

FACT SHEET – MARINE INDUSTRIES January 2017

Thunderbird Mineral Sands Project

The Thunderbird Mineral Sands Project, located on the Dampier Peninsula between Broome and Derby, is being developed by Western Australian company Sheffield Resources Limited.

Thunderbird is a large-scale, mineral sands mining and processing project with low environmental impacts and long term economic and community benefits. Sheffield proposes to undertake mining of mineral sands for more than 40 years from the Thunderbird deposit.

Sheffield is undertaking a Bankable Feasibility Study (BFS) and Public Environmental Review (PER) of Thunderbird, scheduled for completion in 2017. Start of construction is planned to follow with first exports through the ports of Derby/Broome targeted for 2019.

Sheffield believes that Thunderbird can help transform the community through the creation of approximately 140 permanent and many indirect local jobs. Income would stay in the region supporting families, business, cultural values and lifestyle.

The mineral sands products (ilmenite) will be transported in bulk in road trains to the Derby Port, located at the mouth of the Fitzroy River, in King Sound.

The bulk ilmenite will be stored in a purpose-built facility at the port and loaded by conveyor onto barges, which will be taken by tug boats about 30 km into King Sound near Point Torment to meet a moored ocean going vessel where products will be transferred. This is the same process as used between 1997 and 2008 when lead zinc concentrates were exported from Derby Port.

What fisheries are located around Derby?

Five commercial fishers hold licenses in the Kimberley Gillnet and Barramundi Fishery, which includes the waters of King Sound and other areas. Species caught in this fishery are almost all Barramundi, King Threadfin and Blue Threadfin.

What other marine industries are located around Derby?

The northwest of King Sound, and the islands and bays of the Buccaneer Archipelago to the northeast, support a cultured pearl industry and several aquaculture operations.

Cone Bay located approximately 90 km north of Derby Port contains several pearling sites as well as the Kimberley Aquaculture Development Zone. The zone presently includes a finfish aquaculture facility licensed to produce up to 15,000 tonnes per annum of barramundi or local finfish in floating sea cages. An indigenous project at One Arm Point features a marine hatchery for ornamental and edible marine species.



“Non-reactive and non-toxic, mineral sands products are used in paints and artificial joints, in toothpaste, crockery and porcelain, medicines, food colouring and sunscreen.”

Will Thunderbird activities have an impact on marine industries?

The most likely possible source of impact to marine industries is the increase in shipping activity around the Kimberley as a result of the Thunderbird Project. Risks associated with increased shipping can include direct strike of marine animals, fuel spillage and spillage of mineral sands products.

What effect will Thunderbird have on shipping in the Kimberley

Shipping is an existing and well-established industry in the Kimberley. In the year 2014/15, a total of 1,515 vessels berthed at the Kimberley ports of Broome, Wyndham and Derby. The Thunderbird Project will bring an additional 40 - 70 ocean-going vessels to the Kimberley each year. Taking the higher number of 70 additional vessels per year, this is a maximum increase of 4.6% per year of ships in the waters of the Kimberley.

Thunderbird

Mineral Sands



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How much extra activity will occur in Derby Port as a result of the Thunderbird?

Barges are anticipated to operate between 6 and 10 days per month to load between 2 and 4 ships per month with average ship loads being between 15,000 t.

How will potential impacts from fuel spillage and spillage of mineral sands materials be managed?

Minor spillages of mineral sands products would cause negligible impact to the marine environment. In the unlikely event of a major spill, the product would be recovered by suction dredging and returned to the mine site for re-processing. The low solubility of the product would mean that fisheries or other marine industries are unlikely to expect any negative effects.

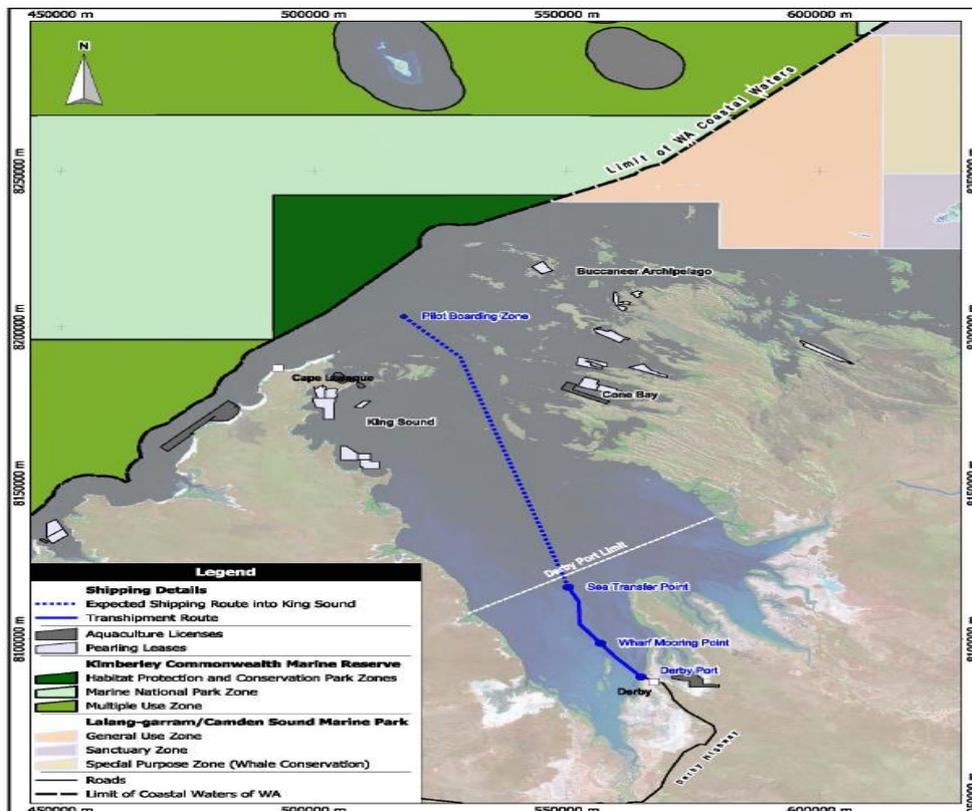
Tug boats and transshipment vessels travel at slow speeds, and use diesel fuel. Minor diesel spills in warm subtropical marine environments (like the waters of Derby Port) tend to spread out and evaporate quickly, and spills can be minimised by use of spill kits which are available on vessels and in the Port. Large ocean-going vessels are required to meet international standards by having a Ship Oil Pollution Emergency Plan and basic oil spill equipment on board. Marine industries in and around the Derby Port will be protected from any negative effects of the Thunderbird Project.



References

Fletcher, W. J. and Santoro, K. (eds). 2015. *Status Reports of the Fisheries and Aquatic Resources of Western Australia 2014/15. The State of the Fisheries*. Perth: DoF.

Department of Fisheries (DoF). 2013. *Kimberley Aquaculture Development Zone Project. Assessment on Proponent Information, Environmental Review Document*. December 2013. Perth: DoF.



The figure shows the location of existing aquaculture and pearling operations. None are close to the area where barging movements or transfer of product from barges to the ocean-going vessels will occur

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