

WILDLIFE MANAGEMENT PLAN

Bass Strait Blue Economy Zone (BEZ),
Aquaculture Research Trial in
Commonwealth Waters

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Cooperative Research
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1 INTRODUCTION

1.1 Background

Marine aquaculture operations have the potential to result in interactions with wildlife, including cetaceans, seals, seabirds, sharks and rays. Interactions have the potential to cause harm to wildlife, damage marine aquaculture infrastructure, result in stock loss and present health and safety risks to personnel.

The Blue Economy CRC (BECRC) is committed to a high standard of wildlife management through staff training, education and system development. BECRC has partnered with industry to deliver and manage operational aspects of the Bass Strait Blue Economy Zone (BEZ) Aquaculture Research Trial in Commonwealth Waters (the Research Trial) and the Research Trial will be conducted in accordance with industry standard best practice environmental management systems and associated procedures.

This wildlife management plan is written to support operations at the Research Trial Site.

The purpose of this plan is to ensure wildlife interactions with all elements of Research Trial activities are handled to the highest standard.

This plan aims to mitigate against detrimental outcomes, including but not limited to:

- Injury or adverse effects to wildlife that result as a consequence of interactions with BEZ Research Trial operations
- Potential injury to employees, contractors, and visitors when undertaking day to day activities associated with BEZ Research Trial operations, and
- Attacks on fish pens causing loss of fish, reduced growth rates and damage to equipment affecting the outcome of the BEZ Research Trial.

1.2 Objectives

1.2.1 Legislative requirements

The *Environment Protection and Biodiversity Conservation Act 1999* and the *Living Marine Resources Management Act 1995* are the central pieces of legislation governing the management of wildlife for the Research Trial. While Tasmania's *Nature Conservation Act 2002*, *Threatened Species Act 1995* and *Animal Welfare Act 1993* apply in State waters, they do not have direct jurisdiction in the Commonwealth waters where the Research Trial Site is situated. They do however apply in State waters through which vessels associated with the Research Trial will transit. Notwithstanding, the intention is that the full Research Trial activity will be conducted in a manner that is consistent with the requirements of these further Acts.

The EPBC Regulations 2000 Part 8 Division 8.1 includes requirements for vessel speeds and minimum distances to cetaceans.

1.2.2 Objectives

The objectives of this plan are to:

- Target zero harm to wildlife caused by interacting with Research Trial activities
- Prevent wildlife interactions with Research Trial activities from causing injury to employees, contractors, and visitors
- Minimise loss of stock to wildlife interactions
- Establish procedures and operating mechanisms that focus on minimising wildlife interactions and managing wildlife interactions that may occur in a manner that minimises the potential for harm to the wildlife and to personnel involved
- Establish chains of responsibility at the farm level, and
- Establish monitoring procedures.

1.3 Approach to preventing wildlife interactions

The Blue Economy CRC is committed to avoiding conditioning wildlife by limiting the ability of wildlife to interact with stock and staff. The primary objective of this strategy is to adopt effective barrier methods to limit the interaction with stock.

Fish pens will be equipped with appropriate physical barriers, including:

- Seal jump fences, and
- Seal proof bird nets.

Given that the Trial Site is in an area where aquaculture operations have not previously been conducted, the small scale of the activity, and the implementation of best-practice exclusion measures, the level of attraction for wildlife is expected to be somewhat limited. As a result, it is not anticipated that wildlife deterrent measures will be required. If wildlife pressures are higher than expected and deterrents are deemed to be required, the Blue Economy CRC will work with the Commonwealth and State regulators regarding suitable deterrent measures and implementation strategies.

2 WILDLIFE MANAGEMENT REQUIREMENTS

2.1 Cetaceans

The general principles for operations near whales and dolphins have been adapted from guidelines for whale watching (Queensland Government, n.d.).

The following principles are to be adhered to at all times while operating at the Trial Site and surrounds:

- Vessel speed must not exceed 5 knots within the Research Trial Site
- Navigational sonar must be used on all vessels outside daylight hours and during low visibility, unless responding to an emergency
- A person must be designated to monitor the presence of cetaceans on all vessels
- Vessel operations must be shut down if a whale is observed within 1 km of the vessel - recommencement of operations cannot begin until the whale is more than 1 km from vessel, and
- In the event of an entanglement, implement the Response Protocol (Section 2.3.1)

Marine mammals are best protected by giving them space. The procedures below are designed to give these animals the space and protection they need to live and behave naturally.

A number of general rules are also in place to protect marine mammals:

- Never restrict the path of a marine mammal or cause it to change direction
- Never drive a boat into a pod or herd of marine mammals causing it to divide into smaller groups
- Do not deposit rubbish in the marine environment, and
- Do not make a sudden noise or attempt to touch or feed a marine mammal.

2.1.1 Sightings

Report any sightings in accordance with Section 4.2.4.

If the whale is more than 1 km from the Research Trial Site, monitor the whale's whereabouts.

