Management program for seal interactions in Western Australia 2023

GOVERNMENT OF WESTERN AUSTRALIA

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A supporting document with research, further information and references to sources utilised to inform this management program is available upon request.

Management program for seal interactions in Western Australia

Summary

The *Management program for seal interactions in Western Australia* (WA) has been developed by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA) to provide a framework for decision making and to guide management of tourism, recreation and other human interaction activities affecting seals in WA state waters.

In this document, the term 'seal' is a collective colloquial term taken to mean Australian sea lion, long-nosed fur seal, sub-Antarctic fur seal, leopard and southern elephant seals and/or any other pinniped species that may occur within WA, or occasionally visit the WA coast.

Management of interactions with seals occurs in accordance with the *Biodiversity Conservation Act 2016* (BC Act) and Biodiversity Conservation Regulations 2018 (BC Regulations) and is underpinned by the intent to protect and conserve these species using the principles of ecologically sustainable development and an adaptive management approach. Where seal populations and/or critical habitat occur within marine parks and reserves, the *Conservation and Land Management Act 1984* (CALM Act) and Conservation and Land Management Regulations 2002 are also relevant, along with the CALM Act management plan for the park or reserve, which provides management guidance.

Management also occurs in the broader framework of various other international, national and state instruments as they apply to seals. This includes recovery plans for those listed as threatened species.

There are resident populations of Australian sea lions and long-nosed fur seals in WA State waters; including haul out and breeding sites located in proximity to populated areas. This management program has a key focus on interactions with these species.

Other seal species occasionally visit WA waters or haul out along the WA coast and management of these non-resident species typically involves ensuring the public is aware of their presence and respects the minimum approach distances prescribed in the BC Regulations, as well as responding to any need for intervention based on evidence of poor health or injury.

The management program outlines the following objectives for management of human interactions with seals in WA:

1. improve the understanding of seal populations to inform management;
2. promote public awareness, appreciation, and support for conservation of seals;
3. manage pressures on seal populations through holistic management actions; and
4. facilitate opportunities for safe and meaningful interactions with seals under a management framework.

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Acronyms

BC Act	*Biodiversity Conservation Act 2016*
BC Regulations	Biodiversity Conservation Regulations 2018
CALM Act	*Conservation and Land Management Act 1984*
CALM Regulations	Conservation and Land Management Regulations 2002
DBCA	Department of Biodiversity, Conservation and Attractions
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
VRM	Visitor risk management
WA	Western Australia

Definitions

Seal	is a collective term taken to mean Australian sea lion, long-nosed fur seal, sub-Antarctic fur seal, leopard and southern elephant seals and/or any other pinniped species that may occur within WA, or occasionally visit the WA coast
DBCA	means the Department of Biodiversity, Conservation and Attractions

1 Introduction

1.1 Management context

The purpose of this *Management program for seal interactions in Western Australia 2022* (herein 'the management program') is to provide a cohesive guide to the management of human interactions with seals in WA. The program will guide decision making by DBCA on management of interactions with these animals. The management program identifies management objectives, desired outcomes and management actions for State waters.

In the past, hunting of seals had a significant impact and some populations have not recovered from this exploitation. Today there are a range of anthropogenic pressures on seals, including ocean pollution and habitat degradation, impacts from aquaculture and commercial fisheries. This management program focusses on one pressure – the potential for disturbance by humans.

The primary focus of the program is human interactions with Australian sea lions and long-nosed fur seals, which have resident populations in WA. The program includes actions that have a primary focus on Australian sea lions and long-nosed fur seals where they are proximate to population centres and subject to frequent and high levels of interactions with humans. The program also provides guidance for management of non-resident seals that may occasionally visit WA.

The management program has been informed by a public consultation process and stakeholder consultation with the tourism industry and marine scientists. It was finalised with advice from the Conservation and Parks Commission.

The implementation and review of this program will be undertaken in consultation with the relevant Regional Aboriginal Corporations or with Cooperative Management Committees, that provide strategic advice on the management of conservation estate in the South West of WA under the South West Native Title Settlement.

1.2 Legislative and policy framework

Under the *Biodiversity Conservation Act 2016* (BC Act), all pinnipeds are protected in Western Australia, including Australian sea lions (*Neophoca cinerea*) (endangered species), sub-Antarctic fur seals (*Arctocephalus tropicalis*) (vulnerable species) and long-nosed fur seals (*Arctocephalus forsteri*) (species in need of special protection). Australian sea lions and sub-Antarctic fur seals are also listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act, Commonwealth) given the current population levels, evidence of declines across their range and concerns for population viability.

The Biodiversity Conservation Regulations 2018 (BC Regulations) establish minimum separation distances that must be maintained between a seal and a person in the water or on land, a vessel, aircraft, helicopter and an aerial device. If a seal approaches within the minimum separation distance, a person, vessel, aircraft, helicopter or aerial device must move away as soon as reasonably possible to maintain the required separation distance.

The *Conservation and Land Management Act 1984* (CALM Act) and Conservation and Land Management Regulations 2002 (CALM Regulations) have provisions that may be used to benefit management of seals in marine parks and reserves, particularly where resident seal populations have

regular haul out sites within a marine park or reserve. Management plans prepared under the CALM Act are statutory documents for DBCA and contain management objectives and conservation actions that are relevant to seals.

There are resident populations of Australian sea lions and long-nosed fur seals at Rottnest Island, where the *Rottnest Island Authority Act 1987* and Rottnest Island Regulations 1988 provide a framework for management.

For Australian sea lions, the *Recovery Plan for the Australian Sea Lion (Neophoca cinerea) 2013* (Australian sea lion recovery plan) also provides a framework for conservation. This management program contributes to the overarching objective of the Australian sea lion recovery plan, to halt the decline and assist recovery of the species, by providing management guidance on one identified threat – the potential for human disturbance to colonies. Other management documents apply to other specific threats, such as the Australian Fisheries Management Authority *Australian Sea Lion Management Strategy 2015*.

1.3 Management objectives

Management of human interactions with seals in WA will be conducted in accordance with the following key management objectives:

1. improve the understanding of seal populations to inform management;
2. promote public awareness, appreciation, and support for conservation of seals;
3. manage pressures on seal populations through holistic management actions; and
4. facilitate opportunities for safe and meaningful interactions with seals under a management framework.

These objectives are focussed on improving management of existing human interactions with seals in a way that is consistent with other management documents, including research and management under the Australian sea lion recovery plan, as well as habitat conservation under marine park management plans.

An adaptive management approach will allow findings from research and monitoring, as well as learnings from managers and commercial tour operators, to be incorporated into decision making on an ongoing basis.

2 Background

2.1 Seal populations in WA

Seals (including true seals, fur seals and sea lions) are a widely distributed and diverse group of marine mammals predominantly found in continental shelf environments of the higher latitudes but also in temperate and equatorial regions.

There are two species with resident populations that have resting haul outs and breeding habitat in WA: the Australian sea lion (*Neophoca cinerea*) and the long-nosed fur seal (*Arctocephalus forsteri*). The focus of this management program is on the resident populations of the Australian sea lion and long-nosed fur seal, and more detail is included below on their ecology and status in WA.

A number of non-resident pinniped species are also found occasionally in WA, including sub-Antarctic fur seal (*Arctocephalus tropicalis*), leopard seal (*Hydrurga leptonyx*), southern elephant seal (*Mirounga leonina*) and crabeater seal (*Lobodon carcinophaga*). These species do not typically reside or breed in WA but they are considered seasonal or occasional visitors and are sighted for short periods of time, mainly hauled out resting on beaches. Management of these non-resident species and human interactions with them typically involves ensuring the public is aware of their presence and respects the minimum approach distances prescribed in the BC Regulations, as well as responding to any need for intervention based on evidence of poor health or injury.

Australian sea lions

The Australian sea lion is the only species of seal that is endemic to Australia. It has a contemporary distribution from Western Australia through South Australia. It was commercially exploited to near extinction in the early 19th century. Around 1,500 adults, or approximately 18% of the species' population, reside in Western Australia. The majority of the remaining Australian population is in South Australia. The species has not managed to recover to pre-exploitation levels due to its slow reproductive rate and ongoing direct and indirect anthropogenic pressures. Indeed, the species has been declining at several sites across its range, leading to its 'endangered' conservation status.

The breeding biology is unusual for a pinniped, with females breeding every 17.5-18 months and exhibiting very strong natal site fidelity (i.e. returning to the same site to breed). This means that each breeding island is its own genetic unit and must be managed as such. Further, breeding is asynchronous, meaning that the timing of breeding differs, often even between island colonies in close proximity to one another. All breeding sites in WA are on islands on the west coast (around Jurien Bay and the Houtman Abrolhos Archipelago) or the south coast between Albany and the border with South Australia.

Males migrate much longer distances to foraging areas and haul out sites when not breeding. In addition to haul out sites in the vicinity of the breeding islands, there are male haul out sites in the Perth metropolitan region including Carnac Island, Dyer Island (Rottnest), Penguin Island, Seal Island, Little Island and Burns Rocks.

Given their conservation status, this species is considered the most vulnerable to human disturbance of the seals that occur in WA. Additional management measures are proposed under this management program that are specific to this species where it is proximate to population centres and subject to frequent interactions with humans.

Long-nosed fur seals

The long-nosed fur seal (also commonly known as the New Zealand fur seal) is native to Australia but also occurs at several other islands in the Southern Ocean, most notably the South Island of New Zealand. In Australia this species is known to occur and breed on rocky islands and coastal areas in South Australia, Tasmania and Western Australia, with small populations emerging in Victoria and southern New South Wales. This species was also targeted by commercial harvest in the 18th and 19th centuries in Australia, however it has exhibited significant population recovery.

Unlike the Australian sea lion, the long-nosed fur seal breeds annually, typically in the summer months. Breeding in WA occurs mainly on islands along the south and south west coast, but includes some mainland beaches such as in Ngari Capes Marine Park. Haul out sites for males and juveniles have been recorded from the Perth metropolitan area to Jurien Bay.

The following maps have been produced based on DBCA survey and observational data, to provide a guide on Australian sea lion and long-nosed fur seal distribution in Western Australia. There may be additional sites not captured in these maps. Many of these sites do not allow access for people, in order to protect critical habitat.

Map 1 to 15 outline the known breeding and haul out sites along the WA coast for Australian sea lions and long-nosed fur seals.

2.2 Threats

There are a range of anthropogenic and natural pressures that seals face throughout their range. While incidental bycatch associated with certain commercial fishing gear has long been considered the most significant threat to seals, other important threats include entanglement in marine debris, marine pollution, vessel strike, human disturbance, noise pollution, habitat modification, prey depletion and climate change. Disease outbreaks are an additional pressure on populations and the impacts of these can be exacerbated when animals are experiencing stress from other threats. Consideration must be given not only to local pressures, but to the cumulative pressures that may be experienced across a population's range. Key pressures are summarised in Table 1 along with their associated consequences.

