

SOUTH AFRICAN NATIONAL ROADS AGENCY

Contract No: SAPR NO304102/1

[2984 v1]

**CONCESSION CONTRACT
FOR THE DESIGN, CONSTRUCTION, FINANCING,
OPERATION AND MAINTENANCE OF A
PORTION OF NATIONAL ROUTE 3 FROM
CEDARA IN KWAZULU-NATAL TO HEIDELBERG
SOUTH INTERCHANGE IN GAUTENG AS A TOLL
HIGHWAY TOGETHER WITH DEVELOPMENTS
AND ASSOCIATED FACILITIES**

CONCESSION CONTRACT

ANNEXURE 2

ENVIRONMENTAL REQUIREMENTS

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1. Definitions

Words and phrases shall have the meaning hereby ascribed to them or where they are defined in the Concession Contract will have the same meaning when used herein unless the context otherwise requires.

"Best Management Practices" means those management practices that would reasonably and ordinarily be expected from time to time of an entity seeking in good faith to comply with all applicable legislation and laws and engaged in the same type of undertaking and under the same or similar circumstances and conditions as those envisaged by the Concession Contract and shall mean the option that provides the most benefit or causes the least damage to the physical environment, at an acceptable cost to the Concessionaire, in the long term as well as the short term;

"Ecological Rehabilitation" means rehabilitation by returning a physical area impacted directly upon by the Project to a condition that is reasonably environmentally desirable and is reasonably acceptable to the Agency and the appropriate Relevant Authorities;

"EIA" means the process of assessing the environmental effects of a development;

"Environmental Management Guidelines" or "EMG" means the guidelines as detailed in the EMP and designed for use by the contractors to the Concessionaire on the Site;

"Environmental Management Plan" or "EMP" means the plan required to be produced under Clause 5 of this Annexure;

"Environmental Management Program Report" means the report required to be prepared pursuant to the Minerals Act (Act 50) of 1991 which will be prepared concurrently with the Scoping Report and EIA (if required) as referred to in regulation 7 as promulgated under Government Gazette R1183 dated 5 September 1997, made by the Minister of Environmental Affairs and Tourism under Sections 26 and 28 of the Environmental Conservation Act 73 of 1989;

"External Reviewer" means the External Reviewer appointed under Clause 7.1(a) of this Annexure;

"Final Environmental Assessment Report" means the report to be produced by the External Reviewer at the termination or expiry of the Concession Period as more fully described in Clause 8.4(e);

"Independent Environmental Consultant" means the Independent Environmental Consultant appointed under Clause 7.1(b) of this Annexure;

"INR Report" means the report entitled "National Route 3 Sections 6, 7 and 8 - Keeversfontein to Warden: Environmental Assessment Investigative Report No.245" produced by the Institute of Natural Resources associated with the construction of Highway Sections 6 and 7;

"Integrated Environmental Management" or "IEM" provides an integrated approach for environmental assessment, management, decision-making monitoring and evaluation to promote sustainable development and the equitable use of resources as contemplated by the National Environmental Management Act (Act 107) of 1998. Principles underlying IEM provide for a democratic, participatory, holistic, sustainable, equitable and accountable approach;

"Interested and Affected Parties" means those persons directly affected by the Project;

"Scoping Report" is the report required to be produced under Clause 4 of this Annexure;

"Sensitive Environments" means riverine areas, wetlands, culturally significant sites, historically significant sites, aesthetically pleasing natural scenic sites, ecological sites and socially sensitive areas;

"Specialist Studies" means the studies to be carried out pursuant to Clause 3 of this Annexure.

2. General Requirements

- 2.1 This Annexure is subject to the provisions and conditions detailed in permits issued to the Concessionaire in respect of the Project and all legislation governing the environment in the Republic of South Africa.
- 2.2 Subject to Clause 17 of the Concession Contract, the Concessionaire shall comply with all environmental laws, regulations and standards of the State during the Development Period and the Concession Period.
- 2.3 Subject to Clause 7.4 of the Concession Contract, the Concessionaire shall bear all risks and costs with respect to damage to the natural environment caused by the Project during the Concession Period including claims for damage to the physical environment arising from any act or omission of the Concessionaire made by third parties.

