

Technical advice report

Coastal Protection and Management Act 1995
Coastal Protection State Planning Regulatory Provision April 2013
Sustainable Planning Regulation 2009

Coastal development

APPLICATION NOTES:

1. With the implementation of SARA from 1 July 2013 the DSDIP templates must be used when EHP provides technical advice to DSDIP -- these templates are available through MyDAS or the EHP sharepoint site - SARA DSDIP resources:
<http://sharepoint/sites/DevelopmentApplications/sara/SARA%20templates/Forms/AllItems.aspx>
2. This coastal development technical advice report may be used to support recommendations made for decisions when providing technical advice to DSDIP.
3. Explanatory notes for completing the report are given under each heading in brackets.
4. The report is to be completed, where indicated, to confirm conclusion of supervisory review/endorsement, and decision stages of the process.

COUNCIL DA NUMBER: OP-136059

EHP REF NUMBER: SDA 0913-004113

FILE NO:

SOR/119591_2

DEVELOPMENT TRIGGER:

- Operational work that is tidal works (including prescribed tidal works) or operational work within a coastal management district (mentioned in the *Sustainable Planning Regulation 2009*, schedule 7, table 2, item 13) which includes any of the following:
 - (i) interfering with quarry material as defined under the *Coastal Protection and Management Act 1995* on State coastal land above high-water mark;
 - (ii) disposing of dredge spoil or other solid waste material in tidal water;
 - (iii) constructing an artificial waterway;
 - (iv) removing or interfering with coastal dunes on land, other than State coastal land, that is in an erosion prone area as defined in the *Coastal Protection and Management Act 1995* and above high-water mark.

DEVELOPMENT DESCRIPTION:

Toogoom Seawall – Erosion Protection

LOCATION DESCRIPTION:

Esplanade, Kingfisher Parade, Toogoom

APPLICANT: Fraser Coast Regional Council

1. Proposal description

- To construct a rock seawall of approximately 400m in length.
- The seawall is an erosion protection measure for private properties located on the seaward side of Kingfisher Parade Toogoom.
- The seawall is to be located on an existing Road Reserve (esplanade) and managed by Fraser Coast Regional Council on behalf of the affected residents.
- The construction footprint is either within or adjacent to Fish Habitat Area, Marine Parks, Coastal Hazard and Erosion Prone Areas and will disturb/remove existing vegetation.
- There have been ongoing consultations with relevant state agencies, local government and affected residents since February 2013.

2. Technical advice Considerations

a) The State Development Assessment Provisions (SDAP)– Module 10 Coastal Protection

- Note that in considering an application against SDAP - module 10 Coastal Protection, it is taken that the policies of the Coastal Protection State Planning Regulatory Provision (Coastal SPRP) have also been considered. However, additional details that respond specifically to a policy of the Coastal SPRP may be included below if this is considered necessary.

Performance outcome Acceptable outcomes	Relevance to the proposal and advice (delete rows that are not relevant)
Table 10.1: All Development	
PO1. Development in a coastal hazard area is compatible with the level of severity of the coastal hazard.	
<p>AO1.1 Development is located outside a <u>high coastal hazard area</u> unless it is:</p> <p>(1) <u>coastal-dependent development</u>, or</p> <p>(2) <u>temporary, readily relocatable, or able to be abandoned</u>, or</p> <p>(3) <u>essential community service infrastructure</u>, or</p> <p>(4) <u>small- to medium-scale tourist development</u>, or</p> <p>(5) development that is compatible with temporary inundation due to its nature or function, or</p> <p>(6) within an existing built-up urban area, or is <u>redevelopment</u> of built structures that cannot be relocated or abandoned.</p> <p>AND</p> <p>AO1.2 Development referred to in AO1.1(6) avoids being located within a <u>high coastal hazard area</u>, or where this is not practicable, minimises the exposure of people and permanent structures to <u>coastal hazard impacts</u> and mitigates residual impacts where it is not practicable to locate the development outside a <u>high coastal hazard area</u>.</p>	<p>1. The development is located within the high coastal hazard area. Is not numbers 1 – 4 of the acceptable outcomes. The application meets number 5 of the outcomes as the proposed seawall is designed to withstand temporary inundation in a storm tide. The application also partially meets 6 as it is within an existing built-up urban area and is for protection of private property that cannot be relocated or abandoned.</p> <p>2. The location is in an existing built-up urban area is in the high hazard area. The proposal is for an erosion protection structure and cannot physically be located within private property. The structure will assist in mitigating impacts of coastal erosion and hazards on the existing properties.</p>
PO2. Development siting, layout and access in a coastal hazard area responds to a potential coastal hazard and minimises risk to personal safety and property.	
<p>AO2.1 Development within a <u>coastal hazard area</u> is located, designed, constructed and operated to maintain or enhance the community's resilience to <u>defined storm tide events</u> and <u>coastal erosion</u> by limiting the exposure of people and structures to <u>coastal hazard impacts</u> and ensuring:</p> <p>(1) <u>habitable rooms</u> of built structures are located above the <u>defined storm tide event</u> level and any additional freeboard level that would ordinarily apply in a flood prone area under a relevant planning scheme standard, or</p> <p>(2) a safe refuge is available for people within the premises during a <u>defined storm</u>.</p>	<p>AO2.1. The proposed development meets the acceptable outcomes. The structure will assist in enhancing resilience by protecting public space, access and private properties from the ongoing effects of erosion.</p> <p>AO2.2 - The structure is proposed to be built to a 50 year ARI design which includes an allowance for sea level rise of 0.3m to</p>

