

EIA FOR THE PROPOSED HYDROPOWER STATION AT BOEGOEBERG DAM, ON THE ORANGE RIVER NEAR GROBLERSHOOP

ADDITIONAL INFORMATION REQUIRED BY THE DEA

The information required in column one corresponds with the items in the Letter from the Department of Environmental Affairs (DEA) accepting the Final Scoping Report (FSR) and the Plan of Study for Environmental Impact Assessment (EIA) (please see Appendix A for the letter from DEA dated 17/10/2013). For ease of reference, some documents have been appended to this Additional Information Required by DEA document in an Appendix. Reference is also made to documents included in Annexures annexed to the Final EIA Report (EIR).

Nr	Information required	Where to find it in the report
1	All comments and recommendations made by all stakeholders and Interested and Affected Parties (I&APs) in the Draft Scoping Report and submitted as part of the FSR must be taken into consideration when preparing a report in respect of the proposed development.	All comments received to date are included in the Comments and Responses Report, included in Annexure B of the Final Environmental Impact Report (FEIR). All comments received were taken into consideration throughout the preparation of the FEIR.
2	Please ensure that all mitigation measures and recommendations in the specialist studies are addressed and included in the final EIR and Environmental Management Programme (EMP).	Summaries of the specialist assessments, as well as all the proposed mitigation measures are included in Section 5 of the FEIR. The specialist reports are included in Annexure D and all mitigation measures are included in Environmental Management Plan appendices (Annexure E), as follows: <ul style="list-style-type: none"> ○ Appendix C: Vegetation Management Plan ○ Appendix D: Hazardous Substances Management Plan ○ Appendix E: Erosion Management Plan ○ Appendix F: Stormwater Management Plan ○ Appendix G: Traffic Management Plan ○ Appendix H: Transportation Plan ○ Appendix I: Waste Management Plan ○ Appendix J: Heritage Conservation Plan ○ Appendix K: Aquatic Resource Management Plan ○ Appendix L: Hazardous Substances Management Plan ○ Appendix M: Open Space Plan

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3	<p>Please ensure that comments from all relevant stakeholders are submitted to the department with the Final Environmental Impact Report (EIR). This includes but is not limited to the Northern Cape Department of Environmental Affairs and Nature Conservation, The Department of Agriculture, Forestry & Fisheries (DAFF), the South African Civil Aviation Authority (SACAA), the Northern Cape Department of Transport, local and district municipalities, the Department of Water (DWA), the Department of Energy, the South African National Roads Agency Limited (SANRAL), the South African Heritage Resources Agency (SAHRA), water and irrigation bodies, farmers unions and the Square Kilometre Array (SKA).</p>	<p>The following authorities and stakeholders are included as key stakeholders and received copies of the FEIR, as indicated in the report transmittal note:</p> <ul style="list-style-type: none"> • Siyancuma Local Municipality • !Kheis Local Municipality • Siyathemba Local Municipality • Siyanda District Municipality • Groblershoop Public Library • DWA: Lower Orange Catchment Management Area • DWA: Hydrological Services • DWA: Chief Director Northern Cape • SAHRA • SAHRA Northern Cape • Northern Cape Provincial Heritage: Boswa ya Kapa Bokone • Department of Energy (Northern Cape): Regional Energy Director • Eskom Holdings Limited • The Department of Agriculture, Land Reform and Rural Development • Department of Agriculture and Land Reform (Northern Cape) • WESSA • Department of Environmental Affairs and Nature Conservation • Department of Energy • Boegoeberg Water Users Association (BWUA) • Agriforum, Boegoeberg, Groblershoop Boere Vereenging and

