

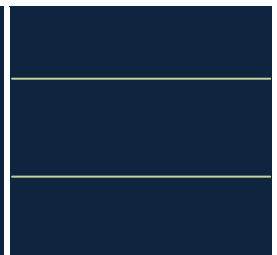
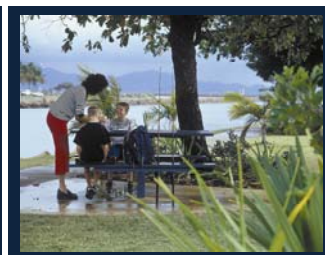
Port of Townsville Planning Codes & Guidelines

January 2013



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Introduction

Background

Port of Townsville Limited (POTL) has the responsibilities of the Assessment Manager under the *Sustainable Planning Act 2009* (SPA) (Qld) for development on strategic port land. POTL administers the responsibilities for land use planning matters through the Integrated Development Assessment System (IDAS); it does not act as the Assessment Manager for Plumbing and Drainage Works or Building Works applications.

The process outlined in this document does not replace requirements or individual responsibility to understand obligations under SPA, and associated legislation, but rather serves as a preliminary overview of the application of state planning and development requirements at the Port of Townsville.

Development Application Requirements

All assessable developments on strategic port land require a planning application to be made to POTL rather than Townsville City Council.

The term 'development' may include but not be limited to, such matters as the establishment of a new use, construction of new buildings, increasing the extent of hardstand areas, changing the intensity or scale of an existing development, and/or permitting any activity that results in an increase in traffic volume.

The scale and nature of the proposed development will determine the complexity and nature of the application required.

POTL Assistance

POTL employs a full-time Planning Officer to assist applicants with preparing their development applications. The Planning Officer can also co-ordinate pre-lodgement meetings with the relevant POTL personnel or functional areas involved in the assessment process, as well as any government agencies that may have a role in the approval process.

POTL recommends that you consult with the Planning Officer in the preliminary phase of the process to ensure that relevant issues are addressed in your application and that a clear understanding of the approval process is obtained. It is recommended that you engage specialist consultants to assist where technical details and specific licensing issues need to be addressed.

Planning Codes and Guidelines

The Planning Codes and Guidelines contained in this document are intended to support the implementation of POTL's Land Use Plan. The Codes and Guidelines provide more detailed assessment criteria against which new development or activities on strategic port land will be assessed. Proponents are to note that, in contrast to the Land Use Plan, the Codes and Guidelines are not statutory documents.

Preparing Your Development Application

Complexity of Developments

The range and scale of development occurring on port land varies dramatically from minor extensions of existing developments, to new purpose-built, multi-million dollar developments.

Therefore, when preparing your development application, it is important that you tailor the application to the complexity of the development.

To make it easier to determine what level of information you need to provide, POTL has divided developments into four distinct application types:

Type	Complexity	Example
1	A development or activity not pertaining to an IDAS assessable development.	Development enquiry, addition to or alteration of the leased land, permits.
2	Uncomplicated minor developments that do not have an ERA and do not have any referral agencies.	Minor extensions to a building and development that involves minimal site disturbance.
3	Relatively uncomplicated development that may involve on or more ERAs and require detailed planning and environmental assessment.	Major change to an existing development, new medium sized developments with construction and earthworks.
4	Complex applications that almost always involve ERAs and potentially other referral agencies such as DERM and Emergency Services. These applications generally require detailed analysis of environmental impact or risk assessment and may require development-specific modification of existing infrastructure.	Boat building premises, bulk storage facilities, chemical storage facilities, major Port of Townsville Limited projects and major developments with construction and earthworks. Usually Type 4 developments will require input from experienced specialist consultants in various technical areas.

All development application must address the relevant IDAS requirements as well as POTL's Planning Codes and Guidelines. It is acknowledged that less complex applications are not likely to have the same impacts and, therefore, do not need to address all the development requirements to the same extent as complex development proposals.

Application Fees

The Corporation charges application fees according to the nature and scale of the application types. The fees applicable to the four application types are:

Application Type	Application Fee	GST	Total
Type 1	\$346.50	\$38.50	\$385.00
Type 2	\$693.00	\$77.00	\$770.00
Type 3	\$2,311.00	\$256.80	\$2,568.00
Type 4*	up to \$13864.50	\$1,540.50	\$15,405.00

* Fees dependent upon the nature, scale and complexity of the application type

Application fees payable will be confirmed during the pre-lodgement stage, in consultation with POTL's Planning Officer.

Please note that fees may also be payable to referral or concurrence agencies during the development assessment (e.g. assessment and approval of ERAs).

In addition to the payment of the appropriate application fee, POTL may, depending upon the nature of the development proposed, require the Proponent to submit a refundable deposit of \$10,000.00 as a guarantee for the submission of hard-copy and suitably formatted electronic “As Constructed Drawings”. POTL will, with fifteen (15) working days of the satisfactory submission of those plans, refund the deposit in full.

Where POTL requires the submission of a technical report to facilitate the assessment of a development application or condition of approval, additional fees may apply. Technical reports that may be required include, but are not limited to:

- Acid Sulphate Soils
- Acoustic Noise Reports
- Air Quality Analysis
- Cultural Heritage Management Plan
- Economic Impact
- Electric and Magnet Fields
- Environmental Management (including Environmental Management Plan)
- Flood Study
- Hazard and Risk Impact Assessment Study
- Landscape Plan
- Lighting Assessment Report
- Stormwater Quality Management (including Stormwater Management Plan)
- Traffic Study

Lodging and Assessment Process

Lodgement Process

The Planning Officer can coordinate pre-lodgement meetings with relevant POTL personnel or functional areas involved in the assessment process, as well as any government agencies that have a role in the approval process. At the arranged meeting a range of issues can be discussed and good planning outcomes can be achieved.

The Planning Officer can review your application prior to lodgement and provide preliminary comments and further detailed guidance on content and issues covered. This preliminary review process is particularly useful to reduce the potential for further information requests and, therefore, minimise opportunities for delays in the approval process.

The application should be directed to:

The Assessment Manager
Port of Townsville
PO Box 1031
TOWNSVILLE QLD 4810

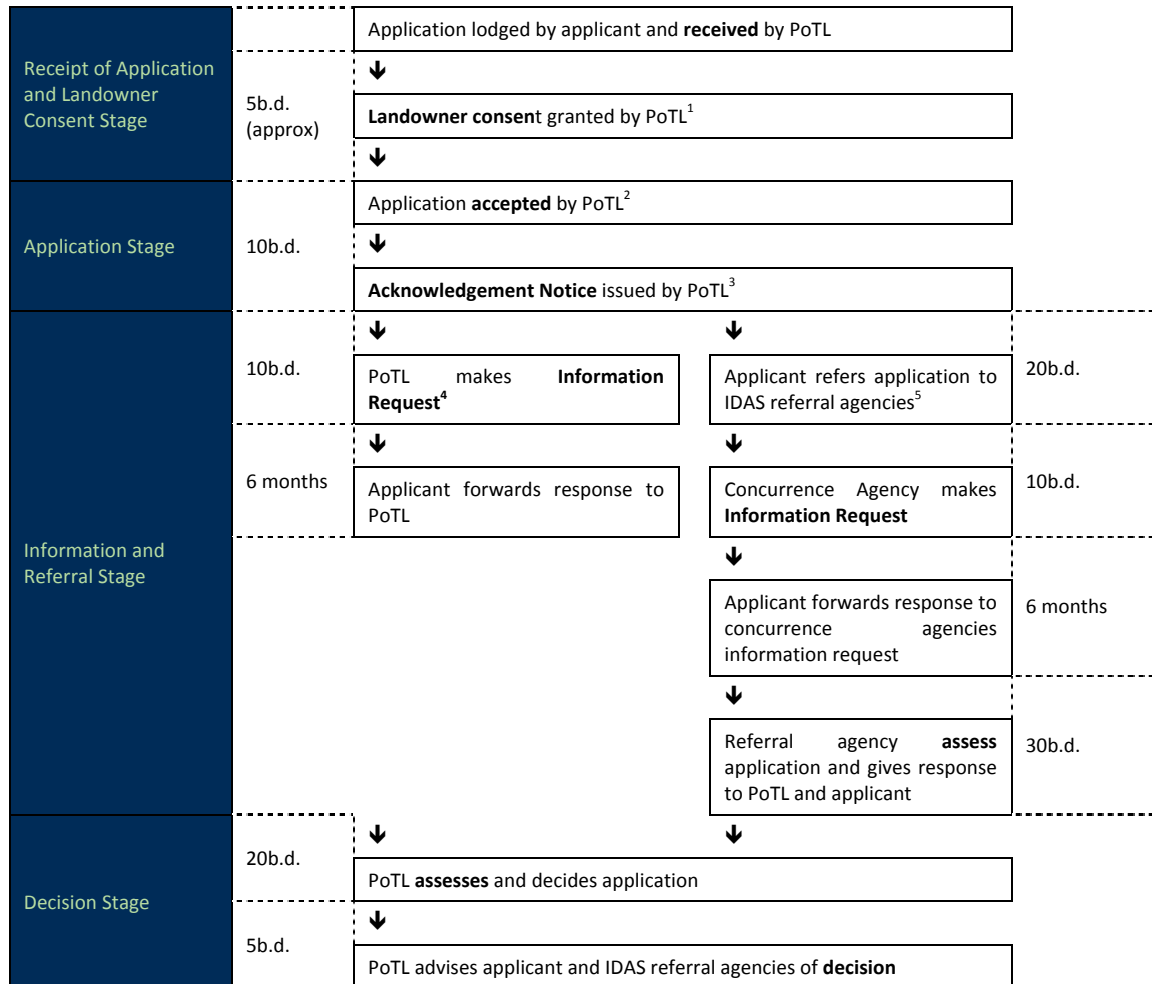
Alternatively your application may be lodged in person at:

