

4.4.2 Zone 2: Floodplain Area

This zone is part of an alluvial plain and characterised by the existence of various interconnected hydrological features such as inflowing rivers, short flowing streams and drainage canals and wetlands. **Figure 52** reflects the topographical attributes that distinguish the area from the coastal plain. It also illustrates environmental sensitivity and proposed development. This zone was purposefully separated from the Estuarine, Marine & Seashore Zone to focus management intervention on priority environmental attributes. It may be feasible to adjoin the two zones in future updates of the EMF.

The land is predominantly used for commercial sugarcane agriculture, port infrastructure and heavy industrial development (Bayside Aluminium).

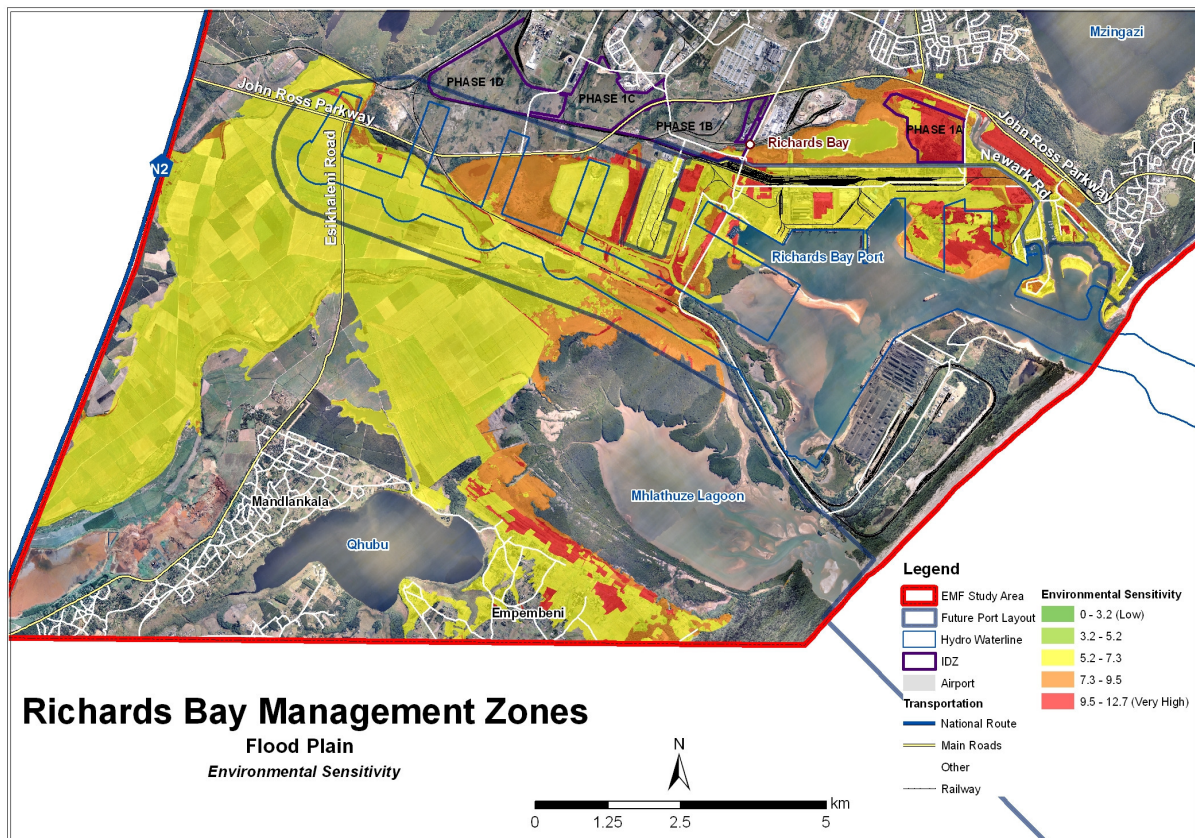


Figure 52: ZONE 2: Floodplain Area (Environmental Sensitivity and Proposed Land Use)

CONSTRAINTS IN THIS ZONE:

The single most significant constraint for development in this zone is its location in the landscape. The floodplain experiences occasional or periodic flooding. Geotechnical constraints prevail in the area and development is not preferred in areas falling below the 1: 100 year floodline and/or marshy areas which are susceptible to a perennial perched water table at depths shallower than 0.5m. Climate change and sea level rise is a major risk over the medium to long-term.

The floodplain contains significant terrestrial and aquatic ecosystem types. Some of these assets have national and global value and therefore presents constraints to port expansion. The Richards Bay

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.