



REFERENCE: 16/3/3/1/E4/27/1041/19
NEAS REFERENCE: WCP/EIA/0000614/2019
ENQUIRIES: Ms. Saa-rah Adams
DATE: 2019 -11- 21

The Trustees
Dorwald Trust
P. O. Box 156
RIVIERSONDEREND
7250

Attention: Mr. Christoffel Petrus Groenewald

Cell: 082 453 2899
E-mail: dorwaldbdy@gmail.com

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A MAINTENANCE MANAGEMENT PLAN 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 THE INSTREAM SWARTSTOMP DAM ON PORTION 1 OF THE FARM SWARTSTOMP NO. 864, VILLIERSDORP.

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and **adopt** the Maintenance Management Plan, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014 (as amended), you are instructed to ensure, within 14 days of the date of the decision on the application, that all registered interested and affected parties ("I&APs") are provided with access to the decision and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the Appeal Regulations, 2014, which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

MR ZAAHIR TOEFY

**DIRECTOR: DEVELOPMENT MANAGEMENT – REGION 1
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

DATE OF DECISION: 21/11/2019

Cc: (1) M. Molife (Pieter Badenhorst Professional Services)
(2) J. Viljoen (Theewaterskloof Municipality)
(3) R. Le Roux (Breedde-Gouritz Catchment Management Agency)
(4) C. Rampartab (CapeNature)

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EIA REFERENCE: 16/3/3/1/E4/27/1041/19
NEAS REFERENCE: WCP/EIA/0000614/2019
ENQUIRIES: Ms. S. Adams
DATE OF ISSUE: 2019 -11- 2 1

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A MAINTENANCE MANAGEMENT PLAN 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 THE INSTREAM SWARTSTOMP DAM ON PORTION 1 OF THE FARM SWARTSTOMP NO. 864, VILLIERSDORP.

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 Site Alternative S5 and Design Alternative D3, described in the Basic Assessment Report ("BAR"), dated August 2019.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) (in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby **adopts the Maintenance Management Plan ("MMP")** for the storage dams associated with an unnamed tributary of the Rivieronderend River, included in the BAR dated August 2019.

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

Dorwald Trust
% Mr. Christoffel Petrus Groenewald

P. O. Box 156
 RIVIERSONDEREND
 7250
 Cell: 082 453 2899
 E-mail: dorwaldbody@gmail.com

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>EIA Regulations Listing Notice 1 of 2014: Activity Number 12: The development of—</p> <ul style="list-style-type: none"> i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or ii) infrastructure or structures with a physical footprint of 100 square metres or more; <p>where such development occurs—</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — <p>excluding—</p> <ul style="list-style-type: none"> (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (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; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary 	<p>The development of the pipeline and pump station will have a physical footprint of 100 square metres or more and will be located within 32 metres of a watercourse.</p>

<p>infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	
<p>Activity Number 19: 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;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <ol style="list-style-type: none"> a. will occur behind a development setback; b. is for maintenance purposes undertaken in accordance with a maintenance management plan; c. falls within the ambit of activity 21 in this Notice, in which case that activity applies; d. occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or 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. 	<p>The development entails the expansion of a storage dam and associated infrastructure within an unnamed tributary of the Riviersonderend River, which will require infilling or depositing of material, dredging, excavation, removal or moving of soil exceeding 10m³.</p>
<p>Activity Number: 48 The expansion of—</p> <ol style="list-style-type: none"> (i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or (ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more; <p>where such expansion occurs—</p> <ol style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; 	<p>The existing storage dam will be expanded by more than 100m².</p>

<p>excluding—</p> <ul style="list-style-type: none"> (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (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; (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; (dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads, road reserves or railway line reserves. 	
<p>EIA Regulations Listing Notice 3 of 2014: Activity 12: 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> <ul style="list-style-type: none"> 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; ii. Within critical biodiversity areas identified in bioregional plans; 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 or even in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation 	<p>The development will require the removal of 300m² or more of indigenous vegetation, within a critically endangered ecosystem.</p>

<p>or had an equivalent zoning; or</p> <p>v. 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."</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:

