



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

Environmental Authorisation

Authorisation register number: EMB/9 (i) (ii), 12 (ii) (a) (b) (c), 13, 14, 19, 27, 4 (b) (i) (cc) (ee) (gg) , 10 (b) (i) (cc) (ee) (gg) (hh), 12 (b) (i) (ii) (iv)/17/29

Holder of Authorisation: Mangaung Metropolitan Municipality

Location of activity: Gariep dam wall to Longridge reservoir in Bloemfontein

Project description: Activity 9 (i) (ii), 12(ii) (a) (b) (c), 13,14,19,27, 4(b) (i) (cc) (ee) (gg), 10(b) (i) (cc) (ee) (gg) (hh), 12(b) (i) (ii) (iv) of Listing Notice 1

Proposed Gariep to Mangaung water augmentation project

HEAD OF DEPARTMENT
Department of Economic,
Small Business Development,
& Tourism Environmental Affairs

2018 -03- 07

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Decision

The Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA- 'the Department') is satisfied, on the basis of information available to it and subject to compliance with the conditions of this Environmental Authorisation (EA), that the applicant should be authorised to undertake the activity specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activity authorised

By virtue of the powers conferred on it by the National Environmental Management Act ('NEMA'), 1998 (Act No. 107 of 1998) and GNR 982 of 8 December 2014 Environmental Impact Assessment Regulations as amended, the Department hereby authorises –

Mangaung Metropolitan Municipality with the following contact details-

P.O. Box 3704

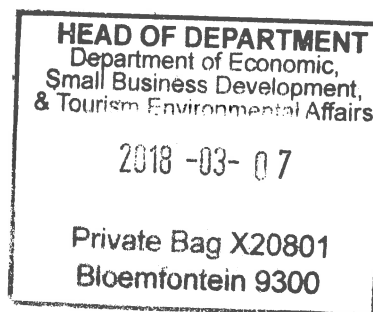
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Contact person: Mr. Gerhard Fritz

Cell: 072 959 2835

e-mail: gerhard.fritz@mangaung.co.za



To undertake the following activities (hereafter referred to as "the activities") indicated in Listing Notice 1 (GNR 327) Activity 9 (i) (ii), 12 (ii) (a) (b) (c), 13, 14, 19, 27, 4 (b) (i) (cc) (ee) (gg), 10 (b) (i) (cc) (ee) (gg) (hh), 12 (b) (i) (ii) (iv) as prescribed in the Final Basic Assessment Report (FBAR) dated 30th October 2017.

Site coordinates:

Activity location	Latitude (S)	Longitude (E)
Starting point	30°37'29.94"	25°30'0.91"
Middle point	29°50'015"	25°51'002"
End point	29°10'38.73"	26°11'56.96"

Activity description

The Mangaung Metropolitan Municipality is proposing to construct a bulk water transfer system and its associated infrastructure to transfer potable water from the Gariiep dam wall to the existing Longridge reservoir in Bloemfontein in order to relieve the severe water shortages that is often experienced in the Mangaung Metropolitan area.

The entire pipeline will be situated underground with a servitude of 36 metres which will stretch across ±182km and a 1km study corridor was also investigated. The proposed transfer system will traverse the Xhariep District Municipality and the Kopanong Local Municipality in particular, as well as the Mangaung Metropolitan Municipality.

The granting of this EA is subject to the conditions set out below.

Conditions

Scope of Authorisation

- 1.1 Authorisation of the activity is subject to the conditions contained in this document. These conditions form part of the EA and are binding on the holder of the Authorisation.
- 1.2 The holder of the Authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the Authorisation.
- 1.3 The authorised activity may only be carried out as a linear activity from Gariiep dam wall to Longridge reservoir in Bloemfontein as indicated in the exact co-ordinates stipulated in the FBAR.

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- 1.4 Any changes to, or deviations from, the project description set out in this Authorisation must be approved, in writing, by the Department before such changes or deviations may be commenced with.
- 1.5 In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations which may result in the holder of the Authorisation to apply for further Authorisation in terms of NEMA.
- 1.6 If commencement of the activity does not occur within a period of 3 (three) years from the date of issue, the Authorisation lapses and a new application for an EA must be made.
- 1.7 This Authorisation does not negate the holder of the Authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of this particular activity.