Table 1 Key pressures to seals in WA

Pressure	Consequences
Fishery bycatch	Seals can be at high risk of injury and mortality around recreational and commercial fishing operations. Seals that become entangled with fishing gear may become injured or drown or be unlawfully terminated as nuisance animals where they interfere with aquaculture operations.
Marine debris	Entanglement in marine debris is a major issue for seals and includes bait bands, net fragments and fishing line. Marine debris can be ingested, or cause entanglement, resulting in injury, starvation, impaired movement or drowning.
Marine pollution	Pollution includes oil, sewage and other anthropogenic contaminants. Chemical pollution can cause impaired health, reproduction and immune function, or death.
Vessel Strike	Vessels may cause serious injuries (e.g. cuts, loss of blood, trauma, fractures) or death if they strike seals. Females with pups are most at risk as they spend more time in shallow waters and near the surface when foraging near breeding islands.
Human disturbance	Disturbance can occur from vessels or people on land whilst seals are resting. Disturbance may also occur in the water near breeding and haul out sites, but typically this is considered to be to a lesser extent given the swimming agility of seals. Disturbance to seals can interrupt critical behaviour such as nursing, resting, mating, and natural foraging potentially leading to increased energy expenditure, stress, reduced condition and altered or habituated behaviours.
Noise pollution	Noise, including from vessels, development or construction, drones and recreational activities, may cause displacement from critical habitat, disrupt behaviour temporarily or permanently, mask natural sounds, impact hearing, cause stress or physical harm.

Habitat degradation	Habitat degradation may occur as a result of human activities that change important characteristics of breeding, resting or foraging habitat. This can lead to changes to behaviours and displacement from areas of preferred habitat, which can result in reduced condition and decreased reproductive success if there is an energy cost to movement and an alternative habitat is sub-optimal.
Prey depletion	Removal of preferred prey items by commercial or recreational fishers can lead to depleted food resources or trophic cascade effects, both of which can influence seal population health.
Climate change	The consequences of climate change on seals are not well understood however they may include changes to prey distribution and abundance, as well as loss of breeding habitat and potentially higher pup mortality.
Disease	In addition to the natural array of diseases and parasites known to occur in seal populations, anthropogenic diseases can also become a pressure. Disease can result in reduced pup survival, mass mortality events or reduced survivorship of other cohorts.
Cumulative pressures	The long-term, cumulative impacts on seals from the above pressures, in the form of stress or changed behaviours (e.g. less time spent resting, feeding or providing maternal care), are not well understood.

2.3 Human interactions

Humans interact with seals in many ways, either intentionally through targeted activities like vessel-based or land-based viewing, or unintentionally, from activities or vessels in the vicinity of seals and their haul outs. Over recent years, viewing of marine fauna, including seals, is gaining in popularity as a tourism activity worldwide. The activity can not only provide significant employment and economic benefits, but also has the potential to promote conservation and provide important information about a species and their environments, when managed in a way that minimises impacts on the animals.

Research has identified that land-based and vessel-based tourism, as well as recreational viewing, may cause disturbance to seals. There is a lack of research on the long-term impact of habituated human contact on seal health and population growth. Interactions with seals (including in-water, on land and from a vessel) may create direct impacts such as boat strike, which can cause mortality or injury, or indirect impacts through physical disturbance that affects wildlife behaviour. Some literature has found that increased human disturbance has the potential to affect foraging, breeding, nursing and resting behaviour and can lead to displacement from optimal habitat, all of which can impact an animal's condition or health, with potentially broader implications for population levels, particularly at breeding sites.

Conservation measures need to consider locations where animals may be more vulnerable to disturbance, such as in the vicinity of breeding habitat, as well as temporal considerations, such as management actions required during breeding seasons. Where animals occur at the limits of their population range, there may be fewer individuals present and changes or disturbance may have a greater impact.

Vessel-based viewing at seal haul out sites

High levels of vessel-based viewing, by both the public and commercial tourism operators, occurs at seal haul out and breeding sites within close proximity of human population centres. This is notably the case for Australian sea lion sites in Shoalwater Islands and Marmion marine parks, at Carnac Island (haul out only) and in Jurien Bay Marine Park (haul out and breeding) areas. To a lesser extent, vessel-based viewing also occurs at the long-nosed fur seal haul out at Rottnest Island and breeding areas in Ngari Capes Marine Park.

The BC Regulations establish a 100 metre separation distance between a seal and a vessel. All commercial and recreational vessels that encounter seals must comply with the rules for interacting with seals in WA State waters and not approach seals closer than 100 metres, regardless of whether the seal is in the water or on land. Should a seal approach a vessel, the person in charge of the vessel must move to re-establish the separation distance at a speed of no more than six knots.

In-water seal interactions

In-water interactions offer people the opportunity to view seals in their own environment and can provide an outstanding experience of nature. These types of interactions are most common in the vicinity of haul out sites where seals typically spend time in shallow water. Under the BC Regulations, any interaction with seals in WA State waters must maintain a separation distance of 50 metres between a seal and a person in the water. If a seal approaches a person within the prescribed separation distance, the person must move away as soon as reasonably possible to maintain the legislated separation distance.

There has been growing interest for commercial in-water interaction tours, particularly with Australian sea lions given their haul out locations in Shoalwater Islands and Jurien Bay marine parks. Providing sustainable tourism opportunities in WA's parks and reserves is a key focus for the State Government and presents a valuable opportunity to further promote WA's parks and reserves as a destination for marine fauna interactions under best-practice management. The section below on the trial of in-water interaction tours addresses this.

Land access at haul out and breeding sites

Where members of the public have access to islands or coastal sites where seals may be present, there is a prescribed separation distance of 10 metres in the BC Regulations between a seal and a person on land. Seals expend a high level of energy foraging for food and during reproduction, resulting in the species operating at their energetic limit. Interacting with or disturbing seals when they are hauled out on land may affect resting, breeding and nursing behaviours, resulting in aggressive actions towards humans. For people's and seals' safety, it is recommended that people do not approach seals on land and that they stay at least 30 metres away.

3 Management

Seals are protected under the BC Act and BC Regulations. The BC Act prohibits the disturbance of fauna (s153(1)) and the feeding of fauna (s155) unless the person has lawful authority while the BC Regulations outline a set of rules for interactions with seals by all people, vessels, aircraft, helicopters and aerial devices in WA State waters and lands. These rules are designed to protect seals from impacts from human activities and to reduce safety risks to the public.

Table 2 outlines the minimum separation distances that must be maintained between a seal and each of the interaction types. Separation distances extend to a vertical distance above and below the surface of water.

Table 2 Prescribed separation distances for seal interactions in WA

Interaction	Separation distance	Rules for interactions
Person and a seal on land	10 metres	A person must not get closer to a seal on land than a distance of 10 metres. It is recommended that persons not approach seals on land.
Person (including on a floatation device) and a seal in the water	50 metres	If a seal approaches a person so that it is closer than the separation distance, the person must move away from the seal as soon as reasonably possible until the separation distance is established.
Vessel and a seal in the water or on land	100 metres	If a seal approaches a vessel so that it is closer than the separation distance, the person in charge of the vessel must ensure that the separation distance is established by - a) switching off the vessel, or putting the vessel into neutral, or otherwise disengaging any other means of propulsion, until the separation distance is established; or (b) moving the vessel away from the seal at a speed not exceeding 6 knots until the distance between the vessel and the seal is at least the separation distance.
Aircraft (other than helicopter)	300 metres	A person in charge of an aircraft or aerial device must move the aircraft or aerial device away from the seal until the separation distance is established.
Helicopter	500 metres	
Aerial device (drones)	60 metres	

3.1 Management actions

Desired outcomes and management actions that guide how DBCA will manage interactions with seals in WA's marine reserves, and other areas where appropriate, are listed in the table below.

Table 3 Management outcomes and actions

Desired outcome 1: Ensure this management program is underpinned by the principles of ecologically sustainable development
Management actions: 1.1 Ensure decision making for seals considers the principles of ecologically sustainable development consistent with the BC Act.
Desired outcome 2: Ensure the conservation status and health and welfare of seals are given priority consideration in decision making.
Management actions: 2.1 Collaborate with local governments, other State Government departments and the Commonwealth Government regarding the conservation status of, and recovery actions for, seal populations. 2.2 Actively communicate and consult with key partners and stakeholders. 2.3 Regularly review and adapt management strategies in response to findings from research, monitoring and consultation with commercial operators and the community, to respond to changing conditions and ensure management effectiveness. 2.4 Implement temporal and spatial closures at key sites to reduce human disturbances to seals if and as required, in consultation with local communities and affected stakeholders. These closures may include permanent or temporary closures of island reserves and/or areas of surrounding marine park waters at particular times, such as during breeding. 2.5 Consider amendments to the regulated separation distances for seals as required. 2.6 Establish public information, including on-site signage and markers where feasible, to help manage separation distances and educate visitors about appropriate behaviours at significant haul out and breeding sites on lands and waters managed by DBCA, including maintaining minimum separation distances and not enticing or feeding seals.
Desired outcome 3: Improve understanding of seal populations and the pressures on the species through research and monitoring.
Management actions: 3.1 Facilitate and implement key research and monitoring priorities identified in this program to inform adaptive management based on knowledge gaps. 3.2 Support research and monitoring on seal population abundance and distribution in WA waters, including identification of new breeding and haul out sites. 3.3 Support research and monitoring that informs understanding of the potential impacts of in-water interaction tours on sea lions. 3.4 Support research that improves understanding of pressures and threats to seals. 3.5 Develop partnerships and collaborations to address research and monitoring priorities. 3.6 Support research and monitoring initiatives that use data from commercial tourism interactions (vessel, land and in-water) to inform decision making.

Desired outcome 4: Promote conservation of seals through community education.
Management actions: 4.1 Educate the public, particularly boat users, about separation distances for seals and actions to manage pressures on seals at haul out and breeding sites using a range of media and methods, including separation distances and reasons not to disturb, feed or entice seals. 4.2 Encourage the community to report injured or deceased seals, unusual seal sightings or marine pollution and entanglement incidents. 4.3 Communicate educational messages and research findings to key partners including tourism operators, stakeholders and the community.
Desired outcome 5: Assess the suitability of in-water interaction tours with Australian sea lions in Shoalwater Islands and Jurien Bay marine parks through a trial that supports conservation outcomes.
Management actions: 5.1 Implement a trial of in-water interaction tours with Australian sea lions based on licence conditions that take into consideration animal and human welfare, Australian sea lion conservation and sustainable tourism outcomes and builds on lessons learned from licensing of these interactions in South Australia. 5.2 Develop licence conditions in consultation with traditional owners and key stakeholders including science representatives and the tourism industry. 5.3 Restrict the number of licences available for in-water interactions with Australian sea lions in order to understand and minimise impacts to the sea lion populations, avoid an increase to in-water interactions outside the trial areas, and to manage risks to swimmers, to ensure the activity is sustainable. 5.4 Review licence conditions and licensing arrangements annually and as required to ensure they are relevant, effective and informed by research, monitoring, stakeholder feedback and best practices. 5.6 Use the trial to determine if in-water interaction tours with Australian sea lions should become an ongoing licensed industry to be conducted in accordance with legislation, this management program and DBCA policy.
Desired outcome 6: Foster best-practice management through partnerships with commercial tourism operators for the trial of in-water interactions with Australian sea lions.
Management actions: 6.1 Explore and implement ways of communicating effectively with tourism operators and industry staff. 6.2 Communicate research and monitoring findings to the tourism industry. 6.3 Work with tourism operators to help them deliver high quality experiences for participants of in-water interaction tours, with a focus on safety and education about Australian sea lions and their conservation. 6.4 Develop a program to create an informed, supported and educated Australian sea lion tourism industry through training and education of operators and industry staff.
Desired outcome 7: Implement an effective enforcement and compliance program.
Management actions: 7.1 Educate the community on the conservation status of seals to inform them of the importance of separation distances and management actions for seals. 7.2 Work to encourage and ensure compliance with legislation and licence conditions from in-water interaction trial participants. 7.3 Implement and regularly review compliance management to identify and address compliance and enforcement priorities.