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<p>tide event, or (3) at least one evacuation route remains passable for emergency evacuations during a <u>defined storm tide event</u>, including consideration of the capacity of the route to support the evacuation of the entire local population within a reasonably short time frame (for example, 12 hours).</p> <p>AND</p> <p>AO2.2 Development within a <u>coastal hazard area</u> is located, designed and constructed to ensure exposed structures can sustain flooding from a <u>defined storm tide event</u>.</p> <p>AND</p> <p>AO2.3 <u>Essential community service</u> infrastructure is: (4) located so that it is not inundated by a <u>recommended storm tide event</u> specified for that infrastructure, or (5) located and designed to ensure any components of the infrastructure that are likely to fail to function or may result in contamination when inundated by a storm tide (for example, electrical switch gear and motors, water supply pipeline air valves) are: (a) located above the peak water level for a <u>recommended storm tide event</u>, or (b) designed and constructed to exclude storm tide intrusion or infiltration (including by being located in the ground), or (c) able to temporarily stop functioning during a <u>recommended storm tide event</u> without causing significant adverse impacts to the infrastructure or the community.</p> <p>AND</p> <p>AO2.4 Emergency services infrastructure and emergency shelters, police facilities, and hospitals and associated facilities have an emergency rescue area above the peak water level for a <u>recommended storm tide event</u>.</p> <p>AND</p> <p>AO2.5 <u>Redevelopment</u> of existing built structures avoids increasing the exposure of people and permanent structures to</p>	<p>2063.</p> <p>AO2.3 (4) Not applicable - The nature of the development means it will inundated at particular times of larger tidal movements.</p> <p>AO2.4 Not applicable</p> <p>AO2.5 Not applicable – not redevelopment</p>

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adverse coastal hazard impacts (including impacts on the development's ongoing operation).	
P03. Development directly, indirectly and cumulatively avoids an unacceptable increase in the severity of the coastal hazard, and does not significantly increase the potential for damage on the premises or to other premises.	
AO3.1 Development avoids increasing the number of premises from which people would need to be evacuated to prevent death or injury from a <u>defined storm tide event</u> .	AO3.1 Not applicable – development is an erosion protection structure
P04. Development avoids the release of hazardous materials as a result of a natural hazard event. Editor's note: Applications should: (1) assess the risk of <u>storm tide inundation</u> releasing or otherwise exposing hazardous materials, including appropriate emergency planning and contingency measures. (2) applications are to be supported by a report certified by a Registered Professional Engineer of Queensland (RPEQ) that demonstrates this performance outcome will be achieved.	
AO4.1 Development that involves the manufacture or storage of hazardous materials in bulk are designed to: (1) prevent the intrusion of waters from a <u>defined storm tide event</u> into structures or facilities containing the hazardous materials, or (2) ensure hazardous materials remain secured despite inundation, including secure from the effects of <u>hydrodynamic forcing</u> associated with wave action or flowing water.	AO4.1 Not applicable
P05. Natural processes and the protective function of landforms and vegetation are maintained in <u>coastal hazard areas</u>. Editor's note: Applications should be supported by a report certified by an RPEQ that demonstrates this performance outcome will be achieved.	
AO5.1 Development in an <u>erosion prone area</u> within the <u>coastal management district</u> : (1) maintains vegetation on coastal landforms where its removal or damage may: (a) destabilise the area and increase the potential for erosion, or (b) interrupt natural sediment trapping processes or dune or land building processes (2) maintains sediment volumes of dunes and near-shore coastal landforms, or where a reduction in sediment volumes cannot be avoided, increased risks to development from <u>coastal erosion</u> are mitigated by location, design, construction and operating standards (3) <u>maintains physical coastal processes</u> outside the development footprint for the development, including longshore transport	AO5.1 – The development involves the removal of vegetation in the projects footprint. The application is for an erosion protection structure (seawall) which in turn will protect any vegetation which is landward of the wall. (a) Not applicable (b) The wall will interrupt the ability of natural sediment trapping processes in the immediate area of the wall, however the application does not discuss to what degree this will be. (2) The proposed development is not expected to significantly change the natural movement of sediment transported from the area due to placing the wall as landward as possible. (3) The area outside the development footprint is expected to experience impacts in the long term as a result of sediment movements. Over time as the coastline to the east erodes through existing natural sediment movement the seawall may take on the effect of a groyne thereby trapping sand at the eastern end of the wall. In

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PO6. Erosion prone areas in a <u>coastal management district</u> are maintained as development free buffers, or where permanent buildings or structures exist, <u>coastal erosion</u> risks are avoided or mitigated	Not applicable as is not primarily for reclamation.
AO6.1 Development locates built structures outside the part of the <u>coastal management district</u> that is the <u>erosion prone area</u> unless the development: (1) is <u>coastal-dependent development</u> , or	AO6.1 The application is for coastal protection work - meets the acceptable outcome.

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<p>(2) is <u>temporary, readily relocatable, or able to be abandoned</u>, or</p> <p>(3) is essential community service infrastructure, or</p> <p>(4) is located landward of an applicable <u>coastal building line</u>, or</p> <p>(5) is located landward of the alignment of adjacent habitable buildings if there is no <u>coastal building line</u>, and on a lot that is less than 2000 square metres in size, or</p> <p>(6) is <u>redevelopment</u> of existing built structures, or</p> <p>(7) is <u>coastal protection work</u>, or</p> <p>(8) locates built structures landward of other permanent built structures that are likely to be defended from coastal erosion, if it is demonstrated the development cannot reasonably be located outside the <u>erosion prone area</u>.</p> <p>AND</p> <p>AO6.2 Development referred to in AO6.1(4), (5) or (8) above ensures sufficient space is provided seaward of the development within the premises to allow for the construction of <u>erosion control structures</u> (such as a seawall). AND</p> <p>AND</p> <p>AO6.3 Coastal-dependent development:</p> <p>(1) locates, designs and constructs relevant buildings or structures to withstand <u>coastal erosion impacts</u>, including by use of appropriate foundations or</p> <p>(2) installs and maintains <u>coastal protection works</u> to mitigate adverse impacts to people and permanent structures from <u>coastal erosion</u> at the location.</p> <p>AND</p> <p>AO6.4 Development that is <u>temporary, readily relocatable, able to be abandoned, or essential community service infrastructure</u>:</p> <p>(1) locates built structures landward of an applicable <u>coastal building line</u></p> <p>(2) where there is no <u>coastal building line</u>, locates habitable built structures landward of the alignment of adjacent habitable buildings</p>	<p>(2) Not applicable</p> <p>(3) Not applicable</p> <p>(4) Not applicable</p> <p>(5) Not applicable</p> <p>(6) Not redevelopment</p> <p>(7) Is coastal protection work.</p> <p>(8) Not applicable.</p> <p>AO6.2 Not applicable</p> <p>AO6.3 - Not applicable – not coastal dependent development</p> <p>AO6.4 Not applicable – not temporary or relocatable</p>

