

Impacts on Cetaceans



Impacts on Cetaceans

OVERVIEW

- What are cetaceans and what species are found at Binningup?
- What will the final result be of this project in the marine environment?
- Will the pipeline impact on cetaceans?
- Will the construction process impact on cetaceans?

● Will the pipeline impact on cetaceans?

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What are Cetaceans?

Cetaceans are warm blooded, air breathing mammals and include whales, dolphins and porpoises.

They have an absence of hair and development of flubber

They have streamlined bodies for movement in water

Their limbs have evolved into flippers and a horizontal tail for propulsion.

Highly developed sound producing organs and hearing sense

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ORDER: Cetacea

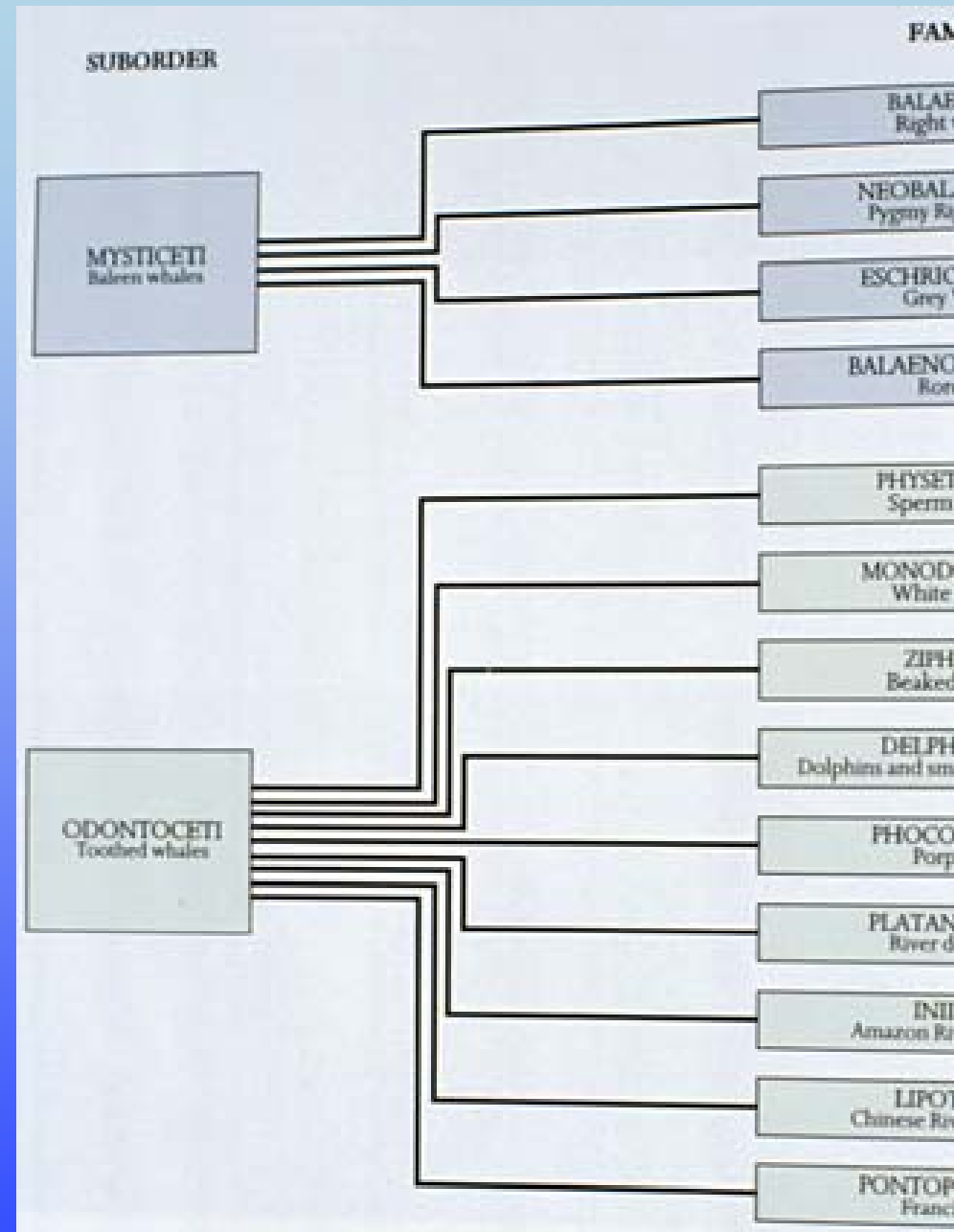


Baleen whales

Approx. 80 species worldwide



Toothed whales



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Large whales - humpback, southern right
blue whales



Most species
migrate and feed on
Krill in the southern
ocean



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toothed whales -

Such as dolphins, porpoises, killer and sperm whales that feed on fish, seals and squid



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What do we know of the cetaceans in the Binningup area?

- Very little indeed as no dedicated surveys have been carried out here.
- Dolphins have been observed by locals and we assume other species may also have been seen in the local and offshore areas, especially by fishers.

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Southern right whales (females and calves) pass close to shore (based on a recent photograph).

Probable migration route for this (and other) species.



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What will this project produce?

An underwater pipeline structure on or half buried in the seabed extending approximately 1.1 km offshore of Binningup.

Variable release of hypersaline water from a number of diffusers along pipeline.

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- A pipeline can provide habitat for benthic organisms and fish and therefore possible food sources for dolphins



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Will it impact on cetaceans?

It is likely that the pipeline will not impact on so
ge cetacean species or on their populations.



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Why is little impact likely?

- In the broader context blue and humpback whales utilise a large area and are very mobile or migratory.
- However, southern right whales are known to utilise shallow habitat close to the coast for calving and nursing.

