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This Summary Report is not required in terms of legislation but is intended to provide the competent authority with a short summary of the project and project impacts, supplemented by other pertinent information not necessarily presented in the prescribed Final Basic Assessment Report.

Summary Report

1 Introduction

The proposed Project consists of the rehabilitation and upgrade of the Route 61 Section 2 (R61/2) between Graaff-Reinet and Cradock to provide a 20 year design life and to bring it up to National Roads Standards, and includes *inter alia*, the widening of the Draairiver Bridge as well as two structures on the tributaries of the Great Fish River at km 34.2 and km 35.4 and the reconstruction of the Great Fish River Bridge within this road section (see Locality Plan included as Figure S-2).

In terms of the National Environmental Management Act 107 of 1998 (NEMA), as amended, and the Environmental Impact Assessment (EIA) Regulations, 2010, a Basic Assessment (BA) must be undertaken for certain listed activities, including the above mentioned activities proposed by the South African National Roads Agency SOC Limited (SANRAL).

SRK Consulting has been appointed by SANRAL as the independent consultants to assess the environmental impacts in terms of NEMA, as amended, and the EIA Regulations, 2010, for the proposed upgrading of the R61/2.

2 Purpose and Structure of the Basic Assessment Report

The NEMA EIA Regulations were promulgated to put into practice the environmental management principles espoused in the Act. The Basic Assessment Report (BAR) provides the competent authority, in this case the Department of Environmental Affairs (DEA) with all relevant information about the proposed activity, as well as an assessment of the potential environmental and social impacts to inform the decision as to whether the activity should be approved and, if so, under what conditions.

The BAR comprises three sections, two of which – Sections 2 and 3 - are mandatory in terms of the requirements for a Basic Assessment. The remaining section is intended to provide additional contextual information in support of the application and to make the report more readable to the public.

Section 1: Summary Report

Section 1 provides an introduction to the Project, provides descriptions of the approach to the BA process and the proposed activity and the concept alternatives considered. It also details the public consultation process undertaken during the BA process, the key findings and recommendations and the way forward. In effect this section provides a summary of key elements of the BA.

Section 2 DEA Basic Assessment Application Form

Section 2 of the report contains the amended BA application form, the specialist declaration forms as well as the Environmental Assessment Practitioner application form, as prescribed by the Department of Environmental Affairs (DEA). The BA application is submitted as the formal application for environmental authorisation under the NEMA EIA regulations.

Section 3 DEA Final BAR Form

Section 3 contains the completed Final BAR form, as prescribed by DEA, submitted in support of application for environmental authorisation of the activity under the NEMA EIA regulations. Section 3 also contains the Appendices as required by the BAR.

3 Approach to the Basic Assessment

The EIA Regulations contained in Government Notice R 544 of August 2010 list activities which require that a Basic Assessment process be followed prior to their commencement. The proponent must therefore obtain authorisation for the proposed activity from the designated competent authority. As this project includes work on a National Road, this relevant authority would be DEA (National Department).

The proposed activities fall within the ambit of various activities listed in Government Notice R 544. For this reason, not all the relevant activities will the listed here. The main activity related to the proposed construction activities, listed under the NEMA EIA Regulations (GNR 544) as requiring a Basic Assessment, is the following:

47) *The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre;*
i) where the existing reserve is wider than 13.5 m; or
ii) where no reserve exists, where the existing road is wider than 8 metres -
excluding widening or lengthening occurring inside urban areas.

The first step in the BA process is the submission of an Application Form for the proposed activity to the competent authority. The

Application Form was submitted to DEA on 2 February 2011. The reference number assigned to the project by DEA is 12/12/20/2360.

The second step entails the assessment of the activity and the production of a BAR (see Section 3) and Draft Environmental Management Programme for public comment. Issues and concerns raised by the public in response to a Background Information Document (BID) informed the Draft BAR. Concerns raised on the Draft BAR informed the Final BAR. A typical BA process is depicted in Figure S-1.

