



REFERENCE: 16/3/3/1/F1/11/2043/18
ENQUIRIES: Natasha Bieding
DATE OF ISSUE: 2019 -03- 07

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED EXPANSION OF A DAM ON PORTION 2 OF THE FARM NO. 76, KROMVLEI, PIKETBERG

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014, the Competent Authority herewith grants Environmental Authorisation to the applicant to undertake the listed activities specified in section B below with respect to Layout Alternative 2, described in the Basic Assessment Report ("BAR"), dated 3 December 2018.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in section E below.

A. DETAILS OF THE HOLDER OF THIS ENVIRONMENTAL AUTHORISATION

Karsten W/C Grapes (a division of Karsten Boerdery)
c/o Belia Karsten
P O Box 4
HEXRIVIER
6855

Tel.: (021) 970 5120
Fax: (021) 979 5247

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "the holder".

B. LIST OF ACTIVITIES AUTHORISED

Listed Activities	Activity/Project Description
<p>Government Notice No. R. 983 of 4 December 2014 – Activity Number: 48</p> <p>Activity Description: <i>"The expansion of— infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more; where such expansion occurs—</i></p> <ul style="list-style-type: none"> <i>(a) within a watercourse;</i> <i>(b) in front of a development setback; or</i> <i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</i> <p><i>excluding—</i></p> <ul style="list-style-type: none"> <i>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</i> <i>(bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</i> <i>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</i> <i>(dd) where such expansion occurs within an urban area; or</i> <i>(ee) where such expansion occurs within existing roads, road reserves or railway line reserves".</i> 	<p>The water surface area and infrastructure of the dam will be expanded by more than 100m² and the expansion will take place within 32m from the Kromvlei-se-Kloof River.</p>
<p>Government Notice No. R. 985 of 4 December 2014 -</p> <p>Activity Number: 23</p> <p>Activity Description: <i>"The expansion of—</i></p> <ul style="list-style-type: none"> <i>(i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or</i> <i>(ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more;</i> <p><i>where such expansion occurs—</i></p> <ul style="list-style-type: none"> <i>(a) within a watercourse;</i> <i>(b) in front of a development setback adopted in the prescribed manner; or</i> <i>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</i> <p><i>excluding the expansion of infrastructure or</i></p>	<p>The water surface area and infrastructure of the dam will be expanded by more than 100m² and the expansion will take place within 32m from the Kromvlei-se-Kloof River.</p> <p>A portion of the farm is included in the Moutonshoek Protected Area.</p>

structures within existing ports or harbours that will not increase the development footprint of the port or harbour.

- i. Western Cape
- i. Outside urban areas:
 - (aa) A protected area identified in terms of NEMPAA, excluding conservancies;
 - (bb) National Protected Area Expansion Strategy Focus areas;
 - (cc) World Heritage Sites;
 - (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
 - (ee) Sites or areas listed in terms of an international convention;
 - (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
 - (gg) Core areas in biosphere reserves; or
 - (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined".

The abovementioned list is hereinafter referred to as "the listed activities".

The holder is herein authorised to undertake the following related to the listed activities:

The expansion of an existing earth dam on Kromvlei (Portion 2 of Farm 76), Piketberg.

Expansion of the 'Kromvlei dam 1' will entail enlargement of the dam basin by moving and raising the dam wall. The new wall will be approximately 7m high (i.e. approximately 3.5m higher than the existing wall). The water storage capacity will be increased from approximately 7 900m³ to approximately 45 000m³. The current water surface area at full supply level will be increased from approximately 1 985m² to approximately 6 734m².

The new wall of the dam will be moved outwards to the west into an area currently occupied by a gravel farm road. A 150m section of this road will therefore be realigned to the west.

Encroachment of the downstream toe of the proposed embankment on the adjacent river corridor will be limited to 5m and this will expand into an area that is currently used as a stockpile yard. The enlargement will however not encroach into the Kromvlei-se-Kloof River itself.

Construction materials will be obtained from the dam basin as well as the eastern edge of the existing dam.

