

# Guideline

## Marine Management

### Local government dog off-leash areas in State Marine Parks

*This document outlines environmental regulations and considerations relevant to the establishment of dog off-leash areas by Local governments within and adjacent to state marine parks.*

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### Overview

There is strong evidence about the negative effects of dogs on shorebirds—and striking a balance between recreational demand and protection of wildlife is a significant challenge for conservation managers. A range of management techniques are available to protect wildlife and managers must consider the threat and corresponding management action against the likely success and cost of implementation. It is widely accepted that wildlife management programs which exclude human social considerations risk low compliance or even failure (Glover et al 2011). Off-leash dogs are a significant threat to roosting, feeding and nesting shorebirds and encouraging the activity away from important shorebird areas through the strategic placement of dog off-leash areas (DOLA) can have significant conservation benefits to shorebirds (Stigner et al 2016). Once positioned, dog off-leash areas must be supported by enforcement, public awareness and improved management of dogs near high value shorebird areas to enhance shorebird protection.

This Guideline has been prepared to assist local governments with planning, establishment and management of foreshore dog off-leash areas within and adjacent to state marine parks managed by the Department of Environment and Science (DES) through the Queensland Parks and Wildlife Service (QPWS). This document summarises the regulations relevant to dog access and environmental management by the Department and subsequent key environmental considerations. Local government should refer to these Guidelines in the early planning stages for dog off-leash areas. An environmental impact assessment has been undertaken to identify potential issues and formulate recommendations to protect environmental values while providing for community access. The potential impact to cultural values will vary depending on the proposed location. The local government should consult relevant First Nations peoples as the traditional owners for Country, for location and group specific considerations. The approach to planning and assessing suitable dog off-leash areas has been guided by evidence-based methods that achieve a conservation outcome for shorebirds.

This Guideline has been prepared based on valued input and feedback from a range of internal and external stakeholders. Practical implementation was piloted with the Brisbane City Council in the Moreton Bay Marine Park where relevant First Nations peoples and stakeholders were engaged to discuss site specific matters.

## Part 1 – Background

Approximately 80% of Queensland's population resides within 50km of the coast, thus creating high demand for freely accessible public beaches, tidal waterways and foreshore reserves (Coastal Plan 2014). 38% of Australian households currently own a dog (Animal Medicines Australia 2016) and as human populations increase so does pet ownership and the demand for dog recreation opportunities in coastal areas.

Shorebirds, including several endangered and vulnerable species, rely on intertidal areas (the area between high and low tide, also known as the foreshore) for foraging and supratidal areas for roosting and breeding. Approximately 60% of the state's intertidal habitat is protected area, 96% of which is exclusively marine protected area and 1.4% is both marine and terrestrial protected area (Dhanjal-Adams et al 2016). Despite this level of protection shorebird populations are rapidly declining as threatening processes internationally and locally are continuing. Dogs and conservation objectives don't always mix and there is no doubt that dogs can cause significant problems. For example, those that are allowed to run about off-lead cover considerably more ground than the route of a footpath, so their effects can be widespread (Priestman 2017).

The presence of people and dogs on the foreshore therefore represents a serious threat to wildlife. While current local and state government laws require dogs to be on a lead in most parts of the foreshore and/or under control, research conducted by Stigner et al. 2016 showed that 84% of dogs on Moreton Bay's foreshores were unrestrained. Therefore, there is clearly a need to bring awareness to the issue and balance recreational demand with conservation values to ensure that high value shorebird areas are left undisturbed.

Jurisdictional overlap of state marine park and local government management in foreshore areas means that effective management of dog recreation on the foreshore requires cooperation by local and state authorities. The Queensland Parks and Wildlife Service (QPWS) is supportive of local government established and managed dog off-leash areas on foreshores in state marine parks provided the designation does not impinge on cultural values, will not disturb shorebirds or their habitat and will result in an overall reduction of disturbance to shorebirds by dogs off-leash, achieved by complementary enforcement of dog on-leash regulations elsewhere.

### 1.1 Objective

The objective of this Guideline is to provide information and guidance around planning and managing dog off-leash areas in relation to matters of marine park cultural and environmental significance, by providing:

- A summary of the legal framework (Part 1);
- Recommendations for assessing cultural and environmental values and how to consider these values when planning for dog off-leash areas (Part 2);
- Evidence based environmental best practice parameters and acceptable solutions to avoid and mitigate impacts to shorebirds and the environment (Part 3);
- Guidance on implementation, monitoring and review of dog off-leash areas and consultation with DES (Part 4).

While this Guideline focusses on the management of dogs within the limits of Queensland state waters that are within state marine parks, consideration has also been given to adjacent QPWS managed areas.

This Guideline applies to shorebird and coastal bird species that utilise the foreshore and that may be affected by the declaration of a dog off-leash area. The term 'shorebird' collectively refers to migratory and non-migratory shorebirds, unless specified. The term 'coastal bird' includes terns and gulls under the order *Charadriiformes*.

This Guideline relates to the establishment of dog off-leash areas in existing natural or semi-developed foreshore areas and beaches. It does not cover works associated with the installation of equipment e.g., agility

equipment, beach nourishment, removal of vegetation or building of structures to establish the dog off-leash area.

The conduct of works on the foreshore will trigger assessment and approval requirements under Queensland legislation such as the *Marine Parks Act 2004*, *Planning Act 2016* and the *Fisheries Act 1994*. This Guideline does not assess or pre-empt a decision on any such approvals.

### 1.11 Applicability

QPWS has an advice role with respect to local government exercising local laws and undertaking activities that may impact shorebirds in state marine parks. Therefore, this Guideline aims to support QPWS in this role as well as providing a self-assessment process for local government with respect to planning, establishment and management of foreshore dog off-leash areas within and adjacent to state marine parks.

### 1.12 What is a dog off-leash area?

A dog off-leash area is a public place established by local government, whereby a dog is allowed off-leash but under full control of the owner in accordance with the relevant animal related local law. Dog off-leash areas are defined and demarcated by signage, fencing and/or geographical features and may have restrictions in terms of daily hours or time of year where dogs are allowed on or off-leash.

Dog off-leash areas are a valuable asset to the community in terms of providing physical exercise opportunities and associated health and wellbeing benefits. If properly established and managed, they can also contribute to sustainable recreation by reducing conflict with other uses and sensitive environmental areas.

The provision of amenities (e.g., car parking and drinking water) and maintaining equitable community access to the foreshore are key considerations for local government in establishing dog off-leash areas. This Guideline will assist to ensure environmental matters are also a primary consideration in this process.

### 1.13 Principles

Establishment and management of foreshore dog off-leash areas by local government within or adjacent to state marine parks should be guided by the following principles:

- The decision or declaration must address the human rights, cultural rights and values of First Nations peoples for the relevant area.
- The decision or declaration must consider the impact to shorebirds and their habitat.
- Protection of high value shorebird areas takes precedence over off-leash area opportunities.
- The dog off-leash area will not have a negative cumulative<sup>1</sup> impact to shorebirds or their habitat.
- There is a demonstrated community need and it will not jeopardise public use and enjoyment of the marine park.
- There is increased and ongoing enforcement and education around dog on-leash/off-leash areas.
- The dog off-leash area is first established in a trial capacity that is supported by monitoring and reviewed prior to long term implementation.

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<sup>1</sup> i.e. indirect impact resulting from the decision.

### 1.14 Procedure for selecting and managing dog off-leash areas

The procedure for selecting and managing dog off-leash areas is as follows:

1. Consider legislative constraints – planning by local governments should consider the objectives of relevant legislation – see Part 1.
2. Assess environmental, cultural and social values of the local government area – see Part 2.
3. Mitigate potential impacts of dog off-leash areas on environmental, cultural and social values using the guideline principles and acceptable solutions - outlined in Part 3.
4. Implement, monitor and evaluate dog off-leash areas – outlined in Part 4.

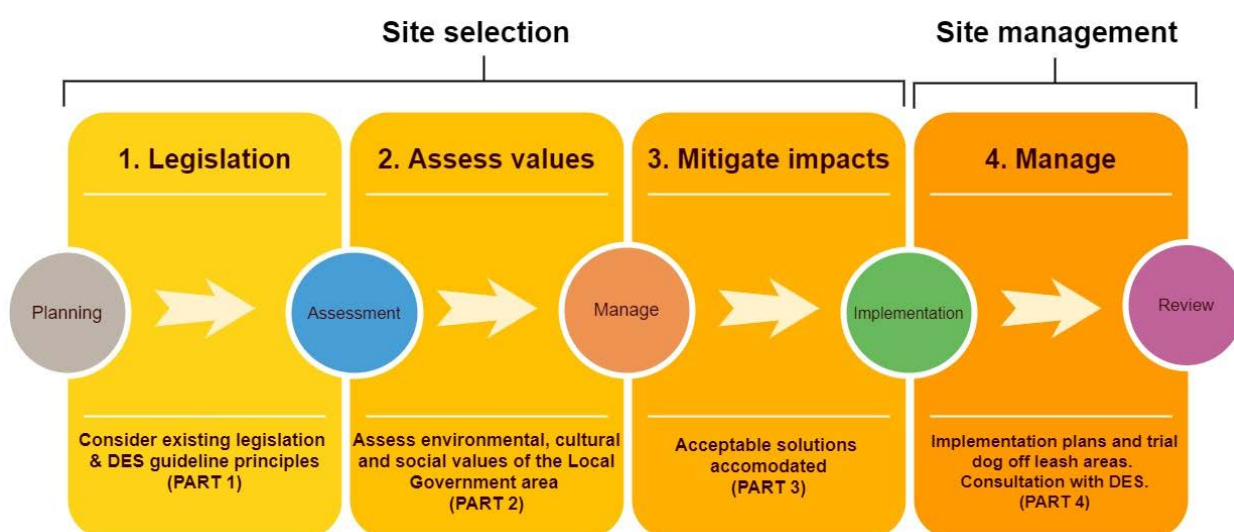


Figure 1. Dog off-leash area guideline outline

### 1.2 Legislation and management context

There are several local, state and Commonwealth statutes relevant to the establishment of dog off-leash areas and management of the marine environment, protected areas, wildlife and habitats.

Appendix 1 and Appendix 2 provide a detailed description of relevant legislation and definitions. Any instructions, guidelines or management plans stipulated by local government for dog off-leash areas must comply with relevant legislation. Where there are inconsistencies, Commonwealth laws prevail over state laws which prevail over local laws. A summary of the key legal requirements administered by the Department of Environment and Science relevant to dog off-leash areas are provided below.

#### Marine Parks

- Dogs are not permitted on tidal land in the Moreton Bay Marine Park that is adjacent to a national park.
- Dogs are not permitted on tidal land in the Great Barrier Reef Coast Marine Park that is adjacent to a national park, unless on the mainland.
- Dogs must be controlled or restrained to prevent disturbance to shorebirds in the Moreton Bay Marine Park and in a designated shorebird roosting and feeding area of the Great Sandy Marine Park. This applies within and outside of identified dog off-leash areas.
- Shorebirds and their habitat must not be excessively disturbed in a designated shorebird roosting and feeding area of the Great Sandy Marine Park or in any part of the Moreton Bay Marine Park. Therefore,

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dog off-leash areas are considered consistent with the objective of a designated shorebird roosting and feeding area in the Great Sandy Marine Park and the Moreton Bay Marine Park provided dogs do not disturb shorebirds.

- A public authority exercising statutory powers in relation to the marine park must consult with the chief executive about any proposal or action likely to affect shorebirds in the Moreton Bay Marine Park.
- A public authority exercising statutory powers in a relevant designated area of the Great Sandy Marine Park (such as a designated shorebird roosting and feeding areas) must consult with QPWS about any proposal or action that may not be consistent with the objects of the area.

### Recreation Areas

- Dogs are not permitted in a Recreation Area unless prescribed by a regulatory notice and dogs must be on a lead and their waste removed from the Recreation Area.

### Protected Areas

- Dogs are prohibited in national parks.
- Dogs may be permitted within a conservation park by regulatory notice.
- Dogs should not be permitted off-leash on beaches adjacent to a conservation park or national park (where permitted) where alternative locations not adjacent to a protected area exist. Where there is no alternative location, dog off-leash areas should only be established on a beach adjacent to a conservation park or national park (where permitted) following an assessment of the potential impacts to the protected areas values and consultation with managers of the protected area.

### Nature Conservation

- An animals breeding place must not be tampered with. Dog off-leash areas must not be established in areas where shorebird nesting occurs.

### Fisheries

- Approval is required if the dog off-leash area involves a material change of use, reconfiguration of a lot, operational works that is the removal, destruction or damage of marine plants, or operational work that is completely or partly within a declared fish habitat area. Therefore, marine plants and declared fish habitat areas should be avoided for foreshore dog off-leash areas if works are required.

### Other legislation

- *Land Act 1994* – Department of Resources should be consulted where a decision is made in areas likely to impact on the use of unallocated state land.
- The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is Commonwealth legislation that protects matters of national environmental significance (MNES) such as Ramsar areas, threatened species, migratory species and ecological communities and migratory species. Any action that may have an impact on matters of national environmental significance must be referred to the Commonwealth government for assessment.
- *The Human Rights Act 2019* outlines that Aboriginal peoples and Torres Strait Islander peoples hold distinct cultural rights and must not be denied their right amongst other rights to—maintain and strengthen their distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition and Island custom; and to conserve and protect the environment and productive capacity of their land, territories, waters, coastal seas and other resources.