After the submission of the Final Basic Assessment Report (FBAR) for the R61 Section 2 (R61/S2) road upgrade to the Department of Environmental Affairs on 23 May 2012, an amendment was made to the project scope of works. Consequently the FBAR for the R61/S2 road upgrade was rejected by DEA and an amendment to the BAR (incorporating the change to the project scope of work and associated impact assessment) was requested. DEA requested that the amended report be made available for public review. Concerns raised on the amended report will be incorporated in the final report to be submitted to DEA.

4 Prescribed Requirements for the Basic Assessment

The BAR provides information about the proposed activity, a description of the affected environment (including ecological, land use and socio-economic aspects), the public consultation process undertaken, and a basic assessment of the potential impacts of the activity on the receiving environment (including social impacts). This information is contained in Section 3 of the DBAR.

Several appendices to the BAR are required as supporting documentation. These include:

- Site plans such as a locality plan (Appendix A) and photographs (Appendix B);
- Facility illustrations (Appendix C);
- Any specialist reports that were undertaken during the BA process (Appendix D);
- A Comments and Responses Report resulting from the public consultation process (Appendix E); and
- A Draft Environmental Management Programme (Appendix F).

5 Site Location and Surroundings

The proposed rehabilitation and upgrade of Route R61 Section 2 is located between Graaff-Reinet and Cradock. The Project commences at km 29.4 on Section 2 where the R61 passes over the Draairivier beyond Wapadsberg Pass and extends to km 42.2 at the access to Elinus Farm. The locality plan of the proposed project is included as Figure S-2.

6 The Proposed Development

The existing R61 consists of a surfaced carriageway about 6.7 m wide flanked by gravel shoulders about 1.8 m wide contributing to the total road width of about 10.3 m. The existing road reserve is generally about 25 m wide. The road section is located in gently rolling terrain with long, straight sections connected by relatively flat horizontal curves.

The R61 is an important National Road as it is a recognised route for public transport (buses and minibus taxis) between the Western Cape and Transkei. SANRAL has decided that the existing cross section should be widened to National Road standards to provide a 7.4 m carriageway with 2,5 m shoulders making a total road width of 12.4 m. At the same time, because of the poor condition of the road surface, the road pavement structure will be strengthened to be adequate for the next 20 years.

The road alignment will be offset to the north in order to construct the additional width on one side and the road reserve will need to be increased on the northern side to provide a total minimum width of 30 m. The existing road reserve will thus need to be widened by approximately 5 to 7 m

The main elements of the proposed scope of works include the following:

- Rehabilitation and widening of approximately 13 km of the existing R61 Section 2 to provide a 7.4 m carriageway with 2,5 m shoulders making a total road width of 12.4 m;
- Widening of the northern side of the road to provide a 30 m road reserve. The existing road reserve (25 m in extent) will therefore need to be widened by approximately 5 to 7 m on the northern side of the road;
- Widening of the Draairivier Bridge to achieve a width of 12.4 m between kerb faces;
- Demolition and re-construction of the Great Fish River Bridge which will be approximately 15 m longer and 1.6 m higher than the existing bridge;
- Widening of structures on two tributaries (on one side only) of the Great Fish River at km 34.2 and km 35.4;
- Replacement / upgrading of existing box culverts where they are smaller than 600 mm or extended on the northern side for the road widening where they have adequate capacity;
- Establishment of a construction camp site (the location to be determined);
- Sourcing of material from three existing borrow pits which are to be extended and are located adjacent or in close proximity to the R61 (i.e. Borrow Pit A at km 55.6, Borrow Pit E at km 21.1 and Borrow Pit Q3 at km 55.4). Material from the three borrow pits will be used for widening of the road, shoulders and sub-base layer. The road base layer will be constructed over the sub-base layer using crushed stone material from a commercial source at Cradock. The mining application for these borrow pits is in process and will be submitted to the Department of Mineral Resources (DMR).

