

Proposed Witteklip Sanitation Services (Waste Water Treatment Works)

BACKGROUND INFORMATION DOCUMENT



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BID No: 383342/1

15 June 2012

PURPOSE OF THIS DOCUMENT

An Environmental Impact Assessment (EIA) has commenced to assist the Nelson Mandela Bay Municipality, Infrastructure and Engineering Department in determining the extent and significance of the environmental and social consequences associated with the proposed Witteklip Sanitation Service Provision (wastewater treatment works).

Notice of an Environmental Impact Assessment Process is given in terms of Regulation 54(3) of the regulations published in Government Gazette No. R. 543 under Section 24(5) of the National Environmental Management Act (Act No.107 of 1998), of the intent to carry out the proposed activity.

Issues of concern and potential environmental and social impacts will be evaluated during an Environmental Impact Assessment process.

The purpose of this Background Information Document is to provide a brief description of the project and process that will be followed and to obtain initial comments and contributions from Interested and Affected Parties (IAPs) on the suitability of the proposed development.

Findings of the EIA, including concerns raised by IAPs, will be submitted to the competent authority, the Department of Environmental Affairs (DEA) for consideration.

IAPs are hereby invited to comment on the environmental, social and economic issues relating to the proposed development. Your comments will ensure that relevant issues are evaluated and will form part of the Assessment Study. Kindly complete the registration form at the end of this document and send (either via email or fax) to Wanda Marais at SRK Consulting, to register your interest in the proposed activity and contribute your input.

Your comment on this document must reach SRK Consulting by **12:00 on 23 July 2012**

Wanda Marais
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E-mail:wmarais@srk.co.za

BACKGROUND & INTRODUCTION

The Department of Economic Development and Environmental Affairs (DEDEA) has previously authorised Calvus Properties to change the land use of Portions 40 and 22 of the Farm Witteklip 466 for the development of low cost housing. The intention is to address the need for this type of housing in the Van Stadens area, and particularly the housing needs of the illegal informal settlement opposite the Van Stadens Wild Flower Reserve. Currently there are no sanitation bulk services in place at Portions 40 and 22 of Farm 466. The change in land use application did not assess the impacts of the sanitation services required for the development as provision of these was deemed to be the responsibility of the Nelson Mandela Bay Municipality (NMBM).

Relevant conditions of the Record of Decision for the change in land use are as follows:

- The sewage disposal system should consist of a waterborne system which can be incorporated into a larger scheme for the area under management by the NMBM; and
- An independent application for authorisation must be submitted to the competent authority for the sanitation service provision to the development.

The NMBM have therefore appointed SRK consulting to undertake an Environmental Impact Assessment and associated Waste License Application for the proposed sanitation services for Portions 40 and 22 of the Farm Witteklip 466.

The aim of the Environmental Impact Assessment (EIA) is to assess the impact of the proposed development as well as to assess the alternative waste water treatment options in order to identify the one which would be the most suitable. Specialist investigations will be identified during the course of the (EIA). The treatment option found to be environmentally and technically suitable during the preliminary investigations will be put forward as the preferred alternative in the application to the Department of Environmental Affairs (DEA).

The EIA process for this assessment will be conducted in accordance with Government Gazette No. R. 543. in terms of the National Environmental Management Act (Act 107 of 1998) Environmental Impact Assessment regulations.

PROPOSED ACTIVITIES

The various components of the proposed Witteklip sanitation service provision are as follows:

- a) A sewer pump station with a 140 m³ capacity sump and three pumps with a pumping capacity of 121 l/s located in the south western corner of the portion 40 of farm 466;
- b) A package plant (waste water treatment works) located in the north western corner of portion 22 of farm 466;
- c) A sludge drying bed (this requirement is dependent on the technology alternative utilised for the proposed package plant);
- d) A 450 mm diameter rising main pipeline connecting the pump station to the package plant aligned along the shared boundary of portions 22 and 40 and then along the northern boundary of portion 22; and
- e) It is proposed to utilise the treated effluent for irrigation of the agricultural land on portions 22 and 40 of farm 466.