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<p>(3) locates lifesaver towers or beach access infrastructure to minimise its impacts on <u>physical coastal processes</u> or</p> <p>(4) where it is demonstrated that (1) or (2) is not reasonable and (3) does not apply:</p> <p>(a) locates built structures as far landward as practicable</p> <p>(b) uses layout design to minimise the footprint of the development that remains within the <u>erosion prone area</u>.</p> <p>AND</p> <p>AO6.5 Redevelopment of existing built structures not referred to in AO6.4, and excluding <u>marine development</u>:</p> <p>(1) relocates built structures outside that part of the <u>erosion prone area</u> that is within the <u>coastal management district</u>, or</p> <p>(2) relocates built structures as far landward as practicable, and landward of an applicable <u>coastal building line</u>, or</p> <p>(3) where there is no <u>coastal building line</u>, relocates built structures landward of the alignment of adjacent habitable buildings, or</p> <p>(4) uses layout design to minimise the footprint of the development that remains within the <u>erosion prone area</u>, or</p> <p>(5) provides sufficient space seaward of the development within the premises to allow for the construction of <u>erosion control structures</u>.</p> <p>AND</p> <p>AO6.6 Redevelopment of built structures in the <u>erosion prone area</u> within a <u>coastal management district</u>, which results in an intensification of use, mitigates the erosion threat to the development, having regard to:</p> <p>(1) use of appropriate foundations for the building or structure, given the practical design life of the development</p> <p>(2) installing and maintaining on-site <u>erosion control structures</u> if the development is not intended to be temporary.</p> <p>AND</p> <p>AO6.7 Development that is <u>coastal protection work</u>:</p>	<p>AO6.5 – Not applicable – not for redevelopment</p> <p>AO6.6 – Not applicable – not for redevelopment</p> <p>AO6.7 – The proposed development is coastal protection work in the form of an erosion control structure. The structure is to be</p>

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<p>(1) is in the form of <u>beach nourishment</u> that maintains the natural characteristics and landform of the beach or <u>foreshore</u> or</p> <p>(2) is in the form of an <u>erosion control structure</u> where <u>beach nourishment</u> is not feasible for addressing the risk of <u>coastal erosion</u>, and the <u>erosion control structure</u> is located on private land to the maximum extent feasible.</p>	<p>located within an existing road reserve so as to maintain amenity and public access along the foreshore.</p> <p>(1) Not beach nourishment</p> <p>(2) The structure is not on private property as this is not feasible without having to relocate infrastructure. The Fraser Coast Regional Council has made an agreement with affected residents to locate the structure on an existing Road Reserve. State government agencies with jurisdiction of the development have all agreed with this approach so as to allow for and maintain public access to the beach via a 10m access way.</p>
PO7. Development avoids or minimises adverse impacts on coastal resources and their values, to the maximum extent reasonable.	
<p>AO7.1 Coastal protection work that is in the form of <u>beach nourishment</u> uses methods of placement suitable for the location that do not interfere with the long-term use of the locality of, or natural values within or neighbouring, the proposed placement site.</p> <p>AND</p> <p>AO7.2 Marine development is located and designed to expand on or redevelop existing marine infrastructure unless it is demonstrated that it is not practicable to co-locate the development with existing marine infrastructure.</p> <p>AND</p> <p>AO7.3 Marine development:</p> <p>(1) relies on a natural channel of a depth adequate for the intended vessels, or</p> <p>(2) where there are no feasible alternative location for the facility in the local area that do not require dredging for navigation channel purposes:</p> <p>(c) involves <u>capital dredging</u> for new navigation channel purposes</p> <p>(d) is located, designed and operated to minimise the need for capital and subsequent maintenance <u>dredging</u> for navigation channel purposes.</p> <p>AND</p> <p>AO7.4 Development minimises capital <u>dredging</u> or the disposal of material in <u>coastal waters</u> during key biological events</p>	<p>AO7.1 – Not applicable – Not beach nourishment</p> <p>AO7.2 – Not applicable – Not marine development</p> <p>AO7.3 – Not applicable – Not marine development</p> <p>AO7.4 – Not applicable – No dredging involved.</p>

