



REFERENCE: 16/3/3/5/F5/14/2043/22
NEAS REFERENCE: WCP/EIA/AMEND/0000657/2022
DATE OF ISSUE: 03 October 2022

The Board of Directors
HB Engelbrecht en Seuns BK
P.O. Box 161
MOORREESBURG
7310

Attention: Mr. HB Engelbrecht

E-mail: hbeoffice@yahoo.com

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED) FOR THE PART 1 AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION ISSUED ON 22 FEBRUARY 2022 (REFERENCE NO.: 16/3/3/2/F5/14/2026/21): PROPOSED DEVELOPMENT OF THE DUIWELSKLOOF DAM AND ASSOCIATED INFRASTRUCTURE ON PORTION 1 OF FARM NIEUWEDRIFT NO. 156 AND PORTION 5 OF FARM MISVERSTAND NO. 333, KORINGBERG.

1. With reference to the above application, the competent authority hereby notifies you of its decision to **grant** the amended 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 amended 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 summarised in the attached amended Environmental Authorisation.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

CC: (1) Ms. Lindsay Speirs Du Toit (Earth Grace Environmental Consultancy)
(2) Mr. Alwyn Zaayman (Swartland Municipality)

E-mail: lindsay@earthgrace.co.za
E-mail: AlwynZaayman@swartland.org.za

REFERENCE: 16/3/3/5/F5/14/2043/22
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AMENDED ENVIRONMENTAL AUTHORISATION

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (“NEMA”) AND THE ENVIRONMENTAL IMPACT ASSESSMENT (“EIA”) REGULATIONS, 2014 (AS AMENDED) FOR THE AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION ISSUED ON 22 FEBRUARY 2022 (REFERENCE NO.: 16/3/3/2/F5/14/2026/21): PROPOSED DEVELOPMENT OF THE DUIWELSKLOOF DAM AND ASSOCIATED INFRASTRUCTURE ON PORTION 1 OF FARM NIEUWEDRIFT NO. 156 AND PORTION 5 OF FARM MISVERSTAND NO. 333, KORINGBERG.

With reference to your application for the abovementioned, find below the amendment to the Environmental Authorisation (hereinafter referred to as an “Environmental Authorisation”) with respect to this application.

ADDENDUM TO ENVIRONMENTAL AUTHORISATION

A. DECISION

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2014 (as amended), the competent authority herewith grants the amendment of the Environmental Authorisation issued on 22 February 2022 (Reference No.: 16/3/3/2/F5/14/2026/21).

The Activity Description under Section B of the Environmental Authorisation issued on 22 February 2022 reads as follows:

“The proposed project entails the construction of a new irrigation farm dam (proposed Duiwelskloof Dam) on Portion 1 of Farm Nieuwedrift No. 156 and Portion 5 of Farm Misverstand No. 333, Koringberg.

The proposed development will comprise of the following:

- *A new irrigation dam;*
- *Bypass channels and diversion berms;*
- *Pipelines; and*
- *A sand borrow area.*

The proposed dam will be filled by means of pumping winter enlistment water from the Berg River. The proposed dam will be located within the Duiwelskloof Tributary, a minor tributary of the Berg River, and will have a storage capacity of 430 000m³. The dam wall will be approximately 13.5m in height and 167m in length, and the full supply level will be approximately 8.7ha.

A southern and northern bypass channel, with berms, will be constructed to divert the saline runoff from the catchment around the dam to continue along the natural valley. The

southern and northern bypass channels will be constructed 3m above the proposed dam's full supply level with a longitudinal slope of 1:1000. The channels will be top soiled with grass where no shale rock is exposed in the base and side slopes. The channel dimensions are:

- A base width of 1m;
- Channel top width of 2.5m;
- Depth of 0.5m; and
- Side slopes: 1V:1.5H

The dam's main spillway will consist of a 2m wide trapezoidal shaped spillway on the end of the embankment left flank and a 1m wide secondary spillway on the right flank, to safely discharge the accumulated storm water runoff from the bypass channels. Both spillways will have a concrete overflow sill to prevent backwater erosion into the dam. The spillway discharge channels will be excavated into erosion resistant shale rock to limit erosion. Where possible, side slopes will be vegetated.

A 2m deep plunge pool will be constructed downstream of the dam, where the two spillway discharge channels meet. The plunge pool will dissipate energy when hydraulic jump occurs and will reduce the flow velocity along the existing valley before the accumulated storm water discharges into the river.

The dam embankment will be protected against surface erosion by placing topsoil and establishing vegetation on the downstream face, rip-rap rock protection on the upstream face and a gravel capping on the embankment crest with a cross fall of 2% to the upstream face.

A Storm Water Management Plan will be implemented to manage the storm water flow within the channels to ensure that erosion does not occur. The bypass channels will be vegetated. With adequate shaping and planting, the channels will replace the ecological habitat that is lost within the tributary.

The existing pump station and abstraction point will also be upgraded. A new pipeline to the proposed dam is also required.