Desired outcome 8: Manage risks to visitors involved in in-water interactions tours under the trial.
Management actions: 8.1 Apply DBCA's visitor risk management policy and guidelines to in-water interaction tours with Australian sea lions and adapt management of this activity accordingly to ensure that visitor risk is managed effectively by commercial operators in accordance with licence conditions. 8.2 Review visitor risk management licence conditions annually and in light of any incidents. Licence conditions may be reviewed and amended following any serious incident or as required. 8.3 Provide visitor risk management information and resources to commercial operators and industry staff and provide training in visitor risk management under the trial.
Desired outcome 9: Manage interactions with seals that haul out along the WA coast to protect the animals and manage risks to the public.
Management actions: 9.1. Communicate educational messages on seal behaviours that explain the importance of separation distances and management actions for hauled out seals. 9.2 Utilise public relations and media opportunities to contribute to community education and understanding. 9.3 Undertake risk assessment and apply procedures to inform decision making and appropriate management response for haul out incidents. 9.4 Support research, data collection and monitoring opportunities for hauled out seals. 9.5 Provide staff with training and development opportunities on management and response actions for seals.

3.2 Trial of in-water interaction tours with Australian sea lions

This section outlines the trial of commercial in-water interaction tours with Australian sea lions in WA. The trial will involve a higher level of management of human interactions in two key locations, and will enable visitors to experience, appreciate and advocate for these animals in a managed way.

The aims of the trial will be to:

- increase the management of interactions with Australian sea lion populations through licensing of a restricted number of commercial tourism operations;
- assess the suitability and safety of in-water interaction tours with Australian sea lions to minimise and manage impacts on the animals as well as manage risks to swimmers; and
- establish a research and monitoring program to inform decision making and determine any impacts of commercial tourism operations on Australian sea lions.

Background to a trial

There are currently no licensed commercial in-water interaction tours with seals in WA. The separation distances in the BC Regulations apply to any interactions with seals.

In-water interactions, predominantly with Australian sea lions, are advertised by operators in Jurien Bay. In the past, operators have been licensed under the former *Wildlife Conservation Act 1950* for in-water interactions with Australian sea lions.

Periodically DBCA has received interest from commercial operators to conduct licenced tours with seals (typically Australian sea lions) at closer distances to what is regulated. Operators see in-water interaction tours with Australian sea lions as a significant tourism opportunity. The State's tourism

industry has been significantly affected by the COVID-19 pandemic, particularly the tour operator sector, which is more highly dependent on interstate and overseas visitation.

In response to renewed operator interest, DBCA reviewed the proposal for licensed in-water interaction tours with Australian sea lions. It was determined that a trial of in-water interaction tours with Australian sea lions could be undertaken to inform decision-making, as a component of a broader management program to better manage human interactions with seals (this document). The review considered national and international literature and findings from impacts of human disturbance on seals, including South Australia, where in-water interaction tours with Australian sea lions are licensed and this has led to improved management outcomes.

The proposed trial was outlined in the draft of this management program. Following consideration of public submissions on the trial, DBCA believes that a trial remains the best strategy to increase management of human interactions with this species at highly visited sites.

Visitor risk management

In-water interactions with seals has inherent risk of attacks from the animals themselves, transmission of zoonotic diseases including tuberculosis, as well as attacks from sharks. The provision of in-water interaction tours has the propensity for the animals to become accustomed to human interactions, leading to more frequent interactions in high visitation areas and the risk of increasingly social or aggressive behaviour that may put swimmers at higher risk. There have been known seal attacks in WA resulting in serious injury to people.

A visitor risk management (VRM) assessment of in-water interactions with seals has been undertaken by DBCA using the DBCA's VRM risk assessment process. This assessment included review of research papers as well as discussions with experienced marine and operational staff. The assessment identified that without any mitigation or management measures, the activity is 'Very High Risk' to visitors. However, with the introduction of suitable mitigation and management measures, primarily through licence conditions, the risk level can be reduced to 'High Risk'. It is noted that 'High Risk' is the same risk rating for in-water interactions with humpback whales. As with any activity involving interactions between people and wild animals, there will always be elements of risk that cannot be completely mitigated or avoided. These risks will need to be understood and managed for in-water interactions with seals under the trial. Due to the high risk nature of the activity, DBCA will require tour operators to indemnify and release the State from liability and hold adequate public liability insurance.

Visitor risk management considerations will inform the licence conditions under the trial. The licence conditions will be designed based on experience from other licensed in-water interactions with whale sharks and humpback whales, as well as Australian sea lions in South Australia, but tailored for the areas involved in the trial. The licences will include conditions aimed at managing the safety of swimmers in-water, including training for operators and their crew, briefings for swimmers before they enter the water, safety management procedures, incident response and relevant public liability insurance.

Licensing framework

Licensing is a management tool that enables DBCA to authorise appropriate access and activities for certain operations and to monitor operations to ensure natural and cultural values are conserved. DBCA may grant licences to authorise activities where they are consistent with the requirements of the legislation. Where an activity is being conducted in a conservation reserve, such as a marine park or reserve, licences must be consistent with the purpose of the reserve and the management plan for

the area. Licensing is the key instrument that will be used by DBCA to conduct the trial of commercial in-water interaction tours with Australian sea lions.

Commercial tourism operators, commercial photographers and scientific researchers are required to obtain a licence and/or lawful authority to conduct certain activities and abide by specific licence conditions. They may also be required to pay fees and charges towards conservation and management, which reflects a user-pays approach.

Many commercial tourism activities are managed by DBCA under unrestricted commercial operations licences that are not limited in number. However, where there is a need to limit the number of licences for an activity in order to conserve particular species, environmental or cultural values, or for management or public safety reasons, DBCA may restrict the number of licences granted for an activity in accordance with the CALM Act or BC Act. Restricted commercial operations licences have a higher level of requirements and contain key performance indicators to allow DBCA to ensure appropriate performance by the licence-holder. These restricted commercial operations licences have a higher licence charge to reflect the higher management costs and the restricted market opportunity. An example of where restricted licences have been used is for licensed in-water interactions with whale sharks and humpback whales on the Ningaloo Coast.

It is proposed to grant operators involved in the trial a restricted E class licence under the CALM Act and CALM Regulations. The licence conditions will allow these operators to approach closer than the regulated separation distances, under a management framework.

Should there be no unacceptable impacts on seal populations or unacceptable safety risks to swimmers, consideration will be given to transitioning from a trial to a licensed industry with a limited number of restricted commercial operations licences. Ongoing monitoring and management will continue to measure and minimise the impact of this activity on populations and manage risks to tour participants.

The trial will be informed by lessons learned from licensing of in-water interaction tours in South Australia. A consistent approach will be applied given Australian sea lions occur exclusively in Western and South Australia. As Australian sea lions are listed as endangered under the EPBC Act, ongoing consultation will also occur with the Commonwealth Department of Climate Change, Energy, the Environment and Water, informed by recovery planning for the species.

Trial parameters

Geographic scope of the trial

The trial will be undertaken in Shoalwater Islands and Jurien Bay marine parks because these parks contain Australian sea lion haul out sites in close proximity to the Perth metropolitan area where there is a high level of interaction by the public and/or commercial operators. Given concerns for the conservation status of this population, DBCA considers it appropriate to establish a greater level of management of these human interactions. In addition, the location of the trial in marine parks will allow DBCA to apply the CALM Act to more effectively monitor compliance.

The trial will be restricted to specific Australian sea lion haul out sites within Shoalwater Islands and Jurien Bay marine parks and will not include sites used during breeding and pupping seasons, to minimise impacts on this endangered species. In Shoalwater Islands Marine Park, the only site available for in-water tours will be Seal Island. In Jurien Bay Marine Park, sites may include South Cervantes Island, Essex Rocks and Sandland Island. The sites available for licensed in-water interaction

tours will be refined in consultation with tour operators involved in the trial to ensure they are suitable for interactions and commercially viable.

Carnac Island Nature Reserve will not be included in the trial even though it is a major haul out site for male Australian sea lions in the Perth metropolitan area. The island is an important haul out for seals to rest between foraging trips and periodic migration north to islands off the central-west coast during breeding periods. Carnac Island currently has a limited land access area for day visitation at the southern portion of the eastern beach. DBCA is assessing the impact of human interactions on seals at Carnac Island and Little Island in the metropolitan area and may implement further land-based management actions. These may include temporal and spatial restrictions to access to minimise disturbance and effects on Australian sea lion behaviour.

The trial is not proposed at haul out sites at Abrolhos Islands because these are breeding sites. They are also at the northern extent of the range for Australian sea lions, where the animals may be more susceptible to impacts from climate change and other disturbances.

Elsewhere on the west and south coast, there is a mix of haul out and breeding sites for Australian sea lions and long-nosed fur seals. These sites are not considered suitable for in-water interaction tours and/or requiring of a higher level of management through licensing of commercial tour operations.

Species eligible for in-water interactions under the trial

For the purposes of the trial, commercial tour interactions will be limited to Australian sea lions at specific haul out sites only, to manage current visitation and interactions already occurring at these highly accessible sites with this endangered species. Care will be given to ensure impacts on the animals are minimised and managed, particularly those that may affect population sustainability. The trial will establish a framework through licensing of commercial operations to manage interactions at these key sites, complementary to management of recreational vessels and other actions identified under this management program.

It is not proposed to trial in-water interactions with long-nosed fur seal at this time. The haul out sites for long-nosed fur seal are generally less accessible to the public and therefore less human interactions are reported at these sites. These sites also have higher visitor risk given their locations and are considered unsuitable for in-water interaction tours.

Operators involved in the trial

The trial will be offered to a limited number of existing operators. DBCA will undertake consultation with operators to be involved in the trial in designing the trial and establishing licence conditions that are effective, practical and able to be implemented.