Applications for Water Use Licenses in terms of Section 21(c) and (i) of the National Water Act, 1998 (Act No 36 of 1998) will be submitted to the Department of Water Affairs (DWA) in due course.

7 Public Consultation Process

A public participation process aimed at allowing the public to be involved in the environmental decision making process was carried out, and is described in Appendix E of the BAR. The public participation process completed to date includes the following:

- Newspaper advert (the Graaff-Reinet Advertiser);
- Circulation of the Background Information Document;
- On site posters;
- 1st public comment period on the BID (30 days);
- 2nd public commenting period on the DBAR (40 days); and
- 3rd public comment period on the amended FBAR (40 days).

A few environmental concerns have been raised by Interested and Affected Parties and are included in Appendix E of the FBAR.

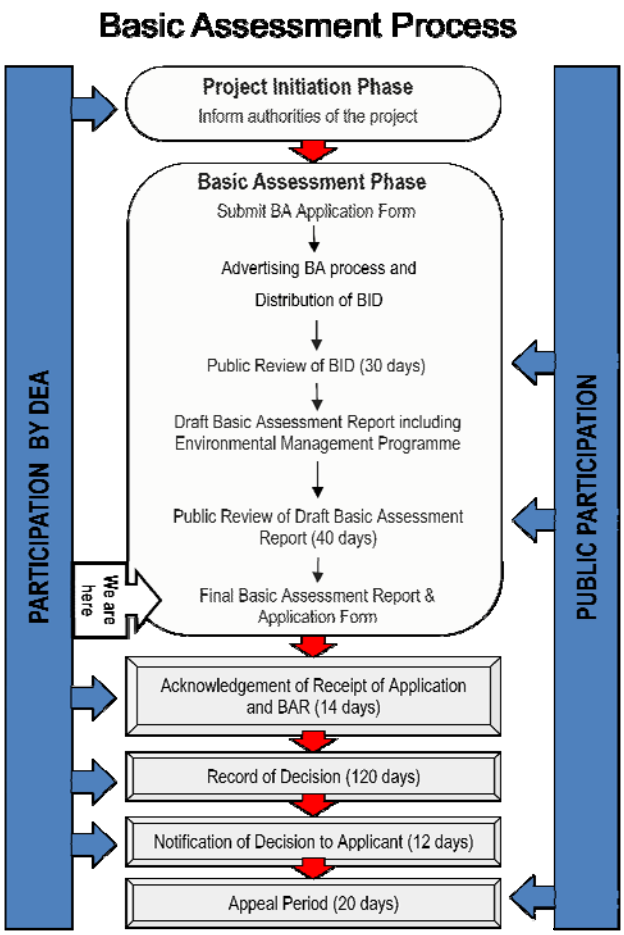

Figure S-1: Typical Basic Assessment Process

8 Assessment of Potential Environmental Impacts

A number of potential impacts resulting from the proposed development were identified by the project team and specialists. The project alternatives, and most of the identified impacts, were assessed in-house by the Environmental Assessment Practitioner. Archaeological, palaeontological, aquatic and ecological impacts were assessed by external specialists, the reports of which are included in Appendix D of the BAR. Specialists included in the compilation of the BAR were consulted with regards to the proposed changes to the project description and a copy of the addendums to their reports are also included in Appendix D of the BAR.

Potential impacts were assessed using SRK's impact assessment methodology. The significance of an impact is defined and assessed as a combination of the consequence of the impact occurring (based on its extent, intensity and duration) and the probability that the impact will occur.

For potentially significant impacts, the significance of the anticipated impact was rated both with and without recommended mitigation measures. These are presented in Table 1 (refer to section D of the BAR form for further detail on the impacts assessed) which summarises:

- The impacts that were assessed;
- Their significance following the implementation of mitigation measures; and
- The key mitigation measures on which the significance rating is based.

