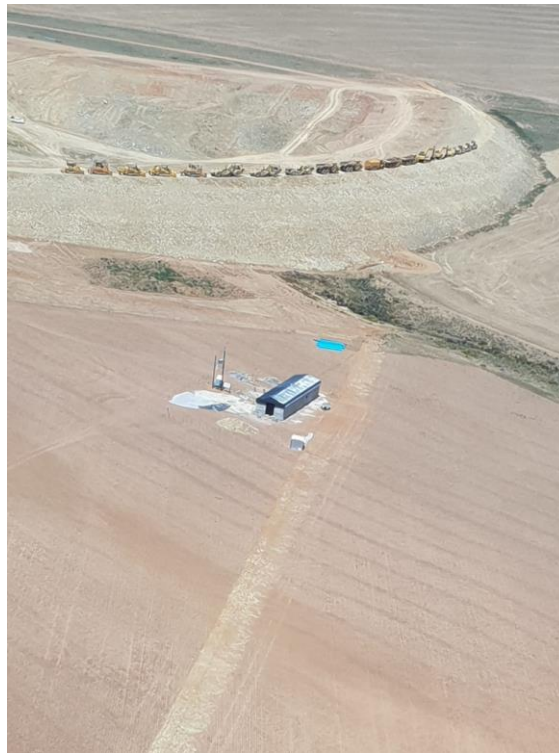


ENVIRONMENTAL AUDIT REPORT

DASBERG BOERDERY: THE PROPOSED CONSTRUCTION OF A NEW DAM ON PORTION 5 FARM VAN DER WATSKRAAL NO. 399, SWELLENDAM



DEADP REFERENCE NUMBER: 16/3/3/2/E3/10/1003/17

FEBRUARY 2019

RELEVANT QUALIFICATIONS OF THE AUTHOR

This Audit Report was conducted by Ms Inge Erasmus who has a BA Honours in Geography and Environmental Studies from Stellenbosch University. Before completing her honours degree Inge gained practical experience as a junior environmental consultant at Hatch Goba in Johannesburg from 2014 until 2015. Inge acted as an environmental control officer on a variety of projects in the Northern Cape, conducting environmental compliance audits, as well as being part of a project team working on a major resettlement project for Kumba Iron ore. Inge joined Enviro Africa in February 2017, generally performing duties as an environmental assessment practitioner with regards to NEMA EIA applications. The whole process and report was supervised by Bernard De Witt who has more than 10 years' experience in environmental management and environmental impact assessments.

DECLARATION OF INDEPENDENCE

EnviroAfrica CC is an independent consulting firm, and has no interest in the activity other than fair remuneration for services rendered. Remunerations for services are not linked to approval by decision making authorities and EnviroAfrica have no interest in secondary development as a result of the outcome of this project. There are no circumstances that compromise the objectivity of this report.

The findings, results, observations and recommendations given in this report are based on the author's best knowledge and available information. EnviroAfrica reserve the right to modify aspects of this report, including the recommendations if new information becomes available which may have a significant impact on the findings of this report.

DEFINITIONS & ABBREVIATIONS USED

DEFINITIONS

Applicant: The person or responsible person from an organization who applied for the proposed activity described in the EA.

Bund: Enclosure under / around a storage facility to contain any spillage

Batch plant: a concrete or plaster mixing facility and associated equipment and materials.

Construction: means the period of the project during which the actual works are carried out, deemed to include site establishment, site preparation, the works, maintenance period and decommissioning.

Construction site: means the area influenced and affected by the construction activities or under the control of the Contractor often referred to as “the Site”.

Construction Supervisor/ Site Agent: The person responsible (appointed by the owner) to ensure that the construction is carried out to completion on time, within budget and that the Contractor fulfils his obligations in terms of the EMP.

Contaminated water: means water contaminated by the Contractor's activities, *e.g.* concrete water and runoff from plant/ personnel wash areas.

Contractor: the principal persons / company and all other sub-contractors involved in the construction of the project.

Contractor's camp: means the designated and suitably demarcated areas on the Site within which all site offices and staff facilities are situated and within which equipment will be stored, for instance, borrow areas, batching plant, crusher plant, sand washing plant, workshop, offices, rest areas, ablution areas, etc., whichever is applicable.

Declaration of understanding: Form that is signed by all contractors involved in the construction works of their understanding and acceptance of the EMP and site-specific additions to the EMP.

Environment: means the surroundings within which humans exist and that are made up of:

- the land, water and atmosphere of the earth;
- micro-organisms, plant and animal life;
- any part of the combination of the above two bullets and the interrelationships between them;

- the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being

Environmental Aspect: Any element of any construction activity, product or services that can interact with the environment.