In Shoalwater Islands Marine Park, there is one restricted E class licence to conduct motorised vessel tours around Seal Island. This operator has experience with operating in-water interaction tours under licence. As there are no other commercial vessels allowed to operate in the vicinity of the haul out, it is appropriate to engage this existing licence-holder in the trial. Whilst there are commercial operators that are licensed to conduct kayak tours, it is not proposed to include these operators in the trial in order to limit the number of in-water tours, assess the impacts on the animals and visitor risk management and manage vessel and swimmer activity around Seal Island.

In Jurien Bay Marine Park, there are three operators that currently offer in-water interactions with Australian sea lions. It is proposed to offer for these existing operators only to be involved in the trial.

The trial will allow the establishment of baseline data on the current impacts of interactions on Australian sea lions, to determine if they are having unacceptable impacts on seal populations.

Licences will not be granted to additional or new operators under the trial, or until there is data available to indicate that commercial in-water interactions are suitable, and that an increase in the number of operators will not cause detrimental impacts on the Australian sea lion population.

Licence conditions

All licensed commercial operators in WA's marine parks are bound by licence conditions outlined in DBCA's Commercial Operator Handbook. Commercial operators are also required to comply with conditions stipulated in their licence that outline how the licensed activity must occur.

Licence conditions are an important management tool designed to protect the environment and mitigate visitor risk. Licence conditions may be added to, cancelled, suspended and varied at any time. They are assessed and reviewed regularly. This allows for licence conditions to be changed in response to new information under an adaptive management approach.

The licence conditions for in-water interaction with Australian sea lions will be developed and refined during the trial period based on research and monitoring and consultation with trial participants and scientists. This adaptive process will be used to determine whether in-water interactions with Australian sea lions transition from a trial to an ongoing-licensed industry, and whether the number of licences available for this activity will be restricted in order to manage impacts on Australian sea lions.

For the purposes of initiating the trial, licence conditions for in-water interactions with Australian sea lions will stipulate various management arrangements for each marine park, including the following.

1. Prescribed areas of operation in Shoalwater Islands and Jurien Bay marine parks, with no anchoring or in-water interactions at or near sites used for breeding or pupping, or sites closed to public access.
2. A minimum distance that approved operator vessels must maintain from Australian sea lions, potentially using approved moorings and/or markers to assist operators to meet this requirement.
3. A minimum distance that swimmers on interaction tours must maintain from Australian sea lions.
4. Swimmer groups must contain a trained in-water guide and be limited in size to manage the safety of swimmers and impacts on Australian sea lions. The number of swimmer groups permitted in the water at once may also be limited to manage cumulative pressure on Australian sea lions.
5. Interaction limits to minimise pressure on Australian sea lions at a particular site may include limits on the number of swimmers permitted per tour and/or per site, number of tours per day, intervals between tours and/or cumulative daily in-water interaction times. A limit may also be placed on the number of operators/vessels present at a particular site and the number of people in the water at any one time.
6. Interaction protocols to be displayed and specify rules for the vessel and for swimmers during in-water interaction activities, including a minimum separation between a person and an Australian sea lion during in-water interactions, with no physical touching if an Australian sea lion approaches closer and other measures to support animal and human safety and welfare.

7. No feeding, encouragement, enticement or scaring of Australian sea lions to encourage animals to enter the water when hauled out on islands.
8. No use of motorised underwater scooters by guides or participants on in-water interaction tours.
9. No interaction to be permitted for guides or participants while using an apparatus that provides an artificial air supply.
10. Interactions will not be permitted with 'prohibited sea lions', which will be defined to include pups, injured, sick, emaciated, deceased or incapacitated sea lions, those with evidence of entanglement; and sea lions demonstrating distressed, aggressive or disturbance behaviours.
11. Training for licensed operators and their crew on the conservation status of seals, particularly Australian sea lions, as well as animal behaviours and management of safety.
12. Participant safety briefing to be provided by the operator prior to commencement of in-water interactions regarding animal behaviours and safety risks.
13. Monitoring requirements on operators to record data crucial to DBCA's management and monitoring of seals and in-water interaction activities, potentially via an electronic monitoring system.

Licence charges

Licence charges contribute towards the costs of managing and administering licensed tourism activities, including conservation, research, monitoring, education and management activities. For other in-water interaction tours, licence charges are applied per passenger and are collected by the commercial operators. This reflects a 'user pays' approach.

Under the trial, a licence charge will apply for passengers on in-water tours with Australian sea lions. DBCA will review licence charges annually in line with State Government requirements to ensure they are appropriate and contribute towards cost recovery. Consultation will occur with operators regarding the licence charges.

Management of key habitat sites

DBCA may manage access to particular haul out and breeding sites to conserve and protect the natural values of these significant habitat sites and minimise disturbance to Australian sea lions undertaking critical behavioural activities.

Consideration will be given to establishing marine markers and/or moorings at particular marine park sites, to establish clear separation distances between vessels and seal haul outs, manage visitation levels and manage safety of swimmers.

Closures may also be implemented to limit access to island reserves and/or areas of surrounding marine park waters at particular times, such as during breeding. Such closures would not only reduce human disturbance to Australian sea lions, but would also reduce visitor risk, as animals may display territorial, protective or aggressive behaviours during breeding or pupping seasons. Australian sea lion females are considered particularly prone to these behaviours.

DBCA will consult with local communities and affected stakeholders in proposing, planning and implementing any such measures to manage access to certain sites.

Research and monitoring priorities for the trial

Research and monitoring will be developed and implemented for the trial to inform ongoing management of commercial interactions with Australian sea lions in WA with a clear focus on conservation and sustainability. Priorities for research and monitoring during the trial will include the following.

- Develop a baseline understanding of Australian sea lion abundance, distribution, residency patterns at haul out and breeding sites, behaviour and movement patterns between habitats and islands.
- Identify short and long term impacts from vessel and/or swimmer interaction on Australian sea lion behaviour and distribution, both by the general public as well as through commercial tours.
- Evaluate the effectiveness of management strategies for in-water tours including licence conditions implemented during the trial, such as number of vessels present, number of swimmers in the water, duration of interactions and location of interactions. This would include assessing potential changes attributable to public visitation and commercial tourism, including Australian sea lion behaviour, numbers and distribution over time and whether restricting in-water tours to the selected haul out sites is appropriate and sustainable.
- Assess the level of pressure on the Australian sea lion population represented by commercial tours participating in the trial. This may include assessing compliance with licence conditions as well as the level of non-commercial interactions occurring.

This information will be used to develop an ongoing monitoring program for the industry and for the Australian sea lion population and will also inform changes that may need to be made to the trial to support the objectives of sustainable development. An electronic monitoring system or other suitable system will likely be required as a licence condition to ensure that information can easily be recorded directly by licensed tour operators on their daily activities and will be important to inform decision making.

Public education during the trial

There will be a need to implement a program of public education during the trial to ensure that recreational boaters are informed of the conservation status of Australian sea lions, the separation distances, appropriate behaviours around all types of seals, and the reasons that licensed commercial operators are allowed to conduct in-water interactions with Australian sea lions. The public education program will focus on local media and social media, education resources distributed at boat ramps and through relevant community groups.

There will be a requirement for increased on-water presence by DBCA during the trial, to ensure that both licensed commercial operators and the public are adhering to the relevant requirements.

4 Implementation and review of this management program

DBCA is the custodian of this management program and is responsible for its implementation. However, other entities have responsibilities relating to its implementation and may provide support as required.

The Conservation and Parks Commission will review DBCA's management of seal-related activities in Shoalwater Island and Jurien Bay marine parks (State waters) in accordance with the *Shoalwater Islands Marine Park Management Plan 2007-2017* and *Jurien Bay Marine Park Management Plan 2005-2015.*

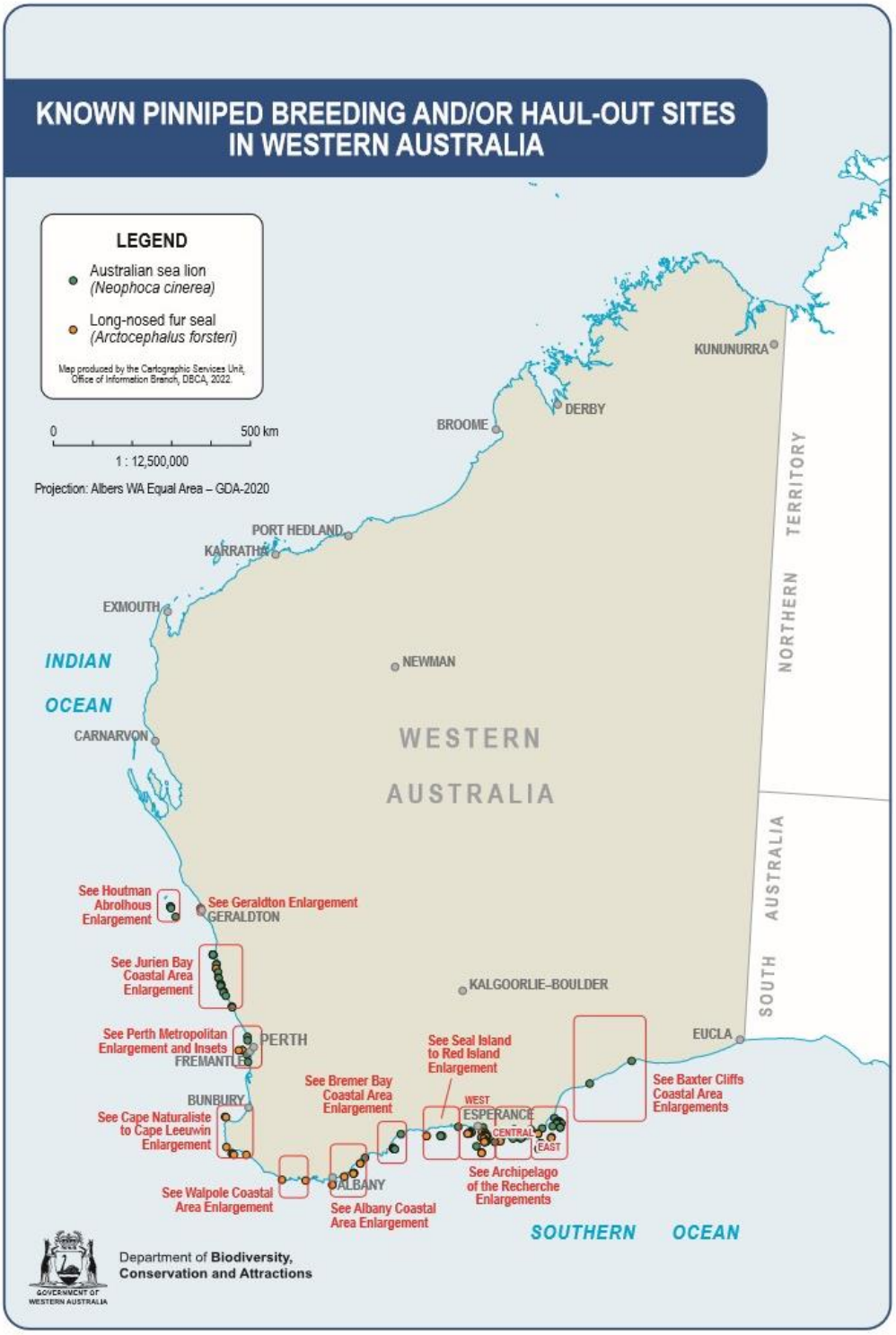
DBCA will engage with traditional owners through relevant joint management bodies and/or cooperative management committees as established.