The impact significance rating should be considered by the competent authority in their decision-making process based on the definitions of ratings ascribed below.

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity.
- Very Low: the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity.
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity.
- Medium: the potential impact should influence the decision regarding the proposed activity.
- High: the potential impact will affect a decision regarding the proposed activity.
- Very High: the proposed activity should only be approved under special circumstances.

8.1 Evaluation

Key relevant observations with regard to the overall impact significance ratings, assuming mitigation measures are effectively implemented, are (refer to Table 1):

- Air Quality Impacts: The potential air quality impacts (dust and vehicle emissions) on the site (from clearing of approximately 5 m of vegetation outside the road reserve and from the laying of subbase materials) and borrow pit areas during the construction phase are considered to be *low* (and negative), as construction will be temporary. With mitigation, the significance of these impacts could be reduced to *very low*;
- Noise Impacts: A *very low* (negative) noise impact (from construction activities) is predicted during construction, as this would be temporary and would only occur during working hours on weekdays. With mitigation, these impacts could be reduced to insignificant;
- Aquatic Impacts: Clearing of topsoil and vegetation cover for the widening of the R61/S2, as well as the establishment of approach roads, removal and re-construction of the Great Fish River Bridge and widening of the Draairiver Bridge and culverts along the R61 at drainage line crossings may increase soil erosion and sediment input into river channels, filling in any remaining pools downstream and elevating turbidity levels during floods. Construction activities also pose a risk of chemical and solid waste pollution to nearby watercourses which may threaten the functioning of the instream habitat, aquatic biota, livestock and adjacent vegetated areas. Clearing of topsoil and vegetation cover on the steep river banks of particularly the Great Fish River for the construction may cause bank collapse or slumping and thus sediment input into the rivers. A *medium* (negative) aquatic impact is therefore predicted However, if the specified mitigation measures are implemented, the significance of these impacts can be decreased to a *very low*;
- Ecological Impacts: The potential negative impact of vegetation removal is expected to be of *medium* significance as the overall diversity and abundance of the affected vegetation in the affected area was found to be low due to current farming and road maintenance practices. This impact can be reduced to *very low* with mitigation. The areas that will

be cleared are furthermore almost mono-specific stands of grass and/ or forbs, which are widespread and common. These particular road servitudes thus contribute little in terms of biodiversity and contain no conservation needy plant species. The negative impact on plant species of special concern is therefore *very low.* The disturbance of vegetation and soils along the entire road during the construction phase would allow for the further spread of alien plants if not curtailed. However due to the present state of the vegetation, the potential impact of plant alien invasion would be *medium* (and negative) considering the regional extent of the project and the terrestrial plant species found. However if the recommended mitigation measures are implemented, the impact of plant alien invasion on the vegetation would be *very low*;