The development entails the expansion of the Swartstomp Dam within an unnamed tributary of the Riviersonderend River, with the following design specifications:

	Existing Swartstomp Dam	Expanded Swartstomp Dam
Dam Wall Height	4m	15.5m
Storage Capacity	6 000m ³	106 000m ³
Crest Length	110m	274m
Crest Width	4m	4m
Flooded Area	0.3ha	1.4ha

In addition, the development includes:

- the construction of a new 250mm diameter pipeline, with a length of 800m, that will connect the expanded dam to the main irrigation pipeline;
- the construction of a new pump house (16m²) and overhead electricity supply to the expanded dam; and
- the widening of the existing river crossing on the Theewaterskloof Dam Basin, including the extension of the 600mm diameter culvert beneath the road's surface with a new reinforced headwall on the upstream end thereof.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on Portion 1 of the Farm Swartstomp No. 864, Villiersdorp at the following co-ordinates:

Latitude: 34° 3' 8.17", S

Longitude: 19° 13' 54.68" E

The SG digit code is: C0130000000086400001

Refer to Annexure 1: Locality Map and Annexure 2: Site Development Plan

The above is hereinafter referred to as "**the site**".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Pieter Badenhorst Professional Services CC
% Ms. M. Molife
P. O. Box 1058
WELLINGTON
7654

Cell: 081 371 9289
E-mail: mische@pbps.co.za

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, Site Alternative S5 and Design Alternative D3 as described in the BAR, dated August 2019 at the site as described in Section C above.
2. The holder must commence with the listed activities on site within a period of **five (5) years** from the date of issue of this Environmental Authorisation.
3. The development must be concluded within **10 years** from the date of commencement of the first listed activity.
4. The holder shall be responsible for ensuring 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.
5. Any changes to, or deviations from the scope of the alternatives described in Section B 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 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

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. The notice must:
 - 6.1 make clear reference to the site details and EIA Reference number given above; and
 - 6.2 include proof of compliance with the following conditions described herein:

Conditions: 7, 8, 9 and 12

Notification and administration of appeal

7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 7.1 notify all registered Interested and Affected Parties ("I&APs") of –
 - 7.1.1 the outcome of the application;
 - 7.1.2 the reasons for the decision as included in Annexure 3;
 - 7.1.3 the date of the decision; and
 - 7.1.4 the date when the decision was issued.
 - 7.2 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 Appeals Regulations, 2014 (as amended) detailed in Section G below;
 - 7.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and
 - 7.4 provide the registered I&APs with:
 - 7.4.1 the name of the holder (entity) of this Environmental Authorisation;
 - 7.4.2 name of the responsible person for this Environmental Authorisation;
 - 7.4.3 postal address of the holder;
 - 7.4.4 telephonic and fax details of the holder;
 - 7.4.5 e-mail address, if any, of the holder; and
 - 7.4.6 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 2014 National Appeals Regulations (as amended).
8. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notifies the registered I&APs of this decision. 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.

Management of activity

9. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The MMP adopted as part of this Environmental Authorisation must be implemented.
11. The EMPr and MMP must be included in all contract documentation for all phases of implementation.

Monitoring

12. The holder must appoint a suitably experienced environmental control officer ("ECO"), or site agent where appropriate, before commencement of any land clearing or construction activities to ensure compliance with the EMPr, MMP and the conditions contained herein.
13. A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activity, and must be made available to anyone on request, including on a publicly accessible website.
14. 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 it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.

Auditing

15. In terms of Regulation 34 of the NEMA EIA Regulations, 2014 (as amended), the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr and submit Environmental 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, 2014 (as amended).

The ECO must conduct fortnightly site audits. Bi-monthly ECO Audit Reports must be submitted to the Competent Authority for the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority three months after construction is completed.

The holder must, within 7 days of the submission of each of the above-mentioned reports to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website (if applicable).

Specific Conditions

16. Should any heritage remains be exposed during excavations or any other actions on the site, these 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 further disturbed 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 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.

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 resources authority.