- 2.4 Subject to Clauses 5, 8.4.1 and 13A.4 of the Concession Contract, the Concessionaire shall obtain all the necessary environmental permits and approvals in accordance with any applicable laws and regulations for the implementation of the Project and shall comply with all conditions of any environmental permit or approval granted by any Relevant Authority.
- 2.5 The Concessionaire shall be responsible for the physical impacts on the natural environment and shall consider the social and socio-economic impacts of the performance of its obligations under the Concession Contract.
- 2.6 The Concessionaire shall take such action to minimise the negative impacts, disturbance and destruction of natural habitats and biota and other environmental consequences of the Project as is reasonable.
- 2.7 The Concessionaire shall liaise with the Agency at reasonable intervals regarding progress of its obligations under this Annexure.
- 2.8 The Concessionaire shall, where practicable, ensure the inclusion in the Preliminary Design and Detailed Design of matters identified in the Scoping Report and EMP produced as a result of activities undertaken pursuant to this Annexure. Nothing in this clause requires the Concessionaire to procure a change to the Preliminary Design or Detailed Design following the grant of approval by the Agency or Independent Engineer of the relevant design under the Concession Contract.

3. Specialist Studies

- 3.1 The Concessionaire shall procure the Independent Environmental Consultant to undertake Specialist Studies detailed in Clause 3.2 of this Annexure as relevant at the times required and in compliance with the Environmental Conservation Act (Act 73) of 1989 and the National Environmental Management Act (Act 107) of 1998.
- 3.2 The Specialist Studies shall comprise, inter alia:
- (a) identification of the bio-physical, social and socio-economic environment to be affected by the Project and an assessment of the concerns of the Interested and Affected Parties regarding the impact of the Project on those environments and issues identified by the specialist conducting the studies;
 - (b) an identification of the environment potentially to be affected or impacted by the Project including identification of the potential impact on Sensitive Environments and species;
 - (c) identification of the potential impact on the environment at various phases of the Project;

- (d) description of the Best Management Practices and techniques required to ameliorate the potential impacts identified;
- (e) an historical and archaeological investigation to identify, outline and detail sites of historical or archaeological importance, graves, monuments and other cultural sites on the Site and the potential impact of the Project on these sites;
- (f) a biophysical investigation to:
 - (i) identify areas of conservation opportunity on the Site and environmental constraints on the development of the Project;
 - (ii) detail recommended mitigation measures for the environmental impacts of the Project identified by the studies;
 - (iii) identify the level and extent of air quality change that may result from exhaust emissions, borrow pits, quarries and new access roads directly associated with the Project;
 - (iv) identify the likely level and extent of noise nuisance resulting from the Project;
 - (v) identify the presence of rare and endangered fauna and flora species in areas directly affected by the Project;
 - (vi) identify, in respect of Highway Sections 6 & 7, the wetland ecosystem identified in the INR Report as habitats for endangered species;
 - (vii) determine the effect of the Project on the interconnection of the ecosystems and hydrological functioning of the wetland system to the river catchments;
 - (viii) identify hydrology and the effect on downstream uses;
 - (ix) determine the potential impact of the Project on the visual quality of the natural environment;
 - (x) assess the status and vulnerability of soil types and the risk of erosion with respect to Ecological Rehabilitation and environmental control;
 - (xi) assess the risk to river environments by contamination of water by spills and runoff from the Highway;

- (xii) identify the potential impact of the Project on the movement patterns of animals and people;
- (xiii) determine the potential impact of weather on the design and operation of Project;
- (xiv) identify existing infrastructure on the Site;
- (g) a socio-economic assessment of the Project to be undertaken within the framework of IEM to:
 - (i) identify and detail the development, economic and social profiles of the businesses and residents of the areas immediately adjacent to the Highway from a local, regional and national perspective;
 - (ii) include a public involvement plan to inform the communities of areas immediately adjacent to the Highway of the proposals for the Highway and to identify their concerns regarding the impact of the Project on the social, economic and biophysical environment;
 - (iii) include an economic assessment of the Project on areas immediately adjacent to the Highway including details on income, expenditure, economic base and demographics;
 - (iv) include an identification of the study area, role players and impacts of the Project;
 - (v) include a compilation of a profile of the study area including demographic, socio-economic and land use profiles;
 - (vi) include an estimation of the potential economic and social effects of the Project; and
 - (vii) include a strategy for monitoring and management of social change during the Concession Period.
- (h) any additional activities required by any appropriate Relevant Authority under law.

