

SOUTH AFRICAN NATIONAL ROADS AGENCY

**PROPOSED CAPACITY IMPROVEMENTS TO NATIONAL ROUTE 2
(N2) AND NATIONAL ROUTE 3 (N3), KWAZULU-NATAL**

**TERMS OF REFERENCE FOR UPDATES OF EXISTING SPECIALIST
REPORTS**

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1. INTRODUCTION

1.1 Background

The South African National Roads Agency SOC Limited (SANRAL) is responsible for improving, managing and maintaining the network of national roads which act as the “economic arteries” of South Africa. Sections of the N2 and N3 are operating at full capacity and traffic studies indicate a need to upgrade them to accommodate future growth and improve road safety. Therefore, SANRAL (Eastern Region) plans to provide additional lanes along a section of the N2 in Durban, as well as along the N3 between Durban and Cedara. This forms part of the suite of Strategic Infrastructure Projects (SIPs) as described in the National Development Plan, 2011.

During 2012, you were involved with this project as a specialist and you provided relevant specialist reports to ACER. The project was thereafter put on hold and the applications to the Department of Environmental Affairs subsequently lapsed. As of May 2016, the environmental work on the project has resumed. SANRAL intends to resubmit applications for environmental authorisation, under the National Environmental Management Act, 1998 (Act No. 107 of 1998), for the proposed capacity improvements.

As part of preparation of the required Basic Assessments, it is necessary for specialists to review their original specialist reports to ascertain whether the content correctly reflects current conditions in terms of the receiving environment and scope of works (proposed upgrades). Where changes have occurred that affect the findings and recommendations of the original reports, these changes and any new associated assessment, findings and recommendations need to be presented in updated specialist reports.

Please find below the terms of reference for compilation and submission of your updated specialist reports (for two of the six original upgrades).

2. SCOPE OF WORK - TWO BASIC ASSESSMENTS

The original Terms of Reference for specialist reports dealt with various road sections according to SANRAL's Preliminary Design Contracts, which were associated with 7 different environmental applications (Basic Assessments), as listed below. (Note however that No 6 was put on hold and no specialist reports were produced). **Your specialist updates will deal with two Basic Assessments, viz. items 1 and 2 listed below.**

1. N3 Capacity Improvements from the EB Cloete Interchange to Paradise Valley (M13 East) Interchange **(BA1)**.
2. N3 Upgrades between the Paradise Valley (M13 East) Interchange and the Key Ridge Interchange¹ **(BA2)**.
3. N3 Upgrades between the Hammarsdale Interchange² and the Cato Ridge Interchange **(BA3)**.
4. N3 Upgrade between the Cato Ridge Interchange and the Lion Park Interchange³ **(BA4)**.
5. N3 Upgrade between the Lynnfield Interchange and the Market Road Interchange⁴ **(BA5)**.
6. Proposed capacity improvements to the Ashburton Interchange and Bellevue⁵ (new Interchange, KwaZulu-Natal (not applicable)).
7. N3 Upgrade between the Epworth Interchange and the Cedara Interchange **(BA6)**.

For some of the above, there have been changes to the project footprints. Most are minor but there are a few cases where some new ground must be covered. The project names in some cases have also changed slightly. These changes are outlined in Section 3.

Note that SANRAL has awarded contracts for detailed design on the sections listed above. In some cases, one preliminary design section has been split into two or more detailed design contracts. The relationship between the current Basic Assessments, the current detailed design contracts and the original Preliminary Design Contracts is shown in Appendix 1, for your information and (if needed) for reference purposes.

1 Key Ridge to Hammarsdale is subject to a separate Environmental Impact Assessment being undertaken by Jeffares & Green/ Terratest.

2 An Environmental Authorisation for the upgrade of the Hammarsdale Interchange (just the interchange) has already been issued and construction of the IC is imminent.

3 Metamorphosis, in co-ordination with ACER, is undertaking the BA for this section.

4 The N3 section between Market Road and Epworth (New England Rd) is subject to a separate Environmental Impact Assessment being undertaken by other consultants.