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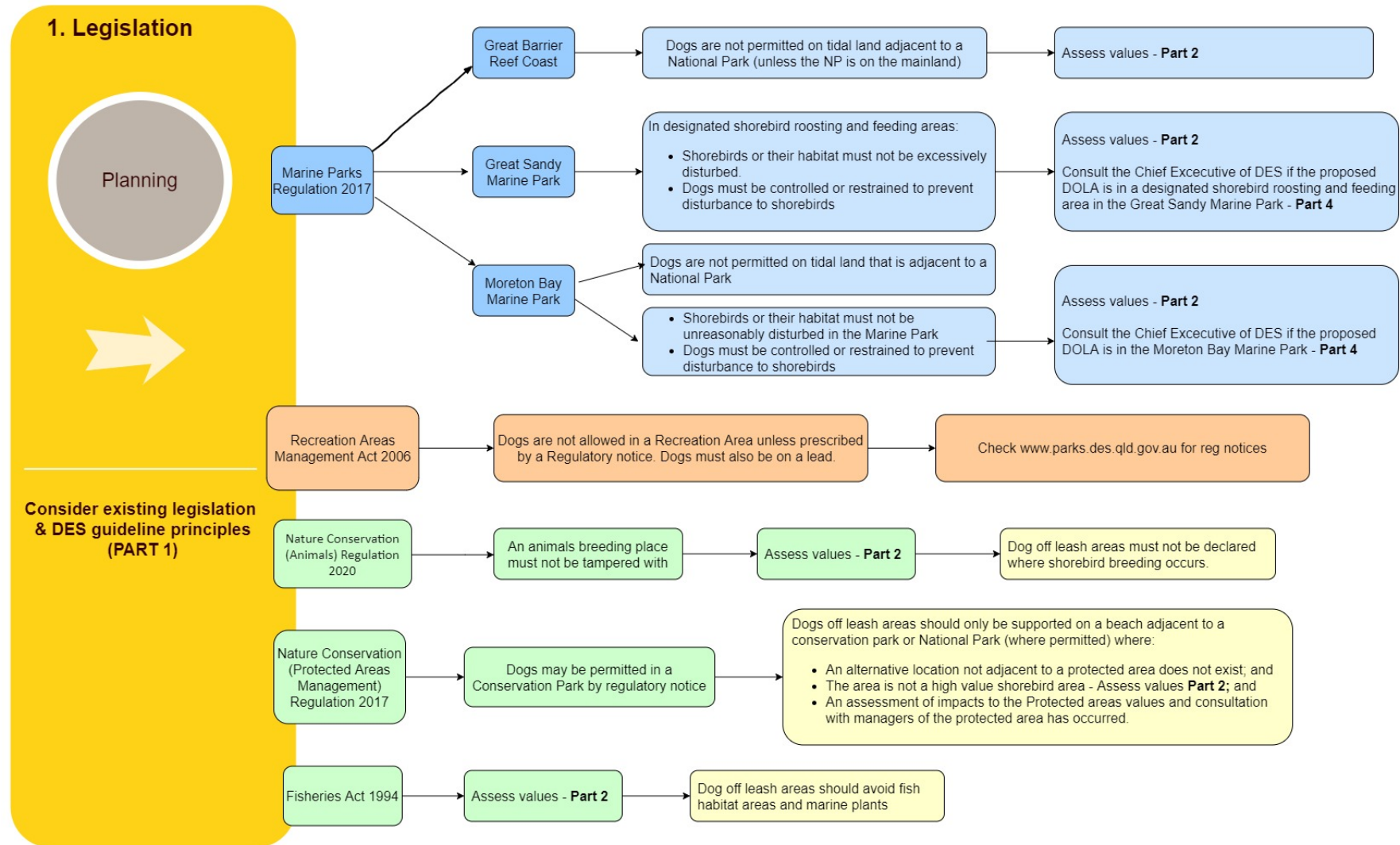


Figure 2. Relevant State legislation and recommended approach (yellow) and assessment process identified (in bold)

## Part 2 – Values assessment

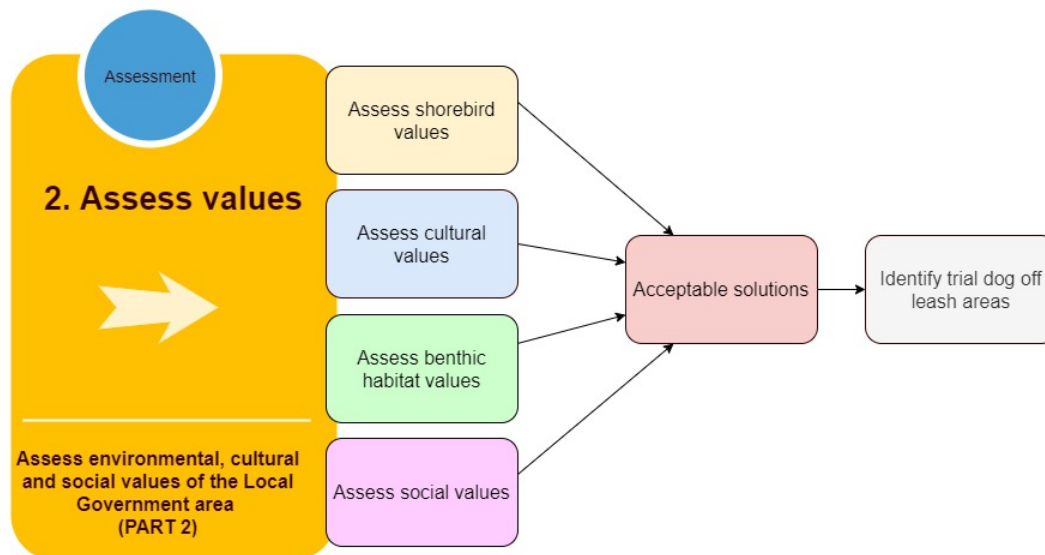


Figure 3. Values assessment process

Foreshore areas are diverse in character and usage and a level of environmental impact from current and future recreational use is likely. Placement of dog off-leash areas away from ecologically significant parts of the foreshore can minimise this impact and achieve a net gain to the environment.

Therefore, it is necessary to understand the values of the local government area to appropriately plan dog off-leash areas around sensitive environments. Following the optimisation method outlined by Stigner et al, establishing foreshore dog off-leash areas in sites that attract high numbers of dog walkers but naturally support relatively low numbers of birds could lead to a substantial reduction in contact between off-leash dogs and shorebirds (Stigner et al. 2016). Cultural values and the presence of marine plants and other intertidal habitats are also key considerations for planning and operating a foreshore dog off-leash area.

Assessment of shorebird values, cultural values, habitat values and social values is recommended at three stages:

- Stage 1 – Pre-planning to inform placement of trial DOLA away from protected values;
- Stage 2 – When trial dog off-leash areas are shortlisted for the trial, a site specific values assessment to inform site specific management strategies; and
- Stage 3 – During the recommended 12-month trial (Part 4) to detect any changes in environmental values or cultural values and determine the success of the dog off-leash areas.

### 2.1 Identifying ‘high value’ shorebird areas

To identify the most important or ‘high value’ shorebird areas the shorebird values across the local government area must be assessed. Broadly, a shorebird area can be valued according to:

- Abundance and diversity in the context of local distribution and flyway populations;
- Conservation significance of the species the site supports (e.g. least concern vs endangered);
- Presence/absence of nesting;



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- Distance to other suitable shorebird habitat.

High value shorebird habitat includes:

- Roost sites;
- Important feeding areas (i.e. feeding areas with high abundance and diversity);
- Nesting sites;
- Sites supporting nationally or internationally important numbers of shorebirds;
- Sites supporting endangered and vulnerable species.

Dog off-leash areas must not be placed near high value shorebird habitat where it is likely to disturb shorebirds. The notion that migratory shorebirds can continue indefinitely to move to other habitats as their normal feeding, staging or roosting areas become unusable is erroneous. In addition, as areas become unsuitable to support migratory shorebirds remaining habitats will attract more birds, in turn creating overcrowding, competition for food and depletion of food resources, and increased risk of disease transmission (Wildlife Conservation Plan for Migratory Shorebirds).

**Surveys by experienced and qualified shorebird professionals following existing accepted methods are necessary to inform all foreshore dog off-leash area proposals and mitigate site-specific impacts to shorebirds and their habitat.**

### 2.11 Shorebird surveys

Prior to declaring a dog off-leash area, it is necessary to understand which shorebirds rely on which habitats for what purpose and positioning of a dog off-leash area must factor in all habitat requirements.

#### **Roost site surveys**

Shorebird roosting areas are areas available to shorebirds around 2 hours before and during high tide. All roost sites (neap to spring high tide sites) are considered to be 'high value' shorebird habitat and are therefore a key consideration for the placement of dog off-leash areas. Roosts sites in the local government area can be identified by using existing mapping or conducting surveys within 2 hours of high tide.

For mapping of high tide roost sites from the Burnett Coast to Moreton Bay contact:

- Burnett Mary Regional Group - [www.bmrg.org.au](http://www.bmrg.org.au)
- Queensland Wader Study Group - [www.waders.org.au](http://www.waders.org.au)
- Queensland Parks and Wildlife Service - <https://parks.des.qld.gov.au>
- Queensland Spatial Catalogue - <https://qldspatial.information.qld.gov.au> and search for 'roost sites'.

In the absence of roost site mapping or the presence of outdated roost maps i.e. greater than 10 years old, it is recommended that at least 4 visual surveys are conducted within 2 hours of high tide (during both neap and spring tides) along the extent of the local government foreshore area to identify roost sites and/or to validate the accuracy of available roost maps.

### Low tide feeding surveys

A method for assessing low tide shorebird feeding areas and use of the foreshore is provided in Stigner et al 2016. In summary, the method involves:

- Identifying the management area boundary i.e. the local government area boundary (Figure 4).
- Identifying discrete management units within the management area e.g. a management unit could be a suburb or local area (Figure 4).
- Within the management unit, divide the foreshore into survey areas. Ideally, survey areas will be a maximum of 600 meters wide and encompass the foreshore between high and low tide (Figure 5).
- Conduct surveys of shorebirds and social use within 2 hours of low tide.
- A total of at least 10 surveys are recommended per survey area during both neap and spring tides.
- Record shorebird species, abundance, human presence, foreshore activity e.g. dogs on lead, dog off lead and other social uses (e.g. kayaking, fishing) and if these activities disturbed shorebirds.



Figure 5 – Survey areas/sites within the management unit

Figure 4 – Management area and management unit boundary

### Presence/absence of nesting

Typically, beach nesting birds are residents on the Australian coast year-round (Maguire, G.S 2008) therefore the presence of non-migratory shorebirds and coastal birds is also likely to indicate the area is potential nesting habitat. Many species of resident shorebirds move to inland wetland areas to breed (e.g. black-fronted dotterel, red-necked avocets), therefore it is important to identify species that use foreshore areas and assess the areas value as actual or potential habitat for nesting by resident species. Beach nesting species include:

- Australian pied oystercatcher and sooty oystercatchers
- Red capped plover, red-kneed dotterel
- Crested tern, little tern, caspian tern, roseate tern, lesser crested tern, black-naped tern, fairy tern, gull-billed tern
- Beach stone-curlew, masked lapwing

The presence of these species can indicate nesting potential and surveys conducted between November and February should detect nesting activity. Nesting sites (actual and potential) are considered to be 'high value' shorebird habitat.

### 2.12 Survey protocols and existing data sources

A table summarising recommended shorebird surveys is provided in Appendix 3. Shorebird surveys are recommended in accordance with the following protocols:

- Surveys are undertaken across the entire local government area.
- Surveys represent peak and non-peak public use times of day.
- If possible, surveys are undertaken concurrently to better reflect the distribution of shorebirds in a management unit.
- High and low tide surveys must be conducted between November and February, when large numbers of non-breeding migratory shorebirds are in Australia.
- At least one high and low tide survey is conducted between April and August to account for species such as double-banded plover and over-wintering shorebirds.
- Surveys are undertaken by observers who are proficient in shorebird identification.

Local knowledge from shorebird experts and the knowledge of the traditional owners of Country can also assist to inform shorebird area values and guide survey requirements.

Existing shorebird data (see Appendix 4) can be used as opposed to conducting new shorebird surveys, provided:

- The surveys covered the entire local government area and foreshore extent (i.e. to lowest astronomical tide) and data can be separated into management units and survey sites for site specific planning.
- Count data was obtained in the last 5 years and covered the peak periods i.e. November – February.
- Sampling was adequate and representative of the temporal and spatial scales outlined above.
- Surveys were conducted by observers who are proficient in shorebird identification.

Appendix 4 also contains additional assessment tools and guidelines for assessing shorebird values of an area.

Shorebird data obtained in the pre-planning stage (stage 1) can be used as the 'before' data for the purpose of assessing the success of dog off-leash trials discussed in Part 4 below.

Once a trial dog off-leash area site has been identified (stage 2) it is recommended that a complete tidal cycle survey be undertaken to observe and confirm the social use and use by shorebirds. These surveys would ideally occur during peak shorebird times (Nov-Feb) and be timed to the most suitable tidal cycle (i.e. neap or spring) as identified from surveys conducted in stage 1.

## 2.2 Shorebird data interpretation

### 2.2.1 Important shorebird habitat

'Important shorebird habitat' for migratory shorebird species is defined under the EPBC Act as areas that are recognised as nationally or internationally important. Migratory shorebird habitat is considered internationally important if it 'regularly' supports 1% or >20,000 birds and nationally important if it regularly supports 0.1% of the East Asia Australasian Flyway (EAAF) population, >2,000 birds or >15 species of a migratory shorebird species (EPBC Act policy statement 3.21).

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The same significance criteria can also be used to identify important habitat for non-migratory shorebirds and coastal birds using global and national population estimates where available. Therefore, shorebird data obtained from surveys can be considered in the context of population estimates and areas supporting nationally and internationally significant numbers are considered 'high value' habitat.

Population estimates for species of shorebirds covered by this Guideline can be found at:

- East Asian Australasian flyway population estimates for migratory shorebirds, as at 2021 are published in 'Revision of the East Asian-Australasian Flyway Population Estimates for 37 listed Migratory Shorebird Species' by Hansen et al 2016. [www.environment.gov.au](http://www.environment.gov.au)
- For non-migratory species you can search for population estimates, trends and 1% threshold criteria using Wetlands International website query tool - [www.wetlands.org](http://www.wetlands.org)
- IUCN Redlist also provides global population estimates for shorebird species - [www.iucnredlist.org/](http://www.iucnredlist.org/)

The following references can provide an indication of where shorebirds and important shorebird habitat areas are likely to exist. In any case, site surveys and/or analysis of existing count data will be required to determine utilisation of the local area by shorebirds.