LOCALITY

The localities of the sanitation services are constrained by the locality of existing infrastructure, the Witteklip Agrivillage, existing property boundaries and topography of the area. It is proposed that the waste water from the Witteklip Agrivillage be drained along the shortest distance via gravity to a sump in the south western corner of portion 40 of farm 466. The proposed rising main linking the sump to the proposed waste water treatment works (WWTW) is located along the shared boundary of portions 22 and 40 of farm 466, and along the northern boundary of portion 22 farm 466. The proposed WWTW is located in the north western corner of portion 22 of farm 466. A more detailed locality map of the proposed sanitation services is attached to the back of this document.

ALTERNATIVES FOR WASTE WATER TREATMENT

The preferred alternative is to install a WWTW to treat the waste water produced by the Witteklip Agrivillage. It is envisaged that the treated effluent from the WWTW be used for irrigation purposes by the community of the Witteklip Agrivillage. The two technology alternatives for

the proposed WWTW are anaerobic digestion (a biological process of treating raw sewage in the absence of oxygen, using bacteria) and activated sludge (a process of treating raw sewage by means of dissolved oxygen) processes. The advantages and limitations of each process are summarised below.

Anaerobic Digester

- Easier to operate;
- Not possible to obtain enhanced phosphorus removal;
- It has high capital costs but lower operational costs; and
- Temperature affects performance.

Activated Sludge

- Requires skilled supervision in order to be operated effectively;
- Enhanced phosphorus removals are obtainable by biological processes;
- It has a lower capital cost but higher operational costs; and
- Temperature does not affect performance.

NO-GO ALTERNATIVE

The provision of sanitation is a basic human right, therefore the 'no-go' alternative is not feasible in this case as the people in the area have a right to the services proposed.

LEGAL REQUIREMENTS

The EIA process for this assessment will be conducted in accordance with Government Gazette No. R. 385. in terms of the National Environmental Management Act (Act 107 of 1998) Environmental Impact Assessment regulations.

The National Environmental Management Act (NEMA) EIA regulations and the National Environmental Management: Waste Act list activities that may have a significant impact on the environment, and which consequently require authorisation from the Department of Environmental Affairs (DEA). The regulations further specify the assessment process, and the information that is required to enable DEA to make a decision regarding the activity.

The activities associated with the proposed development listed in the table below, listed under Section 19 (Category B) of the National Environmental Management: Waste Act (Act 59 of 2008) and GNR 545 of the 2010 Environmental Impact Assessment regulations, respectively, require a Scoping and Environmental Impact Assessment.

Notice	Activity description
718 (4) B, 7	The treatment of effluent, waste water and sewage with an annual throughput capacity of 55 000 cubic metres.
545, 5	The construction of a waste water treatment works which requires a water use license in terms of the National Water Act for the release of treated effluent.
544, 7	A 450 mm diameter rising main pipeline to the waste water treatment works.
544, 18	The proposed pipeline will cross watercourses and as such will result in the moving of material in excess of 5 cubic metres within watercourses.

In terms of the National Water Act (Act 36 of 1998) a water used licence is required for the operation of the proposed Waste Water Treatment Works as well the use of the treated effluent for irrigation purposes. Therefore a water use licence application will be submitted to the Department of Water Affairs (DWA).

WHAT IS AN ENVIRONMENTAL IMPACT ASSESSMENT?

An EIA is a planning and decision-making tool that is used to identify the environmental consequences of a proposed project, before the development takes place.

The purpose of the EIA is to demonstrate to the authorities and the proponent what the potential consequences of their choices will be in environmental, economic and social terms. Public issues and concerns must therefore be identified timeously so that these can be evaluated and incorporated into the final design if necessary. The EIA consists of two phases. The first phase is a Scoping Study, which identifies potential issues which need more detailed investigation. The second phase is the EIA phase, where detailed investigations of the issues identified during scoping, are undertaken.

PUBLIC PARTICIPATION

Public participation is the cornerstone of any EIA process. The principles of the National Environmental Management Act (NEMA) govern most aspects of EIA, including public participation. These include the ongoing provision by the environmental consultant of any relevant information in an objective manner throughout the duration of the project to Interested and Affected Parties (IAPs).