The management program will guide management of human interactions with seals in WA for a period of five years. At the completion of the five-year period, the management program will be reviewed and updated as required. The management program will remain in force in its original form until it is either revised or revoked by DBCA or until a new management program is approved.

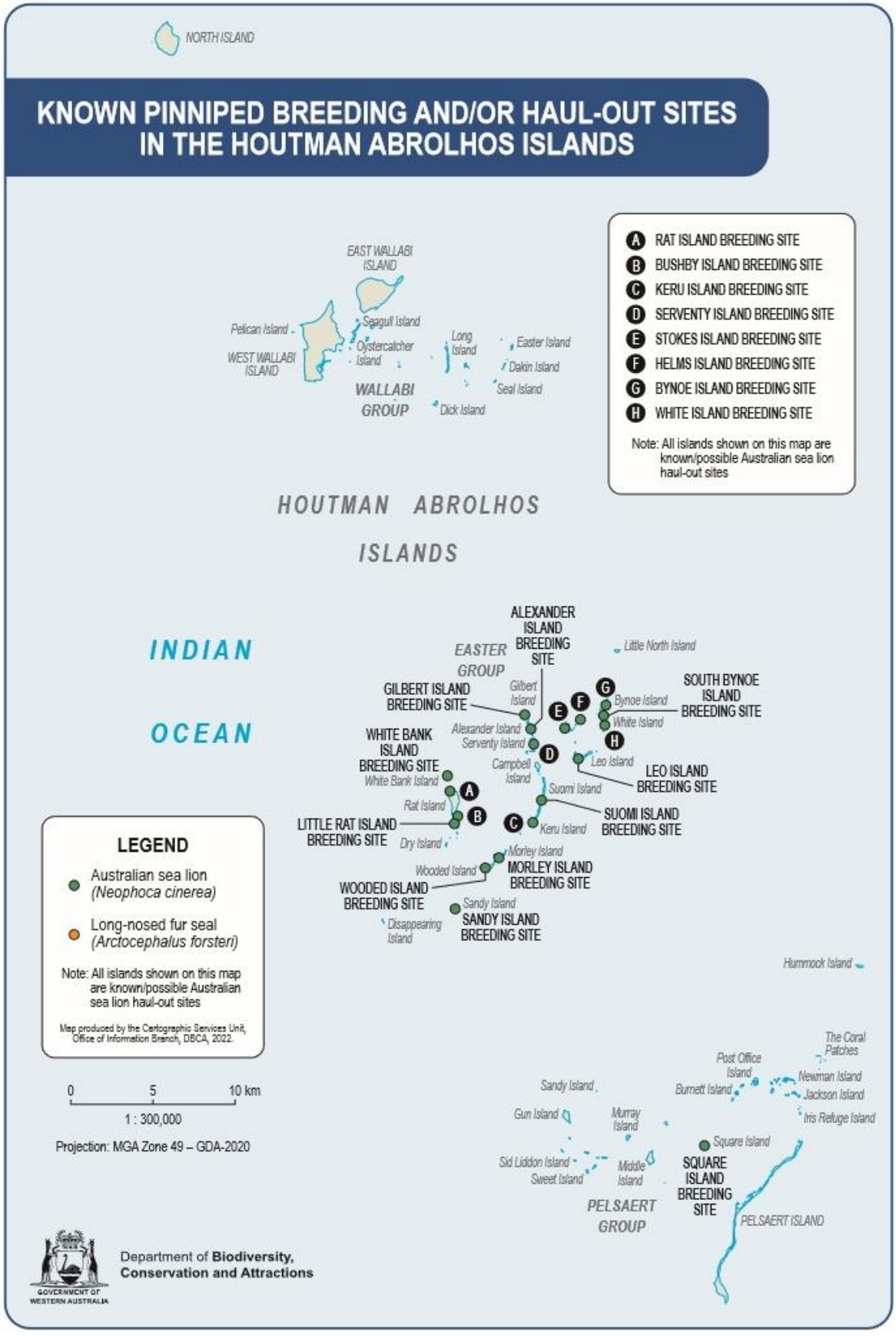
5 Maps

The following maps have been produced based on DBCA survey and observational data, to provide a guide on Australian sea lion and long-nosed fur seal distribution in Western Australia. There may be additional sites not captured in these maps. Many of these sites do not allow access for people, in order to protect critical habitat.

Map 1 - Known pinniped breeding and/or haul-out sites in Western Australia

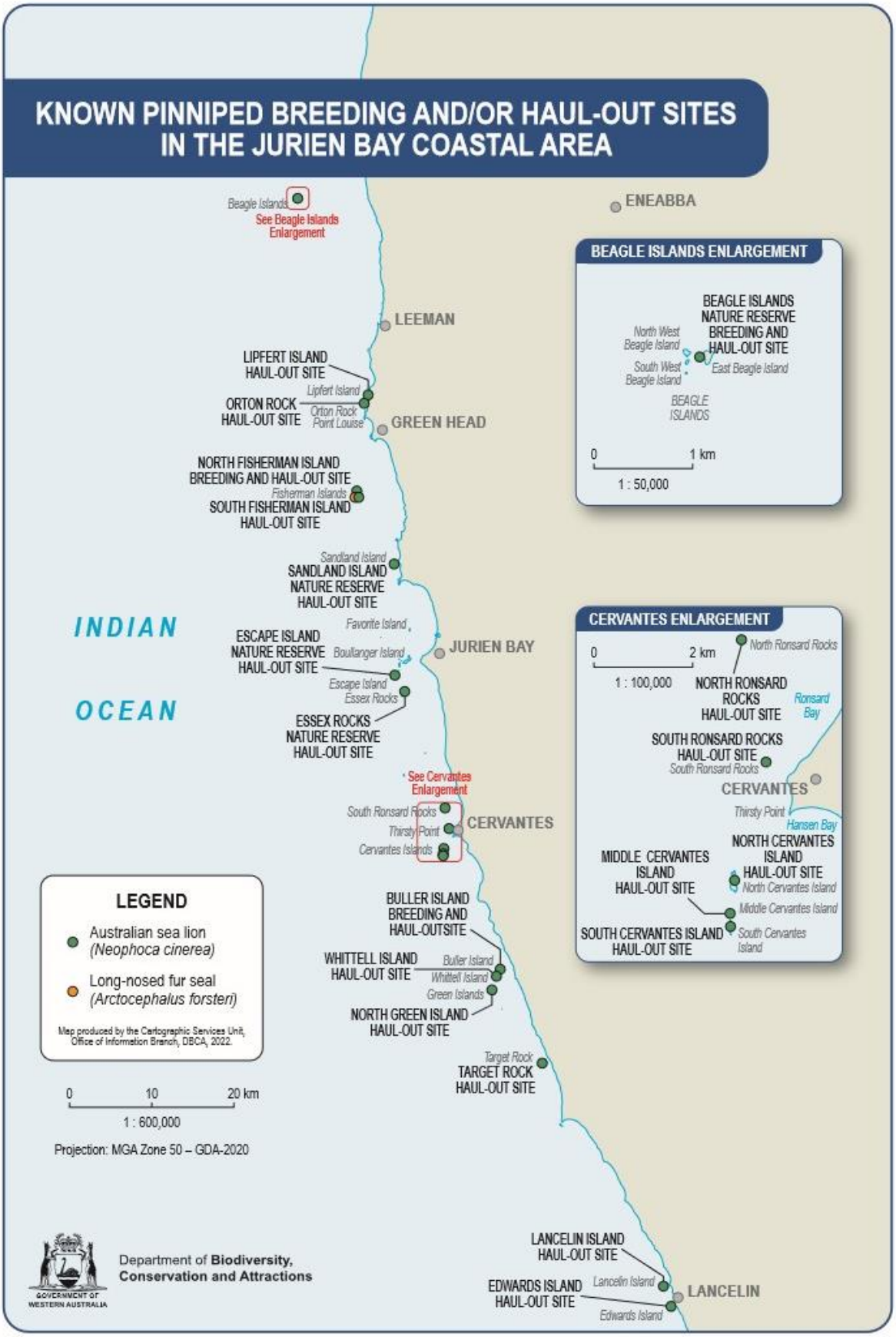


Map 2 - Known pinniped breeding and/or haul-out sites in the Houtman Abrolhos Islands

