



**NSW National Parks
& Wildlife Service**
Office of Environment & Heritage

Our reference: DOC19/836917
Your reference: 27/9/19

Mr Nick Jackman
Senior Development Manager
Coastal Hamlets Pty LTD
51 Riley Street
Woolloomooloo NSW 2300

Re: Catherine Hill Bay Recycled Water Main REF Determination

I refer to Coastal Hamlets Pty LTD application to the Office of Environment and Heritage (OEH) to carry out the above proposed activity. OEH has received a payment from Coastal Hamlets Pty LTD for \$170 and this amount covers the final application fee associated with OEH's assessment of the REF.

As indicated in the attached determination conditions, certain actions must be undertaken prior to works commencing within the reserve. These include your obligation to obtain final approval through the following authorisations under the National Parks and Wildlife Act or National Parks and Wildlife Regulation or other relevant legislation:

- A construction licence under s151 of the NPW Act, in order to access NPWS lands and commence construction of the proposed pipeline.
- A Construction Environmental Management Plan (CEMP)

Other actions to be undertaken prior to commencement include the submission of documentation relating to construction works and compliance with relevant building codes and technical standards. Written notification will be provided when all of the necessary conditions have been satisfied and construction works may commence within the reserve.

Should you require further information please contact Ranger Andrew Hampstead on 4972 9007 or at andrew.hampstead@environment.nsw.gov.au.

Yours sincerely

STEVE ATKINS
Area Manager Central Coast
Hunter Central Coast Branch
National Parks and Wildlife Service



NSW National Parks
& Wildlife Service
Office of Environment & Heritage

Determination Notice for External Proponents

Minor projects

- Recommendation by NPWS Area Manager
- Determination by NPWS Branch Director, Park Operations

Major projects

- Recommendation by allocated officer, Regional Operations Division
- Determination by Regional Operations Division Senior Team Leader (EPO12 and above) except projects needing s.151A lease – see note below

NOTE:

Where an activity requires a lease for a purpose listed in s.151A NPW Act then:

- **Minor projects** – are still determined by NPWS Branch Director, Park Operations unless the lease is for a period >15 years (in which case determination must be by the Executive Director, NPWS Park Operations)
- **Major projects** – must be determined by the Branch Director, Regional Operations.

This is because the REF Determination Report also satisfies the requirement for a report to be prepared for the Minister in relation to the assessment of projects requiring a lease under s.151A. The power to prepare this report has only been delegated to the Senior Executive Service. The power to approve leases is only delegated to SE Band 1 if the lease is for a period of less than 15 years.

REF No.	REF number 172 / DOC19/688698
Project Name:	Catherine Hill Bay Recycled Water Pipeline
Park Name:	Lake Macquarie and Munmorah State Conservation Areas
Area/ NPWS Branch:	Central Coast Area / Hunter Central Coast Branch
Proponent:	Coastal Hamlets Pty Ltd

Based on the REF and any additional information obtained, attached at Schedule X (delete if not applicable), and after having considered to the fullest extent possible all matters likely to affect the environment as a result of the proposed activity (in accordance with s.111 of the Environmental Planning and Assessment Act 1979), **I hereby determine that:**

Activity to proceed

☒ **Further information/assessment is not required:**

- ☒ an Environmental Impact Statement (EIS) is not required (the activity is not likely to significantly affect the environment);
- ☒ a Species Impact Statement (SIS) is not required (the activity is proposed on land that is not part of any area of outstanding biodiversity value and is not likely to significantly affect threatened species or ecological communities, or their habitats).
- ☒ The activity may proceed subject to any necessary approvals (if approval required) being obtained first.
- ☒ The application for the activity may proceed, **subject to the conditions** specified in the attached Schedule 1 – which will minimise the environmental impacts to best practice standards (*see Endnote 2*) – to be considered for any necessary approvals (*see Endnote 1*) under the NPW Act or NPW Regulation or other relevant legislation:
 - A construction licence under s151 of the NPW Act, in order to access NPWS lands and commence construction of the proposed pipeline.
 - An easement under s.153 of the NPW Act, in order for the pipeline to become operational the easement must be finalised

Related matters

Further, it is considered that the proposed activity:

EPBC Act

- ☒ **is unlikely to** impact significantly on matters of **National Environmental Significance** under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

Note: the proponent is responsible for determining whether approvals are required under the EPBC Act and obtaining them if necessary.

Local council matters

- ☒ **is unlikely to** impact significantly on **local council infrastructure**, including roads, water, sewer and stormwater, **local heritage items** listed by the council, and **flood liable land**.

*Note: if the proposal is likely to significantly impact on the above features, the State Environmental Planning Policy (Infrastructure) 2007 requires that the council is consulted **before** the activity is determined.*

- ☐ a record of any required consultation with the appropriate council has been provided.

Certification of building or infrastructure works

- ☒ **will** require certification to Building Code of Australia or Australian Standards in accordance with the OEH *Construction Assessment Procedure*

Determination

NPWS sign off

NPWS Area Manager recommendation: Endorsed.

Name: Steve Atkins

Signature:



Date: 11 September 2019

Determination by Director Park Operations, Hunter Central Coast Branch

Name: Kylie Yeend

Signature:



Date: 23 September, 2019

**NOTE: if the project requires a lease under s.151 for a period longer than 15 years, the determination must be by the Executive Director, NPWS Park Operations*

NEXT STEPS

If proposal to proceed:

- ☒ Obtain final fee from proponent (if relevant) prior to release of determination
- ☒ Register determination
- ☒ Provide determination notice to proponent (preferably **concurrent with the approval** – see below)
- ☒ Prepare and issue **approval** to proponent (see Endnote 1 below), making sure the approval references the REF determination and any conditions (see Endnote 2 below)

If proposal not to proceed:

- ☐ Advise proponent, provide reasons and discuss alternatives (if applicable)

Endnotes

1. For external proponents the authorisation required will normally be in the form of a consent issued under the NPW Regulation or a lease, licence or easement issued under the NPW Act, by an officer with appropriate delegation.
2. If the activity is determined to proceed *subject to conditions* then it is assumed that specific reference to the conditions will be included in any required authorisation that is issued under the NPW Regulation or a lease, licence or easement issued under the NPW Act. If this is not the case consultation with the above signatory must occur.