If the whale is within 1 km of the Research Trial Site, monitor the whale's whereabouts and observe the approach distances described below.

2.1.2 Approach distances

Approach distances reduce the risk of disturbing whales or dolphins. They apply to all vessels.

Approach distances are divided into 'caution zones' and 'no approach zones'.

2.1.2.1 Approaching cetaceans

Caution zones

The caution zone is an area surrounding a whale or dolphin in which vessels cannot travel at speeds greater than 6 knots or must not create a wake. The caution zone extends out to 300 metres from a whale and for dolphins it extends 150 metres (see diagrams).

No approach zones

There are areas designated as 'no approach' zones that vessels cannot enter.

These are the areas closest to an animal and directly in front of and behind an animal. For a whale, the no approach zone is 100 m and extends 300 m in front of and behind the animal. For dolphins, the no approach zone is 50 m and extends 150 m in front of and behind the animal (see diagrams).

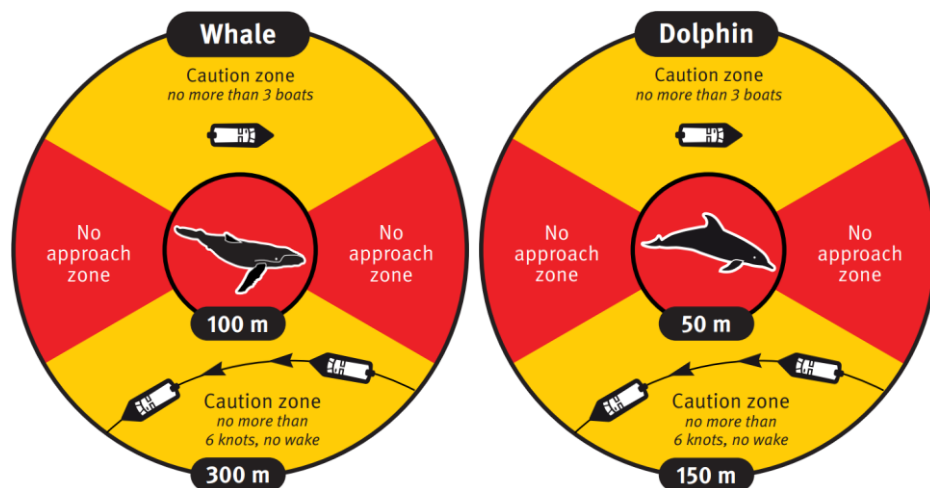


Figure 1 Approach distances for whales and dolphins

Approach distances for calves

Vessels must not come within 300 m of a whale with a calf or within 150 m of a dolphin with a calf. If a calf appears, causing a vessel to be within a no approach zone, the vessel must stop with the engines turned off or gears disengaged, or withdraw at a slow constant speed.

Signs of disturbance

If a marine mammal shows signs of disturbance (e.g. rapid diving, changing direction erratically) the vessel must withdraw beyond the caution zone at a speed that is not more than 6 knots and not create a wake.

Multiple vessels

A vessel cannot enter a caution zone if vessels boats are already present.

2.1.2.2 Cetaceans approach vessels

Whales

If a whale approaches a vessel and the vessel is within the caution zone, the vessel must not operate at a speed more than 6 knots or at a speed that creates a wake. If a whale approaches a vessel and the vessel is within the no approach zone, the vessel must turn its engines off or disengage its gears, or withdraw from the no approach zone at a speed less than 6 knots and not create a wake.

Dolphins

If a dolphin enters a caution zone or a no approach zone, a moving vessel can continue as long as any change to speed or direction is made gradually in a way that is unlikely to disturb the dolphin, particularly if it is bow riding. The vessel may slow down or stop, providing it does not disturb the dolphin.

2.1.3 Whale and dolphin identification

Some of the large whales can be identified by their blow, surfacing and diving characteristics, including:

- Body length
- Presence of a dorsal fin
- Size and position of the dorsal fin
- Shape and size of flippers
- Shape of the head and general body shape
- Presence of a beak
- Shape of the blow
- Body colour and patterns, and
- Swimming characteristics.

An identification guide to commonly observed Tasmanian cetacean is included in Appendix A.

2.1.4 Vessel operations

The following mitigation measures will be applied to reduce the risk of vessel strike and noise disturbance:

- Vessel speed will not exceed 5 knots within the Trial Site
- Vessel operations should preferably take place in daylight hours and extra caution and reduced speed to 2 knots within the Trial Site if vessels need to operate at night
- Noise generating activity (see below) must be shut down if a whale species is observed within 1 km of the Trial Site, and noise generating activity must not recommence until all listed threatened or migratory whales have moved more than one kilometre (1 km) away from the Trial Site, and
- A person must be designated to monitor for and identify cetaceans during vessel operations and noise generating activities.

Noise generating activity means the use of boat-mounted apparatus or other operational noise that can cause noise exceeding 120 dB re 1 μ Pa to travel beyond 1 km underwater from the sound source.

