

EMS Form Environmental Assessment – Level 2

Drainage upgrade works between the pathway of HN62 and HN60 at Hasting Road, Terrigal

This form is an Environmental Impact Assessment or Review of Environmental Factors under Part 5 of the EP&A Act 1979 and S228 of the EP&A Reg (2000). This form is to be completed by a competent Assessing Officer in accordance Council's Environmental Assessment Procedure. Contact Council's Environmental Reporting Section if advice is required.

Section A: Work Activity

The below table is a quick reference summary of the **Infrastructure SEPP** only. Check the SEPP using the links provided to confirm your work activity meets the criteria to be permissible without consent.

Stormwater Management	
Clause 111 SEPP Infrastructure	
Stormwater management systems	<input type="checkbox"/>
Construction works	X
Routine maintenance works, including maintenance dredging to remove sediment build-up in a stormwater canal or at exit points into natural waterways that affects the efficiency of the stormwater management system	<input type="checkbox"/>
Environmental management works	<input type="checkbox"/>
Buildings, including buildings containing amenities for staff that have a height of not more than 12m above existing ground level	<input type="checkbox"/>

Does the work activity meet the relevant conditions to be permissible without consent?

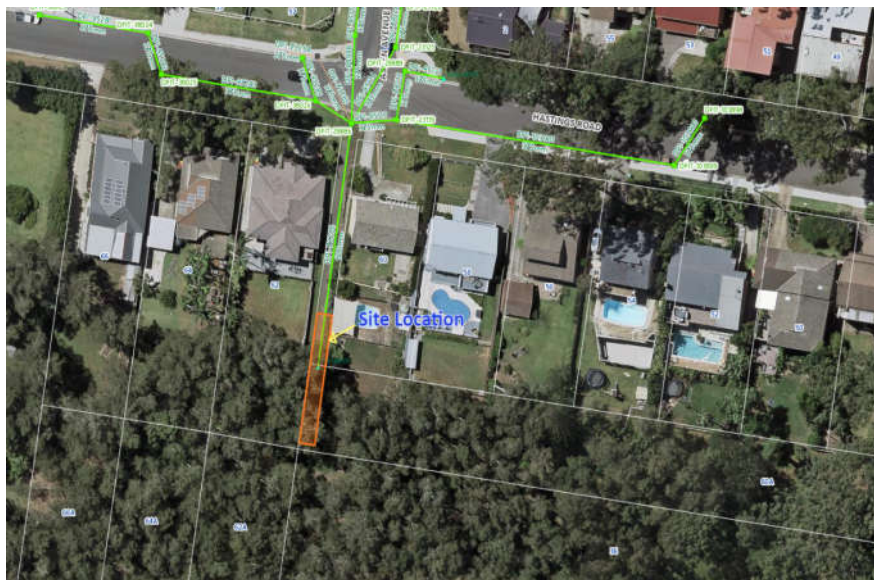
Yes

Section B: Nature and Scope

Project title Drainage improvement works between the pathway HN 62 and HN60 at Hasting road.

Location address The pathway between HN 60 and HN62 including 60A Hasting road Terrigal

Location map

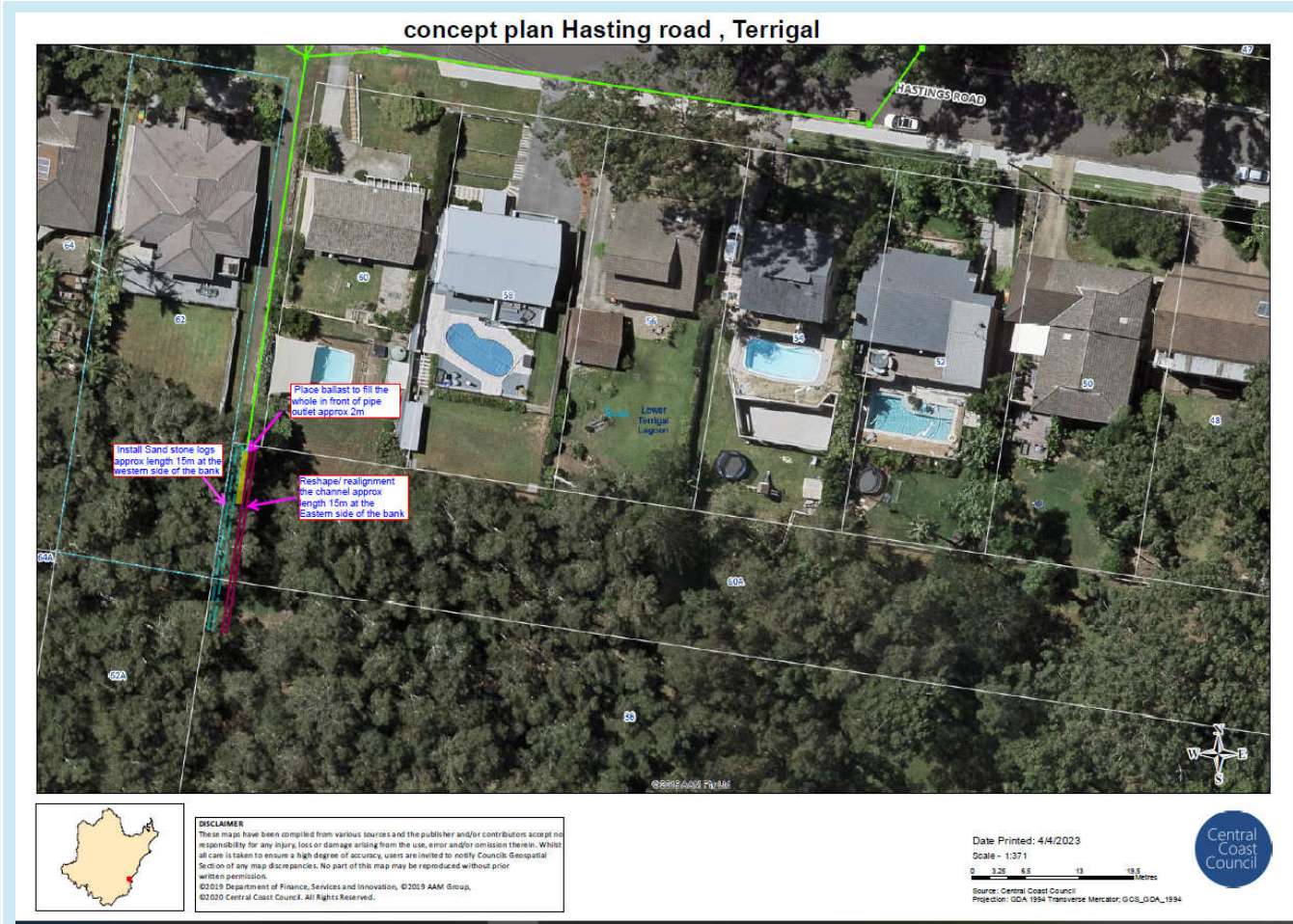


Site zoning R2 Low Density Residential RE1 public recreational land

Brief
description of
the work
activity

- Proposed drainage improvement works at Hasting Road, Terrigal include reference to 60A Hasting Road.
- Stockpile and acid sulphate treatment area will be located on 60A Hasting Road with Asset owner's permission.
- Drainage improvement / channel realignment works at the western and eastern side of the bank – the pathway between HN 62 and HN60 Hasting Road, Terrigal.
- Install sandstone logs of 15 meter in length@ 500mm wide on western side of pipe outlet.
- Existing table drain is 1.5 metres to 2 metres wide and 15m length which will undertake a minimal reshape/realign to improve water flow
- Also, slight direction changes for a length of 15m approx. at the eastern side of the bank.
- Place ballast to fill the whole in front of pipe outlet approx. 2m to prevent scouring at the time of rain events
- Reinststate disturbed area to its original condition with appropriate turf and soil etc.
- The work is expected to finish within four days (weather dependent)

Please see the concept plan below:



**Description
of the
existing
environment
Reasons for
undertaking
the work
activity**

Open drain with vegetation behind and it has been turfed on site. The proposed works will be in R2 low density residential and RE1 public recreational land.