Schedule 1: Conditions of Determination

REF No.	172 / DOC19/688698
Project name:	Cather Hill Bay Recycled Water Main
Proponent:	Coastal Hamlets Pty Ltd
Park name:	Lake Macquarie State Conservation Area and Munmorah State Conservation Area
Area/ NPWS Branch:	Central Coast Area / Hunter Central Coast Branch

General information about this Determination

Responsibilities of the applicant

The proponent as identified in Section 2 of the REF is responsible for the manner in which the activity as detailed in Section 1 of the REF and this determination is performed.

Transfer of REF determination

REF determinations are not transferable, except with the written approval of the NSW National Parks and Wildlife Service Branch Director who was the signatory, or their delegate.

Inspection of work covered by this REF determination

NPWS reserves the right to inspect work undertaken as part of the activity at any reasonable time.

Entry to land

The proponent is responsible for securing approval under the *National Parks and Wildlife Act 1974*, in the form of a Section 151 licence to enter and undertake construction works on the Lake Macquarie State Conservation Area and Munmorah State Conservation Area, as subject to this determination.

Reference to NPWS officers or Officer of the Service in this determination

The NPWS Branch Director may delegate any functions ascribed to the NPWS Branch Director in the determination to another NPWS officer including, but not limited to, the relevant NPWS Area Manager or relevant Ranger

Explanatory notes to conditions in this determination

Explanatory notes included with this determination do not form part of the conditions, they form the explanation of the intent of the condition presented.

Submission of information to NPWS

All written requests or submissions of relevant post determination documentation is to be directed to or lodged at the following address:

Attention: *Central Coast Area Manager*
National Parks and Wildlife Service
Department of Planning, Industry and Environment
PO Box 8068
Summerland Point NSW, 2259

Phone: 02 4972 9000

Email: npws.centralcoast@environment.nsw.gov.au

GENERAL CONDITIONS

Scope

1. This review of environmental factors determination pursuant to the *Environmental Planning and Assessment Act 1979 (EP&A Act)*:
 - a) remains valid for only five (5) years. This determination will lapse 5 years from the date of issue as stated on this determination notice unless the proponent can demonstrate substantial commencement of the activity and NPWS concurs.
 - b) authorises only the activity and the stated ancillary works as described in Section 6 the Catherine Hill Bay Recycled Water Main Review of Environmental Factors, as prepared by Coastal Hamlets, dated 9 July 2019 referenced as **(RWM-REF)**, and
 - a) applies only to land described as Lake Macquarie State Conservation Area and Munmorah State Conservation Area as reserved under Part 4 of the *National Parks and Wildlife Act 1974* at the date of this determination.

Hours of Operation

2. Onsite work must only be conducted between the hours of 7am to 6pm Mondays to Fridays (except public holidays), works occurring over public holidays or weekends must have prior authorisation from NPWS.

Reasons: To ensure that the activity is commenced within an appropriate timeframe

Approval under the *National Parks and Wildlife Act 1974*

3. This determination, does not authorise activities, works, actions or access for the purpose of commencing the construction of the pipeline on NPWS lands, the proponent is required to obtain the following approvals:
 - a) A construction licence under s151 of the NPW Act, in order to access NPWS lands and commence construction of the proposed pipeline. The proponent is required to apply for a licence in writing, the application must be accompanied by a Construction Environmental Management Plan (CEMP),
 - b) An easement under s.153 of the NPW Act, is to be established in order for the pipeline to become operational the easement must be finalised, with an approved Operational Management Plan (OMP) in place.

Reasons: To ensure that the activity is in accordance with all relevant statutory approvals.

Administrative

4. This determination does not authorise or permit any activities or works outside of the defined activity or activity footprint. Any activities, works, actions or access occurring on NPWS lands will be considered a breach under the *National Parks and Wildlife Act 1974* or the National Parks and Wildlife Regulation, irrespective of the intentional or accidental nature.
5. If the proponent requires access, activities, works or actions outside of this determination during any phase of construction, the proponent must contact NPWS and request in writing a modification to the REF activity (and its activity footprint).

6. The 'activity' for the purpose of this determination is described in Part 6 of the REF, and works associated with the activity are to be undertaken in accordance with:
 - a) the engineering plans specific to the park as presented in Attachment 1, 2, 9 and 10 of the REF which show the location and positioning of the proposed pipeline, and
 - b) the description of the activity, and activity footprint as presented in Section 6.2 of the REF, which includes all ancillary works or service requirements for construction and operation of the pipeline. As described in Attachment 1, 2, 9 and 10 of the REF.
 - c) any required or amended specifications as set by the conditions of this determination.
7. In the event of any inconsistency between the REF and the conditions of this determination, the conditions of the determination shall prevail.

Reasons: To ensure that the activity is undertaken in accordance with the REF as amended by the conditions of approval.

Other statutory approvals

8. This determination does not negate any obligation held by the proponent to obtain other statutory approvals necessary to undertake the activity, this includes but is not limited to any approvals required under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
9. The proponent must undertake the activity and associated works in accordance with:
 - a) the *Work Health and Safety Act 2011*, including codes of practice adopted under the Act, and
 - b) *Work Health and Safety Regulation 2011*, all contractors on the site are to have appropriate insurance, including public liability.

Reasons: To ensure that the activity is undertaken in accordance with all relevant statutory approvals.

Emergency provisions

10. Notwithstanding any other conditions of this determination, in the event of an emergency or emergency works as required by the proponent to protect or arrest an imminent threat to life, property or the environment may be instigated immediately. In the event of an emergency the proponent must
 - a) notify ENIROLINE on 13 15 55, within 4 hours of the emergency being identified, and
 - b) notify NPWS as soon as practicable (within 12 hours) by contacting the Branch Duty Officer on 02 8275 1746 to seek direction on any further procedures to be implemented to protect the environment and NPWS land values, and
 - c) notify NPWS in writing within 7 days, providing details of the emergency event, works carried out to address issues or environmental impacts, follow up measures required and remediation to be implemented following resolution of the event.

Reasons: To ensure appropriate management of incidents and emergency situations and to arrest an imminent threat to life, property or the environment.

PRIOR TO COMMENCEMENT

Construction Environmental Management Plan (CEMP)

10. Prior to NPWS issuing a licence permitting access and construction of the proposed pipeline under the NPW Act, a CEMP is to be drafted and submitted to NPWS. The CEMP is to include the following provisions.