During the Public Participation Process, input from the Proponent, technical experts, government authorities

and the general public will be gathered to result in a better understanding of the project for all involved and more informed decision-making throughout the process.

The key objective of public participation during the Scoping phase of this project is to provide IAPs with an opportunity to provide comment and input in the planning phase of the project. Issues of concern and suggestions raised by IAPs will be addressed and responded to as required in the Scoping Report, and IAPs will also be given the opportunity to comment on the findings of both the Scoping and EIA Reports and findings of the Specialist studies during the specified comment periods.

Please note that communications regarding the process and the availability of reports will only be sent to registered Interested and Affected Parties.

To register for the process, and thus to receive further communications regarding this project please forward your contact details and nature of interest to SRK. Interested and Affected Parties can register by completing and signing the attached registration sheet and sending it to SRK.

EIA PROCESS

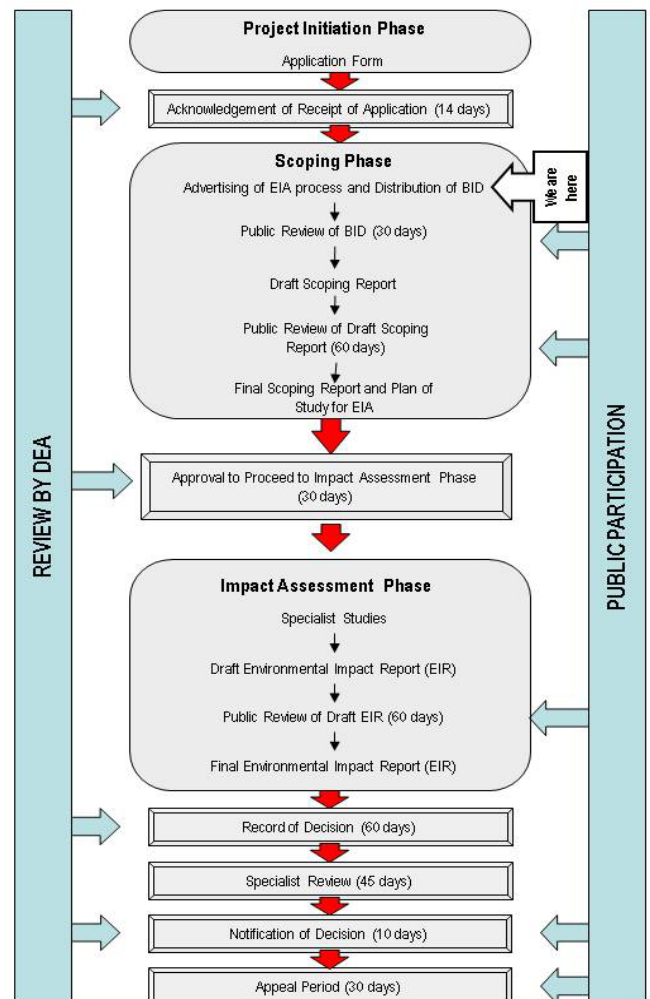
