

**OUTENIQUA
RESERVE DETERMINATION STUDY**

BACKGROUND INFORMATION DOCUMENT
June 2007

DEPARTMENT OF WATER AFFAIRS & FORESTRY

PURPOSE OF THE BACKGROUND INFORMATION DOCUMENT

The purpose of this document is to inform water users and other stakeholders in and associated with the **Outeniqua Coast catchment** areas of the Ecological Reserve assessment activities to be undertaken over the next two years.

INTRODUCTION

The National Water Act of 1998 (Chapter 3, Part 3) provides for the protection of significant water resources through the **Reserve**. As the Department of Water Affairs and Forestry (DWAF) is the custodian of the nation's water resources, it is the Department's responsibility to ensure the adequate protection, effective management and sustainable utilisation of these resources.

The Chief Directorate (CD): Resources Directed Measures (RDM) within the DWAF is tasked with the responsibility of ensuring that **Reserve requirements**, which have priority over other uses in terms of the Act, are determined before **license applications** can be processed, particularly in water-stressed catchments.

The DWAF has appointed Coastal and Environmental Services (CES) and Southern Waters Ecological Research and Consulting cc (Southern Waters) as the Technical Professional Service Providers to conduct **Ecological Reserve** determination studies for the water resources of the Outeniqua Coast catchment. CES will be responsible for the Reserve determination related to the Knysna and Swartvlei River systems, including the estuaries as well as a desktop assessment of wetlands.

Southern Waters will conduct the Reserve determination for the Groot Brak, Klein Brak, Gwaing, Kaaimans, Goukamma and Knoetzie River systems. In addition to the above river systems reserve determinations will also be done on the Groot Brak estuary as well as

the ground water components of all the river systems in the catchment.

BKS (Pty) Ltd, in association with Londoloza Environmental and Conservation Management Solutions cc (Londoloza), have been appointed as the Project Management Team for the project. The study is funded by the RDM Directorate of DWAF.

BACKGROUND

The need to undertake detailed Reserve determination studies for water resource components became apparent during the Inception Phase of the Outeniqua Coastal Water Situation Study undertaken under the auspices of the Directorate National Water Resources Planning of the DWAF. Specific development pressures, such as increased residential and leisure estate developments, especially around the towns of George, Mossel Bay and Knysna, along with an increase in farming activities and the associated impacts of these developments on the availability of water resources necessitated this.

The DWAF, through the CD: RDM, subsequently initiated an integrated Reserve determination study for selected surface water, groundwater, estuaries and wetlands in the Outeniqua Coast Catchment. The consequential higher level of confidence in the Reserve determination results will assist the DWAF to make informed decisions regarding the authorisation of future water use and the magnitude of the impacts of proposed developments.

Reserve determinations can be conducted at a *Rapid*, *Intermediate* or *Comprehensive* level. Each level of determination entails a more detailed (higher confidence) investigation than the previous level. The level of assessment to be conducted depends on a number of factors, such as:

- Sensitivity and importance of the catchment
- Degree to which the catchment is already disturbed or utilised

- Potential impact of a proposed water use
- Availability and confidence of data

The various water source components (i.e. different rivers, estuaries, groundwater, wetlands, etc) were identified as requiring different levels of assessment before the **water allocation process (compulsory**

Reserve: The quantity and quality of water needed to sustain basic *human needs* and *ecosystems* (e.g. estuaries, rivers, lakes, groundwater and wetlands) to ensure ecologically sustainable development and utilisation of a water resource.

Ecological Reserve: The quality and quantity of water required to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource.

Ecological Reserve determination study: The study undertaken to determine Ecological Reserve requirements.

Licensing applications: Water users are required (by legislation) to apply for licenses prior to any water use from a water resource.

Catchment: The area in which all water ultimately flows into the same river.

Ecological Water Requirements: This is the quality and quantity of water flowing through a natural stream that is needed to sustain in-stream functions and ecosystem integrity at an acceptable level, as determined during an Ecological Reserve determination study.

Compulsory licensing: This is a process where all existing and new water users are requested to reapply for their licenses, particularly in geographic areas where there is an over-allocation of water or an inequitable distribution of entitlements. Re-allocations are then done to normalise and optimise the situation, and also to ensure adequate protection of the aquatic eco-systems.

licensing) can proceed. Thus, any Reserve assessments carried out on the water resource components will vary in detail from medium to high. Once Reserve requirements are available, the allocatable resource could be determined and water use applications evaluated.

OUTENIQUA RESERVE STUDY

The study area for the Reserve determination will include the Knysna and Swartvlei as well as the Groot Brak, Klein Brak, Gwaing, Kaaimans, Goukamma and Knoetzie river systems, all part of the larger Gouritz Water Management Area (see attached map).

Work conducted on these river systems will determine required water quantity (flow) and quality conditions (collectively named **Ecological Water Requirements**) for the *Ecological Reserve*. The various surface water source components, i.e. rivers, estuaries and wetlands, will be assessed at different confidence levels and integrated with the relevant groundwater Reserve where appropriate.