5 The Bellevue Interchange has been put on hold.

3. REQUIRED REPORT UPDATES

3.1 General

Specialists are requested to update their original reports as follows:

- ❑ Make your changes directly in the original report, rather than providing a separate attachment/addendum.
- ❑ All changes are to be made clearly visible in the updated report by using track changes.
- ❑ The title page must reflect that this is an updated specialist report and must display the new project name with associated detail design contract numbers (provided in section 4).
- ❑ Update the introduction, explaining the background and purpose of the updated report.
- ❑ In a text box, provide an up-front summary statement as to whether there is/is not any significant change in the updated (2016) findings compared with the findings of the original report. If you are satisfied that the findings and recommendations of your original report still apply in the current (2016) period, with no changes needed, please make a statement to this effect, with a motivation.
- ❑ Update the contents of your report where relevant in terms of:
 - Project description (activities and footprints).
 - Receiving environment (including updated maps and graphics, as applicable).
 - Legal environmental requirements.
 - Relevant findings, impacts and associated recommendations for mitigation.
 - Ensure that your report is compliant with the 2014 EIA Regulations in terms of the reporting and content requirements (refer to Appendix 6 of GN R982 for these requirements). Note that the requirements have changed since 2012. Appendix 2 provides an illustration of these changes.
- ❑ Noting in particular, the 2014 Regulations' requirement for mitigation and monitoring measures, specialists are to ensure that updated and (where relevant) site specific mitigation and monitoring measures are provided for inclusion in an Environmental Management Programme Report (EMPR).
- ❑ To assist SANRAL in planning for project implementation, permits that will be required prior to construction must be clearly specified.

3.2 Updates specific to specialist disciplines

The following updates are emphasized for particular specialist disciplines.

3.2.1 Noise

The noise specialist is requested to provide a stand-alone section comprising a noise management plan for the construction phase, which takes into account legal noise limits, the anticipated type, location and timing of equipment used and location of sensitive receivers for the particular section of road under consideration. The management plan should incorporate a community liaison and monitoring component. This will be appended to the EMPR.

3.2.2 Vegetation

The vegetation specialist must pinpoint, on Google earth images (or other suitable method) and list the areas which will require permits from the Department of Agriculture, Forestry and Fisheries.

Please provide a brief explanation of the process required to obtain such permits, and an estimate of timeframes and costs.

3.2.3 Cultural Heritage

The construction of the Paradise Valley Viaduct Access Road and general widening activities below the viaduct will unavoidably affect the Umbilo Waterworks. Similarly, the widening of the Umhlatuzana Viaduct will affect the Umhlatuzana Rock Shelter.

The cultural heritage specialist will be required to interact with the engineers to identify the impacts in detail and provide site specific management actions for these areas, for inclusion in the EMPR.

The heritage specialist must indicate what destruction permits will be required from Amafa. Please provide a brief explanation of the process required to obtain such permits, and an estimate of timeframes and costs.

3.2.4 Social

The construction of the Paradise Valley Viaduct Access Road and general widening activities below the viaduct will require an extended period of closure of part of the Paradise Valley Nature Reserve to the public. Related social impacts must be investigated.

The Giba Gorge Nature Reserve and Giba Mountain Bike Park will be affected by the construction of the Umhlatuzana Viaduct Access Road and general widening activities below the viaduct. Related social impacts must be investigated.

4. ASSESSMENT OF ALTERNATIVES

No alternatives were specifically investigated in the original specialist reports. Where changes in the original (preliminary design) have since been proposed during the current (detailed design phase) (generally relating to interchange layouts), this may or may not result in a changed footprint.

5. PROJECT DESCRIPTION UPDATES

You have been provided with the following resources/descriptions for the two projects:

- Kml file(s) showing the existing road reserve.
- Kml file(s) showing the proposed preliminary design road reserve which you used for the original specialist report.
- Kml file(s) file showing the proposed current (detail design) road reserve/footprints.
- Kml file(s) showing **new** proposed viaduct access roads (Westville, Paradise Valley and Umhlatuzana).
- Kml file showing the expanded footprint for Solomon Mahlangu Interchange.
- General description of project activities (Appendix 3) – these apply across all projects.
- New titles of projects and their associated detail design contracts (provided below).

5.1 N3 Capacity Improvements from EB Cloete Interchange to Paradise Valley (Basic Assessment 1)

5.1.1 *New title for Basic Assessment 1*

The new title of this BA is:

Capacity Upgrades to the N2 (Solomon Mahlangu to south of Umgeni Rd I/C), including expansion of EB Cloete and Solomon Mahlangu Interchanges, and the N3 (EB Cloete to Paradise Valley) including provision of temporary access for construction below Westville and Paradise Valley viaducts.

5.1.2 *Corresponding detail design contracts (Basic Assessment 1)*

This project is being handled under three detailed design contracts, viz:

DETAIL DESIGN PROJECT NO	DESCRIPTION	SERVICE PROVIDER
N.003-010-2017/1	EB Cloete (including portion of N2 North and N3 West) (N3: km 9.06-km 11.8) (N2:km 117.2-km 20.7)	SNA
N.002-250-2009/2D2N2	Upgrade of Solomon Mahlangu IC	SNA
N.003-010-2017/2	Westville Viaduct (Km 11.8) to Paradise Valley (Km 17.5) including Westville and Paradise Valley viaduct access roads	SNA

5.1.3 *Changes in project footprint (Basic Assessment 1)*

It is incumbent on the specialist to compare the original and current kml files and identify all significant changes in footprint that would require reporting/assessment in the updated report.