2.1.5 Entanglement prevention

The following mitigation measures will be applied to reduce the risk of entanglement:

- Moorings, ropes, and lines must be kept taut
- Ropes and lines must be inspected at least monthly, in addition to after any weather event that may reasonably be expected to potentially impact the equipment
- Repairs must be made to ropes and lines as soon as it is safe to do so. If additional equipment is required to complete a repair, loose lines, ropes or damaged equipment must be secured to reduce the risk of entanglement until repairs can be completed, and
- Ensuring farm layout ensures a minimum horizontal separation distance of 20 m between lanes for cetaceans, especially whales, to move through.

2.1.6 Deceased cetacean

In the event of observation of a deceased cetacean the following will be adhered to:

- If the carcass is entangled, the carcass will be recovered and held, if safe to do so, and the Department of Natural Resources and Environment Tasmania (NRE) will be contacted for advice regarding disposal
- In the event of an observed mortality (even where the cause of death is unknown) of a cetacean, full details will be recorded, and

- An analysis of the cause of the mortality will be undertaken in consultation with NRE and actions recommended, where practicable to do so, to prevent similar occurrences.

2.2 Wildlife exclusion

Wildlife exclusion netting will be installed both above and below the waterline to prevent predation by seals, sharks and birds.

Fish nets (underwater) are dual purpose preventing predation by wildlife and preventing escape of livestock. In accordance with the Infrastructure Management Plan, the netting must meet minimum requirements specified in Tasmania's Seal Management Framework, including strength and minimum mesh size.

Above water, an integrated bird and seal netting system is used to prevent the entry of wildlife. This netting system is joined to the fish net to minimise the opportunity for seals or birds to enter the pen. The netting is placed under tension by tying down to reduce the potential for bird entanglement. Poles around the edge of the net, which are used to keep the net elevated, are designed to support the weight of the net as well as animal pressure. A single entry-point is provided to allow servicing of the pen; the entry point is secured at all times, except when access is required.

2.3 Trapped or entangled wildlife

Specific procedures for cetaceans are presented in Section 2.3.1.

Any wildlife trapped or entangled in marine farming equipment must be managed in accordance with the following guidelines:

- If the entangled animal is alive, and safe to do so, immediately attempt to release the entangled wildlife
- If the entangled wildlife is deceased, then the carcass is to be recovered and held until direction is given by either site management or the Trial Site Wildlife Officer, and
- Reporting requirements are described in Section 4.2.3, 4.2.5, and 4.2.6.

All netting must:

- Be maintained in a state that prevents any wildlife entanglement, unless for short durations as necessitated by operational requirements (for example, during deployment of nets), and
- If netting will not be used for more than one month and presents a risk of entanglement, it is to be removed from the water and stored off-site.

2.3.1 Cetaceans

Marine mammal entanglements present complex and sometimes dangerous situations that require specialist skills and training if the animal is to be safely returned unharmed.

The NRE Marine Conservation Program will determine the best course of action and discern whether the animal needs to recuperate and be provided with further treatment under veterinary supervision.

The carcasses of dead marine mammals will be managed in accordance with the requirements of the Marine Conservation Program. The Marine Conservation Program will outline investigation and disposal of the carcass, if required. The Marine Conservation Program will be consulted to ensure all relevant approvals are in place and procedures have been carried out.

Whale/dolphin entangled in and/or connected with farm equipment, infrastructure or a vessel

- **STOP ALL VESSEL MOVEMENTS IMMEDIATELY**
- **DO NOT ATTEMPT TO DISENTANGLE THE ANIMAL**
- **RESEARCH TRIAL SITE OPERATIONS LEAD CALL NRE MCP WHALE HOTLINE: 0427 942 537**
- **IF OPERATING A VESSEL, STAND OFF FROM THE ANIMAL TO AVOID CAUSING FURTHER STRESS**
- Call the Research Trial Site Operations Lead
- Take photos of the entanglement and/or injury if possible
- Monitor the animal's whereabouts and behaviour
- Remain in visual contact with the animal if on a vessel and update the Hotline with any changes

Stranded or beached whale/dolphin

- **RESEARCH TRIAL SITE OPERATIONS LEAD CALL NRE MCP WHALE HOTLINE: 0427 942 537**
- **DO NOT ATTEMPT TO MOVE OR RESCUE THE ANIMAL/S WITHOUT FIRST RECEIVING ADVICE AND APPROVAL VIA THE HOTLINE – NRE EXPERTS WILL DIRECT SAFE AND APPROPRIATE FIRST AID PROCEDURES**
- Call Research Trial Site Operations Lead
- Take photos of animal if possible
- Monitoring for additional whales or dolphins offshore
- Update the Hotline with any changes to the situation

2.3.2 Seals

2.3.2.1 Seal breach

Reporting requirements for a seal breach are described in Section 4.2.1.

