

**Klein River Estuarine Management Plan
Summary notes from the Draft Situation
Assessment Report dated 13 December 2007**



DRAFT SITUATION ASSESSMENT SCOPE AND STRUCTURE OF REPORT

- **Fundamental concepts**
- **Policy and planning environment**
- **Planning instruments**
- **Systems assessments –**
 - **Catchment hydrology, river health**
 - **Estuarine system**
 - **Catchment-wide conservation assessment**
 - **Land use and infrastructure**
 - **Social systems**
 - **Extractive resource use, goods, services**
 - **Landscape**
- **Data assessment**
- **Integrated assessment, conclusion, recommendations**
- **Appendix – data sheets**

DRAFT SITUATION ASSESSMENT FUNDAMENTAL CONCEPTS

- **The EMP will (p11):**
 - **give effect to the principles of sustainable development as articulated in the NFSD (2006);**
 - **identify the linkages for integration with the municipal IDP**
 - **contribute to meeting overall conservation targets for temperate estuary habitats**
 - **provide the required framework for the participation of all government and non-government organisations and individuals who have a role or interest in the EMP**
 - **employ adaptive management as a technique for mobilising the management of the estuary as an urgently required intervention**

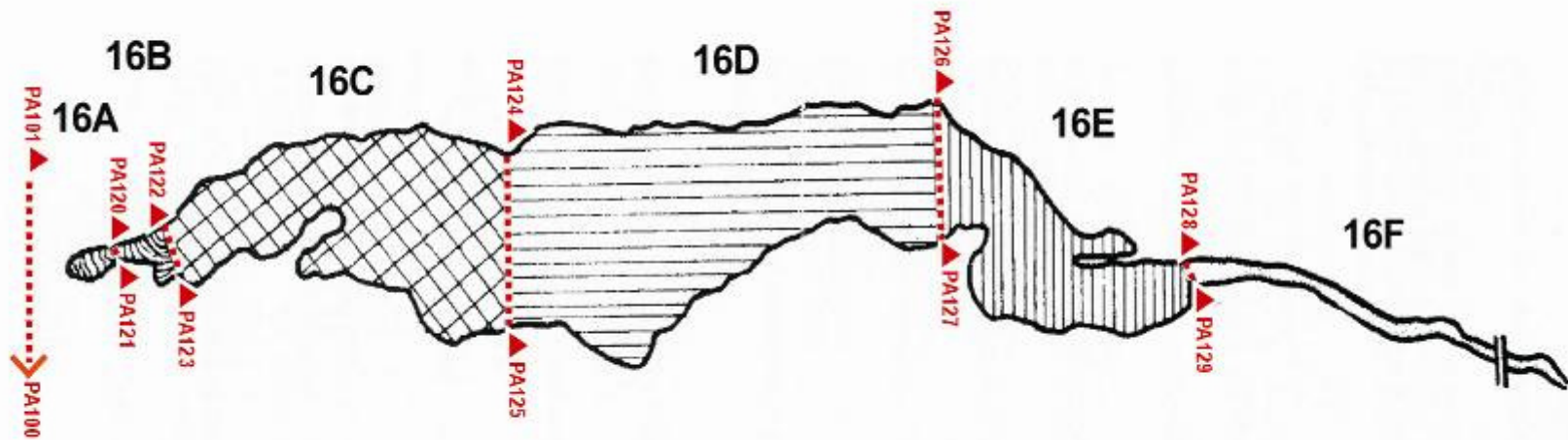
DRAFT SITUATION ASSESSMENT POLICY AND PLANNING ENVIRONMENT

- **The Klein EMP will be informed by national and regional policies and strategies for (p24)**
 - **integrated environmental management**
 - **marine resources and coastal management**
 - **catchment management**
 - **biodiversity conservation in particular w.r.t. estuaries**
 - **the conservation of agricultural resources**
 - **the roll-out of municipality-wide spatial planning and land use management**
- **And will consult the legislation for guidance on mandates, etc**