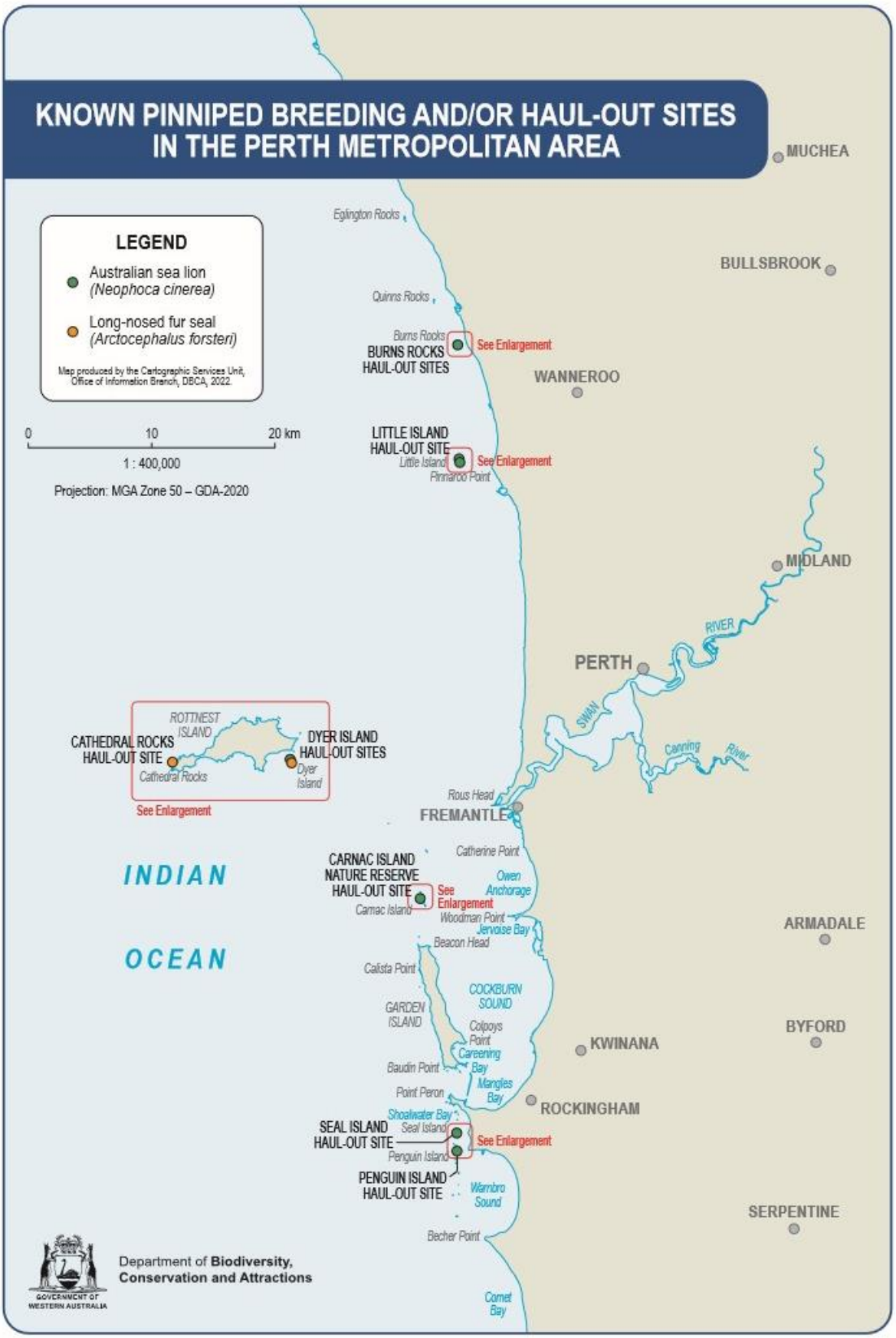


Map 3 - Known pinniped breeding and/or haul-out sites in the Geraldton area

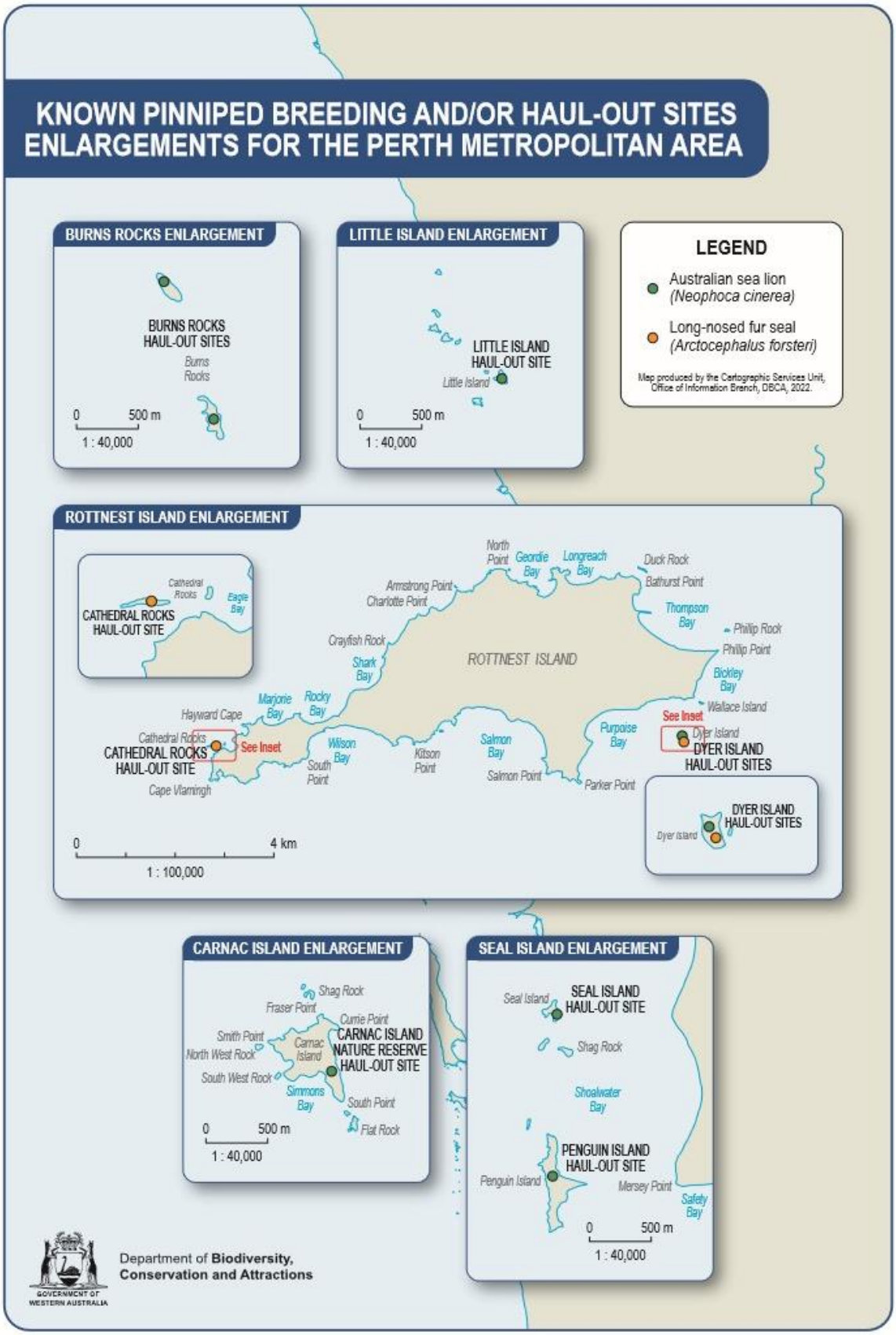
Map 4 - Known pinniped breeding and/or haul-out sites in the Jurien Bay coastal area



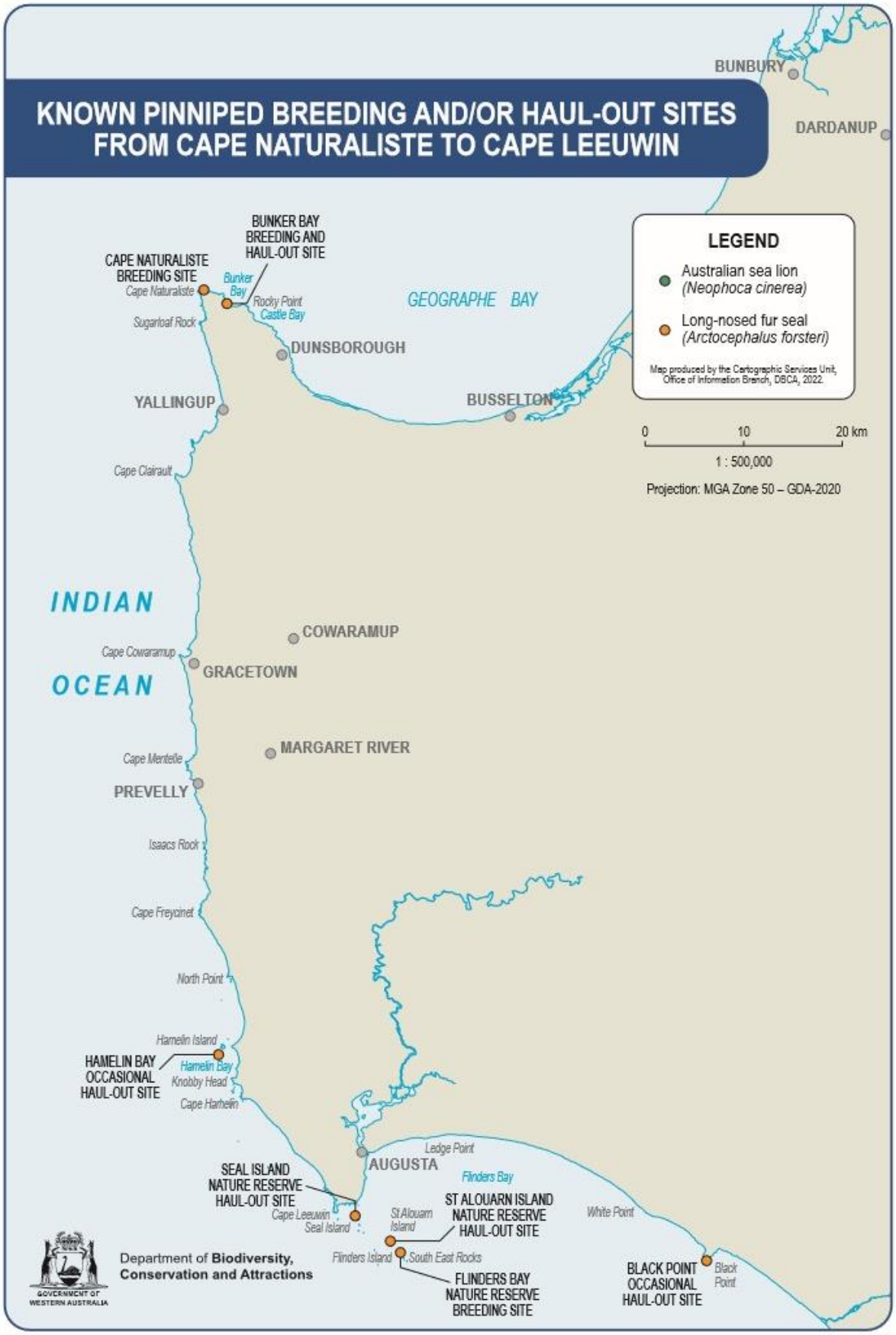
Map 5 - Known pinniped breeding and/or haul-out sites in the Perth metropolitan area