General Construction

11. The CEMP is to specify general construction requirements, by

- a) Listing all relevant NPWS contact details, including the emergency provisions and general contact and reporting.
- b) Identifying the construction supervisor, and providing all their 24-hour contact details, as it is their role to ensure all construction, site operations and application of mitigation measures are effective and comply with the terms of this determination. The supervisor must have the authority to stop work and is accountable for all reporting.
- c) Identifying all ancillary requirements of the activity including construction facilities and services such as:
 - i. designated storage areas for stockpiling materials, equipment or machinery required for construction, this includes staff parking, at no time must parking occur which presents a danger to passing traffic, and
 - ii. security of the locations, equipment and materials proposed with authorised access only, and
 - iii. any other temporary services must have prior approval, no restricted material such as fuel and other similar flammable materials, are to be stored on site.
- d) Including site induction, training and worker briefing requirements to ensure all staff and/or contractors are aware of the CEMP and its provisions.
- e) Providing for general operational procedures for all contractors to observe hygiene protocols for machinery to reduce the spread of weeds and pathogens, irrespective of source of the machinery or material.

Activity and Site Mitigation

12. The CEMP is to specify activity and site mitigation measures, by

- a) ensuring physical identification and marking of the linear activity footprint extent occurs on site with a minimum highly visible flicker tape (or similar).
- b) applying the measures as outlined in Section 6.2 of the REF to avoid and/or reduce adverse risk, around sediment and erosion control by ensuring:
 - i. planning accords with '*Managing Urban Stormwater: Soils and Construction*' (Landcom 2004) and NPWS standard '*A Field Guide for Erosion and Sediment Control Maintenance Practices on Unsealed Roads, dated April 2010*', and
 - ii. excavated material is appropriately managed, and if temporary stockpiles are created, they must be covered during periods of rainfall, and
 - iii. Temporary stockpile areas are to be clearly marked and have no impact on adjacent vegetation, and
 - iv. works during wet weather are to be limited, with no works to continue during significant rain events, and

- v. erosion and sediment controls must be installed prior to commencement of works. Sediment controls associated with fire trail works should remain and checked during scheduled general maintenance.
- c) applying measures as outlined in Section 6.2 of the REF to avoid and/or reduce adverse risk, around access issues by ensuring controls are in place to manage and restrict vehicular and pedestrian public access during construction, which may include:
 - i. Establishment of heavy-duty steel bollards and steel wire rope barrier fencing outlined in Section 6.2 of the REF prior to the commencement of the pipeline works
 - ii. erecting trail closure signage at the entrance to Crangan Bay Trail off Kanangra Road and the two entrance points off the Pacific Highway at Big T Trail and the unnamed section of Crangan Bay Trail for the designated construction time frame, with a contact telephone number for public inquiries, and
 - iii. where pedestrian access restrictions such as temporary barriers are required ensure they are established prior to commencement of works.

Social Values

12. providing measures that reflect best practice and standards to reduce environmental impacts on the wider community (noise, air or water) during construction and describe how they will be monitored, reported on and provide triggers for intervention.

Natural Values

13. The CEMP is to specify construction requirements for biodiversity, by
 - a) Providing a map of the environmentally sensitive areas, and CEMP procedures to ensure additional precautionary measures are employed to reduce construction risk. The sensitive areas are to include habitats such as watercourses, known areas of Wallum froglet habitat and the immediate area surrounding the population of threatened flora onsite. The CEMP is to ensure these sites are marked on site by an appropriately qualified ecologist, and the area is sign posted prior to commencement of works.
 - b) Specifying procedures to manage areas of excavations, if left open and unsecured at night. These procedures are to include providing a means of escape and checking each morning for any trapped fauna.
 - c) Providing for the monitoring of weeds during construction and apply where appropriate or as directed by NPWS the appropriate treatment regimes.

Fire Trail and fire management

14. The CEMP is to specify requirements for management and remediation of the Category 1 - fire trail, by
 - a) providing measures to protect the general fire trail integrity and apply construction methods which reduce potential degradation.
 - b) providing fire trail remediation standards which are to accord with the NSW Rural Fire Service – Fire Trail Standard Version 1.1 dated June 2019, for a one Category-1 fire trail, and the NSW Rural Fire Service – Fire Trail Design, Construction and Maintenance Manual, published by the NSW Soil Conservation Service, dated 2017.
 - c) providing the preferred NPWS standards of fencing consistent with the current fencing along Kanangra Drive. Technical information provided in s.8.2.3 of the NPWS Park Facilities Manual (provided as **excerpt 1**).
 - d) including fire risk procedures to ensure management of hot works or machinery operation will not result in ignition, by making provisions for the presence of fire-fighting equipment

during high risk works, that correspond with periods of declared high or greater fire danger or ceasing works on a Total Fire Ban day. High risk works require the availability of fire suppression measures being available.

Environmental Performance, Contingency Planning and Reporting

15. The CEMP is to specify environmental performance monitoring, triggers for intervention and any contingency actions for potential or likely environmental issues arising from construction works. The environmental performance monitoring, compliance and reporting framework for the CEMP is to cover
- Erosion and sediment control installation, inspection and operation
 - Surface water management and issues
 - Hazardous materials management, if applicable
 - Threatened plant and animal habitat protection and site monitoring for areas identified as sensitive
 - Cultural heritage, if they arise
 - Remediation of the fire trail
 - Complaint management associated with park users and the adjoining community
16. The CEMP is to also include a reporting framework, which is linked to these Conditions.

Reasons:

- To ensure confirmation of any site-specific arrangements for the undertaking of the activity and to minimise the risk of environmental harm.*
- To provide detailed site-specific guidance to minimise environmental risk from the activity and to ensure appropriate management of stormwater and to minimise the risk of environmental harm associated with erosion and sedimentation.*
- To support the safe undertaking of the activity and provide appropriate information to the public.*
- To minimise fire risk. To ensure that equipment is stored and secured in suitable locations and that any damage from the storage of vehicles and equipment is repaired.*
- To ensure topsoil is managed appropriately and ground disturbance is minimised*
- To minimise biodiversity impacts.*

Certification of Infrastructure

17. Prior to the commencement of infrastructure works, the applicant must ensure that proposed works are certified to comply with *the Building Code of Australia (BCA)* or relevant Australian Standards, if required by the *NPWS Construction Assessment Procedure*. Evidence of compliance with the BCA or Australian Standards must be submitted to the NPWS Authorised Officer 14 days prior to commencement of the activity.
18. For those proposed works that do not require certification under the *NPWS Construction Assessment Procedure*, the applicant must still ensure that the activity is undertaken in accordance with any relevant requirements of the *Building Code of Australia* or Australian Standards and is safe and fit for the intended purpose.