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(such as fish aggregations or spawning) for species found in the area.	
AND	
<p>AO7.5 Measures are to be incorporated as part of siting and design of the development to protect and retain identified ecological values and underlying ecosystem processes within or adjacent to the development site to the greatest extent practicable. This includes:</p> <p>(1) maintaining or restoring vegetated buffers between development and <u>coastal waters</u> to the extent practicable, unless the development is within ports or airports, or is <u>marine development</u></p> <p>(2) maintaining or enhancing the connectivity of ecosystems in consideration of the cumulative effect of the development in addition to existing developed areas</p> <p>(3) retaining coastal wetlands, seagrass beds and other locally important feeding, nesting or breeding sites for native wildlife.</p>	<p>AO7.5 Meets the acceptable outcomes – Ecology assessment undertaken. The applicant has stated there will be a “construction environmental management plan” developed to minimise impacts on fauna and flora during the construction of the wall. The plan includes undertaking monitoring for any impacts as well as only undertaking works as times of low tide to further reduce any risk of impact on marine fauna.</p>
AND	
<p>AO7.6 Measures are incorporated as part of siting and design of the development to maintain or enhance water quality to achieve the <u>environmental values</u> and water quality objectives outlined in the Environmental Protection (Water) Policy 2009.</p>	<p>AO7.6 – The applicant states “the seawall design has considered the environmental values outlined in the EPP Great Sandy Strait and coastal creeks”.</p>
AND	
<p>AO7.7 Development avoids the disturbance of acid sulphate soils, or where it is demonstrated that this is not possible, the disturbance of acid sulphate soils is carefully managed to minimise and mitigate the adverse effects of the disturbance on coastal resources.</p>	<p>AO7.7 – The application states that As the works will require excavation below 5m AHD, there is the potential that acid sulfate soils (ASS) will be encountered during construction. An acid sulfate soil management plan (ASSMP) was developed for the project area in 2004. The 2004 geotechnical investigation did not encounter ASS above the water table, which at the time was at - 1.5m AHD, however there is the potential that ASS may be present at depth.</p> <p>It is intended that the existing ASSMP would be updated and implemented for this project. The ASSMP will include methods to mitigate potential environmental impacts through the implementation of appropriate controls for handling, managing and treating ASS material, should these soils be encountered during excavation works. If material requires treatment the ASSMP covers a number of possible alternative options for treatment (such as liming).</p> <p>Due to the size of the development, the level of community concern/interest in the project and the applicant is local government on behalf of the affected residents, it is recommended that a condition be placed on any development permit stating that Works must comply with the latest edition of the “Instructions for the Treatment and Management of Acid Sulfate Soils”, 2001, Queensland Government.</p>
<p>PO8. Coastal protection work is undertaken only as a last resort where erosion presents an imminent threat to public safety or permanent structures.</p> <p>Editor's note: Applications for coastal protection work must be supported by a report certified by an RPEQ that demonstrates how the</p>	

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engineering solution sought by the work will be achieved.	
<p>AO8.1 Coastal protection work is only undertaken to protect existing permanent structures from imminent adverse coastal erosion impacts, and the structures cannot reasonably be relocated or abandoned.</p> <p>AND</p> <p>AO8.2 Coastal protection work is undertaken on private land to the maximum extent reasonable.</p> <p>AND</p> <p>AO8.3 Coastal protection work does not increase the coastal hazard risk for adjacent areas or properties.</p>	<p>AO8.1 – The application states - once constructed, the seawall will protect the properties at 48 to 80 Kingfisher Parade from on-going beach erosion. However, the beach erosion is likely to continue at Toogoom Beach and as a result the ends of the seawall may require extension overtime to protect the neighbouring properties either side of the current seawall footprint. Typically erosion in these locations occurs at an average rate of 1.5 m per year. The remaining dune buffer at the eastern end is approximately 30m wide. This implies that additional erosion protection may be required in these locations within the next 20 years.</p> <p>AO8.2 – The works are not located on private land. Refer AO6.7</p> <p>AO8.3 – The works will assist in protecting adjacent properties from coastal hazards. The crest height of the wall is approximately 1m above surrounding ground level. Once this is overtopped however, there will be potential flooding of properties as would be the case without the wall.</p>
PO9. Development avoids adverse impacts on matters of state environmental significance, or where this is not reasonably possible, impacts are minimised and residual impacts are offset.	
<p>AO9.1 Development:</p> <p>(1) is set back from <u>matters of state environmental significance</u></p> <p>(2) avoids interrupting, interfering or otherwise adversely impacting underlying natural ecosystem components or processes and interactions that affect or maintain the <u>matters of state environmental significance</u>, such as water quality, hydrology, geomorphology and biological processes, or</p> <p>(3) incorporates measures as part of its location and design to protect and retain <u>matters of state environmental significance</u> and underlying ecosystem processes within and adjacent to the development site to the greatest extent practicable.</p> <p>Editor's note: Applications for development should identify any threatened species or their habitats, or threatened ecosystems, that may be affected by the proposal. In particular, applications should identify and describe how the development avoids adverse impacts on any critical life stage ecological processes within or adjacent to the development area.</p> <p>AND</p>	<p>AO9.1 – Matters of state environmental significance associated with this application include: Great Sandy Marine Park and Fish Habitat Area B. The development triggers assessment of the impacts on the Fish Habitat B area which is undertaken by another state government agency. The development also requires a permit under the Great Sandy Marine Park legislation and this is assessed by Marine Resource Management unit of DNPRSR (QPWS).</p> <p>Both agencies have been involved in the meetings/discussions around the Toogoom erosion issues for many years previous to this application being submitted.</p>

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<p>AO9.2 An <u>environmental offset</u> is provided for any unavoidable significant residual impact on <u>matters of state environmental significance</u> caused by the development. Editor's note: Applications for development should identify anticipated losses, and outline what actions are proposed to be undertaken to offset the loss in accordance with the relevant Queensland Government Environmental Offset Policy available from the Department of Environment and Heritage Protection library catalogue.</p>	<p>AO9.2 – No offsets required – the terrestrial vegetation community in the area is mapped as "of least concern" and therefore does not trigger an offset.</p> <p>The application states that the Marine vegetation being disturbed/removed as a result of the development does not trigger an offset under the Marine Fish Habitat Offset Policy.</p>
<p>PC10. Development maintains or enhances general public access to or along the <u>foreshore</u>, unless this is contrary to the protection of coastal resources or public safety.</p>	
<p>AO10.1 Development adjacent to <u>state coastal land</u> or tidal water: (1) demonstrates that restrictions to public access are necessary for: (a) the safe or secure operation of development, or (b) the maintenance of coastal landforms and coastal habitat (2) separates residential, tourist and retail development from tidal water with public areas or public access facilities, or (3) maintains existing public access (including public access infrastructure that has been approved by the local government or relevant authority) through the site to the <u>foreshore</u> for: (a) pedestrians, via access points including approved walking tracks, boardwalks and viewing platforms, or (b) vehicles, via access points including approved roads or tracks.</p> <p>AND</p> <p>AO10.2 Development adjacent to <u>state coastal land</u>, including land under tidal water: (1) is located and designed to: (a) allow safe and unimpeded access to, over, under or around built structures located on, over or along the <u>foreshore</u> (b) ensure emergency vehicles can access the area near the development, or (2) minimises and offsets any loss of access to and along the <u>foreshore</u> within two kilometres of the existing access points, and the access is located and designed to be consistent with (1)(a) and (b).</p>	<p>AO10.1 –</p> <ol style="list-style-type: none"> (1) There will be no change to public access as a result of these works. (2) Not applicable (3) Public access will be maintain via a 10m access way. At time of maintenance this access way may be closed to allow machinery to access the wall. <p>AO10.2</p> <ol style="list-style-type: none"> (1) A 10m access way between the property boundaries and the wall with formal steps located in line with a pathway from Kingfisher Parade will allow safe access to the beach. The 10m access way can be accessed by emergency vehicles/machinery as necessary. (2) Not applicable.