- Ramsar wetlands of international importance in Queensland coastal areas include Bowling Green Bay, Great Sandy Strait, Shoalwater and Corio Bays and Moreton Bay. Maps can be found at:  
[www.environment.gov.au](http://www.environment.gov.au)  
[www.wetlandinfo.des.qld.gov.au](http://www.wetlandinfo.des.qld.gov.au)
- Matters of state environmental significance (MSES), such as threatened wildlife habitat can be found at:  
[www.environment.des.qld.gov.au](http://www.environment.des.qld.gov.au)
- Birdlife shorebird areas at [www.birdlife.org.au](http://www.birdlife.org.au)
- Key biodiversity Areas are an extension of Birdlife International's important bird areas (IBA's) and can be found at [www.keybiodiversityareas.org](http://www.keybiodiversityareas.org)
- Shorebird roost site mapping for Great Sandy Marine Park – (select layer from a list after launching the online map) [www.wetlandinfo.des.qld.gov.au](http://www.wetlandinfo.des.qld.gov.au)

### 2.22 Species of conservation significance

The *Nature Conservation Act 1992* protects all species of shorebirds in Queensland and classifies them into protection categories based on population distribution, trends and threats to their survival. Many species of shorebirds are also listed nationally under the EPBC Act. Areas that support threatened species, particularly sites showing declines of threatened species or that support large numbers of threatened species in comparison to other sites in the Management Area or Region, are a conservation priority

Appendix 5 shows the conservation status of resident and migratory shorebird species. Further information on species listing can be found at the following website:

- [www.environment.gov.au](http://www.environment.gov.au)

### 2.23 Distance to other shorebird habitat

During flooding tides, habitat available for shorebirds is reduced to high tide roosting areas. Therefore, thousands of birds may be crammed into a small number of roosting sites particularly during spring high tides. Disturbance at these roosting areas means that shorebirds may have to fly some distance to the nearest available high tide to roost.

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Shorebirds will generally feed in areas close to their roost site if habitat is suitable, prey is abundant and the area is undisturbed. As shorebird species have specific feeding requirements, if feeding areas are disturbed they may be forced to move to less optimal feeding areas where they may experience competition with other shorebirds and have reduced feeding success. Alternative roosting and feeding areas may be some distance away from preferred roosting and feeding sites therefore having an unacceptable energetic cost to relocate. Therefore, shorebird areas with greater distance to alternative suitable areas, either within or outside the local government area, are of high importance to protect from disturbance.

### 2.24 Threat factors

While threats such as anthropogenic disturbance are factored into the conservation status assigned to a species, the presence of existing threats and disturbance to shorebirds does not justify further disturbance to shorebirds from dog off-leash activity. The most suitable locations for dog off-leash areas will be where existing use of the foreshore is high and the threats to shorebirds and value of the area to shorebirds is low.

If existing threats to shorebirds at the site are high, assessing the value of an area to shorebirds based on the abundance of shorebirds alone is not likely to reflect the true value of the area to shorebirds. Removing threats and conducting an assessment of the areas value for shorebirds is recommended. If threats cannot be removed or surveys timed to enable an assessment of the shorebird values, historical records (pre-dating the current threats) can be used and/or expert opinion obtained regarding the value of an area to shorebirds.

Where foreshore habitat is degraded by existing threats e.g. vehicle access and development, placement of dog off-leash areas in existing degraded or modified areas where compatible is recommended.

**In summary, an appropriate location for a dog off-leash area will be an area that supports the least number of shorebirds, greatest dog use and is not shorebird nesting habitat. Sites that support conservation significant species, nationally or internationally numbers of shorebirds and/or have large distances to adjacent habitat are a priority for protection.**

The following table summarises the assessment process for valuing shorebird areas.

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Table 1. Summary shorebird values assessment

Guideline section	Site based assessment	Assessment method	No	Yes	Mitigate
2.11	Identified high tide roost site	Check existing roost mapping. If mapping ≥ 10 yrs old, conduct 4 surveys within 2 hrs of high tide between November and February as per section 2.11	<input type="checkbox"/> go to next	<input type="checkbox"/> See comments	High value area. See acceptable solutions 1-6 in Table 2
2.11	Species abundance - in comparison to other survey sites in the management area.	Use existing data or conduct at least 10 surveys within 2 hrs of low tide as per section 2.11	Low <input type="checkbox"/> go to next	High <input type="checkbox"/> See comments	High value area. See acceptable solutions 1-6 in Table 2
2.11	Species diversity - in comparison to other survey sites in the management area.		Low <input type="checkbox"/> go to next	High <input type="checkbox"/> See comments	High value area. See acceptable solutions 1-6 in Table 2
2.21	Survey site, management unit or management area supports 1% of population of a species.	Use existing count data (≤ 5 years old) or conduct at least 10 surveys within 2 hrs of low tide as per section 2.11  Compare count data with population estimates for the species. See link to population estimates provided in section 2.21	<input type="checkbox"/> go to next	<input type="checkbox"/> See comments	High value area. See acceptable solutions 1-6 in Table 2  Refer to EPBC Act Policy statement 1.1.
2.21	Survey site, management unit or management area supports 0.1% of population of a species.		<input type="checkbox"/> go to next	<input type="checkbox"/> See comments	
2.11	Nesting species present	Nesting actual/potential identified from surveys conducted as per section 2.11	<input type="checkbox"/> go to next	<input type="checkbox"/> See comments	High value area. See acceptable solutions 7-12 Table 2.
2.22	Conservation significant species present	Use species list Appendix 5 to identify threatened species from surveys conducted as per section 2.11	<input type="checkbox"/> go to next	<input type="checkbox"/> See comments	High value area. Priority for protection.  Refer to EPBC Act Policy statement 1.1
2.23	Distance to other suitable shorebird areas in comparison to other survey sites within or outside of management area	Use roost site mapping validated as per section 2.11 to identify distance between roost sites.	Short <input type="checkbox"/> end	Long <input type="checkbox"/> See comments	High value area. Priority for protection.

### 2.3 Cultural values

Cultural values at proposed foreshore dog off-leash areas may be related to shorebird or habitat values, or other considerations. Foreshore areas may also contain culturally sensitive sites and the declaration of dog off-leash areas could potentially increase visitation at the sites or additional impacts may occur from off-leash dogs. Aboriginal peoples and Torres Strait Islander peoples share cultural rights under section 28 of the *Human Rights Act 2019* including a right;

- to maintain and strengthen their distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition or Island custom; and
- to conserve and protect the environment and productive capacity of their land, territories, waters, coastal seas and other resources.

The Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) maintains a cultural heritage database and register (visit [www.qld.gov.au](http://www.qld.gov.au) and search for 'cultural heritage database and register'). The database is not publicly available nor is its use by First Nations peoples mandatory, but local government representatives can register to access information if they feel it is necessary to satisfy their duty of care to protect cultural heritage. It is therefore recommended that local governments consult the database for specific areas being considered for a dog off-leash area however, please note that consulting the database does not necessarily meet all requirements for a land manager's duty of care regarding cultural heritage values. Local governments should also consult the relevant First Nations peoples for Country.

Identifying and engaging with relevant First Nations peoples for Country early in the pre-planning stage can identify any concerns they may have specific to their Country and the local government area and traditional knowledge is likely to offer valuable site specific considerations for planners. Once trial dog off-leash areas are short listed, further consultation with relevant First Nations peoples for Country is recommended to address site specific considerations. Resources that may be of use when identifying the relevant First Nations peoples for an area, include:

- National Native Title Tribunal (<http://www.nntt.gov.au/>), and follow links to:
  - Maps
  - Native Title Vision
  - Search Register of Native Title Claims
- Queensland: information on engaging with traditional owners – ([www.austrade.gov.au](http://www.austrade.gov.au) and search for 'engaging with traditional owners').
- Queensland Globe (<https://qldglobe.information.qld.gov.au/>)  
Map layers available, Boundaries - Cultural heritage and local government.

### 2.4 Habitat values

Foreshore areas are diverse marine environments therefore, it is important to identify protected and fragile habitat types that may be present in dog off-leash areas. In general, sandy substrates will be most suitable for dog off-leash areas. Habitats of concern (in addition to those used by shorebirds) include those that support marine plants (i.e. seagrass, mangroves, macro algae, saltmarsh) and coral. In addition, declared Fish Habitat Areas protect all marine plants and fish habitat (e.g. vegetation, sand bars and rocky headlands) within their boundaries.

## Local government dog off-leash areas in State Marine Parks

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Marine plants are an important part of the marine parks' ecosystem acting as refuge for many juvenile species of fish, invertebrates and subsequent food for higher order species. Marine plants also provide stabilization to dune areas. See Appendix 2 for a definition of marine plants. Subtropical and temperate coastal saltmarsh is listed as a vulnerable ecological community under the EPBC Act. It supports a wide range of organisms and critical ecosystem functions such as coastal productivity and stabilization, carbon sequestration and filtering surface water.

Identifying the location of declared Fish Habitat Areas and the presence/ absence of marine plants or coral either by site inspection or use of existing mapping can assist with initial planning of dog off-leash areas to avoid these values.

- Declared Fish Habitat Area mapping – [www.parks.des.qld.gov.au](http://www.parks.des.qld.gov.au) and search for 'area plans'.
- Mangrove maps – <https://qldspatial.information.qld.gov.au>
- For information on coral reefs in the Moreton Bay and Great Sandy marine parks visit: [www.parks.des.qld.gov.au](http://www.parks.des.qld.gov.au)

Once trial dog off-leash area sites are selected, site specific assessment to identify the location of marine plants and planning access routes and walking routes away from these areas is recommended.

### 2.5 Social values

Social data is necessary to identify existing dog walker hot spots, foreshore activities that may conflict with future dog off-leash areas or cumulatively effect high value shorebird areas. Therefore, it is recommended that the following social data is consistently recorded (i.e. a single 'snap shot' count or count over a set period of time) during shorebird surveys (as per section 2.1):

- Number of people and the activity they are conducting i.e. walking, fishing, kite surfing;
- Number of off-leash dogs and on-leash dogs;
- Identify if the activity is a commercial or recreational purpose; and
- If the activity caused shorebird disturbance i.e. if the shorebirds walked or flew away from the stimuli.

While dog off-leash areas are not supported near roost sites, conducting social surveys during roost surveys will also assist to inform any changes in social use as a result of dog off-leash areas being declared.

Social data is also relevant to identifying recreational demands and demonstrating community need for foreshore DOLAs. Other social data that will assist to inform dog off-leash area planning includes:

- Dog registration numbers in the local area;
- Presence and location of other DOLAs in the local area;
- Community feedback obtained from consultation prior to and during trial DOLAs.

Pre and post social surveys are essential to assess any changes in social behaviour and foreshore use by dog walkers to determine the success of the trial dog off-leash areas (Part 4).

### Part 3 – Impact assessment, mitigation and site selection

Foreshore dog off-leash areas not placed in the correct locations can cause direct and indirect impacts (i.e. cumulative impacts) such as:

- Disturbance to roosting, feeding and breeding shorebirds;
- Impacts to cultural values or culturally sensitive sites;



## Local government dog off-leash areas in State Marine Parks

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- Impacts to sensitive intertidal habitats (e.g. marine plants and coral) from trampling;
- Litter and animal waste; or
- Social conflicts or impediment to current or future access and use.

The following table summarises the detailed impact and risk assessment provided in Appendix 6 and presents acceptable solutions to mitigate and reduce potential impacts of a dog off-leash area, to low.

If the proposed dog off-leash area does not meet the acceptable solutions an alternative site can be chosen. If an alternative site is not feasible and matters of national environmental significance (MNES) are concerned, the dog off-leash area must be considered against EPBC Act Significant Impact Guidelines and Policy Statements (see Appendix 1). If a significant impact is likely then the matter must be referred by Local government to the Commonwealth government as per the EPBC Act policy statement.

## Local government dog off-leash areas in State Marine Parks

Table 2 - Summary impact assessment and acceptable solutions at planning and implementation stages. Implementation stages shown in **blue text**.

Hazard/impact	Factors	Action required	Acceptable solutions for planning and implementation
<ul style="list-style-type: none"> <li>Disturbance to shorebirds (feeding and roosting)</li> </ul>	<ul style="list-style-type: none"> <li>Presence/absence</li> <li>Proximity to DOLA</li> <li>Importance of site</li> </ul>	<ul style="list-style-type: none"> <li>Assess value of area to shorebirds. Identify roosts and high value low tide feeding areas – section 2.1-2.2</li> </ul>	<ol style="list-style-type: none"> <li>Position dog off-leash area at least 300m from shorebird roost and high value low tide feeding areas.</li> <li>Where required buffer cannot be achieved, site specific data or expert opinion that demonstrates the shorebird species for that location can tolerate a reduced buffer distance.</li> <li>Where required buffer cannot be achieved a physical and visual barrier is installed.</li> <li>Where required buffer cannot be achieved a seasonal closure is applied.</li> <li>Education and awareness about on-leash, off-leash areas and shorebird values - see section 4.2.</li> <li>Compliance and enforcement around on-leash and off-leash areas.</li> </ol>
<ul style="list-style-type: none"> <li>Disturbance to shorebirds (nesting)</li> </ul>	<ul style="list-style-type: none"> <li>Presence/absence of nesting species and nests</li> </ul>	<ul style="list-style-type: none"> <li>Assess value of area to nesting shorebird species – section 2.11</li> </ul>	<ol style="list-style-type: none"> <li>Dog off-leash areas are not located in an area where shorebird nesting occurs (all year round).</li> <li>Position dog off-leash areas at least 300m from shorebird nesting areas (year round).</li> <li>Where required buffer cannot be achieved, site specific data or expert opinion that demonstrates the shorebird species for that location can tolerate a reduced buffer distance.</li> <li>Education and awareness about dogs-on lead near nesting birds.</li> <li>Temporary fencing around nesting areas.</li> <li>Compliance and enforcement around on-leash and off-leash areas.</li> </ol>
<ul style="list-style-type: none"> <li>Impacts to cultural values or culturally sensitive sites</li> </ul>	<ul style="list-style-type: none"> <li>First Nations peoples' perspective.</li> <li>Cultural sensitivity of site.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and engage with First Nations peoples.</li> </ul>	<ol style="list-style-type: none"> <li>Consult relevant First Nations peoples for Country.</li> <li>Position dog off-leash areas away from culturally sensitive sites.</li> <li>Where relevant First Nations peoples are not supportive, alternative sites are investigated.</li> <li>Continued engagement with relevant First Nations peoples is undertaken to ensure any expectations or commitments made by the local government are being met.</li> </ol>