Council's identified of the need to mitigate the bank erosion of the open drain as well as numerous complaints from the resident of HN62.

Section C: Environmental Impacts and Control Measures

Environmental Impacts	Details of Impacts	Impacts Without Controls	Control Measures	Impacts With Controls
Select if applicable or not applicable to the work activity.	Include a brief description of the environmental impact including cause, severity, extent and duration.	Insignificant, minor, potentially significant or significant.	Include a brief description of the control measures that will be implemented to avoid, minimise or offset the environmental impact.	Positive, insignificant, minor, potentially significant or significant.

Air Quality

Odours	Details of impacts Fumes and odours may be generated from operating vehicles, plant and equipment during construction	Minor: Odours generated. Limited to duration of works.	Control measures <ul style="list-style-type: none"> Ensure all plant and machinery is in good working order and fitted with appropriate exhaust dampening if required Positioning vehicles and machinery where the fumes will least affect neighbouring property occupants Not leaving vehicles or machinery idling when not in use Planning works and equipment to minimise trips between depots and worksites Vehicles will not be left to idle unattended 	Insignificant: No or minimal odours generated.
Dust	Details of impacts Potential for dust to be generated from vehicular movements, plant, equipment and materials associated with construction works.	Minor: Dust generated. Limited to duration of works.	Control measures <ul style="list-style-type: none"> Loads to be covered and vehicles to be fitted with tight tailgates during transport of materials. 	Insignificant: No or minimal dust generated.

			<ul style="list-style-type: none"> Area to be watered down during works as required. 	
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Water

Stormwater	Details of impacts Pollution of stormwater with sediment	Minor: Stormwater will potentially contain sediment or pollutants.	Control measures <ul style="list-style-type: none"> Implementation of sediment control plan prior, during and post works until the site is stabilised 	Minor: Stormwater will potentially contain sediment or pollutants.
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Groundwater Not Applicable

Water Bodies	Details of impacts Sediment could enter Terrigal Lagoon through Stormwater system	Minor: Works will be carried out within a water body and may cause minimal or temporary change to the water body.	Control measures <ul style="list-style-type: none"> Erosion and sediment control plan to be created and implemented prior, during and post works until the site is stabilised Works will be undertaken in time of no expected rainfall Works will be undertaken at low tide 	Minor: Works will be carried out within a water body and may cause minimal or temporary change to the water body.
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Soil

Soil Erosion and Disturbance	Details of impacts Stormwater drain installation and tidal flows within the canal and a groundwater level at 1.0m AHD will impact pipe construction methodologies and will need to be	Minor: Soils will be disturbed during works.	Control measures <ul style="list-style-type: none"> Works will be carried out in accordance with the final Geotechnical report (Martens) Section 5 Erosion and sediment control plan to be created 	Minor: Soils will be disturbed during works.
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	considered in the design of proposed structures.		<p>implemented prior, during and post works until the site is stabilised</p> <ul style="list-style-type: none"> Monitoring will be undertaken downstream to ensure no sediment is leaving the site Works will be undertaken in times of no expected rainfall Works will be undertaken at low tide or the area will be coffer dammed of to reduce sediment entering the water course Soil to be reinstated on site. Geofabric and geogrid will be laid between exposed surfaces and stabilising rock Excavations into low strength soils will require temporary retention and / or batters for grated pit, pipe installation trench and head wall footing excavation stability. Exposed areas turfed on completion of works 	
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Acid Sulphate Soils	<p>Details of impacts</p> <p>ASS has been identified on site by the contractor. Geocortex map the area as risk 5.</p> <p>As a result of the Geotechnical Engineer recommendations an ASS</p>	Minor: Some acid sulfate soils will be disturbed.	<p>Control measures</p> <ul style="list-style-type: none"> All works will be carried out in accordance with the ASS Management Plan. Refer to Council's Environmental Guideline – Acid Sulphate Soils – Project folder No: F2020/01266 	Minor: Some acid sulfate soils will be disturbed.
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	<p>plan has been created to minimise the impact to the waterway.</p>		<ul style="list-style-type: none"> • Soils will not be left exposed • All materials will be stockpiled away from the drainage line. • Stockpiling will be undertaken in accordance with the Ass Management Plan. • Surround Stockpiles with plastic wrapped haybales. • Treatment with lime – mixed in with machinery. • All materials will be tested using POPCS • All materials will be treated in accordance with the ASS management plan • Stockpiling will be undertaken adjacent to the site • Stockpiling and treatment of material will not be undertaken when rain is expected • Stockpiling and treatment area will have a base layer of lime and sand. All materials will be removed from the site on finalisation of the works and the soil under the stockpile area will be tested for pH (ASS or PASS). To ensure levels are returned to between 5 and 7 PH. • Stock pile and treatment area will be no less than 20 meters away from the proposed work. (Water) • Rehabilitate stockpile site with couch turf and continue the establishment maintenance and watering period for at least 2 months. Soils will be re-used on-site and any that cannot be re- 	
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			used will be disposed of at Woy Woy Landfill.	
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Land Contamination Not Applicable

Biodiversity

Native Fauna (Animals)	Details of impacts Part of stormwater drain is mapped as key fish habitat. Minor impact to aquatic fauna. Minor impact to amphibians. A site visit was carried out by Councils Environmental management Coordinator identifying no frogs within the system. The drain was murky and contained sediment. Little rain over the last few weeks.	Potentially Significant: Fauna be potentially be harmed in accordance with a permit.	Control measures <ul style="list-style-type: none"> Prior to any excavation the site will be assessed by Councils Environmental Management Coordinator for frogs and tadpoles If any aquatic fauna is identified within the system and aquatic ecologist will be contracted to relocate any fauna to outside of the works area Frog fencing will be installed if required Each morning prior works commencing the site will be assessed for fauna If required additional relocations will occur Fisheries permit will be required 	Potentially Significant: Fauna be potentially be harmed in accordance with a permit.
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<p>Native Vegetation</p>	<p>Details of impacts No trees are expected to be impacted by the proposed works although some pruning may be required to allow machinery to access work areas. The vegetation adjacent to the site is consistent with Coastal Narrabeen blackbutt forest. Sporadic <i>Casuarina glauca</i> is present.</p>	<p>Minor: Native vegetation will be pruned or cleared.</p>	<p>Control measures</p> <ul style="list-style-type: none"> No vegetation will be disturbed If pruning is required it will be undertaken in accordance with a Tree Works Permit. 	<p>Minor: Native vegetation will be pruned or cleared.</p>
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<p>Aquatic Ecology</p>	<p>Details of impacts Impact to aquatic flora and fauna as a result of pollutants or sediment entering the drainage system. Impacts would also be associated with the physical disturbance to the bank for the purpose of stabilisation.</p>	<p>Minor</p>	<p>Control measures</p> <ul style="list-style-type: none"> ERSCP will be created and implemented prior during and post works. Geofabric will be installed under and bank stabilisation Excavations will be undertaken at 100mm depth for each bucket and each bucket will be checked for aquatic fauna e.g. frogs. Any fauna will be returned to the drainage line. 	<p>Positive</p>
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Threatened Species & Ecological Communities Not Applicable

