



EIA REFERENCE: 16/3/3/1/B2/32/1032/20
NEAS REFERENCE: WCP/EIA/0000767/2020
DATE OF ISSUE: 19 February 2021

The Trustees
Meerlust Trust
P. O. Box 862
WORCESTER
6849

Attention: Mr. J. P. J. le Roux

Tel.: (023) 340 4506

Email: meerlustboerdery@gmail.com

Dear Sir

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 AGRICULTURAL EXPANSION, ENLARGEMENT OF THE MEERLUST DAM AND ASSOCIATED PIPELINE INFRASTRUCTURE ON PORTIONS 1, 14, 15, 16, 18 AND 19 OF FARM DOORN RIVIER NO. 546, WORCESTER

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation, 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 Environmental Authorisation, that all registered Interested and Affected Parties ("I&APs") are provided with access to 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 National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

Zaahir Toefy
Digitally signed
by Zaahir Toefy
Date: 2021.02.19
13:21:02 +02'00'

MR. ZAAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

CC: (1) Ms. K. Ross (Holland and Associates Environmental Consultants)
(2) Mr. J. Steyn (Breede Valley Municipality)
(3) Ms. E. Rossouw (BGCMA)
(4) Ms. A. Duffel-Canham (CapeNature)

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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 AGRICULTURAL EXPANSION, ENLARGEMENT OF THE MEERLUST DAM AND ASSOCIATED PIPELINE INFRASTRUCTURE ON PORTIONS 1, 14, 15, 16, 18 AND 19 OF FARM DOORN RIVIER NO. 546, WORCESTER

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 the Preferred Site Alternative and Dam Design Alternative 3 (Option 1b) for the enlarged Meerlust Dam and associated infrastructure described in the Basic Assessment Report ("BAR"), dated October 2020.

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

Meerlust Trust
% Mr. J. P. J. le Roux
P. O. Box 862
WORCESTER
6849

Tel.: (023) 340 4506
Email: meerlustboerdery@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> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</p> <p>excluding—</p> <p>(aa) the development 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 development 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 development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</p> <p>(ff) the development of temporary 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>The laying of a 315mm diameter HDPE outlet pipe, with a new 110mm diameter brackish water pipeline would have a physical development footprint of approximately 350m² and would be located within 32m of a watercourse.</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>More than 10m³ of material will be moved and/or deposited within watercourses on the Meerlust Farm during maintenance activities on structures and infrastructure.</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>Activity Number 27: 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—</p> <ol style="list-style-type: none"> (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan. 	<p>Clearance of indigenous vegetation for the proposed enlargement of Meerlust Dam, associated pipeline infrastructure and agricultural expansion will exceed 1ha, but will be less than 20ha in total.</p>

The abovementioned list is hereinafter referred to as “**the listed activities**”.

The holder is herein authorised to undertake the following alternative:

The proposal entails the following:

- The clearance of 13ha of indigenous vegetation for cultivation purposes.
- The construction of two 160mm diameter PVC inlet pipelines from the Bossieveld pipeline to the dam.
- The construction of a 315mm diameter HDPE dam outlet pipe with a 110mm diameter Brackish water pipeline.
- The expansion of the existing Meerlust Dam, to have the following specifications:
 - Capacity: 500 000m³
 - Dam wall height: 11,2m
 - Surface area at full supply level: 11,7ha
- The following maintenance activities to be conducted on the site:
 - Clearing of alien invasive vegetation along the watercourses and in the wetland areas;
 - Control of invasive indigenous Phragmites reeds and Typha bulrushes in the watercourses and wetland areas;
 - Removal of sediment from the watercourses and dams for conveyance purposes;
 - Repairs to road and pipelines crossing the Doring River and its tributaries within the property; and
 - Flood damage repairs to the Doring River channel that is adjacent to the agricultural areas within the property.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on Portions 1, 14, 15, 16, 18 and 19 of Farm Doorn Rivier No. 546, Worcester at the following co-ordinates:

Meerlust Dam:

Latitude (S)	Longitude (E)
33° 49' 12.65"	19° 29' 44.49"

Agricultural area:

Latitude (S)	Longitude (E)
33° 49' 01.51"	19° 28' 08.00"

Pipelines:

Proposed 160mm PVC Inlet Pipe (Left Flank)

Start Point:

Latitude (S)	Longitude (E)
33° 49' 14.87"	19° 29' 39.29"

Middle Point:

Latitude (S)	Longitude (E)
33° 49' 15.52"	19° 29' 37.69"

End Point:

Latitude (S)	Longitude (E)
33° 49' 14.16"	19° 29' 36.55"

Proposed 160mm PVC Inlet Pipe (Right Flank)

Start Point:

Latitude (S)	Longitude (E)
33° 49' 05.61"	19° 29' 43.71"

Middle Point:

Latitude (S)	Longitude (E)
33° 49' 05.14"	19° 29' 42.48"

End Point:

Latitude (S)	Longitude (E)
33° 49' 04.59"	19° 29' 41.46"

Proposed 315mm HDPE Outlet Pipe & 110mm Brackish Water Pipe

Start Point:

Latitude (S)	Longitude (E)
33° 49' 14.38"	19° 29' 39.50"

Middle Point:

Latitude (S)	Longitude (E)
33° 49' 09.04"	19° 29' 28.68"

End Point:

Latitude (S)	Longitude (E)
33° 49' 01.69"	19° 29' 26.15"

The maintenance activities will be undertaken in various areas of the site, as described in the Maintenance Management Plan (Annexure 7 of the Environmental Management Programme).

The SG digit codes are:

- C0850000000005460001
- C0850000000005460014
- C0850000000005460015
- C0850000000005460016
- C0850000000005460018
- C0850000000005460019

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

Holland & Associates Environmental Consultants

% Ms. K. Ross

P.O. Box 31108

TOKAI

7966

Cell: 083 704 6075

Email: kelli@hollandandassociates.net

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 Site Alternative and Dam Design Alternative 3 (Option 1b) in the BAR dated October 2020 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 alternative 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: 6, 7, 8, 12 and 19

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 Maintenance Management Plan ("MMP") accepted as part of the EMPr must be implemented. Future maintenance activities must be undertaken in accordance with the accepted MMP.
11. The EMPr 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"), before commencement of any construction activities to ensure compliance with the EMPr and the conditions contained herein.
13. The ECO must conduct weekly compliance monitoring inspections during the first month of construction and thereafter undertake monthly site visits. Monthly Environmental Compliance Reports must be compiled and submitted to the Competent Authority for the duration of the construction phase. The final Environmental Compliance Report must be submitted to the Competent Authority within six months after construction has been complete.
14. A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including a publicly accessible website.
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 it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.

Auditing

16. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr and the MMP. The Environmental Audit Reports must be submitted to the Competent Authority every **six (6)** months during the construction phase. 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 final Environmental Audit Report must be submitted to the Competent Authority within six months after operation commenced.

The holder must, within 7 days of the submission of an environmental audit report to the Competent Authority, notify all potential and registered I&APs of the submission and make the report immediately available to anyone on request and on a publicly accessible website (where the holder has such a website).

Specific Conditions

17. 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.

18. 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.
19. The “no-go” areas (Annexure 3) that will not be developed must be clearly demarcated prior to the commencement of any land clearing activities. Proof of demarcating these areas must be submitted to the Department together with the seven calendar days’ notification, as per Condition 6.

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 2659)
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 2659, 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

Zaahir
Toefy
Digitally signed
by Zaahir Toefy
Date: 2021.02.19
13:16:18 +02'00'

MR. ZAAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE OF DECISION: 19 FEBRUARY 2021

CC: (1) Ms. K. Ross (Holland and Associates Environmental Consultants)
(2) Mr. J. Steyn (Breede Valley Municipality)
(3) Ms. E. Rossouw (BGCMA)
(4) Ms. A. Duffel-Canham (CapeNature)

Email: kelli@hollandandassociates.net
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Email: erossouw@bgcma.co.za
Email: aduffell-canham@capenature.co.za

ANNEXURE 1: LOCALITY MAP



Figure 1: Location of the proposed development.