Local government dog off-leash areas in State Marine Parks

<ul style="list-style-type: none"> <li>• Trampling sensitive benthic communities (e.g. marine plants or coral)</li> </ul>	<ul style="list-style-type: none"> <li>• Presence/absence of marine plants</li> <li>• Proximity to DOLA</li> </ul>	<ul style="list-style-type: none"> <li>• Assess value of area to marine plants and coral – section 2.3</li> </ul>	<p>17. Dog off-leash areas, including access and egress locations must not be placed in saltmarsh areas and avoid of all other marine plants and coral.</p> <p>18. Placement of dog off-leash areas on existing degraded or heavily modified beaches.</p> <p>19. <a href="#">Where marine plants can't be avoided, a tidal closure is applied.</a></p> <p>20. <a href="#">Where marine plants can't be avoided, photo transect monitoring occurs before and after the 12 month trial and changes made to the dog off-leash area if damage is occurring.</a></p>
<ul style="list-style-type: none"> <li>• Impact on commercial and recreational activities</li> </ul>	<ul style="list-style-type: none"> <li>• Presence/absence of uses</li> <li>• Size of DOLA in relation to available foreshore</li> <li>• Daily and yearly use patterns</li> </ul>	<ul style="list-style-type: none"> <li>• Assess value of area to commercial and recreational users – section 2.4</li> </ul>	<p>21. Consider potential conflicts that may have a cumulative impact to high value shorebird areas.</p> <p>22. Consider the size of the dog off-leash area in the context of available foreshore and other activities.</p> <p>23. Consider the needs for a foreshore DOLA considering dog registration and other DOLAs</p> <p>24. <a href="#">Consider DOLA operating requirements around times of day or year to separate competing activities.</a></p> <p>25. <a href="#">Consider measures to address potential cumulative impacts to high value shorebird areas e.g. dog prohibited areas.</a></p> <p>26. <a href="#">Survey and monitor user impacts and satisfaction</a></p>
<ul style="list-style-type: none"> <li>• Litter and animal waste</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance</li> <li>• Facilities</li> <li>• Level of awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with existing legislation (Council by-laws, Marine Parks Regulation 2017, <i>Waste Reduction and Recycling Act 2011</i>)</li> </ul>	<p>27. <a href="#">Provision of rubbish disposal facilities adjacent to marine park</a></p> <p>28. <a href="#">Education and awareness around littering.</a></p> <p>29. <a href="#">Compliance enforcement.</a></p>

**Important note - If acceptable solutions in this Guideline are not followed and MNES are concerned, the dog off-leash area should be assessed against EPBC Act significant impact guidelines and the matter referred by the Local government to the Commonwealth Government as per the EPBC Act policy statement 1.1**

## Part 4 – Implementation and review

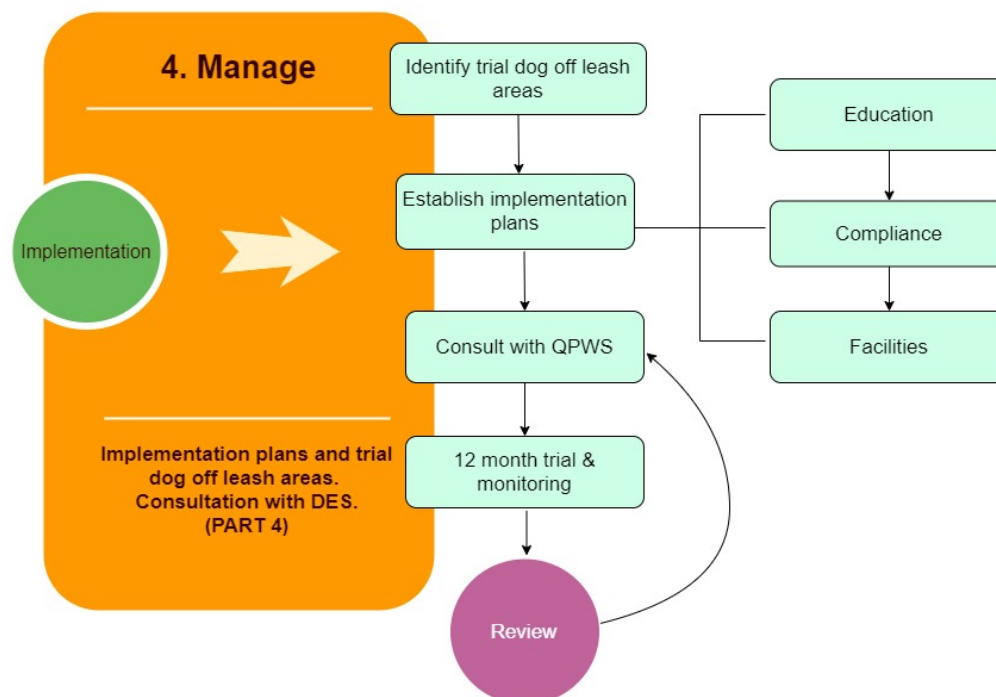


Figure 6. Implementation, management and review process

### 4.1 Operation plans

The success of dog off-leash areas will depend on community awareness and voluntary compliance. The operational requirements of an off-leash areas will be determined by local government funding, site attributes and the environmental and social considerations in accordance with Part 2 and Part 3 of this Guideline. Additionally, the number of dog off-leash areas per Local Government Area will be determined by residential demand and considered as part of local government’s broader recreation and park planning strategies.

Implementation plans to support the placement of dog off-leash areas will address:

- Signage and site delineation:
  - Site delineation – the boundary of the dog off-leash area must be clearly delineated by either a physical barrier, geographical feature and signage. The size of the off-leash area needs to be relevant to the public demand. In accordance with model local law animal management the local government must take reasonable steps to provide notice to members of the public regarding the designation of an area as a dog off-leash area. Reasonable steps include, as a minimum, the display of a notice at a prominent place within the dog off-leash area indicating the extent of the area.
  - Signage – is necessary to delineate the dog off-leash area and to advise users of appropriate conduct e.g. pick up their dogs waste, any daily or seasonal use restrictions and relevant local and state laws. Local governments are encouraged to seek guidance on signage from behavioural scientists/communicators to ensure messages are appropriate and will encourage behaviour change and compliance.

## Local government dog off-leash areas in State Marine Parks

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- Community awareness and education program:
  - Promote the location of dog off-leash and on-leash areas, for example by providing maps and information online.
  - Complementary signage in on-leash areas that explains why dogs must be on the lead for the protection of wildlife. Dog owners are more likely to feel obliged to leash their dog when they believe their dog was a threat to wildlife (Williams et al 2009).
  - Consider the input of First Nations peoples into educational signage and to raise community awareness of local cultural values and the significance of areas to First Nations peoples where relevant.
  - Ensure that dog off-leash area users are aware that the off-leash areas are being trialled and could be removed if problems such as environmental impacts arise within or adjacent to the off-leash area.
  - Ensure that dog off-leash area users are aware that the area is not for their exclusive use and encourage sharing the foreshore with other users.
  - Ensure users remove their dogs waste from foreshore areas and dispose of it outside of the marine park.
  - Where shorebird disturbance laws exist, ensure public messaging emphasises that 'shorebirds must not be disturbed' in the marine park.
- Enforcement of on-leash and off-leash area
  - While many people are aware of the laws to leash their dog and have a sense of obligation to leash their dog, Williams et al 2009 found that dog owners place greater importance on the benefits of unleashed exercise for dogs than wildlife protection. Therefore, a regular program that enforces off-leash and on-leash area laws is necessary, particularly at locations in close proximity to sensitive environmental areas, where foreshore dog use has occurred and where historical and current reports indicate non-compliance.
- Facilities such as fencing and rubbish disposal
  - Fencing – physical barriers may be required to separate off-leash dogs from incompatible or sensitive adjacent areas where setbacks or mitigation strategies aren't feasible (Edmonton 2016). Fence design must not impact the useability of the site by shorebirds (e.g. be of a height that would inhibit predator detection, obstruct flight paths etc.) or other legitimate marine park uses, have cumulative hydrological effects or degrade marine park amenity.
  - Essential facilities such as rubbish disposal facilities for dog waste bags and human generated litter must be provided outside of the marine park.
  - Supporting facilities during the 12-month trial may be of a temporary nature and more permanent facilities may be installed following the trial period.
- Routine monitoring and maintenance
  - Regular inspections of the dog off-leash areas are required to identify any issues such as maintenance, compliance and environmental impacts (e.g. litter).

### 4.2 Dog off-leash area trials

Establishing dog off-leash areas on a trial basis is strongly recommended by the Department to ensure implementation measures are adequate and that the dog off-leash areas are achieving the intended goal – to

## Local government dog off-leash areas in State Marine Parks

reduce disturbance to shorebirds. It is recommended that a minimum 12 month dog off-leash area trial is implemented, commencing outside of the migratory shorebird season i.e. May to August when the least number of shorebirds are present. A trial will allow a before/after comparison to evaluate:

- Changes in shorebird abundance and distribution;
- Changes in shorebird disturbance caused by dogs;
- Changes in impacts to cultural values;
- Changes in social use patterns and dog walker behaviour in and outside of dog off-leash areas (compliance);
- Changes in environmental condition (litter, waste and marine plants).

### 4.21 Trial monitoring

Information obtained in the values assessment (Stage 1) with respect to shorebirds, social uses and marine plants can be used as the 'before data'. During the 12-month trial, repeating the shorebird and social surveys for the entire management area will provide 'after data' and allow conclusions to be made regarding shorebird exposure to dogs off-leash and dog walker behaviour.

Changes in social use patterns and behaviour can also be yielded from compliance program data i.e. rate of compliance vs non-compliance, with on-leash and off-leash laws. Complaints regarding safety and amenity issues are also relevant to determining social acceptability of the dog off-leash areas. Local government may also gauge public opinion and user satisfaction of the dog off-leash areas via community opinion surveys during the 12-month trial.

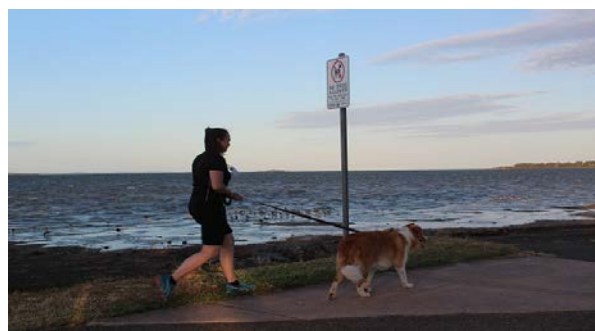
Monitoring of marine plants is recommended only where dog off-leash areas are placed on marine plants. Changes with respect to marine plants will be evident through before after comparison of seagrass cover using photo monitoring plots. Expert opinion can also assist to put any observed changes into context of any naturally occurring fluctuations in seagrass distribution in the surrounding area.

Changes in environmental condition with respect to litter and waste will be evident through routine monitoring and maintenance inspections by Council staff (recommended in section 4.2).

Ideally, monitoring within the 12-month trial period should commence at least a couple of months after the trial has commenced to allow the trial dog off-leash areas to be fully operational.

Appendix 3 summarises the values assessment and monitoring requirements during the trial period (stage 3).

**Successful dog off-leash areas will result in a reduction of disturbance to shorebirds via increased use of designated dog off-leash areas and reduced disturbance to shorebirds via increased compliance with dog on-leash areas.**



### 4.22 Trial outcomes

Desirable outcomes from dog off-leash area trials include:

- Reduced interaction of dogs and shorebirds on the foreshore and therefore reduced shorebird disturbance;

## Local government dog off-leash areas in State Marine Parks

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- Improved awareness and compliance with dog on leash laws outside of dog off-leash areas;
- Objectives of QPWS managed areas and Marine Parks are maintained.

Dog off-leash areas and their management should be modified or removed where compliance with dog on-leash laws has not improved and impacts on the environment and marine park users are evident such as:

- Obvious degradation and loss of marine plants that can't be explained by other factors;
- Presence of off-leash dogs in high value shorebird areas, disturbance to shorebirds roosting, feeding or breeding;
- Waste and litter on the foreshore;
- Social objections, safety issues and complaints.

Foreshore habitat is not homogenous and habitat characteristics and species distribution can change within relatively short time periods, influenced by natural and non-natural factors. Therefore, review and adjustment to DOLAs is recommended where necessary to reduce disturbance to shorebirds.

### 4.3 Consultation with Department of Environment and Science

Consultation with the Chief Executive of DES (where required<sup>2</sup>) prior to conducting a dog off-leash area trial is to be undertaken in writing by providing the following information:

- Demonstrated community interest/ need in terms of dog registration numbers, location and proximity to other dog off-leash areas.
- Map of area (shape file or Google Earth file) showing proposed boundary of proposed dog off-leash area/s;
- Details regarding how dogs will be controlled i.e. on leash or off-leash, daily or seasonal limitations;
- Details regarding implementation plan such as access points, infrastructure and signage that will be installed to manage the site.
- Details regarding the shorebird values assessment undertaken in the management area, including monitoring methods and data;
- Details regarding measures to mitigate potential impacts to shorebirds at planning and implementation stages;
- Demonstrated consideration for cumulative impacts to shorebirds (e.g. where existing foreshore use may be displaced to the detriment of the shorebirds) and how potential cumulative impacts propose to be managed;
- Details of engagement with relevant First Nations peoples and any responses received.
- Details regarding measures to mitigate potential impacts to intertidal habitat at planning and implementation stages (i.e. acceptable solutions used).
- Details regarding the measures proposed to educate the public about keeping dogs 'under control' in on-leash and off-leash areas so shorebirds are not disturbed;
- Details regarding the measures proposed to enforce dog on leash areas, 'effective control' in off-leash areas and dog prohibited areas.

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<sup>2</sup> Consultation with QPWS is not mandatory if the DOLA is within the Great Barrier Reef Coast Marine Park or outside of a designated shorebird roosting and feeding area in the Great Sandy Marine Park.



## Local government dog off-leash areas in State Marine Parks

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- Details of consultation undertaken with managers of adjacent Protected Areas e.g. National parks and Conservation parks (if applicable); and
- Details of community consultation and stakeholder engagement undertaken and the outcomes.

A template is provided in Appendix 7 to assist with your assessment against the guidelines and to prompt the information to provide to QPWS.

After a 12 month dog off-leash area trial, please advise the Chief Executive of the success or otherwise of the trial dog off-leash areas and any plans to modify dog off-leash areas thereafter.

### **Human Rights Act 2019 compatibility**

The department is committed to respecting, protecting and promoting human rights. Under the [Human Rights Act 2019](#), the department has an obligation to act and make decisions in a way that is compatible with human rights and, when making a decision, to give proper consideration to human rights. When acting or making a decision under this Guideline, officers must comply with that obligation (refer to [Comply with Human Rights Act](#)).

### **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 by**

Ben Klaassen

Signature

2 February 2022

Date

Ben Klaassen  
**Deputy Director-General**  
**Queensland Parks and Wildlife Service and**  
**Partnerships**

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 Great Barrier Reef and Marine Parks Region,  
 Technical Support Unit  
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 Partnerships  
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## Appendix 1. Legislation

### Australian Government

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is Commonwealth legislation that protects matters of national environmental significance (MNES) such as Ramsar areas, threatened species, threatened ecological communities and migratory species. The EPBC Act also develops recovery plans, conservation advice and wildlife conservation plans such as the Wildlife Conservation Plan for Migratory Shorebirds.