Appeal of Authorisation

- 1.8 The holder of the Authorisation must notify every registered interested and affected parties, of the decision by the Department in writing and within 14 (fourteen) calendar days of the date of this EA,
- 1.9 The notification referred must –
 - 1.9.1 specify the date on which the Authorisation was issued;
 - 1.9.2 inform the registered interested and affected party of the appeal procedure provided for in National Appeal Regulations published in Government Gazette No. 38303 of 8 December 2014.
 - 1.9.3 advise the registered interested and affected parties that a copy of the Authorisation will be furnished on request; and
 - 1.9.4 Give the reasons for the decision.
- 1.10 A person affected by the decision who wishes to appeal against the decision must lodge an appeal with the MEC of the Department of Economic, Small Business Development, Tourism and Environmental Affairs. An appeal should be directed to:

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MEC (DESTEА)

Private Bag X20801

Bloemfontein

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Tel: (051) 400 4903

E-mail: mosholij@detea.fs.gov.za

An appeal not submitted to the MEC (DESTEА) will not be regarded as valid.

- 1.11 The applicant shall not commence with the proposed activity once an appeal has been lodged with the office of the MEC.

Management of the activity

- 1.12 The Environmental Management Programme (EMPr) submitted as part of application for an EA is hereby approved.
- 1.13 The provisions of the EMPr included in the FBAR are an extension to the conditions of Authorisation, and non-compliance with the conditions of the EMPr would accordingly constitute non-compliance with the conditions of this Authorisation.
- 1.14 Should there be a change of ownership and/or project developer, the Department must be notified within 30 (thirty) days prior to the change itself. Conditions imposed in this EA must be made known to the new owner and/or developer and are binding on the new owner and/or developer.
- 1.15 The recommendations and mitigation measures recorded in the FBAR dated 30th October 2017 must be adhered to and incorporated as part of the EMPr where applicable.
- 1.16 Any updates or amendments to the EMPr must be submitted to the Department of Economic, Small Business Development, Tourism and Environmental Affairs and must be decided upon within a period of 30 days of the submission.



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Monitoring

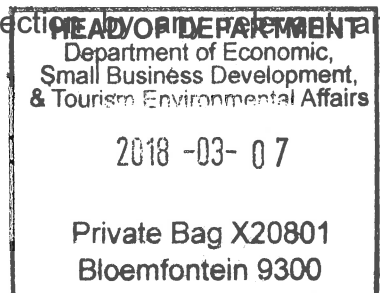
- 1.17 The applicant must appoint a suitably experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation / rehabilitation measures and recommendations referred to in this Authorisation are implemented and to ensure compliance with the provisions of the EMPr.
- 1.18 The ECO shall be appointed before commencement of any construction activity.
- 1.19 The ECO shall keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
- 1.20 The ECO shall remain employed until all rehabilitation measures, as required for implementations due to construction damage are completed and the site is ready for operation.
- 1.21 Records relating to monitoring must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.
- 1.22 Construction and operation of the development may be temporarily or permanently stopped for reasons of non-compliance with the conditions of this particular EA as set out in this document or any other subsequent document emanating from the conditions of this EA.

Recording and reporting to the Department

- 1.23 The applicant must appoint an independent auditor to conduct an environmental audit to ensure that the conditions, mitigation measures and recommendations stipulated in this EA are complied with. The environmental audit report must –
 - 1.23.1 Indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the EA conditions as well as the corrective action plan and implementation programme.
 - 1.23.2 Be kept on site and be made available for inspection to any relevant and competent authority in respect of this development.

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Commencement of the activity

- 1.24 The authorised activities / shall not commence within twenty (20) days of the date of notification of Interested and Affected parties of the decision on the EA.
- 1.25 Should you be notified by the MEC of a suspension of the Authorisation pending appeal procedures, you shall not commence with the activity unless authorised by the MEC in writing.