Explanatory

- Building works mean an activity that comprises of Infrastructure works means any physical activity involved in the erection or alteration of on-park public or private assets and utility services, including demolition. Examples include car parks, roads, tracks, viewing platforms, landscaping, fencing, environment protection works and public utilities.*
- The process for obtaining certification is specified in the NPWS Construction*

Notification Process

19. The proponent must:

- a) notify NPWS in writing at least **7 days prior** to commencing the construction activity or works, and
- b) must hold an on-site meeting with NPWS and all relevant staff and contractors (and subcontractors) at least **2 days prior** to the commencement of the activity, and
- c) provide NPWS with the direct contact details of the designated supervisors details at least **48 hours prior** to the commencement of the activity.

DURING CONSTRUCTION

Availability of Documentation

20. A copy of the following documents must be kept on site and produced for inspection as requested by NPWS.

- a) The REF, and the determination notice issued to the proponent,
- b) The approved CEMP, which specifies the operation application of the proposed mitigation measures as agreed by NPWS, and
- c) The construction licence issued under s.151 of the *National Parks and Wildlife (NPW) Act 1974*.

Reasons: To ensure that the activity is undertaken in accordance with the CRA/REF and in accordance with relevant statutory approvals.

Compliance

21. The proponent and their contractor are to ensure that the CEMP and its provisions are implemented as outlined in the documentation and all environmental protection and mitigation measures are delivered as specified. Failure to implement or accord with the CEMP is a breach of this determination and the associated construction licence issued as the authorisation under the NPW Act.

Waste Management

22. Waste generated at the site from works undertaken as part of the construction activity must be managed in accordance with the *Protection of the Environment Operations Act 1997* and all associated related regulations, standards and industry guidelines. The proponent is to ensure all waste materials are removed, transported and disposed of appropriately.

Reasons: To ensure the appropriate management of waste material.
Explanatory - For further information on managing waste see
<http://www.environment.nsw.gov.au/waste/consult.htm>

Waterway Protection

23. Except as may be expressly provided in any other condition of this determination, the applicant must comply with section 120 of the *Protection of the Environment Operations Act 1997*.

Reasons: Explanatory - Section 120 states that a person who pollutes any water is guilty of an offence. Sections 121 and 122 provide that a person is not guilty of an offence if they are acting in accordance with a regulation or licence applicable to the activity.

Protection of Cultural Values (Aboriginal or Historic Heritage)

Objects or items of heritage significance

24. If during the course of construction, if:

- a) any Aboriginal objects, as defined under NPW Act 1974, are uncovered or discovered, and/or
- b) any relics, as defined under NSW *Heritage Act 1977*, are uncovered or discovered.

The proponent or their contractor must **cease work immediately** and notify the NPWS, work must not recommence until written advice to do so has been provided by NPWS or NSW Heritage.

Human remains

25. This determination does not authorise the disturbance or movement of any human skeletal remains. If during the course of the activity any human skeletal remains are located the proponent, or their contractor **must immediately cease the construction activity**, so no further harm is caused to the remains, and

- a) secure the area to avoid and prevent further harm to the remains, and
- b) notify the local police and Environment Line on 13 15 55 as soon as practicable and at that time provide any available details about the nature and location of the remains, and
- c) notify the NPWS Area Office on 02 4972 9000.

The proponent is only permitted to recommence the activity only after receiving confirmation in writing from the local police and NPWS that it is appropriate to do so.

Reasons: To protect cultural heritage values

Protection of Natural Values (Biodiversity)

26. If, during the course of construction activities, the proponent or their contractor becomes aware of the presence of additional threatened species, populations or their habitats, that were not initially identified which are likely to be affected by the activity, they must:

- a) immediately cease all work likely to affect the threatened entity, or their habitat, and
- b) notify NPWS if terrestrial or NSW Fisheries if aquatic, notification must be made as soon as practicable by phone and then in a written form.

Works must not recommence work until the proponent has received written advice from either NPWS and/or NSW Fisheries to do so.

Reasons: To minimise biodiversity impacts.

Incident Reporting

27. The proponent or their contractors must notify Environmental Line on 13 15 55 of all site incidents that are likely to cause or threaten the environment as soon as practicable after the person becomes aware of the incident (or within 4 hours).
28. NPWS is to be notified verbally within 24 hours, the proponent must seek direction on any additional procedures to be implemented. This is to be followed up with formal notification in writing of the incident within 7 days to the NPWS Area Office.

<i>Reasons:</i>	<i>To minimise the potential for pollutants to enter the waterway and surrounding environment.</i>
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POST CONSTRUCTION CONDITIONS

Environmental Performance Reporting

29. An environmental performance summary report is to be submitted on project completion and is to cover the all the performance criteria as specified in the CEMP. A final report (with photos) must be provided to NPWS within 1 month of the completion of the works. The report needs to provide an overview of the works from commencement to completion.