Four areas along the eastern Australian coast have been recognized as a Wetland of International Importance (under the Ramsar Convention), and migratory shorebirds are a key component of the ecological character of these sites. These Ramsar sites are: Bowling Green Bay, Shoalwater and Coio Bays, Great Sandy Strait and Moreton Bay

The principal obligation of contracting parties to the Ramsar Convention is to maintain the ecological character of listed Wetlands of International Importance and promote the “wise use” of all wetlands

Any action that may have an impact on matters of national environmental significance must be referred to the Australian Government for assessment. An ‘action’ is broadly defined as a project, a development, an undertaking an activity or series of activities, or an alteration of any of these things (EPBC Act Policy Statement 3.21).

The following policy statements have been developed to assist proponents to mitigate impacts from their proposal on MNES and migratory shorebirds:

- Significant impact guidelines 1.1 matters of national environmental significance
- Policy statement 3.21 – Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (migratory waders)

Australia also has agreements with the Governments of Japan, China and the Republic of Korea for the protection of migratory birds and their important habitat areas. Australia is also a member of the East Asian-Australasian Flyway Partnership and signatory to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention). All of Australia’s migratory shorebird species are listed on Appendix II of the Bonn Convention, the Eastern Curlew and Great Knot are also listed on Appendix I. All listed migratory birds and are therefore matters protected under the EPBC Act.

The DOLA Guideline aims to avoid and mitigate degradation of shorebird habitat and disturbance in accordance with Commonwealth guidelines and policy statements. Where the DOLA Guideline is not followed the proposal must be assessed by local government against the Commonwealth policy statement and ‘significant impact’ criteria and referred to the Australian government if required.

### State Government

#### **Marine Parks**

The objective of the *Marine Parks Act 2004* is to provide for the conservation of the marine environment, providing opportunities for public appreciation, understanding and enjoyment of the marine environment for present and future generations. Therefore, all uses coexist without any exclusive access rights to state land and waters unless permission has been granted, for example by a resource allocation or lands act lease.

Planning decisions by local governments must consider the objectives of the marine parks act and ensure equitable access for all user groups.

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Under the Marine Parks Regulation 2017 domestic animals are not permitted on tidal land in the Great Barrier Reef Coast Marine Park that is adjacent to a national park, to the extent the national park is not located on the mainland. In Moreton Bay a dog must not be brought onto tidal land that is adjacent to a national park. However, dogs are permitted on a beach adjacent to a conservation park. There are no restrictions about bringing dogs onto the beach adjacent to protected areas in the Great Sandy Marine Park. The Marine Parks Regulation also provides for the management of domestic animals via a regulatory notice.

Objectives of marine park zones are outlined in the Marine Parks Regulation 2017. The most highly protected zones, marine national park zones (green zones) aim to conserve the marine park to the greatest possible extent. Green zones are equivalent to national parks in that all forms of recreational take is prohibited. Very few green zones are accessible via foreshore areas adjacent to population centres and dogs are allowed in green zones unless prohibited by regulatory notice. Implementing the dog off-leash area guideline assists with achieving the objectives of marine park zones, including protecting the values of marine national park zones.

State marine parks are managed by multi use zoning plans and the *Marine Parks (Great Sandy) Zoning Plan 2017* and *Marine Parks (Moreton Bay) Zoning Plan 2019* contain provisions about not 'excessively' or 'unreasonably' disturbing shorebirds or their habitat. In Moreton Bay these provisions apply marine park wide, whereas for the Great Sandy Marine Park, these provisions only apply within designated shorebird roosting and feeding areas. There are no provisions relating to shorebird disturbance in the *Marine Parks (Great Barrier Reef Coast) Zoning Plan 2004*. However, persons entering the accessible area in the Michaelmas Cay restricted access area must not disturb a bird in the area.

Designated shorebird areas in the Great Sandy Marine Park aim to protect shorebirds, particularly migratory shorebirds, and their habitat and to minimise harm or distress caused directly or indirectly to shorebirds by human activities or domestic animals. Dogs are allowed within the designated areas provided they do not disturb shorebirds.

Under both zoning plans 'taking flight' is provided as an example of disturbance to a shorebird. While a definition of 'disturbance to habitat' is not provided, it could reasonably be considered to include polluting, occupying, modifying or damaging habitat to the point that its value, usefulness or normal functioning has been impaired e.g. vehicle destruction of a clay pan or placement of a dog off-leash area in a high value shorebird area.

When in Moreton Bay and Great Sandy marine parks, dogs must be 'controlled or restrained' by the person in a way that prevents the dog from causing unreasonable or excessive disturbance to a shorebird. Controlled or restrained means 'have control or command of', therefore having a dog off-leash is not itself in contravention of marine park legislation.

To facilitate cooperative management of the marine park with local government, the local government is required to consult with the Queensland Parks and Wildlife Service regarding proposals that may affect the value of the marine park to shorebirds in Moreton Bay and Great Sandy (section 101(1) and section 23 respectively). Again, this requirement only applies to designated shorebird roosting and feeding areas in the Great Sandy Marine Park. The requirement to consult does not apply in the Great Barrier Reef Coast Marine Park. Consultation requirements are detailed in Part 4.

### **Nature Conservation Act 1992**

The *Nature Conservation Act 1992* (NCA) provides for the protection and listing of species and the declaration and management principles of protected areas. All shorebird species are protected and several species of shorebirds are listed as endangered and vulnerable (see Table 3 in Appendix 4). Under the NCA a person must not take (or attempt to take) a protected animal, such as a shorebird, unless the person is an authorised person or the taking is authorised. 'Take' includes, but is not limited to pursue, lure, remove, catch, injure, harm, or kill.

## Local government dog off-leash areas in State Marine Parks

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The Back On Track species prioritisation framework, which prioritises Queensland's native species to guide conservation management and recovery, identifies two species of shorebirds (little tern and beach stone curlew) as priority for recovery actions. Predation of chicks and eggs by uncontrolled dogs was identified as a serious threat to these species.

Under the Nature Conservation (Animals) Regulation 2020, tampering with an animal breeding place that is being used by a protected animal to incubate or rear the animal's offspring is an offence. Tamper, with an animal breeding place, means damage, destroy, mark, move or dig up the breeding place.

National parks and conservation parks are refuges for wildlife, and many species of shorebirds rely on both marine and terrestrial habitats. The Nature Conservation (Protected Areas Management) Regulation 2017, states that a person must not take a live animal into a protected area unless authorised to do so. A dog however may be brought into a conservation park (CP) or resources reserve if authorised under a regulatory notice. The Chief Executive may erect a notice allowing dogs to be walked in the CP provided the area was widely used for dog-walking before the initial dedication of the area under the Act and the dog access will not damage cultural resources or have a significant adverse effect on natural resources. When legitimately bringing a dog into a protected area the dog must be under control by means of lead, tether, enclosed vehicle or cage and waste must be collected and disposed of. Please visit [www.parks.des.qld.gov.au](http://www.parks.des.qld.gov.au) and use the park features filter to select parks where dogs are permitted.

### ***Recreation Areas Management Act 2006***

The purpose of the *Recreation Areas Management Act 2006* (RAM Act) is to provide, coordinate, integrate and improve recreational planning, recreational facilities and recreational management for recreation areas, having regard to the conservation, cultural, educational, production and recreational values of the areas and the interests of area landholders. A person must not take a live animal into a Recreation Area unless prescribed under a regulatory notice or a regulation. Section 122 of the RAM Act states that a person must not take a dog into, or keep a dog in, a recreation area unless the dog is under control. Under control must be by means of lead, tether, enclosed vehicle or cage and waste must be collected and disposed of. Established Recreation Areas that overlap with Queensland state marine parks include Fraser Island, Green Island, Moreton Island, Bribie Island, Inskip Peninsula, Cooloola and Minjerribah. Please visit [www.parks.des.qld.gov.au](http://www.parks.des.qld.gov.au) and use the park features filter to select Recreation Areas where dogs are permitted (at the time of publication dogs on-leash were only permitted within Minjerribah (North Stradbroke Island) and Inskip Peninsula Recreation Areas).

### ***Declared Fish Habitat Areas and marine plants***

An area declared as a Fish Habitat Area (FHA) under the *Fisheries Act 1994* (Fisheries Act) is an area protected against physical disturbance from coastal development. Declared FHAs also aim to 'provide community access (particularly to fishing grounds), and undisturbed locations for recreation, nature-based enjoyment, education and research about fish and fish habitats'.

There are two management levels – management A areas more strictly control development, while management B areas allow for a more flexible approach. While dog off-leash activity on the foreshore i.e. traversing exposed tidal flats and shallow water habitats (including seagrass) can have a detrimental impact to fish habitats and marine fauna (for example soldier crabs) the establishment of a dog off-leash area itself does not trigger the Fisheries Act. However, development in the form of a material change of use (MCU), reconfiguration of a lot (ROL) or operational works completely or partly in a fish habitat area or operational works resulting in the removal, destruction or damage to marine plants will trigger a Planning Act approval.

Marine plant protection applies irrespective of the tenure (e.g. unallocated state land and all state tenured lands, including private freehold and leasehold lands) of the land on which the plant occurs, the time the plant has been growing at the location, or the degree of or purpose of the disturbance. All operational works resulting in

## Local government dog off-leash areas in State Marine Parks

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the removal, destruction or damage of marine plants must comply with the Department of Agriculture and Fisheries Accepted Development requirement (ADR). If works cannot comply with the ADR they are assessable development and will require a development approval

For works within a declared FHA, two approvals (under the Planning Act and the Fisheries Act) are required. These include a Resource Allocation Authority (RAA) to authorise the interference with a declared FHA and a development approval for operational works completely or partly within a declared FHA. RAA may only be issued in a declared FHA if the proposed works meet a prescribed development purpose outlined in the Fisheries (General) Regulation 2019. In addition, works are unlikely to be supported in a declared FHA management 'A' area. Therefore, where possible, marine plants and declared fish habitat areas should be avoided for dog off-leash areas, particularly management A fish habitat areas if works are required.

Planning for dog off-leash areas by local government must consider impacts to declared Fish Habitat Areas in accordance with existing 'Operational Policy management of established fish habitat areas'. While the definition of marine plants is broad (see Appendix 2) this Guideline is concerned with the potential impact to mangroves, saltmarsh, macro algae and seagrass that may be present on the foreshore. Mitigating impacts to marine plants is discussed in section 3.

### **Human Rights Act 2019**

Although human rights belong to all individuals, human rights have a special importance for the Aboriginal peoples and Torres Strait Islander peoples of Queensland, as Australia's first people, with their distinctive and diverse spiritual, material and economic relationship with the lands, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition and Ailan Kastom.

Aboriginal peoples and Torres Strait Islander peoples must not be denied the right, with other members of their community—

- (a) to enjoy, maintain, control, protect and develop their identity and cultural heritage, including their traditional knowledge, distinctive spiritual practices, observances, beliefs and teachings; and
- (b) to enjoy, maintain, control, protect, develop and use their language, including traditional cultural expressions; and
- (c) to enjoy, maintain, control, protect and develop their kinship ties; and
- (d) to maintain and strengthen their distinctive spiritual, material and economic relationship with the land, territories, waters, coastal seas and other resources with which they have a connection under Aboriginal tradition or Island custom; and
- (e) to conserve and protect the environment and productive capacity of their land, territories, waters, coastal seas and other resources.

### **Land Act 1994**

Where the local government does not have control of the foreshore, the Department of Natural Resources and Mines manage the area as unallocated state land (USL) under the *Land Act 1994*. USL means all land that is not—

- (a) freehold land, or land contracted to be granted in fee simple by the State; or
- (b) a road or a reserve, or a national park, conservation park, State forest or timber reserve; or
- (c) subject to a lease, licence or permit issued by or for the State, other than a permit to occupy under this Act issued by the chief executive.

## Local government dog off-leash areas in State Marine Parks

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Parts of foreshores may be roads/esplanades or reserves, with local government as the trustee responsible for managing these areas.

### Local government

#### **Local government boundaries**

Local government areas are established under section 6 of the Local government Regulation 2012. Defining and interpreting administrative area boundaries is set out in the *Survey and Mapping Infrastructure Act 2003*. Section 61 of this Act states that on a plan, the boundary of an administrative area marked—

- (a) along the line of a coast, harbour, tidal watercourse or tidal lake, is the high-water mark along the coast, harbour, watercourse or lake.

Therefore, local government areas generally end at high water mark and in some cases extend to the low tide mark where the local government has taken control of the foreshore under section 61 of the Local government Regulation 2012. While the foreshore, (the land between the high-water mark and low-water mark during ordinary spring tides), is unallocated state land, when placed under the control of the Local government the foreshore is considered part of the Local government Area and therefore all relevant local laws, such as laws with respect to animal control apply. Area maps held by the Department of State Development Infrastructure Local Government and Planning show the official boundaries of the LGA.

If the local government has not taken control of the foreshore—they do not have the authority to apply a local law or designate a dog off-leash area outside of their management area boundary.

#### **Animal management local laws**

Section 11 of the *Model Local Law No2 (Animal Management) 2010* administered by the Department of Local Government Racing and Multicultural Affairs provides the head of power for local governments to establish dog off-leash areas and prescribes the requirements to notify the public by notices indicating the extent of the area. Local laws also prescribe how dogs must be managed in public places that are within and outside of dog off-leash areas. As a general rule, a dog in a public place such as a foreshore must be under effective control which means—on a lead, unless in a dog off-leash area.

Local government also have the ability to declare a bathing reserve up to 1km beyond low water mark. Regulating entry and use of bathing reserves is usually under a local law implemented by the local government. Dogs are generally prohibited from established bathing reserves as they intend to provide for safe swimming and non-motorised watercraft activities. Local government Planning schemes must reflect the *Planning Act 2016* and State Planning Policy requirements. However, dog off-leash areas are not generally identified in local government planning schemes.