- Stormwater and Erosion Impacts: With appropriate mitigation, the stormwater runoff and erosion impacts on the proposed site and rivers during the construction and phase can be decreased from a *medium* negative impact significance rating to *very low*. During the operational phase, potential stormwater/ erosion impacts as a result of insufficient rehabilitation/ stormwater design is considered to be of *low* (negative) impact significance. Even with mitigation, the impact remains *low*;
- Job Creation Socio-economic Impact: The predicted positive socio-economic impact, due to a number of jobs being created (during construction) is predicted to have a low significance rating due to its localised and short-term nature;
- Palaeontological Impacts: A medium palaeontological impact was predicted due to potential disturbance / loss of fossils (plant, vertebrate burrows and vertebrate bones), which were identified along the road section at four sites. However, this impact can be reduced to insignificant if recommendations made by the specialist are implemented;
- Archaeological Impacts: No archaeological material remains or features were identified within the road reserve or within the surrounding areas of Borrow Pit A and Borrow Pit Q3. Two Middle Stone Age stone artefacts were however documented within the area surrounding Borrow Pit E, but are suspected by the specialist to occur in a disturbed and secondary context. An insignificant archaeological impact is therefore anticipated;
- Waste management Impacts: A *low* negative waste impact is expected during construction due to the potential for incorrect disposal of construction waste, which could lead to other visual impacts and loss of natural habitat. With appropriate mitigation, this impact could be reduced to *insignificant*;
- Impacts on Services: Telkom and Eskom services will not be affected by the proposed development. The negative impact on services as a result of construction activities is therefore *insignificant*. The road as an existing service will be improved, resulting in a positive impact of *medium* significance;
- Impacts on Traffic Flow: Construction activities will likely cause disruption of traffic flow. This is rated to have a *low* negative impact and could be reduced to very low with mitigation. Moving of fences during construction can lead to animals breaking out of camps, which could be a safety hazard to motorists. The impact on traffic safety is expected to be *very low* (and negative). With mitigation, the impact is reduced to *insignificant*;
- Livestock Impacts: Landowner fences will need to be moved in accordance with the widening of the road reserve on the northern side. If fences are left down for long periods of time without being replaced, livestock may escape from camps, which could result in stock loss to adjacent farmers. With the proposed mitigation, this impact would be eliminated. The impact on farmers is expected to be *very low* (-ve). With mitigation, the impact is reduced to *insignificant*;
- Socio-economic Impact due to improved Road Condition / No-go alternative: The improved road condition would result in easier access through the area, positively affecting the local and provincial economy as this is an important transport route between Graaff-Reinet and Cradock and the Western Cape and Transkei. Vehicle maintenance costs associated with wear and tear to vehicles would also be reduced because of the improvement of the road surface. The positive socio-economic impact associated with the improvement of the road is *HIGH*. With the no-go alternative (no upgrading), the deteriorating road could result in limited access to the area and increased user costs, which would affect the local and provincial economy and result in a *HIGH* negative impact; and
- Traffic flow and Safety / No-go alternative: General road safety will be improved with the proposed upgrade, to result in a *MEDIUM* positive operational impact. With the no-go alternative (no upgrading), a negative *MEDIUM* impact on traffic flow and safety is predicted.

8.2 Findings

1. The South African National Roads Agency SOC Limited (SANRAL) has identified a need to rehabilitate and upgrade the R61 Section 2 (R61/2) and associated infrastructure from the Draairivier to Elinus Farm.
2. Potential positive impacts as a result of the proposed activity include improved traffic flow and safety, socio-economic benefits associated with the improved condition of the road, and temporary employment opportunities.
3. The main potential negative impacts include impacts on aquatic ecosystems due construction in river crossings, erosion and stormwater impacts, disturbance to traffic flow during the construction phase, which amongst other less significant impacts, can be prevented or managed by implementing the specified mitigation measures.
4. Two Middle Stone Age stone artefacts were documented within the surrounding Borrow Pit E area, but are considered to occur in a disturbed and secondary context.
5. Fossils (plant, vertebrate burrows and vertebrate bones) were identified along the road section at four sites, for which mitigation measures are recommended.
6. The no-go option is associated with negative impacts on the socio-economic situation, traffic flow and safety. Therefore, it is environmentally and socially preferred that the R61/2 and associated infrastructure is rehabilitated and upgraded as proposed.
7. No major environmental or social impacts have been identified that should prevent the Project from obtaining environmental authorisation.

8.3 Way Forward (IAPs)

The Final Basic Assessment Report (FBAR) was submitted to DEA for a decision. Prior to the DEA response to the FBAR, SANRAL proposed a change of project scope. This amendment to the project description was then submitted to DEA for consideration. The

proposal was rejected and DEA requested that the FBAR be amended and resubmitted to include all changes to project scope of works and necessary specialist comment. The Executive Summary of this revised FBAR has been sent to the registered IAPs for the project. The complete Report is available for public viewing at the Cradock Public Library. Should any issues be raised, these will be addressed in the report to be sent to DEA.