Operation Management Plan & Certification on Completion

30. Upon completion of construction works for the utility infrastructure works prior to the pipeline becoming operational, the proponent must ensure all works are certified to comply with the *Building Code of Australia* (BCA) or relevant Australian Standards, as required by the *NPWS Construction Assessment Procedure*. The proponent is required to provide evidence of compliance with the BCA or Australian Standards, to the satisfaction of NPWS.
31. The proponent must draft an operational management plan (OMP) to be submitted to NPWS which describes the planned approach regarding maintenance works and inspections of the pipeline. Requirements in the OMP include;
 - i. All inspections and minor maintenance undertaken will require 7 days' notice to NPWS
 - ii. General maintenance works such as fire trail works or repairs to the Pipeline that involve trenching will require 28 days' notice. A Conservation Risk Assessment is to be submitted to NPWS

<i>Reasons:</i>	<ul style="list-style-type: none">• <i>To ensure that completed building and infrastructure works are certified to comply with all necessary OEH policy and relevant statutory requirements.</i>• <i>To ensure works have been undertaken in accordance with the conditions of this approval.</i>
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Park Facilities Manual

8.2 Vehicle barriers

8.2.1 Square bollard



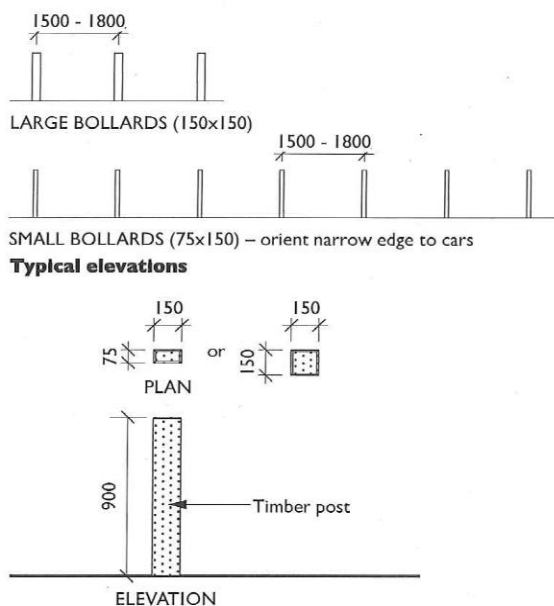
Subsurface fixed square timber bollard



Subsurface fixed rectangular timber bollard



Surface fixed rectangular timber bollard



- Typical detail** Refer technical sheets for installation options:
- fixed
 - removable
 - sub surface fixed
 - surface fixed

900mm high bollards should be located 300mm minimum clear of parking spaces and 600mm minimum clear from roadways

Where bollards are provided as *barriers* (AS/NZS 2890.1:2004) to prevent vehicles running over the edge of a raised platform or deck that is greater than 600mm high, then bollards should be 1300mm high and structurally designed to the loading requirements in AS/NZS 1170.1

Location

Suitable for all park areas

Principles

- Two shapes (rectangular and square) available to suit a range of visual settings and security requirements
- The smaller rectangular bollards are preferred for long runs to minimise visual impact and reduce cost
- The larger square bollards are to be used for short runs that don't create a high visual impact or where a higher security alternative is required
- Bollards should generally be spaced at 1800 centres, however the spacing can be reduced to 1500 for extra security or where bollards are approached at 90° to barrier alignment
- Consider installation in hardstand where possible to reduce maintenance requirements (e.g. mowing around in grassed areas)
- Removable bollards – smaller rectangular shape preferred for ease of removal

Technical

- Range of materials and finishes:
 - hardwood or softwood timber with chamfered top or steel end cap
 - steel tube (RHS/SHS) with welded top plate
 - steel universal section
 - recycled plastic bollard
 - refer A3 technical sheets for more detailed information

Refer A3 technical sheets:

SBA for subsurface fixed

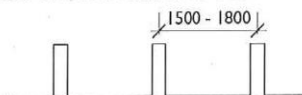
SBB for surface fixed



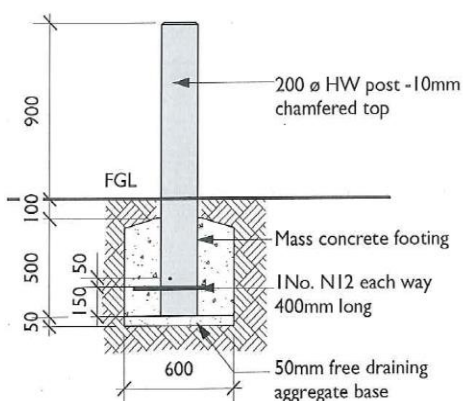
Park Facilities Manual

8.2 Vehicle barriers

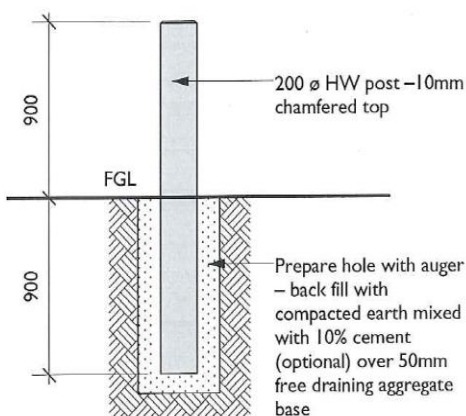
8.2.2 Round bollard



Typical elevation



Section - concrete footing



Section - augered hole

900mm high bollards should be located 300mm minimum clear of parking spaces and 600mm minimum clear from roadways.

Where bollards are provided as barriers (AS/NZS 2890.1:2004) to prevent vehicles running over the edge of a raised platform or deck that is greater than 600mm high, then bollards should be 1300mm high and structurally designed to the loading requirements in AS/NZS 1170.1

All dimensions in millimetres unless otherwise noted



Location

Heavily forested park areas away from urban centres

Principles for use

- Intended to reflect the round vertical elements of adjoining trees
- Bollards should generally be spaced at 1800 centres, however the spacing can be reduced to 1500 for extra security or where bollards are approached at 90° to barrier alignment
- Bollards to be 900mm high for vehicle/parking areas but may be reduced to 600mm for other areas
- Consider installation in hardstand where possible (e.g. gravel to reduce maintenance requirements, mowing around in grassed areas)
- Large timber post is too heavy to have a removable bollard option – use in conjunction with slip rails and round profile gate

Technical

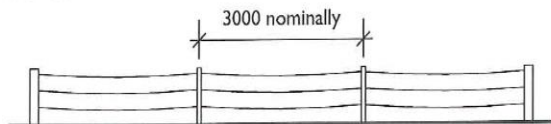
- 200Ø min. timber post
- Timber can be class 1–2 hardwood (new or recycled) or plantation softwood with approved preservative treatment – refer 10.2.6 Timber
- Recycled timber posts from fences (e.g. cypress pine) may be reused where appropriate
- Finish timber with Lanoguard or approved oil penetrating stain – refer 10.2.6 Timber



