

Guideline

Coastal Protection and Management Act 1995

Purpose and use of the Code for assessable development that is prescribed tidal works

This document provides guidance to both local government and those applying for development approval for a prescribed tidal work to understand the purpose and use of the 'Code for assessable development that is prescribed tidal works' under the Coastal Protection and Management Regulation 2017.

1	Introduction	2
2	What are prescribed tidal works?	2
3	Development assessment of prescribed tidal works	2
4	Where is the 'tidal area for a local government area'?	3
5	The Prescribed Tidal Works Code (the Code)	4
5.1	Purpose of the Code	4
5.1.1	Achieving the purpose of the Code	5
5.2	Structure of the Code and performance outcomes	5
5.2.1	Character and amenity	6
5.2.2	Lighting and signage	6
5.2.3	Ensuring works are structurally sound and are safe for their intended use	7
5.2.4	Avoiding adverse impacts of the works on nearby structures	7
5.2.5	Protecting the natural features of tidal water	7
5.2.6	Use of State coastal land for a private purpose	7
6	Additional Guidance on meeting performance outcomes	9
6.1	Registered Professional Engineer of Queensland certification and design and safety	9
6.2	Pontoon design to resist flood damage and the release of expanded polystyrene to the environment	10



Purpose and use of the Code for assessable development that is prescribed tidal works

1 Introduction

Prescribed tidal works are assessed by local government under the development assessment system. The Department of Environment and Science (DES) provides assistance to local government in this role by providing the Code for assessable development that is prescribed tidal works in Schedule 3 of the Coastal Protection and Management Regulation 2017 (Coastal Regulation¹).

This guideline is designed to assist both local government and those applying for development approval for a prescribed tidal work to understand what are prescribed tidal works, the purpose of the Code for assessable development that is prescribed tidal works and how the Code is to be used.

2 What are prescribed tidal works?

Prescribed tidal works are defined in section 15² of the Coastal Regulation. They are a subclass of tidal works which are operational works carried out in, on or above tidal land. Tidal works are defined in the *Coastal Protection and Management Act 1995* and include jetties, pontoons, boat ramps, seawalls, pipelines and bridges.

Prescribed tidal works include all tidal works other than:

- a) tidal works within a State managed boat harbour;
- b) tidal works for a new or existing structure used for the operation of—
 - (i) a port authority or port operator; or
 - (ii) a public marine facility constructed by or for the Gold Coast Waterways Authority, Queensland Transport, a port authority or a port operator;
- c) tidal works for any of the following—
 - (i) creating or changing the configuration or characteristics of a navigational channel;
 - (ii) an inlet or outlet for development of aquaculture if the development is carried out on land and is made 'accepted' under the local government's planning scheme or is development requiring code assessment under the Planning Act;
- d) tidal works the subject of—
 - (i) a deemed approval; or
 - (ii) a development approval given under the repealed *Integrated Planning Act 1997* on or before 20 October 2003.

3 Development assessment of prescribed tidal works

The local government is the assessment manager for development applications for prescribed tidal works³ within the tidal area for a local government area⁴. The assessment benchmark set by the Planning Regulation 2017 (Planning Regulation) for local government is the Coastal Regulation, Schedule 3 – Code for assessable

¹ Planning Regulation 2017, schedule 10, part 17, division 1, item 28

² In this section—

Aquaculture see the *Fisheries Act 1994*, schedule.

Queensland Transport means the department in which the *Transport Operations (Marine Safety) Act 1994* is administered.

State managed boat harbour see the Transport Infrastructure (Public Marine Facilities) Regulation 2011, schedule 4.

³ Planning Regulation 2017, schedule 8, table 2

⁴ *Planning Act 2016*, section 19(3)

Purpose and use of the Code for assessable development that is prescribed tidal works

development that is prescribed tidal works⁵. A local government must use the Code for assessable development that is prescribed tidal works when assessing prescribed tidal works. This is to ensure consistency of development assessment state-wide and to ensure State interests are appropriately dealt with, especially as most tidal water is over State land. Generally local government cannot apply planning schemes outside of their local government areas, or have not had provisions in their planning schemes for assessment of tidal works. The Code for assessable development that is prescribed tidal works allows, in some cases, the planning scheme to be applied if provisions exist. Refer also to section 19 of the *Planning Act 2016* (Planning Act) for the application of planning schemes in a tidal area for a local government area.