ANNEXURE 2: SITE DEVELOPMENT PLAN



Figure 2: Porposed dam elargement and agricultural expansion (highlighted in green).



Figure 3: Georeferenced map of the "no-go" area.

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 dated 5 August 2020, the final BAR dated October 2020 and the EMPr (including an MMP for implementation during the operational phase) 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 October 2020; 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;
- the placing of a newspaper advertisement in the 'Worcester Standard' on 30 January 2020;
- 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 28 and 30 January 2020, 25 and 26 June 2020, as well as on 7 September 2020 and 2 October 2020;
- fixing a notice board at the site where the listed activities are to be undertaken 31 January 2020; and
- making the pre-application draft BAR available to I&APs for public review from 31 January 2020 and the in-process draft BAR from 7 September 2020.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and all the comments raised and responses thereto were included in the comments and response report.

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

2. Alternatives

Site Alternative 1:

This alternative entails:

- The clearance of 13ha of indigenous vegetation for cultivation purposes.
- The following maintenance activities to be conducted on the site:
 - Clearing of alien invasive vegetation along the watercourses and in the wetland areas;
 - Control of invasive indigenous Phragmites reeds and Typha bulrushes in the watercourses and wetland areas;
 - Removal of sediment from the watercourses and dams for conveyance purposes;
 - Repairs to road and pipelines crossing the Doring River and its tributaries within the property; and
 - Flood damage repairs to the Doring River channel that is adjacent to the agricultural areas within the property.
- The expansion of the existing dam located to the west of the existing Meerlust Dam.

This alternative is not preferred because the expansion of the dam located to the west of the existing Meerlust Dam would not reach the target capacity due to location factors, such as the position of the existing Bossieveld pipeline and Eskom's overhead power line infrastructure.

Preferred Site Alternative (Herewith Authorised):

This alternative entails:

- The clearance of 13ha of indigenous vegetation for cultivation purposes.
- The following maintenance activities to be conducted on the site:
 - Clearing of alien invasive vegetation along the watercourses and in the wetland areas;
 - Control of invasive indigenous Phragmites reeds and Typha bulrushes in the watercourses and wetland areas;
 - Removal of sediment from the watercourses and dams for conveyance purposes;
 - Repairs to road and pipelines crossing the Doring River and its tributaries within the property; and
 - Flood damage repairs to the Doring River channel that is adjacent to the agricultural areas within the property.
- The expansion of the existing Meerlust Dam, to have the following specifications:
 - Capacity: 500 000m³
 - Dam wall height: 11,2m
 - Surface area at full supply level: 11,7ha
- The construction of two 160mm diameter PVC inlet pipelines from the Bossieveld pipeline to the dam.
- The construction of a 315mm diameter HDPE dam outlet pipe with a 110mm diameter Brackish water pipeline.

This alternative is preferred because the expansion of the existing Meerlust Dam will reach the required target storage capacity and has no limiting factors.

Five dam design alternatives for the expansion of the existing Meerlust Dam were assessed as part of the project proposal and are discussed below:

Discarded dam design alternatives:

Options	Storage capacity (m ³)	Surface area at full supply level (ha)	Dam wall height (m)
Dam Design Alternative 1 (Option 1)	238 000	7	8,5
Dam Design Alternative 2 (Option 1a)	460 000	9,7	11
Dam Design Alternative 4 (Option 2)	132 000	3,9	7
Dam Design Alternative 5 (Option 3)	500 000	8,9	11,3

The dam designs described above were not preferred because the designs did not take into consideration the aquatic features associated with the existing dams.