The main changes, however, include:

- Expansion in footprint for Solomon Mahlangu Interchange on the N2.
- Additional (new) viaduct access road to Westville Viaduct, east of the Pavilion.
- Additional (new) viaduct access road to Paradise Valley Viaduct, affecting the Paradise Valley Nature Reserve.

5.2 N3 Upgrades between the Paradise Valley (M13 East) Interchange and the Key Ridge Interchange (Basic Assessment 2)

5.2.1 New title for Basic Assessment 2

The new title of this BA is:

Capacity Upgrades to the N3 (Paradise Valley to Key Ridge) including provision of temporary access for construction below the Umhlatuzana Viaduct.

5.2.2 Corresponding detail design contracts (Basic Assessment 2)

This project is being handled under two detailed design contracts, viz:

DETAIL DESIGN PROJECT NO	DESCRIPTION	SERVICE PROVIDER
N.003-010-2017/3	Paradise Valley (Km 17.5) to Mariannhill plaza (Km 25.0)	V3 Consulting / Kabe Joint Venture
N.003-012-2017/1	Mariannhill toll plaza (Km 25.0) to Key Ridge (Km 3.6) including Umhlatuzana Viaduct access road	SMEC

5.2.3 Changes in project footprint (Basic Assessment 2)

It is incumbent on the specialist to compare the original and current kml files and identify all significant changes in footprint that would require reporting/assessment in the updated report.

The main changes, however, are:

- Additional (new) viaduct access road to Umhlatuzana Viaduct, affecting Giba Gorge (kml file provided).
- Note that the proposed toll infrastructure near the M13/N3 merge does not form part of the detail design contract although it was part of the preliminary design contract. It is suggested that if there is any reference to this area in your original reports, that you leave as is and simply put in a footnote indicating that it is not part of the detailed design contract.

APPENDIX 1

N3 CAPACITY IMPROVEMENTS BETWEEN DURBAN AND CEDARA: PROJECT STRUCTURE FOR ENVIRONMENTAL ASSESSMENTS 2016

ORIGINAL CONTRACT NO	EAP PACKAGE ORIGINAL	DETAIL PROJECT NO	DESIGN DESCRIPTION	SERVICE PROVIDER	BASIC ASSESSMENT (2016)
PARADISE VALLEY TO CEDARA N003-023-2010/1ES	EB CLOETE- PARADISE VALLEY (PRELIM PACK 1) ACER	N.003-010-2017/1	EB Cloete (including portion of N2 North and N3 West)	SNA	BA1 (3 detail design contracts)
		N.002-250-2009/2D2N2	Upgrade of Solomon Mahlangu IC	SNA	
		N.003-010-2017/2	Westville Viaduct (Km 11.8) to Paradise Valley (Km 17.5) including Westville and Paradise Valley viaduct access roads	SNA	
	PARADISE VALLEY TO KEY RIDGE (PRELIM PACK 2) ACER	N.003-010-2017/3	Paradise Valley to Mariannahill plaza	V3 Consulting / Kabe Joint Venture	BA2 (2 detail design contracts)
		N.003-012-2017/1	Mariannahill toll plaza (Km 25) to Key Ridge (Km 3.6) including Umhlatuzana Viaduct access road	SMEC	
	HAMMARSDALE TO CATO RIDGE (PRELIM PACK 4) ACER	N.003-020-2017/1	Hammarsdale to Cato Ridge (20.1)	HHO Africa	BA3 (1 detail design contract)
CATO RIDGE TO LION PARK N003-020-2009/1ES	CATO RIDGE TO LION PARK (PRELIM PACKAGE 5) METAMORPHOSIS	N.003-020-2017/4	Cato Ridge to Dardanelles	Nyeleti	BA4 (2 detail design contracts)
		N.003-020-2017/5	Dardanelles to Lynnfield Park	GIBB	

ORIGINAL CONTRACT NO	EAP PACKAGE ORIGINAL	DETAIL PROJECT NO	DESIGN	DESCRIPTION	SERVICE PROVIDER	BASIC ASSESSMENT (2016)
LYNNFIELD PARK TO MARKET ROAD N003-023-2008/1ES	LYNNFIELD PARK TO MARKET ROAD (PRELIM PACKAGE 6) ACER	N.003-023-2017/1		Lynnfield Park to Ashburton IC	NME-Leporogo JV	BA5 (2 detail design contracts)
		N.003-030-2017/1		Ashburton I/C to Murray Road	Naidu Consulting	
EPWORTH TO RICKIVY N003-023-2010/1ES	EPWORTH TO CEDARA (PRELIM PACKAGE 8) ACER	N.003-030-2017/3		New England Road to Twickenham Road note this has been shortened – no longer extends to Cedara	RHDHV	BA6 (1 detail design contract)

APPENDIX 2

REQUIREMENTS FOR SPECIALIST REPORTS - 2010 VS 2014 EIA REGULATIONS

The black text is from the 2010 EIA Regulations. The red text indicates anything from the 2014 Regulations which is additional or different.