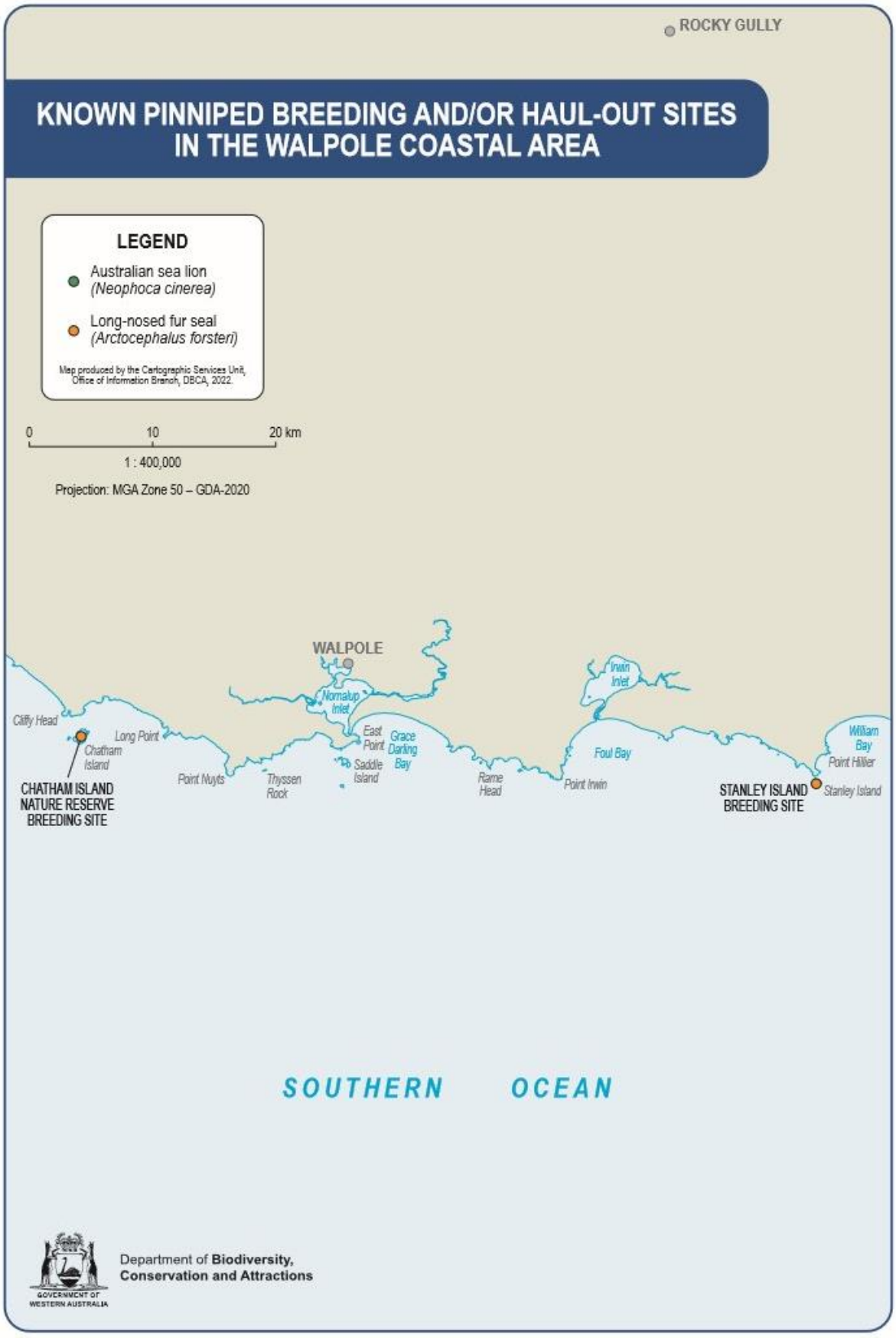
Map 6 - Known pinniped breeding and/or haul-out sites enlargements for the Perth metropolitan area



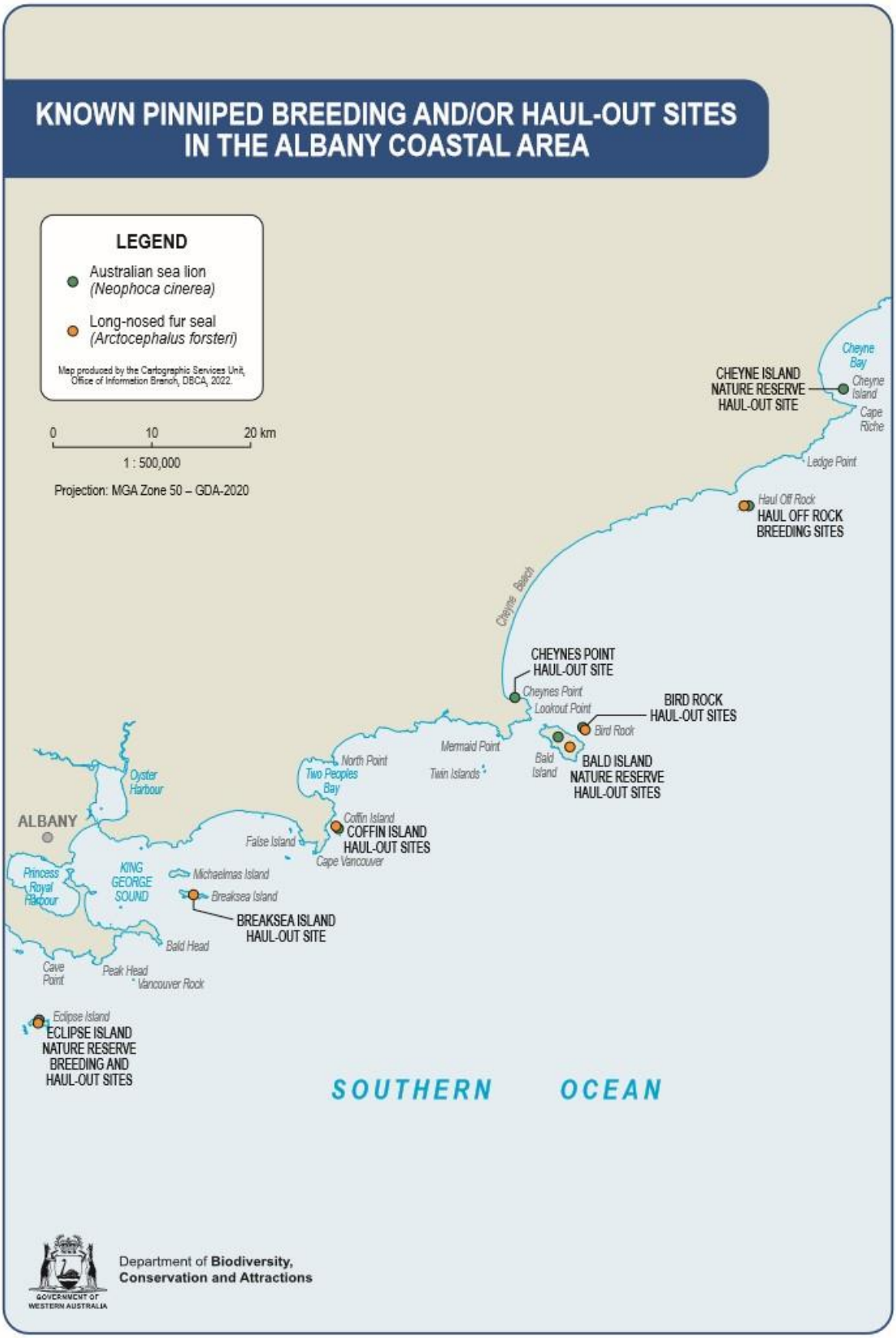
Map 7 - Known pinniped breeding and/or haul-out sites from Cape Naturaliste to Cape Leeuwin



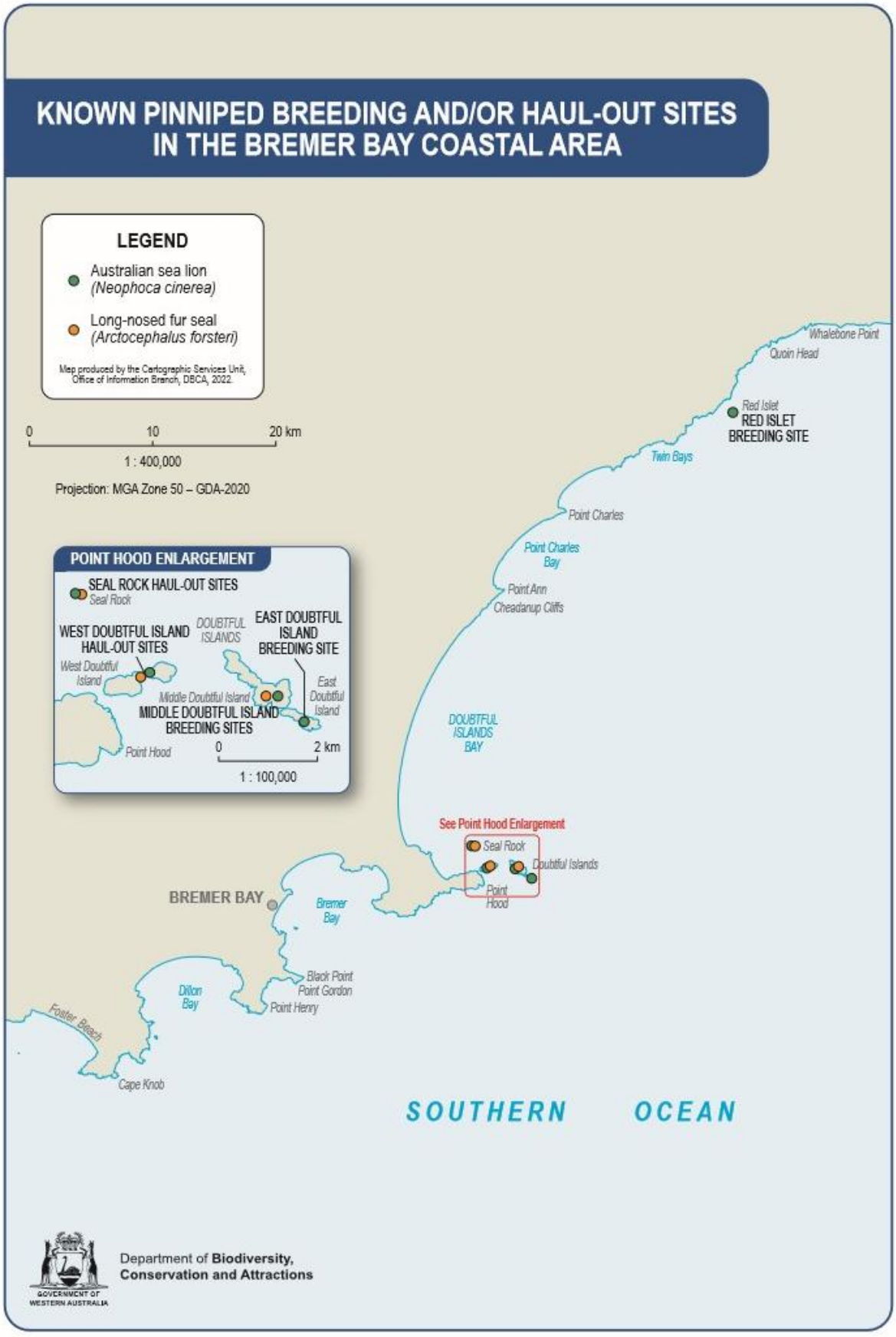
Map 8 - Known pinniped breeding and/or haul-out sites in the Walpole coastal area