Water for the dam is to be extracted from existing boreholes on the farm. As such, no surface water will be utilised in the proposed scheme and no additional boreholes are proposed.

C. LOCATION AND SITE DESCRIPTION

The listed activities will take place on Portion 2 of the Farm No. 76, Kromvlei, Piketberg. The said property is located to the south-eastern section of the Krom Antonies River Valley adjacent to the Piketberg Mountains.

The SG 21-digit code is: C05800000000007600002

Co-ordinates:

Latitude: 32° 42' 55.95" S

Longitude: 18° 44' 07.36" E

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan.

hereinafter referred to as "the site".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

In Clover Environmental Consulting (Pty) Ltd
c/o Ingrid Eggert
P O Box 3420
TYGERVALLEY

Cell.: 083 278 7107

Fax: 086 5526764

E. CONDITIONS OF AUTHORISATION

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 preferred alternative, described in the BAR dated 3 December 2018 on the site as described in Section C above.
2. Authorisation of the activity is subject to compliance with the conditions set out in this Environmental Authorisation. The holder must ensure compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
3. The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.

This Environmental Authorisation is granted for–

- (a) A period of five (5) years, from the date of issue, during which period the holder must commence with the authorised listed activities; and

- (b) A period of ten (**10**) years, from the date the holder commenced with an authorised listed activities, during which period the authorised listed activities for the construction phase, must be concluded.
- 4. The activity that has been authorised may only be carried out at the site described in Section C above in terms of the approved "Environmental Management Programme" ("EMPr").
- 5. Any changes to, or deviations from the scope of the description set out in Section B and Condition 2 above must be accepted or approved, in writing, by the competent authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the competent authority may request such information to evaluate the significance and 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.

Notification of authorisation and right to appeal

- 6. The holder of the authorisation must in writing, within 14 (fourteen) calendar days of the date of this decision –
 - 6.1 notify all registered Interested and Affected Parties of –
 - 6.1.1 the outcome of the application;
 - 6.1.2 the reasons for the decision;
 - 6.1.3 the date of the decision; and
 - 6.1.4 the date of issue of the decision;
 - 6.2 draw the attention of all registered Interested and Affected Parties to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulation, 2014;
 - 6.3 draw the attention of all registered Interested and Affected Parties to the manner in which they may access the decision; and
 - 6.4 provide the registered Interested and Affected Parties with:
 - 6.4.1 the name of the holder (entity) of this Environmental Authorisation,
 - 6.4.2 name of the responsible person for this Environmental Authorisation,
 - 6.4.3 postal address of the holder,
 - 6.4.4 telephonic and fax details of the holder,
 - 6.4.5 e-mail address, if any;
 - 6.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered Interested and Affected Parties in the event that an appeal is lodged in terms of the National Appeals Regulations 2014.

Commencement

- 7. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered Interested and Affected Parties of this decision.
- 8. In the event that an appeal is lodged with the Appeal Administrator, the effect of this Environmental Authorisation is suspended until such time as the appeal is decided. In the instance where an appeal is lodged the holder must not commence with the activity, including site preparation, until such time as the appeal has been finalised and the holder is authorised to do so.

Written notice to the competent authority

9. Seven calendar days' notice, in writing, must be given to the competent authority before commencement of construction activities. Commencement for the purpose of this condition includes site preparation.
 - 9.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 9.2 The notice must also include proof of compliance with the following conditions described herein:
Conditions: 6, 7 and 14.

Management of activity

10. The draft EMPr submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
11. An application for amendment to the EMPr must be submitted to the competent authority in terms of Chapter 5 of the EIA Regulations, 2014 (as amended), if any amendments are to be made to the outcomes of the EMPr, and these must only be implemented once the amended EMPr has been authorised by the competent authority.
12. The EMPr must be included in all contract documentation for all phases of implementation.
13. A copy of the Environmental Authorisation and the EMPr must be kept at the site where the listed activities will be undertaken. Access to the site referred to in Section C above must be granted and the Environmental Authorisation and EMPr must be produced to any authorised official representing the competent authority who requests to see these for the purposes of assessing and/or monitoring compliance with the conditions contained herein. The Environmental Authorisation and EMPr must also be made available for inspection by any employee or agent of the applicant who works or undertakes work at the site.