DRAFT SITUATION ASSESSMENT PLANNING INSTRUMENTS

- **The EMP will engage with the following planning instruments (p37):**
 - **IDP and SDF of Overberg DM and Overstrand**
 - **C.A.P.E. Bioregional Programme**
 - **Overberg Fine-Scale Biodiversity planning**
 - **Agulhas Biodiversity Initiative**
 - **Breede River Water Management Strategy**
 - **Kleinriviersvlei Structure Plan**
 - **Zoning schemes –**
 - **municipal-wide land use scheme**
 - **coastal zoning scheme**
 - **estuary use zones**

Recreational use zones



DRAFT SITUATION ASSESSMENT CATCHMENT HYDROLOGY, RIVER HEALTH

- **The EMP should include mechanisms for supporting (p45):**
 - **Riparian corridor set back, management and/rehabilitation for the immediate catchment**
 - **Prioritisation of detailed mapping of all wetlands in the catchment - Integration into terrestrial biodiversity conservation planning**
 - **Prioritisation for river monitoring on an ongoing basis; Prioritisation for water abstraction monitoring and control (surface and groundwater)**
 - **Prioritisation of farm-scale planning in priority areas where degradation / erosion could be having a major impact, especially in special or endangered or critically endangered habitats**

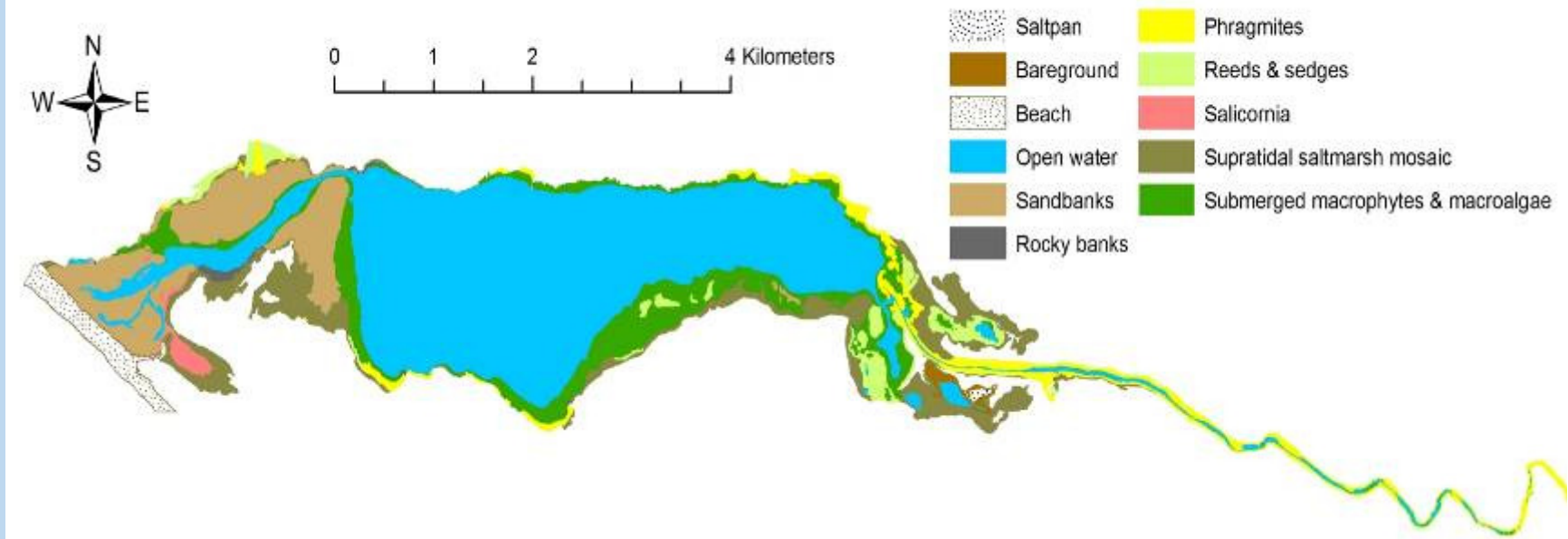
BREDE WATER MANAGEMENT AREA, KLEIN RIVER QUATERNARY CATCHMENTS (Fig.7 p38)