Map 9 - Known pinniped breeding and/or haul-out sites in the Albany coastal area

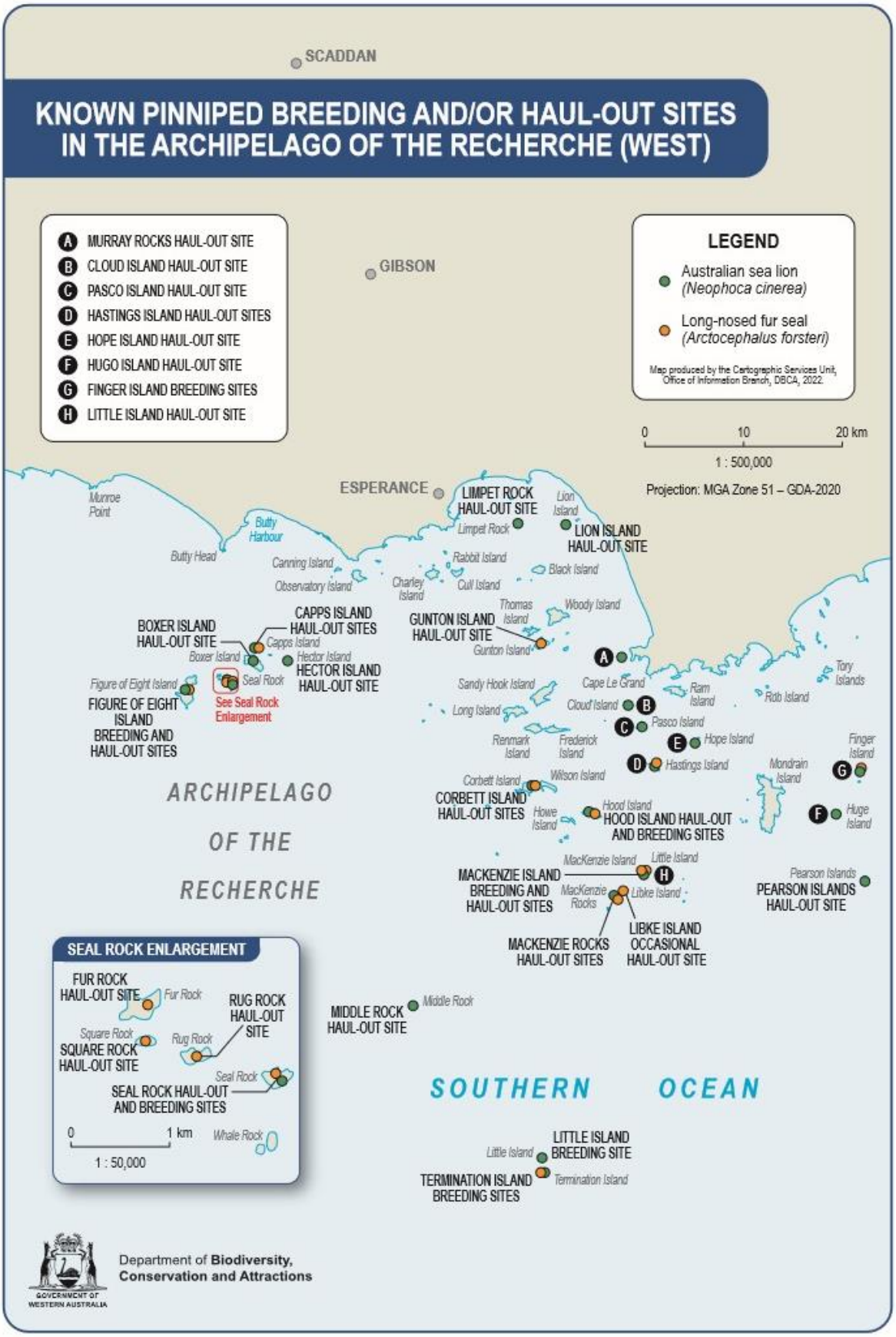


Map 10 - Known pinniped breeding and/or haul-out sites in the Bremer Bay coastal area

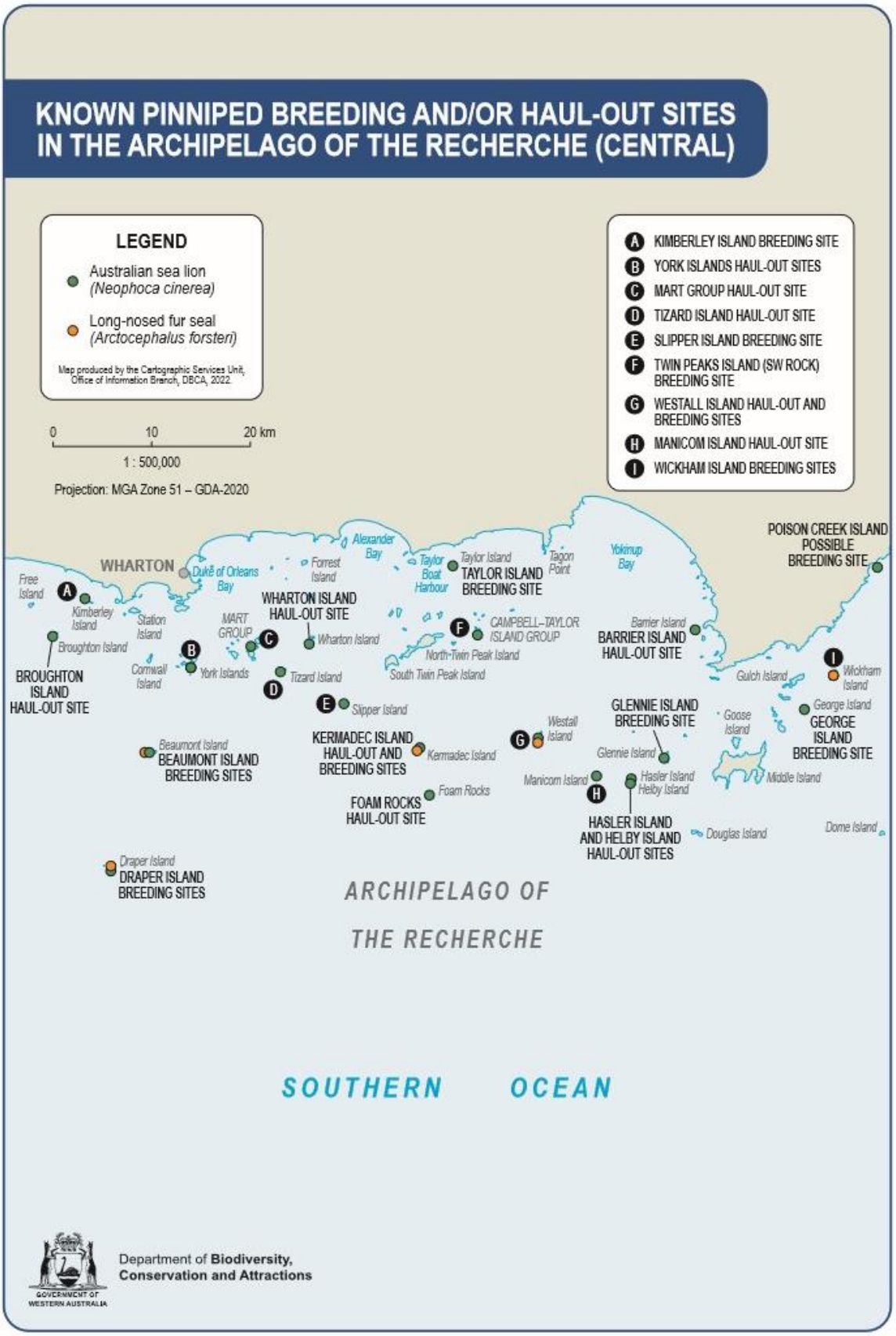


Map 11 - Known pinniped breeding and/or haul-out sites from Seal Island to Red Island, Esperance

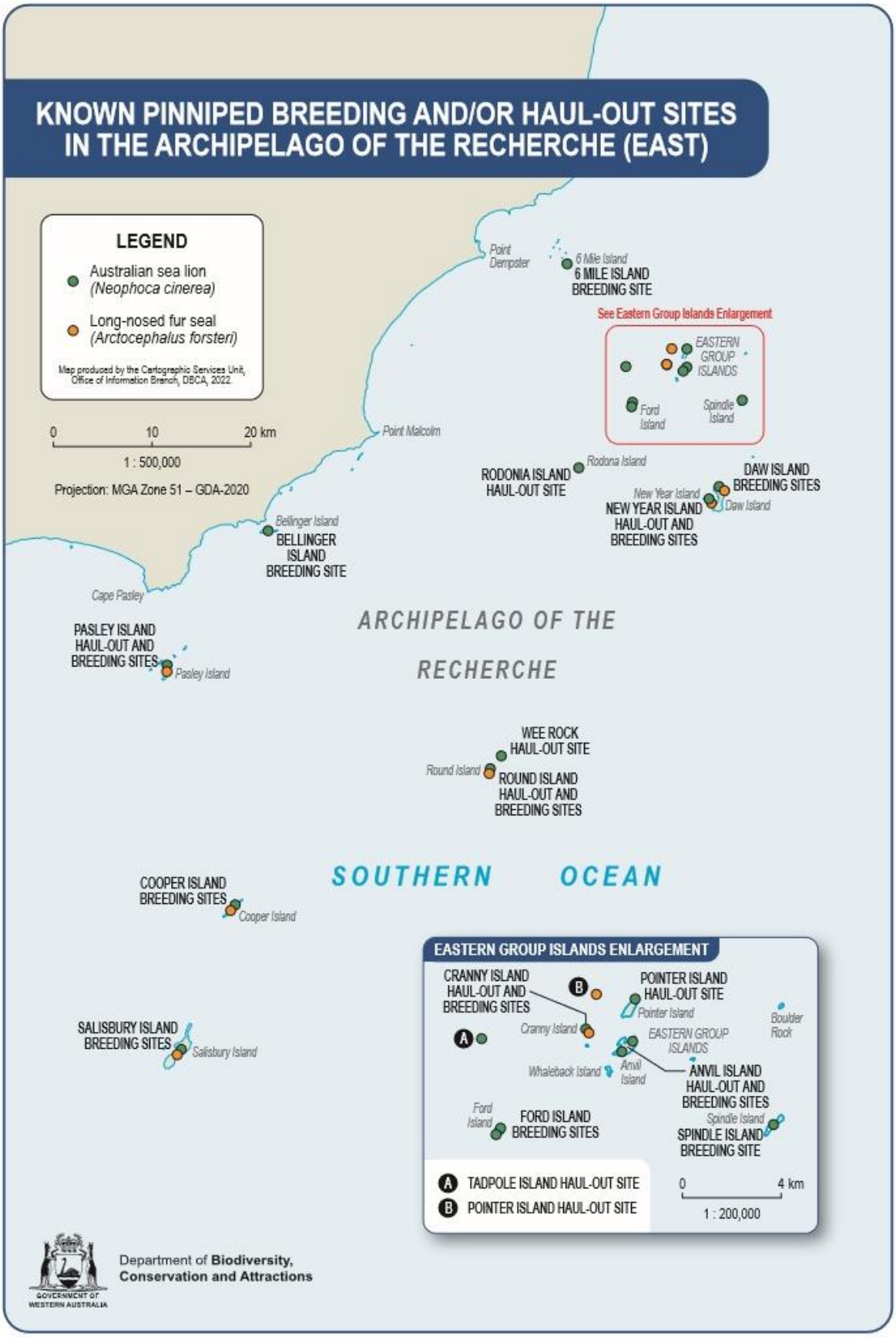
Map 12 - Known pinniped breeding and/or haul-out sites in the Archipelago of the Recherche (west)



Map 13 - Known pinniped breeding and/or haul-out sites in the Archipelago of the Recherche (central)



Map 14 - Known pinniped breeding and/or haul-out sites in the Archipelago of the Recherche (east)



Map 15 - Known pinniped breeding and/or haul-out sites in the Baxter Cliffs coastal area