## Appendix 2: Definitions

Definition	Instrument
<b>Foreshore</b> means land between the high-water mark and low-water mark.	<i>Land Act 1994</i>
<p><b>Meaning of <i>marine plant</i></b></p> <p>(1) <b>Marine plant</b> includes the following–</p> <p>(a) a plant (a <b>tidal plant</b>) that usually grows on, or adjacent to, tidal land, whether it is living, dead, standing or fallen;</p> <p>(b) material of a tidal plant, or other plant material on tidal land;</p> <p>(c) a plant, or material of a plant, prescribed under a regulation or management plan to be a marine plant.</p> <p>(2) <b>Marine plant</b> does not include a plant that is–</p> <p>(a) prohibited matter or restricted matter under the <i>Biosecurity Act 2014</i>; or</p> <p>(b) controlled biosecurity matter or regulated biosecurity matter under the <i>Biosecurity Act 2014</i></p>	<i>Fisheries Act 1994</i>
<b>Matters of local environmental significance (MLES)</b> means natural values and/or areas identified by a local government in a planning instrument as MLES that are not the same, or substantially the same, as matters of national environmental significance or matters of state environmental significance.	State Planning Policy
<p><b>Matters of state environmental significance (MSES)</b> means the following natural values and areas:</p> <p>i) protected areas (including all classes of protected area except coordinated conservation areas) under the <i>Nature Conservation Act 1992</i></p> <p>ii) ‘marine national park’, ‘conservation park’, ‘scientific research’, ‘preservation’ or ‘buffer’ zones under the <i>Marine Parks Act 2004</i></p> <p>iii) areas within established fish habitat areas that are management A areas or management B areas under the Fisheries (General) Regulation 2019</p> <p>iv) a designated precinct, in a strategic environmental area under the Regional Planning Interests Regulation 2014, schedule 2, Part 5, s15(3)</p> <p>v) wetlands in a wetland protection area or wetlands of high ecological significance shown on the map of referable wetlands under the Environmental Protection Regulation 2008</p> <p>vi) wetlands and watercourses in high ecological value waters identified in the Environmental Protection (Water) Policy 2009, schedule 1</p> <p>vii) legally secured offset areas as defined under the Environmental Offsets Act 2014.</p> <p>viii) threatened wildlife under the Nature Conservation Act 1992 and special least concern animals under the Nature Conservation (Animals) Regulation 2020</p>	State Planning Policy

## Local government dog off-leash areas in State Marine Parks

<p>ix) marine plants under the Fisheries Act 1994 (excluding marine plants in an urban area)</p> <p>x) waterways that provide for fish passage under the Fisheries Act 1994 (excluding waterways providing for fish passage in an urban area)</p> <p>xi) High risk area on the flora survey trigger as described by the Environmental offsets Regulation 2014, schedule 2, Part 6(1)</p> <p>xii) regulated vegetation under the Vegetation Management Act 1999</p>	
<p><b>Matters of national environmental significance</b> (MNES) means the following matters protected under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>, chapter 2, Part 3:</p> <ul style="list-style-type: none"> <li>• world heritage properties</li> <li>• national heritage places</li> <li>• wetlands of international importance</li> <li>• listed threatened species and communities</li> <li>• listed migratory species</li> <li>• Commonwealth marine areas</li> <li>• the Great Barrier Reef Marine Park.</li> </ul>	State Planning Policy
<p><b>QPWS managed area</b> means a national park, conservation park or Recreation Area.</p>	
<p><b>Shorebird</b> includes a duck, seabird, swan and wading bird.</p>	Marine Parks (Moreton Bay) Zoning Plan 2019



Local government dog off-leash areas in State Marine Parks

Appendix 3: Values assessment and monitoring requirements

	Shorebird and social surveys					Marine plants
Stage	Site type	Time of year	Tides	Timing	# of surveys/ site	Method
Stage 1 – pre-planning to inform placement of trial DOLAs	Roost site	Nov-Feb	Spring	Within 2 hours of high tide	2 surveys across local government area	Desktop and/or site inspection across local government area
		Nov-Feb	Neap		2 surveys across local government area	
		April-Aug	Target most suitable tides identified from above surveys		1 survey across local government area	
	Feeding site	Nov-Feb	Spring	Within 2 hours of low tide	5 surveys across local government area	
		Nov-Feb	Neap		5 surveys across local government area	
		April-Aug	Target most suitable tides identified from above surveys		1 survey across local government area	
Stage 2 – short-listed DOLA site	Feeding site	Nov-Feb	Target most suitable tides identified from above surveys	Full tidal cycle survey	1 survey / short listed DOLA site	Photo/transect monitoring (before) within the trial DOLAs
Stage 3 – DOLA trial monitoring	Feeding site	Nov-Feb	Spring	Within 2 hours of low tide	5 surveys across local government area	Photo/ transect monitoring (after) within the trial DOLAs
		Nov-Feb	Neap	Within 2 hours of low tide	5 surveys across local government area	
		April-Aug	Target most suitable tides identified from above surveys	Within 2 hours of low tide	1 survey across local government area	

## Appendix 4 Shorebird data sources and information

- Ebird – [www.ebird.org](http://www.ebird.org)
- Atlas of living Australia – [www.biocache.ala.org.au](http://www.biocache.ala.org.au)
- Birdlife bird data – [www.birddata.birdlife.org.au/](http://www.birddata.birdlife.org.au/)
- Australian wader study group [www.awsg.org.au/](http://www.awsg.org.au/)
- Queensland Wader Study Group - [www.waders.org.au/](http://www.waders.org.au/)
- A wildlife search using species profile search [www.qld.gov.au](http://www.qld.gov.au)
- A wildlife search using species profile search [www.qld.gov.au](http://www.qld.gov.au) or biomaps [www.qldspatial.information.qld.gov.au](http://www.qldspatial.information.qld.gov.au) can be undertaken to identify the presence of threatened or special least concerns wildlife protected under the NCA

The following shorebird assessment tools/guidelines provide further advice and detailed methods for assessing shorebird values of an area:

- Visit [www.wetlandinfo.des.qld.gov.au](http://www.wetlandinfo.des.qld.gov.au)
- Policy statement 3.21 – Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species has been developed to assist proponents to mitigate impacts from their proposal on migratory shorebirds [www.environment.gov.au](http://www.environment.gov.au)
- Survey guidelines for Australia's threatened birds – Department of Environment Water Heritage and the Arts [www.environment.gov.au](http://www.environment.gov.au)
- Terrestrial vertebrate assessment guidelines [www.qld.gov.au](http://www.qld.gov.au)

## Understanding shorebirds

### Shorebird ecological requirements

Coastal foreshores along with inland and artificial wetlands are the primary habitats used by shorebirds in Australia. Migratory and non-migratory species move across these habitats in response to a variety of triggers such as resource availability and seasonal change. Coastal foreshores are utilised by many species of shorebirds all year round for roosting, foraging and nesting, but with particularly high numbers of migratory shorebirds during the non-breeding period (September to April). Migratory shorebirds must have space, food, and protection from predators and disturbances, to recuperate from long flights and to prepare for the next stage of their journey. Non-migratory shorebirds also need similar habitats including safe areas for breeding (Moreton Bay shorebird strategy).

### 2.12 Roosting

Shorebirds roost generally at or above the high tide mark. Some species prefer to roost in mangroves, or on structures but many roost on the ground on open shores near the high tide mark. Tern species roost on open shores, sandbanks and near the mouths of coastal inlets. Most shorebirds roost in mixed flocks of species ranging from tens to thousands of birds, in areas with clear visibility to enable threat detection. To conserve energy, shorebirds select roosting areas that are conveniently close to their feeding areas. A good roost should involve low energy costs as every kilojoule expended during the roosting period is lost from such vital activities as maintenance metabolism, moult and migratory fueling (Rogers, D 2003). Roosts can be classified on their availability at a certain tide, such as staging roost (available on the lower high tides), high tide (used at or around the mean high tides) or critical high tide roost. Critical high tide roosts are used by many thousands of birds during the spring tides when staging and high tides roosts are under water. Staging and high tide roosts may also provide some limited foraging opportunities.

### 2.13 Feeding

Shorebirds utilise shallow wetlands with mudflats or beaches and water less than 10cm deep, surrounded by low, sparse vegetation. These habitats provide the small insects, worms, and other invertebrates eaten by shorebirds (Moreton Bay shorebird strategy). Shorebirds employ different feeding techniques such as visual prey selection and tactile probing below the sediment, depending on their biology. Finn et al (2007) found substrate resistance, width of feeding flats and presence or absence of seagrass to be a good predictor of shorebird feeding habitat. Coastal birds such as little tern and crested tern feed in near shore coastal areas and lakes by plunge diving, therefore their dependency on foreshore areas for feeding is low.

Shorebirds preferably forage in areas where prey density, prey availability and intake rates are relatively high and where energy expenditure is low (Goss Custard and Charman 1976 in Paton 2000). Densities of shorebirds therefore tend to reach a maximum in the best and most preferred feeding areas (Goss-Custard et al 1982 in Paton 2000). Studies have shown that migratory shorebirds may travel between 4 to 10 kms from roosting to feeding areas, with many species showing strong fidelity to their roosting and feeding sites between and within seasons (e.g. grey tailed tattler in Coleman, J & Milton, D (2012).). When protecting sites for shorebirds, both roosting and feeding locations need to be considered and protected as a single system (Coleman and Milton 2012).

### 2.14 Nesting

Many non-migratory shorebird and coastal bird species nest in coastal foreshore areas, creating either a shallow scrape on a sandy beach or crudely constructed nests made of pumice and pebbles. Species such as little tern nest in small single species colonies and utilise the same general area for nesting year after year. Species such as beach stone curlew and Australian pied oyster catchers breed in pairs and have a limited home range that they defend. While most nesting locations are above the high tide mark and therefore outside of state water limits, adults and chicks move across coastal areas to forage on beaches and near shore waters.

## Local government dog off-leash areas in State Marine Parks

Table 3. How and when different habitat types are used by shorebirds.

Habitat type	Usage	Time of year	Time of day
Tidal mud flats/saltmarsh	Foraging	All year	Low tide – high tide
	Roosting	All year	High tide
Mangrove trees	Roosting	All year	High tide
Open ocean - sandy beaches	Foraging	All year	Low tide
	Roosting	All year	High tide
	Nesting*	August – January	n/a
Rocky headlands	Foraging	All year	Low tide
	Roosting	All year	High tide

\*applies to non-migratory shorebirds only

## Local government dog off-leash areas in State Marine Parks

## Appendix 5: Shorebird species listings under state and Commonwealth legislation

Key to conservation status									
E - Endangered under <i>Nature Conservation Act 1992</i>					V - Vulnerable under <i>Nature Conservation Act 1992</i>				
CE/c - Critically Endangered under EPBC Act					E/c - Endangered under EPBC Act				
V/c - Vulnerable under the EPBC Act					M/r - Listed marine species as under the EPBC Act				
M - Migratory species listed under the EPBC Act									
Family	Scientific Name	Common Name	NCA		EPBC				
			E	V	CE/ c	E/c	V/c	M/r	M
Jacanidae	<i>Irediparra gallinacea</i>	comb-crested jacana							
Rostratulidae	<i>Rostratula australis</i>	Australian painted snipe		•		•		•	
Haematopodidae	<i>Haematopus fuliginosus</i>	sooty oystercatcher							
Recurvirostridae	<i>Haematopus longirostris</i>	Australian pied oystercatcher							
Recurvirostridae	<i>Himantopus himantopus</i>	black-winged stilt						•	
Burhinidae	<i>Recurvirostra novaehollandiae</i>	red-necked avocet						•	
Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew							
Glareolidae	<i>Esacus neglectus</i>	beach stone-curlew		•				•	
Charadriidae	<i>Stiltia isabella</i>	Australian pratincole						•	
Charadriidae	<i>Charadrius bicinctus</i>	double-banded plover						•	•
Charadriidae	<i>Charadrius leschenaultii</i>	greater sand plover		•			•	•	•
Charadriidae	<i>Charadrius mongolus</i>	lesser sand plover	•			•		•	•
Charadriidae	<i>Charadrius ruficapillus</i>	red-capped plover						•	
Charadriidae	<i>Elsayornis melanops</i>	black-fronted dotterel							
Charadriidae	<i>Erythrogonys cinctus</i>	red-kneed dotterel							
Charadriidae	<i>Pluvialis fulva</i>	pacific golden plover						•	•
Charadriidae	<i>Pluvialis squatarola</i>	grey plover						•	•
Charadriidae	<i>Vallenus miles novaehollandiae</i>	masked lapwing (southern subsp)							
Charadriidae	<i>Vanellus tricolor</i>	banded lapwing							
Scolopacidae	<i>Arenaria interpres</i>	ruddy turnstone						•	•
Scolopacidae	<i>Calidris acuminata</i>	sharp-tailed sandpiper						•	•

## Local government dog off-leash areas in State Marine Parks

Scolopacidae	<i>Calidris alba</i>	sanderling						•	•
Scolopacidae	<i>Calidris canutus</i>	red knot	•			•		•	•
Scolopacidae	<i>Calidris melanotos</i>	pectoral sandpiper						•	•
Scolopacidae	<i>Calidris ferruginea</i>	curlew sandpiper	•		•			•	•
Scolopacidae	<i>Calidris ruficollis</i>	red-necked stint						•	•
Scolopacidae	<i>Calidris tenuirostris</i>	great knot	•		•			•	•
Scolopacidae	<i>Gallinago hardwickii</i>	Latham's snipe						•	•
Scolopacidae	<i>Heteroscelus brevipes</i>	grey-tailed tattler						•	•
Scolopacidae	<i>Heteroscelus incanus</i>	wandering tattler						•	•
Scolopacidae	<i>Limicola falcinellus</i>	broad-billed sandpiper						•	•
Scolopacidae	<i>Limnodromus semipalmatus</i>	asian dowitcher						•	•
Scolopacidae	<i>Limosa lapponica</i>	western Alaskan bar-tailed godwit				•		•	•
Scolopacidae	<i>Limosa limosa</i>	black-tailed godwit						•	•
Scolopacidae	<i>Numenius madagascariensis</i>	eastern curlew	•		•			•	•
Scolopacidae	<i>Numenius minutus</i>	little curlew						•	•
Scolopacidae	<i>Numenius phaeopus</i>	whimbrel						•	•
Scolopacidae	<i>Tringa hypoleucos</i>	common sandpiper						•	•
Scolopacidae	<i>Tringa nebularia</i>	common greenshank						•	•
Scolopacidae	<i>Tringa stagnatilis</i>	marsh sandpiper						•	•
Scolopacidae	<i>Xenus cinereus</i>	terek sandpiper						•	•
Laridae	<i>Sterna albifrons</i>	little tern						•	•
Laridae	<i>Thalasseus bergii</i>	crested tern						•	•
Laridae	<i>Hydroprogne caspia</i>	caspian tern						•	•
Laridae	<i>Thalasseus bengalensis</i>	lesser-crested tern						•	
Laridae	<i>Sterna sumatrana</i>	black-naped tern						•	•
Laridae	<i>Sternula nereis exsul</i>	fairy tern	•					•	
Laridae	<i>Gelochelidon nilotica</i>	gull billed tern						•	•
Laridae	<i>Sterna dougallii</i>	roseate tern						•	•

## Appendix 6: Impact assessment and risk tables

### Environmental values

#### Impacts to shorebirds by dogs

Disturbance to shorebirds is well documented as a stressor which affects their long term survival. Disturbance to shorebirds could range from a minor response (e.g. increasing alertness), to major response (e.g. causing them to take flight), both of which may cause them to abandon resting and feeding.