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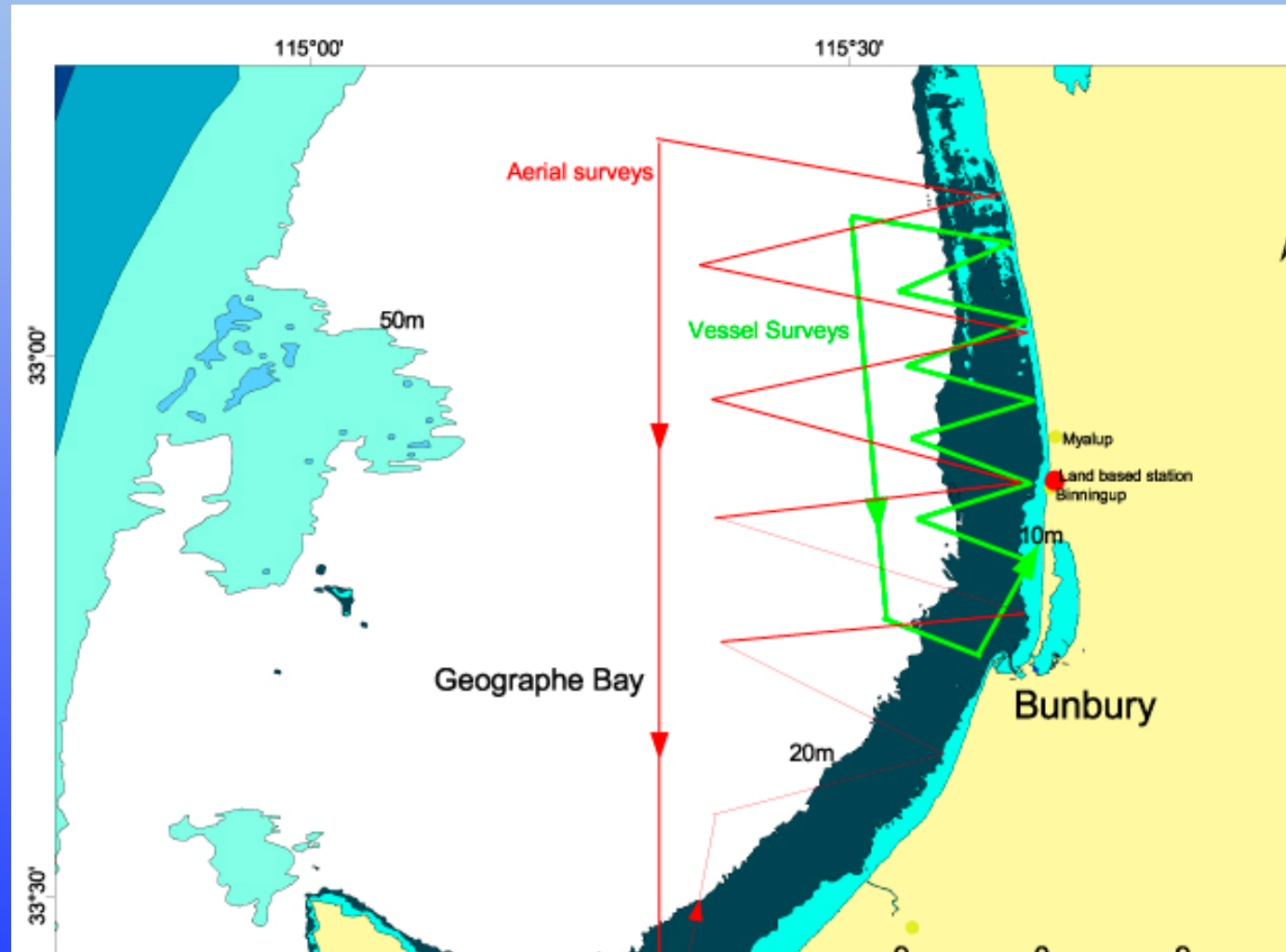
What do we need to do?

- Conduct a series of surveys before, during and after the construction of the pipeline to determine the diversity, numbers and distribution of cetaceans in this area. This will provide good baseline information for management.

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- Recommended aerial, vessel and land-based surveys will provide broad to local level data.

mpback, blue &
thern right whales
recorded annually
Cape Naturaliste
are likely to be
n further north



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All the construction process impact on cetaceans

Construction activities

- will be localised and temporary in nature,
- may result in some species developing new movement or migratory patterns
- will unlikely impact on their population.

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l the construction process impact on cetaceans

Noise

- likely to cause some species to be displaced during the construction phase, especially during times of high energy blasting and pile-driving
- capable of inducing physiological damage and even death to cetaceans if animals venture too close to the noise source.

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the construction process impact on cetaceans

- Hyper-saline effluent
 - very little information on the effects on cetaceans.
 - very few humpback whales venture into the hyper-saline waters of Shark Bay. Dolphins however do live in this environment.

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How can any impacts be minimised?

Recommendations

Implement an exclusion zone at *least* 1km around the pipeline alignment for local vessel and marine mammal management.

Employ a vessel for boat and cetacean management and land based observers for cetacean monitoring.

Monitor for cetaceans an hour before any blasting/pile driving

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As part of the broad survey conduct daily land-based observations to determine the use of the nearby ocean areas by cetaceans, and in particular the southern right whales.

Install acoustic loggers for the collection of species specific calls and anthropogenic sound including that of the construction phase.

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A photograph of a whale breaching the surface of the ocean. The whale's dark back and a small portion of its head are visible above the water. The ocean is a deep blue color, and the sky is a clear, light blue. In the foreground, there is a small patch of green and brown vegetation on a cliffside.

Thank you very much for your attention