Port of Townsville
Administration Building
Benwell Road, South Townsville

How applications are assessed

Strategic port land is not subject to local government planning schemes. Instead, POTL regulates development on strategic port land and is the assessment manager for all applications, regardless of whether the development is inconsistent or consistent with the Land Use Plan.

The following diagram illustrates the assessment process.



¹ Landowner consent must be granted by PoTL prior to the application being assessed under IDAS. Please note that Landowner Consent is required on Part A of the IDAS Form. A copy of this signed form will be forwarded to the Applicant.

² Once the landowner consent is granted and the application is deemed 'properly made' and accepted by PoTL, the IDAS process commences.

³ The Acknowledgement Notice identifies the Referral Agencies for the application. Please note that it is the responsibility of the applicant to ensure that the application is submitted to the applicable referral agencies.

⁴ Your development application is reviewed and assessed by the relevant internal Business Units of PoTL including; Planning and Environment, Corporate Governance, Engineering, and Marine Services.

⁵ Applications are to be referred to the relevant 'referral agencies' usually EPA or Townsville City Council (where the application involves ERA's). Applications may also be referred to other State or Local Agencies for review.

Subsequent Approvals

Development permit for building works and/or plumbing and drainage works

In addition to obtaining planning approval from POTL, separate approvals for Building Works and/or Plumbing and Drainage Works may be required for the development.

You may engage the services of a private certifier to assess and approve Building Works. You must use Townsville City Council for the Plumbing and Drainage Works application. It should be noted that POTL does not offer these services and cannot provide such approvals.

An important aspect of the design process for the development will be compliance with the requirements of the Building Code of Australia and the Standard Building Regulation. POTL can assist with discussions between the applicant and the relevant agencies, including Queensland Fire and Rescue Service, to ensure that the design meets the requirements of these agencies.

Health, Safety and Emergency Response

As required by relevant legislation, you are encouraged to develop a Workplace Health and Safety Plan for the construction phase of your development in accordance with the relevant legislation.

Similarly, an Emergency Response Plan for the operational phase of your development is recommended and may be required under relevant legislation. POTL may require your development to be included in its' overall Emergency Response Plan, depending on its' nature and location. Further, POTL may also require a site or operation-specific cyclone response plan.

Other Licences and Approvals

Depending on the nature or location of your development, you may also require a range of other licenses and approvals. These licenses and approvals are likely to be include, but may not be limited to a Liquid Waste Permit, approval for the storage of flammable and combustible liquids, or approvals under the *Dangerous Goods Safety Management Act 2001 (Qld)*.

Port Codes & Guidelines

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PORT CODE

PURPOSE

The purpose of the Port Code is to provide common criteria for development on Strategic Port Land (excluding Zone 4 – Special Use).

The Port Code is intended to ensure that:

- Land-sea interface areas are designed and operated in a way that maximises the efficiency of cargo handling;
- Transport integration is designed to support efficiencies in cargo storage and handling;
- Any potential impacts on the environment are minimised and/or avoided;
- Any significant environmental values of the area, including waterways and wetlands, are protected.

The purpose of the code will be achieved through the following Assessment Criteria.

APPLICATION

The Port Code applies to the following Land Use Plan Zones and Precincts:

- Zone 1 – Port Operations
- Zone 2 – Port Industry
 - Quayside
 - Inner Port
 - Centre Port
 - Nexus
- Zone 3 – Marine Industry
 - Ross River North
 - Ross River West
- Zone 4 – Special Use
 - Ross Creek East
 - Ross Creek West
- Zone 5 – Port Buffer

The Acceptable Solutions for each Performance Outcome applies to the Zones and Precincts, unless expressly stated otherwise within the Acceptable Solution.

ASSESSMENT CRITERIA

Performance Outcome		Acceptable Solution	
Building Requirements			
PO1	Buildings and ancillary structures are sited, and of a scale, consistent with the surrounding development.	AS 1.1	No part of any building or structure shall be within 6m of any road-frontage lease boundary and 3m from any secondary road frontage.
PO2	Building height must not result in significant loss of visual amenity.	AS 2.1	No maximum building height is specified, although building height should be similar to surrounding development and will not result in significant loss of visual amenity.

Performance Outcome		Acceptable Solution	
		AS 2.2	For Zone 2 – Precinct 2.4, Buildings and structures are to be no higher than three (3) storeys or 15 metres, whichever is the lesser.
PO3	Buildings and ancillary structures have a floor-level height that provides expected flood immunity for health and safety.	AS 3.1	Site ground level is to be at a minimum of 3 metres, AHD.
		AS3.2	Finished floor heights are set a minimum of 300mm above site ground level.
PO4	The site coverage of all buildings and associated structures must allow for sufficient: <ul style="list-style-type: none"> • building setbacks; • landscaping – refer to landscaping guidelines; • car parking – car parking ratios provided; • loading and unloading areas; and • vehicle manoeuvring and access. 	AS 4.1	A maximum site cover of 75% of the site is applicable.
PO5	Buildings are designed to minimise impacts on existing services.	AS 5.1	Ensure the site layout avoids the position of buildings over: <ul style="list-style-type: none"> • potable water supply mains; • sewer or stormwater mains; • power services; • telecommunication and fibre optic services; and • ancillary port user services.
PO6	The development minimises impacts with the surrounding sensitive receiving environments.	AS 6.1	The development contributes to the amenity of the local area, having regard to impacts including, but not limited to: <ul style="list-style-type: none"> • noise; • hours of operation; • traffic; • lighting; • signage; • visual amenity; • privacy; • odour and emissions; and • flora and fauna. <p>The design of the development</p>

Performance Outcome		Acceptable Solution	
			incorporates measures to minimise any associated impacts.
		AS 6.2	Construction and Operational Environmental Management Plans (EMP) must be submitted to POTL in accordance with the Environmental Management Plan Guidelines.
PO7	Buildings and ancillary structures must function efficiently and safely.	AS 7.1	A formal entry must be provided to all buildings, designed to address, be visible and accessible from, the principle road frontage.
		AS 7.2	Identifiable office facilities must be located at the front of the site and include an outdoor staff recreation area.
PO8	Development must provide for non-discriminatory access.	AS 8.1	Building design must provide for non-discriminatory access in accordance with <i>AS1428 – Design Access and Mobility</i> .
PO9	Development is carried out in a manner which “buffers” adjacent residential or other sensitive premises.	AS 9.1	Where the site is located near or adjoining any land use, which is likely to be sensitive to noise, odour, dust, or lighting emissions, the design of the development incorporates measures to minimise any associated impacts.
		AS 9.2	Construction and Operational Environmental Management Plans (EMP) must be submitted to POTL in accordance with the Environmental Management Plan Guidelines.
PO10	All buildings and ancillary structures create a strong sense of visual interest and consistent character.	AS 10.1	All buildings and ancillary structures, including warehouses, must exhibit high-quality visual amenity and construction standards.
		AS 10.2	The street frontage of all buildings must achieve a high standard of visual amenity, with particular regard to the character of the area and the nature of the precinct.
PO11	Essential services are obscured where possible to enhance site amenity.	AS 11.1	Air-conditioning units, telecommunications equipment or mechanical plants must be concealed in screened enclosures or positioned

