
APPENDIX 2
Plan of Study

**PLAN OF STUDY FOR ENVIRONMENTAL SCOPING
REPORT:**

THE PROPOSED N2 KNYSNA TOLL HIGHWAY

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TABLE OF CONTENTS

1.	Introduction	2
2.	Existing Situation	2
3.	Proposed Project Description	5
4.	Identified Issues	5
5.	Alternatives	6
6.	Scope of Work	6
7.	Plan of study for Environmental Scoping Report	6
7.1	Scoping team	8
8.	Environmental Impact Assessment Phase	9
8.1	Biophysical/Ecological Assessment	9
8.2	Socio-Economic Assessment	9
8.2.1	Land Acquisition	9
8.2.2	Resettlement	9
8.2.3	Impact of road and traffic on land users neighbouring the toll highway	10
8.2.4	Impact on business and tourism	10
8.2.5	Impacts of the tolls	11
8.3	Public Participation Process (PPP)	11
8.4	Environmental Management Plan (EMP)	12
9.	Applicant	12

INTRODUCTION

The Environmental Conservation Act, 1989 (Act No 73 of 1989), identifies under Section 21 (Section 21(1), Government Gazette #18261) activities, which may have a substantial detrimental effect on the environment. Regulation 1182 lists the following activities relevant to the construction of the N2 Nysna Toll Highway as activities with the potential to cause a substantial effect on the environment.

1. The construction, erection or upgrading of-
 - (c) transportation routes and structures, and manufacturing, storage, handling or processing facilities for any substance which is considered as dangerous or hazardous and is controlled by national legislation;
 - (d) roads, railways, airfields and associated structures.
2. The change of land use from agriculture or zoned undetermined use or and equivalent zoning to any other land use.
7. The reclamation of land below the high water mark of the sea and in inland water including wetlands.

As a result, the proposed N2 Knysna Toll Highway is subject to an Environmental Impact Assessment (EIA) which requires authorisation from the competent environmental authority via the EIA process outlined in Regulation 1183. In addition, the works must also conform to the new National Environmental Management Act (NEMA) (Act 107 of 1998), as these two Acts jointly regulate the management of the environment.

Coastal & Environmental Services (CES) has been commissioned by the project proponent, the South African National Roads Agency Limited (SANRAL), to undertake the necessary EIA process.

A site visit was undertaken on 10-11 March 2005 with the consultants, SANRAL and the relevant authorities.

Existing situation

The existing N2 passes over the Knysna river and lagoon at the White Bridge and then negotiates the northern shore of the lagoon on the western approach to Knysna. This road is a narrow 2 lane road with narrow gravel shoulders and is located within the Knysna municipal area with regular accesses to properties, developments and commercial enterprises.

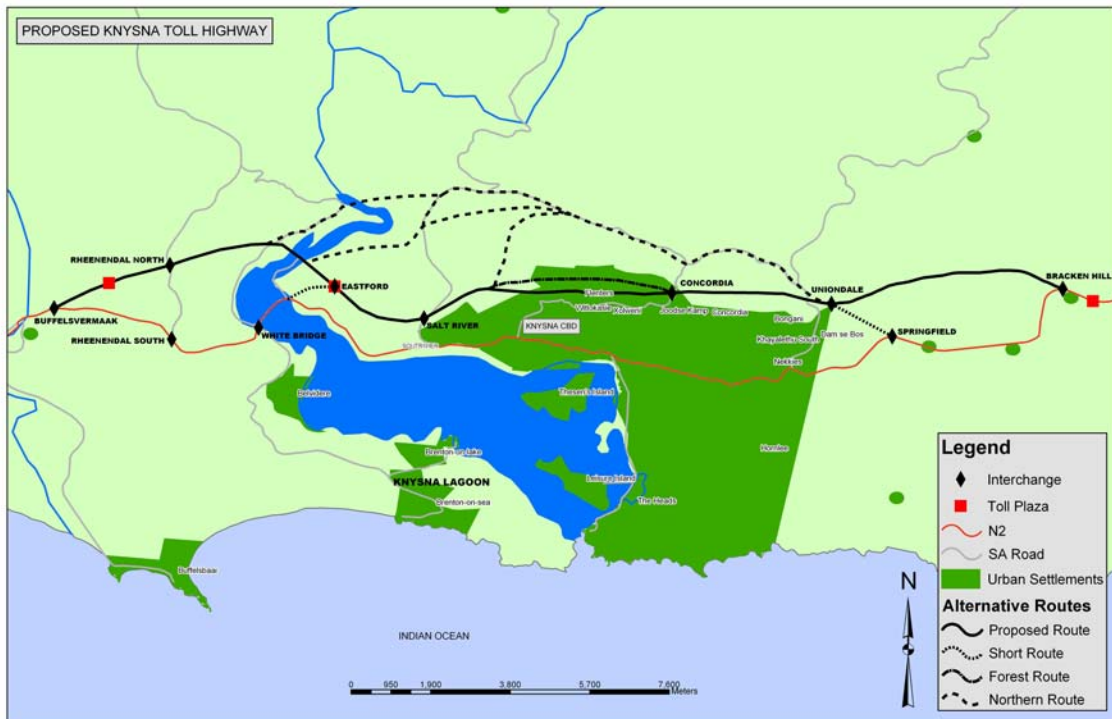
The road then enters the center of the Knysna CBD where traffic movement is very slow due to street accesses, traffic signals and pedestrian movement. Severe traffic congestion occurs, particularly during the holiday periods, when local and tourist traffic mix with regional through traffic. According to a previous Scoping Report for the Unsolicited Bid Toll Road on the N2 between George and Port Elizabeth (2000), I&APs reported that during the Christmas break of 1999 the queue of cars entering Knysna was at times backed up to the Rheenendal turnoff (10km) to the east of town.