To remove a seal from a pen, the following procedure applies:

- Identify the point of entry if possible
- If a subsurface hole is suspected, a dive team is called to repair the breach and minimise stock damage
- Determine a desired exit point, and unstitch the fish net and seal/bird exclusion net to create an opening
- Position vessels away from the opening and avoid crossing the opening if possible; keep well clear of the exit while seal removal is occurring
- Encourage the seal towards the exit point avoiding intentional harassment and physical contact
- Once the seal/s are out, close the hole and ensure the pen is secure to prevent re-entry, and
- Complete relevant reporting.

If a seal will not leave the pen of its own volition, sedation may be used to allow the animal to be removed (see below).

2.3.2.2 Sedation

If required, sedation may be used by an authorised person to remove seals from a pen. NRE minimum requirements apply, including:

- An NRE contact officer must be informed within 48 h of the sedation
- Any adverse effects incurred by the seal must be reported within 1 h of the event, and
- Documentation is required to be forwarded to NRE within 7 days of the event.

Sedation activities are supervised by a qualified veterinarian with appropriate dosages and reversal agents applied as required.

2.3.3 Birds

2.3.3.1 Entangled bird

Reporting requirements for entangled birds are described in Section 4.2.6 and 4.2.7.

The bird is to be carefully removed from the pen. Photographs should be taken for reporting purposes, including to allow for confirmation of species identity and individual age (ageing is only possible for some species).

Entangled birds are to be covered (e.g. wrapped in dark towel or jumper) before removal to reduce stress to the bird and minimise chance of staff being pecked or clawed. The towel or jumper is to be **gently** draped over the bird, and never thrown at the bird.

In the case of an eagle or other birds of prey, do not attempt to remove. Immediately notify Research Trial Site Operations Lead or Trial Site Wildlife Officer who will organise removal by competent personnel e.g. vet, NRE Wildlife Officer or registered wildlife carer.

If the bird displays obvious signs of injury, the disentangled bird is to be kept for veterinary treatment.

If a staff member is unable to remove bird, then report Research Trial Site Operations Lead or Trial Site Wildlife Officer to organise removal.

2.3.3.2 Entrapped bird

Reporting requirements for trapped birds are described in Section 4.2.6 and 4.2.7.

If a staff member identifies a bird trapped within a pen, attempt to remove it immediately:

- If the pen is fitted with bird escape hatches, open the hatches and wait for the bird to leave
- Identify the prevailing wind direction; birds will take off more easily into the wind, so make the escape gap toward the wind
- Pull bird net back from the seal fence to create a gap to allow bird to fly out
- Use a small inflatable vessel to enter the pen and position behind the bird(s) to encourage them to exit the pen, or
- If seal proof bird net is fitted, bird removal may be done by climbing on the bird net

To prevent re-entry, any holes in the bird net are to be repaired or a replacement organised once birds have been removed from the pen.

If the removal of the bird is unsuccessful within 48 h of the bird being identified in pen, Trial Site Wildlife Officer **must** be contacted as a matter of priority by the Research Trial Site Operations Lead.

2.3.3.3 Deceased bird

Reporting requirements for deceased wildlife is described in Section 4.2.8.

To remove a deceased bird from within the pen:

- Plastic/protective gloves to be worn when handling carcasses or entangled birds, and
- Carcasses are to be put into garbage bags and disposed of in rubbish bins at the land base, or as otherwise directed by NRE.

2.4 Injured wildlife

2.4.1 Birds

If a staff member observes a bird that is injured or compromised (water logged) then attempts should be made to capture the bird.

Capture methods may include, but not limited to dip net, throw net, or towel/blanket over bird.

Once captured, wrap bird in towel or jumper and organise transport to the Trial Site Wildlife Officer for primary care and assessment.

Trial Site Wildlife Officer to organise veterinary treatment if required.

2.4.2 Other wildlife

If an injured seal, cetacean or predatory bird is identified, NRE is to be contacted for advice on appropriate response measures. This may include attempting to capture the animal prior to transport off site, or continuous observation until specialist personnel can reach the site to provide veterinary care. Reporting requirements are described in Section 4.2.7.

3 MONITORING

Site personnel will be provided with an induction and information to assist in the identification of listed species that may occur within or near the Trial Site. Any observations of these species will be recorded in a Wildlife Management App. The collected data will be used to support analysis of wildlife attraction and interaction as part of the Research Trial.

Incidental observations will be supplemented with targeted wildlife monitoring programs, as described in the Blue Economy ECRC Additional Monitoring Program.

4 REPORTING AND RECORD KEEPING

4.1 General

All communications from the Blue Economy CRC to NRE must be completed by the Principal Investigator Blue Economy CRC, the Research Trial Site Chief Veterinary Officer, or delegate.

Should NRE directly request any further information from site personnel, these are to be directed to the Principal Investigator Blue Economy CRC, the Research Trial Site Chief Veterinarian Officer, or delegate.

4.2 Wildlife reporting

All wildlife interactions are recorded through a Wildlife Management App maintained by the Trial Site operational partner.