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		<p>Oranjerivier Landbou Unie</p> <p>The Department of Agriculture, Forestry & Fisheries, Square Kilometre Array, and the Department of Transport have been notified throughout the process. South African National Roads Agency Limited and the Civil aviation authority have also been included per the Departments request.</p> <p>Request for comment has been made and all comments received and is included in the Final EIA Report (please see Annexure B for a list of authorities and the written request).</p> <p>All comments received on the FEIR will be forwarded to DEA for final decision making.</p>
4	Please be advised that the contact person for renewable projects at the SKA office is Dr Adrian Tiplady and he can be contacted on Tel: 011 442 2434 or Email: atiplady@ska.ac.za.	Noted. SKA has been included as a key stakeholder.
5	You are also required to address all issues raised by organs of state and I&APS prior to the submission of the EIR to the Department.	<p>All issues raised to date are recorded in the Comments and Responses Report as included in Annexure B of the FEIR.</p> <p>All comments received on the FEIR will be forwarded to DEA for final decision making.</p>
6	Proof of correspondence with the various stakeholders must be included in the Final EIR. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.	Proof of correspondence with Authorities and I&APs is included in Annexure B of the FEIR.
7	The Environmental Assessment Practitioner must, in order to give effect to Regulation 56(2), give registered I&APs access to, and an opportunity to comment on the report in writing within 21 days before submitting the final environmental impact assessment report to the Department.	Letters requesting comments were sent to all registered I&APs, as per the database included in Annexure B. In addition the Final EIR will be made available at Groblershoop Public Library, at the offices of the Kheis Municipality in Groblershoop and as on the Aurecon

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Nr	Information required	Where to find it in the report
		website. I&APs have been be afforded 21 days to comment on the FEIR from 17 March 2014 to 7 April 2013
8	Please ensure that the Final EIR includes at least one legible A3 regional map of the area and the site layout map to illustrate the positions and associated infrastructure. The maps must be of acceptable quality and as a minimum, have the following attributes: <ul style="list-style-type: none"> • Maps are relatable to one another; • Cardinal points • Co-ordinates • Legible legends • Indicate alternatives • Latest land cover • Vegetation types of the study area • A3 size locality map 	Included in Annexure H of the Final FEIR.
9	In addition, the following additional information are required for the EIR: <ol style="list-style-type: none"> I. The EIR must provide an assessment of the impacts and mitigation measures for each of the listed activities applied for. II. Written comment from the provincial Department of Environmental Affairs indicating that the activities applied for under GNR 546 applies. In addition, a graphical representation of the proposed development within the respective geographical areas must be provided. 	I. All impacts and mitigation measures have been considered and are described in section 5 of the FEIR. II. Graphical representation for the proposed project is included in Annexure H. Requests to the Department of Environmental Affairs and Nature Conservation was been made to confirm the activities being applied for under GNR546. However confirmation is yet to be received.

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	<p>III. Details of the future plans for the site and infrastructure after decommissioning in 20-30 years and the possibility of upgrading the proposed infrastructure to more advanced technologies.</p> <p>IV. The total footprint of the proposed development should be indicated. Exact locations of the infrastructure, power lines and associated should be mapped at an appropriate scale.</p> <p>V. Should a Water use license be required, proof of application for a license needs to be submitted.</p> <p>VI. Information on services required on the site, e.g. sewage, refuse removal, water and electricity. Who will supply these services and has an agreement and confirmation of capacity been obtained? Proof of these agreements must be provided.</p> <p>VII. A copy of the final site layout map. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:</p> <ul style="list-style-type: none"> • Foundation footprint • Permanent laydown area footprint • Construction period laydown footprint 	<p>III. Please see Section 3.1.4 of the FEIR (Table 3.1).</p> <p>IV. The total footprints are indicated in Section 3 of the FEIR (table 3.1). The final Site Layout Map is included in the FEIR and Annexure H.</p> <p>V. The Water Use Licence Applications have been applied for as a separate process to the EIA. Proof of the application is provided in Annexure H.</p> <p>VI. It should be noted that once the proposed project is operational, there would be a very limited requirement for municipal services. Application for the confirmation of services has been verbally confirmed and the letter confirming this will be provided with submission of all comments on the FEIR.</p> <ul style="list-style-type: none"> • Final site layout maps are provided in Annexure H of EIR. • See Table 3-1 for footprint and location for temporary and permanent infrastructure. • The construction site is indicated in Figure 23 of the EIR.