Environmental Audit Report: report done by the ECO and submitted by the Applicant to the satisfaction of the Chief Directorate Environmental Affairs, within six months after construction has been completed and also after the site(s) has been rehabilitated.

Environmental Control Officer: The appointed environmental officer responsible for overseeing the environmental aspects of the Construction phase of the EMP.

Environmental Impact: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from any construction activity, product or services.

Method statement: A statement by the Contractor, describing the scope of intended construction works step-by-step, in order for the ECO and Construction Supervisor to understand the Contractor's intentions and be able to comment on, so that they could assist with devising mitigating measures should it be necessary to avoid environmental impact.

No-Go Area(s): An area of such (environmental/aesthetical) importance that no person or activity are allowed within a designated boundary surrounding this area.

Stop Works Order: An order which can be issued either by the ECO or Construction Supervisor to the Contractor (or any sub-contractor) if serious environmental damage is about to happen or is happening as a result of construction activities. On receiving such an order the Contractor must immediately stop all activities (or planned activities) relevant to the specific issue until an environmentally friendly resolution has been approved by the ECO.

Site meetings: Periodic (weekly or monthly) meetings between the ECO, Construction Supervisor and Contractor to discuss construction activities that relate to the environment or any other environmental issues that might arise.

On-site start-up meeting: a start-up meeting held on site, before any construction has begun to discuss EMP and determine site specific additions that will be included as the basis for the EMP.

Potentially hazardous substance: is a substance, which, in the reasonable opinion of the Engineer, can have a deleterious (detrimental) effect on the environment.

Reasonable: means unless the context indicates otherwise, reasonable in the opinion of the Engineer/Project Leader after he has consulted with a person, not an employee of the

client, suitably experienced in "environmental implementation plans" and "environmental management plans", both as defined in the Environmental Management Act (Act No 107, 1998).

Solid waste: means all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Precautionary principle: means the basic principle, that when in doubt or having insufficient or unreliable information on which to base a decision, to then undertake actions that will have minimum risk.

Abbreviations

CA	Competent Authority
DEADP	Department of Environment and Development Planning
EA	Environmental authorization
EIA	Environmental Impact Assessment
EAP	Environmental Assessment Practitioner
ECO	Environmental control officer
EMP	Environmental Management Plan or Program
I&APS	Interested & Affected Parties
MMP	Maintenance & Monitoring Plan
NEMA	National Environmental Management Act, Act 107 of 1998
SAHRA	South African Heritage Resources Agency

BACKGROUND

Dasberg Boerdery (Pty) Ltd obtained an Environmental Authorisation (Appendix A) on 20 June 2018 to undertake the following related to listed activities:

The construction of a farm storage dam on Portion 5 of Farm van der Wattskraal No. 399. Water will be used for the irrigation of proposed 105ha of citrus orchards. The location was chosen to ensure the project life cycle costs are minimised (gravity feed vs. pumping cost etc.) as no pump station is required to extract water from the source and water will flow with gravity from the water source to the dam. Extraction of water from the source as well as irrigation of crops may trigger activities in term of the National Water Act (Act 36 of 1998), however this report only looks at activities triggered in terms of the National Environmental Management Act (Act 107 of 1998) as amended.

It was proposed that the dam will have a maximum dam wall height of 19,5 m, a dam wall length of approximately 550 m, and will have a capacity of approximately 625 000 cubic meters. The water surface at full capacity will be approximately 8,8 ha.

A new pipeline, approximately 1.5 km in length and a diameter of about 250 mm was constructed from the dam to the N2, where it connects with an existing pipeline. The route was chosen to avoid the stream/ wetland habitat to the west of the property (Portion 5 of Farm van der Wattskraal No. 399) and extends through cultivated land. The pipeline crosses the N2 within an existing sheep culvert and connect to the existing pipeline on Remainder of the Farm Wattskraal No. 399. The pipeline is constructed on previously disturbed land and therefore does not trigger any listed activities in terms of NEMA 2014, as amended. The total footprint of the dam with associated infrastructure is expected to be approximately 9.55 ha.

Associated infrastructure includes an Eskom powerline as well as a Pumphouse for irrigation of crops on agricultural land. The erection of the Eskom powerline and construction of the pumphouse is mentioned in the ECO reports Appendix D.

