



REFERENCE: 16/3/3/1/F5/16/2012/18

ENQUIRIES: Natasha Bieding

DATE OF ISSUE:

2018 -07- 30

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED EXPANSION OF TWO STORAGE DAMS ON THE REMAINING EXTENT OF THE FARM CLOOVENBURG NO. 663 AND THE REMAINING EXTENT OF FARM BOTMAS KLOOF NO. 661, MALMESBURY

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 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to Alternative 6, described in the Final Basic Assessment Report ("BAR") dated April 2018.

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

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Die Kloovenburg Trust
c/o Mr Pieter du Toit
P O Box 2
RIEBEECK KASTEEL
7307

Tel.: (022) 448 1635
Fax: (086) 669 6123

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 (as amended) – Activity Number: 19 Activity Description: <i>“The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i> <i>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</i> <i>(a) will occur behind a development setback;</i> <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> <i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i> <i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i> <i>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies”.</i></p>	<p>The expansion of the current dams entails the depositing and removal of more than 10m³ of soil within a stream.</p>
<p>Government Notice No. R. 983 of 4 December 2014 (as amended) – Activity Number: 27 Activity Description: <i>“The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</i> <i>(i) the undertaking of a linear activity; or</i> <i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan”.</i></p>	<p>More than 1ha of indigenous vegetation will be cleared.</p>
<p>Government Notice No. R. 983 of 4 December 2014 (as amended) – Activity Number: 48 Activity Description: <i>“The expansion of—</i> <i>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</i> <i>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;</i> <i>where such expansion occurs—</i> <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</i></p>	<p>The dams will be expanded to a storage capacity of approximately 446 000m³ and 200 000 m³.</p>

<p>metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding—</p> <p>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(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;</p> <p>(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;</p> <p>(dd) where such expansion occurs within an urban area; or</p> <p>(ee) where such expansion occurs within existing roads, road reserves or railway line reserves".</p>	
<p>Government Notice No. R. 983 of 4 December 2014 (as amended) –</p> <p>Activity Number: 66</p> <p>Activity Description: "The expansion of a dam where—</p> <p>(i) the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, was originally 5 metres or higher and where the height of the wall is increased by 2,5 metres or more; or</p> <p>(ii) where the high-water mark of the dam will be increased with 10 hectares or more".</p>	<p>The maximum height of the enlarged Dam 1 will measure approximately 18.1m.</p> <p>The maximum height of the enlarged Dam 2 will measure approximately 12m.</p>
<p>Government Notice No. R. 985 of 4 December 2014 (as amended) –</p> <p>Activity Number: 12</p> <p>Activity Description: "The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>i. Western Cape</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into</p>	<p>More than 300m² of indigenous vegetation will be cleared.</p>

v.	<p><i>effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</i></p> <p><i>On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister".</i></p>	
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The abovementioned list is hereinafter referred to as "**the listed activities**".

The holder is herein authorised to undertake the following alternative that includes the listed activities as it relates to the proposed development:

Dam 1:

The enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 446 000m³. The maximum height of the enlarged dam will measure approximately 18.1m, have water/wall ratio of approximately 1:6 and cover a surface area of approximately 5.3ha.

Dam 2:

The enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 200 000m³. The maximum height of the enlarged dam will measure approximately 12m, have water/wall ratio of approximately 1:82 and cover a surface area of approximately 3.7ha.

Diversion channels and/or pipelines will be installed into each expanded dam. This will include an approximate 315 mm outside diameter high-density polyethylene pipe for Dam 1 and an approximate 200 mm outside diameter high-density polyethylene pipe for Dam 2.

The expanded dams will make use of its winter allocation under the Riebeeck-Kasteel Irrigation Board. Water will be abstracted via the Irrigation Board Scheme in winter when surplus flow in the Berg River is available.

C. SITE DESCRIPTION AND LOCATION

The site where the authorised listed activities will be undertaken on the Remaining extent of Farm Kloovenburg No. 663 and the Remaining Extent of Farm Botmas Kloof No. 661.

The Co-ordinates for the proposed enlarged Kloovenburg dam (Dam 1) and Botmas Kloof dam (Dam 2) are as follows:

Dam 1
 33° 23' 55.34" South
 18° 53' 0.13" East

Dam 2
 33° 23' 42.71" South
 18° 53' 35.46" East

The SG digit codes are:

C04600000000066300000
 C04600000000066100000

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan.
The above is hereinafter referred to as "**the site**".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Pieter Badenhorst Professional Services
c/o Mische Molife & Pieter Badenhorst
P O Box 1058
WELLINGTON
7654

