Ashburton Salt Project

About the Environment: Fact sheet #1

BENTHIC COMMUNITIES

Experience growth.

A benthic community is made up of organisms (both animals and plants) that live on the bottom of a water body, such as the ocean floor. Marine benthic communities dominated by algae, seagrass, mangroves and corals (or a mixture of these) are referred to as Benthic Primary Producer Habitats (BPPHs).

WHY ARE BPPHS IMPORTANT?

BPPHs play an important role in maintaining the biodiversity and integrity of marine ecosystems by providing shelter and food for marine animals. Healthy BPPHs benefit humans too, by feeding the fish and crustaceans that our fishing industry depends upon, and protecting our coastlines by altering ocean currents and weakening the waves hitting the beaches.

For example mangrove communities stabilise the shoreline and sediment, provide habitat (terrestrial and marine), for fish and crustacean nurseries and input nutrients to coastal ecosystems. Algal/cyanobacterial mats take nitrogen out of the air, making it available to marine organisms that need nitrogen to grow.

WHERE ARE THE BPPHS?

Locally, algal mats and mangroves are located on the coastal mud flats. Mangroves grow on the low lying coastal fringing mudflat and are flooded regularly (often twice daily) due to incoming tides. Algal/cyanobacterial mats form on the upper reaches of the mud flats that are submerged only occasionally after spring tides (just after a full moon). The mangroves and algal mat areas surrounding the Ashburton Salt Project have been mapped using high resolution aerial photography and "ground-truthing" will be undertaken with site surveys. The Project is being designed to ensure the majority of proposed disturbance will not affect the mangrove and algal mat areas including ensuring an adequate buffer between the salt ponds and these areas.

Seagrass beds and corals are likely to exist off the coast. Coral is unlikely to occur close to the coast but may surround offshore islands further afield. There has not been a detailed seagrass survey for the Project yet, however past mapping indicates seagrass beds occur along the coastline of the Project area. "Ground-truthing" via site surveys will be undertaken of both seagrass and coral occurring nearshore. The project is being designed to ensure seagrass beds and corals will not be disturbed as well as minimise any potential water quality impacts.

WHAT BPPHS COULD BE AFFECTED BY THE PROJECT?

The salt ponds will be positioned so that there is an adequate buffer between the ponds and the algal mats and mangroves. There may be some very minor clearing of small amounts of mangroves and algal mats required for roads and pipelines. The project is being designed to minimise indirect impacts to mangroves and algal mats as well by minimising changes to tidal inundation and minimising water quality changes.

The coral and seagrasses are less likely to be affected, as the Project is located primarily on the salt flats. Dredging (deepening) of the sea floor will be minimised (if required at all) and areas containing coral and seagrass beds will be avoided where possible. The project is being designed to minimise indirect impacts by ensuring minimal changes to water flows, water quality and proper management of activities such as boat movements and ballast water handling.

HOW WILL K+S AVOID AND MINIMISE IMPACTS TO BPPH?

The Project has the flexibility to avoid and minimise environmental impact by changing the project design as environmental studies are completed. No BPPHs will be cleared for the salt ponds, and clearing for infrastructure and dredging (if even needed) will be minimised. The Project design will be engineered so that it does not significantly alter tidal or ocean flows or water quality. Management measures will be in place for boat movements, ballast water, dredging and minimising changes to water quality.

K+S recognises that benthic primary communities are important parts of the local environment and are committed to minimising any impacts to them.