Discussions and preparations for a Toll highway around the CBD have been under consideration since the mid 1970s. In 1972 Uhlmann, Witthaus and Prins (UWP) Consulting Civil Engineers were contracted by the Department of Transport in Pretoria to do the basic planning for a toll highway. The route was proclaimed on 18 September 1978 and land for the Toll highway was acquired. However, these plans were not implemented. Then in 1995 the Department of Transport again requested UWP engineers to undertake an area wide study to determine whether feasible alternative routes to the proclaimed route existed behind Knysna. This study identified a number of alternatives (see Figure 1) that included:

- Route E - utilizing the Ou Kaapse Weg
- Alternative routes to the proposed route through the informal settlements in Concordia area. These included:
 - Route B - between the indigenous forest and the informal settlements
 - Route C - through the valley and indigenous forest just north of the informal settlements

Routes B and C were the only practicable routes worthy of further study. On the instructions of the Knysna Municipality and the Department of Transport, a more detailed study of these two routes was undertaken by the consultants and an EIA was undertaken by Gibb Africa/HKS Law Gibb. As a result of these two studies Route B was selected as the preferred route by the clients and UWP engineers were again contracted to develop a preliminary design for the Knysna Toll highway (National Route 2 Section 8).

Figure 1: Map of Proposed Knysna Toll highway and alternative routes.



Key to Map of Alternative Routes for N2 Knysna Toll Highway:

	Proposed/Proclaimed route
	Short/Rooti's route
	Ou Kaapse Weg/Northern Route
	Deviation of proposed route through the indigenous forest.

PROPOSED PROJECT DESCRIPTION

- The proposed N2 Knysna Toll Highway to be assessed in this EIA is the route which follows the proclaimed alignment, except for the section of the road known as Route B which is to run between the indigenous forest and the informal settlements in Concordia (see Figure 1). This Toll highway would entail the construction of 22,8 km of new road, predominantly single carriageway road with climbing/passing lanes as well as grade separated interchanges at the following locations:
- Buffelsvermaak
- Rheenendal
- Eastford or Sout River
- Concordia
- Uniondale
- Springfield or Bracken Hill

The base case for the N2 Knysna Toll Highway including a link road to the existing Trunk Road includes the following components:

- A grade separation at Rheenendal Road where it crosses the toll highway;
- A new bridge crossing the Knysna River 1.5 km upstream of the White Bridge.
- An interchange at Eastford.
- A new bridge crossing the Sout River.
- The access road from the Eastford Interchange to Knysna
- A grade separation at Uniondale Road where it crosses the toll highway.
- Optimum toll plaza positions are to be determined at the completion of the traffic and toll feasibility study.

IDENTIFIED ISSUES

The issues associated with the proposed toll highway that are likely to be of concern to I&APs include:

- Pedestrian facilities
- The need for residents of informal settlements along the proposed route to be resettled
- The impact of the road on the indigenous forest next to the informal settlements
- Potential environmental impacts of the bridges over the Knysna and Sout rivers
- The impact of the link road between the Eastford Interchange and the existing Trunk Road on residents in this area (Larenhill).
- The impact of the toll highway on the Montessori School and other neighbouring land owners in the Eastford, Larenhill, Cobbshaven, Hazelholm and Sout River residential areas.
- The impact of tolls on residents of Sedgefield, Knysna and Plettenberg Bay as well as other road users.
- The impact of the toll highway on local businesses.
- Access to and from the toll highway to Knysna.