4 Where is the ‘tidal area for a local government area’?

A **tidal area**, for a local government area, or a port authority’s strategic port land, means—

- a) the part or parts of a river, stream or artificial waterway that are—
 - (i) tidal water⁶ in or next to the area or land; and
 - (ii) between the high water mark and the middle of the river, stream or artificial waterway; and
- b) to the extent the boundary of the area or land is, or is seaward of, the high water mark and outside a river, stream or artificial waterway—tidal water that is seaward and within 50m of the high water mark.

A local government area may include tidal rivers and creeks but generally won’t extend beyond the high water mark on open coasts or large bays. The Planning Act and the Planning Regulation provide the authority for local governments to assess prescribed tidal works outside of their local government areas. The tidal area for a local government area is intended to capture tidal works that are most often connected to land and have an on-land component, such as jetties, pontoons and boat-ramps.

⁵ Planning Regulation 2017, schedule 10, part 17, division 2, table 2

⁶ **Tidal water** is defined in the *Coastal Protection and Management Act 1995*, Schedule

Purpose and use of the Code for assessable development that is prescribed tidal works

Figures 1 and 2 illustrate the local government tidal area under each of these circumstances.

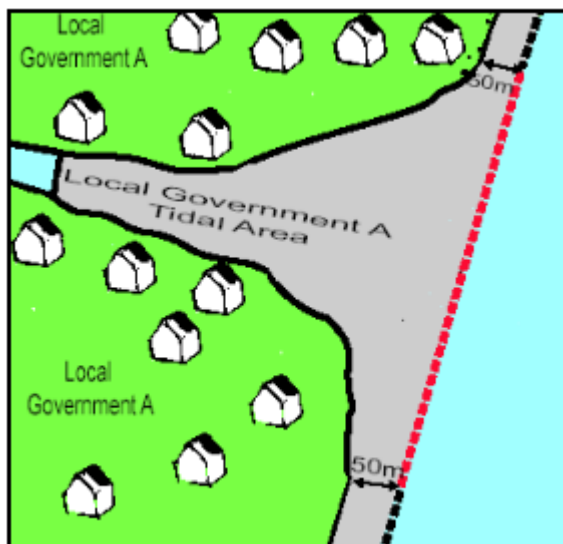


Figure 1 When a tidal waterway is within only one local government area (green area) the local government tidal area includes all of the tidal area (no matter how wide the waterway) from high water mark and 50m into the ocean. The 50m boundary can be determined at the mouth by projecting a straight line between the last two points on the coastline (red dashed line).

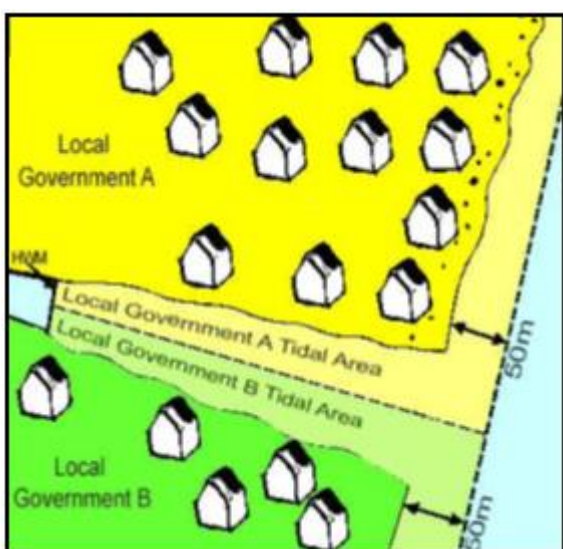


Figure 2 When a tidal waterway is within two local government areas, the local government tidal area for each local government is the area from high water mark to halfway across the waterway and 50m into the ocean.

