

Papyrus Swamps is a unique wetland type with national conservation status which fulfils a significant role in local pollution reduction.

Human activities have transformed the historical floodplain, impacting the ability of the zone to route major flood events. The zone is under pressure for development, notably large scale expansion of the port.

The land use map shows a number of undesirable activities in this zone with potential to harm ecological sustainability. These include upstream damming, commercial agriculture, diversion of water courses and industrial development. There are also illegal sand mining activities.

A number of existing activities are constraints to port expansion:

- The slimes dam from the mining operations at Hillendale poses a risk to the hydrological and ecological integrity of the area.
- The Foskor Phosphogypsum Stack or slimes dam between Bayside Aluminium and the papyrus swamp is a contaminated site with potential to severely constraint future port expansion.
- The location of Bayside Aluminium.

The Richards Bay Industrial Development Zone lies adjacent to the zone. IDZ 1A extends into the floodplain management zone.

### **OPPORTUNITIES IN THIS ZONE:**

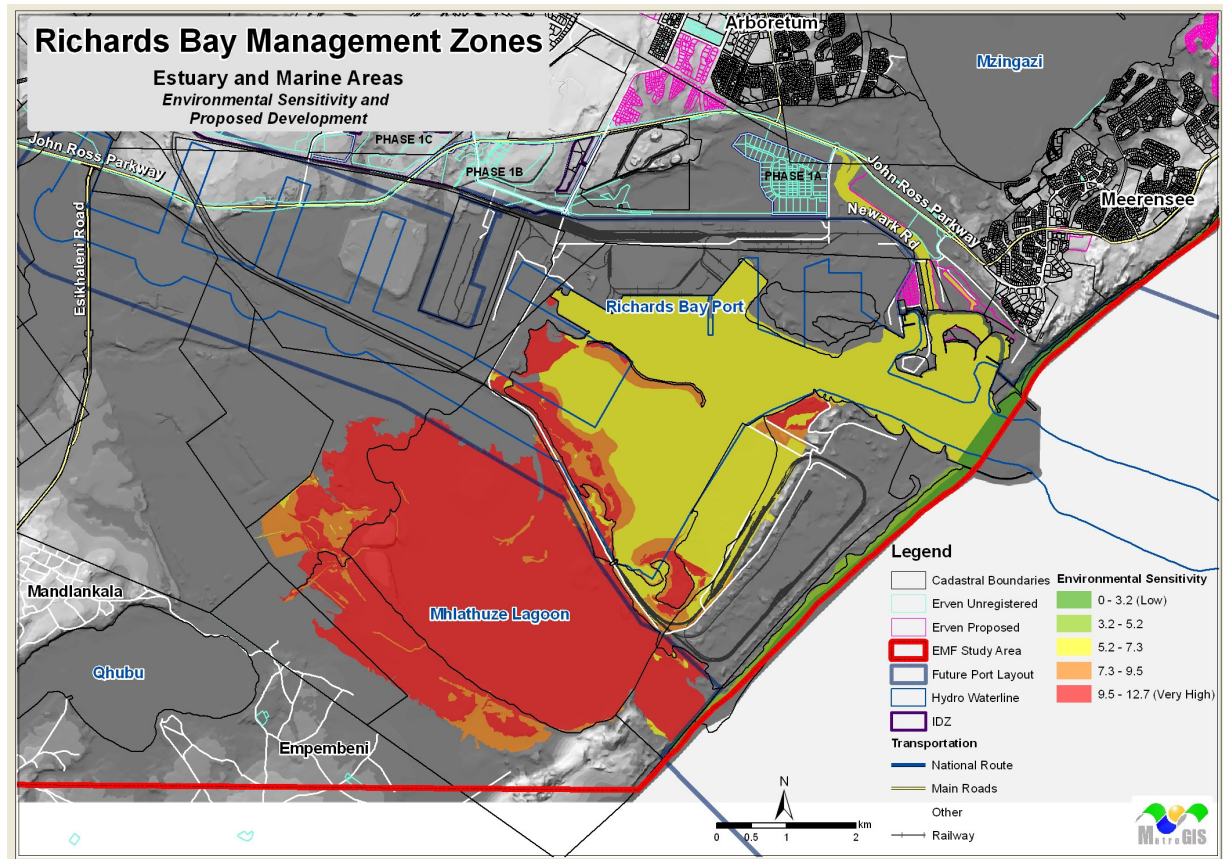
The major opportunity in this zone is the potential for port expansion due to landscape level-characteristics. The zone also offers opportunities for meeting conservation targets. It has already been identified for its inherent rehabilitation potential. As such there are opportunities to recreate habitats in the areas currently under sugarcane. The establishment of an offsets area presents further opportunities for developers in the broader study area. The formalisation of these areas will present research opportunities.

### **POTENTIAL CONFLICTS BETWEEN OPPORTUNITIES:**

There is an obvious conflict between the need for conservation of critical ecosystem assets and port expansion. Competition for land presents potential conflicts between agriculture and port expansion and/or conservation.

### 4.4.3 Zone 3: Estuary, Marine and Seashore Area

The original Mhlathuze estuary was transformed to its present state consisting of the northern deep-water. This management zone makes provision for two estuarine entities, namely the Port Estuary and the southern Sanctuary Estuary. This zone also acknowledges the interconnectedness between the estuarine and marine environment, including the seashore. The zone is predominantly used for conservation and harbour activities.



**Figure 53: ZONE 3: Estuarine, Marine and Seashore Area (Environmental Sensitivity and Proposed Land Use)**

#### CONSTRAINTS IN THIS ZONE:

The estuary entities in this zone are on the receiving end of rivers, streams, canals and diffuse seepage zones of freshwater that drain towards them. These streams are all linked hydrologically and ecologically to the surrounding lakes, swamps, and wetlands.

There are significant features and characteristics in both of these estuarine entities that rate them as nationally (and globally) important estuarine ecosystems such as the intertidal mudflats and sandflats, mangroves and the Mzingazi canal. The Port Estuary has an important role in providing refuges, nursery grounds and feeding areas for marine and estuarine dependent organisms that support the regional prawn trawling industry and fisheries. The Sanctuary Estuary contains the largest mangrove forest in South Africa.

Pollution and sedimentation from land-based activities arising in the other management zones place pressures on this zone. Port expansion related activities have the potential to significantly harm

ecological sustainability in this zone. Climate change and sea level rise is a significant long-term threat to this ecosystem.

Disposal of dredge spoil during construction and maintenance dredging may pose a threat to the environment. The contribution of shipping emissions, particularly sulphur dioxide, to ambient air quality is a concern.

### **OPPORTUNITIES IN THIS ZONE:**

The development of the harbour and its supporting infrastructure has created many opportunities for development, including for expansion and future socio-economic growth for the area. While the Port Estuary presents opportunities for performing a biological function it also presents opportunities for expanding its trade functions.

These zones present opportunities for conservation of critical ecosystem types - could maintain their contribution to the national and regional economy, as well as contribute to local sustainable livelihoods. The subtropical climate coupled with the warm ocean, beaches, wetlands, harbour and estuarine features, marine activities and the general scenic beauty of the area presents opportunities for recreation and ecotourism.

### **POTENTIAL CONFLICTS BETWEEN OPPORTUNITIES:**

There is a potential conflict between conservation and port/harbour expansion that will require strict development control.