DRAFT SITUATION ASSESSMENT ESTUARINE SYSTEMS

- **Priorities (p58):**
 - **Determination of the ecological reserve for the Klein requires a complete suite of data in order to be effective**
 - **In the interim, priority should be awarded to obtaining data on river flow, bathymetry and sediment load**
 - **Given the paucity of current information on the Klein River estuary, it is appropriate that adaptive management and associated monitoring is employed as the strategy for the Klein River EMP**

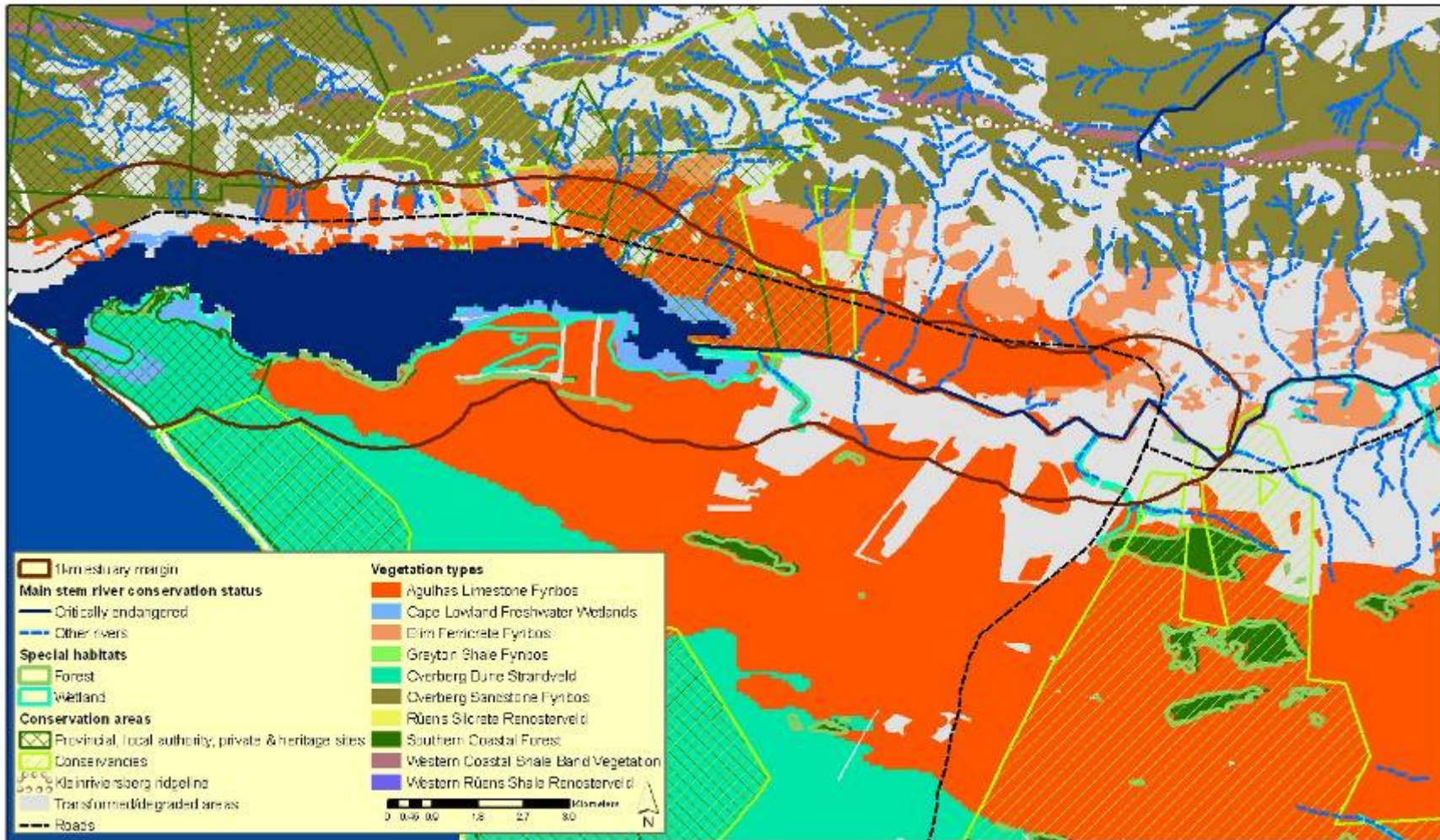
GIS Mapping of Estuarine Habitats



DRAFT SITUATION ASSESSMENT CATCHMENT-WIDE CONSERVATION ASSESSMENT

- **The EMP should (p67):**
 - **Prioritise finer-scale vegetation and habitat mapping of the areas surrounding the estuary**
 - **Inform all land use decisions within the direct catchment influence on the estuary (focusing on G40L and G40K)**
 - **Adopt an integrated conservation planning approach to link ecosystems, based on a discussion around the terrestrial buffer, its extent and linkages to other areas, as well as its status in law**