Performance outcome Acceptable outcomes	Relevance to the proposal and advice (delete rows that are not relevant)
Table 10.1.1: All Development	
<p>AND</p> <p>AO10.3 Any parts of <u>private marine development</u> that extend over tidal water are to be designed, constructed and used for marine access purposes only.</p>	<p>AO10.3 – Not applicable.</p>
<p>PO11. Development avoids structures attaching to, or extending across, non-tidal <u>state coastal land abutting tidal waters</u>.</p>	
<p>AO11.1 <u>Private marine development</u> and other structures such as decks or boardwalks for private use do not attach to, or extend across <u>state coastal land</u> that is situated above the high water mark.</p> <p>Editor's note: For occupation permits or allocations of State land, refer to the Land Act 1994.</p>	<p>AO11.1 – Not applicable – not private marine development.</p>
<p>PO12. Further development of <u>canals, dry land marinas and artificial waterways</u> avoids or minimises adverse impacts on coastal resources and their values, and does not contribute to:</p> <p>(1) degradation of water quality (2) an increase in the risk of flooding (3) degradation and loss of <u>matters of state environmental significance</u> (including, but not limited to, coastal wetlands, fish habitat areas and migratory species habitat).</p>	
<p>AO12.1 The design, construction and operation of artificial tidal waterways maintains the <u>tidal prism volume</u> of the natural waterway to which it is connected.</p> <p>AND</p> <p>AO12.2 The design, construction and operation of artificial tidal waterways does not increase the number of premises vulnerable to flooding from a <u>defined storm tide event</u>.</p> <p>AND</p> <p>AO12.3 The location of <u>artificial waterways</u> avoids <u>matters of state environmental significance</u>, or does not result in any significant adverse effect on <u>matters of state environmental significance</u>.</p>	<p>AO12.1 – Not applicable – Not a canal, dry land marina or artificial waterway.</p>
<p>PO13. Development does not involve <u>reclamation</u> of land below the <u>highest astronomical tide</u>, other than for the purposes of:</p> <p>(1) <u>coastal-dependent development</u>, public <u>marine development</u> or community infrastructure (2) strategic ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan, where there is a demonstrated net benefit for the state or region and no feasible alternative exists (3) <u>coastal protection work</u> or work necessary to protect coastal resources or <u>physical coastal processes</u>.</p>	
<p>No acceptable outcome is prescribed.</p>	<p>Any reclamation involved in this development is an integral part of the erosion protection works. An area behind the wall where</p>

Performance outcome Acceptable outcomes	Relevance to the proposal and advice (delete rows that are not relevant)
Table 10.1.1: All Development	
	existing erosion has receded to less than 10m from the property boundaries will be backfilled as a result of the construction of the wall. The material will be sourced from the excavation of the trench for the construction of the wall.

Performance outcome Acceptable outcomes	Relevance to the proposal and technical advice (delete rows that are not relevant)
Table 10.1.2: Operational Work	
<p>P01. Tidal works that is <u>private marine development</u> does not result in adverse impacts to tidal land.</p> <p>Editor's note: In addressing this performance outcome, the applicant should also have regard to requirements for <u>private marine development</u> in the prescribed tidal works code in the Coastal Protection and Management Regulation 2003.</p> <p>Editor's note: Applications should be supported by a report certified by an RPEQ to demonstrate compliance with this performance outcome.</p>	
<p>AO1.1 The location and design of tidal works that is <u>private marine development</u>:</p> <p>(1) is on private land abutting <u>state tidal land</u> and used for property access purposes</p> <p>(2) occupies the minimum area reasonably required for its designed purpose</p> <p>(3) is not to be roofed or otherwise covered</p> <p>(4) does not require the construction of <u>coastal protection works</u>, riverbank hardening or <u>dredging</u> for marine access</p> <p>(5) does not adversely impact on public safety or public access and use of the foreshore.</p>	AO1.1 - Not applicable – not for private marine development.
<p>P02. Development does not result in the disposal of material dredged from an <u>artificial waterway</u> into <u>coastal waters</u>, with the exception of:</p> <p>(1) <u>reclamation works</u>, or</p> <p>(2) <u>coastal protection works</u>, or</p> <p>(3) the maintenance of an existing <u>artificial waterway</u> and the at-sea disposal of material that has previously been approved for the waterway.</p>	
No acceptable outcome prescribed.	Not applicable
<p>P03. Development includes and complies with a dredge management plan that demonstrates how environmental impacts will be managed and mitigated, and how the requirements of the National Assessment Guidelines for Dredging, Australia Government Department of the Environment, Water, Heritage and the Arts, 2009 will be met.</p>	
<p>AO3.1 A dredge management plan for the development:</p> <p>(1) directs the operation of the development</p> <p>(2) identifies disposal methods and disposal sites for the removed material for the construction and operational phases of the development</p> <p>(3) outlines how any adverse effects from extraction activities on sediment transport processes and/or adjacent coastal landforms will be mitigated or otherwise remediated by suitably planned and implemented <u>beach nourishment</u> and rehabilitation works.</p> <p>Editor's note: The development must comply with the National assessment</p>	AO3.1 – Not applicable – not dredging.