Tel.: (021) 873 7228
Fax: (086) 672 1916

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 Alternative 6 described in the Final BAR dated April 2018 on the site as described in Section C above.
2. The holder must commence with 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.
3. This Environmental Authorisation is granted for–
 - 3.1 A period of five (5) years, from the date of issue, during which period the holder must commence with the authorised listed activities; and
 - 3.2 A period of ten (10) years, from the date the holder commenced with the authorised listed activities, during which period the authorised listed activities for the development phase, must be concluded.
4. The listed activities that have been authorised must only be carried out on the site described in Section C above in terms of the approved Environmental Management Programme ("EMPr").
5. The holder shall be responsible for ensuring compliance with the conditions by any person acting on his behalf, including an implementing agent, sub-contractor, employee or any person rendering a service to the holder.
6. Any changes to, or deviations from the scope of the alternative described in section B above must be approved in writing by the Competent Authority before such changes or deviations may be implemented. In assessing whether or not to grant such approval, the Competent Authority may request information in order 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.

Written notice to the Competent Authority

7. A written notice of seven (7) calendar days must be given to the Competent Authority before construction work can be commenced with.

- 7.1 The notice must make clear reference to the site details and EIA Reference number given above.
- 7.2 The notice must include proof of compliance with the following conditions described herein:

Conditions: 8, 9 and 13.

Notification of Environmental Authorisation and Administration of Appeal

8. The holder must in writing, within fourteen (14) calendar days of the date of this decision–
 - 8.1 notify all registered Interested and Affected Parties ("I&APs") of –
 - 8.1.1 the decision reached on the application;
 - 8.1.2 the reasons for the decision as included in Annexure 3;
 - 8.1.3 the date of the decision; and
 - 8.1.4 the date when the decision was issued.
 - 8.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations, 2014 (as amended) detailed in Section G below;
 - 8.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
 - 8.4 provide the registered I&APs with the:
 - 8.4.1 name of the holder (entity) of this Environmental Authorisation,
 - 8.4.2 name of the responsible person for this Environmental Authorisation,
 - 8.4.3 postal address of the holder,
 - 8.4.4 telephonic and fax details of the holder,
 - 8.4.5 e-mail address, if any, of the holder,
 - 8.4.6 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 National Appeals Regulations, 2014 (as amended).

Commencement

9. The listed activities, including site preparation, must not be commenced with within twenty (20) calendar days from the date the applicant notified the registered I&APs of this decision.
10. 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.

Management of Activity

11. The EMPr (submitted with the BAR to this Department on 9 May 2018) is hereby approved and must be implemented.
12. The EMPr must be included in all contract documentation for all phases of implementation.

Monitoring

13. The holder must appoint a suitably experienced Environmental Control Officer ("ECO") before the listed activities can be commenced with, to ensure compliance with the EMPr and the conditions contained herein.
14. A copy of the Environmental Authorisation, EMPr, ECO reports, audit reports and compliance monitoring reports must be kept at the contractor's site office, and must be made available to anyone on request.

15. Access to the site referred to in Section C must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see the reports for the purposes of assessing and/or auditing compliance with the conditions contained herein.

Auditing

16. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid—
 - 16.1 ensure that the compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
 - 16.2 submit environmental audit reports to the relevant competent authority. The holder must submit the first audit report six months after commencement of the construction phase and the last audit report six months after completion of the construction period; and
 - 16.3 submit an environmental audit report every five years while the Environmental Authorisation remains valid.

Specific Conditions

17. Should any heritage remains be exposed during excavations or any other actions on the site, this must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from Heritage Western Cape.

Heritage remains include: meteorites, archaeological and/or paleontological remains (including fossil shells and trace fossils); 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 with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

18. A qualified archaeologist and/or paleontologist 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 resources authority.
19. The Western Cape is currently experiencing a severe drought and has been declared a disaster area. In light of the current water crisis being experienced in the Western Cape, water must be used wisely during all phases of development. No potable water must be used as far as possible for construction activity during the development phase and alternative methods to save water must be implemented.
20. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
2. Non-compliance with a Condition of this Environmental Authorisation or EMPr may render the holder liable for criminal prosecution.

3. If the holder does not commence with the listed activities within the period referred to in Condition 3, this Environmental Authorisation shall lapse, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be lodged with the Competent Authority.
4. The holder must submit an application for amendment of the Environmental Authorisation 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.
5. Please note that an amendment of the Environmental Authorisation is not required for a change in the contact details of the holder. In such a case, the Competent Authority must only be notified of such changes.
6. The manner and frequency for updating the EMPr must be as follows:
 - 6.1 Amendments to the EMPr must be made in accordance with Regulations 35 to 37 of GN No. R. 982 (as amended) or any relevant legislation that may be applicable at the time.