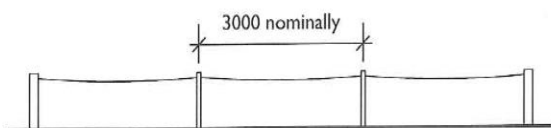
Park Facilities Manual

8.2 Vehicle barriers

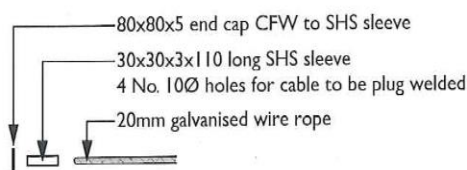
8.2.3 Post and cable



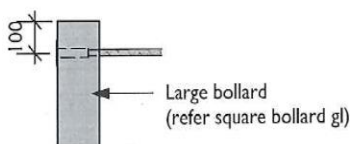
Typical elevation – multiple strand



Typical elevation – single strand

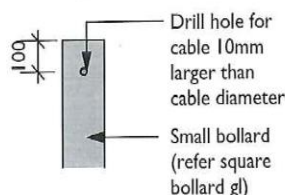
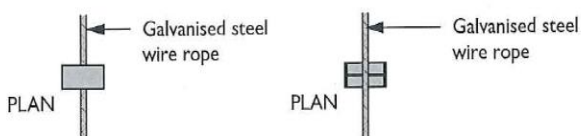


Cable end exploded view



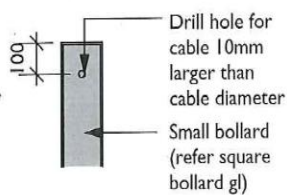
150x150 SAWN HARDWOOD or 150 SHS

End / corner post



150x75 SAWN HARDWOOD
or 150x100 RHS

Intermediate post



150 UB 14.0



Location

Suitable for all park areas where pedestrian access is not required

Not suitable for camping areas, due to potential hazard at night caused by poor visibility

Principles

- Large bollards used to end/corner posts
- Small bollards used for intermediate posts
- Incorporates steel cable with square profile bollards to provide continuous horizontal barrier
- Install bollards at 3000mm max. centres
- Terminate cable at large bollards – barrier ends, corners and no greater than 55m apart for long continuous lengths
- Use shorter distances between posts at curves to ensure that posts are not deflected
- Consider installation in handstand where possible to reduce maintenance requirements (e.g. mowing around in grassed areas)

Technical

Bollards

- Sawn hardwood, recycled plastic, steel tube or steel universal section – refer 8.2.1
- Square bollard

Cable

- 16–20mm galvanised steel wire rope for general use
- 32–40mm galvanised steel wire rope for higher vandal resistance
- Recycled steel wire rope not acceptable due to work health and safety risks (frayed wires)

All dimensions in millimetres unless otherwise noted

Telephone: 1300 463 954
Please Quote: DA/1385/2018
Responsible Officer: Salli Pendergast/JP

Coastal Hamlets Pty Ltd
47-51 Riley St
WOOLLOOMOOLOO NSW 2011



Notice of Determination of a Development Application
issued under the *Environmental Planning and Assessment Act 1979*
Sections 4.16, 4.17 and 4.18(1)(a)

Development Application No: DA/1385/2018
Applicant: Coastal Hamlets Pty Ltd
Property Address: Lot 52 DP 785458
Sewerage Works, 10 Summerland Road, SUMMERLAND
POINT NSW 2259
Proposal: Private Recycled Water Main (Water Reticulation
System)
Determination: Approved
Determination Date: 23 September 2019

Date from which this consent operates

In accordance with Section 4.20 of the *Environmental Planning and Assessment Act 1979*, this consent becomes effective and operates from the date of this notice being 23 September 2019.

Consent to lapse on

23 September 2024

Imposition of conditions

Subject to the provisions of Section 4.17 of the Act this Consent has been granted subject to conditions annexed to this consent.

Review of Determination

Subject to provisions of Sections 8.2, 8.3, 8.4 and 8.5 of the Act the applicant may make an application seeking a review of this determination, providing it is made in time for Council to determine the review within six (6) months of this determination.

Right of Appeal

Sections 8.7 and 8.10 of the Act confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court within six (6) months, from the date of determination.



Wyang Office: 2 Hely St / PO Box 20 Wyang NSW 2259

Gosford Office: 49 Mann St / PO Box 21 Gosford NSW 2250

P 1300 463 954 | E ask@centralcoast.nsw.gov.au | W centralcoast.nsw.gov.au | ABN 73 149 644 003

On behalf of the consent authority
Gary Murphy

Chief Executive Officer

Per:

A handwritten signature in dark ink, appearing to be 'Salli Pendergast', written in a cursive style.

Salli Pendergast

**Principal Development Planner
DEVELOPMENT ASSESSMENT**

1. PARAMETERS OF THIS CONSENT

- 1.1. Implement the development substantially in accordance with the plans listed below as submitted by the applicant and to which is affixed a Council stamp "Development Consent" and supporting documents unless modified by any following condition.

Architectural Plans:

Description/Title	Drawing No	Rev	Date	Author
Cover sheet	001	C	18.04.19	ADW Johnson
Overall site plan	002	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 1	003	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 2	004	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 3	005	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 4	006	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 5	007	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 6	008	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 7	009	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 8	010	C	18.04.19	ADW Johnson
Recycled Water Pipeline Alignment Plan – Sheet 9	011	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 1	012	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 2	013	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 3	014	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 4	015	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 5	016	C	18.04.19	ADW Johnson
Recycled Water Pipeline Longitudinal Section – Sheet 6	017	C	18.04.19	ADW Johnson

Supporting Documentation

Document	Title	Date
D13605742	Ecological Assessment Report (Gwandalan WM), Anderson Environment and Planning, Revision 1 (June 2019 AEP Ref:1834)	12/07/2019.
D13592624	Correspondence ADW Johnson (211688(61) SVD/BM	28.06.19
D13396720	SEE – ADW Johnson	Nov 2018

- 1.2. Carry out all building works in accordance with the Building Code of Australia.
- 1.3. Comply with the General Terms of Approval / requirements from the Authorities as listed below and attached as a schedule of this consent.

Government Agency / Department / Authority	Description	Ref No	Date
NSW Subsidence Advisory	Stamped Approved Plan (Subsidence Advisory)	D13396833	14 Nov 2018

2. PRIOR TO ISSUE OF ANY CONSTRUCTION CERTIFICATE

No Conditions

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 Pay developer contributions to Council as calculated in the formula below:

Developer contribution = \$7073.23 X Current CPI ÷ Base CPI

where "Current CPI" is the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Statistician at the time of payment of developer contributions pursuant to this condition, and "Base CPI" is the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Statistician at the date of this consent.