A specialist report or a report on a specialised process prepared in terms of these Regulations must contain—

- (a) details of—
 - (i) the person who prepared the report; and
 - (ii) the expertise of that person to carry out the specialist study or specialised process; **including a curriculum vitae**
- (b) a declaration that the person is independent in a form as may be specified by the competent authority;
- (c) an indication of the scope of, and the purpose for which, the report was prepared;
Date and season of site investigation and relevance of the season to the outcome of the assessment.
- (d) a description of the methodology adopted in preparing the report or carrying out the specialised process;
The specific identified sensitivity of the site related to the activity and its associated structures and infrastructure.
An identification of any areas to be avoided, including buffers.
A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers.
- (e) a description of any assumptions made and any uncertainties or gaps in knowledge;
- (f) a description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment;

- (g) recommendations in respect of any mitigation measures that should be considered by the applicant and the competent authority;
- A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment.
- Any mitigation measures for inclusion in the EMPr.
- Any monitoring requirements for inclusion in the EMPr or EA.
- A reasoned opinion – (i) as to whether the proposed activity or portions thereof should be authorised and (ii) if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan.
- (h) a description of any consultation process that was undertaken during the course of carrying out the study;
- (i) a summary and copies of any comments that were received during any consultation process; and
- (j) any other information requested by the competent authority.

APPENDIX 3

PROJECT DESCRIPTION (GENERIC FOR ALL SECTIONS OF THE N2 AND N3)

The proposed capacity improvements, which will provide from 4 to 7 lanes in each direction, will improve safety and accommodate traffic growth to 2047.

Use will be made of the median and existing road reserve to accommodate widening; however, additional land will be required in limited areas where further space is needed. Counter flow lanes will be divided by a concrete barrier and retaining walls will be constructed on the road perimeters where required. Interchanges will be upgraded, bridges will require widening and demolition of redundant structures will occur.

During the planning phase, additional land will be acquired by SANRAL where needed (mainly where interchanges are expanding). Prior to construction at Westville, Paradise and Umhlatazana Viaducts, temporary construction access roads will need to be established to enable plant to access the area beneath the viaducts. With the exception of these viaduct access roads, contractors will make use of existing roads for construction access. No new borrow pits or quarries will be established as materials will be sourced from commercial sources⁶. No batching plants will be established on site.

The main construction activities for the capacity upgrades will include the following:

SITE PREPARATION

- Establishment of site camps and stockpile areas.
- Provision for on site waste management – sewage, waste water, solid waste, etc.
- Provision for storage/handling/disposal of hazardous substances (e.g. cement, asphalt, fuels and oils).
- Clearance of vegetation.
- Removal and stockpiling of topsoil and subsoil.
- Construction of temporary access roads to Westville, Paradise Valley and uMhlatuzana Viaducts.

ROAD AND BRIDGE WIDENING

- Accommodation of traffic.
- Demolition of structures (where required).
- Blasting (where required).
- Excavation with heavy plant.
- Stockpiling of spoil for building and leveling on site or other parts of the proposed N2 & N3 upgrades.
- Stockpiling of demolition rubble for building and leveling on site or other parts of the proposed N2 & N3 upgrades.
- Disposal of excess spoil/rubble to authorized landfill sites.
- Provision of drainage structures where crossing drainage lines and watercourses.
- Haulage and placement of materials with heavy plant.
- Water abstraction from local streams.
- Water spraying.
- Rolling and compaction with heavy plant.
- Bridge jacking.
- Retaining walls/other stabilisation/erosion control structures (as required).

⁶ SANRAL has decided to investigate materials sources but development or operation of quarries/borrow pits is not part of the scope of work for Basic Assessments 1 & 2.

- Erection of lighting, Armco or concrete barriers, road signs, and road lane markings.
- Relocation of existing traffic management infrastructure (cameras, etc).

RE-INSTATEMENT AND REHABILITATION

- Reinstatement of slopes.
- Reinstatement of topsoil.
- Revegetation.
- Erosion control.
- Alien plant control.