Dam Design Alternative 3 (Option 1b) Herewith Authorised:

The expansion of the existing Meerlust Dam, to have the following specifications:

- Capacity: 500 000m³
- Dam wall height: 11,2m
- Surface area at full supply level: 11,7ha

This alternative is preferred because the design allows for a berm to be constructed upstream of the existing Meerlust Dam in order to maintain the artificial wetland habitat. Further to this the small existing dam located to the south of the Meerlust Dam will no longer be inundated by the enlarged Meerlust Dam as previously considered.

"No-Go" Alternative

The "no-go" option was considered and is not preferred since the applicant will not be able to utilise the existing lawful water use to its full potential and the expansion of agricultural activities on the farm will not be achieved. No additional employment opportunities will arise if the proposal is not implemented. In addition, 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 enlarged dam, is primarily to increase the efficiency of water storage on the properties in line with the existing water use rights. 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. The expansion of the cultivation areas relates to the full use of the existing water use rights allocated to the applicant and the ability of the farms to be cultivated to its full potential using the allocated water rights. Furthermore, the development is consistent with the surrounding land use.

3.2 Biodiversity and Biophysical Impacts

According to the Botanical Impact Assessment dated July 2019, compiled by Dr. David McDonald of Bergwind Botanical Surveys & Tours CC, the vegetation within the area proposed for agricultural

expansion consists entirely of Breede Alluvium Renosterveld, while the area for the proposed dam expansion consists of Breede Alluvium Renosterveld, which is transitional to Robertson Karoo. Both the aforementioned are located within ecosystems classified as vulnerable and least threatened (respectively) in terms of Section 52 of the National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) ("NEMBA"). The area for expansion was found not to be species rich, nor sensitive in nature. According to the botanical specialist, the inundation of approximately 4ha of relatively undisturbed natural vegetation and 2ha of disturbed veld by the enlarged dam (a total of 6ha) is considered to be within acceptable limits. The proposed agricultural area does not form part of a Critical Biodiversity Area ("CBA"). The Botanical Impact Assessment indicates that there is evidence of regular grazing by cattle in the 13ha area proposed for agricultural expansion. This has resulted in a limited graminoid and herbaceous cover, with vegetation consisting mainly of shrubs and geophytes. Through the implementation of the specialist's recommendations as contained in Condition 19 and the EMPr (Accepted in Condition 9), the impacts on vegetation will be mitigated.

According to the Freshwater Impact Assessment dated March 2020, compiled by Ms. T. Belcher of BlueScience, the most prominent aquatic features that were identified and assessed within the study area are the artificial wetland areas associated with the dams on the property. The wetlands at the dams, although comprising of diverse wetland habitat that supports aquatic biota, are considered to be artificial wetlands and would be likely to disappear from the landscape if not fed by the dams. They are considered to be in a moderately to largely modified ecological condition and of moderate to low ecological sensitivity and importance. Due to the fact that these wetlands do provide some valued aquatic habitat and functionality it is recommended that the associated wetland habitat be maintained as far as possible through retaining some of the existing wetland habitat in the adjacent smaller dams. An alternative dam enlargement was proposed that included an upstream berm to maintain a small wetland area upslope of the dam, where the Doornrivier Canal feeds into the series of dams. In addition, the existing small southern dam would be retained that would fill and overtop into the enlarged dam, thereby retaining its associated artificial wetland habitat. Through the implementation of the preferred layout, the specialist recommendations and the EMPr (accepted in Condition 9), impacts on the artificial wetlands will be mitigated to an acceptable level.

Furthermore, a Water Use Licence was issued on 24 December 2019 by the Department of Water and Sanitation for the proposed enlargement of the Meerlust Dam.

An MMP has been compiled to address future maintenance activities required at the various aquatic features on Meerlust Farm (pipeline and road crossings). 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 development will result in both negative and positive impacts.

Negative Impacts:

- The proposed development will result in loss of natural vegetation.
- Impacts on aquatic features are anticipated but will be limited through the implementation of specialist recommendations and in terms of the approved EMPr and MMP.
- There will be an increase in noise and dust impacts during the construction phase.

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, enabling the proposed agricultural expansion of 13ha.
- The economic viability of the farm will be assured.
- There will be employment opportunities during the construction and operational phases.

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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