Weeds and Pests Not Applicable

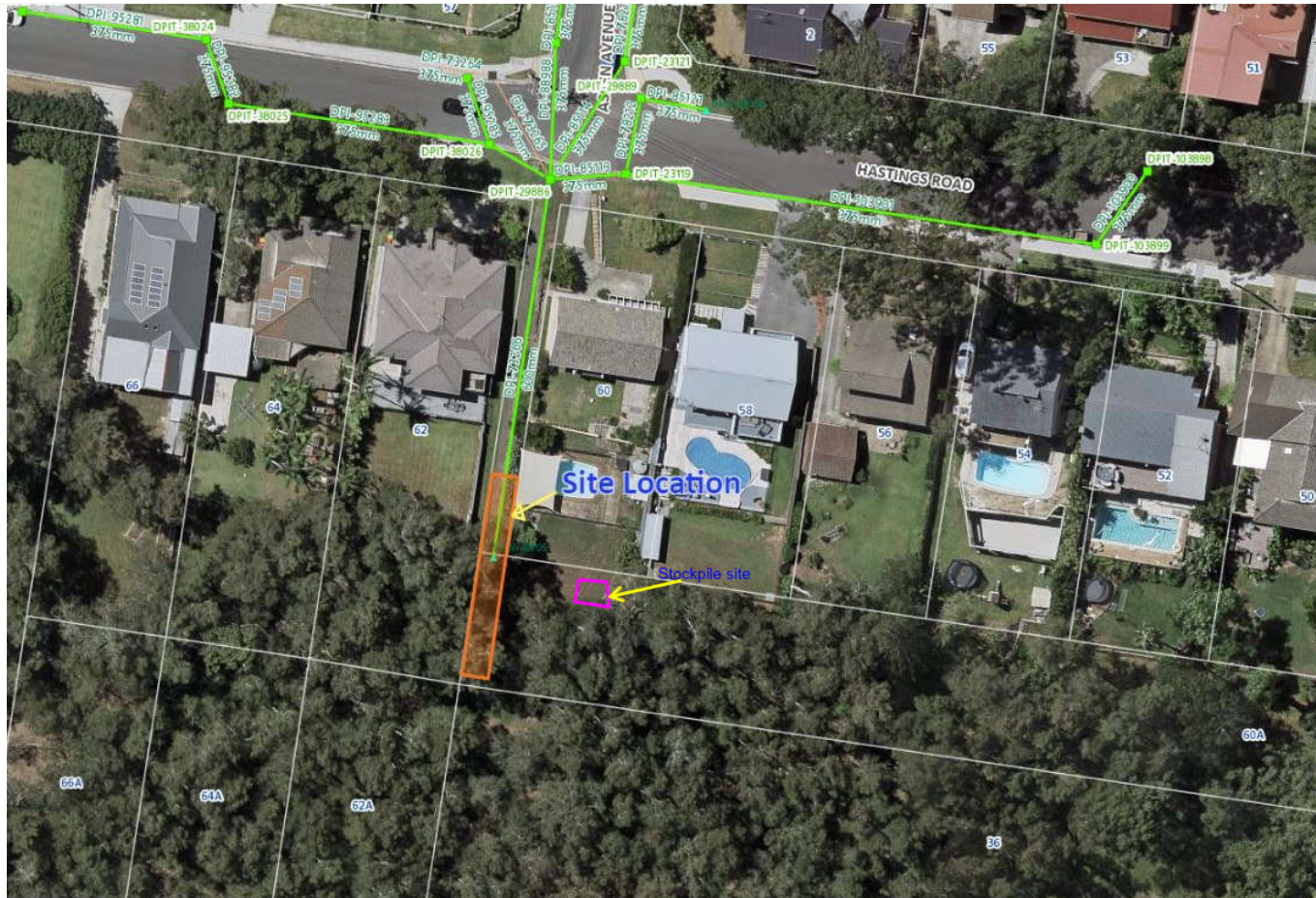
Conservation Areas
Not Applicable

Wildlife Corridors
Not Applicable

Waste & Energy

<p>Waste & Stockpiles</p>	<p>Details of impacts Waste will be generated as a result of excavation, removal of the existing stormwater pipes and clearing of vegetation. Imported and exported material may be stockpiled temporarily on site</p>	<p>Minor: Large volumes or special types of waste & stockpiles.</p>	<p>Control measures</p> <ul style="list-style-type: none"> • Where possible excavated drainage material will be placed on the bank and allowed to drain prior any transport or stockpiling • Where applicable materials will be reused, recycled and if required will be carted and disposed of at a licenced waste disposal facility. • ASS will be treated and reused on site or disposed of a Woy Woy landfill facility • Any waste materials generated on-site will be stored in a manner which has minimal effect on the environment and community. • Use the stockpile location as indicated below. • Rehabilitate stockpile site with couch turf and continue the establishment 	<p>Insignificant: Incidental waste & stockpiles.</p>
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			<ul style="list-style-type: none"> • maintenance and watering period for at least 2 months • soils will be re-used on-site and any that cannot be re-used will be disposed of at Woy Woy Landfill. 	
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Emissions & Radiation	Details of impacts	Insignificant	Control measures	Insignificant
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	Some minor emissions may be created from the plant, vehicles and machinery used onsite.		<ul style="list-style-type: none"> Not leaving vehicles or machinery idling when not in use All machinery and equipment will be serviced regularly to ensure minimal fumes and emissions are produced. Where applicable, low emission plant and equipment will be used 	
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Socio-economic

Aboriginal Heritage Not Applicable	An AHIMS search was conducted and it revealed no Aboriginal Heritage sites have been recorded or declared within the site.	AHIMS ID: 777909 Search Date: 15/07/2020 Project folder No: F2020/01266
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Local & State Heritage Not Applicable

Community Disturbance	Details of impacts Road users and neighbours will be impacted by the proposed works.	Minor: The community will be moderately disturbed during works or for short term periods.	Control measures Neighbours will be informed of proposed works via a letter before works commence. Disturbance will be limited to duration of works (max 3 weeks).	Insignificant: The community is likely to be disturbed during works or for short term periods.
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Economic	Details of impacts e.g. ongoing maintenance and operational costs, value for money, impacts to local businesses, competition with private sector, availability of funding.	Insignificant: Funds allocated.	Control measure <ul style="list-style-type: none"> Efficient use of resources. Proposed works will reduce maintenance costs for the stormwater drainage system and involve safety hazard. 	Positive: Cost savings.
Visual	Details of impacts Some reduction of visual amenities due to removal of vegetation (predominantly weeds and introduces species)	Insignificant: Visual amenity reduced only during works or short periods.	Control measures <ul style="list-style-type: none"> Turf will be laid onsite and maintained for 2 months with water. 	Positive: Improved visual amenity.