A new 400mm Ø pipeline will be established from the pump station to the proposed dam and measure 0.6km in length. The proposed pipeline will cross the Duiwelskloof Tributary at an existing road crossing and will also cross one of the stream's tributaries, also at an existing farm track.

Sand material for the construction of the dam filter will be obtained from an area adjacent to the Berg River within the wider channel of the Berg River. An upstream borrow area (south) will be established within the channel of the Berg River where excess sand has been deposited by the river to form islands or sandbanks.

The borrow area will not be excavated closer than 15m from the active flow channel at the time of sediment removal. The layout of the southern borrow area has been slightly amended and the borrow area is approximately 0.6ha in extent.

A MMP has been compiled for maintenance or managements works to be undertaken in the watercourses. Maintenance, management or repair activities are required during the operational phase and will include the following:

Sediment removal:

1. Clearing of sediment or placing sediment at:

- Pump hole/trench;
 - Return flow (irrigation);
 - Off-take weir;
 - Storm water outfall;
 - Detention/retention ponds;
 - Canalised urban river; and
 - Bridges, culverts and drifts.
2. Preventing the formation of islands in the river channel; and
 3. Dredging of the in-stream dam.

Emergency repairs:

- Repairs to erosion of the riverbank or servicing of infrastructure (e.g. pipelines/roads);
- Removal of material that has built up due to flooding/sedimentation;
- Attend to damage or replacement of infrastructure (e.g. pipeline, pump house, dam wall);
- Manage the condition of the flood protection berms and existing structures such as gabions, canalised and storm water systems; and
- Installing temporary gravel approaches at flood-damaged river crossings.

Management of alien invasive and bush encroachment plant species:

- Clearance of alien invasive vegetation from the watercourse to reduce maintenance requirements as they relate to erosion and sedimentation; and
- Managing indigenous species categorised as bush encroachment to improve hydrological flow and reduce associated flooding impacts.

Rehabilitation and restoration activities for maintaining ecological infrastructure:

- Development and maintenance of ecological buffering systems to improve and/or restore functioning (e.g. wetlands and storm water detention ponds);
- Actively rehabilitate riparian zones through planting of locally indigenous species; and
- Bank grading and movement/removal of berms and barriers to flow".

This is herewith replaced with the following:

The proposed project entails the construction of a new irrigation farm dam (proposed Duiwelskloof Dam) on Portion 1 of Farm Nieuwedrift No. 156 and Portion 5 of Farm Misverstand No. 333, Koringberg.

The proposed development will comprise of the following:

- A new irrigation dam;
- Bypass channels and diversion berms;
- Pipelines; and
- A sand borrow area.

The proposed dam will be filled by means of pumping winter enlistment water from the Berg River. The proposed dam will be located within the Duiwelskloof Tributary, a minor tributary of the Berg River, and will have a storage capacity of 430 000m³. The dam wall will be approximately 15.9m in height and 167m in length, and the full supply level will be approximately 8.7ha.

A southern and northern bypass channel, with berms, will be constructed to divert the saline runoff from the catchment around the dam to continue along the natural valley. The southern and northern bypass channels will be constructed 3m above the proposed dam's

full supply level with a longitudinal slope of 1:1000. The channels will be top soiled with grass where no shale rock is exposed in the base and side slopes. The channel dimensions are:

- A base width of 1m;
- Channel top width of 2.5m;
- Depth of 0.5m; and
- Side slopes: 1V:1.5H

The dam's main spillway will consist of a 2m wide trapezoidal shaped spillway on the end of the embankment left flank and a 1m wide secondary spillway on the right flank, to safely discharge the accumulated storm water runoff from the bypass channels. Both spillways will have a concrete overflow sill to prevent backwater erosion into the dam. The spillway discharge channels will be excavated into erosion resistant shale rock to limit erosion. Where possible, side slopes will be vegetated.

A 2m deep plunge pool will be constructed downstream of the dam, where the two spillway discharge channels meet. The plunge pool will dissipate energy when hydraulic jump occurs and will reduce the flow velocity along the existing valley before the accumulated storm water discharges into the river.

The dam embankment will be protected against surface erosion by placing topsoil and establishing vegetation on the downstream face, rip-rap rock protection on the upstream face and a gravel capping on the embankment crest with a cross fall of 2% to the upstream face.

A Storm Water Management Plan will be implemented to manage the storm water flow within the channels to ensure that erosion does not occur. The bypass channels will be vegetated. With adequate shaping and planting, the channels will replace the ecological habitat that is lost within the tributary.

The existing pump station and abstraction point will also be upgraded. A new pipeline to the proposed dam is also required.

A new 400mm Ø pipeline will be established from the pump station to the proposed dam and measure 0.6km in length. The proposed pipeline will cross the Duiwelskloof Tributary at an existing road crossing and will also cross one of the stream's tributaries, also at an existing farm track.