Performance Outcome		Acceptable Solution	
			behind the roofline, to prevent visibility from the main street frontage.
PO12	Storage areas for goods, materials and containers must be configured in a safe manner that does not detract from the visual amenity and/or environmental attributes of the area.	AS 12.1	Areas for storage of goods, materials and containers on the site must be effectively screened or located within a building to inhibit visibility from the main street frontage where possible.
		AS 12.2	Areas where toxic and/or dangerous substances or other potential contaminants are stored or used must be roofed, secured and contained within appropriately engineered bunds. Provisions must be made for potential spills to be bunded and retained on site for removal and disposal in accordance with relevant legislation and standards.
Access and Parking Requirements			
PO13	Parking meets all operational, employee and customer needs.	AS 13.1	Parking must be provided on site to accommodate all vehicles (i.e. employees, operational and/or visitors).
PO14	Vehicle parking is segregated from areas dedicated to loading/unloading and waste storage areas.	AS 14.1	All queuing or other vehicle activity associated with the operation of the site; including collection and distribution of cargo, goods and material; must be accommodated on-site, including during peak times and when vehicles may be waiting prior to a site being 'open' for business or access.
PO15	Car parking is integrated with site landscaping with the provision of adequate shade trees or shade structures.	AS15.1	Shade trees are provided at rate of one (1) tree for each six (6) car parking spaces.
		AS 15.2	Car parking must be integrated with site landscaping with drainage directed over land to permeable surfaces.
PO16	The design of vehicle access,	AS 16.1	An access, circulation, manoeuvring and

Performance Outcome		Acceptable Solution	
	circulation, manoeuvring and parking areas demonstrates compliance with relevant Australian Standards, relevant State policy or other adopted by the Assessment Manager.		<p>parking plan to be provided which illustrates the following details:</p> <ul style="list-style-type: none"> • dimensions of all pavements and areas; • turning templates for largest turning circle of vehicles accessing the site; • access for service vehicles; • depths of, and materials used to construct pavements; • all gradients of parking, access and circulation areas; • sight lines; and • height clearances. <p>At the discretion of the Assessment Manager, a traffic management study may be required, addressing impacts of the development and associated vehicle activity on the road network.</p>
PO17	On site vehicle access is designed to be safe, effective, minimise conflicts and of a standard to the satisfaction of the Assessment Manager.	AS 17.1	Appropriate driveways and crossovers are provided according to the type of vehicles expected to access the site.
	Site access is provided on site to meet operational, employee and customer needs.	AS 17.2	<p>Provision is made to ensure all vehicles:</p> <ul style="list-style-type: none"> • entering a site do not queue across footpaths or onto external roads; and • are exclusively accommodated within the lease boundary.
PO18	<p>Vehicle circulation and manoeuvring is provided on-site to meet all operational, employee and customer needs.</p> <p>Vehicle circulation paths and loading/unloading areas are segregated from storage and vehicle parking areas.</p>	AS 18.1	<p>Internal circulation routes comply with standards adopted by POTL, function safely and efficiently, and accommodate all expected traffic on site, including:</p> <ul style="list-style-type: none"> • delivery and pick-up services; • loading, unloading and refuelling areas; • wash-down, repair, service and inspection areas; • movement between access points, parking and storage; • movement between outdoor and indoor areas; • provisions for vehicles to exit the

Performance Outcome		Acceptable Solution	
			<p>site in a forward direction; and</p> <ul style="list-style-type: none"> • service vehicle, such as rubbish-collection, movement. <p>Appropriate signage, line marking and lighting are incorporated into on-site circulation routes.</p>
		AS 18.2	<p>Internal circulation roads do not conflict with parking areas.</p> <p>All circulation and parking areas allow for the safe manoeuvring of all vehicles according to AUSTROADS or other standard vehicle manoeuvring template, to the satisfaction of the Assessment Manager.</p>
PO19	Off-site works complement the road network to safely and efficiently meet the operational requirements of the development.	AS 19.1	<p>Works required to augment the road network to meet the operational needs of the development are identified.</p> <p>Design and construction of off-site road network infrastructure works are to the satisfaction of the Assessment Manager, according to:</p> <ul style="list-style-type: none"> • the requirements of the Department of Main Roads; and • the requirements of Townsville City Council.
Sustainability Requirements			
PO20	The development supports the principles of sustainable development and incorporates continual improvement into operations.	AS 20.1	Comprehensively address the EMP Guidelines as part of the development application.
Contaminated Land Requirements			
PO21	Development and operation of sites does not result in the contamination of the site or environmental impacts.	AS 21.1	Baseline Contamination Survey to be prepared and submitted to POTL.
		AS 21.2	Where a site is listed on the Environmental Management Register (EMR) or Contaminated Lands Register (CLR), all works shall incorporate practices (to be detailed in the Construction EMP and Operational EMP) to minimise environmental impacts from contamination.

Performance Outcome		Acceptable Solution	
Landscaping Requirements			
PO22	Landscaping: <ul style="list-style-type: none">• is of a high quality that focuses on all road and other public space frontages to enhance the overall amenity of the streetscape;• is maintained to a high level;• is designed to require limited watering and maintenance; and• is integrated with the site's stormwater-management system and provision of:<ul style="list-style-type: none">○ staff recreation areas; and○ the screening of air-conditioning plant and rubbish collection areas.	AS 22.1	On-site landscaping is provided along the full length of the road frontage of the site, apart from vehicle access points, and has a minimum average width of 4m, with a minimum width of 2m.
		AS 22.2	Comprehensively address the Landscaping Guidelines as part of the development application.
Infrastructure & Services Requirements			
PO23	Land is adequately serviced by reticulated infrastructure, such as water supply, sewage disposal, street lighting, telecommunications and energy.	AS 23.1	All land is provided with: <ul style="list-style-type: none">• reticulated water;• sewerage;• drainage;• energy;• telecommunications; and• gas service where required.
PO24	Site design and layout include provisions for additional infrastructure to facilitate future telecommunications services.	AS 24.1	Conduits are provided to enable the future provision of fibre-optic cabling and other 'smart-wiring'.
PO25	Stormwater drainage from the site is at approved locations and of an acceptable quality and volume to prevent harmful impacts on receiving waters.	AS 25.1	Comprehensively address the Stormwater Guidelines as part of the development application.
PO26	Development provides appropriate storage and collection areas for services visiting the site, such as: <ul style="list-style-type: none">• rubbish collection; and• trade-waste removal.	AS 26.1	Appropriately located waste-storage areas, which meet the needs of regularity of visits to the site, are incorporated into the site layout and building design.
		AS 26.2	For Zone 2 – Precinct 2. Waste storage areas are screened from public view by dense landscaping at least two (2) metres wide, fencing or buildings and located no closer than five (5) metres to a road frontage.