There are many variables that influence the response of a shorebird, including the proximity of other areas and the quality of these compared to the current area. When alternative areas of comparable quality are nearby the birds might respond and take flight at greater distances than when alternative areas are further away or of poorer quality (Paton et al 2000). Accordingly, shorebirds are particularly sensitive at roost sites during the high tides when there is often some distance to the nearest suitable alternative roost site. Continuous shorebird disturbance can also lead to site abandonment.

Buffers are often used to separate threatening stimuli, such as humans, from wildlife, with wildlife responses diminishing with lateral distance between stimuli and wildlife (Glover et al 2011, Lafferty, 2001b; Pfister et al 1992 in Glover et al 2011). Therefore, buffers are generally regarded as an appropriate way of managing disturbance to shorebirds.

The distance at which a bird becomes vigilant or alert is referred to as the alarm initiation distance (AID). The distance at which shorebirds fly as a result of disturbance is referred to as the flight initiation distance (FID). In general, the AID of the bird is twice the FID (Lilleyman 2016). Many studies on FID have shown that it can vary between species and age, the nature of the stimuli, the approach speed, flock size and the degree of habituation by the birds to such disturbance. Milton et al 2011 found that speed of the person or vessel was a significant factor in determining the response of shorebirds to a threat suggesting that unleashed dogs approaching birds at higher speed than if a dog is leashed is likely to result in the bird reacting at a greater distance.

A summary of research studies that assessed the response of shorebirds to the presence of dogs and human stimuli is provided in the table below. In summary, large flocks with large species or juveniles are likely to be more susceptible to dogs off-lead than on-lead.

While buffer distances have been used by the Department to manage disturbance to shorebirds by authorised activities in state marine parks, distances are precautionary based on published literature rather than site specific empirical data. For ease of consistent application and in the absence of site specific data, a conservative buffer distance of 300 meters is recommend between identified 'high value' shorebird areas and a dog off-leash area. This is taking into consideration:

- The maximum AID and FID reported for the most sensitive species to people walking (196m Eastern Curlew in Glover et al 2011) and walking with a dog (168m Cormorant in Paton et al 2000);
- Maximum FIDs don't take into consideration detection distance and physiological initiation distance;
- Dogs elicit a greater response from shorebirds than humans walking alone and dogs in an off-leash area may not be under control;
- The current low compliance by dog walkers in having their dog under control in the Marine Park.

Acceptable solutions to reducing the recommended buffer distance between an important shorebird area and dog off-leash area include:

- Site specific data that demonstrates the shorebird species for that location can tolerate a reduced buffer distance;

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- A physical and visual barrier that prevents visual and actual contact is provided between the dog off-leash area and important shorebird area; or
- A seasonal closure avoiding peak migratory shorebird times e.g. 1 September to 30 April. A seasonal closure for nesting areas is not an acceptable solution.

If the proposed dog off-leash area does not meet the acceptable solutions in this Guideline, an alternative site can be chosen. If an alternative site is not feasible and matters of national environmental significance (MNES) are concerned, the dog off-leash area must be considered against EPBC Act Significant Impact Guidelines and Policy Statements (see Appendix 1). If a significant impact is likely then the matter must be referred by Local government to the Commonwealth government as per the EPBC Act policy statement.

### Impacts to nesting birds by dogs

Breeding success of non-migratory and coastal birds is significantly reduced by the presence of humans and domestic animals as a result of trampling, exposure, predation, disturbance and reduced weight gain, introduction of litter and weeds. Domestic dogs have been known to partially or entirely destroy shorebird nests, including those protected with symbolic fencing (Maguire, S 2008).

Therefore, it is recommended that dog off-leash areas are not established in shorebird nesting areas<sup>3</sup> and a buffer of at least 300m be maintained between nesting areas and dog off-leash areas. Local government is encouraged to raise public awareness about the threats that unleashed dogs have on beach nesting birds via educational programs and signage in identified shorebird nesting areas.

As a minimum, dogs should be leashed on breeding beaches (Maguire, S 2008) and temporary barrier fencing installed to prevent trampling and provide a buffer between dogs on lead and nests.

### Impacts to cultural values

Due to the distinct perspective of individual First Nations peoples and the unique nature of each culturally significant site, potential cultural impacts should be assessed through engagement with relevant First Nations peoples.

Potential impacts may include but are not limited to:

- Increased disturbance of culturally significant wildlife.
- Increased disturbance or visitation of areas used for traditional hunting.
- Increased disturbance of culturally significant landscapes/seascapes.
- Increased visitation of culturally significant sites (e.g., shell middens, scar trees).

It is recommended strategies to manage any potential cultural impacts are discussed with the relevant First Nations peoples.

### Impacts to benthic habitat (e.g. marine plants and coral)

Damage to intertidal habitats and marine plants, including saltmarsh, mangroves, seagrass, macro algae and coral communities can occur as a result of repetitive and frequent visitor access to foreshore areas. Walking on marine plants can cause direct and indirect disturbances to the vegetation itself, the seedlings/new growth and the root system (e.g. mangrove pneumatophores). In addition, salt marsh species are highly sensitive to changes in tidal regime, modification and physical damage. Impacts may take the form of soil compaction from regular use resulting in changed local area hydrology and thus marine plant impacts.

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<sup>3</sup> A 'shorebird nesting area' is an area where there is evidence of nesting or a high potential for nesting to due to habitat characteristics.



## Local government dog off-leash areas in State Marine Parks

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Therefore, an assessment of marine plant and coral values on the foreshore is recommended and the potential impact of a dog off-leash area considered low. Dog off-leash areas must not be established in salt marsh areas due to their listing as a vulnerable ecological community under the EPBC Act. Utilising foreshore areas void of other marine plants and coral or existing degraded and modified areas is recommended.

Where dog off-leash areas are established in the presence of marine plants, photo monitoring is recommended throughout the 12-month trial period to evaluate any changes in percent cover of marine plants.

While other impacts to benthic habitats and the marine ecosystem are possible e.g. changes in nutrients, benthic invertebrates, erosion, invertebrate density etc., such impacts are difficult to detect without extensive long term monitoring to detect causal factors.

### **Social values**

Impacts on foreshore uses, both existing and future planned use, is a key consideration in planning for dog off-leash areas. Primarily:

- Ensuring that activities are not displaced to the detriment of shorebirds. For example, if a dog off-leash area is established in a popular kite surfing location, the kite surfers may re-locate closer to important shorebird areas;
- Ensuring social acceptability of the proposed declaration; and.
- Provide equitable access to the foreshore.

Dogs off-leash have the ability to impede the conduct and the quality of activities such as:

- Tourism programs that utilise the foreshore (kite surfing, equipment hire, vending),
- Passive beach recreation and events e.g. surf carnivals, triathlons,
- Commercial and recreational fishing e.g. bait gathering, beach netting, line fishing.
- Research and education programs that involve sampling or placement of equipment intertidally.

Therefore, it is necessary to assess the current use of the foreshore and the needs of other commercial and recreational user groups. Consultation with the community during the planning phase is recommended to gauge potential conflicts and social surveys of foreshore users will assist to inform the degree of social acceptability of proposed dog off-leash management options.

The size of the dog off-leash area in the context of available foreshore area and other user demands and their ability to co-exist is also a key consideration. Where necessary, operating requirements may need to be considered around times of day or year to separate competing uses.

Understanding the nature and daily patterns of foreshore use is also helpful to plan and target education and enforcement activities in support of the dog off-leash area declaration as discussed in Part 4 below.

### **Litter and waste**

The presence of dogs and humans on the foreshore in general may result in the introduction of litter and waste resulting in impacts to marine wildlife such as ingestion, entanglement and exposure to pathogens. As required in park-based dog off-leash areas, waste from dogs must be removed from foreshore dog off-leash areas. It is an offence to deposit waste in state marine parks and local government therefore, it is essential to provide waste disposal facilities outside of the marine park to enable dog off-leash users to remove and dispose of general litter and animal waste from foreshore areas.

Local government dog off-leash areas in State Marine Parks

Table 4. Buffer distance literature summary

Reference	Study details (i.e. species and study location)	Disturbance distances observed	Summary of findings/ recommendations
<p>Blumstein, D.T., Anthony, L.L., Harcourt, R., Ross, G (2003). Testing a key assumption of wildlife buffer zones: Is flight initiation distance a species-specific trait? <i>Biological Conservation</i>, 110 (1), pp. 97-100</p>	<p>Walked towards 8 species of shorebirds in Botany Bay</p>	<ul style="list-style-type: none"> <li>• 50m oyster catcher</li> <li>• 70m masked lapwing</li> <li>• 60m Australian Pelican</li> <li>• 60m Ibis and Heron</li> <li>• 35m Bar tailed godwit</li> <li>• 30m Silver gull</li> </ul>	<p>Flight initiation distance is a species specific trait. There was also some variability between species at different sites.</p>
<p>Glover HK, Weston MA, Maguire GS, Miller KK &amp; Christie BA (2011) Towards ecologically meaningful and socially acceptable buffers: Response distances of shorebirds in Victoria, Australia, to human disturbance. <i>Landscape and Urban Planning</i>, 103, 326-334.</p>	<p>28 species of shorebirds in eastern Victoria using three stimuli: walker, jogger and walker with leashed dog.  Also measured human dimension and attitude towards protection scenarios</p>	<p>Mean FID approach by a walker:</p> <ul style="list-style-type: none"> <li>• all species 6.0-218m.</li> <li>• E.Curlew – 196m (max)</li> <li>• Common greenshank – 145m (max)</li> <li>• Masked lapwing – 218m</li> </ul>	<p>Migrants had shorter FID compared to resident species.  Walker with dog had greater influence on pied oyster catcher FID.  Larger flocks had greater FID.</p>
<p>Koches, Paton W.C (2014) Assessing Anthropogenic Disturbances to develop Buffer Zones for shorebirds using a stop over site. <i>The Journal of Wildlife Management</i> 78(1):58–67.</p>	<p>Impacts of pedestrians and shell-fishing on 9 species of foraging shorebirds in Massachusetts USA</p>	<p>Buffer distance of 61-97m for least sandpiper to 113-186m for red knots and ruddy turnstone.</p>	<p>Recommend buffers &gt;185m from key foraging sites to reduce disturbance to the most sensitive species.</p>

## Local government dog off-leash areas in State Marine Parks

Reference	Study details (i.e. species and study location)	Disturbance distances observed	Summary of findings/ recommendations
Lilleyman, A., Franklin, D.C., Szabo, J.K. & Lawes, M.J. (2016). Behavioural responses of migratory shorebirds to disturbance at a high-tide roost. <i>Emu</i> 116: 111-118.	Measured natural and human disturbance distances and reactions by 4 shorebird species (Red knot, Great Knot, Lesser and Greater Sand plover) in Darwin.	Mean FID for all taxa 53.6m however recommend a buffer zone of 100m to account for the alarm distance.	10 alarm flights per day increased daily energy expenditure by 4.5-4.7% for knots and 7.5-7.8% for sand plovers.  Recommend a larger FID for larger species.
Martin B et al (2014) Effects of human presence on the long-term trends of migrant and resident shorebirds: evidence of local population declines. <i>Animal Conservation</i>	Kentish Plover, southern Spain	100% of plovers reacted to people 80m or closer	Fencing and a minimum of 80m buffer from shorebird areas to built tracks or walkways.
Mayo, T.W., Paton, P.W.C., August, P.V. (2015) Responses of Birds to Humans at a Coastal Barrier Beach: Napatree Point, Rhode Island. <i>North eastern Naturalist</i> 22(3):501-512. 2015	Resident shorebird species on Rhode Island, South New England.	39 ± 24m (pedestrians)  38 ± 33m (watercraft)	Use of a spatially explicit density map of flight-initiation distance vectors, to identify the most important area to set as a buffer zone for human access
Milton, D. Beck, D, Campbell, V, Harding S.B (2011). Monitoring disturbance of shorebirds and seabirds at Buckleys Holes Sandspit in northern Moreton Bay. <i>The Sunbird</i> 41 (2)	Recorded response and FID of shorebirds to disturbance at Buckleys Hole Sandbar	22.9m – 73m (slow to fast approach speeds).	There was no significant difference in FID between raptor, dogs and people walking. Reduce the speed of approach by people, pets and vessels.

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Reference	Study details (i.e. species and study location)	Disturbance distances observed	Summary of findings/ recommendations
<p>Paton DC, Ziembicki M, Owen P &amp; Heddle C (2000). Disturbance distances for water birds and the management of human recreation with special reference to the Coorong region of South Australia. <i>Stilt</i>, 37, 46.</p>	<p>Shorebird responses to jet ski, walking, boating, walking with dog and canoeing were measured in the Murray River estuary and Barker Inlet South Australia.</p>	<p>Alert distance to walkers                      Sandpipers= 25-110m                      Stilts, godwit, curlew, avocets =26-204m                      Ibis, duck, cormorant, swan = 85-347m</p>	<p>Birds showed a significant alert response and took flight further away when the walker had a dog.                      Jet-skiing was the most disruptive activity.                      Larger species were more sensitive than smaller species and shorebirds were less sensitive than shorebirds.                      Buffer distances of around 350m are required</p>
<p>Rodgers Jr., J.A., Smith, H.T. (1997) Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. <i>Wildlife Society Bulletin</i>, 25 (1), pp. 139-145. Cited 81 times</p>	<p>9 species of waterbirds in north and central Florida were observed for response to walking, all-terrain vehicle, automobiles and boats.</p>	<p>Sanderlings – 13.73m to walkers                      Ring-billed terns – 33.80m to walkers.                      Ruddy turnstone – 14.80m to ATV</p>	<p>Buffer distance = expected flush distance + 40m.                      The most sensitive species should be used to determine the buffer distance.                      A buffer of 100m should minimise disturbance to most species of waterbirds studied in Florida.</p>
<p>Taylor, I.R. &amp; A. Bester (1999). The response of foraging waders to human recreation disturbance at Rhyll, Phillip Island, Victoria. <i>Stilt</i> 35, 67.</p>	<p>Observed response of shorebirds to walking, dog walking and bait gathering at Phillip Island Victoria.</p>	<p>Bar tailed godwit FID = 10-70m                      Eastern curlew = 30-100m</p>	<p>Masked lapwing most unlikely to fly off, Eastern Curlew and Whimbrel were the most likely to fly off.</p>
<p>Weston, M.A., McLeod, E.M., Blumstein, D.T., &amp; Guay, P.J. (2012). A review of flight-initiation distances and their</p>	<p>Review of FID research</p>	<p>Table 2, within the literature, summarises all above distances.</p>	<p>Breeding birds potentially respond very differently compared with non-breeding birds</p>

**Local government dog off-leash areas in State Marine Parks**

<b>Reference</b>	<b>Study details (i.e. species and study location)</b>	<b>Disturbance distances observed</b>	<b>Summary of findings/ recommendations</b>
application to managing disturbance to Australian birds. <i>Emu</i> 112: 269-286.			(Glover et al. 2011), and few studies report FIDs for dependent or flightless young. FID are reported in non-standard ways.