This condition is imposed pursuant to Section 7.11 or 7.12 of the *Environmental Planning and Assessment Act 1979*.

Note: Any works required for the development that are also identified in the relevant Contributions Plan may be subject to a credit in accordance with that Plan. Any request for a credit for works to be carried out in accordance with the Plan must be requested and agreed to by Council via a Works-in-Kind Agreement prior to the commencement of any works.

3.3 Install run-off and erosion controls to prevent soil erosion, water pollution or the discharge of loose sediment on the surrounding land by:

- erecting a silt fence and providing any other necessary sediment control measures that will prevent debris escaping into drainage systems, waterways or adjoining properties, and
- diverting uncontaminated run-off around cleared or disturbed areas, and
- preventing the tracking of sediment by vehicles onto roads, and
- stockpiling top soil, excavated materials, construction and landscaping supplies and debris within the lot.

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

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

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

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

3.5 Prior to the commencement of construction an initial Erosion and Sediment Control Plan (ESCP) prepared in accordance with the latest edition of the Landcom Publication *'Soils and Constructions- Volume 1'* (The Blue Book) shall be provided to the Principal Certifying Authority. This plan shall be modified and updated during construction to reflect any changes due to the on-ground/site conditions. A copy of any modifications or updates to the ESCP shall be provided to the PCA and provided to Council upon request.

Erosion and sediment controls shall be monitored, maintained and adapted in accordance with the most recent ESCP until the site is fully stabilised and landscaped. Failure to comply with this condition may result in fines under the provision of the *Protection of the Environment Operations Act 1997*.

3.6 Where conditions of this consent require approval from Council. An application for:

- Section 138 Roads Act Works Approval,
- Water Authority, water and sewer works approval.

must be lodged with Council and be accompanied by detailed design drawings and supporting information. Upon submission to Council, fees and charges will be calculated in accordance with Council's Management Plan. The fees and charges must be paid prior to Council commencing the design assessment.

3.7 The submission to Council of Civil Works design drawings and specifications detailing the following design requirements:

- Private recycled water main. The proposed air value must be relocated from the Kanangra Drive / Road 1 intersection approved under SCC/26/2018.
- Adjustment of services as required.
- Protection of infrastructure such as cable barriers
- Tree protection measures

Required design drawings are to be prepared in accordance with Council's *Civil Works Specification Design Guidelines 2018* and must be approved by Council as the Roads Authority prior to the commencement of works.

3.8 Prior to the commencement of detailed design works within any public road, a subsurface utility investigation Quality Level A must be undertaken in accordance with AS 5488.1:2019.

3.9 Prior to commencing any works upon public roads the developer and their contractor will be required to:

- Obtain a copy of the Council approved Civil Works plans and pavement design (if applicable).
- Obtain a copy of Council's *Civil Works Specification Construction Guidelines 2018*. This is Council's Specification for Civil Works and is available on Council's web site.

- Arrange a meeting on-site with Council's Principal Development Construction Engineer on 1300 463 954.
- 3.10 Prior to works associated with development commencing, a dilapidation report must be prepared and submitted to Council as the Roads Authority. The required dilapidation report must document and provide photographs that clearly depict any existing damage to the road, kerb, channel, footpath, driveways, water supply, sewer works, street trees, street signs or any other Council assets in the vicinity of the development.
- Note:** The report will be used by Council to determine the extent of damage arising from site and construction works.
- 3.11 Prior to the commencement of any works, the Applicant shall prepare a Construction Traffic Management Plan for the development. The plan shall include Traffic Control Plans prepared by a suitably qualified and experienced consultant. All works must ensure the safety of all vehicles and pedestrians within the frontage service road.
- 3.12 All water and sewer works or works impacting on water and sewer assets must be designed and constructed to the requirements of Council as the Water Supply Authority. The requirements are detailed in the Section 306 Notice of Requirements letter attached to this consent.
- 3.13 Trees and native vegetation proposed for retention and those approved for removal must be clearly marked on all final engineering plans. No Go Areas, disturbance areas and significant trees to be retained are shown in Appendix F of the Ecological Assessment Report (Andersen Environment and Planning, 12/07/2019). All fenced tree protection areas must be clearly marked as "No Go Area" on all plans. The location of all threatened species must also be marked on all plans.
- 3.14 Submit a Construction Environmental Management Plan to Council's Ecologist for approval. The CEMP must outline the construction method that will be used to minimise clearing of native vegetation and include all required environmental mitigation measures from these conditions of consent and the Ecological Assessment Report (Andersen Environment and Planning, 12/07/2019).

The CEMP must nominate stockpile site locations in existing cleared areas.

The CEMP must outline how the site will be rehabilitated, including stable landform shaping to facilitate regeneration from species occurring on site and triggers for revegetation if natural regeneration does not occur. No exotic species are to be introduced to site with the exception of sterile cover crops (if appropriate).

- 3.15 Install a high visibility temporary fence along the eastern boundary of the proposed disturbance area, including the "No Go Areas" shown in in Appendix F of the Ecological Assessment Report (Andersen Environment and Planning, 12/07/2019). All fenced areas are to be clearly marked as a "No Go Area" on the fencing itself. No clearing of vegetation, storage of vehicles or machinery, stockpiling, materials storage or unauthorised access is to occur within the fenced area.

4. DURING WORKS

- 4.1 All conditions under this section must be met during works.
- 4.2 Carry out construction or demolition works during the construction phase of the development only between the hours as follows:

- 7.00am and 5.00pm Monday to Saturday

No construction or demolition works associated with the development are permitted to be carried out at any time on a Sunday or a public holiday.

- 4.3 During the construction phase of the development, if any Aboriginal object (including evidence of habitation or remains), is discovered during the course of the work:
- a) All excavation or disturbance of the area must stop immediately in that area, and
 - b) The Office of Environment and Heritage must be advised of the discovery in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

Note: If an Aboriginal object is discovered, an Aboriginal heritage impact permit may be required under the *National Parks and Wildlife Act 1974*.