5 The Prescribed Tidal Works Code (the Code)

5.1 Purpose of the Code

The purpose of the Code is to ensure proposed prescribed tidal works—

- are compatible with the character and amenity of their surrounding area
- are designed and constructed in a way to ensure they are structurally sound
- are safe for their intended use
- are adequately serviced with infrastructure, including, for example, infrastructure for the supply of water or the discharge of sewage
- involve only minimal use of State tidal land for a private purpose

Purpose and use of the Code for assessable development that is prescribed tidal works

- f) do not cause a significant adverse effect to any of the following—
- (i) existing public use of, and access to, State tidal land or any tidal water
 - (ii) navigable access to, or navigable egress from, any lot that adjoins, or is in the immediate surroundings of, a lot connected to prescribed tidal works
 - (iii) the natural features of tidal water, including, for example, the water quality and bed and banks of the tidal water
 - (iv) the structural integrity, operation or maintenance of any structure.

5.1.1 Achieving the purpose of the Code

The Code achieves these purposes by setting performance outcomes that must be complied with. All performance outcomes relevant to a specific development must be complied with. In most cases the Code provides acceptable outcomes that are a guide to how the performance outcome can be complied with. The acceptable outcomes do not limit the assessment manager's discretion to impose different or additional standards as conditions of the development permit, to ensure the performance outcomes are met.

For certain performance outcomes:

- the acceptable outcome is the only way the performance outcome can be met, and
- the works must be appropriately certified by a registered professional engineer with relevant qualifications in civil, environmental, geotechnical or structural engineering.

This is fully described in section 5(2) and 5(3) of the Code. Acceptable outcomes which are listed as a section 5(2) outcome in the Code are intended to set a minimum standard which must be met to ensure structural integrity and safety of the works.

The acceptable outcomes allow relevant planning scheme standards to be acceptable outcomes in many cases, but generally only where the relevant planning scheme standard is more stringent than any of the other listed acceptable outcomes.

5.2 Structure of the Code and performance outcomes

The Code is divided into the following sections which reflect the purpose of the Code:

- Character and amenity generally – prescribed tidal works in a canal
- Character and amenity generally – prescribed tidal works not in a canal
- Character and amenity (height, scale and size)
- Character and amenity (materials and colours)
- Lighting
- Signage
- Earthworks, vegetation and rehabilitation
- Public access – availability
- Public access – safety
- Navigable access to, or egress from, lots that adjoin or are in the immediate vicinity of, a lot connected to prescribed tidal works
- Infrastructure including access, parking, sewerage and water services

Purpose and use of the Code for assessable development that is prescribed tidal works

- Design, construction and safety – all prescribed tidal works
- Design, construction and safety – boat ramps and slipways for private purposes
- Design, construction and safety – bridges
- Design, construction and safety – prescribed decks
- Design, construction and safety – jetties and piers
- Design, construction and safety – pipelines and other underground services
- Design, construction and safety – pontoons
- Design, construction and safety – revetments and seawalls
- Design, construction and safety – wharves

Each section, and each performance outcome, does not necessarily relate to a specific purpose but may relate to multiple purposes. A general overview of how the sections and their performance outcomes align with the purpose of the code is given below.

5.2.1 Character and amenity

The character and amenity requirements relate to how the design and construction of prescribed tidal works is compatible within the immediate surroundings and locality in which the works are located. Generally, this section of the Code is to be referred to in conjunction with a local government planning scheme applying to the area as these will generally have a more stringent standard specific to the locality.

Performance outcome 1.1 and 2.1 refer to character and amenity of prescribed tidal works in a canal and other waterways and address similar design aspects to limit impact on local aesthetics. However, acceptable outcome 2.1(b) includes a requirement in areas other than canals (such as natural waterways), for only one prescribed tidal works of its type to be permitted on the edge of tidal water fronting the lot. These outcomes also seek to minimise the size of works by not allowing the roofing of prescribed tidal works, except where they provide the main access to land, such as ferry terminals and high use public jetties.