3.3 The impacts on the environment shall, for the purposes of the Specialist Studies, be assessed in terms of geographic extent, significance, status, duration, intensity and probability of occurrence of the relevant impact and confidence of assessment so made.

- 3.4 Specialist Studies shall comprise inter alia desktop research, site visits and field investigation where required.
- 3.5 The Concessionaire shall procure a report detailing the findings of the Specialist Studies.
- 3.6 The Specialist Studies report shall be peer reviewed by the External Reviewer and shall be audited for compliance with this Annexure by the External Reviewer.
4. **Scoping Report and Environmental Impact Assessment**
- 4.1 The Concessionaire shall procure that the Independent Environmental Consultant prepares a Scoping Report and EIA (if required) at the times required and in compliance with section 21, 22 & 26 of the Environmental Conservation Act 73 of 1989 (Government Regulations R1182, R1183 & R1184) and the National Environmental Management Act 107 of 1998 (as relevant) unless otherwise agreed by the Department of Environmental Affairs and Tourism. The Concessionaire shall procure that the Independent Environmental Consultant prepares a consolidated Scoping Report and EIA (if required) in a form that is user friendly.
- 4.2 Notwithstanding the requirements of legislation or regulation as to matters to be addressed in the Scoping Report and the EIA (if required) the Scoping Report and EIA (if required) will address the following:
- (a) identification and assessment of the potential environmental impacts associated with the Project;
 - (b) identification and assessment of potential cumulative environmental impacts associated with the Project;
 - (c) identification and assessment of potential secondary impacts associated with the Project including secondary impacts associated with the promotion of Developments and Local Industrial Parks;
 - (d) where appropriate, identification of alternative routes of the Highway with the necessary reasoning and motivation for the preferred alternative clearly identified and addressed during preliminary design;
 - (e) identification of measures for the management, and mitigation, of the potential environmental impacts identified and selection of the most appropriate options, alternatives and measures for mitigation of such potential impacts;
 - (f) identification of Best Management Practices for the mitigation measures identified pursuant to Clause 4.2(e);

- (g) identification of opportunities for enhancing already degraded aspects of the environment within the Site and opportunities for aesthetically pleasing design;
 - (h) detail a communication strategy for involvement of, and promoting trust and confidence with, the public residing adjacent to the Project for the duration of the Concession Period;
 - (i) aspects of the Project that directly impact on the social well being and cultural heritage areas through which the Highway passes;
 - (j) the results of the Specialist Studies;
 - (k) identification of issues regarding social changes to areas adjacent to the Highway directly resulting from the Project;
 - (l) identification of the potential impact of the Project on cultural sites and national monuments;
 - (m) identification of Sensitive Environments and measures for mitigation of impacts of the Project of these Sensitive Environments.
- 4.3 The Scoping Report and EIA (if required) shall be submitted to the Agency prior to Financial Closing and the Concessionaire shall consider any of the reasonable requirements of the Agency in obtaining approval of the Scoping Report.
- 4.4 The Scoping Report and EIA (if required) shall be audited by the External Reviewer one month prior to submission to the Relevant Authority.

5. Environmental Management Plan (“EMP”)

5.1 The Concessionaire shall procure that the Independent Environmental Consultant prepare an EMP for all phases and aspects of the Project. The EMP must address the results of the Scoping Report and EIA (if required).