Performance Outcome		Acceptable Solution	
PO27	Fire hydrants and boosters are in locations that enable the provision of water and pressure for use by the Queensland Fire and Rescue Service.	AS 27.1	Fire hydrants are provided in accordance with water and sewerage reticulation standards.
PO28	Infrastructure is appropriately maintained	AS 28.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.
PO29	Infrastructure, utilities and services, whether reticulated or not, accommodate future planned development of any other infrastructure and/or services.	AS 29.1	<p>The design and operation of all infrastructure, utilities and services do not compromise planned future land uses and infrastructure, and include:</p> <ul style="list-style-type: none"> • appropriate alignments on and off site; • appropriate locations on and off site; • appropriate discharge and/or connection points; and • sufficient 'additional' design capacity.
Hazards and Safety Requirements			
PO30	Outdoor lighting must be provided for safety and security where required.	AS 30.1	<p>Where it is intended that a facility will operate at night, outdoor work areas, car-parking and pedestrian areas must incorporate motion-sensor security and safety lighting.</p> <p>Car-parking must be located close to building entrances to enable safe access at night.</p>
PO31	Development does not contravene any Australian quarantine or customs legislative requirements.	AS 31.1	<p>Development complies with any requirements of the Australian Quarantine Inspection Service (AQIS) and Australian Customs Service, associated Commonwealth legislation, and any subordinate legislation, including, but not limited to, the:</p> <ul style="list-style-type: none"> • <i>Quarantine Act 1908</i>; • <i>Imported Food Control Act 1992</i>; and • <i>Export Control Act 1982</i>. <p>Should the Assessment Manager consider it appropriate the application may be referred to AQIS or Customs for Advice Agency assessment.</p>

Performance Outcome		Acceptable Solution	
PO32	<p>Risks and hazards associated with the storage or transport of hazardous or flammable materials:</p> <ul style="list-style-type: none"> • satisfies all Local, State and Commonwealth legislation and/or requirements; and • does not endanger any person or the natural or built environment. 	AS 32.1	<p>Storage of any hazardous or flammable materials:</p> <ul style="list-style-type: none"> • is appropriately licensed and managed in accordance with: <ul style="list-style-type: none"> ○ <i>Flammable and Combustible Liquids Regulation 1994</i>; ○ <i>Dangerous Goods Safety Management Act 2001</i>; ○ Australian Standard AS1940:2004 The storage and handling of flammable and combustible liquids; and ○ Australian Code for the Transport of Dangerous Goods by Road Rail. • does not pose a safety, environmental or health threat to any adjoining areas or people; • demonstrates that it is appropriately separated from surrounding sensitive land uses. <p>Any proposed Major Hazard Facility (MHF) or Possible Major Hazard Facility (PMHF) is required to be referred to the Department of Emergency Services (CHEM Unit) for Concurrence Agency assessment.</p> <p>Where a Large Dangerous Good Facility (LDGF) is proposed the Assessment Manager may refer the development to the Department of Emergency Services for Advice Agency comments.</p>
		AS 32.2	<p>The Assessment Manager may request the submission of a safety / hazard management plan, risk contour maps or other plan identifying risks and outlining relevant safety and emergency procedures.</p>
PO33	The construction site is managed and operated to ensure a safe workplace for onsite employees.	AS 33.1	<p>The Proponent and its appointed contractors are required to ensure that a workplace plan that meets the requirements of <i>Queensland Workplace Health and Safety Act 1995</i> is developed and implemented during construction.</p>

Performance Outcome		Acceptable Solution	
Advertising Signage			
PO34	All advertising signage is to be approved by the Port of Townsville Limited.	AS 34.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.
Fencing Requirements			
PO35	Fencing is provided to ensure safety with regard to security, potential hazards and storage of hazardous goods.	AS 35.1	Activities undertaken on site that may pose a direct physical hazard or potential hazard to the public are fenced and security-gated so that access is denied. Storage areas are reasonably secured from general access.
PO36	All fencing is of a design that provides maximum security and/or separation without adversely affecting overall amenity and streetscape quality.	AS 36.1	The minimum standard for access-control security fencing is 2 metre-high, black PVC, plastic coated, chain-wire mesh fence with black posts. A concrete strip should be laid below the fence line to improve ease of maintenance. Where other standards established by legislation, code, policy or otherwise are not applicable, warning signs of hazards should be attached to fencing according to the following standard: <ul style="list-style-type: none">• a minimum height of 1.2m from ground level to bottom of sign;• a maximum height of 1.6m from ground level to bottom of sign;• a minimum sign of 0.2m by 0.3m;• spaced at every 100m, or less as the situation and hazard demand;• brightly coloured to attract attention;• simply worded to reinforce the potential hazards of accessing the area. Any fencing other than chain-wire mesh is to be constructed of a durable material that does not create glare and is not brightly coloured. Maximum fence height is 3.0m.
		AS 36.2	For Zone 2 – Precinct 2

Performance Outcome		Acceptable Solution	
			An acoustically treated fence is required to the western and southern boundaries (which adjoins residential areas).
Lighting Requirements			
PO37	<p>All lighting is to:</p> <ul style="list-style-type: none"> contribute to the overall amenity of the streetscape and the port. facilitate a safe and secure working; environment; be energy efficient; <p>Light emissions from outdoor lighting, either directly or by reflection, do not have an adverse impact on any person, activity or surrounding environment</p>	AS 37.1	<p>Lighting fixtures where possible are designed to enhance amenity of development.</p> <p>Lighting structures are of a sufficient height to provide enhanced safety and security of an area.</p> <p>All outdoor lighting areas are to be lit to a standard appropriate to allow for a safe night-time working environment.</p> <p>To ensure that outdoor lighting minimises light spillage and adverse impacts on the environment, either directly or by reflection, light shades and other devices to control and manage light are used to reduce light spillage affecting any sensitive place, environment, use or area. Lighting is also to be projected no further upwards than 5 degrees from horizontal.</p> <p>Technical parameters, design, installation, operation and maintenance of outdoor lighting comply with requirements of the relevant Australian Standard on the AS4282: Control of the Obtrusive Effects of Outdoor Lighting.</p> <p>Energy-efficient lighting technologies are adopted.</p>
Tenure Requirements			
PO38	Proponent has been granted tenure for the proposed use by POTL.	AS 38.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.
Geotechnical Requirements			
PO39	Ground level geotechnical conditions are constructed to a sufficient engineering standard to allow for imposed loadings.	AS 39.1	All ground level pavements, slabs and hardstand areas have been certified by a Registered Professional Engineer of Queensland to withstand proposed loadings of buildings, vehicles,

Performance Outcome		Acceptable Solution	
			structures and container stacking where applicable.
Acid Sulphate Soil Requirements			
PO40	<p>Leachate containing acid and metal contaminants caused by disturbing acid sulphate soils does not have significant adverse effects on the natural or built environments or human health.</p> <p>Works avoid disturbing acid sulphate soils or are managed to avoid or minimise the release of acid or metal contaminants.</p>	AS 40.1	Comprehensively address the Acid Sulphate Soils Guidelines as part of the development application.

TIDAL WORKS CODE

PURPOSE

The purpose of the Tidal Works Code is to describe the necessary requirements in preparation of a tidal works application.

The Tidal Works Code is intended to ensure that:

- any potential impacts on the environment are minimised and/or avoided;
- any significant environmental values of the area are protected;
- tidal works do not impact upon, or impede, port operations; and
- tidal works are undertaken in accordance with relevant legislative requirements.

The purpose of the code will be achieved through the following Assessment Criteria.

Proponents to note, this Code does not replace any requirements other relevant authorities (e.g. Department of Environment & Resource Management (DERM) and Department of Maritime Safety Queensland (MSQ)) may have regarding tidal works.

APPLICATION

The Tidal Works Code applies to the following Land Use Plan Zones and Precincts:

- Zone 1 – Port Operations
- Zone 2 – Port Industry
 - Quayside
 - Inner Port
 - Centre Port
- Zone 3 – Marine Industry
 - Ross River North
 - Ross River West
- Zone 4 – Special Use
 - Ross Creek East
 - Ross Creek West

ASSESSMENT CRITERIA

Performance Outcome		Acceptable Solution	
Port Operations Requirements			
PO1	Tidal work must not have any potential adverse impacts on port operations.	AS 1.1	Tidal work must not: <ul style="list-style-type: none">• interfere with the operation of ships entering or leaving the Port of Townsville;• impede existing navigational channels;• interfere with stevedoring operations at the Port of Townsville; or• interfere with the dredging operations of Port of Townsville Limited.