Performance outcome Acceptable outcomes	Relevance to the proposal and technical advice (delete rows that are not relevant)
<p>Table 10.1.2: Operational Work</p> <p>guidelines for dredging, Australian Government Department of Environment, Water, Heritage and the Arts, 2009</p> <p>AND</p> <p>AO3.2 For land based disposal of <u>dredged material</u>, any area used for storing, dewatering, drying or rehandling dredge material as outlined in the dredge management plan is:</p> <p>(1) of sufficient size for the projected volume of dredged material from relevant capital or maintenance <u>dredging</u></p> <p>(2) protected from future development that would compromise the use of the area for its intended purpose of spoil dewatering.</p> <p>AND</p> <p>AO3.3 For at-sea disposal of suitable <u>dredged material</u>, the dredge management plan specifies that material is placed at a dredged material disposal site only if it is demonstrated that it is not feasible to:</p> <p>(1) dispose of the material above the high water mark, if the material is from maintenance works for an existing <u>artificial waterway</u> for which at-sea disposal was previously approved, or</p> <p>(2) keep the <u>dredged material</u> within the active sediment transport system for the locality, or</p> <p>(3) use the material for <u>beach nourishment</u> or another beneficial purpose.</p> <p>AND</p> <p>AO3.4 For at-sea disposal of <u>dredged material</u> where the marine spoil disposal site is a retentive (i.e. non-dispersive) site, the disposal site identified in the dredge management plan has the capacity to hold and retain the material within its boundaries during construction and operation of the development.</p> <p>Editor's note: The use of dredged material for a beneficial purpose uses of <u>dredged material</u> could include development of port or other marine facilities, use for construction or industrial purposes, or use to create or modify land or waters for an approved environmental outcome (such as creation of a bird roosting site). Further</p>	<p>REVIEW RELEASE - EHP</p>

Performance outcome Acceptable outcomes	Relevance to the proposal and technical advice (delete rows that are not relevant)
Table 10.1.2: Operational Work	
Information about beneficial uses is contained in the National assessment guidelines for dredging, Australian Government Department of Environment, Water, Heritage and the Arts, 2009.	
Within a wild river area: riparian and wildlife corridor functions	
PO4. The clearing of native marine plants within a wild river area is minimised.	
AO4.1 Clearing of marine plants within a wild river area can only occur to the extent of the works, plus the prescribed area around the development to allow for maintenance.	AO4.1 – Not applicable – not in a Wild River area.
PO5. Development within a wild river area does not impact fish passage.	
No acceptable outcome is prescribed.	Not applicable – Not in a Wild River area.
PO6. There is no net loss in marine plants beyond the extent of the works in a wild river area.	
AO6.1 Any marine plant damaged during construction in a wild river area is replaced at the completion of the development with the same species of plant in the disturbed area outside the footprint of the development.	AO6.1 – Not applicable – Not in a Wild River area.
PO7. Works within a wild river area does not impact on fish habitat values.	
AO7.1 Works located in tidal waters within a wild river area are designed and constructed using materials, and located to ensure that the activities do not impact on fish habitat values and function.	AO7.1 – Not applicable
Within a wild river area: hydrological processes	
PO8. Development within a wild river area does not impound natural drainage lines or flow paths, during both construction and operation.	
No acceptable outcome is prescribed.	Not applicable
Within a wild river area: geomorphic processes	
PO9. Excavation and filling for prescribed tidal work within a wild river area is carried out only to the extent necessary for the development.	
No acceptable outcome is prescribed.	Not applicable.
PO10. Works in a tidal area within a wild river area are designed and constructed in a way to ensure they do not adversely affect the stability of the bed and banks of any waterway.	
AO10.1 Where it is necessary to remove a marine plant, the root system must be left in the substrate to minimise disturbance to bed and banks.	A10.1 - Not applicable
AND	
AO10.2 When the works are completed, any tidal lands disturbed by activities beyond the footprint of the works are restored to pre-disturbance condition to	

Performance outcome Acceptable outcomes	Relevance to the proposal and technical advice (delete rows that are not relevant)
Table 10.1.2: Operational Work	
promote natural restoration of marine plants and fish habitats.	
Within a wild river area: water quality	
PO11. No pollutants are released from the activity.	
No acceptable outcome is prescribed.	Not applicable

Performance outcome Acceptable outcomes	Relevance to the proposal and technical advice (delete rows that are not relevant)
Table 10.1.3: Reconfiguration of a lot	
PO1. Erosion prone areas in a coastal management district are maintained as development free buffers, or where permanent buildings or structures exist, <u>coastal erosion</u> risks are avoided or mitigated.	
<p>AO1.1 Where reconfiguring a lot is proposed within the <u>coastal management district</u>, the <u>erosion prone area</u> within the lot, or land within 40 metres of the <u>foreshore</u> (whichever is greater), is surrendered to the State for public use unless:</p> <p>(1) the development is in a port or is for <u>coastal-dependent development</u> or</p> <p>(2) the surrender of the land will not enhance coastal management outcomes, for example, because there is already substantial development seaward of the lot.</p> <p>Editor's note: Land surrendered to the State for public use under AO1.1 is to be:</p> <p>(1) placed in a State land reserve for beach protection and coastal management purposes under the Land Act 1994, with local government as trustee, or</p> <p>(2) managed for beach protection and coastal management purposes under another management regime to the satisfaction of the chief executive administering the Coastal Protection and Management Act 1995 and Land Act 1994, if it is demonstrated that AO1.2(1) cannot be reasonably achieved.</p>	Not applicable
PO2. Development maintains or enhances general public access to or along the <u>foreshore</u> , unless this is contrary to the protection of coastal resources or public safety.	
AO2.1 Reconfiguring a lot that abuts the <u>foreshore</u> or tidal waters involves the creation of 10 or more lots or the opening of a new road, unless it is for <u>coastal-dependent development</u> .	Not applicable.

b) Approved plans and specifications

Plans and specifications relied upon for this response are referred to in the advice or conditions supplied earlier in this response.