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 to criminal prosecution.
3. If the holder does not commence with the listed activities within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activity, 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 made to the Competent Authority prior to the expiry date of the Environmental Authorisation.
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.

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.

5. The manner and frequency for updating the EMPr is as follows:
Amendments to the EMPr, must be done in accordance with Regulations 35 to 37 of the EIA Regulations, 2014 (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 20 (twenty) calendar days from the date on which 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 20 (twenty) calendar days from the date on which 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 Organs 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 Organs 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. Marius Venter (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 DEADP.Appeals@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, E-mail DEADP.Appeals@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/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. ZAAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE OF DECISION: 21 / 11 / 2019

Cc: (1) M. Molife (Pieter Badenhorst Professional Services)

Fax: 086 672 1916

(2) J. Viljoen (Theewaterskloof Municipality)

Fax: 028 214 1289

(3) R. Le Roux (Breede-Gouritz Catchment Management Agency)

E-mail: rleroux@bgcma.co.za

(4) C. Rampartab (CapeNature)

E-mail: crampartab@capenature.co.za

ANNEXURE 1: LOCALITY MAP



Figure 1: Location of the dam.

ANNEXURE 2: SITE DEVELOPMENT PLAN

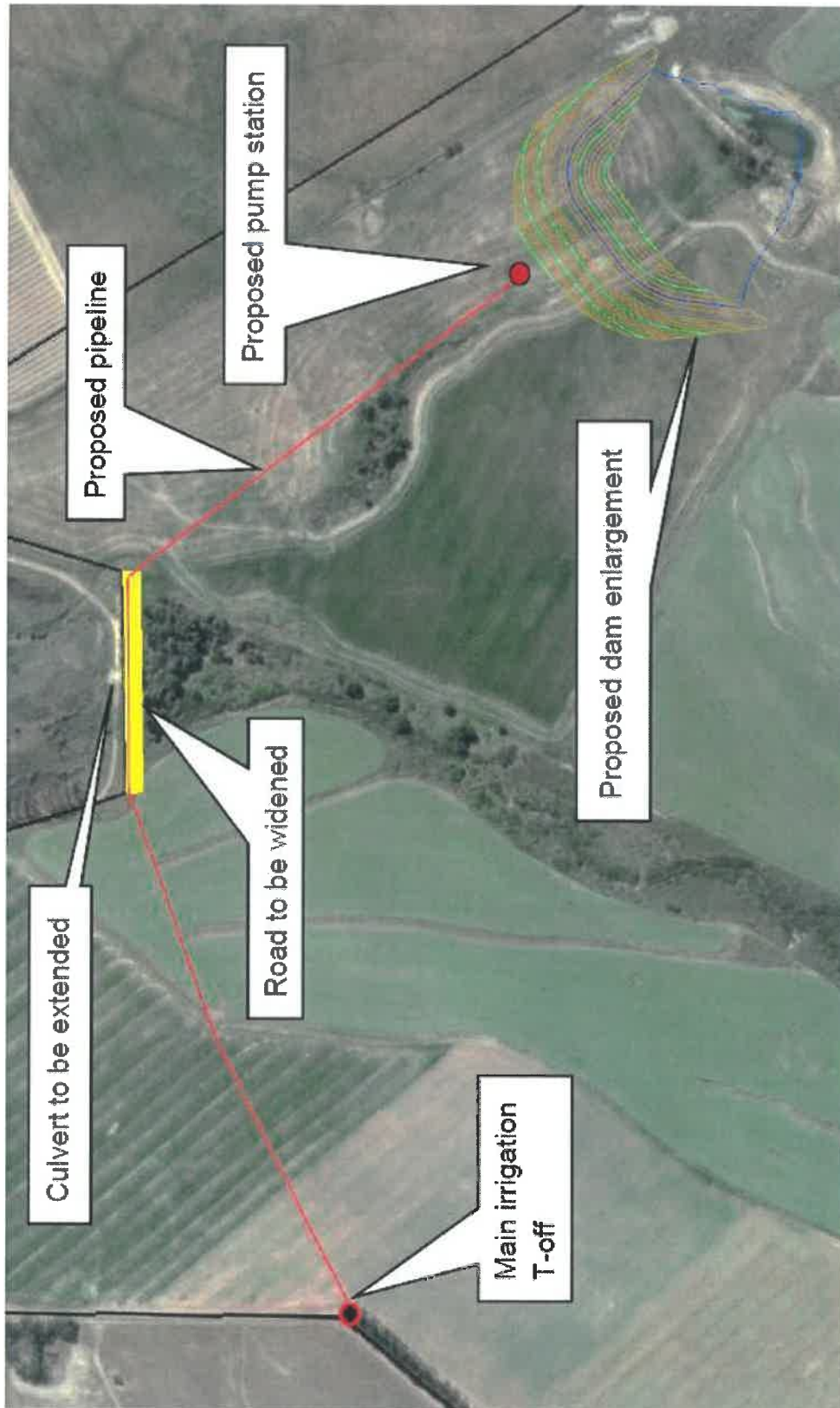


Figure 2: Swartsomp Dam and the associated infrastructure.

ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, amongst others, the following:

- a) The information contained in the Application Form and the draft BAR dated 7 June 2019, the final BAR dated August 2019 and the EMPr and MMP submitted together with the final BAR;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of NEMA;
- d) The comments received from I&APs and responses to these, included in the BAR dated 1 August 2019; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

No site visits were conducted. The Competent Authority had sufficient information before it to make an informed decision without conducting a site visit.

All information presented to the Competent Authority was taken into account during 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 entrance of the site where the listed activities are to be undertaken on 11 June 2019;
- 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, on 5 June 2019, 7 June 2019 and 11 June 2019;