 - **Identify all relevant state owned land of endangered / critically endangered status and enable formal protection**
 - **Identify and prioritise privately owned land of the same status for stewardship arrangements.**
 - **Contribute to the development of an invasive alien plant management strategy for the catchment**

TERRESTRIAL MARGIN AND BIODIVERSITY INFORMANTS (Fig.12 p66)



DRAFT SITUATION ASSESSMENT LAND USE AND INFRASTRUCTURE (p78)

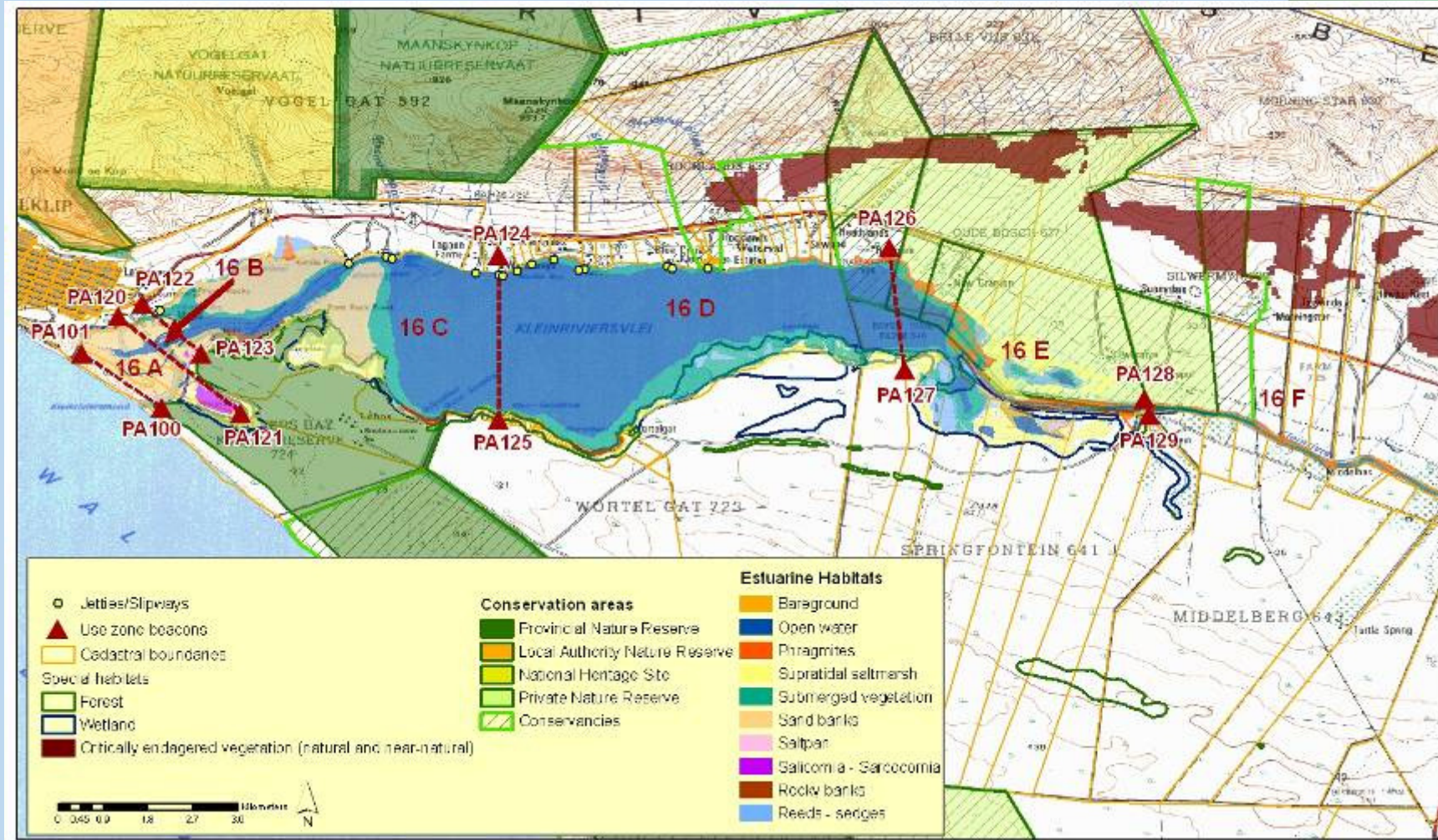
- **The EMP should Provide guidelines for preferred and non-preferred land uses, based on estuarine health priorities, and identify existing activities that pose a high risk**
- **The EMP should identify opportunities in the study area for acknowledging and respecting the limits that the environment imposes, and supporting those opportunities through the EMP (e.g. initiatives like the proposed cycle path)**
- **Identification of current impacts on water quality need to be verified by water quality data. The leiwater issue needs urgent investigation**
- **The precautionary principle should be applied in assessing proposed developments – EMP can provide some guidelines**