4.2.1 Seal breach

If a seal has breached a pen:

1. Report immediately to the Research Trial Site Wildlife Officer and Research Trial Site Operations Lead
2. Follow relevant procedures to remove the seal from the pen (Section 2.3.2.1), and
3. As soon as the seal has been removed, the Research Trial Site Wildlife Officer or Research Trial Site Operations Lead must enter the breach information into the Wildlife Management App

4.2.2 Aggressive seal interaction

If there has been an aggressive seal interaction:

1. Report immediately to the Research Trial Site Wildlife Officer and Research Trial Site Operations Lead
2. Take images or footage of seal to aid in identification
3. Immediately notify the Research Trial Site Chief Veterinary Officer
4. The Research Trial Site Wildlife Officer or Research Trial Site Operations Lead must enter the interaction information into the Wildlife Management App within 1 h
5. The Research Trial Site Wildlife Officer or Research Trial Site Operations Lead must enter the interaction information into the Safety App as a wildlife incident within 1 h
6. The Principal Investigator Blue Economy CRC must report to NRE within 6 h of the incident, and
7. The Principal Investigator Blue Economy CRC will then liaise with site personnel to investigate if required.

4.2.3 Entrapped seal (uninjured)

If there is a seal entrapped within infrastructure:

1. Attempt to remove seal following relevant procedures
2. Report immediately to the Research Trial Site Wildlife Officer and Research Trial Site Operations Lead
3. If multiple attempts have been made to release a seal and sedation or the use of a liner is being considered, the Research Trial Site Wildlife Officer/Research Trial Site Operations Lead must notify the Principal Investigator Blue Economy CRC about the intent within 6 h of discovering the seal, and
4. On the day of the incident, log the incident in the Wildlife Management App.

4.2.4 Cetacean sighting

If a whale is sighted:

1. Immediately contact the Research Trial Site Operations Lead or Research Trial Site Wildlife Officer
2. The Research Trial Site Operations Lead or Research Trial Site Wildlife Officer is to contact the Whale Hotline 0427 WHALES (0427 942 537), and
3. Record the sighting in the Wildlife Management App.

4.2.5 Cetacean entanglement

If a cetacean is entangled in marine infrastructure:

1. Follow the procedures in Section 2.3.1
2. The Research Trial Site Operations Lead or Research Trial Site Wildlife Officer is to contact the Principal Investigator Blue Economy CRC, who will conduct follow-up communications with NRE, and
3. Record the incident in the Wildlife Management App on the day.

4.2.6 Other entrapped wildlife (uninjured)

If other wildlife is entrapped in infrastructure:

1. Immediately follow relevant procedures to attempt to release the wildlife
2. Within 1 h, report to the Research Trial Site Wildlife Officer or Research Trial Site Operations Lead, and
3. Record the incident in the Wildlife Management App on the day.

4.2.7 Entrapped wildlife (injured or cannot release)

If there is injured wildlife or wildlife that cannot be safely released:

1. Immediately report to the Trial Site Wildlife Officer or Research Trial Site Operations Lead
2. The Research Trial Site Wildlife Officer or Research Trial Site Operations Lead will immediately notify the Principal Investigator Blue Economy CRC
3. The Principal Investigator Blue Economy CRC will immediately notify NRE (prior to release). NRE may provide advice, which will be conveyed to the Trial Site Wildlife Officer, and
4. Record the incident in the Wildlife Management App on the day.

4.2.8 Deceased wildlife

If deceased wildlife is found:

1. Immediately report to the Research Trial Site Wildlife Officer or Research Trial Site Operations Lead
2. The Research Trial Site Wildlife Officer or Research Trial Site Operations Lead will immediately notify the Principal Investigator Blue Economy CRC and Trial Site Veterinarian
3. The carcass is to be recovered and retained until further advice from NRE
4. Within 4 hours of the discovery of the deceased seal, the Principal Investigator Blue Economy CRC must report to NRE and request approval to dispose of the carcass.
5. Record the incident in the Wildlife Management App on the day, and
6. If the deceased wildlife is a fur seal, complete a seal mortality report and provide to the Principal Investigator Blue Economy CRC.

4.2.9 Listed species

If a listed species is observed close to the Trial Site:

1. Contact the Research Trial Site Wildlife Officer and provide the following:
 - a. Location of sighting (GPS coordinates)
 - b. Species
 - c. Photo, if possible, and
2. The Research Trial Site Wildlife Officer will provide the information to the Principal Investigator Blue Economy CRC, who will then forward details to ConservationAssessments@nre.tas.gov.au

The sighting will be recorded in the Wildlife Management App.

If the Research Trial activity results in the unintentional death, injury, taking, keeping or moving of a listed marine species, the Secretary, Department of Climate Change, Energy, the Environment and Water must be notified within 7 days of the Principal Investigator Blue Economy CRC becoming aware.

4.3 Document management

Accurate and up to date records will be maintained for all wildlife interactions involving entanglement and stock or employees interacting with wildlife.