- the placing of a newspaper advertisement in the '*Theewaterskloof & Kaap Agulhas Gazette*' on 11 June 2019; and
- making the BAR available to I&APs for public review from 11 June 2019.

All the concerns raised by I&APs were responded to and addressed during the public participation process. Specific management and mitigation measures have been considered in this Environmental Authorisation, EMPr and in the MMP, in order to address the concerns raised.

The Competent Authority notes the Environmental Assessment Practitioner's responses to the issues raised during the public participation process and has included appropriate conditions in this Environmental Authorisation and in the EMPr.

2. Alternatives

Five site alternatives were considered and are discussed below. Sites 1- 4 are located within the western tributary of the Riviersonderend River, with Site 1 located closest to the Theewaterskloof Dam Basin and Site 4 the furthest. Site 5 (preferred) is located within the eastern tributary of the Riviersonderend River and incorporates the existing dam.

Site Alternatives S1 – S3 - are not preferred due to the negative impact the sites will have on the existing freshwater features.

Site Alternative S4 – is not preferred as it located too far from the existing infrastructure and would require an Environmental Water Requirement release to the downstream wetland.

Site Alternative S5 – is preferred as it is located closer to the existing infrastructure compared to Alternative S4, will have the least environmental impacts and would not require an Environmental Water Requirement release.

Design Alternatives

Five design alternatives were considered for Site Alternative S5 and are discussed below:

Alternatives D1 and D2

Dam Alternative	Design	Storage Capacity (m ³)	Wall Height (m)	Full Supply Level (ha)
D1		105 000	13.0	2.0
D2		107 000	12.7	1.8

These design alternatives are not preferred as it entails the construction of new dams and it is more economically feasible to enlarge the existing dam. In addition, Alternative D1 would require the clearance of additional indigenous vegetation.

Alternative D3 (Preferred)

Dam Alternative	Design	Storage Capacity (m ³)	Wall Height (m)	Full Supply Level (ha)
D3		106 000m ³	15.5m	1.4

In addition, the proposed development includes:

- the construction of a new 250mm diameter pipeline, with a length of 800m, that will connect the expanded dam to the main irrigation pipeline;
- the construction of a new pump house (16m²) and overhead electricity supply to the expanded dam; and
- the widening of the existing river crossing on the Theewaterskloof Dam Basin, including the extension of the 600mm diameter culvert beneath the road's surface with a new reinforced headwall on the upstream end thereof.