Miscellaneous

Environmental Hazards Not Applicable

Noise & Vibration	Details of impacts Potential noise and vibration impact from vehicles, plant, equipment and construction activities.	Insignificant: Incidental noise and/or vibration will be generated occasionally during business hours.	Control measures <ul style="list-style-type: none"> All works shall comply with the NSW EPA's Environmental Controls Manual and the Protection of the Environment Operations Act 1997 (NSW). Activity will be carried out during normal working hours: Monday through to Friday 7:00am – 5:00pm, Saturdays 7:00am – 1:00pm. All PPE is to be worn by all relevant personnel. 	Insignificant: Incidental noise and/or vibration will be generated occasionally during business hours.
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<p>Hazardous Chemicals & Dangerous Goods</p>	<p>Details of impacts There is potential for spills of petroleum, oils, lubricants and other substances from machinery and equipment.</p>	<p>Insignificant: HC&DG will be stored and handled during works.</p>	<p>Control measures</p> <ul style="list-style-type: none"> • Use EMS Guideline Chemical Spills • All chemicals and materials are to be used and stored according to their instructions. SDS forms for all materials to be kept onsite. • Spill kits are always to be kept with plant on-site. • PPE is always to be worn by all relevant personnel 	<p>Insignificant: HC&DG will be stored and handled during works.</p>
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Cumulative Impacts
Not Applicable

Additional Impacts
Not Applicable

Section D: Additional Information

Date of site inspection (and attendees)	12/02/2020	Nazmun Nahar, Joanne Mack, Phil Foster																				
Who is the relevant land owner/asset manager?	RTDW for the laneway and Natural Assets for 60A Hasting Road.																					
Concurrences, approvals, licences and/or permits	Select if applicable Fisheries Permit - Part 7																					
Consultation	<p>Consultation with the property owner of HN62, Hasting road Terrigal</p> <table border="1"> <thead> <tr> <th colspan="2">Consultation methods (tick all undertaken)</th> </tr> </thead> <tbody> <tr> <td>Letterbox drop</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Widespread mail out</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Door knock</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Newspaper add</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Meeting or forum</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Social media</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Council's website</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Internal meetings</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Emails/memos</td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <p>Meet on site with the property owner of HN 62 and also consulted with Larry Melican the asset owner of Natural Assets.</p>		Consultation methods (tick all undertaken)		Letterbox drop	<input type="checkbox"/>	Widespread mail out	<input type="checkbox"/>	Door knock	<input type="checkbox"/>	Newspaper add	<input type="checkbox"/>	Meeting or forum	<input type="checkbox"/>	Social media	<input type="checkbox"/>	Council's website	<input type="checkbox"/>	Internal meetings	<input checked="" type="checkbox"/>	Emails/memos	<input type="checkbox"/>
Consultation methods (tick all undertaken)																						
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Newspaper add	<input type="checkbox"/>																					
Meeting or forum	<input type="checkbox"/>																					
Social media	<input type="checkbox"/>																					
Council's website	<input type="checkbox"/>																					
Internal meetings	<input checked="" type="checkbox"/>																					
Emails/memos	<input type="checkbox"/>																					
Other relevant information	Attach or provide a document reference to other relevant information such as photos, reports, buildings plans or a Level 1 Environmental Assessment (if completed).																					
Replacement Planting	N/A																					
Project Handover	All controls will be included in the below CEMP																					

Section E: Authorisation

The completed form is to be sent to an Authorising Officer via email, TRIM or ECM for review and approval. A peer review may be undertaken by any other competent Assessing Officer if deemed necessary. The approved version is to be stored in TRIM or ECM (Subject 17.227) with a precis that includes the following: 'EMS Environmental Assessment – Level 2 – Project Title – Location'.

I have assessed the minor activity in accordance with Council's Environmental Assessment Procedure. The minor work activity meets the Environmental Assessment criteria and has been assessed to have a minor environmental impact. I will ensure that the environmental control measures committed to in this assessment are effectively communicated to the implementation/construction team.

Assessing Officer Name	Position	Service Unit	Date
Nazmun Nahar	Investigations Engineer	Technical Services Roads and Business Development	2/05/2023

Expand for peer reviewer's signature (optional)

I have reviewed the Environmental Assessment for the work activity and concur with the Environmental Assessment that the work activity is for minor works and will have a minor environmental impact. The activity is approved to proceed in accordance with the control measures committed to within this Environmental Assessment.

Authorising Officer Name	Position	Service Unit	Date
Scott Miller	Team Leader Investigations	Technical Services Roads and Business Development	2/05/2023

Expand for Authoriser's checklist (optional)

Appendix A: Threatened Species Assessment

Expand if threatened species assessment is applicable

Appendix B: Bulk Fisheries Permit Checklist

Expand if using the Bulk Fisheries Permit

Appendix C: Construction Environmental Management Plan

Construction Environmental Management Plan

Drainage upgrade and piping the open drain at Hasting Road, Terrigal – October 2020

Introduction

This Construction Environmental Management Plan is to be read in conjunction with

Environmental assessment part 5 level2

Geotechnical report

Acid Sulphate soil management plan

Responsibilities

- Position Title – Summary of responsibilities (e.g. undertake induction, daily inspections etc.
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Licences and Approvals

Fisheries permit application Part 7

Acid sulphate soil management plan

Advice and Incident Management

For environmental and heritage enquiries during business hours, contact Council's Environmental Reporting Unit.

For all environmental and heritage incidents, cease works and contact the Occurrence Hotline on 4350 5789. They will provide advice regarding if any further reporting is required to the NSW Environment Protection Authority, Fisheries or the Office of Environment and Heritage.

Induction, Training and Inspections

- Workers will be inducted with the content of this CEMP at the commencement of works.
- A copy of this CEMP, the Environmental Assessment and the other relevant document name will be made available on site.
- Inspections for compliance with this CEMP will be undertaken by name of responsible person/group at a frequency of when? Timing?.

Environmental Control Measures & Inspection Checklist

			
Item completed or complied with	Item requires further action or to be done at later date	Non-conformance	Other custom category

Inspected by	Name & Title	Date of inspection	Date
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Air Quality <ul style="list-style-type: none"> Ensure all plant and machinery is in good working order and fitted with appropriate exhaust dampening if required Positioning vehicles and machinery where the fumes will least affect neighbouring property occupants Not leaving vehicles or machinery idling when not in use Planning works and equipment to minimise trips between depots and worksites Vehicles will not be left to idle unattended Ensure all plant and machinery is in good working order and fitted with appropriate exhaust dampening if required Loads to be covered and vehicles to be fitted with tight tailgates during transport of materials. Area to be watered down during works as required. 		Result
		Result

Water <ul style="list-style-type: none"> Implementation of sediment control plan prior, during and post works until the site is stabilised Erosion and sediment control plan to be created and implemented prior, during and post works until the site is stabilised Works will be undertaken in time of no expected rainfall Works will be undertaken at low tide 		Result
		Result