ALTERNATIVES

In addition to an assessment of the environmental impacts of the proposed route for the N2 Knysna Toll Highway, this EIA will assess the following alternatives:

Alternative Routes (see map 1)

- Do nothing
- Proposed route (yellow route) (Alternative B)
- The proposed Rooti's route using the existing White Bridge (orange route)
- The Ou Kaapse Weg (green route)
- The deviation from the proposed route through the indigenous forest (blue route) (Alternative C)
- Other practicable routes identified in the scoping.

Alternative Interchanges and link roads

- The construction of an interchange at Buffelsvermaak and at Springfield or Bracken Hill.
- Alternative link roads between the Eastford interchange and the CBD and to the Trunk Road east of White Bridge
- A partial interchange at Sout River and link road to the CBD of Knysna.
- An interchange at the intersection with the Concordia road.
- An interchange at the intersection with the Uniondale road and upgrading of the link road to the existing N2.
- Alternative locations for the toll plaza(s)

SCOPE OF WORK

The Consultants have been commissioned to undertake the EIA for the project and the scope of work for the scoping phase includes:

- A brief project description.
- A public participation process.
- A description of environmental issues identified.
- A description of alternatives identified.
- Recommendations on alternatives and on how identified potential impacts should be mitigated.

Should issues be identified that require additional specialist investigation, an Environmental Impact Report will be required. A separate Plan of Study will be submitted for the EIA.

PLAN OF STUDY FOR ENVIRONMENTAL SCOPING REPORT

THE FOLLOWING ACTIVITIES WILL BE UNDERTAKEN:

- Pre-application meeting and site visit with the relevant authorities (10 March 2005)
- Compilation and subsequent submission of the Plan of Study (this document).

- **Application for Authorisation:** This document will be submitted to the relevant authority in order to register the project.
- **IAP registration:** The proposed project will be advertised in both regional and local newspapers. An open day and some focus group meetings with local I&APs will be held during the comments period. All IAPs will be notified of the project process and will be given opportunity to comment.
- **Background Information Document (BID):** The BID will be prepared and will be distributed to registered IAPs. The BID will inform IAPs of the project in more detail and will give contact details for anyone who would like to submit their concerns or comments.
- **Draft Scoping Report:** The draft report will be compiled incorporating all the issues and concerns raised by the authorities and the IAPs.
- **Public Review of Draft Scoping Report:** There will be a 4 week public review period for the Draft Scoping Report. This will involve the distribution of the draft report to the authorities, key IAPs and community workshops to explain the contents of the draft report. The availability of the report will be advertised in the local newspaper, made available on the CES website and printed copies of the reports will be situated at easily accessible locations.
- **Compiling of Final Scoping Report:** Comments assembled during the public review period will be included in the Final Environmental Scoping Report.
- **Submission of Final Scoping Report:** The Final Environmental Scoping Report will be submitted to the authorities for their Record of Decision.

The proposed timetable for these activities is provided in Table 1 below.

ENVIRONMENTAL SCOPING PHASE		
ACTIVITY	TIME ANTICIPATED	DATE (2005)
Appointment by CES 15 January 2005		
Pre-application meeting & Site Visit	2 days	10-11 March 2005
Preparation of Plan of Study for Scoping	3 days	14-16 March
Review of Plan of Study for Scoping by Client	3 days	16 - 18 March
Review of Plan of Study for Scoping by Authorities	14 days	22 March – 5 April
Project assessment, advertise proposed project, IAP consultation & registration	21 days	6 - 28 April
Project assessment, preparation and distribution of BID to IAPs (after registration)	5 days	29 April – 5 May
IAPs comment period (includes 4x focus group mtgs and Open House Day)	21 days	6 – 27 May
Preparation of draft environmental scoping report	43 days	1 May – 13 June
Review of draft environmental scoping report by Authorities & I&APs	28 days	13 June – 11 July
Public Presentation of Draft Scoping Report/ Meeting with client	3 days	14-16 June
Preparation of final environmental scoping report,	5 days	12 – 18 July

including the Plan of Study for the EIR		
APPROVAL OF ENVIRONMENTAL SCOPING REPORT		
Submission of final environmental scoping report to DEAT for the Record of Decision (ROD)	Submit	19 July
Review of final environmental scoping report by Authorities	21 days	19 July – 10 August

7.1 SCOPING TEAM

The CES Project Manager, Rob Jones, will direct the Scoping Study development. CES feels that it is essential for the people in the know to be at these meeting to ensure that the latest up to date information is provided and problem solving is maximised. Mr. Jones has numerous years of experience in public participation in both rural and urban environments and in the environmental analysis of major highway and transportation projects here in South Africa and overseas.