Notification to authorities

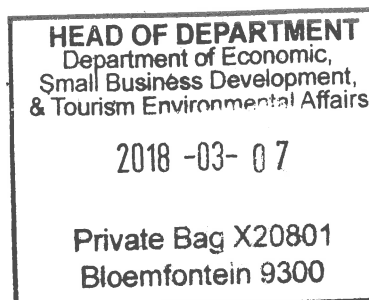
- 1.26 Fourteen (14) days prior written notice must be given to the Department that the activities will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which the construction of the activities will commence.

Operation

- 1.27 Fourteen (14) days prior written notice must be given to the Department that the activities will commence with the operation.

Post operation and rehabilitation

- 1.28 During post operation and rehabilitation, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.
- 1.29 Before the commencement of the rehabilitation activities a comprehensive rehabilitation plan must be compiled and adhered to and it should also be approved by this Department.



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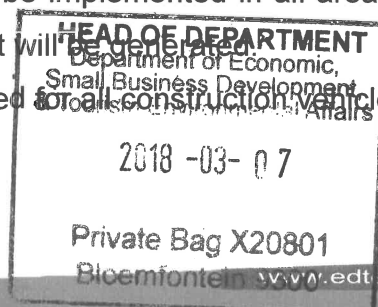
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Specific conditions

- 1.30 An integrated waste management approach that is based on waste minimisation must be implemented and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No. 59 of 2008) as amended.
- 1.31 The most significant hazardous waste stream will be cement and used motor oils from construction vehicles, therefore designated hazardous store areas must be set up and the hazardous waste must be disposed of at the closest appropriate hazardous landfill site.
- 1.32 Where registration for the storage of waste is required as per the Waste Act, such must be implemented.
- 1.33 Chemical toilets must be used during construction and must be serviced regularly by an authorised contractor. Grey water from construction camps must be directed to soak-away and must be managed to avoid contamination.
- 1.34 Water must be abstracted from an approved abstraction points near the construction works for potable use and for construction, if the municipal water will be brought in (for potable purposes) from the closest towns permission must be obtained from the relevant authority.
- 1.35 The total abstraction from the Gariep dam must be 47 304ml/annum, and that must only be 1.89 % of the dam volume.
- 1.36 Water Use License application must be submitted to the Department of Water and Sanitation.
- 1.37 An application for electricity supply must be lodged with the relevant authorities before the commencement of the proposed project.
- 1.38 Diesel generators must be used for generating electricity in areas where electricity is not easily obtainable.
- 1.39 Dust suppression measures (e.g. wetting) must be implemented in all areas that will be affected by construction activities and where dust will be generated for all construction vehicles.
- 1.40 Speed restrictions of 20km/h must be implemented for all construction vehicles.

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- 1.41 Vehicles transporting friable materials such as sand, rubble etc. must be covered by tarpaulin.
- 1.42 Construction and use of construction machinery must be limited between 07h00 to 17h00 from Monday to Friday.
- 1.43 All construction vehicles must be in good working order to reduce possible noise pollution.
- 1.44 Access roads to be constructed during the construction and operation of the proposed activities must be of the exact specifications as stipulated in the FBAR.
- 1.45 The significant impacts on the farms and farming activities that will be affected by the pipeline activities must be mitigated by ensuring that the construction sites and activities are properly managed by finalizing a route alignment with the least negative impacts on the farming activities.
- 1.46 The negative short term risks should thus be contained to ensure that no financial losses as a result of the construction activities on the farming practices occurs.
- 1.47 Storm water management measures to prevent ponding and to encourage storm water to flow around / off the site, must be implemented.
- 1.48 Increased run-off during construction must be managed using suitable structures as required to ensure flow velocities are reduced.
- 1.49 There must be monitoring of the re-growth of the natural occurring vegetation on the river bank.
- 1.50 Stormwater, wherever possible, must be allowed to soak into the land in the area on which the water fall e.g. retention ponds.
- 1.51 The Contractor must ensure that excessive quantities of sand, silt and silt laden water do not enter the storm water system.
- 1.52 Design of the stormwater drainage system must ensure that the local and surrounding natural systems are not negatively impacted.
- 1.53 Appropriate measures, e.g. erection of silt traps, or drainage retention areas to prevent silt and sand entering drainage or watercourses must be taken.
- 1.54 Effective stormwater management principles to reduce the loss of topsoil during heavy downpours must be ensured.
- 1.55 A comprehensive rehabilitation plan must be compiled and strictly adhered to.