5.2 The EMP must:

- (a) include a mission statement stating that the EMP is intended to ensure that the biophysical and social environment receive due consideration in order to preserve as much as reasonably possible the existing quality of the biophysical and social environments and that unexpected biophysical, social and socio-economic impacts of the Project during the Concession Period will receive due consideration;
- (b) specify Best Management Practices which will be implemented, where appropriate, to achieve the identified environmental improvements and mitigation;
- (c) detail mitigation measures to be utilised for environmental impacts identified in the Scoping Report and EIA (if required) including details of preventative measures for those impacts;
- (d) detail actions to manage the impact and issues in respect of social change resulting from the Project identified in the Scoping Report including, inter alia, the implementation of measures specified in the Concession Contract, action related to the expropriation of land and the utilisation of PDEs as specified in Annexure 20 of the Concession Contract;
- (e) detail opportunities for Ecological Rehabilitation of areas affected by the Project;
- (f) address the results of the Scoping Report and EIA (if required) including but not limited to providing details regarding:
 - (i) management of all Sensitive Environments during the Project;
 - (ii) mitigation of impacts of the Project on historical and archaeological sites, graves and monuments and other cultural sites on the Site identified in the Scoping Report;
 - (iii) the salvage of plant material, establishment of nurseries, and the preparation of an ecological rehabilitation plan for the Road Reserve;
 - (iv) prevention and control of fires on the Site during the Project;

- (v) protection of natural drainage and wetlands systems on the Site;
- (vi) conservation and management of top soil on the Site;
- (vii) ecological rehabilitation of borrow pits, spoil areas, quarries, workshop and construction camps used for the Project;
- (viii) fencing off of the relevant parts of the Road Reserve by at least temporary fencing before Construction Commencement;
- (ix) establishment of a database, procedures for handling, and storage of, hazardous substances;
- (x) the effect of noise pollution directly related to the Project on the environment;
- (xi) the effect of air pollution directly related to the Project on the environment;
- (xii) the effect of the Highway on tourism in the region;
- (xiii) the effect of Construction Works on the local labour force;
- (xiv) procedures for incidents and emergencies on the Highway where the environment may be negatively impacted upon;
- (xv) waste reduction in respect of the Project;
- (g) specify mitigation measures regarding river crossings and pedestrian and animal crossings in defined areas with particular cognisance of wetland and other Sensitive Environments;
- (h) detail waste minimisation and recycling policies for the Project;
- (i) include procedures to ensure that ground water, surface water and soil are not contaminated as a result of the Project.
- (j) address any requirements of any appropriate Relevant Authorities under law; and
- (k) be updated as agreed between the Parties.

- 5.3 The Concessionaire shall use its reasonable endeavours to ensure the co-operation of its employees and Contractors to achieve the environmental targets specified in the EMP.
- 5.4 The Concessionaire shall submit the EMP to the Agency for approval 1 month (or as otherwise agreed) prior to Financial Closing and thereafter at 4 monthly intervals unless otherwise agreed by both Parties, which approval shall not be unreasonably withheld or delayed.
- 5.5 The Concessionaire shall comply with the EMP approved under clause 5.4 above and shall not deviate from such approved plan unless it has the approval of the Relevant Authorities or the Agency. The Concessionaire shall employ an environmental control officer who will be responsible for monitoring and implementing the EMP during the Concession Period (the "Environmental Control Offer"). Environmental Management Guidelines ("EMG") shall be prepared for use by contractors of the Concessionaire on Site. The Concessionaire shall ensure that the Environmental Control Officer has access to all information required to perform its tasks specified hereunder.
- 5.6 The mitigation measures required to be undertaken by the Concessionaire shall be implemented according to Best Management Practices.
- 5.7 The EMP must incorporate the relevant environmental policies and standards applicable at the time of preparation and implemented using an Environmental Management System developed by the Concessionaire based on the ISO 14000 series of standards as the same may be updated from time to time.
- 5.8 The Environmental Control Officer, Independent Environmental Consultant and Independent Engineer will monitor the implementation and effectiveness of the mitigation measures set out in the EMP.
- 5.9 The EMP and its implementation will be audited by the External Reviewer from time to time as is reasonable for effectiveness and quality control. Recommendations may be formulated to be implemented during the Concession Period.
- 5.10 The Concessionaire shall within 3 months of any change in the relevant laws or regulations, update the EMP and advise the Agency of such change.