Monthly reports will be prepared covering:

- Bird entrapments, entanglements and mortalities
- Marine mammal interactions
- Marine mammal entanglement
- Deceased marine mammal, and
- Internal audit records.

Wildlife interaction records will be made available to NRE on request, and will inform overall analysis associated with the Research Trial.

Further wildlife monitoring information requirements are described in the Monitoring Plan for the Research Trial.

All wildlife interactions will be recorded on industry standard document templates. All records will be retained onsite for auditing purposes for the duration of the Research Trial.

4.4 Annual review

This plan and any incident reports will be reviewed annually in consultation with NRE to assess the effectiveness of the plan and identify any issues of concern. The review will also enable modifications to be made based on recommendations from post action reports, field experience and professional advice.

5 ROLES AND RESPONSIBILITIES

BECRC and its industry partner are jointly responsible for implementing this Wildlife Management Plan. The Research Trial Site Operations Lead is responsible for ensuring operational activities associated with the BEZ Research Trial are conducted in a manner consistent with this Wildlife Management Plan.

All staff are responsible for responding to any interactions appropriately where required.

Table 1 Roles and responsibilities

ROLE	RESPONSIBILITIES
Chief Executive Officer (Blue Economy CRC)	<ul style="list-style-type: none"> • Ensure that this management plan is effectively implemented • Support subordinates and hold them accountable for their specific responsibilities relating to safe and effective wildlife management.
Principal Investigator (Blue Economy CRC)	<ul style="list-style-type: none"> • Primary point of contact within BECRC for all matters related to wildlife sightings and incidents. • Primary point of contact for all communication with NRE.
Research Trial Site Operations Lead	<ul style="list-style-type: none"> • Ensure the effective implementation of this management plan and associated procedures and task breakdowns. • Support subordinates with their specific responsibilities relating to safe and effective wildlife management.
Research Trial Site Wildlife Officer	<ul style="list-style-type: none"> • Ensure that the Trial Site has the necessary tools and training to adequately deal with wildlife in a safe and effective manner. • Ensure that all notifiable interactions are reported to the relevant government bodies within the guidelines of this system
Managers, supervisors & team leaders	<ul style="list-style-type: none"> • Each manager, supervisor and/or team leader is responsible for taking all practical measures to ensure the wildlife management systems and procedures are complied with. • They are responsible for employee inductions, training and supervision to meet their requirements under this system.
Employees	<ul style="list-style-type: none"> • Undertake all activities in accordance with the wildlife management system. • Report all interactions with wildlife required within this system. • Escalate to Research Trial Site Operations Lead or Trial Site Wildlife Officer any issues relating to wildlife.
Contractors and visitors	<ul style="list-style-type: none"> • All Contractors/visitors engaged to perform work or are observing Research Trial activities are required to comply with the wildlife management system and observe directions from the designated member of staff accompanying them.

APPENDIX A – CETACEAN IDENTIFICATION GUIDE

TASMANIAN CETACEANS: Identification Guide



Supporting whale and dolphin conservation

Approximately 40 cetacean species have been identified in Tasmania to date. The following provides a guide to identifying the 10 most frequently sighted whales and dolphins in Tasmanian waters.

The waters around Tasmania support a diverse range of whale and dolphin (cetacean) species, however many populations are still recovering from historical exploitation. The Department of Primary Industries, Parks, Water and Environment (DPIPWE) is responsible for the conservation and management of cetaceans in Tasmania.

You can help:

1

Immediately **REPORT** all stranded, injured or entangled whales or dolphins (alive or dead) to the Whale Hotline **0427 WHALES (0427 942 537)**

Rescue of compromised whales and dolphins requires specialised skills and equipment, and rapid reporting via the 24hr/7day hotline provides the Marine Conservation Program with the best chance of effecting a successful response.

2

Visit our WhalesTas **FACEBOOK** page for more information and to report sightings (www.facebook.com/whalestas)

Reporting sightings of whales and dolphins contributes valuable information to long-term monitoring of these species in Tasmania, providing the opportunity to actively participate in their conservation and protection. To discuss sightings please call the Whale Hotline.

Photos of the dorsal fin, head and tail are particularly useful for identification.