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- 1.56 After construction of the pipeline the areas must be rehabilitated, and this must include the removal of all construction materials.
- 1.57 Excavated rock must not be left in heaps and must be removed or distributed evenly over the terrain to represent a natural environment and compacted areas must be ripped.
- 1.58 The route must be inspected for erosion due to construction where erosion is evident and this must be remedied.
- 1.59 When excavating in watercourses the upper 30 cm, or topsoil, must be removed together with the vegetation and stored as sods on the site. These will then be replaced on top of the installed pipeline.
- 1.60 Subsoil must be used as backfilling and not as top dressing, only removed sods and topsoil must be utilised to rehabilitate the bed and bank surface.
- 1.61 The soil surface must also be re-instated to the virgin soil level and not depressed or elevated as this will promote erosion and cause flow barriers.
- 1.62 Installation of the pipeline through the watercourses must preferably be undertaken during winter months (July to September) when baseflow will be at its lowest level and the likelihood of erosion will be lowest.
- 1.63 The watercourse bed and bank morphology must also be re-instated as far as possible.
- 1.64 Where excavation takes place within watercourses, the excavated material must be stored outside the floodplain of the watercourse as soils will be washed into the main channel when placed within the stream.
- 1.65 Many of the watercourses along the pipeline route contain a bedrock main channel, where the pipeline will be installed underneath the watercourse this will require blasting, excavation or cutting through the rock and removal thereof.
- 1.66 In such instances backfilling with concrete or other resistant material up to the watercourse bedrock surface must be implemented in order to minimize the detrimental impacts of uncured cement on watercourses.
- 1.67 Where steep banks occur and erosion is evidently problematic the geotextiles must be utilised to stabilise soils and the available options must include contouring, berms, gabions and geotextile netting.

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- 1.68 Weed eradication must be initiated at the crossing sites prior to construction and continued until rehabilitation of the pipeline route has been completed, this must include monitoring and eradication for a period of at least 2 years after construction has ceased.
- 1.69 When tranches are excavated through watercourses construction must be completed in the shortest timeframe possible to minimize the likelihood of flooding taking place and no open trenches through ephemeral systems must be left for any extended period.
- 1.70 Crossing streams or rivers which have an active connected main channel to flow only half of the channel must be blocked off for construction whilst the remaining half is allowed to maintain flow.
- 1.71 Stormwater must not be diverted into watercourses.
- 1.72 A 2 year period of monitoring must be initiated which must include monitoring of erosion, bank and bed stability, vegetation and weed establishment and this must be remediated.
- 1.73 Wetland boundaries must be clearly marked in work areas and trenching must be done in the dry season to minimize the risk of compaction and disturbances to the wetland.
- 1.74 The soil must be replaced in the reverse order in which it was removed, e.g. the soil that was removed last must be used as the first backfill.
- 1.75 The ECO must ensure that trenching does not create a subsurface drain, e.g. an underground preferential flow path due to backfilling with soil of lower permeability, this in particular where trenching is to occur in the same direction of the natural flow, precautions must include inserting clay plugs at appropriate 1m-2m intervals.
- 1.76 The bulk of silt and clay particles in the raw water must be removed in the sedimentation tanks.
- 1.77 The raw water must be coagulated/flocculated upstream from the sedimentation tanks and small flocs in the water must then settle to the bottom of the sedimentation tanks.
- 1.78 The sedimentation tanks must be provided with sludge collection hoppers with steep side slopes at the floor of the tanks where settled flocs or silt will accumulate as sludge.
- 1.79 The sludge must be discharged from the hoppers for a few minutes at regular intervals, say once or twice per day.
- 1.80 Discharge sludge must flow to the sludge dam where it can be stored and dried.