Intermediate assessments will be undertaken for the Groot Brak and Knysna river and estuary systems. The remaining rivers, ie the Malgas, Kaaimans, Goukamma, Maalgate, Moeras, Gwaing, Swart, Silver, Swartvlei and Knoetzie river as well as the Kaaimans and Swartvlei estuary systems will be assessed in less detail at *Rapid* level due to certain data requirements not being met. In so doing a number of river and estuarine surveys will be undertaken.

A priority wetland (possibly Rondevlei) will be identified on which the Reserve will be assessed at *Rapid* level.

Groundwater Reserve assessments will be undertaken at *Rapid* level for the Groot Brak, Kaaimans, Goukamma, Swartvlei and Knysna catchments.

In addition to the above the socio-economic water use situation in the study area will be outlined. This will include a qualitative assessment of conventional measures of economic impact due to changes in water yield under different scenarios and potential impact on recreational use.

TIME-FRAMES

The planning stages for the various tasks of the project were undertaken from October 2006 to April 2007, with the first field surveys being conducted from April 2007 overlapping the final stages of planning.

The report finalisation for the study along with the DWAF's decision making is expected to take place from October 2008 to April 2009.

Tovho Ndiitwani	DWAF, Cape Town	021-9507124
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PROJECT TEAM

The project is managed by Dr Aldu le Grange of BKS in Bellville and Mr Eugene Matthews of Londoloza in George.

Dr Patsy Scherman of CES in Grahamstown is the Technical Team Leader for the Knysna and Swartvlei component of the project. Dr Cate Brown of Southern Waters in Cape Town is the Technical Team Leader for the Groot Brak and other catchment components. They can be contacted with any queries. They are working in co-operation with:

- Ms Barbara Weston (Deputy Director) and Ms Retha Stassen (Study Manager) of the CD: RDM, DWAF, Pretoria.
- DWAF Western Cape Regional Office, Bellville, contact person MsTovho Ndiitwani-Nyamande.