Interested and Affected Parties are invited to raise comments and / or further issues regarding the Basic Assessment Report and to submit their comments to SRK before 18 December 2012. All comments should be addressed to:

Wanda Marais at SRK Consulting
PO Box 21842, Port Elizabeth, 6000
Email: wmarais@srk.co.za
Fax: (041) 509 4850

Deadline for Comments: 12h00 on 18 December 2012

It is believed that this BAR has addressed the full suite of potential environmental impacts related to the proposed development (including the latest changes to the project description), and that sufficient information regarding the identification, assessment and potential mitigation of impacts has been presented to facilitate informed decision-making by DEA. The Final BAR will assist DEA in deciding whether to approve or reject the proposed project.

Once DEA have made their decision, they will issue a Record of Decision (RoD) to the Applicant. IAPs will be advised of the RoD. If IAPs are not satisfied with DEA's decision, they should lodge a written notice of intention to appeal with the relevant Member of the Executive Council (MEC) within 20 days of the date on which the RoD was issued.

Table 1: Summary of impact significance for the proposed rehabilitation and upgrade of the R61/2

Alternative (preferred alternative)											
IMPACT		CONSTRUCTION				OPERATION				NO-GO OPTION	
		WITHOUT MITIGATION		WITH MITIGATION		WITHOUT MITIGATION		WITH MITIGATION			
Air quality (dust / emissions)		Low	- ve	Very Low	- ve	Insignificant	- ve	Insignificant	- ve	N/A	-
Noise		Very Low	- ve	Insignificant	- ve	Insignificant	- ve	Insignificant	- ve	N/A	-
Social & Economic – improved road condition		Low	+ ve	Low	+ ve	High	+ ve	High	+ ve	High	- ve
Archaeology		Insignificant	- ve	Insignificant	- ve	N/A	-	N/A	-	N/A	-
Palaeontology		Medium	- ve	Insignificant	- ve	N/A	-	N/A	-	N/A	-
Stormwater & Erosion	Changes to the hydrological regime & consequent erosion	-	-	-	-	Medium	- ve	Very Low	Medium	N/A	-
	Reduction in permeable surfaces	-	-	-	-	Medium	- ve	Very Low	Medium	N/A	-
	Soil erosion	Medium	- ve	Very Low	- ve	-	-	-	-	-	-
Ecology	Clearing of vegetation/ habitat removal	Medium	- ve	Very Low	- ve	-	-	-	-	-	-
	Loss of biodiversity and species of special concern	Very Low	- ve	Very Low	- ve	-	-	-	-	-	-
	Spread of alien vegetation	Medium	- ve	Very Low	- ve	-	-	-	-	-	-
Aquatic	Sedimentation & Turbidity	Medium	- ve	Very Low	- ve	Medium	- ve	Very Low	- ve	N/A	
	Water quality	Medium	- ve	Very Low	- ve	-	-	-	-	-	-
	Bank stability	Medium	- ve	Very Low	- ve	Medium	- ve	Very Low	- ve	N/A	
	Solid Materials	Medium	- ve	Very Low	- ve	-	-	-	-	-	-
Existing services – road upgrade		Insignificant	- ve	Insignificant	- ve	Medium	+ ve	N/A	-	N/A	-
Waste management		Low	- ve	Insignificant	- ve	N/A	-	N/A	-	N/A	-
Traffic flow		Low	- ve	Very Low	- ve	Medium	+ ve	N/A	-	Medium	- ve
Traffic safety		Very Low	- ve	Insignificant	- ve	Medium	+ ve	N/A	-	Medium	- ve
Livestock impacts		Very Low	- ve	Insignificant	- ve	-	-	-	-	-	-