This design alternative is preferred as it is located in close proximity to the existing infrastructure and within a partially transformed area. The enlargement of the existing dam would

accommodate an existing registered water use right and is favourable from a freshwater ecology perspective.

Alternatives D4 and D5

Dam Design Alternative	Storage Capacity (m ³)	Wall Height (m)	Full Supply Level (ha)
D4	104 000	15.5	1.5
D5	109 000	16.8	1.6

These design alternatives are not preferred as it is located in areas that would require the clearance of additional indigenous vegetation. Alternative D5 is also located the furthest from the existing infrastructure.

"No-Go" Alternative

The "no-go" option was considered and is not preferred, since the availability of water during the summer months will not be achieved and there will be no improvement in terms of water resource management and water use on the property.

3. Impact Assessment and Mitigation measures

3.1 Activity Need and Desirability

The purpose of the proposed expansion of the Swartstomp Dam, is primarily to increase the efficiency of water storage on the property. The proposed development will promote water efficiency and enhance the economic viability of the farm. No additional water rights will be required since the proposal is restricted to the storage of water for which water rights have already been granted.

3.2 Biodiversity and Biophysical Impacts

The site falls within an area that historically comprised of Western Rûens Shale Renosterveld, an ecosystem classified as critically endangered in terms of Section 52 of the National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) ("NEMBA"). A Freshwater Impact Assessment dated February 2018, compiled by Ms. Jeanne Snyman from everWater Freshwater Consulting Services reported that most of the Critical Biodiversity Areas ("CBAs") are limited to the riparian areas of the unnamed tributary on site. The vegetation along the upper reaches of the tributary are in a highly degraded state and it improves to a near natural state along the downstream reaches. The addendum to the Freshwater Impact Assessment dated May 2019 indicates that Alternative D3 (herewith authorised) is preferred from a freshwater perspective as both the enlargement of the dam and the widening of the road crossing will occur in already impacted areas. Through the implementation of the EMPr and MMP (as per Condition 9 and 10), the impact significance of the proposed development on the vegetation and ecological functioning of the freshwater features on site, will be low negative on the larger freshwater system, in the long term.

CapeNature has agreed with the findings and mitigation measures as stipulated in the Freshwater Impact Assessment report and addendum to the report and supports the location of the proposed expansion of the dam.

Furthermore, a Water Use Licence Application ("WULA") in terms of the National Water Act, 1998 (Act 38 of 1998) has been submitted to the Department of Water and Sanitation, for the proposed increase in storage capacity.

A MMP has been compiled to address future maintenance activities taking place in the affected watercourses. The maintenance of the structures authorised in this Environmental Authorisation forms part of this MMP. It must be noted that the accepted maintenance activities only relate to the activities described in the MMP. Should any new activities and associated infrastructure, not included in the MMP, require maintenance and if any of the applicable listed activities are triggered, an Environmental Authorisation must be obtained prior to the undertaking of such activities. It remains the responsibility of the proponent to determine if any other listed activities are triggered and to ensure that the necessary Environmental Authorisation is obtained.

The fact that the MMP is adopted by the Competent Authority does not absolve the applicant from its general "duty of care" set out in Section 28(1) of the NEMA, which states that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."* (Note: When interpreting their "duty of care" responsibility, cognisance must be taken of the principles of sustainability contained in Section 2 of NEMA).

The development will result in both negative and positive impacts.

Negative Impacts:

- Indigenous vegetation will be removed within the expansion footprint of the dam and river crossing. However, with the implementation of the mitigation measures the impact significance rating can be reduced to a very low negative.
- The development will result in a localised, low negative impact on water quality within the freshwater features on site. However, with the effective implementation of the recommended mitigation measures of the specialist, this impact can be reduced to a low negative.

Positive impacts:

- The proposed development will increase the efficiency of water storage on the farm i.e. the utilisation of allocated water rights to its full potential.
- The management of both water resources and water use will be improved.
- Temporary employment opportunities will be created during the construction phase.
- The availability of irrigation water during the summer months will be ensured.

4. National Environmental Management Act Principles

The NEMA 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.

5. 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 NEMA and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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