Soil

<ul style="list-style-type: none"> • Works will be carried out in accordance with the final Geotechnical report (Martens) Section 5 • Erosion and sediment control plan to be created implemented prior, during and post works until the site is stabilised • Monitoring will be undertaken downstream to ensure no sediment is leaving the site • Works will be undertaken in times of no expected rainfall • Works will be undertaken at low tide or the area will be coffer dammed of to reduce sediment entering the water course • Soil to be reinstated on site. • Geofabric and geogrid will be laid between exposed surfaces and stabilising rock Excavations into low strength soils will require temporary retention and / or batters for grated pit, pipe installation trench and head wall footing excavation stability. • Exposed areas turfed on completion of works 	Result
<ul style="list-style-type: none"> • All works will be carried out in accordance with the ASS Management Plan. • Refer to Council's Environmental Guideline – Acid Sulphate Soils – Project folder No: F2020/01266 • Soils will not be left exposed • All materials will be stockpiled away from the drainage line. • Stockpiling will be undertaken in accordance with the Ass Management Plan. • Surround Stockpiles with plastic wrapped haybales. • Treatment with lime – mixed in with machinery. • All materials will be tested using POPCS • All materials will be treated in accordance with the ASS management plan • Stockpiling will be undertaken adjacent to the site • Stockpiling and treatment of material will not be undertaken when rain is expected • Stockpiling and treatment area will have a base layer of lime and sand. All materials will be removed from the site on finalisation of the works and the soil under the stockpile area will be tested for pH (ASS or PASS). To ensure levels are returned to between 5 and 7 PH. • Stock pile and treatment area will be no less than 20 meters away from the proposed work. (Water) • Rehabilitate stockpile site with couch turf and continue the establishment maintenance and watering period for at least 2 months. Soils will be re-used on-site and any that cannot be re-used will be disposed of at Woy Woy Landfill. 	Result

Biodiversity	
<ul style="list-style-type: none"> • Prior to any excavation the site will be assessed by Councils Environmental Management Coordinator for frogs and tadpoles • If any aquatic fauna is identified within the system and aquatic ecologist will be contracted to relocate any fauna to outside of the works area • Frog fencing will be installed if required • Each morning prior works commencing the site will be assessed for fauna • If required additional relocations will occur • Fisheries permit will be required 	Result
<ul style="list-style-type: none"> • No vegetation will be disturbed • If pruning is required it will be undertaken in accordance with a Tree Works Permit. • ERSCP will be created and implemented prior during and post works. • Geofabric will be installed under and bank stabilisation • Excavations will be undertaken at 100mm depth for each bucket and each bucket will be checked for aquatic fauna e.g. frogs. • Any fauna will be returned to the drainage line. 	Result

Waste and Energy

Control measures

- Where possible excavated drainage material will be placed on the bank and allowed to drain prior any transport or stockpiling
- Where applicable materials will be reused, recycled and if required will be carted and disposed of at a licenced waste disposal facility.
- ASS will be treated and reused on site or disposed of a Woy Woy landfill facility
- Any waste materials generated on-site will be stored in a manner which has minimal effect on the environment and community.
- Use the stockpile location as indicated below.
- Rehabilitate stockpile site with couch turf and continue the establishment maintenance and watering period for at least 2 months
- soils will be re-used on-site and any that cannot be re-used will be disposed of at Woy Woy Landfill.
- Not leaving vehicles or machinery idling when not in use
- All machinery and equipment will be serviced regularly to ensure minimal fumes and emissions are produced.
- Where applicable, low emission plant and equipment will be used

Result

Result

• Socio-Economic

Neighbours will be informed of proposed works via a letter before works commence. Disturbance will be limited to duration of works (max 3 weeks).

Result

- Efficient use of resources. Proposed works will reduce maintenance costs for the stormwater drainage system and involve safety hazard.
- Turf will be laid onsite and maintained for 2 months with water.

Result

Miscellaneous

- All works shall comply with the NSW EPA's Environmental Controls Manual and the Protection of the Environment Operations Act 1997 (NSW).

• Result

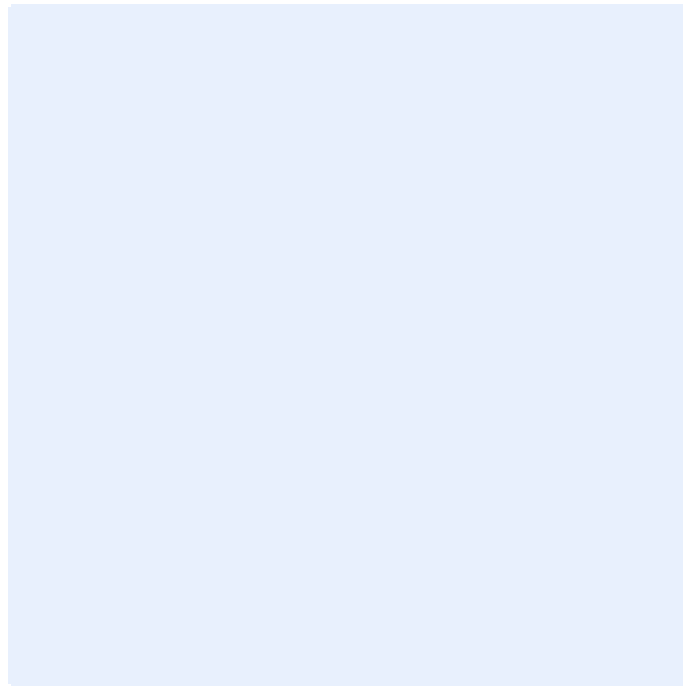
- Activity will be carried out during normal working hours: Monday through to Friday 7:00am – 5:00pm, Saturdays 7:00am – 1:00pm.
- All PPE is to be worn by all relevant personnel.
- Use EMS Guideline Chemical Spills
- All chemicals and materials are to be used and stored according to their instructions. SDS forms for all materials to be kept onsite.
- Spill kits are always to be kept with plant on-site.
- PPE is always to be worn by all relevant personnel

• Result

Additional Comments & Control Measures

Type here

Site Map/CEMP Diagram



SEPP resilience and hazards Hastings Rd Terrigal. Open drain restoration and stabilisation.

CI 2.8 Development on land in proximity to coastal wetlands or littoral rainforest

Note.

The Coastal Wetlands and Littoral Rainforests Area Map identifies certain land that is inside the coastal wetlands and littoral rainforests area as “proximity area for coastal wetlands” or “proximity area for littoral rainforest” or both.

- (1) Development consent must not be granted to development on land identified as “proximity area for coastal wetlands” or “proximity area for littoral rainforest” on the Coastal Wetlands and Littoral Rainforests Area Map unless the consent authority is satisfied that the proposed development will not significantly impact on—
 - (a) the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest, or

Works are being conducted within an already existing drainage outlet for the purposes of open drain stability. There is not expected to be additional biophysical, hydrological or ecological impacts associated with the works. No additional water or pollutants will be entering the wetland as a result of the works.

- (b) the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.

Water quality will be improved as a result of the works. Current conditions of the open drain are eroding the banks, this is causing sediment to enter downstream wetland. The works will stabilise the banks of the drain and reduce downstream pollution.

- (2) This clause does not apply to land that is identified as "coastal wetlands" or "littoral rainforest" on the Coastal Wetlands and Littoral Rainforests Area Map.

Our Ref: PN23/211

3 May 2023

Central Coast Council
ATTN: Nazmun Nahar
c/o: nazmun.nahar@centralcoast.nsw.gov.au

Dear Nazmun,

RE: Permit PN23/211 for dredging and reclamation in association with drainage upgrade works located at Terrigal Lagoon Wetland - Hastings Road, Terrigal - Lot 111 DP 850602

I refer to your application of 2/5/2023 and additional documentation provided 3/5/2023 for a permit under Part 7 of the Fisheries Management Act 1994 (FM Act). DPI Fisheries, a division of NSW Department of Primary Industries, assesses applications for dredging or reclamation / to harm marine vegetation / to block fish passage in accordance with Part 7 of the FM Act, Part 14 of the Fisheries Management (General) Regulation 2010 and the Policy and Guidelines for Fish Habitat Conservation and Management (2013).

