FACT SHEET #8

About the Environment

STUDIES FOR BENTHIC HABITATS AND COMMUNITIES

Experience growth.

Current status: Studies commencing September 2018

Consultant engaged: To be announced

Benthic communities are the animal and plant organisms that live on ocean and estuarine floors. Algae, seagrass, mangroves and corals are the benthic communities relevant to the Ashburton Salt Project. Scientists refer to them as Benthic Primary Producer Habitats (BPPHs).

These habitats are important for maintaining biodiversity and the integrity of the marine ecosystem by providing food and shelter for marine animals. They feed fish and crustaceans, which in turn underpin commercial and recreational fishing. Mangrove communities also stabilise shorelines and algal mats capture nitrogen, which is important for the growth of marine organisms.

What we are doing

The benthic study for the Ashburton Salt project will include the following activities:

1. A desktop review of existing information about communities and habitats in the area, including identifying, describing and mapping the information.
2. Field work and the collection of new data to develop a nutrient balance model. This includes:
    a. Assessment of the mangrove communities along the entire eastern side of the Exmouth Gulf.
    b. Measurement of photosynthetic rates of mangroves and algal mats.
    c. Collection of cores from algal mats and salt mats to measure thickness, structure and species composition of algae as well as concentrations of nutrients in the samples.
    d. Determining the nutrient flux between freshwater creeks and Exmouth Gulf by comparing the nutrient concentrations for ingoing and outgoing tides.
3. Determining the direct loss of benthic communities and habitats, if any, due to project clearing and habitat disturbance.
4. Determining the indirect loss of benthic communities and habitats, if any, due to the project. Information on groundwater, hydrodynamic marine activity, tidal activity and surface water will be used to predict any indirect effects.
5. Identifying any critical associations between important marine fauna, including sea and shore birds, and key benthic communities.
6. Determining the potential effects of discharge from the project on benthic communities and habitats.
7. Evaluating the combined direct and indirect impacts.
8. Recommending monitoring, management and mitigation measure for construction, operation and closure.

FOR MORE INFORMATION:

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Experience growth.

How we will use the information

K+S is planning the Ashburton Salt Project with the flexibility to avoid and minimise environmental impacts by changing the project design. Existing principles in relation to benthic communities and habitats include:

- No benthic communities or habitats will be cleared for the salt ponds.
- Any clearing for infrastructure and dredging of the small berthing pocket will be minimised.
- The project design will be engineered so that is does not significantly alter water flows or water quality.

Date of fact sheet review

September 2018

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