Maura Andrew will direct the Scoping Study development. CES feels that it is essential for the people in the know to be at these meetings to ensure that the latest up to date information is provided and problem solving is maximised. Ms. Andrew is a senior social scientist with CES and will manage the Public Participation Phase (PPP) scope of services. She has been involved in numerous EIA, SEA and social survey projects throughout South Africa, and in the Eastern and Western Cape in particular. *Ms Andrew* will be assisted with the Public Facilitation work by *Mr. Lungisa Bosman* and *Ms Bronwyn Palmer*.

Mr Lungisa Bosman – Mr. Bosman is a local Xhosa and Afrikaans-speaking consultant who has experience in public consultation and will lead the focus group meetings in the traditionally black constituencies and will assist in the focus group and public meetings to be held. He is also experienced with impact assessment, wetland assessment and GIS.

Ms Bronwyn Palmer is a graduate student of Environmental Science and has extensive administrative and management skills and will manage the I&AP database as well as assisting in the organisation and logistics for the focus group and public meetings.

Dr. Ted Avis will be the overall Project Director and Principal Consultant on this Project. He will maintain oversight, editorial and strategic review functions throughout the duration of the Scoping process (and EIA should it be required). He is the Director and founding member of CES and has almost twenty years of experience in the field of environmental impact assessment in a number of southern African countries.

ENVIRONMENTAL IMPACT ASSESSMENT PHASE

It is expected that some or all of the following issues could warrant further investigation in the EIA phase:

8.1 Biophysical/Ecological Assessment

This assessment will focus on the potential impacts of the bridges across the Knysna and Sout rivers on these estuaries. In the case of the proposed/proclaimed route the potential impacts of various types of bridges need to be assessed. In the case of the Rooti's alternative the potential impacts of widening or reconstruction of the White Bridge over the Knysna estuary and intrusion into the estuary by the construction works at this crossing would need to be assessed. The estuarine assessment would need to examine the potential impacts of these developments on the rivers, mudflats and wetlands such as:

- Direct loss of habitat and species by filling in the mudflats and wetlands
- Changing the normal river flow patterns
- Altering the flooding regime of the river and its floodplain
- Changing the sediment flows and rates of siltation, and
- Changing the ecological functioning of the natural communities due to reduction in the effective size of the animal and plant communities, oxygen content of the water, salinity, turbidity, flow rate, temperature, levels of chemicals and other forms of pollutants, potential eutrophication, siltation patterns, and barriers to animal movement.

8.2 Socio-economic Assessment

The major focus of this assessment is to identify and weigh up the relative socio-economic costs and benefits of the alternatives (routes, interchanges and toll plazas). This assessment will need to address the following issues:

8.2.1 Land acquisition

There are land acquisition issues related to all the alternative routes. Land has only been acquired for the proclaimed road reserve, and even in this case small portions of additional land would need to be expropriated to link this route at either end to the existing N2 road. In the case of the Ou Kaapse Weg, additional land would have to be acquired on either end of it to link it to the proclaimed N2. Land for Rooti's route would also need to be acquired in the Eastford area to link the interchange there to White Bridge on the existing N2. The questions around the legal issues of land acquisition of this land and the cost implications will need further investigation and comparison. Such land acquisitions will also have impacts on the values of neighbouring land and consequently, socio-economic impacts for the affected parties in terms of the current regional structure plans and land development framework.

8.2.2 Resettlement

When Gibb Africa conducted an EIA in 1997 of the portion of the expropriated route that went through the informal settlements in Concordia, Flenters and Gobololo, they

estimated that about 220 households might need to be resettled to make way for the toll highway. This estimate was for the more northerly route that runs between the settlements and the indigenous forest. The original expropriated route that went through the settlements and split them, was estimated to have required the removal of approximately 650 households. Since then settlement in the road reserve area has continued and may have grown due to population growth and in-migration. At this stage there is no certainty about the numbers that would need to be moved as the road reserve has not yet been marked and consequently no survey of households has been conducted. No attempt has yet been made to remove these residents and there are regulations that would make it illegal to move these people unless alternative accommodation was provided. The Knysna Municipality is concerned about this issue and is the responsible authority. They are currently proposing to accommodate the residents that need to be moved in the nearby Windheuwel area. This area currently belongs to SAFCOL who have indicated a willingness to transfer it to the municipality. Once transferred, this area would need to be cleared of trees, surveyed and services provided before any housing could be built. The Municipality is expecting to be able to access housing subsidies to cover the cost of providing the alternative accommodation.