## Local government dog off-leash areas in State Marine Parks

### Risk Tables:

DESCRIPTION	DEFINITION
CATASTROPHIC	Impact is clearly affecting the nature of the ecosystem over a wide area OR impact is catastrophic and possibly irreversible over a small area or to a sensitive population or community Recovery periods of greater than 20 years likely OR condition of an affected part of the ecosystem irretrievably compromised.
MAJOR	Impact is significant at either a local or wider level or to a sensitive population or community. Recovery periods of 10 - 20 years are likely.
MODERATE	Impact is present at either a local or wider level. Recovery periods of 5 - 10 years anticipated.
MINOR	Impact is present but not to the extent that it would impair the overall condition of the ecosystem, sensitive population or community in the long term.
INSIGNIFICANT	No impact or, if impact is present, then not to an extent that would draw concern from a reasonable person. No impact on the overall condition of the ecosystem.

Table 1: Consequence (Environment –Ecosystem level)

DESCRIPTION	DEFINITION
CATASTROPHIC	Negative and extensive national media attention and national campaigns
MAJOR	Negative national media attention and national campaign
MODERATE	Negative regional media attention and regional group campaign
MINOR	Individual complaints
INSIGNIFICANT	No media attention

Table 2: Consequence (Environmental Perception)

DESCRIPTION	FREQUENCY	PROBABILITY
Almost certain	Expected to occur more or less continuously throughout a year (e.g. more than 250 days per year)	95-100% chance of occurring
Likely	Expected to occur once or many times in a year (e.g. 1 to 250 days per year)	71-95% chance of occurring
Possible	Expected to occur once or more in the period of 1 to 10 years	31-70% chance of occurring
Unlikely	Expected to occur once or more in the period of 10 to 100 years	5-30% chance of occurring
Rare	Expected to occur once or more over a timeframe greater than 100 years	0-5% chance of occurring

Table 3: Likelihood

LIKELIHOOD	CONSEQUENCE RATING				
	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
ALMOST CERTAIN	M	M	H	E	E
LIKELY	M	M	H	H	E
POSSIBLE	L	M	H	H	E
UNLIKELY	L	L	M	M	H
RARE	L	L	M	M	M

Table 4: Hazard Risk Grade

## Appendix 7: Self-assessment checklist

<b>1. Legal requirements</b>			
Relevant regulations outlined in Part 1 and Appendix 1 and 2 of the Guideline have been considered and the DOLA complies with state legislation. Landowners and adjacent landowners have been consulted.			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
1.1 Marine Parks – Moreton Bay <ul style="list-style-type: none"> <li>The DOLA is not on a beach adjacent to a National Park</li> </ul>	<input type="checkbox"/> go to 1.2	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
1.2 Marine Parks – Great Barrier Reef Coast <ul style="list-style-type: none"> <li>The DOLA is not on a beach adjacent to a National Park that is not on the mainland.</li> </ul>	<input type="checkbox"/> go to 1.3	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
1.3 Recreation Areas <ul style="list-style-type: none"> <li>The DOLA is not in a Recreation Area</li> </ul>	<input type="checkbox"/> go to 1.4	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
1.4 Protected Areas <ul style="list-style-type: none"> <li>The DOLA is not within a National Park</li> </ul>	<input type="checkbox"/> go to 1.5	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
1.5 Protected Areas <ul style="list-style-type: none"> <li>The DOLA is not adjacent to a National Park</li> </ul>	<input type="checkbox"/> go to 1.6	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>Consult with QPWS protected area manager</li> </ul>
1.6 Protected Areas <ul style="list-style-type: none"> <li>The DOLA is not within a Conservation Park.</li> </ul>	<input type="checkbox"/> go to 1.7	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>Dogs may be permitted by Reg notice.</li> <li>Consult with QPWS protected area manager</li> </ul>
1.7 Nature Conservation <ul style="list-style-type: none"> <li>The DOLA will not interfere with an animals breeding place (see Part 2.1 below).</li> </ul>	<input type="checkbox"/> go to 1.8	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLAs must not be established where shorebird breeding occurs</li> </ul>
1.8 Fish Habitat Areas (FHA) <ul style="list-style-type: none"> <li>The DOLA does not involve works in a FHA.</li> </ul>	<input type="checkbox"/> go to 1.9	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>Works will require approval</li> </ul>
1.9 Department of Resources (DoR)	<input type="checkbox"/> go to 2.0	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>Consult with DoR</li> </ul>

## Local government dog off-leash areas in State Marine Parks

<ul style="list-style-type: none"> <li>The DOLA is on Council managed foreshore.</li> </ul>			
<p>2.0 EPBC Act</p> <ul style="list-style-type: none"> <li>The DOLA will not impact on matters of national environmental significance.</li> </ul>	<input type="checkbox"/> Proceed to values assessment	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>Consult with Department of the Environment and Energy</li> </ul>
<p><b>2. Values assessment</b></p> <p>Assessment of shorebird, benthic habitats and social values has been undertaken at three stages:</p> <ul style="list-style-type: none"> <li>Stage 1 – pre-planning to inform placement of trial DOLAs</li> <li>Stage 2 – site specific assessment of chosen trial DOLAs</li> <li>Stage 3 – monitoring during the 12-month trial of DOLAs</li> </ul>			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
2.1 Shorebird values have been assessed following section 2.1 and Appendix 3 of the Guidelines.	<input type="checkbox"/> go to 2.2	<input type="checkbox"/> see comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
2.2 Cultural values have been assessed in accordance with section 2.3 and Appendix 3.	<input type="checkbox"/> go to 2.3	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
2.3 Marine plant values have been assessed in accordance with section 2.4 and Appendix 3 of the Guidelines.	<input type="checkbox"/> go to 2.4	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
2.4 Social values have been assessed in accordance with section 2.5 and Appendix 3 of the Guidelines.	<input type="checkbox"/> Proceed to impact mitigation	<input type="checkbox"/> See comments	<ul style="list-style-type: none"> <li>DOLA not supported</li> </ul>
<p><b>3. Mitigation of impacts</b></p> <p>Acceptable solutions outlined in Table 2 of the Guidelines have been met (implementation actions appear in <b>blue text</b>).</p>			
Disturbance to shorebirds (feeding and roosting) – tick which acceptable solutions have / have not been met.			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
AS1. Position dog off-leash area at least 300m from shorebird roost and high value low tide feeding areas.	<input type="checkbox"/>	<input type="checkbox"/>	
AS2. Where required buffer cannot be achieved, site specific data or expert opinion that demonstrates the shorebird	<input type="checkbox"/>	<input type="checkbox"/>	



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species for that location can tolerate a reduced buffer distance.			
AS3. Where required buffer cannot be achieved a physical and visual barrier is installed.	<input type="checkbox"/>	<input type="checkbox"/>	
AS4. Where required buffer cannot be achieved a seasonal closure is applied.	<input type="checkbox"/>	<input type="checkbox"/> see comments	At least one of AS1-4 must be met, otherwise DOLA is not supported.
AS5. Education and awareness about on-leash, off-leash areas and shorebird values. (see 4.2 below)	<input type="checkbox"/>	<input type="checkbox"/>	
AS6. Compliance and enforcement around on-leash and off-leash areas. (see 4.3 below)	<input type="checkbox"/>	<input type="checkbox"/>	
Disturbance to shorebirds (nesting) – tick which acceptable solutions have/ have not been used.			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
AS7. Dog off-leash areas <u>are not</u> located in an area where shorebird nesting occurs (all year round).	<input type="checkbox"/>	<input type="checkbox"/>	
AS8. Position dog off-leash areas at least 300m from shorebird nesting areas (year round).	<input type="checkbox"/>	<input type="checkbox"/>	
AS9. Where required buffer cannot be achieved, site specific data or expert opinion that demonstrates the shorebird species for that location can tolerate a reduced buffer distance.	<input type="checkbox"/>	<input type="checkbox"/> see comments	At least one of AS7-9 must be met, otherwise DOLA is not supported.
AS10. Education and awareness about dogs-on lead near nesting birds. (see 4.2 below)	<input type="checkbox"/>	<input type="checkbox"/>	
AS11. Temporary fencing around nesting areas.	<input type="checkbox"/>	<input type="checkbox"/>	
AS12. Compliance and enforcement around on-leash and off-leash areas. (see 4.3 below)	<input type="checkbox"/>	<input type="checkbox"/>	

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Impacts to cultural values or culturally sensitive sites.			
Checklist	Met	Not met	Comments
AS13. Consult relevant First Nations peoples.	<input type="checkbox"/>	<input type="checkbox"/>	
AS14. Position dog off-leash areas away from culturally sensitive sites.	<input type="checkbox"/>	<input type="checkbox"/> See comments	AS13 and AS14 must be met, otherwise DOLA is not supported.
AS15. Where relevant First Nations peoples are not supportive, alternative sites are investigated.	<input type="checkbox"/>	<input type="checkbox"/>	
AS16. Continue engagement with relevant First Nations peoples to ensure any expectations or commitments made by the local government area are being met.	<input type="checkbox"/>	<input type="checkbox"/>	
Trampling sensitive benthic communities (e.g. marine plants or coral) – tick which acceptable solutions have/ have not been used.			
Checklist	Met	Not met	Comments
AS17. Dog off-leash areas, including access and egress locations are void of saltmarsh areas and avoid of all other marine plants and coral.	<input type="checkbox"/>	<input type="checkbox"/>	
AS18. Placement of dog off-leash areas on existing degraded or heavily modified beaches.	<input type="checkbox"/>	<input type="checkbox"/>	
AS19. Where marine plants can't be avoided, a tidal closure is applied.	<input type="checkbox"/>	<input type="checkbox"/>	
AS20. Where marine plants can't be avoided, photo transect monitoring occurs before and after the 12 month trial and changes made to the dog off-leash area if damage is occurring.	<input type="checkbox"/>	<input type="checkbox"/> see comments	At least one of AS17-20 must be met, otherwise DOLA is not supported.
Impact on commercial and recreational activities – tick which acceptable solutions have/ have not been used.			
Checklist	Met	Not met	Comments

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AS21. Consider potential conflicts that may result in a cumulative impact to high value shorebird areas.	<input type="checkbox"/>	<input type="checkbox"/>	
AS22. Consider the size of the dog off-leash area in the context of available foreshore and other activities.	<input type="checkbox"/>	<input type="checkbox"/>	
AS23. Consider the need for a foreshore DOLA given dog registration and existing DOLAs.	<input type="checkbox"/>	<input type="checkbox"/>	
AS24. Consider DOLA operating requirements around times of day or year to separate competing activities.	<input type="checkbox"/>	<input type="checkbox"/>	
AS25. Consider measures to address potential cumulative impacts to high value shorebird areas e.g. dog prohibited areas.	<input type="checkbox"/>	<input type="checkbox"/>	
AS26. Survey and monitor user impacts and satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	
Litter and animal waste – tick which acceptable solutions have / have not been used.			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
AS27. Provision of rubbish disposal facilities adjacent to the marine park (see 4.4 below)	<input type="checkbox"/>	<input type="checkbox"/>	
AS28. Education and awareness around littering. (see 4.2 below)	<input type="checkbox"/>	<input type="checkbox"/>	
AS29. Compliance enforcement around littering. (see 4.3 below)	<input type="checkbox"/> proceed to implementation and review	<input type="checkbox"/>	
<p><b>4. Implementation and review</b></p> <p>Operational plans outlining education and compliance programs to support trial dog of leash areas have been developed and are resourced. The DOLA has been established in a trial capacity and monitoring has demonstrated improved dog management and environmental protection.</p>			
<b>Checklist</b>	<b>Met</b>	<b>Not met</b>	<b>Comments</b>
4.1 Signage plan for DOLA site delineation has been prepared and resourced.	<input type="checkbox"/> go to 4.2	<input type="checkbox"/>	

## Local government dog off-leash areas in State Marine Parks

4.2 Community awareness program about shorebirds, waste and dog management has been prepared and resourced.	<input type="checkbox"/> go to 4.3	<input type="checkbox"/>	
4.3 Compliance plan has been developed and scheduled.	<input type="checkbox"/> go to 4.4	<input type="checkbox"/>	
4.4 Facilities such as fencing and bins have been considered and funded.	<input type="checkbox"/> go to 4.5	<input type="checkbox"/>	
4.5 Monitoring of shorebirds has been undertaken in accordance with section 2.1 and Appendix 3 of the Guidelines.	<input type="checkbox"/> go to 4.6	<input type="checkbox"/>	
4.6 Monitoring of habitat impacts (where required) has been undertaken in accordance with 2.3 and Appendix 3 of the Guidelines.	<input type="checkbox"/> go to 4.7	<input type="checkbox"/>	
4.7 Monitoring of social values has been undertaken in accordance with section 2.4 and Appendix 3 of the Guidelines.	<input type="checkbox"/> go to 4.8	<input type="checkbox"/>	
4.8 Trial success has been evaluated against desirable outcomes and desirable outcomes have been met.	<input type="checkbox"/> go to 4.9 DOLA supported	<input type="checkbox"/> See comments	Review DOLA placement and management <u>OR</u> DOLA not supported.
4.9 DES has been consulted and provided sufficient information to advise on the DOLA.	<input type="checkbox"/> END	<input type="checkbox"/>	

**Appendix 8: References**

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