Our department recommends that the following plans and specifications should be referenced in the response:

Drawing or document	Reference no.	Version	Date
New Seawall Kingfisher Parade, Toogoom Site Layout	237236- 0000- DRG_LA-0002	C	26/08/2013
New Seawall Kingfisher Parade, Toogoom Sections and Details	237236 -0000-DRG- LA-0003	C	26/08/2013
New Seawall Kingfisher Parade, Toogoom Beach Access Stair General arrangement and Section	237236 -0000-DRG- LL-0004	B	26/08/2013

3. Consultation

- Significant consultation with community, Council and Aurecon prior to submission of application.
- Consultation with other state agencies with jurisdiction in coastal areas (DNRM, NPRSR, DAFF, DSDIP).
- Paul Prenzler – Coastal Engineer – EHP

4. Critical issues

- Critical issues identified in the assessment of this development have been recommended to have conditions placed on any development permit. These include disturbance of potential or actual acid sulfate soils during construction and revegetation of the area on completion of construction

5. Recommendations

Our department:

- (a) recommends the following conditions be attached to any development approval (SPA section 324(1)(b))

No.	Conditions of development approval	Condition timing
1.	The permit holder and any operator involved in the works to which this approval relates must comply with approved plans.	At all times
2.	Contaminants, including sediment, must not be released from the site to any waters or the bed and banks of any waters.	At all times
3.	An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of fuel and chemicals associated with the works must be kept on site.	At all times

No.	Conditions of development approval	Condition timing
4.	Anyone working under this approval must be trained in the use of the spill kit and operating procedures.	At all times
5.	Telephone the Department of Environment and Heritage Protection's Pollution Hotline on 1300 130 372 or local office on (07) 4121 1800 immediately after becoming aware of any release of contaminants not in accordance with the conditions of this approval.	At all times
6.	Access to the foreshore for construction work must be at an existing access point.	At all times
7.	Works must comply with the latest edition of the "Instructions for the Treatment and Management of Acid Sulfate Soils", 2001 Queensland Government or any updates as they become available.	At all times
8.	Clearing of vegetation is to be kept to a maximum of 40 metres wide.	At all times
9.	Prior to the completion of the work you must develop a Revegetation Plan in consultation with the Department of Environment & Heritage Protection. Within one month of the completion of construction of the seawall, you must commence the implementation of the revegetation plan.	Prior to completion
10.	The Chief Executive administering the <i>Coastal Protection and Management Act 1995</i> may order the works to be removed or modified within a reasonable time, if the works have or are likely to have a significant effect on coastal management because the works: <ul style="list-style-type: none"> • are a danger to the public; or • cause erosion or land degradation; or • are unstable; or • have not been constructed according to the approved plan. 	Post construction
11.	A report from a Registered Professional Engineer of Queensland must be submitted to the Department of Environment and Heritage Protection within three (3) months of the date of completion of the works, certifying that:-	Post construction

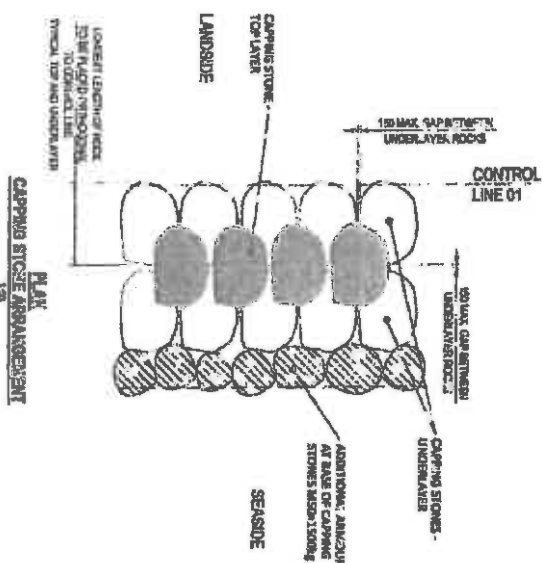
No.	Conditions of development approval	Condition timing
	<p>(a) The works (including any other associated works) have been constructed in accordance with the approved drawings and these conditions:</p> <p>(b) The works:- (i) are structurally adequate for anticipated usage; and (ii) comply with all relevant codes including the Department's operational policy, Building and engineering standards for tidal works; and</p> <p>(c) An area for a distance of 20 metres around the site of the works is clear of all debris.</p>	

- (i) The reasons for the inclusion of these conditions are:
- Conditions contained in the recommendations of this assessment have been applied to the development approval so as to ensure the development achieves the performance outcomes contained in the SDAP Module 10, Table 10.1.1 and Table 10.1.2.
- (A) Findings on material questions of fact:
- The applicant seeks a development approval for Prescribed Tidal Works
 - Information in relation to SDAP Module 10 has been provided. Assessment of this information has determined the application meets the principles and policies stated in Module 10.
 - Recommendation for conditions relating to the permit will ensure that best practice coastal and environmental outcomes are achieved.
- (B) Evidence or other material on which the findings were based:
- *Sustainable Planning Act 2009* and subordinate legislation.
 - *Coastal Protection and Management Act 1995* and subordinate legislation.
 - State Development Assessment Provisions (SDAP) – Module 10: Coastal Protection, June 2013
 - Coastal Protection State Planning Regulatory Provision (SPRP) April 2013
 - Information from the applicant.