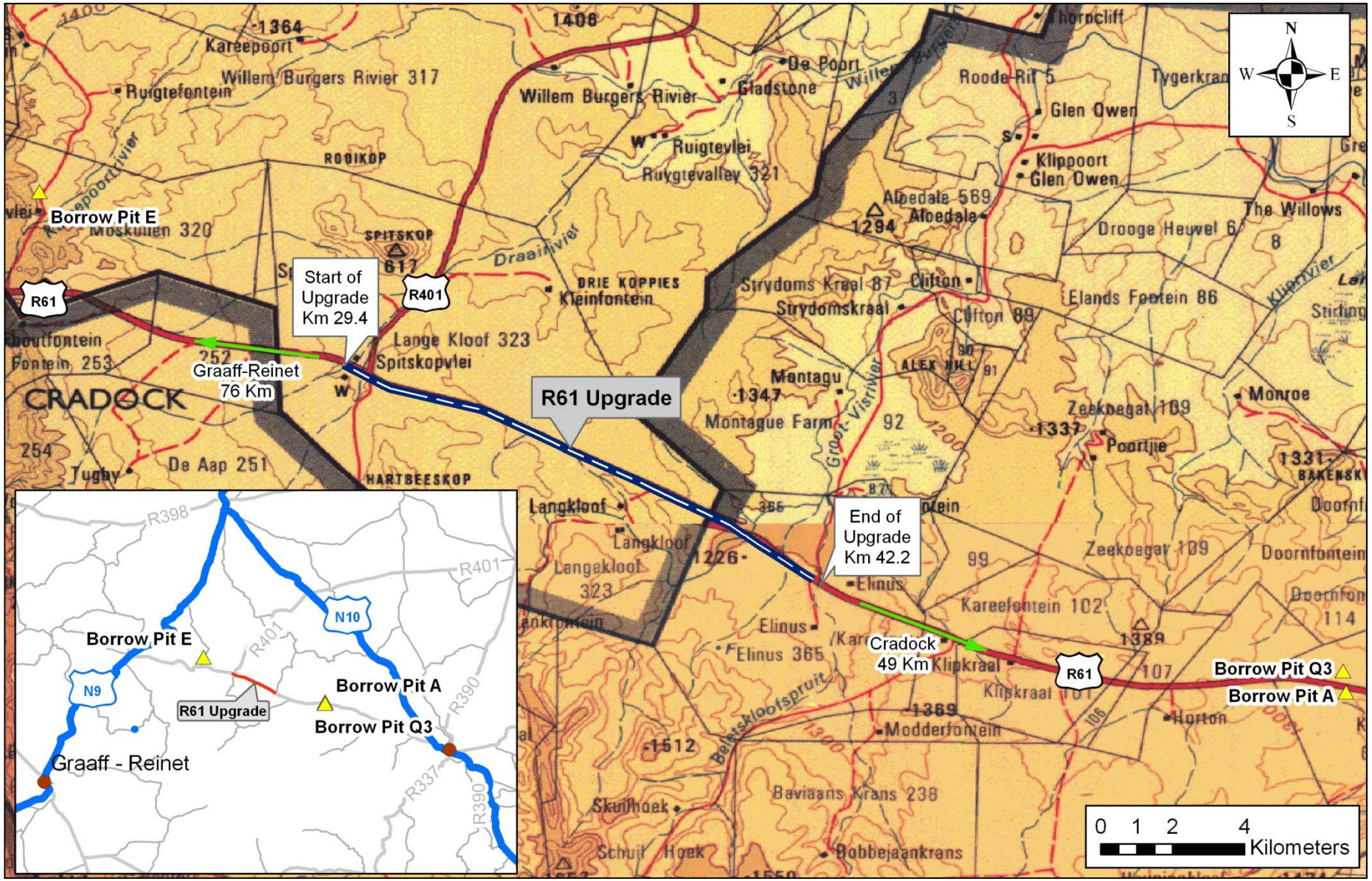

Figure S-2: Locality Plan for the proposed project