Performance Outcome		Acceptable Solution	
Dredging Requirements			
PO2	Tidal works application is of a standard acceptable for assessment by Port of Townsville Limited and the relevant regulatory authority.	AS 2.1	<p>For dredging or excavations confirm and show on plans:</p> <ul style="list-style-type: none">the volume and type of material to be removed;the proposed dredging profile; andthe disposal area for the material. <p>Applicant has investigated whether an application may be required to DERM for Environmentally Relevant Activity an ERA 16 – Extractive and screen activities (Dredging), and any other necessary approvals.</p> <p>Proponent has investigated the need for a resource allocation from DERM. This resource allocation approval, if required, has been obtained prior to submission of the tidal works approval.</p> <p>Proponent can demonstrate to the relevant administering authority that dredge spoil is being deposited to an approved area.</p>
Environmental Management Requirements			
PO3	All developments undertaken on port land must receive approval from Port of Townsville Limited of both a: <ul style="list-style-type: none">Construction Environmental Management Plan; and anOperational Environmental Management Plan.	AS 3.1	A construction and operational Environmental Management Plan has been submitted to Port of Townsville Limited in accordance with the Environmental Management Plan Guidelines and is approved prior to works being undertaken.
PO4	Tidal works to be undertaken in accordance with the relevant provisions of the <i>Environmental Protection Act 1994</i> and regulations.	AS 4.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.
Hazards and Safety Requirements			
PO5	The construction site is managed and operated to ensure a safe workplace.	AS 5.1	The Proponent and its appointed contractors are required to ensure that a workplace plan that meets the requirements of <i>Queensland Workplace Health and Safety Act 1995</i> is developed and implemented during construction.
PO6	The proposal does not pose a safety risk	AS 6.1	The proposed structure and/or works

Performance Outcome		Acceptable Solution	
	or fire hazard to adjoining people or property.		meet all legislative requirements and/or Australian Standards regarding safety and risk management including required fire fighting infrastructure.
Legislative Requirements			
PO7	The proposal complies with all relevant legislative requirements.	AS 7.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.
Tenure Requirements			
PO8	Proponent has been granted tenure for the proposed use by Port of Townsville Limited.	AS 8.1	No acceptable solution is prescribed as compliance with performance criteria is mandatory.

ACID SULPHATE SOILS GUIDELINE

INTRODUCTION

The purpose of this guideline is to:

- identify, assess, contain and/or manage Potential Acid Sulphate Soils (PASS) and Actual Acid Sulphate Soils (AASS); and
- ensure the environmental values of receiving waters are maintained and protected.

This guideline applies to all development (both exempt and assessable) that:

- includes land, soil and sediment at or below 5 metres Australian Height Datum (AHD) where the natural ground level is less than 20 metres AHD;
- involves the following activities:
 - excavating or otherwise removing 5m³ or more of soil or sediment; or
 - filling of land involving 500m³ or more of material with an average depth of 0.5 metres or greater.

Management of acid sulphate soils is at all times to be undertaken in accordance with the *State Planning Policy 2/02 Guideline – Planning and Management Development involving Acid Sulphate Soils*.

ASSESSMENT CRITERIA

Performance Outcome		Acceptable Solution	
Acid Sulphate Soils			
PO1	The release of acid and associated metal contaminants into the environment is avoided.	AS 1.1	Acid sulphate soils are not disturbed when excavating or otherwise removing soil or sediment, extracting groundwater or filling land. OR If acid sulphate soils are disturbed, they are treated and, if required, ongoing management of any disturbed acid sulphate soils and drainage waters is undertaken.
PO2	Prior to any site works, the likelihood of AASS or PASS and the associated environmental impacts are determined.	AS 2.1	Sampling and analysis is carried out in accordance with the procedures described in the <i>Guidelines for Sampling and Analysis of Lowland Acid Sulphate Soils in Queensland</i> produced by the Department of Environment and Resource Management.
		AS 2.2	An acid sulphate soil investigation report is submitted to, and approved by, the assessment manager prior to

Performance Outcome		Acceptable Solution	
			<p>any works. This report is to include at least the following:</p> <ul style="list-style-type: none"> the testing results; sampling methods; an assessment of the potential for acid sulphate soils to be disturbed either through drainage or excavation; and potential impacts on adjoining areas. <p>The level of testing should be commensurate with the level of risk.</p> <p>Any acid sulphate soil report must be in accordance with <i>State Planning Policy 2/02 Guideline – Planning and Management Development involving Acid Sulphate Soils</i>.</p>
PO3	Where in an area of PASS or AASS, development is managed in a manner that ensures the environmental values including receiving water quality are not adversely impacted and that assets are not subject to accelerated corrosion.	AS 3.1	<p>Where AASS or PASS is identified, an Acid Sulphate Soils Environmental Management Plan (EMP) is prepared. The EMP is to detail at least the following:</p> <ul style="list-style-type: none"> the sampling and analysis procedures to be adopted; the methods of treating/managing soils; details of monitoring procedures; and details of contingency procedures. <p>Any management plan must be in accordance with <i>State Planning Policy 2/02 Guideline – Planning and Management Development involving Acid Sulphate Soils</i>.</p>
		AS 3.2	<p>All development is to be carried out in accordance with the approved Acid Sulphate Soils Environmental Management Plan.</p>

ENVIRONMENTAL MANAGEMENT PLAN GUIDELINE

INTRODUCTION

This document is intended to assist Port operators and/or contractors identify the basic requirements that need to be considered when preparing Construction and Operational Environmental Management Plans (EMPs) for activities within the Port of Townsville.

The size, complexity and issues associated with the project will guide the requirements of the EMP. Straightforward small projects will require a simple document while larger projects, or those with specific environmental risks, will require a more comprehensive approach.

EMPs should be developed by experienced persons and it may be necessary to engage a consultant to assist in more complex matters.

Depending on the nature of construction and operation of the proposed development, technical information may need to be provided. Specialised consultants may need to be engaged to prepare this information.

It is strongly suggested that the contractor engaged to perform the works is significantly involved in the development of the documents, particularly the Construction EMPs.

The preferred style of document is a basic information source that can be readily accessed and understood by all employees. It should be as straightforward as possible and contain only information of direct relevance to the project.

It is recommended that anyone requiring or preparing an EMP consult with POTL's Environment Unit. This will allow timely assessment of the EMP and prevent submission of unnecessary information.

The Proponent is at all times solely responsible for the full and complete implementation of the Construction and/or Operational EMP. The Proponent will at all times be liable for all penalties, costs and expenses which may be incurred in respect of offences committed or alleged to have been committed under the provisions of any relevant Environmental Protection legislation.

ENVIRONMENTALLY RELEVANT ACTIVITIES (ERAs)

Some proposed activities to be undertaken on port land may constitute an ERA as identified by Schedule 2 of the *Environmental Protection Regulation 2008 (Qld)*. It is the sole responsibility of the Proponent to investigate whether an application may be required to the Department of Environment and Resource Management (DERM, formerly EPA) for an ERA.

Where development involves an ERA, assessment and approval of the EMP will be undertaken by either DERM or local council (for devolved ERAs) as part of the development approval process.

If an ERA is triggered a specific format may need to be followed for a submitted EMP. If this is the case, Proponents should follow the structured formatting required by DERM or the local council for submission to the Corporation.

CONSTRUCTION EMPs

A Construction EMP is a practical and achievable plan to minimise environmental impacts during the construction phase by any personnel on site (including, but not limited to, the contractor and all sub-contractors).

The Construction EMP must be site specific and clearly state the measures that will be employed on the site to minimise any adverse environmental impact. All activities are expected to be undertaken in accordance with the relevant Federal, State and Local Government regulations.

Ideally, a site-specific Construction EMP will be submitted with the Development Application, however, where contractors have not been appointed at the time of submitting the Development Application, the requirement for a Construction EMP will be a condition of the development approval. In this case the document will need to be lodged at least two (2) weeks prior to the planned construction commencement date and approved prior to any works starting on the site.

No construction activities can commence on port lands until POTL has approved a Construction EMP. Furthermore no work can commence on site until the 'pre-start inspection' has been undertaken or appropriate agreement has been reached with POTL's Environmental Unit.

Appendix 1 provides a checklist of issues which need to be addressed in a Construction EMP. It should be noted that the issues listed in the checklist are not intended to be an exhaustive list and Proponents are required to investigate and address all environmental issues that may be relevant to their development.