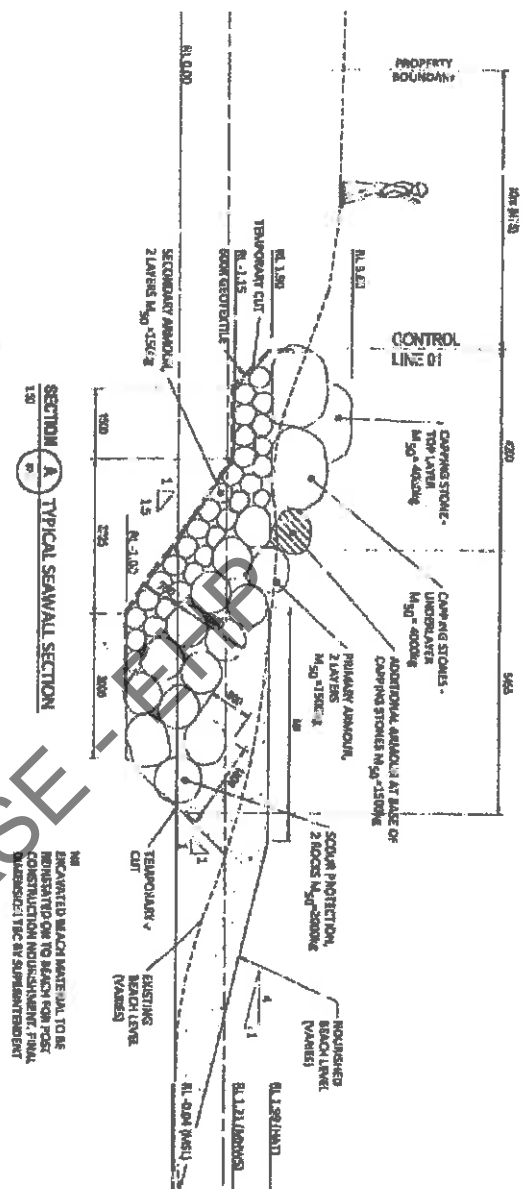
6. Endorsement

Officer	Denise Batten	Snr Env Officer	4121 1818
Approver	Tim Brain CTPI 49-Sch4 - Signature	Manager	4121 1813

20-9-13



SECTION 1.30 **A** TYPICAL SEAWALL SECTION

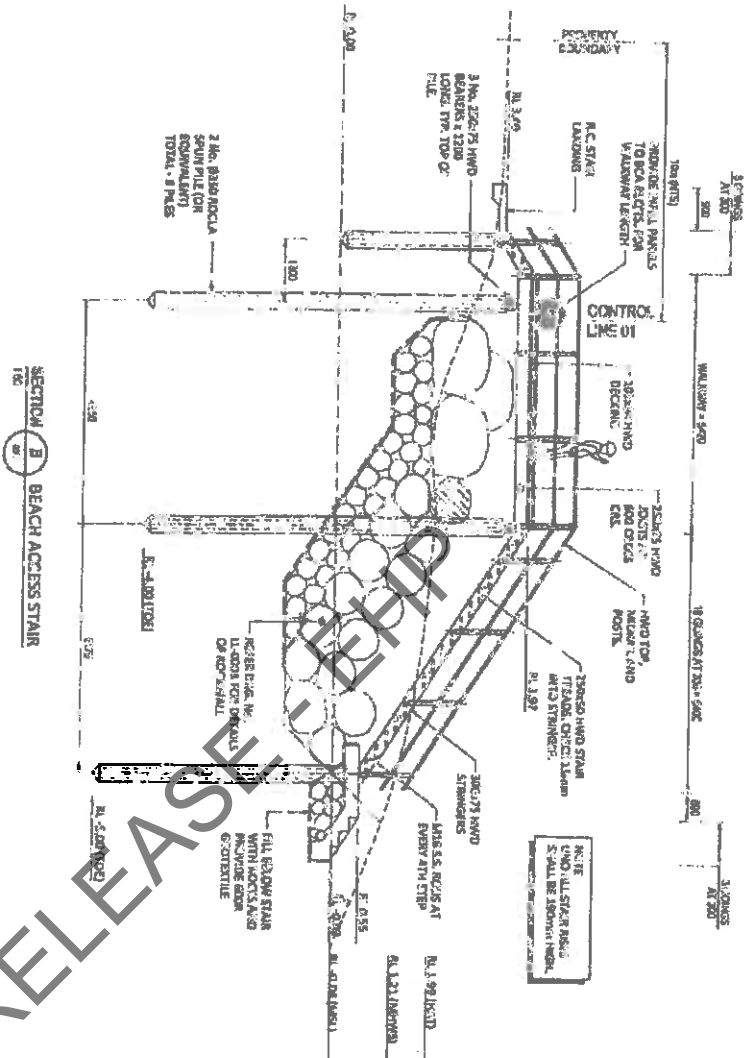


RE-ENCASED EACH MATERIAL TO BE
REINFORCED ONE TO EACH FOR POST
CONSTRUCTION INDUSTRY, FINAL
DESIGNER: TBC BY SUPPLEMENTARY



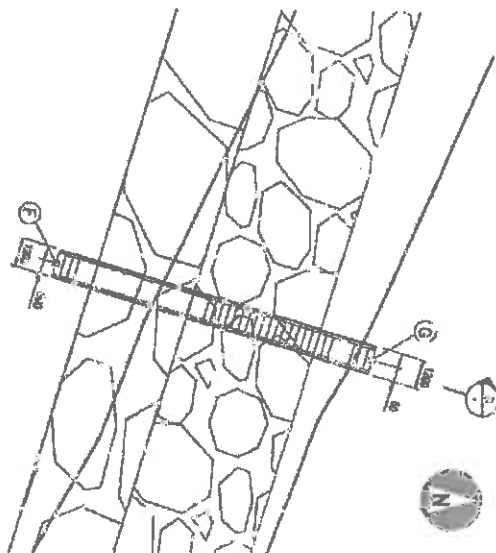
- NOTES:**
1. REFER LIST NO. LA-0001 FOR NOTES AND TOLERANCES.
 2. ALL LEVELS ARE IN METRES AND ARE TO AND DATUM.
 3. ALL DIMENSIONS ARE IN MILLIMETRES UNO.

FOR APPROVAL



STAR SETOUT TABLE		
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PLAN 1:00



1. KEEPERS, NO. 14-0001 FOR WINTER AND THIN LEVELS.
2. ALL LIVES ARE IN NORTHERN AND ONE BY AND DALLAS.
3. ALL JAMMINGS ARE IN KOLLMAN'S TWO.
4. ALL TRUCKS SHOULD BE OF CLASS I DENSITY GRADE FIFTEEN HUNDRED OR FORTY TWO.

FOR APPROVAL