An invoice for \$358 has been raised and will be posted separately. Payment will need to be finalised to activate the attached permit.

Please find your Part 7 permit attached. Please carefully read and note the conditions included in the permit. **If you agree that all the conditions are reasonable, appropriate and achievable, you must sign and date the attached sheet (Acceptance of Conditions) and return it to the Fisheries Contact Officer as soon as possible. If you believe that you cannot comply with all the Conditions then you must not commence work.** Instead, you should contact the Fisheries Contact Officer listed on the first page of the permit so that your concerns can be considered.

Please note that the attached permit providing authorisation under the FM Act to undertake dredging and reclamation does not provide authorisation under any other Act or planning instrument. It is Council's responsibility to ensure it possesses all appropriate approvals and land owner consents before works occur. This may include, but is not restricted to, development consent under the *Environmental Planning & Assessment Act 1979*, land owners consent and/or a licences under the *Crown Land Management Act 2016*, and controlled activity approvals under the *Water Management Act 2000*.

If you intend to have the work undertaken by a contractor, please ensure that the contractor receives a full copy of the permit and understands the importance of abiding by the conditions. As the permit holder, Central Coast Council is responsible for ensuring compliance with all conditions therein and with any other relevant legislative obligations. **Breaching a condition of a permit can incur an on-the-spot penalty notice of \$500 or up to \$11,000 through the courts pursuant to clause 259 of the *Fisheries Management (General) Regulation 2010*.**

The extent of work is to be restricted to that outlined in the application and plans submitted to the Department. **If for any reason, other works are required, or the works need to be extended to other areas, you must seek specific approval beforehand.** DPI Fisheries will require a justification for these variations and may charge additional assessment fees as outlined in the permit application.

Similarly, **please note the expiry date** on the permit. If the works are not completed by the expiry date you will need to obtain an extension. **Requests for an extension after the expiry date will**

incur the \$179 permit application fee. Requests for an extension before the expiry date will not incur an application fee.

DPI Fisheries places particular importance upon the need to minimise the harm to the natural environment both at the work site and in downstream/adjacent waters. The Department expects implementation of Best Management Practice with respect to erosion and sediment control as outlined in "The Blue Book - Managing Urban Stormwater: Soils and Construction" (4th Edition, reprinted July 2006), (see: <http://www.landcom.nsw.gov.au/news/publications-and-programs/the-blue-book.aspx>).

In addition to complying with the conditions of the permit, DPI Fisheries recommends that laminated copies of the permit be included on the site security signage and/or other high visibility areas of the works compound.

If you have any queries, please contact Charlotte Jenkins on charlotte.jenkins@dpi.nsw.gov.au.

Yours sincerely,



Charlotte Jenkins

Acting Senior Fisheries Manager, Central/Metro
Authorised delegate of the Minister for Primary Industries

cc: Fisheries Compliance

**Permit under Part 7 of the
FISHERIES MANAGEMENT ACT 1994**

Permit Number:	PN23/211
Permit Holder:	Central Coast Council Contact: Nazmun Nahar Phone: 0434 657 819 Email: nazmun.nahar@centralcoast.nsw.gov.au
Permit Area:	Terrigal Lagoon Wetland, Hastings Road, Terrigal, Lot 111 DP 850602
Permit Activity:	Dredging and reclamation associated with drainage upgrade works (as described in your application dated 2/5/2023)
Fisheries Manager Contact:	Charlotte Jenkins Phone: 0407 154 320 E-mail: charlotte.jenkins@dpi.nsw.gov.au
Fisheries Compliance Office Contact:	Central Coast District Email: ben.travis@dpi.nsw.gov.au Ph: 4328 8618

Unless cancelled or suspended sooner, this permit shall remain in force until:

5 May 2024

This permit is subject to the following Conditions:

ADMINISTRATIVE CONDITIONS

- 1) The **Acceptance of Conditions** form (attached) must be completed and returned to the nominated Fisheries Contact Officer before commencing any works authorised by this permit.
Reason – To remove any doubt that the Permit Holder understands and accepts the Conditions before work commences.
- 2) The **Commence Works Notification** form (attached) must be completed and sent to Fisheries Compliance (fisheries.compliance@dpi.nsw.gov.au) **and** the Fisheries Contact Officer (contact details listed above) at least three (3) days BEFORE the commencement of works authorised by this permit.
Reason - To ensure that local DPI Fisheries staff are aware that works authorised by this permit are about to commence.

The **Active Works Notification** form (attached) must be completed and sent to Fisheries Compliance (fisheries.compliance@dpi.nsw.gov.au) **and** the Fisheries Contact Officer (contact details listed above) at least 1 day BEFORE works are complete or machinery is removed from the site. *Reason - To provide an opportunity for local DPI Fisheries staff to inspect the site whilst machinery is still on site and available to do any remedial work that may be necessary.*
- 3) The **Post Works Notification** form (attached) must be completed and sent to Fisheries Compliance (fisheries.compliance@dpi.nsw.gov.au) **and** the Fisheries Contact Officer (contact details listed above) within 21 days of completion of works at the site.

Reason - To provide an opportunity for local DPI Fisheries staff to inspect the site to ensure compliance with the Conditions of this permit.

- 4) This permit (or a true copy) and a copy of the finalised Construction Environmental Management Plan (CEMP) must be carried by the permit holder or sub-contractor operating on-site at all times during work activity in the permit area.
Reason – DPI Fisheries staff may wish to check compliance of works with imposed conditions.

EXTENT OF WORKS

- 5) The permit holder must ensure that all works authorised by this permit are restricted to the permit area and are undertaken in a manner consistent with those described in the permit application and associated documents. Other works, which have not been described, are not to be undertaken.
Reason – This permit has been granted following an assessment of the potential impacts of the described works upon the aquatic and neighbouring environments. Other works, which were not described in the application have not been assessed and may have significant adverse impacts.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN & OTHER PLANS

- 6) A Construction Environmental Management Plan (CEMP), detailing provisions relating to the items listed below, is to be prepared **and submitted to the Fisheries Contact Officer for endorsement two weeks prior to any works taking place.** The CEMP must address:
- a) Site delineation and marking of “no go” areas (with the aim of keeping the impacted area to a minimum), including potential impacts to marine vegetation.
 - b) An Erosion and Sediment Control Plan (ESCP) must be prepared and implemented in a manner consistent with currently accepted Best Management Practice (i.e. Managing Urban Stormwater: Soils and Construction 4th Edition Landcom, 2004). Erosion and sediment control (ESC) devices must be designed to prevent sediment from entering the waterway and to prevent sediment plumes from spreading within the waterway. ESC devices must be installed prior to earth works commencing and be maintained in good working order for the duration of the works and subsequently until the site has been stabilised and the risk of erosion and sediment movement from the site is minimal.
 - c) The ESCP must include, but is not limited to:
 - i) A sediment fence is to be erected along the toe of the bank just above the waterline. The fence is to be of sufficient length and arrangement to capture all sediment that may wash towards water land from the worksite.
 - ii) A floating silt curtain is to be erected in a semi-circular arrangement with ends against the bank so as to contain all suspended sediments within the work area.
 - d) Use of temporary crossings or other access works (with the aim of keeping the impacted area to a minimum),
 - e) Material storage and stockpiling well away from the waterway (with the aim of keeping the impacted area to a minimum),
 - f) Site restoration and clean up (with the aim of ensuring that the impacted area recovers as soon as possible),
 - g) Site rehabilitation and revegetation (with the aim of ensuring that there are no long term impacts after works are completed).