3

Tag your **PHOTOS #whalestas**

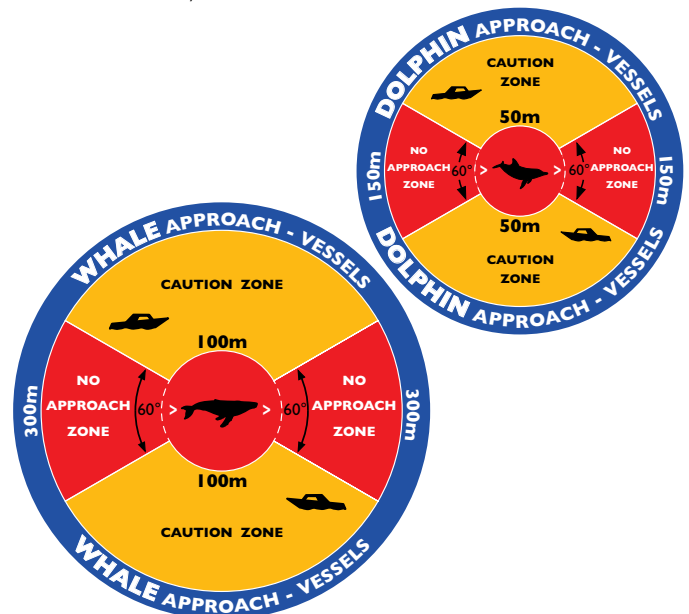
Viewing whales and dolphins

Guidelines for viewing and approaching cetaceans are outlined below, and additional information can be found on the DPIPWE website. These guidelines apply to all water users including commercial operators (e.g. tour vessels) as well as recreational boaters.

In general, when a whale or dolphin is observed, vessel operators should:

- Slow down and avoid erratic changes in speed and direction
- Approach no closer than the specified approach distances (see below)
- Avoid approaching from directly in front of or behind the animal

If vessels are operated appropriately, the impacts of whale and dolphin watching can be minimised and you will have a more enjoyable experience. Remember, it is OK if whales or dolphins deliberately approach your vessel closer than the approach distances outlined below (e.g. dolphins riding a vessel's bow-wave), however this must be entirely determined by the animal.



Marine Conservation Program
Department of Primary Industries, Parks, Water and Environment
134 Macquarie St Hobart • GPO Box 44 Hobart TAS 7001
www.dpipwe.tas.gov.au

Blue whale - *Balaenoptera musculus*

Tas: *Endangered* National: *Endangered*

Baleen whale

Identifying features

Max: 33 m
150 tons

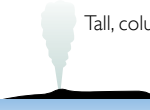
Massive shoulder and splashguard

Tiny dorsal fin



Turquoise silhouette below the water

Tall, columnar blow



Surfacing behaviour

Southern right whale - *Eubalaena australis*

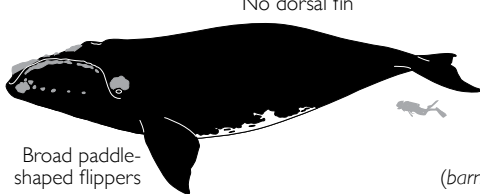
Tas: *Endangered* National: *Endangered*

Baleen whale

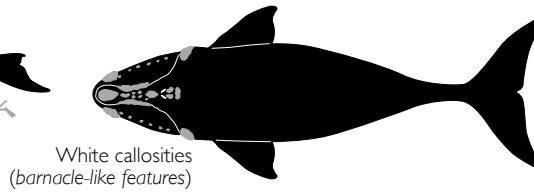
Identifying features

Max: 17 m
70 tons

No dorsal fin



Broad paddle-shaped flippers



White callosities (barnacle-like features)

Surfacing behaviour

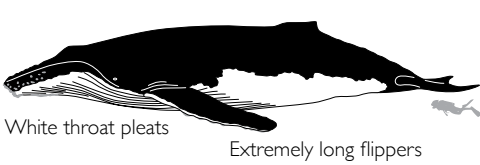
Humpback whale - *Megaptera novaeangliae*