Continued .../

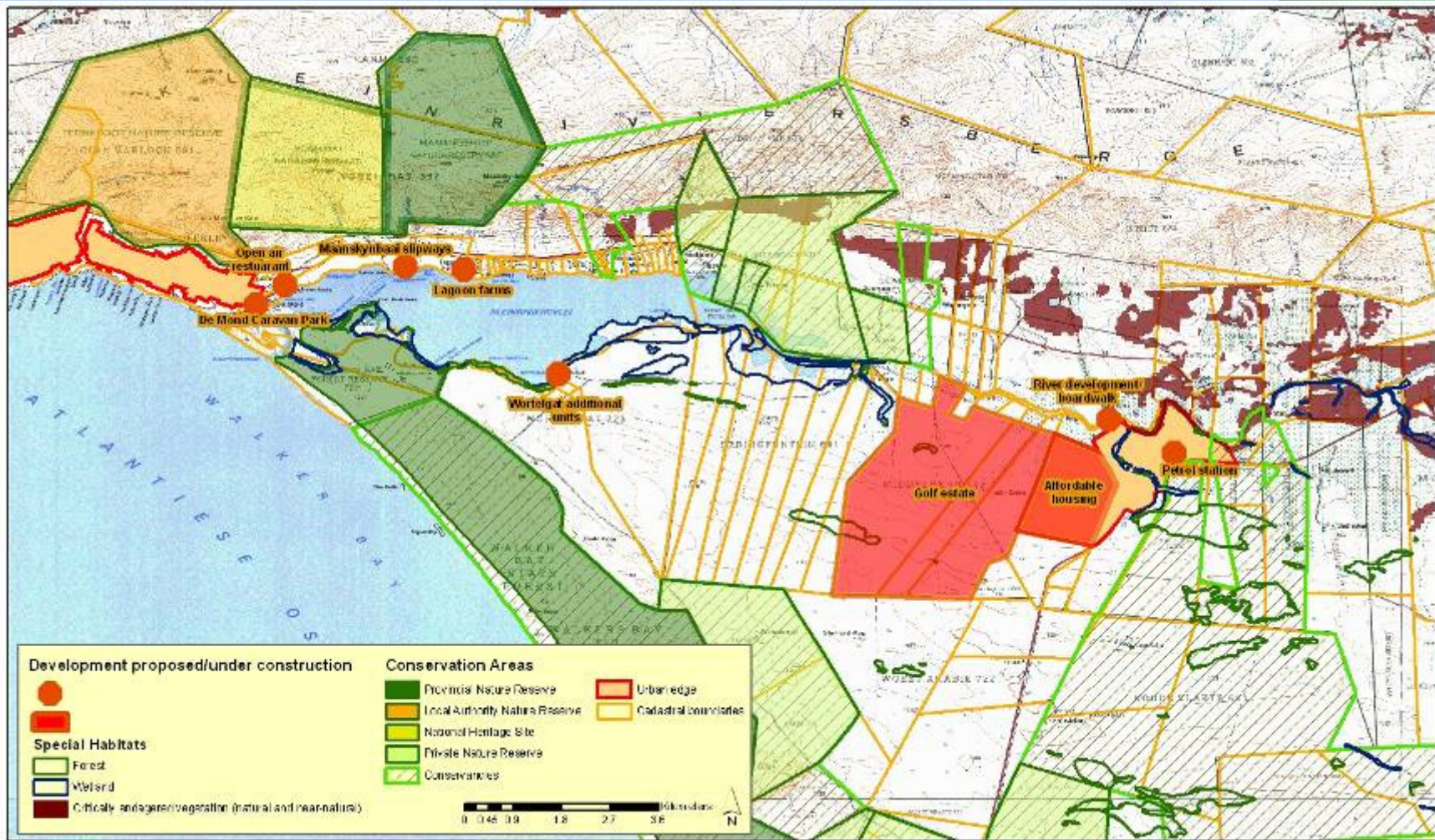
DRAFT SITUATION ASSESSMENT LAND USE AND INFRASTRUCTURE

- **Public recreation areas need to be more visible. Appropriate location and form of these, relative to proposed estuary zoning and preferred / non-preferred land use, should be addressed in the EMP**
- **Liaison with the Overberg District Municipality regarding Disaster Management Planning relating to floods is needed. Lessons learned in November 2007 should be captured while these are still fresh**
- **The EMP should support the investigation and determination of limits of groundwater reserves**
- **The EMP must identify a management approach to recreational carrying capacity that is linked to a monitoring system and can respond to early warning signals**
- **The existing protected areas in the estuarine environment present potential for corridor linkages that should be investigated through a variety of protection mechanisms**

ESTUARINE RECREATIONAL USE ZONES AND RELATED INFRASTRUCTURE (Fig.13 p71)



DEVELOPMENTS UNDER CONSIDERATION (Fig. 15 p76)



DRAFT SITUATION ASSESSMENT SOCIAL SYSTEMS

- **Priority issues include (p85):**
 - **Setting up and assisting the TWG**
 - **Obtaining further input on riparian rights and any prescriptive rights**
 - **Development of a heritage registry – including mapping of milkwood trees**
 - **Obtaining broader representation**
 - **Maintenance and permitting of slipways (litigation implications in case of accident)**

DRAFT SITUATION ASSESSMENT

EXTRACTIVE RESOURCE USE, GOODS AND SERVICES (p88)

- **The EMP needs to address:**
 - **Further investigation of the estuary's functioning as a nursery area for marine species, in particular the role of mouth management, water quality and quantity and the definition of a sufficiently large nursery area as a no-take zone**
 - **Tourism and recreation aspects and the potential impact of poor management in terms of shoreside facilities and water quality and quantity**
 - **The need to develop a consolidated data set on current rates of surface and ground water abstraction and uses (including waste water discharge) for the estuary**
 - **Dealing with compliance and enforcement / permitting and poaching – harvesting of marine living resources**
 - **Taking into account both the impacts and value of the uses of the estuary, as well as the potential conflicts associated with use and value, using the framework developed by Turpie and Clark (2007)**