Performance outcome 3.1 addresses the height, scale and size of all prescribed tidal works while performance outcome 4.1 addresses the materials and colours of all prescribed tidal works. The scale, size and colour of the works should be compatible with the character and amenity of the location so that the works do not change or impact on the general visual amenity of the area. Where practical, tidal work should be built in the middle of the waterfront boundary of the lot to which it is connected (or associated with), and be of a scale and design that ensures the structure does not extend in front of a neighbouring lot.

Consideration must also be given to consistency with each of the Code's structural and safety-specific outcomes. For example, although while not aesthetically pleasing, metal may be the only material appropriate for the structural integrity of the proposed work. In this instance a condition could be applied about treating and colouring the materials to be compatible with the character and amenity of surrounding structures, but may not apply a condition that is contradictory to an acceptable outcome listed in section 5(2).

5.2.2 Lighting and signage

Performance outcome 5.1 for lighting seeks to ensure that lighting is both adequate for security and safe use of the works and also minimises nuisance or aesthetic impact of the lighting. Performance outcome 5.1 does not relate to lighting for navigational purposes, which may be required by Maritime Safety Queensland.

Purpose and use of the Code for assessable development that is prescribed tidal works

Performance outcome 6.1 relates to signage and acknowledges that signage required for safety, identifying the prescribed tidal works or for reasons under any Act are accepted as part of the works. However other signage should be avoided, or positioned or integrated, into the structure so as not to be a dominant feature and impact on the amenity of the area.

5.2.3 Ensuring works are structurally sound and are safe for their intended use

Performance outcomes 12.1 to 20.1 seek to ensure that prescribed tidal works are structurally sound and are safe for their intended use. Performance outcomes 12.1 to 12.9 cover general requirements for all tidal works and 12.10 to 20.1 cover specific structural and safety requirements for each type of work including jetties, bridges and pontoons.

When assessing against the Code, the assessment must consider the performance outcomes in part 12.1 to 12.10 as well as the relevant performance outcome for the specific type of tidal work (e.g. an application for a pontoon must be assessed against performance outcomes 12.1 to 12.10 and performance outcomes 18.1 to 18.6).

Acceptable outcomes 12.10 to 20.1 are usually section 5(2) outcomes (see above) and hence are the only acceptable solution for achieving the performance outcome. Also for these performance outcomes compliance with the Code is only achieved if the works carried out are appropriately certified by a relevant engineer.

Performance outcomes for safety and structural integrity rely heavily on appropriate Australian Standards.

5.2.4 Avoiding adverse impacts of the works on nearby structures

Performance outcomes 12.2, 12.3, and 12.5 seek to ensure that when prescribed tidal works are constructed on, or attached to, an existing structure, consideration is given to the existing structure's capacity to withstand the additional loading and other forces applied to it as a result of the new structure. Performance outcome 15.3 ensures the works do not hinder or prevent remedial works to banks or any other existing structure such as revetments.

5.2.5 Protecting the natural features of tidal water

Performance outcomes 7.1 to 7.2 seek to protect and conserve the natural features of the land and tidal water by preserving the natural land levels, natural banks and minimising any clearing or disturbance to vegetation. Performance outcome 7.3 is a requirement to rehabilitate disturbed areas following construction of works including reinstating land levels and revegetating the land with native vegetation. Construction of revetments or other bank hardening works and dredging the bed of the waterway to improve vessel access is inconsistent with achieving these performance outcomes.

It is noted that in canals and artificial waterways, or in highly developed waterways these performance outcomes may not be relevant as the shoreline is usually artificial and revetted.

Protection of water quality is dealt with in performance outcome 12.6.

5.2.6 Use of State coastal land for a private purpose

Prescribed tidal works are commonly constructed on State land under tidal water as they generally provide access to the sea via jetties, pontoons and boat ramps. However, as private works they risk displacing or interfering with public use of the State land, which is undesirable. For State land in natural waterways, proponents of works must obtain the consent of the owner of the land (the State) before a development

Purpose and use of the Code for assessable development that is prescribed tidal works

application can be made⁷. Through this process the impact of private works on existing public use can be considered. However, local government may also have concerns with the use of State land especially in canals which they manage, and there is no owner's consent process to assess this.