Monitoring

14. The holder must appoint a suitably experienced Environment Control Officer ("ECO"), for the duration of the construction and rehabilitation phases of implementation.

The ECO must–
 - 14.1 be appointed prior to commencement of any land clearing or construction activities commencing;
 - 14.2 ensure compliance with the EMPr and the conditions contained herein; and
 - 14.3 keep record of all activities on site; problems identified; transgressions noted and a task schedule of tasks undertaken by the ECO.

Environmental audit reports

15. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid -
 - 15.1 ensure that compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
 - 15.2 submit at least two environmental audit reports to the relevant competent authority during the construction phase. The holder must submit one audit report

three months after commencement of the construction phase and another audit report six months after completion of the construction period; and
15.3 submit an environmental audit report every five (5) years while the Environmental Authorisation remains valid.

16. The environmental audit report must be prepared by an independent person and must address the objectives and contain all the information set out in Appendix 7 of the EIA Regulations, 2014 (as amended).

In addition to the above, the environmental audit report, must -

- 16.1 provide verifiable findings, in a structured and systematic manner, on-
- (a) the level of compliance with the conditions of the Environmental Authorisation and the EMPr and whether this is sufficient or not; and
 - (b) the extent to which the avoidance, management and mitigation measures provided for in the EMPr achieve the objectives and outcomes of the EMPr and highlight whether this is sufficient or not;
- 16.2 identify and assess any new impacts and risks as a result of undertaking the activity;
- 16.3 evaluate the effectiveness of the EMPr;
- 16.4 identify shortcomings in the EMPr;
- 16.5 identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr;
- 16.6 indicate the date on which construction work was commenced with and completed or in the case where the development is incomplete, the progress of the development and rehabilitation;
- 16.7 include a photographic record of the site applicable to the audit; and
- 16.8 be informed by the ECO reports.
17. The holder must, within seven days of the submission of the environmental audit report to the competent authority, notify all potential and registered Interested and Affected Parties of the submission and make the report available to anyone on request and, where the holder has such a facility, be placed on a publicly accessible website.

Specific conditions

18. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed. Any solid waste must be disposed of at a waste disposal facility licensed in terms of the applicable legislation.
19. Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include: archaeological remains (including fossil bones and fossil shells); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

20. The holder of the Environmental Authorisation must, at all times, ensure that the activity complies with the Noise Regulations in terms of the relevant legislation.
21. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
22. If the holder does not commence with the listed activities within the period referred to in Condition 3, this Environmental Authorisation shall lapse for the activity, and a new application for Environmental Authorisation must be submitted to the competent authority. In order to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the competent authority prior to the expiry date of the Environmental Authorisation.
23. An application for amendment of the Environmental Authorisation to the competent authority must be submitted to the competent authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the competent authority must only be notified of such changes.

24. The manner and frequency for updating the EMPr is as follows:
Amendments to the EMPr, other than those mentioned above, must be made in accordance with Regulations 35 to 37 of GN No. R. 982 of 4 December 2014 (as amended) or any relevant legislation that may be applicable at the time.
25. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
26. The Maintenance Management Plan included in the EMPr dated August 2018 is hereby approved and must be implemented.
27. The following recommendations adapted from the BAR dated 3 December 2018 from Ingrid Eggert of In clover Environmental Consulting and the Freshwater Assessment dated March 2018 from Toni Belcher and Dana Grobler of Blue Science must be implemented:
 - 27.1 The riparian area north of the toe of the new enlarged dam must not be re-shaped, filled in, cleared of indigenous vegetation or used as a stockpile area or construction yard.
 - 27.2 The riparian area directly north of the dam wall where soil will be exposed as a result of the construction activities must re-vegetated when construction has been completed.
 - 27.3 A buffer area of approximately 30m in width between the Kromvlei-se-Kloof River and the expanded dam must be maintained. No new development, new roads, ploughing, infilling, dumping of material, storing, excavation or installation of infrastructure must take place in the said buffer area.

F. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date notification of the decision was sent to the holder by the competent authority -
 - 1.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
 - 1.2 Submit a copy of the appeal to any registered Interested and Affected Parties, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered Interested and Affected Parties -
 - 2.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014 (as amended) to the Appeal Administrator; and
 - 2.2 Submit a copy of the appeal to the holder of the decision, any registered Interested and Affected Party, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.
3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered Interested and Affected Party and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
4. The appeal and the responding statement must be submitted to the address listed below:

By post: Western Cape Ministry of Local Government, Environmental Affairs and Development Planning
Private Bag X9186
CAPE TOWN
8000

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Jaap de Villiers (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001
- Note:** For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to Jaap.DeVilliers@westerncape.gov.za.
5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from the Appeal Authority at: Tel. (021) 483 3721, E-mail Jaap.DeVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

G. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this environmental authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully


MR ZAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 07/03/2019

Copied to: (1) Ingrid Eggert (Inclover Environmental Consulting)
(2) Hannes Vermeulen (Bergrivier Municipality)

Fax: (086) 552 6761
Fax: (022) 783 1422

FOR OFFICIAL USE ONLY:

EIA REFERENCE NUMBER: 16/3/3/1/F1/11/2043/18

ANNEXURE 1: LOCALITY PLAN



ANNEXURE 2: SITE PLAN



ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the competent authority, *inter alia*, considered the following:

- a) The information contained in the Application Form dated 1 August 2018, as received by the competent authority on 3 August 2018, the BAR dated 3 December 2018 and the EMPr submitted together with the BAR, respectively;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation, Alternatives (dated March 2013); and
- c) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the NEMA.

All information presented to the competent authority was taken into account in the consideration of the application for environmental authorisation. A summary of the issues which, according to the competent authority, were the most significant reasons for the decision is set out below.

1. Public Participation

The public participation process included:

- identification of and engagement with Interested and Affected Parties;
- fixing a notice board at the site where the listed activities are to be undertaken;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activities are to be undertaken, the municipality and ward councillor, and the various organs of state having jurisdiction in respect of any aspect of the listed activities;
- the placing of a newspaper advertisement in the "Weslander" on 17 May 2018; and
- making the BAR and all relevant information available to Interested and Affected Parties for public review and comment.

This Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements.

All information presented to the Competent Authority was taken into account in the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

2. Alternatives

Early eliminated Alternative (Rejected Alternative):

A location alternative was considered during the early stages of the assessment process. This included the proposed expansion of the existing off-stream dam as well as the expansion of the existing dam northward. The expansion of the existing dam northward is located well beyond the Kromvlei-se-Kloof River. The expanded dam will be used as an instream dam by using surface water.

This alternative was rejected as a result of the following:

- the potential impacts on downstream water users regarding the expansion of the existing dam located northward were never considered in detail; and
- the impacts of having an instream dam on the Kromvlei-se-Kloof River, the Krom Antonies River and the Verlorevlei River system were deemed to be significant/very high.

Layout Alternative 1 (Rejected Alternative):

This alternative entails the expansion of an existing dam westward to where it abuts an existing gravel road, as well as expansion northwards to where it extends into the buffer area along the adjacent river. This expansion yielded a total water holding capacity of only 30,000m³.

Layout Alternative 2 (Preferred and herewith authorised)

This alternative was formulated after the refinement of Alternative 1. In order to limit encroachment into the river corridor this layout alternative entails greater expansion of the existing dam to the west. As such, the dam will be expanded beyond the existing gravel road and limiting expansion to the north. This will make it possible to maintain a suitable buffer area alongside the river. A portion of the existing gravel road will have to be rerouted due to the dam's expansion into the road. The dam expansion will increase the total water storage capacity to approximately 45,000m³.