ENVIRONMENTAL AUDIT REPORT

PROJECT NAME: Dasberg Boerdery: The Proposed Construction of a New Dam

PROJECT & PHASE: Construction phase: Completed

LOCATION: Portion 5 of Farm Van Der Wattskraal No. 399 Swellendam

AUDIT DATE: 13 February 2019

EA CONDITION	STATUS	COMMENTS
SCOPE OF AUTHORISATION:		
1. The holder is authorised to undertake the listed activities specified in Section B above in accordance with, and restricted to, the Site Alternative A, described in the EIAR dated March 2018 on the site as described in Section C.	Compliant	Noted and agreed.
2. The Environmental Authorisation is valid for a period of Five years from the date of issue within which commencement must occur	Compliant	Noted agreed. Please see Appendix A for a copy of the Environmental Authorisation.
3. The development must be concluded within ten years from the date of issue within which commencement must occur.	Compliant	Noted and agreed.
4. The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, subcontractor, employee or any person rendering a service to the holder.	Compliant.	Noted. All contractors on site were made available of the conditions of the EA. Please refer to Appendix A for the Environmental Authorisation.
5. Any changes to, or deviations from the scope of the alternative described in Section B must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether or not to grant such acceptance/approval or not, the Competent Authority may request information, in order to evaluate the significance and the impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.	Compliant.	No deviations from the Scope.
WRITTEN NOTICE TO COMPETANT AUTHORITY:		
6. Seven calendar days' notice. In writing, must be given to the Competent Authority before commencement of clearing and construction activities. The notice must: <ul style="list-style-type: none"> • Make clear reference to the site details and EIA Reference number given above, and • Also include proof of compliance with the following conditions described herein: <ul style="list-style-type: none"> ➤ Conditions: 7, 8, 12, 17 and 18. 	Compliant.	Please refer to the letter dated 14 August 2018 delivered to the Competent Authority on the same date in Appendix B.

EA CONDITION	STATUS	COMMENTS
NOTIFICATION AND ADMINISTRATION OF APPEAL		
<p>7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision:</p> <ul style="list-style-type: none"> • Notify all registered interested and affected parties ("I&APs") <ul style="list-style-type: none"> ➤ The outcome of the application ➤ The reasons for the decision as included in Annexures 3 ➤ The date of decision; and ➤ The date when the decision was issued • Draw attention of all I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulation, 2014 (as amended) detailed in Section G • Draw attention of all registered I&APs to the manner in which they may access the decision; and • Provide the registered I&APs with: <ul style="list-style-type: none"> ➤ The name of the holder (entity) of this Environmental Authorisation ➤ Postal address of the holder ➤ Telephonic and fax details of the holder and ➤ Contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations (as amended) 	Compliant.	Please refer to letters dated 20 June 2018 sent to I&APs on 25 June 2018 in Appendix B.
<p>8. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date of issue of this Environmental Authorisation. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided i.e. the listed activities, including site preparation, must not commence until the appeal is decided.</p>	Compliant.	The letter to the CA dated 14 August 2018 confirms that this condition was met. No appeals were lodged. Refer to Appendix B.
MANAGEMENT OF ACTIVITIES		
<p>9. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.</p>	Compliant.	<p>A copy of the EMP was handed to the construction supervisor and an informative and detailed presentation of the EMP and its contents were carried out by the ECO to outline the function and objectives of the EMP. The construction supervisor signed a Declaration of Understanding.</p> <p>Please refer to the start up meeting report dated 13 August 2018. Appendix C.</p>
<p>10. The MMP adapted as part of this Environmental Authorisation must be implemented.</p>	Compliant.	A copy of the MMP is kept in the Environmental File on site.