Tas: *Endangered* National: *Vulnerable*

Baleen whale

Identifying features

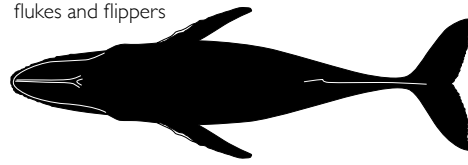
Max: 18 m
40 tons



White throat pleats

Extremely long flippers

White underside to flukes and flippers



Surfacing behaviour

Arches high above water when surfacing

flukes lifted high prior to diving



Pygmy right whale - *Caperea marginata*

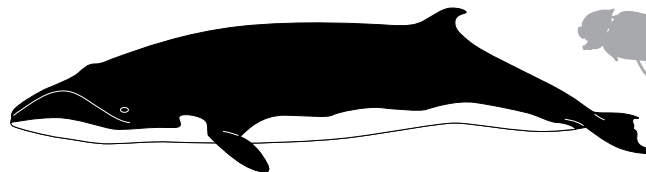
Baleen whale

Identifying features

Max: 6.5 m
3.5 tons

Sickle-shaped dorsal fin far back on body

Characteristic arched mouthline



Surfacing behaviour

flukes never raise above surface

Antarctic minke whale - *Balaenoptera bonaerensis*

Baleen whale

Identifying features

Max: 10.7 m
9.1 tons

Rather tall sickle-shaped dorsal fin

Pointed snout, straight mouthline



White leading edge to flipper



Surfacing behaviour

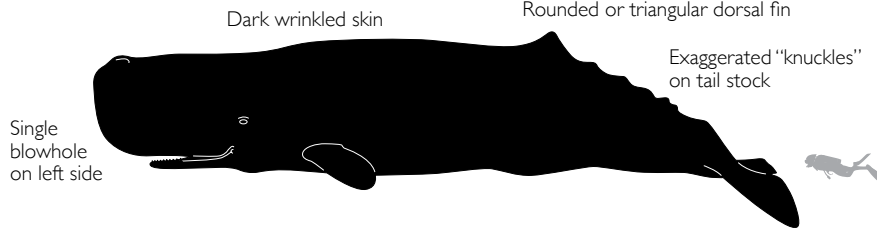
Report sightings to 0427 WHALES

Sperm whale - *Physeter macrocephalus*

Toothed whale

Identifying features

Max: 18 m
55 tons



Surfacing behaviour

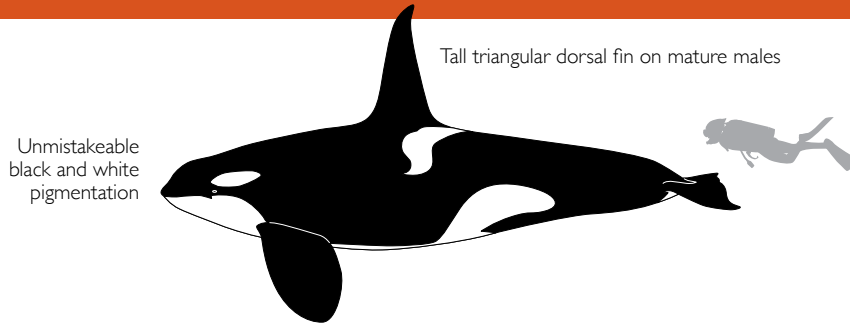


Killer whale - *Orcinus orca*

Toothed whale

Identifying features

Max: 9.8 m
5.5 tons



Surfacing behaviour

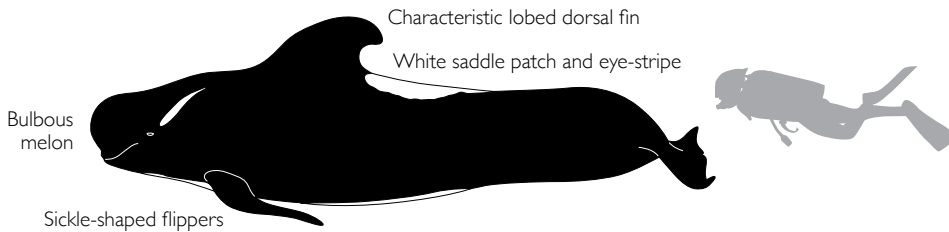


Long-finned pilot whale - *Globicephala melas*

Toothed whale

Identifying features

Max: 7.4 m
3 tons



Surfacing behaviour

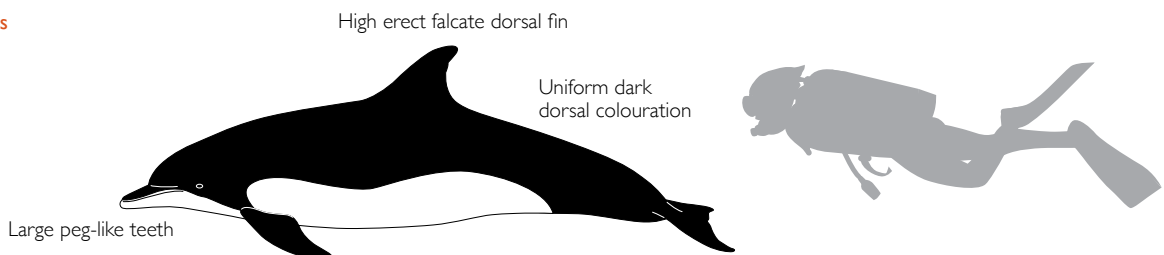


Bottlenose dolphin - *Tursiops truncatus*

Dolphin

Identifying features

Max: 4.1 m
650 kg

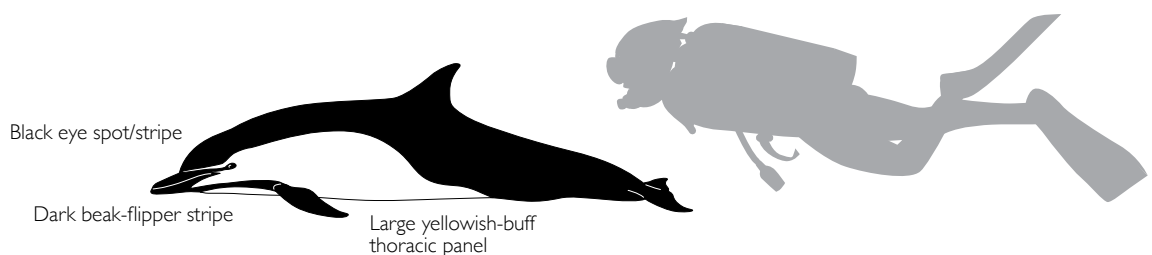


Common dolphin - *Delphinus delphis*

Dolphin

Identifying features

Max: 2.5 m
230 kg



Report sightings to 0427 WHALES