Therefore performance outcomes throughout the Code seek to ensure private use of State land does not unduly affect or displace public use or activities such as maintenance dredging of canals. Performance outcomes which achieve this are detailed below.

Maintaining public use and access

Performance outcome 8.1 seeks to ensure that opportunities for public use of and access to State coastal land including beaches, intertidal areas and waterways, is maintained. Performance outcome 9.1 requires that prescribed tidal works do not adversely affect the safety of members of the public accessing or using State coastal land. For example works should not impede access along a beach or riverbank or as an alternative should provide signage to direct members of the public to use alternative access paths.

Maintaining navigable access to, or egress from, lots that adjoin or are in the immediate vicinity of, a lot connected to prescribed tidal works

Each waterfront property owner with land directly abutting tidal water (State land) has an assumed right of access to navigable water in the adjacent waterway. The State supports the construction of private jetties, pontoons and other structures to facilitate access from private property directly abutting tidal water to navigable water without formal tenure. This is a similar situation to the construction of a driveway from private property across a footpath (State land) to a roadway for vehicle access. However such works can only be permitted where it does not interfere with any other person's access to navigable water, for general access to the shore, say for erosion control, or maintaining stormwater infrastructure or by making the use of a waterway unsafe for vessels. This is achieved in various parts of the Code by ensuring:

- property owners are only permitted to build structures in front of their property and not another person's property and this area is defined by the extension of the property's side boundaries over tidal water
- a minimum 3m wide unimpeded access corridor to tidal water is available to all waterfront property owners
- works are setback 1.5m from their extended side boundary so that, between properties, there will always be a 3m wide unimpeded access corridor to the bank from the water for manoeuvring or access to the bank
- works do not extend into a mapped navigation corridor, past a quay line or to a distance that would interfere with safe navigation along the waterway.

In some cases there may not be sufficient room for a pontoon or jetty and therefore an application cannot be approved. However a boat ramp may be an alternative. In some cases a shared structure may be considered where several properties have short water frontages or are in constrained locations such as at the ends of canals. Alternatively the State, local government or Gold Coast Waterways Authority may prepare a water allocation area plan for a waterway which designates an area for each property where a development application for a marine access structure may be made. The State has prepared such guidance for natural waterways⁸.

⁷ For information on owner's consent for a development application refer to <https://www.qld.gov.au/environment/land/state/owner-consent>

⁸ Refer to DES guideline '[Preparing a water allocation area for tidal works in natural waterways](#)'

Purpose and use of the Code for assessable development that is prescribed tidal works

Use of State land under tidal water may also be formalised by a lease or other arrangements by the State. In these cases the access of waterfront property owners to navigable water will be considered in the lease application.

Minimising the use of State land for a private purpose

Private use of State land on the coast is generally only permitted for marine access structures and property protection works (in limited circumstances). Works for private recreational purposes such as decks or boardwalks over State land are generally not supported.

A right to occupy and use State land for prescribed tidal works is given, at no cost to the property owner, when a development approval is given⁹. However the State requires such works to be of the minimum size required to fulfil its intended function. For example a pontoon constructed for private marine access purposes must not be of a size beyond that needed for mooring vessels or designed to facilitate other purposes such as an entertainment deck. This ensures public use is preserved as much as possible and aesthetic impacts are minimised.

The Code provides limits on structure sizes, (for example in 3.1, 8.1, 9.1, 10.1, 12.9, 12.10, 15.3 and 16.3) and includes the roofing of a structure (for example performance outcome 1.1, 2.1, 3.1). Also note that the term Water Allocation Area is used in performance outcomes and it is defined in the Code. It also provides an administrative tool to limit the size and location of works.

Infrastructure including access, parking, sewerage and water services

Performance outcome 11.1 seeks to ensure that appropriate infrastructure is provided to support the prescribed tidal works including parking and water supply. It relates primarily to works for a commercial or public purpose, for example, adequate off street parking is provided for a public boat ramp or jetty for a passenger ferry. The acceptable outcome mainly relies on applying a planning scheme standard as such matters would normally be dealt with by a planning scheme.