The Construction EMP is a dynamic document, which may be subject to change or modification as a result of site development, changes on the site, or occurrence of a non compliant event. This allows better environmental outcomes to be achieved throughout the process. The Corporation needs to be consulted on any changes to an accepted EMP.

OPERATIONAL EMPs

An Operational EMP is focussed on sound environmental management practices, which will be undertaken to minimise adverse impacts on the environment through normal operation of the facility. In addition, an Operational EMP identifies what measures will be in place or are actioned to manage any incidents and emergencies that may occur during operation of a facility.

The Operational EMP must clearly state the measures that will be employed on the site to minimise any adverse environmental impact. All activities are expected to be undertaken in accordance with the relevant Federal, State and Local Government regulations.

The Operational EMP must be reviewed every three (3) years and POTL needs to be consulted on any changes to the accepted Operational EMP. When reviewed Proponents should ensure that the Operational EMP continues to comply with POTL's Environmental Management Plan Guideline (as in place at the time of review).

Appendix 2 provides a checklist of issues which need to be addressed in an Operational EMP. It should be noted that the issues listed in the checklist are not intended to be an exhaustive list and Proponents are required to investigate and address all environmental issues that may be relevant to their operation.

APPENDIX 1 – CONSTRUCTION EMP CHECKLIST

A Construction EMP should include the following information:

1.0 Introduction

- | | | |
|-----|--|--------------------------|
| 1.1 | Overview of the works | <input type="checkbox"/> |
| 1.2 | Scope of the works | <input type="checkbox"/> |
| 1.3 | Layout of the works (including the size and location of the site) | <input type="checkbox"/> |
| 1.4 | Address and real property description of the site | <input type="checkbox"/> |
| 1.5 | Details of the developer/contractor, and any other key groups or individuals who may be associated with the works | <input type="checkbox"/> |
| 1.6 | Proposed start and finish dates, and specification of an approximate date for any key events (e.g. material excavation begins, or test phase entered into) | <input type="checkbox"/> |
| 1.7 | Details of the type and duration of the construction phase | <input type="checkbox"/> |

2.0 Site Plan

- | | | |
|-----|--|--------------------------|
| 2.1 | Detail the location of developments on the site (buildings etc.) | <input type="checkbox"/> |
| 2.2 | Detail the location of natural features (waterways, sensitive vegetation etc.) | <input type="checkbox"/> |
| 2.3 | Detail environmental control measures (sediment and erosion controls etc.) | <input type="checkbox"/> |
| 2.4 | Detail the location of stormwater infrastructure to be installed (e.g. pipe work, GPTs etc.) | <input type="checkbox"/> |
| 2.5 | Details as to review and update methodology of the site plan as work progresses | <input type="checkbox"/> |
| 2.6 | Copy of Site Plan attached to the Construction EMP | <input type="checkbox"/> |

3.0 Environmental Issues

- | | | |
|--------|---|--------------------------|
| 3.1 | Erosion and sediment control | <input type="checkbox"/> |
| 3.1.1 | Detailed plan showing the site layout and various erosion and sediment control devices | |
| 3.1.2 | Detail stormwater discharge points | |
| 3.1.3 | Detail access and egress location for vehicles (including control measures e.g. shakedown pads) | |
| 3.1.4 | Detail stormwater retention and ponding areas with capacity and overflow points identified | |
| 3.1.5 | Detail any up/down stream diversions from contaminated, storage and activity areas | |
| 3.1.6 | Detail measures to manage run-off from cleaning, wash-down and servicing area with potential for contaminants to enter stormwater system | |
| 3.1.7 | Detail installation and maintenance programs for stormwater control measures, such as oil separators, silt, rubbish traps, gross pollutant traps and stormwater diversion systems | |
| 3.1.8 | Detail any wastewater recycling / re-use systems | |
| 3.1.9 | Detail emergency response (devices (e.g. spill kits etc.)) | |
| 3.1.10 | Detail appropriate sedimentation control measures | |

3.2	Water conservation	<input type="checkbox"/>
3.3	Air quality management	<input type="checkbox"/>
3.4	Noise management	<input type="checkbox"/>
3.5	Land contamination	<input type="checkbox"/>
3.6	Acid sulphate soil management	<input type="checkbox"/>
3.6.1	Management plan prepared in accordance with the Corporation's Acid Sulphate Soil Guideline and State Planning Policy 2/02 Guideline – Planning and Management Development involving Acid Sulphate Soils	
3.7	Waste management	<input type="checkbox"/>
3.8	Cultural heritage	<input type="checkbox"/>
3.9	Flora and fauna	<input type="checkbox"/>
3.9.1	Detail any (on / off site) proposed vegetation removal	
3.9.2	Detail the method of removal and measures for erosion and sedimentation control	
3.9.3	Detail ongoing measures to avoid affecting (on / off site) vegetation	
3.10	Water management	<input type="checkbox"/>
3.10.1	Detail how much water will be used during the works	
3.10.2	Detail what water will be used for (e.g. dust suppression, compaction etc.)	
3.10.3	Detail what alternate supplies to potable water can be used (e.g. recycled waters, marine water or harvested stormwater)	
3.11	Hours of work	<input type="checkbox"/>
3.12	Access to the site	<input type="checkbox"/>
3.13	Storage of fuel and other hazardous goods	<input type="checkbox"/>
3.14	Fuelling and maintenance of vehicles and equipment	<input type="checkbox"/>
3.15	Disposal of waste (including fuel, oil, chemicals, points and sewage)	<input type="checkbox"/>
3.15.1	Litter and waste from construction phase to be regularly cleaned from the site and disposed of off site in accordance with regulatory requirements and to the satisfaction of the Corporation	
3.15.2	Proof of appropriate disposal to be supplied by the contractor or operator prior to activities commencing	
3.15.3	Litter and waste to be contained on-site until disposed	
3.15.4	Litter and waste to be prevented from escaping off the site into adjacent areas, neighbouring properties and waterways.	
3.16	Water quality and surface water runoff	<input type="checkbox"/>
3.16.1	Detail measures to prevent adverse effects on existing water quality	
3.17	Contaminated water	<input type="checkbox"/>
3.18	Handling and reporting environmental incidents	<input type="checkbox"/>
3.18.1	Detail process for handling, recording and reporting environmental incidents	

4.0 Project Management and Contacts

- 4.1 Detail the roles and responsibilities of the responsible employees (e.g. Project Manager, Site Superintendant, Project Engineer etc.) involved in the implementation of the Construction EMP ☐
- 4.2 Provide contact details for the responsible employees ☐

5.0 Monitoring and Reporting

- 5.1 Detail the key elements to be monitored and reported on over the duration of the project ☐

6.0 Site Environment Induction

- 6.1 Detail site induction process and how it will be managed ☐

7.0 Sustainability

- 7.1 Water consumption ☐
- 7.1.1 Detail measures to reduce the consumption of potable water used
- 7.1.2 Detail measures to manage and monitor water usage and leaks
- 7.2 Waste management ☐
- 7.2.1 Detail measures to minimise the generation of waste
- 7.2.2 Detail measures to facilitate recycling
- 7.3 Energy management ☐
- 7.3.1 Detail measures to manage the use and reduce the consumption of energy
- 7.4 Fuel ☐
- 7.4.1 Detail measures to reduce greenhouse gas emissions from operational vehicles and equipment

APPENDIX 2 – OPERATIONAL EMP CHECKLIST

An Operational EMP should include the following information:

- | | | |
|-------------------|---|--------------------------|
| <u>1.0</u> | <u>Introduction</u> | |
| 1.1 | Details of activities undertaken on site | <input type="checkbox"/> |
| 1.2 | Address and real property description of the site | <input type="checkbox"/> |
| 1.3 | Detail processes being undertaken and any emissions associated with the activities | <input type="checkbox"/> |
| 1.4 | Detail any nearby activities or environmental attributes relevant to the activities undertaken | <input type="checkbox"/> |
| 1.5 | Detail an assessment of risks associated with the operation and measures that have been implemented to minimise the risks | <input type="checkbox"/> |
| <u>2.0</u> | <u>Site Plan</u> | |
| 2.1 | Detail the location of buildings, structures, drains and other site features | <input type="checkbox"/> |
| 2.2 | Detail the location of all existing and proposed discharge and emission points to the environment, including where air, noise, liquids, wastewater, dust, smoke, vapours and any other contaminants are emitted | <input type="checkbox"/> |
| 2.3 | Copy of Site Plan attached to the Operational EMP | <input type="checkbox"/> |
| <u>3.0</u> | <u>Environmental Issues</u> | |
| 3.1 | Erosion and sediment control | <input type="checkbox"/> |
| 3.1.1 | Detailed plan showing the site layout and various erosion and sediment control devices | |
| 3.1.2 | Detail stormwater discharge points | |
| 3.1.3 | Detail access and egress location for vehicles (including control measures e.g. shakedown pads) | |
| 3.1.4 | Detail stormwater retention and ponding areas with capacity and overflow points identified | |
| 3.1.5 | Detail any up/down stream diversions from contaminated, storage and activity areas | |
| 3.1.6 | Detail measures to manage run-off from cleaning, wash-down and servicing area with potential for contaminants to enter stormwater system | |
| 3.1.7 | Detail installation and maintenance programs for stormwater control measures, such as oil separators, silt, rubbish traps, gross pollutant traps and stormwater diversion systems | |
| 3.1.8 | Detail any wastewater recycling / re-use systems | |
| 3.1.9 | Detail emergency response (devices (e.g. spill kits etc.) | |
| 3.1.10 | Detail appropriate sedimentation control measures | |
| 3.2 | Water conservation | <input type="checkbox"/> |
| 3.3 | Air quality management | <input type="checkbox"/> |
| 3.4 | Noise management | <input type="checkbox"/> |
| 3.5 | Land contamination | <input type="checkbox"/> |

- | | | |
|------------|---|--------------------------|
| 3.6 | Acid sulphate soil management | <input type="checkbox"/> |
| 3.6.1 | Management plan prepared in accordance with the Corporation's Acid Sulphate Soil Guideline and State Planning Policy 2/02 Guideline – Planning and Management Development involving Acid Sulphate Soils | |
| 3.7 | Waste management | <input type="checkbox"/> |
| 3.8 | Cultural heritage | <input type="checkbox"/> |
| 3.9 | Flora and fauna | <input type="checkbox"/> |
| 3.9.1 | Detail any (on / off site) proposed vegetation removal | |
| 3.9.2 | Detail the method of removal and measures for erosion and sedimentation control | |
| 3.9.3 | Detail ongoing measures to avoid affecting (on / off site) vegetation | |
| 3.10 | Water management | <input type="checkbox"/> |
| 3.10.1 | Detail how much water will be used during the works | |
| 3.10.2 | Detail what water will be used for (e.g. dust suppression, compaction etc.) | |
| 3.10.3 | Detail what alternate supplies to potable water can be used (e.g. recycled waters, marine water or harvested stormwater) | |
| 3.11 | Hours of work | <input type="checkbox"/> |
| 3.12 | Access to the site | <input type="checkbox"/> |
| 3.13 | Storage of fuel and other hazardous goods | <input type="checkbox"/> |
| 3.14 | Fuelling and maintenance of vehicles and equipment | <input type="checkbox"/> |
| 3.15 | Disposal of waste (including fuel, oil, chemicals, points and sewage) | <input type="checkbox"/> |
| 3.15.1 | Litter and waste from construction phase to be regularly cleaned from the site and disposed of off site in accordance with regulatory requirements and to the satisfaction of the Corporation | |
| 3.15.2 | Proof of appropriate disposal to be supplied by the contractor or operator prior to activities commencing | |
| 3.15.3 | Litter and waste to be contained on-site until disposed | |
| 3.15.4 | Litter and waste to be prevented from escaping off the site into adjacent areas, neighbouring properties and waterways. | |
| 3.16 | Water quality and surface water runoff | <input type="checkbox"/> |
| 3.16.1 | Detail measures to prevent adverse effects on existing water quality | |
| 3.17 | Contaminated water | <input type="checkbox"/> |
| 3.18 | Handling and reporting environmental incidents | <input type="checkbox"/> |
| 3.18.1 | Detail process for handling, recording and reporting environmental incidents | |
| 4.0 | <u>Project Management and Contacts</u> | |
| 4.1 | Identify the people (and provide their contact details, including after hours) responsible for: | |
| | <ul style="list-style-type: none"> • implementation of and management of the Operational EMP; • receiving the reports of monitoring, remedial action, environmental complaints and emergencies; • ensuring that measures / action plans are implemented; • verification, reporting and auditing of such measures / actions. | <input type="checkbox"/> |

<u>5.0</u>	<u>Monitoring and Reporting</u>	
5.1	Detail measure to monitor the environmental aspects and/or effects resulting from the operation of the site.	<input type="checkbox"/>
5.2	Detail record keeping process for monitoring results	<input type="checkbox"/>
<u>6.0</u>	<u>Environmental Complaints</u>	
6.1	Detail measures on how environmental complaints to the operation are managed	<input type="checkbox"/>
<u>7.0</u>	<u>Environmental Incidents</u>	
7.1	Detail how environmental incidents are recorded and managed	<input type="checkbox"/>
<u>8.0</u>	<u>Site Environment Induction</u>	
8.1	Detail site induction process and how it will be managed	<input type="checkbox"/>
<u>9.0</u>	<u>Auditing</u>	
9.1	Detail the implementation of the Operational EMP and how it will be monitored for compliance	<input type="checkbox"/>
9.2	Detail review process of the Operational EMP	<input type="checkbox"/>
<u>10.0</u>	<u>Sustainability</u>	
10.1	Water consumption	<input type="checkbox"/>
10.1.1	Detail measures to reduce the consumption of potable water used	
10.1.2	Detail measures to manage and monitor water usage and leaks	
10.1.3	Detail measures to reduce the quantity of potable water used for landscape irrigation	
10.1.4	Detail measures to treat water on-site and reuse the treated water	
10.2	Waste management	<input type="checkbox"/>
10.2.1	Detail measures to minimise the generation of waste	
10.2.2	Detail measures to facilitate recycling	
10.3	Energy management	<input type="checkbox"/>
10.3.1	Detail measures to manage the use and reduce the consumption of energy	
10.3.2	Detail measures to source energy from renewable sources	
10.4	Fuel	<input type="checkbox"/>
10.4.1	Detail measures to reduce greenhouse gas emissions from operational vehicles and equipment	

LANDSCAPING GUIDELINE

Introduction

The purpose of this guideline is to promote appropriate landscape treatments and maintenance throughout the Port of Townsville.

Performance Outcome		Acceptable Solution	
Landscaping Requirements			
PO1	The appearance and amenity of development is enhanced through use of high quality landscape design. Landscaping promotes the character of the area, and is of an appropriate scale and type relative to the size and nature of development and its surroundings.	AS 1.1	Landscaping is in accordance with an approved Landscape Plan that demonstrates the proposal’s satisfaction of the performance criteria.
		AS 1.2	Landscaped areas along and/or near retaining walls, service areas and recreational uses consist of an appropriate combination of trees shrubs and ground covers.
		AS 1.3	Important views are maintained and enhanced through landscape design.
PO2	Landscape siting and design assist microclimate management to conserve energy.	AS 2.1	In landscaped areas, trees and vegetation are selected and located to provide as much shade as possible.
PO3	Vertical landscaping ‘softens’ the appearance of multi-level buildings and provides increased privacy between buildings.	AS 3.1	Species selected for planting are suitable and of an adequate size or maturity to improve the appearance of the development.
		AS 3.2	Landscaping is sited and designed considering site-specific conditions.
PO4	A high standard of landscape design is provided to industrial and commercial development.	AS 4.1	On-site landscaping is designed to provide open space areas for the enjoyment of employees, to provide landscaping to the frontages of the site and to provide screening to car parks and other service areas.
		AS 4.2	Where development is accessible to the general public, landscaping is in accordance with an approved Landscape Plan.
PO5	Significant vegetation is retained where its removal is not required for the proposed building.	AS 5.1	Existing on-site vegetation is retained wherever possible.