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- 1.81 Sludge must be handled at the sludge lagoons with supernatant return facility, and must not be hazardous.
- 1.82 The total footprint of the sludge lagoons must be approximately 2 hectares.
- 1.83 Sludge must be accumulated in the dam for approximately ten years depending on raw water turbidity and water volumes treated and when a dam is filled, the sludge must be dried and removed for some application like covering solid waste dumping area.
- 1.84 If there is going to be any stockpiling of the dried sludge then all water treatment chemicals must be handled in accordance with standard safety regulations.
- 1.85 A domed roof must be used for the current design of the balancing reservoir.

General

- 1.86 A copy of this particular EA must be kept at the property where the activities will be undertaken. The Authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the Authorisation who works or undertakes work at the property.
- 1.87 Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
- 1.88 The holder of the Authorisation must notify the Department, in writing within 48 (forty eight) hours, if any condition of this Authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
- 1.89 Non-compliance with a condition of this Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.



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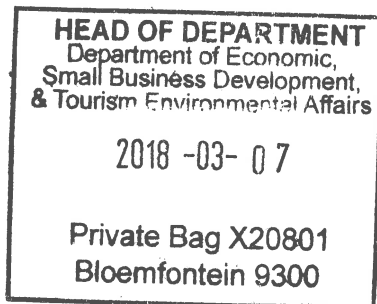
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- 1.90 National government, provincial government, local authorities or committees appointed in terms of the conditions of this Authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where operation be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of Authorisation as set out in this document or any other subsequent document emanating from these conditions of the Authorisation.
- 1.91 The applicant is responsible for compliance with the provisions for Duty-of-Care and remediation of damage contained in Section 28 and emergency incidents contained in Section 30 of the National Environmental Management Act, (Act no 107) of 1998.
- 1.92 Emergency and reporting of incidents as stipulated in Section 30 of NEMA (Act 107 of 1998) must be followed accordingly.

Approved:


.....
Ms. G. Brown
(HOD: DESTEА)

6/2/2018
.....
Date:



Annexure 1: Reasons for Decision

1. Background

The applicant, Mangaung Metropolitan Municipality applied for an Authorisation to commence with the activities under Listing Notice 1 (GNR 982) of 8 December 2014 EIA Regulations as amended and also as prescribed in the FBAR dated 30th October 2017 for the proposed Gariep to Mangaung water augmentation project. The applicant appointed GladAfrica Environment (Pty) Ltd to undertake Basic Assessment process.

2. Information considered in making the decision

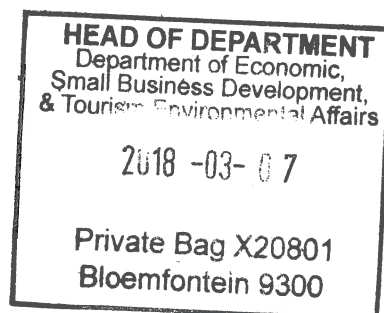
In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the FBAR dated 30th October 2017 completed by GA Environment (Pty) Ltd and the accompanying EMPr.
- b) Mitigation measures as proposed in the FBAR dated 30th October 2017 and the EMPr.
- c) The objectives and requirements of relevant legislation, policies and guidelines and Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).
- d) The findings of the site visit were undertaken by Ms. B. Mogorosi from the Department of Economic, Small Business Development, Tourism and Environment Affairs.

3. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. Factors considered in making the decision are the following:

- a) Wetlands and watercourse
- b) Generation of noise
- c) Air emission



4. Findings

After consideration of the information and factors listed above, the Department made the following findings –

- (a) When tranches are excavated through watercourses construction will be completed in the shortest timeframe possible to minimize the likelihood of flooding taking place and no open trenches through ephemeral systems will be left for any extended period.
- (b) All construction vehicles will be in good working order to reduce possible noise pollution.
- (c) Dust suppression measures (e.g. wetting) will be implemented in all areas that will be affected by construction activities and where dust will be generated.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the Environmental Authorisation, the proposed activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potential detrimental environmental impacts resulting from the proposed activities can be mitigated to acceptable levels, therefore the application is accordingly granted.



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