high-level alarm and emergency shut off controls to prevent overfill.
i) Aggregate feed hopper must be enclosed on three sides and roofed.
j) Wheel tracking mitigation measures are implemented including:

I. Weekly use of sweeper trucks to sweep the yard and surrounding road boundary.
II. Daily wash down of the yard, subject to weather conditions.
III. Increased use of dust suppression sprays during windy conditions and / or

when visible dust can be seen leaving the site.

k) The proponent must prepare and implement an Air Quality Management Plan, which must include: Monitoring methods, including for PM_{10} (24-hour) at receptor R11.

6.11 NSW EPA recommends:

l) The proponent implements a construction and operational Noise Management Plan (NMP) per the recommendations set out in the NVIA and in line with best practice as benchmarked in the Environmental Management Guideline for Concrete Batch Plants (2019).
m) That all construction activities be carried out during the recommended standard Interim Construction Noise Guidelines, and that all feasible and reasonable noise mitigation and management measures be implemented to minimise construction noise impacts at sensitive receivers.
n) Operation of concrete batching be limited to 6:00am 6:00pm Monday to Friday and 6:00am 12:00pm on Saturday.

Noise limit conditions:

o) All works and activities undertaken at the premises must be undertaken in a manner that will minimise noise and vibration impacts at any sensitive receivers.
p) Noise generated at the premise should not exceed the project noise levels identified in the NVIA.
q) If noise emissions exceed the project noise levels in the NVA, the proponent must investigate the cause of the noise and implement reasonable and feasible measures to avoid a repeat of the exceedance

6.12 NSW EPA recommends:

a) The proponent must develop and implement effective controls for the storage, processing, and handling of material at the premises, in accordance with any applicable SafeWork NSW codes of practice. These controls should include operating and maintaining bunds or spill containment systems where necessary.

7. PENALTIES

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

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

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

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

ADVISORY NOTES

- Install and maintain backflow prevention device(s) in accordance with Council's WS4.0 Backflow Prevention Containment Policy. This policy can be found on Council's website:
  www.centralcoast.nsw.gov.au

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

- It is an offence under the *National Parks and Wildlife Act 1974* to disturb an Aboriginal artefact without a Permit. If during works suspected Aboriginal heritage items (stone tool artefacts, shell middens, axe grinding groves, pigment or engraved rock art, burials, or scar trees) are identified, works will cease and OEH (131555) will be contacted.
- Dial Before You Dig
  Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures. (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial Before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial Before You Dig service in advance of any construction or planning activities.

- Carry out all work under this Consent in accordance with SafeWork NSW requirements including the *Workplace Health and Safety Act 2011 No 10* and subordinate regulations, codes of practice and guidelines that control and regulate the development industry

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

  a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
  b) Jemena Asset Management for any change or alteration to the gas line infrastructure
  c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
  d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
  e) Central Coast Council in respect to the location of water, sewerage and drainage services.
- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.

Offence to harm native protected fauna

It is an offence under the *Biodiversity Conservation Act 2016* to harm protected native wildlife. If during works fauna is displaced, it must not be harmed. If required works will cease and fauna will be transferred to the nearest veterinary hospital and Councils Ecologist will be notified within 24hrs.

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

Emma Brown
Reporting Officer Reviewing Officer

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

Approved:

Date: 14 August 2025