6. De Beers Pass Works, Upgrade Works and Repair and Replacement Works

- 6.1 In respect of the Upgrade Works and De Beers Pass Works, the Concessionaire shall procure Specialist Studies, a Scoping Report and an EIA (if required) as required by this Annexure. The Concessionaire shall update the EMP to comply with this Annexure and to reflect the impact of such works, including:

- (a) identification and assessment of the potential environmental impacts associated with such works;
- (b) identification of opportunities for Ecological Rehabilitation of Highway Sections on which Upgrade Works or De Beers Pass Works are to be performed;
- (c) incorporation of the impacts identified, mitigation measures recommended and findings of the INR Report; and
- (d) Repair and Replacement Works (as necessary).

6.2 The Concessionaire shall comply with the updated EMP.

7. External Reviewer, Independent Environmental Consultant and Environmental Control Officer

7.1 The Concessionaire shall appoint at its cost:

- (a) the External Reviewer, which appointment shall be approved by the Agency, which approval shall not be unreasonably withheld or delayed;
- (b) an Independent Environmental Consultant; and
- (c) the Environmental Control Officer,

to perform the functions of the relevant entity as set out in this Annexure.

8. Reports Training and Communication

8.1 The Concessionaire shall develop a communication strategy which shall ensure that there is a procedure for communication between the Concessionaire, the Independent Environmental Consultant, the Independent Engineer, the External Reviewer, the Agency and any Interested and Affected Parties.

8.2 The Concessionaire shall develop a public involvement program to be implemented during preparation of the Scoping Report and EIA and shall update such program as reasonably required during the Concession Period. The program shall provide an opportunity for Interested and Affected Parties to make comments, identify issues and express concerns regarding the potential environmental impact of the Project.

8.3 The Concessionaire shall procure the establishment of an Environmental Committee representative of the major stakeholders in the Project, including Interested and Affected Parties, to canvass the concerns of those persons in respect of the Project.

The Environmental Committee shall design its terms of reference in accordance with the principles of IEM.

- 8.4 The Concessionaire shall submit to the Agency the following reports:
- (a) the Scoping Report and EIA (if required) prepared in accordance with Clause 4 of this Annexure;
 - (b) the EMP prepared in accordance with Clause 5 of this Annexure;
 - (c) a site inspection report prepared by the Independent Environmental Consultant detailing progress of implementing the requirements of this Annexure and compliance with this Annexure. This report shall be prepared on the basis of site inspections carried out at intervals appropriate in the circumstances and as agreed with the Agency;
 - (d) Environmental Management Program Report as required under the Minerals Act (Act 50) of 1991;
 - (e) A Final Environmental Assessment Report which shall be a summary of all the Scoping Reports, EIAs (if any), the EMP and the specifications in the Environmental Management System (prepared pursuant to Clause 5.7) prepared or procured in relation to the Project by the Concessionaire, such Report to provide an overview of environmental matters which affected the Project.
- 8.5 Within 3 months of the Effective Date the Concessionaire shall establish a liaison committee consisting of one representative from each of the Agency, the Concessionaire, the Independent Engineer, the Lenders (if required by the Lenders) and any other role player deemed necessary by the members of the committee.
- 8.6 The Concessionaire shall procure the preparation of an environmental training program for the staff of the Concessionaire and the sub-contractors involved on the Construction Works prior to Construction Commencement appropriate for the relevant staff of the Concessionaire or sub-contractors having regard to their involvement in the Construction Works.

The environmental training program must provide for:

- (a) training of the relevant staff of the Concessionaire and sub-contractors in regard to the mitigation measures required to be implemented;
- (b) training of officers involved in supervising Construction Works, Concessionaire's staff and sub-contractors whose work may impact on the environment; and

- (c) capacity building, education and training in relation to environmental management of the Project.
- 8.7 The Concessionaire shall ensure that the results of environmental investigations, required mitigation measures and other relevant information is incorporated into tender documentation issued in respect of any Construction Contracts for Construction Works.
- 8.8 Capacity building, education and training in relation to environmental management of the Project shall be incorporated into the EMP and Environmental Management System (prepared pursuant to Clause 5.7).