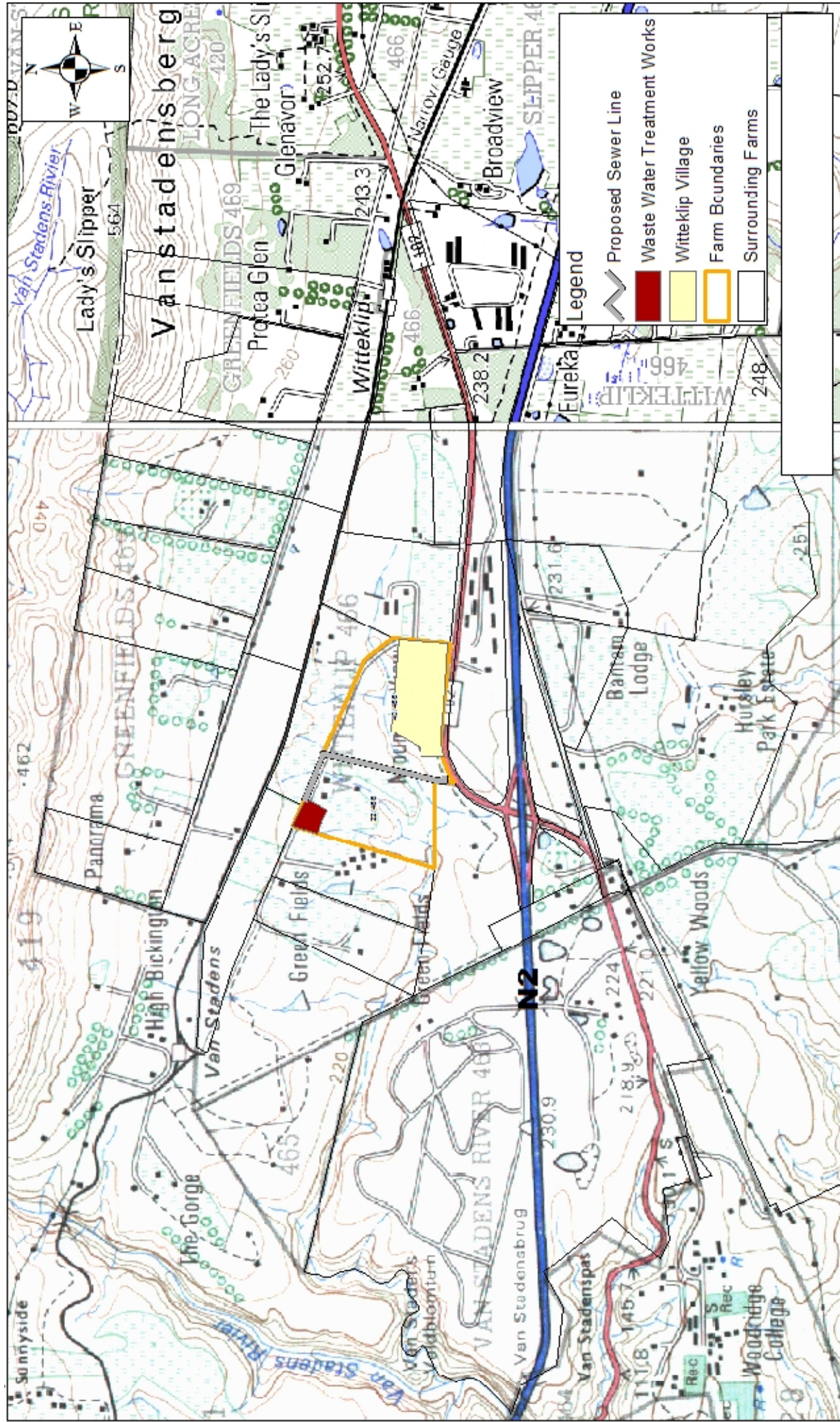


Figure 1: The EIA process showing stages where public comment will be invited



Legend

	Proposed Sewer Line
	Waste Water Treatment Works
	Witteklip Village
	Farm Boundaries
	Surrounding Farms

Project No. 383342	Datum HH94	Date: 25/05/2012	Scale at A4 1:25,000
	Projection DD	Compiled by: R.Thomson	Fig No. 001
G:\Projects\Current\383342_Izizwe Witteklip Housing BA\GIS\GISPROJ\MXD		Revision A Date: 25.05.2012	

WITTEKLIP BULK WATER AND SANITATION
LOCALITY



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REGISTRATION & COMMENT SHEET

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS FOR THE PROPOSED WITTEKLIP WASTE WATER TREATMENT WORKS

I wish to register as an Interested and Affected Party and/or bring to the attention of SRK Consulting the following comments (please use additional sheets of paper if required).

Attention: **Wanda Marais**

Fax no: **041 509 4850**

(In order for your contact details to be captured on our database - Please fill out the sheet below)

Name of Respondent:	Title:
Organisation / Company:	
Nature of Interest:	
Postal Address:	
Postal Code:	
Telephone Number:	
Facsimile Number:	
Mobile Number:	
Email:	

Signed: _____

Date: _____