Reason – To ensure that appropriate strategies for preventing sediment input to downstream waterways and rehabilitation of aquatic habitats and the riparian zone are proposed and carried out.

ACID SULFATE SOIL MANAGEMENT PLAN

- 7) An acid sulfate soil management plan is to be prepared by a suitably qualified person in accordance with the *Acid Sulfate Soil Assessment and Management Guidelines* (Acid Sulfate Soil Management Advisory Committee 1998) and developed consistent with best management practice outlined in *Restoring The Balance: Guidelines for Managing Floodgates and Drainage Systems on Coastal Floodplains* available at: http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0007/167875/restoring-balance-guidelines.pdf

The plan must be comply with the NSW EPA Waste Classification Guidelines, Part 4: Acid Sulfate Soils.

Reason – Avoid oxidation, and or appropriately treating potential acid sulfate soils to minimise impacts on aquatic ecosystems.

DEWATERING PLAN

- 8) The site shall not be dewatered, unless a Dewatering Management Plan is prepared and submitted as part of the Construction Environmental Management Plan required under Condition 6 of this permit. Any Dewatering Management Plan shall specifically consider any potential off-site impacts as a result of the dewatering operations and contain mitigation controls to effectively treat any discharge waters to prevent offsite pollution of any receiving waters.

WORK IN WATERS

- 9) Machinery is not to enter, or work from the waterway unless in accordance with works proposed in your application for the permit and the requirements of this permit.
Reason – To ensure minimal risk of water pollution from oil or petroleum products and to minimise disturbance to the streambed substrate.
- 10) Only clean rock (no fines) is to be used in construction of works authorised by this permit.
Reason – To avoid fines, clay and other sediment un-necessarily entering the waterway and potentially impacting on aquatic habitats.
- 11) Prior to use at the site and/or entry into the waterway, machinery is to be appropriately cleaned, degreased and serviced. Spill kits are to be available on site at all times.
Reason – To reduce the threat of an unintended pollution incident impacting upon the aquatic environment.
- 12) Geotextile fabric is to be used to isolate the natural bed of the waterway from any imported clean rock fill or other material used to create a work platform within the bed of the waterway.
Reason – Improve the ability to remove imported clean rock used in the work platform.

TIMING OF WORKS FOR LOW FLOWS/LOW TIDES

- 13) Works are to be undertaken during low flows in the Terrigal Lagoon and when Bureau of Meteorological forecast for the region indicates several days of clear, dry weather.
Reason – Timing the works for appropriate conditions can reduce delays and minimise impacts on the aquatic environments.
- 14) Works are to be undertaken during two hours either side of the low tide only.
Reason – Timing the works for appropriate conditions can reduce delays and minimise impacts on the aquatic environments.

AVOIDING HARM TO SNAGS, MARINE AND RIPARIAN VEGETATION

- 15) When working near marine vegetation (seagrass, mangroves and saltmarsh), riparian vegetation or water land these areas need to be identified and appropriately delineated as

“No Go” areas (with the aim of avoiding harm to these areas). Harm to marine vegetation, riparian vegetation or water land outside the work footprint approved under the authority of this permit is not permitted and any harm caused is to be documented and reported to the Fisheries Contact Officer. Any harm caused is to be restored in accordance with directions provided by the Fisheries Contact Officer.

Reason – To ensure that impacts on aquatic habitats and the riparian zone are minimised.

- 16) Material storage and stockpiling is not to be undertaken on water land, marine vegetation (saltmarsh, mangrove, seagrass) or riparian vegetation. Stockpiling must be undertaken in a manner to avoid harm to these types of vegetation or water land and should be located away from drainage lines and overland flow paths. Stockpiles and/or dewatering areas should be appropriately controlled by sediment fencing or other materials prescribed in the “Blue Book” to ensure sediments do not enter the waterway.

Reason – To ensure that impacts on aquatic habitats, the riparian zone and threatened saltmarsh communities are minimised. “Degradation of native riparian vegetation along NSW water courses” (excluding estuarine and marine waters) is listed as a Key Threatening Process under the provisions of the FM Act.

- 17) No snags¹ are to be removed, realigned or relocated without first obtaining the written authority of the Senior Fisheries Manager.

Reason – “Removal of large woody debris from NSW rivers and streams” is listed as a Key Threatening Process under the provisions of the FM Act. This approval has been granted on the basis that snags are not to be removed.

- 18) On completion of the works the site is to be rehabilitated and stabilised including but not limited to:

- a) Surplus construction materials and temporary structures (other than silt fences and other erosion and sediment control devices) installed during the course of the works are to be removed.
- b) Appropriate maintenance of erosion and sediment control devices is to be undertaken until the vegetation has successfully established and the site has stabilised OR until the suspended sediments have settled out of the water column.

Reason – To ensure that habitats are restored as quickly as possible, public safety is not compromised, aesthetic values are not degraded and sediment inputs into the waterway are reduced.

FISH KILL CONTINGENCY

- 19) A visual inspection of the waterway for dead or distressed fish (indicated by fish gasping at the water surface, fish crowding in pools or at the creek’s banks) is to be undertaken daily during the works. **Observations of dead or distressed fish are to be immediately reported to the Contact Officer by the Permit Holder.** In such a case all works are to cease until the issue is rectified and approval is given to proceed. If requested, the Permit Holder is to commit resources to the satisfaction of the Contact Officer for an effective fish rescue, if in the view of that officer, a fish kill event is imminent and likely to occur within or adjacent to the works area due to conditions associated with weather, water quality and other parameters.

Reason – DPI Fisheries needs to be aware of fish kills so that it can assess the cause and mitigate further incidents in consultation with relevant authorities. They are also potentially contentious incidents from the public perspective. Work practices may need to be modified to reduce the impacts upon the aquatic environment.

¹ “Snags” is a term used to describe **large woody debris** from trees and shrubs, including whole fallen trees, broken branches and exposed roots that have fallen or washed into a waterway and are now wholly or partially submerged by water. For the purposes of this permit, snags are only those pieces of large woody debris that are greater than 3m in length and 300mm in diameter and also includes submerged large rocks (of greater than 500 mm in two dimensions).

IMPORTANT NOTE:

In the event of any inconsistency between the conditions of this approval and:

- the drawings / documents referred to above, the conditions of this approval prevail to the extent of the inconsistency;
- any Government publication referred to in this permit, the most recent document shall prevail to the extent of the inconsistency; and
- the proponent's mitigation measures outlined in the application, the conditions of this approval prevail to the extent of the inconsistency.