G. 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 twenty (20) calendar days from the date the 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 I&APs, 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 twenty (20) calendar days from the date the holder of the decision sent notification of the decision to the registered I&APs–
 - 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 I&AP, 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 I&AP and the Organ of State must submit their responding statements, if any, to the Appeal Authority and the appellant within twenty (20) 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 8 th 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 at 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>

H. 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 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 greatly appreciated.

Yours faithfully



MR ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 30/07/2018

Copied to : (1) M Molife/P Badenhorst (Pieter Badenhorst Professional Services cc) Fax: (086) 672 1916
(2) A Burger (Swartland Municipality) Fax: (022) 487 9440

ANNEXURE 1: LOCALITY MAP



ANNEXURE 2: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, *inter alia*, the following:

- a) The information contained in the Application Form dated 21 February 2018, the BAR received by this Department on 9 May 2018, the EMPr submitted together with the BAR, and the additional information received by the Competent Authority on 25 April 2018, 1 June 2018 and 13 July 2018;
- 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 that were considered to be the most significant for the decision is set out below.

1. Public Participation

The public participation process included:

- identification of and engagement with I&APs;
- fixing a notice board at the site where the listed activities are to be undertaken on 1 March 2018;
- 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 'Swartland Gazette' on 27 February 2018;
- making the Reports available to I&APs for public review and comment.

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

Dam Alternatives for Dam 1:

Alternative 1 (Rejected Alternative)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 231 000m³. The maximum height of the enlarged dam will measure approximately 14m, have water/wall ratio of approximately 0:99, 56.09 rand per cubic meter and cover a surface area of approximately 4.2 ha.

Alternative 2 (Rejected Alternative)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 256 000m³. The maximum height of the enlarged dam will measure approximately 14.5m, have water/wall ratio of approximately 1:32, 39.67 rand per cubic meter and cover a surface area of approximately 4.5ha.

Alternative 3 (Rejected Alternative)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 315 000m³. The maximum height of the enlarged dam will measure approximately 15.5m, have water/wall ratio of approximately 1:82, 26.20 rand per cubic meter and cover a surface area of approximately 5.4ha.

Alternative 4 (Rejected Alternative)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 300 000m³. The maximum height of the enlarged dam will measure approximately 15.3m, have water/wall ratio of approximately 1:66, 29.06 rand per cubic meter and cover a surface area of approximately 5ha.

Alternative 5 (Rejected Alternative)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 433 000m³. The maximum height of the enlarged dam will measure approximately 18m, have water/wall ratio of approximately 1:49, 26.78 rand per cubic meter and cover a surface area of approximately 5ha.

Alternative 6 (Preferred and herewith authorised)

This alternative entails the enlargement of the Kloovenburg Dam from 196 000m³ to a maximum storage capacity of approximately 446 000m³. The maximum height of the enlarged dam will measure approximately 18.1m, have water/wall ratio of approximately 1:6, 25.05 rand per cubic meter and cover a surface area of approximately 5.3ha.

Alternative 6 is preferred as a result of the following:

- No additional water is to be taken, as the amount of water abstracted and stored will be in line with the Existing Lawful Use ("ELU").
- The dam expansion will bring about a higher rate of job security.
- From a botanical perspective, the proposed expansion of Kloovenburg Dam would be acceptable, as the mitigation measures will be implemented.
- Potential heritage impacts are anticipated to be of low significance.

Alternatives 1-5 are rejected for the following reasons:

- The applicant will not be gaining full financial benefits.
- The applicant will not be able to store the maximum ELU capacity in the expanded dam.

Dam Alternatives for Dam 2:

Alternative 1 (Rejected Alternative)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 285 000m³. The maximum height of the enlarged dam will measure approximately 14m, have water/wall ratio of approximately 2:29, 18.57 rand per cubic meter and cover a surface area of approximately 4.8ha.

Alternative 2 (Rejected Alternative)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 292 000m³. The maximum height of the enlarged dam will measure approximately 14.2m, have water/wall ratio of approximately 2:26, 18.72 rand per cubic meter and cover a surface area of approximately 4.9ha.

Alternative 3 (Rejected Alternative)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 303 000m³. The maximum height of the enlarged dam will measure approximately 14.4m, have water/wall ratio of approximately 2:27, 18.49 rand per cubic meter and cover a surface area of approximately 5ha.

Alternative 4 (Rejected Alternative)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 300 000m³. The maximum height of the enlarged dam will measure approximately 15m, have water/wall ratio of approximately 1:81, 22.78 rand per cubic meter and cover a surface area of approximately 4.9ha.

Alternative 5 (Rejected Alternative)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 200 000m³. The maximum height of the enlarged dam will measure approximately 12.6m, have water/wall ratio of approximately 1:55, 28.21 rand per cubic meter and cover a surface area of approximately 3.5ha.