Layout Alternative 1 is rejected and Layout Alternative 2 is preferred as a result of the following:

- Layout Alternative 1 will encroach/extend into the buffer area alongside the adjacent river and this is deemed undesirable from an ecological perspective;
- Layout Alternative 1 will extend into the riparian zone which requires removal of some indigenous vegetation; and
- Layout Alternative 1 will increase the dam's total water storage capacity to only 30,000m³, which is undesirable for the farm's operational needs and demand for water.

Operational alternative:

From an operational perspective, the possibility of utilising some surface water from the river as an additional water source for the dam was considered. This alternative was rejected in favour of only using groundwater and thereby also avoiding the direct potential impacts on downstream users.

"No-Go" Alternative:

This option entails maintaining the *status quo*, i.e. no expansion taking place. The no-go alternative was rejected based on the following reasons:

- The capacity of the dam is inadequate to store water during dry seasons, as required for irrigation purposes; and
- Inadequate storage capacity of the dam means that the required irrigation regime cannot be achieved which would negatively impact the profit margins and viability of the farm.

3. Impacts, assessment and mitigation measures

3.1 Activity Need and Desirability

The proposed dam expansion is required in order to increase the water storage capacity on the farm. The current storage volumes are insufficient for the required irrigation regime during the dry season. Having sufficient water storage capacity will help to ensure the continuation of the agricultural activities on the farm.

3.2 Regional/ planning context

The site is zoned Agriculture and the proposed development is permitted in terms of the property's existing land use rights. The forward planning vision for the region is generally in support of the region as a primary agricultural production area and its associated landuses. As such, the proposed development is therefore consistent with this forward planning context.

3.3 Biophysical Impacts

The Kromvlei-se-Kloof River flows through the property in a westerly direction. Several other drainage lines also exist on the property. The Kromvlei-se-Kloof River is mapped as a terrestrial Critical Biodiversity Area ("CBA") (with some aquatic CBA pockets), while the riparian buffer of the river system is mapped as terrestrial Ecological Support Area. In view of these Systematic Biodiversity Planning Categories, the preferred layout alternative 2 will maintain suitable buffer areas to avoid having significant negative impacts on these sensitive resources. Mitigation measures to further reduce the biophysical impacts are included in the EMPr as well as the conditions of authorisation (see conditions 27.1 - 27.3).

Several large English Oak trees and other alien species occur in the riparian area. Three of the Oak Trees will require removal to accommodate the dam expansion. There is however no indigenous vegetation remaining in the areas where the dam expansion and road realignment are proposed to take place. Furthermore, most of the proposed expansion will take place in section of the site where operational support activities of the farm take place, *i.e.* (gravel road, fertiliser storage area, pump station, cultivation, stock pile yard etc.). As such the negative impacts of the physical expansion on the land will be low in significance.

The site is underlain by 'Aeolian sand, colluvium and alluvium with feldspathic grit, greywacke, quartz schist, conglomerate and limestone beds with lenses of phyllite. In accordance with the Geotechnical Report dated 18 October 2018, the founding conditions of the proposed dam enlargement appeared to be acceptable. Sufficient suitable materials are available on-site for the enlargement of the Kromvlei 1 Dam, as proposed.

3.4 Visual impacts

During the construction period the building activities may result in visual impacts. These will however be short-term and be adequately managed by means of the provisions of the EMPr.

Since the dam is existing, of which enlargement thereof will only occur, the visual impact is deemed to be low. The proposal is considered consistent with the agricultural character of the surrounding area.

3.5 Socio-economic

The development will contribute towards meeting the local and regional socio-economic needs through securing job opportunities, as the expanded dam is necessary to secure sufficient supply water resource for irrigation purposes. The development will also have a positive impact by providing local job opportunities during construction.

3.6 Heritage impacts

It is unlikely that any archaeologically significant material exists on the site, as the site is transformed by agricultural activities.

National Environmental Management Act Principles

The National Environmental Management Act Principles (set out in section 2 of the NEMA, which apply to the actions of all Organs of State, serve as guidelines by reference to which any Organ of State must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between Organs of State through conflict resolution procedures; and
- the selection of the best practicable environmental option.

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the competent authority is satisfied that the proposed listed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the NEMA and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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