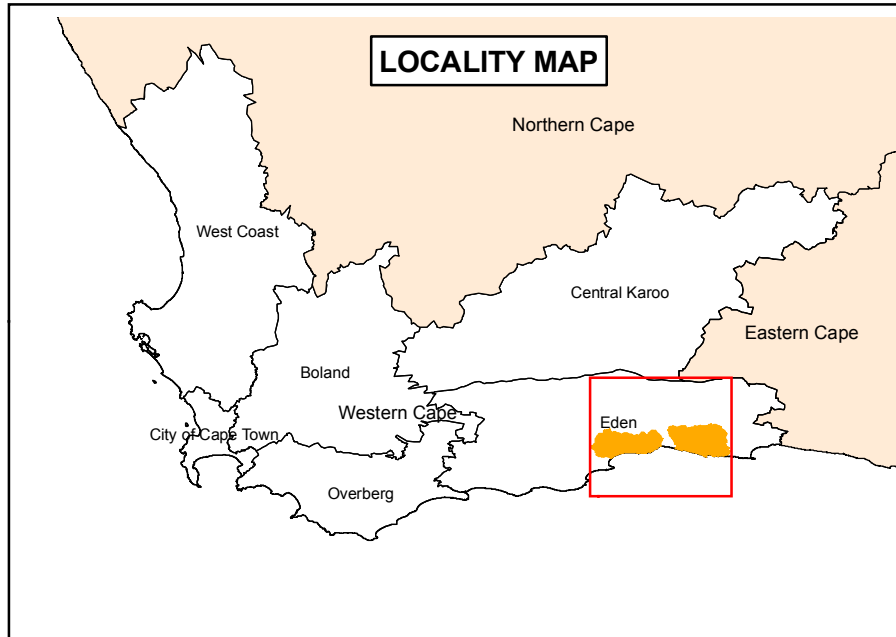
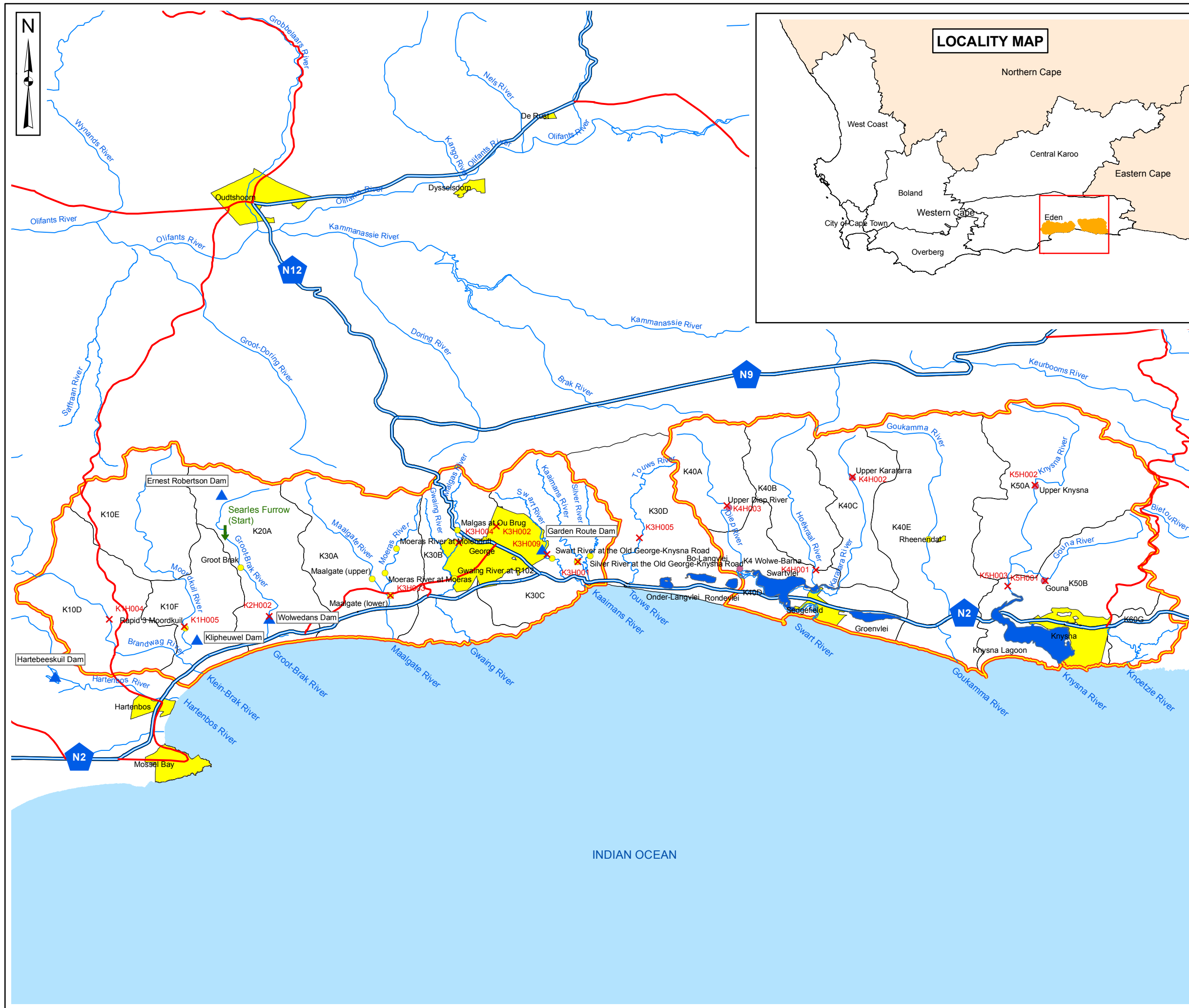
Although an extensive public participation programme will not be conducted as part of the Ecological Reserve study, stakeholders will be registered for public awareness and information transfer.

During the course of this study results will be made available on an ad hoc basis and will be distributed via electronic newsletter. Electronic copies of various specialist presentations will also be made available from time to time to keep stakeholders informed about the progress during the study period.


Please feel free to stop and ask questions of the specialists when they are in the field or to contact us regarding any questions, queries or information. We would like to express our gratitude to the landowners for their willingness to allow us access to their properties and for their hospitality.

Contact details are provided below:

Team member	Responsibility	Contact number
Patsy Scherman	Technical Team Leader : Knysna and Swartvlei components	046-6222364 082 503 6070
Cate Brown	Technical Team Team Leader : Groot Brak and other catchment components	021-4653135 082 925 6699
Aldu le Grange Eugene Matthews	Project Management Team	021-9507500 083 462 0817 044-8840481 082 718 8356
Barbara Weston	Deputy Director, CD: RDM, DWAF, Pretoria	012-3368221 083 631 0801
Retha Stassen	Study Manager, CD: RDM, DWAF, Pretoria	012-3367843 082-3718109



LEGEND	
	Searles Furrow
	Gauging Stations
	Sub-Study 2 EWR Sites
	Sub-Study 3 EWR Sites
	Dams
	Wetlands / Lakes
	National Roads
	Main Roads
	Main Rivers
	Study Boundary
	Major Town
	Quaternary Boundary

CLIENT	
 DEPARTMENT OF WATER AFFAIRS AND FORESTRY CHIEF DIRECTORATE : RESOURCE DIRECTED MEASURES	
PROJECT	
RESERVE DETERMINATION STUDIES FOR SELECTED SURFACE WATER, GROUNDWATER, ESTUARIES AND WETLANDS IN THE OUTENIQUA CATCHMENT	
TITLE	
LOCALITY OF EWR SITES	
SCALE	FIGURE
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