Alternative 6 (Preferred and herewith authorised)

This alternative entails the enlargement of the Botmas Kloof Dam from 100 000 m³ to a maximum storage capacity of approximately 200 000m³. The maximum height of the enlarged dam will measure approximately 12m, have water/wall ratio of approximately 1:82, 1.82 rand per cubic meter and cover a surface area of approximately 3.7ha.

Alternative 6 is preferred as a result of the following:

- No additional water is to be taken, as the amount of water abstracted and stored will be in line with the ELU.
- The dam expansion will bring about a higher rate of job security.
- From a botanical perspective, the proposed expansion of Botmas Kloof Dam would be acceptable, as the required mitigation measures will be implemented.
- The Potential heritage impacts are considered to be of low significance

Alternatives 1-5 are rejected for the following reasons:

- The applicant will not be gaining full financial benefits.
- The applicant will not be able to store the maximum ELU capacity in the expanded dam.

"No-Go" Alternative

The "no-go" alternative entails maintaining the *status quo*, i.e. no expansion of existing dams will take place. This alternative was however rejected for the following reasons:

- Not expanding the dams will present the risk of insufficient supply of water for irrigation during the dry summer months.
- The associated socio-economic benefits such as job security will not be realized.

3. Impact Assessment and Mitigation measures

3.1 Activity need and desirability

The proposed expansion of the existing dams is required to secure a sufficient supply of water for irrigation/cultivation purposes. This will in turn benefit the local economy, as it will become possible for crops to be exported and thereby also ensure job security.

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 Swartland as a primary agricultural production area. As such, the proposed development is therefore also consistent with this forward planning context.

3.3 Infrastructure

Diversion channels and/or pipelines will be installed at each expanded dam. This will include an approximately 315 mm outside diameter high-density polyethylene pipe for Dam 1 and an approximate 200 mm outside diameter high-density polyethylene pipe for Dam 2.

3.4 Biophysical

The site is underlain by greywacke and phyllite with beds and lenses of quartz schist of the Malmesbury group. According to the geotechnical assessment (2018) the founding conditions of the proposed dams enlargements are acceptable. Furthermore, sufficient materials are available on site for the proposed dam enlargements.

The site has been almost completely transformed by agricultural activities and there is no significant natural vegetation remaining. Riparian vegetation directly surrounding the freshwater features, varies from a moderately to largely modified state.

The existing Kloovenburg Dam 1 and the Botmas Kloof Dam 2 are both in-stream dams, as it is situated within an Unnamed Tributary of the Berg River. According to the Freshwater Impact Assessment February (2018), aquatic features affected by the proposed dam expansions include small tributaries merging into an Unnamed Tributary of the Berg River. The Tributary is in a near natural state, while its far upper reaches are degrading as it flows through the cultivated farm areas. Considering the already degraded state of the stream, its seasonal nature any loss of habitat during the construction works will likely be low. The most probable impact of the proposed development would largely entail a loss of riparian and instream habitat with some possible loss in water quality. In order to reduce these impacts, various measures will be implemented, as included in the EMP. In this regard, the newly constructed dam banks will be rehabilitated and re-vegetated with appropriate vegetation. Furthermore, the new pipeline for Dam 1 will be limited to a demarcated 6m wide corridor and must be installed as close as possible to the bank of the expanded dam, in order to reduce its impact. A small wetland area just north-east from Dam 2 will also be delineated and treated as a no-go area during construction activities.

There is less likelihood for negative impacts associated with the abstraction of surface water for the newly expanded water. However, the Kloovenburg Farm has a winter allocation from the Berg River which currently cannot be utilised without the proposed storage capacity of the expanded dams. The surface water that will be taken to fill the enlarged Kloovenburg Dam 1 and Botmas Kloof Dam 2 is water already allocated and managed by the Riebeeck-Kasteel Irrigation Board. The winter allocation means that water will be abstracted in winter when surplus flow in the Berg River is available. This will have a positive impact on the Berg River, as less water will be taken during the low flow dry summer months. More water will therefore be available in summer to sustain certain aquatic ecosystem functions of the river.

3.5 Visual / sense of place

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

Since the proposed development mainly comprises of the expansion of existing dams, visual impacts will be low. The expanded dams will be where the surroundings comprise of agricultural areas, and will also therefore not be out of character.

3.6 Heritage & Archaeological

It is unlikely that any archaeologically significant material exists on the site, as the site is transformed. Heritage Western Cape confirmed in the correspondence dated 16 March 2018 that the proposed development will not impact on heritage resources.

3.7 Socio-economic

The development will meet the local and regions needs through securing job opportunities as the expanded dams are necessary to secure the water resource for irrigation purposes. The development will also have a positive impact by providing local job opportunities during construction.

1. National Environmental Management Act Principles

The National Environmental Management 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.

2. Conclusion

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 National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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