The socio-economic specialists will need to assess the potential scale and impacts of the resettlement process. The information obtained from I&APs during the scoping and EIA phases will provide valuable information for this assessment. However, additional qualitative and quantitative research will be needed to identify and evaluate the nature and scale of the socio-economic impacts on those removed, those living in the receiving area (host) and other residents of the neighbouring informal settlements. Due consideration will also need to be given to the compatibility of this relocation with the municipality's strategic spatial and land use plans.

8.2.3 Impact of road and traffic on land users neighbouring the toll highway

The proposed route also runs through a number of wealthier peri-urban and suburban areas in the Eastford, Larenhill, Cobbshaven and Sout River areas. Since the 1970s when the land for the road was expropriated there has been a considerable intensification of residential and business developments in these areas. The construction and subsequent use of a toll highway in these areas is likely to have considerable impacts (some positive and some negative) on land values and on land use in these areas, due to noise, visual and accessibility impacts. The scale and nature of these impacts will need to be assessed and taken into consideration when weighing up the costs and benefits of the alternative routes. Such an assessment will require an investigation of the visual, noise and accessibility impacts.

8.2.4 Impact on business and tourism

During the mid 1990s when SANRAL and the local authorities were considering constructing the toll highway, there was considerable concern amongst local business and tourism stakeholders that the toll highway would impact negatively on their activities with dire socio-economic consequences for the town. As a result of these concerns the construction of the toll highway did not go ahead. These issues and the views of these stakeholders will need to be reassessed.

8.2.5 Impacts of the tolls

The construction of the toll highway will have to be paid for by the users through the collection of road tolls. These costs will in turn affect the choices people make and impact on local incomes and businesses. Who will be affected and how they will be affected will need to be assessed. However, these impacts will depend on the kind of toll strategies employed, and these strategies are currently being investigated by Tolplan(Pty) Ltd. Although this is a serious issue, it should be noted that this issue will not be dealt with in this EIA, as it is supposed to be dealt with through the “Intent to Toll” process in terms of the South African National Roads Agency Limited and National Roads Act No 7 of 1998. According to these regulations, SANRAL is required to engage in an extensive stakeholder engagement process with affected parties and with the relevant provincial and local authorities and to indicate to the minister how it has addressed the concerns and issues raised by these stakeholders before the Minister of Transport will approve an application to impose a toll.

8.3 Public Participation Process (PPP)

The EIR will be made available for public and authority review. The availability of the report will be advertised in the local newspaper, made available on the CES website and printed copies of the reports will be situated at an easily accessible location. Additional comments, issues and concerns raised by I&APs and the authorities will be included in a Comments Report. The EIR, including the Comments Report, will then be lodged with the relevant authorities for a final review and comment period.

Upon thorough examination of the EIR, the authority will either issue a Record of Decision (ROD), which either authorises the project or rejects it, or requires further details to clarify certain issues. Should authorisation be granted, the ROD usually carries Conditions of Approval. The proponent is obliged to adhere to these conditions. A copy of the ROD is sent to all registered IAPs. The public have one month in which to appeal the decision, should they wish to do so. An appeal must be submitted to the authority involved.

FULL ENVIRONMENTAL IMPACT ASSESSMENT PHASE		
EIA Public Participation	28 days	11 Aug – 8 Sept
Primary Specialist Studies (to run concurrently with EIA Public Participation)	28 days	11 Aug – 8 Sept
Production of specialists report volume	10 days	9 - 22 Sept
Production of Environmental Impact Report	10 days	23 Sept – 7 Oct
Production of comments report	7 days	23 Sept – 7 Oct
Production of Framework Design and Construction EMP	10 days	23 Sept – 7 Oct
Submission to Authorities for Record of Decision		7 October 2005

8.4 Environmental Management Plan (EMP)

CES will produce a framework design and construction EMP that will outline the required mitigatory actions to be implemented during the detailed design period and then the construction period. This will be submitted together with the EIA, so that this document would form part of the authorities' Record of Decision.

9. APPLICANT

The applicant is:

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