- 4.4 Implement and maintain all erosion and sediment control measures at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.
- 4.5 Keep a copy of the stamped approved plans on-site for the duration of site works and make the plans available upon request to either the Principal Certifying Authority or an officer of Council.
- 4.6 Re-use, recycle or dispose of all building materials in accordance with the Waste Management Plan submitted with the subject application.

- 4.7 Place all building materials, plant and equipment on the site of the development during the construction phase of the development so as to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure. Further, no construction work is permitted to be carried out within the road reserve unless the works are associated with a separate approval issued under the provisions of the *Roads Act 1993*.
- 4.8 The developer is solely responsible for any costs relating to alterations and extensions of existing roads, drainage, water and sewer infrastructure and other utilities for the proposed development.
- 4.9 Other public authorities may have separate requirements and should be consulted prior to commencement of works in the following respects:
- Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments;
 - AGL Sydney Limited for any change or alteration to gas line infrastructure;
 - Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements;
 - Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure.
- 4.10 During construction works, all cut or fill is to be constructed in such a manner that surface water will not be permanently or temporarily diverted to adjoining land and so that natural drainage from adjoining land will not be obstructed or affected.
- 4.11 Implement the Construction Environmental Management Plan prepared under condition 3.13 of this consent.
- 4.12 Clearing of native vegetation and significant trees is to be minimised. The construction methodology will be to install the pipeline and backfill progressively from the road side to minimise disturbance to native vegetation. All trenches will be backfilled by the end of each shift. Stockpiles are only to be located in existing cleared areas.
- 4.13 Ensure a qualified arborist (AQF level 5) is on-site to oversee and direct all trenching works within four (4) metres of any significant tree in order to minimise damage to trees and tree roots. Significant trees are those trees with a dbh of more than 500mm, hollow bearing trees, trees with glider scars, *Angophora inopina* or any other tree identified as significant in Appendix F of the Ecological Assessment Report (Andersen Environment and Planning, 12/07/2019). The arborist is to specify where hand trenching is to be undertaken to avoid damage to roots of significant trees.

- 4.14 Manually (hand) excavations or directional drilling must occur within Tree Protection Zones. All care is to be taken not to damage tree roots. Cut with a saw (not rip) any tree roots greater than 50mm that cannot be avoided.
- 4.15 Supervision by a suitably qualified Ecologist is required for all vegetation clearing works to mitigate any native animal welfare issues and ensure compliance with conditions of consent. The Ecologist must:
- Implement the required ecological protection measures outlined in these conditions of consent, the Construction Environmental Management Plan approved under condition 3.13 and the Ecological Assessment Report (Andersen Environment and Planning, 12/07/2019)
 - Mark trees for retention and removal
 - Supervise the installation of No Go fencing
 - Provide an environmental induction to civil contractors and subcontractors
 - Undertake pre clearance surveys, relocate fauna if any habitat trees need to be felled
 - Directly supervise all vegetation clearing works, including removal of any hollow bearing trees
 - Any hollow bearing trees are to be sectionally dismantled and hollows salvaged for reuse
 - During clearing and felling all fauna and habitat will be protected through fauna protection measures (eg. Soft felling, pre-clearing surveys, sectional dismantling or any measures as required ensuring no fauna is harmed during the works).

The Ecologist must provide updates in writing to Council's Ecologist upon completion of the above environmental control measures.

- 4.16 If any hollow bearing trees require removal they are to be felled by an arborist, sectionally dismantling and lowering the hollows carefully to the ground. Hollows that can be salvaged should be either modified as replacement hollows and erected on trees in the road reserve, or placed in nearby retained lands as ground habitat.
- 4.17 Maintain the temporary No Go fencing for the duration of construction works.
- 4.18 Undertake clearing in accordance with the approved tree removal/retention survey plan. Trees must be removed in such a manner so as to prevent damage to surrounding trees to be retained.

- 4.19 Vehicles and other equipment to be used on site must be free of soil, seeds and plant material before entering/leaving the site to prevent the spread of exotic plant species and pathogens. All vehicles and machinery must be inspected prior to site entry and those failing inspection are to be sent away for cleaning. Appropriate records of inspections shall be maintained.
- 4.20 Council is to be notified as soon as practicable (and not more than twenty-four (24) hours after) if a breach of these ecological protection conditions occurs.
- 4.21 No soils to be imported to the subject site except for Virgin Excavated Natural Material (VENM) as defined in Schedule 1 of the *Protection of the Environment Operations Act 1997*.
- 4.22 Classify all excavated material removed from the site in accordance with NSW EPA (1999) *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* prior to disposal. All excavated material must be disposed of to an approved waste management facility, and receipts of the disposal must be kept on-site.

5. PRIOR TO ISSUE OF ANY OCCUPATION CERTIFICATE

No Conditions

6. ONGOING

- 6.1 Undertake site rehabilitation in accordance with the Construction Environmental Management Plan approved under condition 3.13 to promote natural regeneration of vegetation or provide revegetation if required. No exotic species are to be introduced to site with the exception of sterile cover crops (if appropriate).

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 Law include fines up to \$1.1 Million and/or custodial sentences for serious offences.

ADVISORY NOTES

- Discharge of sediment from a site may be determined to be a pollution event under provisions of the *Protection of the Environment Operations Act 1997*. Enforcement action may commence where sediment movement produces a pollution event.
- The following public authorities may have separate requirements in the following aspects:
 - a) Australia Post for the positioning and dimensions of mail boxes in new commercial and residential developments
 - b) Jemena Asset Management for any change or alteration to the gas line infrastructure
 - c) Ausgrid for any change or alteration to electricity infrastructure or encroachment within transmission line easements
 - d) Telstra, Optus or other telecommunication carriers for access to their telecommunications infrastructure
 - e) Central Coast Council in respect to the location of water, sewerage and drainage services.
- Carry out all work under this Consent in accordance with SafeWork NSW requirements including the *Workplace Health and Safety Act 2011* No 10 and subordinate regulations, codes of practice and guidelines that control and regulate the development industry.
- Dial Before You Dig
Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone 1100 before excavating or erecting structures. (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial Before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial Before You Dig service in advance of any construction or planning activities.

- Telecommunications Act 1997 (Commonwealth)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the *Criminal Code Act 1995* (Cth) and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact: Telstra's Network Integrity Team on phone number 1800 810 443.