6 Additional Guidance on meeting performance outcomes

6.1 Registered Professional Engineer of Queensland certification and design and safety

The design and safety provisions in the Code specified in section 5(3) must be certified by a Registered Professional Engineer of Queensland (RPEQ¹⁰) or interstate equivalent. The RPEQ should be experienced in the design, construction and safety requirements of tidal structures.

It is the role of the assessment manager to ensure development applications for prescribed tidal work are structurally sound and in accordance with the design construction and safety provisions outlined in the Code. The RPEQ certification process can be used by local government to provide certainty that proposed works are structurally sound.

⁹ *Coastal Protection and Management Act 1995*, section 123

¹⁰ A registered professional engineer is a person registered under the *Professional Engineers Act 2002 (Qld)*.

Purpose and use of the Code for assessable development that is prescribed tidal works

6.2 Pontoon design to resist flood damage and the release of expanded polystyrene to the environment

Pontoon flotation units are commonly constructed using an expanded polystyrene (EPS) core to provide a flotation chamber for the unit. In most cases the core is wrapped with a thin High Density Polyethylene (HDPE) liner to protect it from the marine environment. However, river flooding is known to cause significant damage to pontoons, resulting in dislodged and broken structures with damaged liners. This can result in EPS release into waterways and wide dispersal. This adversely impacts the environment and results in significant clean-up costs to the community. This was particularly evident in the aftermath of the South East Queensland (SEQ) 2022 floods.

Relevant design requirements in the Code to prevent EPS release to the environment are specified in performance outcomes PO12.1 and PO12.4 and require the prescribed tidal work to:

- be structurally sound, having regard to the impact of flooding, storm tide, overtopping by waves, projected sea-level rise, tidal influences and hydrodynamic forces
- be constructed of materials suitable for the marine environment, having regard to their ability to resist breakage resulting from exposure to environmental conditions.

To comply with the Code each performance outcome must be achieved. A pontoon design that is easily damaged during a flood event or results in the release of EPS to the environment is not considered to achieve PO12.1 or PO12.4. For a pontoon design to meet these performance outcomes, in waterways with flood flows capable of dislodging a pontoon or carrying debris that may damage a pontoon, a robust standard of EPS wrapping or encasement is required to ensure it is not released to the environment.

To achieve PO12.1 and PO12.4, the following design for the core protection liner (or membrane), developed in consultation with Maritime Safety Queensland, is recommended in rivers and large creeks carrying high flood flows. Note that this is advice only and it is the responsibility of the design engineer to provide a design that achieves PO12.1 and PO12.4 for a specific site.

Recommended pontoon flotation unit design for EPS containment

1. All EPS used in a pontoon flotation unit is wrapped or encased with a core protection liner;
2. The liner materials used are to be rotomolded tubs, welded high density polyethylene (HDPE) membranes or composites; and
3. The liner includes at least one layer on the sides, ends and base of minimum thickness 6 mm to protect the flotation chamber core from debris and sharp objects. Concrete shells used as core liners are permitted, provided concrete cover requirements are met in accordance with AS 3600.

This design is necessary in SEQ as large numbers of pontoons have been significantly damaged during floods. Elsewhere in Queensland, these standards should be considered, having regard to site location and the flood and damage risk. In situations where pontoons are not exposed to damaging flood flows, including canals, marinas, small creeks or similar protected areas the above design may not be required. Development applications for a pontoon proposing a core protection liner of thickness less than 6 mm should include an RPEQ statement on why the proposed design of the liner is appropriate for the location.

Purpose and use of the Code for assessable development that is prescribed tidal works

Disclaimer

While this document has been prepared with care it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Science should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Approved:

3 April 2023

Version history

Version	Date	Description of changes
2.00	2 July 2018	
2.01	3 April 2023	Addition of section 6.2 to provide guidance on pontoon design to resist flood damage and the release of expanded polystyrene to the environment