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	<ul style="list-style-type: none"> • Internal roads indicating width (construction period width and operation period width) and with numbered sections between the other site elements which they serve (to make commenting on sections possible) • Wetlands, drainage lines, rivers, stream and water crossing of roads and cables indicating the type of bridging structures that will be used • The location of sensitive environment features on site e.g. CBAs, heritage sites, wetlands, drainage lines etc. that will be affected by the facility and its associated infrastructure. • Sub-station(s) and/or transformer(s) sites including their entire footprint 	<ul style="list-style-type: none"> • See Table 3-1 and refer to Maps 23, 24 and 25 of the FEIR, as well as Annexure F for information on roads. • Aquatic resources are indicated in the Sensitivity Maps in Figures 57 to 59, as well as included in Annexure H of the FEIR and measures for protection are included in the EMP. The transmission line will cross the Orange River and will be designed so that the entire river is spanned, with no infrastructure within the river. New roads will cross drainage lines. Standard engineering construction for such crossings will be used to ensure that the road is protected from flood damage and that the road does not impede water flow. • The sensitive areas are indicated in the sensitivity map included in Annexure H and Figures 57 to 59 of the FEIR. • The precise location of the sub-station and transformers would be determined during the detailed design. However, the placement of these will be within the assessed development footprint areas.

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	<ul style="list-style-type: none"> • Cable routes and trench dimensions (where they are not along internal roads). • Connection routes (including pylon positions) to the distribution/transmission network • Cut and fill areas at panel sites, along roads and at sub-station/transformer sites indicating the expected volume of each cut and fill • Borrow pits 	<ul style="list-style-type: none"> • The transmission line which starts at the switchyard next to the powerhouse will be above ground all the way to the Eskom Fibre Substation with some underground cable potentially near the substation. All cabling and trenching from the powerhouse to the switchyard will be below ground. The precise location of cable routes and connection routes would be determined during the detailed design. However, the footprints would be limited to the assessed areas. Transmission line alignment is indicated in Figure 22 of the FEIR. • As above • There will be cut and fill at the power chamber site and for the water conveyance infrastructure. Most of the roads to be used are existing and will be upgraded or are on flat topography and will not require any cut or fill. However widening of the existing access track near the powerhouse may require some cut and fill. A hard stand area will probably be required near the powerhouse/downstream tunnel portal, which may need cut/fill. The precise details of volumes would be determined during the detailed design. However, the footprints would be limited to the assessed areas. • Borrow pits are shown in Figure 23 and described in section 3.

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Nr	Information required	Where to find it in the report
	<ul style="list-style-type: none"> • Spoil heaps (temporary for topsoil and subsoil and permanently for excess material) • All existing infrastructure on the site, especially roads • Buffer areas • Building, including accommodation • All “no-go” areas <p>VII. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.</p> <p>IX. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.</p>	<ul style="list-style-type: none"> • Spoil is to be temporarily stockpiled and reused. The management of these stockpiles will be defined in the method statements which the ECO will approve prior to construction commencing. • Existing infrastructure (roads) is indicated in the maps included in Annexure H of the FEIR and Figures 23, 24 and 25 of the FEIR. • The construction camp has been set 100m from the river area, and a buffer area of 20m allowed for activities on the dam. The buffer areas are indicated on the sensitivity maps. • The construction site includes site offices and accommodation, as shown in the map included in Annexure H. • All no-go areas are indicated in the Sensitivity Maps (Figures 57 to 59) and included in Annexure H. <p>VIII. The final layout maps superimposed on the environmental sensitivity maps are shown in Figures 57 to 59 of the FEIR and included in Annexure H.</p> <p>X. Figures 57 to 59 in the FEIR and EMPr.</p>

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	<p>XI. A shapefile of the preferred development layout/footprint must be submitted to this Department. The shapefile must be created using the Hartebeesthoek 94 Datum and the data should be in Decimal Degree format using the WGS 84 Spheroid. The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, xml (Metadata file). If specific symbology was assigned to the file then the .avl and /or the .lyf file must also be included. Data must be mapped at a scale of 1:10 000 (Please specify if an alternative scale was used). The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title.</p> <p>The shape file must be submitted to:</p> <p>Postal Address: Department of Environmental Affairs Private Bag X447 Pretoria 0001</p> <p>Physical address: Department of Environmental Affairs Fedsure Forum Building (corner of Pretorius and Lillian Ngoyi Streets) 4th Floor South 315 Pretorius Street Pretoria 0002</p>	<p>XII. GIS electronic copy with zipped shpfile submitted with FEIR.</p>