EA CONDITION	STATUS	COMMENTS
11. The EMPr and MMP must be included in all contract documentation for all phases of implementation.	Compliant.	A copy of the MMP is kept in the Environmental File on site.
MONITORING		
12. The holder must appoint a suitably experienced environmental control officer (“ECO”), or site agent where appropriate, before commencement of any clearing or construction activities to ensure compliance with the EMPr and the conditions contained herein.	Compliant	<p>Cobus Henning from Moreson Grondverskuiwings was appointed as the site agent.</p> <p>Inge Erasmus from Enviro Africa was appointed as the ECO.</p> <p>The site agent and ECO ensured that EMPr is complied with and conditions in the EA is met.</p>
13. A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including on a publicly accessible website.	Compliant	<p>The ECO conducted bi-weekly environmental evaluations using a site checklist. After every four bi-weekly checklists were completed, the ECO conducted a consolidated ECO report. This report was made available on the EnviroAfrica website.</p> <p>Please refer to Appendix D for the consolidated ECO reports dated 3 October 2018, 10 December 2018, 1 February 2019</p>
14. Access to the site referred to in Section C must be granted, and environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.	Compliant	Noted.
AUDITING		
<p>15. In terms of Regulation 34 of the NEMA EIA regulations 2014 (as amended), the holder must conduct environmental audits to determine the compliance with the conditions of the Environmental Authorisation, EMPr, MMP and submit Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2015 (as amended)</p> <p>The holder must undertake an environmental audit quarterly for the duration of the construction phase and submit Environmental Audit Reports to the Competent Authority once every six months during the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority six months after the operation commenced.</p>	<p>Compliant</p> <p>Compliant</p>	<p>This report serves as the Environmental Audit Report to ensure all conditions of the EMP and MMP was complied to. This report will be submitted to the Competent Authority.</p> <p>The ECO conducted bi-weekly environmental evaluations using a site checklist. After every four bi-weekly checklists were completed, the ECO conducted a consolidated ECO report. This report was made available on the EnviroAfrica website.</p> <p>Please refer to Appendix D for the consolidated ECO report dated 3 October 2018, 10 December 2018, 1 February 2019.</p> <p>Six monthly audits were not conducted as the construction of the dam was completed within 6 months (August 2018 – January 2019). This</p>

EA CONDITION	STATUS	COMMENTS
<p>The holder must, within 7 days of the submission of each of the above-mentioned reports to the Competent Authority, notify all potential registered and affected I&AP's of the submission and make the report available to anyone on request and on a publicly accessible website. (if applicable)</p>	Compliant	<p>report serves at the six monthly audit report and will be made available on the Enviro Africa website.</p> <p>This Audit report will be submitted to the CA and all I&AP were made aware of the availability of this report on the EnviroAfrica website.</p> <p>Please refer to proof of email sent to all I&APs dated 13 February 2019, Appendix B</p>
SPECIFIC CONDITIONS		
<p>16. Should any heritage remains be exposed during excavations or any other actions on site, these must immediately be reported to Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape.</p> <p>Heritage remains include: meteorites, archaeological and/or palaeontological remains (including fossil shells and trace fossils); coins, indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts; and bone remains; structures and other built features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.</p>	Compliant.	<p>The site supervisor was made aware of this conditions during the Start Up meeting. Refer to the Start Up Meeting report Appendix C.</p> <p>No heritage remains were exposed.</p>
<p>17. A qualified archaeologist and / or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resource authority.</p>	Compliant.	No heritage remains were exposed.
<p>18. A "Search and Rescue" exercise must be undertaken in the area of the affected remnant of Central Ruens Shale Renosterveld and rescued plants must be relocated into the area from waypoint VDW5 westwards, as specified in the Botanical Assessment, dated October 2017 and conducted by Bergwind Botanical Surveys and Tours.</p>	Compliant.	<p>Search and rescue was conducted by VULA Environmental Services on 15 and 16 August 2018 before any excavations were conducted. Rescued plants were relocated to the stream which was made a No-go area.</p> <p>Please refer to Appendix E for the Search and Rescue report from VULA Environmental Services.</p>
19.		
<p>20. The construction footprint of the dam must be clearly demarcated prior to commencement of any construction activities and all vehicles and construction related activities must be prohibited outside of the demarcated area.</p>	Compliant.	<p>A method statement for demarcation and was conducted prior to construction. Method statements are kept in the Environmental Site file, available on request.</p> <p>The construction footprint of the dam was demarcated a No-Go area was established.</p>

EA CONDITION	STATUS	COMMENTS
		Vehicles and construction relate activities were prohibited in the No-Go area.

Audit findings

In the case of the Dasberg Boerdery: Proposed construction of a new dam on Portion 5 of Farm Van Der Wattskraal No 399, Swellendam, the auditor would like to congratulate the contractor Moresonson Grondverskuiwing as well as the Applicant, Mr Schalk Viljoen, on a well-managed and maintained construction site.

It seems that all construction activities were done in accordance with the stipulated environmental control procedures and all requirements with regard to impact minimisation were implemented. Even though the environment in which the dam is situated is monthly transformed due to agricultural activities on the property , rehabilitation work was neatly done and No-Go areas maintained.

Non-conformities encountered

None

Please see the following appendices attached:

Appendix A – Environmental Authorisation

Appendix B – Letters to DEADP & I&APs

Appendix C – Start-up meeting report

Appendix D – ECO Reports & Photos record

Appendix E – Search and Rescue report

Appendix F – Declaration of Independence