STOP WORK ORDERS

A Fisheries Officer or other appropriate delegate who has reasonable cause to suspect that the conditions of this permit have not been complied with, **may order the work to stop immediately**. The order may be given to the permit holder or any person who informs the officer that they are acting in any capacity on behalf of the permit holder. Any damage caused to the habitat outside the specified permit area, or the carrying out of works not in accordance with the conditions specified in this permit and/or the application and that were accepted by the permit holder, could result in a breach of the *Fisheries Management Act 1994* or *Regulations*, and penalties of up to \$220,000 may apply. Orders may also be made requiring work to rectify any damage caused by unauthorised works. **Breaching a condition of a permit can incur an on-the-spot penalty notice of \$500 or up to \$11,000 through the courts pursuant to clause 259 of the *Fisheries Management (General) Regulation 2010*.**

Yours sincerely,



Charlotte Jenkins

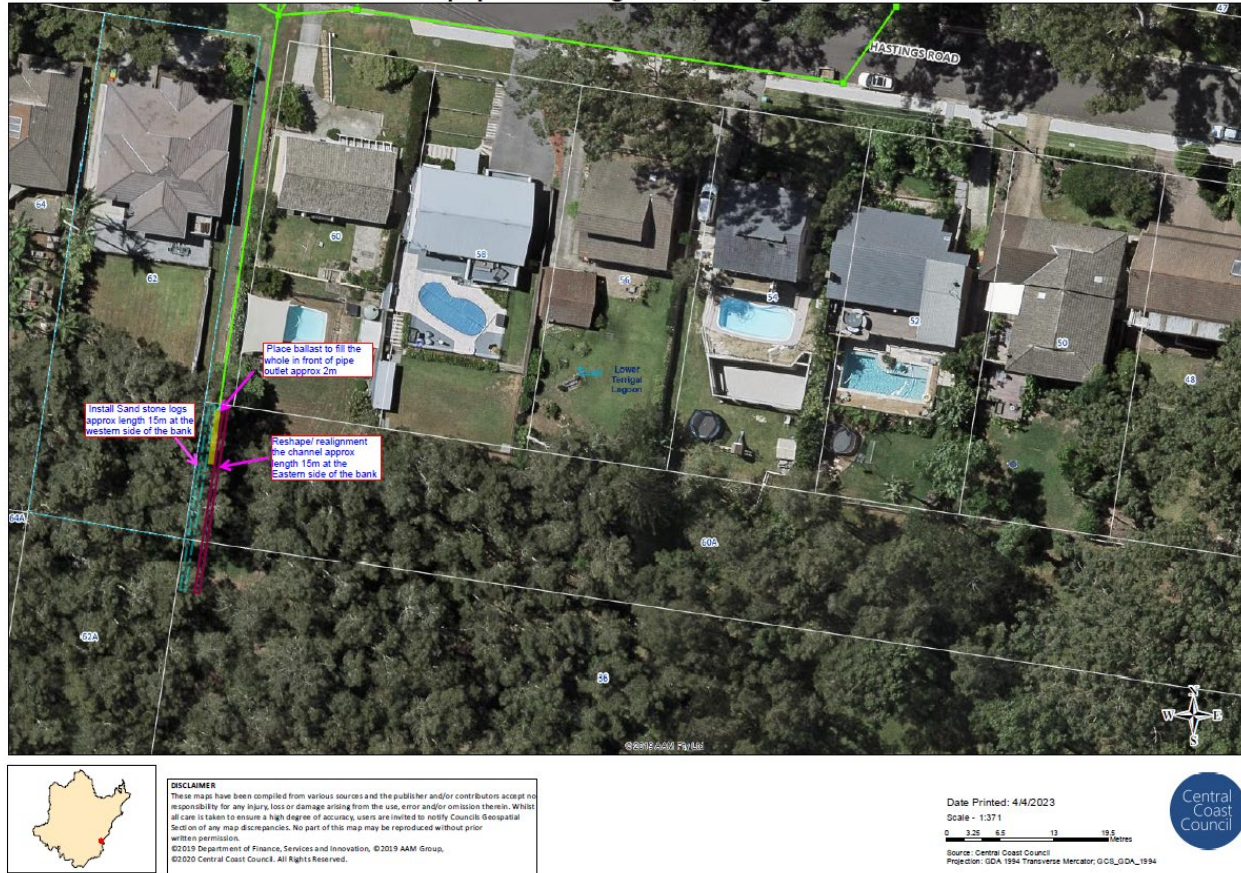
A/Senior Fisheries Manager, Central/Metro

Authorised delegate of the Minister for Primary Industries

3 May 2023

ATTACHMENT 1 – Site map depicting location of works authorised under this Fisheries Permit (PN23/211)

concept plan Hasting road , Terrigal



**Permit No. PN23/211 issued under Part 7 of the
*Fisheries Management Act 1994***

PLEASE COMPLETE THIS PAGE AND RETURN TO DPI FISHERIES

**In reference to Permit No. PN23/211 to undertake dredging or reclamation works
associated with drainage upgrade works to be undertaken at Terrigal Lagoon
Wetland- Hastings Road – Terrigal. Lot 111 DP 850602:**

Acceptance of Conditions Form

I the undersigned, acknowledge that I have read and understood and agree to comply with the conditions specified. I understand that penalties can be imposed for non compliance with conditions.

Permit holder's name: _____

Permit holder's signature: _____

Date: _____

**Please ensure you have SIGNED this page and RETAINED a
copy for your records before you email or text it to:**

ahp.central@dpi.nsw.gov.au

AND

Fisheries Compliance Office

Email: fisheries.compliance@dpi.nsw.gov.au

**Permit No. PN23/211 issued under Part 7 of the
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associated with drainage upgrade works to be undertaken at Terrigal Lagoon
Wetland- Hastings Road – Terrigal. Lot 111 DP 850602:**

Commence Works Notification Form

(Note: to be completed and returned 3 days before commencement of works)

Permit Holder's Name _____

Permit Number _____

Site Location _____

Works _____

Commencement Date: _____

Comments:

Project Manager: _____ Date: _____

**Please ensure you have SIGNED this page and RETAINED a
copy for your records before you email or text it to:**

ahp.central@dpi.nsw.gov.au

AND

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associated with drainage upgrade works to be undertaken at Terrigal Lagoon
Wetland- Hastings Road – Terrigal. Lot 111 DP 850602:**

Active Works Notification Form

*(Note: to be completed and returned 3 days before completion of works or before
machinery is removed from the site)*

Permit Holder's Name _____

Permit Number _____

Site Location _____

Works _____

Commencement Date: _____

Anticipated Completion Date: _____

Comments:

Project Manager: _____ Date: _____

**Please ensure you have SIGNED this page and RETAINED a
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AND

Fisheries Compliance Office

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**In reference to Permit No. PN23/211 to undertake dredging or reclamation works
associated with drainage upgrade works to be undertaken at Terrigal Lagoon
Wetland- Hastings Road – Terrigal. Lot 111 DP 850602:**

Post Works Notification Form

*(Note: to be completed and returned within 21 days of completion of works associated with
this permit, including rehabilitation of riparian areas)*

Permit Holder's Name _____

Permit Number _____

Site Location _____

Works _____

Date Completed _____

Assessment of works:

(e.g. straightforward, or complicated, i.e. were there complications that made it difficult to
comply with permit conditions e.g. weather, unforeseen geological conditions, etc.)

Project Manager: _____ Date: _____

**Please ensure you have SIGNED this page and RETAINED a
copy for your records before you email or text it to:**

ahp.central@dpi.nsw.gov.au

AND

Fisheries Compliance Office

Email: fisheries.compliance@dpi.nsw.gov.au