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	For Attention: Muhammad Essop Integrated Environmental Authorisations Strategic Infrastructure Developments Telephone Number: (012) 395 1734 Fax Number: (012) 395 7539 Email Address: (MEssop@environment.gov.za)	
10	The Environmental Management Programme (EMP) to be submitted as part of the EIR must include the following: <ol style="list-style-type: none"> I. All recommendations and mitigation measures recorded in the EIR and the specialist studies conducted. II. The final site layout map. III. Measures as dictated by the final site layout map and micro-siting. IV. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process. V. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map. 	The EMP, included in Annexure E of the FEIR includes the following: <ol style="list-style-type: none"> I. All recommendations and mitigation measures from the specialists and the EIR. II. The final site layout map will be included in the Annexure H and in the EMP. III. All specialists identified sensitive features to avoid. The planning recommendations made by the specialist would be considered during the detailed design of the facility and associated infrastructures. IV. Environmental sensitivity map is included in the EMP and Annexure H of the FEIR. V. Final layout map superimposed on the environmental sensitivity map is included in the EMP and Annexure H of the FEIR.

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VI.	An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.	VI. Measures to manage alien invasive species are included Appendix C of the EMPr.
VII.	A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habits.	VII. A Plant Rescue and Protection Plan has been compiled and included Appendix C of the EMPr.
VIII.	A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoring must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.	VIII. A Revegetation and Habitat Rehabilitation Plan has been compiled and included Appendix C of the EMPr.
IX.	An open space management plan to be implemented during the construction and operation of the facility.	IX. An Open Space Management Plan has been compiled and included in Appendix M of the EMPr.
X.	A traffic management plan for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimize impacts on local commuters e.g. limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.	X. A Traffic Management Plan has been compiled and included in Appendix G of the EMPr.
XI.	A transportation plan for the transport of panel components, main assembly cranes and other large pieces of equipment.	XI. A Transportation Plan has been compiled and included in Appendix H of the EMPr.

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	<p>XII. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.</p> <p>XIII. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.</p> <p>XIV. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.</p> <p>XV. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spelling of pollutants.</p>	<p>XII. A Storm Water Management Plan has been compiled and included Appendix F in the EMPr.</p> <p>XIII. An Erosion Management Plan for monitoring and rehabilitating erosion events has been compiled and included in Appendix E of the EMPr.</p> <p>XIV. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage has been compiled and included in Appendix D of the EMPr.</p> <p>XV. Measures to protect hydrological features are included in Annexure K of the EMPr.</p>
11	The EIR must include a cumulative assessment of the facility if there are other similar facilities in the region. The specialist studies e.g. biodiversity, visual, noise, etc. must also assess the facility in terms of potential cumulative impacts.	Please see Section 5 of the FEIR report describing the potential cumulative impacts for each specialist study.
12	Please ensure that all the relevant Listing Notice activities are applied for, that the listing notice activities applied for are specific and that they can be linked to the development activity or	Please see the Application Forms included in Annexure A and the

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	infrastructure in the project description.	project description provided in Section 3.
13	The applicant is hereby reminded to comply with the requirements of Regulation 67 with regard to the time period allowed for complying with the requirements of the regulations, and regulations 56 and 57 with regard to the allowance of a comment period for I&APs on all reports submitted to the competent authority for decision-making. The reports referred to are listed in Regulation 56(3a-3h).	Noted. Time frames for commenting are in line with the requirements.
14	Furthermore, it must be reiterated that, should an application for Environmental Authorisation be subject to the provisions of Chapter 11, section 38 of the National Heritage Resources Act, Act 25 of 1999 (NHRA), then this Department will not be able to make nor issue a decision in terms of your application for Environmental Authorisation pending a letter from the pertinent heritage authority categorically stating that the application fulfils the requirements of the relevant heritage resources authority as described in Chapter 11, Section 38(8) of the National Heritage Resources Act, Act 25 of 1999.	Noted. Heritage and Palaeontology Impact Assessments were undertaken (as included in Annexure D). The Heritage and Palaeontological specialists confirmed that an application in terms of Chapter 11, section 38 of the NHRA would not be required. SAHRA requirements have been met in this FEIR (Appendix J of the EMPr).
15	You are requested to submit two (2) electronic copies (CD/DVD and two (2) hard copies of the Environmental Impact Report (EIR) to the Department as per regulation 34(1)(b) of the EIA Regulation, 2010.	Please find enclosed two (2) electronic copies (CD/DVD and two (2) hard copies as well as a GIS CD containing project relevant shpfiles.
16	You are hereby reminded of Section 24F of the National environmental Management Act, Act no 107 of 1998, as amended, that no activity may commence prior to an environmental authorisation being granted by the Department.	Noted.