DRAFT SITUATION ASSESSMENT LANDSCAPE VALUE

- **The EMP will (p89):**
 - **Take into account the visual impact of any proposals, for example relating to any shoreside recreational facilities, relative to landscape value**
 - **Endeavour through its interventions to strengthen the landscape heritage aspect of the proposed Scenic Route**
 - **Support the Municipality's proposals by identifying measures that will satisfy ecological sustainability and landscape considerations**

DRAFT SITUATION ASSESSMENT DATA ASSEMBLY / ASSESSMENT

- **Assembling of the data consumes the bulk of the effort**
- **Recommended establishment of an estuaries database (BCM CZMP)**
- **Some data for Klein outstanding / possibly not discovered**
- **Database included in Section 12 (pp93-95)**
- **Requires TWG input to identify sources / additional references not listed**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Sorted in themes (as recommended in Generic EMP prepared by CSIR):**
 - **Conservation**
 - **Social and cultural issues**
 - **Land use and infrastructure**
 - **Water quantity and quality**
 - **Exploitation of living resources**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Conservation:**
 - **Economic importance of Klein – nursery area vital to sustaining fisheries, tourism value**
 - **Ranked 5th most important temperate estuary in SA for meeting biodiversity conservation targets**
 - **To achieve targets, need to conserve 50% of water surface and estuary margin**
- **Recommended strategy: establishment of an Estuarine Management Area as a spatial framework that assembles a range of mechanisms for achieving biodiversity conservation targets for the estuary and its terrestrial margin**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Social and cultural issues:**
 - **Diverse range of IAPs requires a participatory planning, co-operative governance and co-management based approach**
 - **Overstrand Municipality has a significant role – EMP must find strategies for supporting its developmental agenda**
 - **EMP needs to address issues relating to private ownership of estuary margins, poaching, vandalism, public access, conflict around recreational uses**
- **Recommended strategy: Support the establishment and ongoing operation of a broadly representative and enduring Estuarine Forum, as well as a TWG, that will work on a co-operative management basis to harness social and political will for the purpose of achieving their common vision as represented by the Estuarine Forum's objectives**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Land use and infrastructure:**
 - **Lack of clarity relating to proposed RDA**
 - **Pollution threat of discharges into estuary**
 - **Physical carrying capacity for recreational use**
- **Recommended strategy: Support the establishment and sustainability of an Estuarine Management Area through the application of relevant regulations and the introduction of municipal by-laws and enforcement capacity**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Water quantity and quality:**
 - Essential for biodiversity and tourism values
 - Mouth management
 - Abstraction, ecological Reserve
 - Alien vegetation control
- **Recommended strategy: Initiate a well-designed system for monitoring water quantity and quality with a view to the introduction of Resource Directed Measures. Apply the principles of adaptive management**

DRAFT SITUATION ASSESSMENT INTEGRATED ASSESSMENT (SECTION 13)

- **Exploitation of living resources:**
 - **Appears to be small scale but due to nursery status, even small losses are significant**
 - **Impact of illegal harvesting**
- **Recommended strategy: Engage with DEAT-MCM, the local municipality and communities, and other stakeholders to address the issue of illegal harvesting of marine living resources at the local level**

KLEIN ESTUARINE FORUM'S INSTRUCTIONS TO THE TWG

- **The Klein Estuary Management Plan will.....**
 - **ensure the integrity of the estuarine ecosystem and its natural environs**
 - **promote the optimal long-term utilisation of the estuary in a sustainable way**
 - **address all impacts on the built environment and natural, cultural, social and economic systems**
 - **be integrated with the Klein Rural Development Framework as provided for in the Overstrand SDF**
- **These represent the basis for articulating Klein EMP's strategic objectives / outcomes**