Performance Outcome		Acceptable Solution	
		AS 5.2	Existing trees are protected during construction.
PO6	Landscaping is designed to provide a buffer between adjacent buildings to improve privacy and to provide a buffer to the site frontage.	AS 6.1	Screen planting is provided in accordance with Port of Townsville development standards.
		AS 6.2	Landscaped set back areas to the street frontage are provided in accordance with Port of Townsville development standards.
PO7	Landscaping incorporates predominantly local native species which are suited to the environmental and climatic conditions.	AS 7.1	Use of endemic species which do not create hazards for port operations and associated uses and activities.
		AS 7.2	The introduction of species that are not Australian natives is discouraged.
PO8	Soil preparation and garden edging is implemented to provide every chance of survival of newly landscaped areas.	AS 8.1	Planting, edging and soil preparation is in accordance with approved Landscape Plan.
PO9	Exposed car parking and driveway areas are enhanced through the planting of appropriate vegetation.	AS 9.1	Landscaping in an around exposed car parking areas and driveways is designed in accordance with POTL's development standards.
PO10	Landscaping of buffers is of a suitable width and density to achieve its intended effect and to minimise land use conflict.	AS 10.1	Screening vegetation is provided between adjoining different land uses, in accordance with POTL's development standards.
PO11	Landscaping is maintained in accordance with horticultural industry best practice.	AS 11.1	Landscaping is maintained in accordance with approved Landscape Plan.

STORMWATER MANAGEMENT GUIDELINE

INTRODUCTION

The purpose of this guideline is to:

- achieve acceptable levels of stormwater run-off quality and quantity by applying water sensitive design principles in development proposals to maintain and enhance the environmental values of waterways and catchments; and
- provide an efficient and cost effective stormwater drainage network and detention/retention storage that adequately protects people and the natural and built environments from an unacceptable level of flooding risk.

This guideline identifies many issues that will require detailed design of systems to mitigate the impacts of development on flooding, water quality and drainage. It is not envisaged that this level of detail will be available or considered at the initial application stage. It is crucial to ensure that flooding, water quality and drainage management have been taken into account in development design to ensure these issues are accommodated in the final detailed design.

The detailed design of the drainage network and stormwater quality best management practices will normally be required in a Site Based Stormwater Management Plan (SBSMP). A SBSMP provides site specific details and highly detailed information on how stormwater will be managed on site and any impacts this may have both on and off site. This level of detailed design will usually be required as part of an operational works application or as a condition of approval.

ASSESSMENT CRITERIA

Performance Outcome		Acceptable Solution	
Stormwater			
PO1	The planning of the stormwater management system must provide for the integrated management of stormwater in order to:	AS 1.1	The proposal complies with these Stormwater Guidelines and Referenced Standards
	<ul style="list-style-type: none">• minimise flooding;• protect and enhance environmental values of receiving waters;• maximise the use of water sensitive design principles;• maximise the use of natural waterway corridors and natural channel design principles;• maximise community benefit; and• minimise public safety risk.	AS 1.2	A SBSMP is prepared for all major and minor stormwater management measures. The SBSMP must provide for the following where applicable: <ul style="list-style-type: none">• an underground and/ or open drain/overland flowpath network maximising the use of natural channel design and water sensitive urban design principles;• make provision for detention/retention storage basins;• an erosion and sediment control program;• retention of natural waterway corridors;• public safety factors and risk

Performance Outcome		Acceptable Solution	
			management measures; <ul style="list-style-type: none"> an acceptable level of flood immunity.
		AS 1.3	The proposal complies with any relevant legislative requirement.
PO2	The proposed stormwater management system or site works must not adversely impact on flooding or drainage of properties that are upstream, downstream or adjacent to the subject site.	AS 2.1	The proposal does not result in an increase in flood level or flood duration on upstream, downstream or adjacent properties. Compliance with this acceptable solution can be demonstrated by the submission of a hydraulic and hydrology report (as part of a SBSMP) identifying potential flooding impacts on upstream, downstream or adjacent properties.
PO3	The drainage network must provide capacity to safely convey stormwater run-off resulting from relevant design storm events taking into account increased run-off from roof drainage.	AS 3.1	The design demonstrates that a drainage network will be provided that will comply with the Referenced Standards.
PO4	Any channel works that are part of the development, major drainage works or flood mitigation works must maintain and/or enhance the environmental values of the waterway corridor or drainage corridor.	AS 4.1	Design and construction of channel works incorporate water sensitive design and natural channel design features which will comply with the Referenced Standards.
PO5	Erosion treatment works along waterway banks and associated drainage structures must maintain or enhance the environmental values of waterways.	AS 5.1	Design and construction of erosion treatment features incorporate natural channel design features which will comply with the Referenced Standards.
PO6	Environmental values and water quality objectives of receiving waters within or downstream of the proposal are protected or enhanced.	AS 6.1	Relevant water quality objectives for receiving waters are identified and site specific discharge standards met. All development complies with the Referenced Standards and any relevant legislative requirements.

Performance Outcome		Acceptable Solution	
		AS 6.2	The design provides for stormwater quality best management practices that are sufficient to treat the target pollutants and will comply with the Referenced Standards.
		AS 6.3	Stormwater quality best management practices are designed, constructed and maintained in accordance with the Referenced Standards.
PO7	Release of sediment laden stormwater is minimised	AS 7.1	All development complies with the Referenced Standards and any relevant legislative requirements including, but not limited to, the <i>Environmental Protection Policy (Water) (Qld)</i> .

STORMWATER GUIDELINE DEFINITIONS

Detention/retention storage basin means a storage pond, basin or tank used to reduce and attenuate the peak discharge within a drainage system.

Environmental values means the actual or potential function carried out by the water body. For more information on environmental values, refer to the *Environmental Protection Policy (Water)*.

Flood means the temporary inundation of land by expanses of water that overtop the natural or artificial banks of a watercourse.

Floodable land means land affected by one of the following flood sources:

- Ross River;
- Ross Creek;
- localised overland flow paths;
- designed open channels;
- localised flooding;
- storm tide surge.

Land disturbing development means any carrying out of building work, plumbing or drainage work, operational work or subdivision where there is potential for accelerated erosion from wind or water and/or the discharge of sediment to drains or waterways.

Localised flooding includes localised overland flow paths and localised ponding.

Localised overland flow paths are drainage lines that convey stormwater runoff, from any storm, before it enters a creek or waterway network. Overland flow paths, in general, are not part of river, creek or waterway flooding and by nature are dry except during storm events.

Localised ponding occurs in naturally low-lying areas where overland flows from localised storms (of any frequency) collects and creates a temporary detention storage. Water from these ponded areas then slowly drains through stormwater drainage pipes or other waterway networks. These ponded areas are usually dry except during and immediately after storm events.

Major drainage system means part of a drainage system in a catchment which is designed to convey major design storms, e.g. 50 year ARI and 100 year ARI events. The system may comprise open space, floodway channels, road reserves, pavement expanses, overland flow paths and detention basins.

Minor drainage system means part of a drainage system in a catchment that controls flows from the minor design storm, e.g. 2 year ARI and 10 year ARI events. The system usually comprises kerbs and channels, roadside channels, gully inlet pits, underground pipes, junction pits, manholes and outlets.

Natural channel design means the basic principles of natural channel design (NCD) are to maintain the hydraulic conveyance requirements of engineered or natural channels, while improving environmental values.

Receiving waters means a body of water (including a wetland) within or downstream of the development that has environmental values. This does not include structures provided for the purpose of stormwater management that have no other statutory functions (e.g. recreation).

Referenced Standards means the following standards:

- Australian Runoff Quality – A guide to Water Sensitive Urban Design (Engineers Australia, National Committee for Water Engineering);
- Australian Rainfall and Runoff (Engineers Australia, National Committee for Water Engineering);
- Natural Channel Design Guidelines (Brisbane City Council); and the
- Queensland Urban Drainage Manual (Department of Environment and Resource Management).

Site Based Stormwater Management Plan (SBSMP) means a plan that identifies potential on and off site (upstream, downstream and adjacent properties) impacts associated with stormwater for a development. The SBSMP also identifies the range of stormwater management strategies and actions for water quality and environmental issues.

Water quality objectives means measurable long term goals for the quality of receiving waters. For more information on water quality objectives, refer to the *Environmental Protection Policy (Water)*.

Water Sensitive Design Principles means those principles detailed by the Referenced Standards.