Sand material for the construction of the dam filter will be obtained from an area adjacent to the Berg River within the wider channel of the Berg River. An upstream borrow area (south) will be established within the channel of the Berg River where excess sand has been deposited by the river to form islands or sandbanks.

The borrow area will not be excavated closer than 15m from the active flow channel at the time of sediment removal. The layout of the southern borrow area has been slightly amended and the borrow area is approximately 0.6ha in extent.

A MMP has been compiled for maintenance or managements works to be undertaken in the watercourses. Maintenance, management or repair activities are required during the operational phase and will include the following:

Sediment removal:

1. Clearing of sediment or placing sediment at:
 - Pump hole/trench;

- Return flow (irrigation);
 - Off-take weir;
 - Storm water outfall;
 - Detention/retention ponds;
 - Canalised urban river; and
 - Bridges, culverts and drifts.
2. Preventing the formation of islands in the river channel; and
 3. Dredging of the in-stream dam.

Emergency repairs:

- Repairs to erosion of the riverbank or servicing of infrastructure (e.g. pipelines/roads);
- Removal of material that has built up due to flooding/sedimentation;
- Attend to damage or replacement of infrastructure (e.g. pipeline, pump house, dam wall);
- Manage the condition of the flood protection berms and existing structures such as gabions, canalised and storm water systems; and
- Installing temporary gravel approaches at flood-damaged river crossings.

Management of alien invasive and bush encroachment plant species:

- Clearance of alien invasive vegetation from the watercourse to reduce maintenance requirements as they relate to erosion and sedimentation; and
- Managing indigenous species categorised as bush encroachment to improve hydrological flow and reduce associated flooding impacts.

Rehabilitation and restoration activities for maintaining ecological infrastructure:

- Development and maintenance of ecological buffering systems to improve and/or restore functioning (e.g. wetlands and storm water detention ponds);
- Actively rehabilitate riparian zones through planting of locally indigenous species; and
- Bank grading and movement/removal of berms and barriers to flow.

B. REASONS FOR THE DECISION:

In reaching its decision, the competent authority took, *inter alia*, the following into consideration:

- (a) The information contained in the application form received by the competent authority via electronic mail correspondence on 12 September 2022.
- (b) The application is for a non-substantive amendment to the Environmental Authorisation and will not change the scope of the Environmental Authorisation issued on 22 February 2022.
- (c) No additional impacts are anticipated due to the proposed amendment. This can be justified as follows:
 - i. The proposed amendment will not result in a change in the nature of the impacts nor an increase in the nature of the impacts.
 - ii. The amendment is required, as the river channel where the embankment is proposed, is slightly deeper than what was previously estimated.
 - iii. The final wall height of the proposed Duiwelskloof Dam will therefore be 15.9m, instead of the authorised 13.5m.

- iv. Although the height of the dam wall will be increased by 2.4m, the footprint and capacity of the dam will not increase.
- (d) The amendment is administrative in nature and no impacts are associated with the application for amendment.
- (e) The environment and the rights and interests of interested and affected parties ("I&APs") are not likely to be affected.
- (f) The conditions contained in the Environmental Authorisation issued on 22 February 2022 still remain unchanged and in force.

C. CONDITION:

- 1. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 1.1 notify all registered I&APs of –
 - 1.1.1 the outcome of the application;
 - 1.1.2 the reasons for the decision as included in Section B;
 - 1.1.3 the date of the decision; and
 - 1.1.4 the date when the decision was issued.
 - 1.2 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 D below;
 - 1.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
 - 1.4 provide the registered I&APs with:
 - 1.4.1 the name of the holder (entity) of this Environmental Authorisation;
 - 1.4.2 name of the responsible person for this Environmental Authorisation;
 - 1.4.3 postal address of the holder;
 - 1.4.4 telephonic and fax details of the holder;
 - 1.4.5 e-mail address, if any, of the holder; and
 - 1.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered Interested and Affected Parties in the event that an appeal is lodged in terms of the National Appeal Regulations, 2014 (as amended).

D. APPEALS:

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

An appellant must –

- 1.1 Submit an appeal in accordance with Regulation 4 to the appeal administrator, within 20 (twenty) calendar days from the date the applicant notified registered I&APs of this decision;

- 1.2 If the appellant is the applicant, provide any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator;
- 1.3 If the appellant is a person other than the applicant, provide the applicant, any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator;
- 1.4 The applicant (if not the appellant), the decision-maker, I&APs and Organs of State must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.
- 1.5 The appeal form/s must be submitted by means of one of the following methods:
- By post: Attention: Mr. Marius Venter
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
- By e-mail: DEADP.Appeals@westerncape.gov.za
- 1.6 An electronic copy (word document format) of the appeal and supporting documents must also be submitted.
- 1.7 A prescribed appeal form, as well as assistance regarding the appeal processes is obtainable from the office of the appeal authority at: Tel. (021) 483 3721, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

E. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Amended 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 greatly appreciated.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE OF DECISION: 03 OCTOBER 2022

CC: (1) Ms. Lindsay Speirs Du Toit (Earth Grace Environmental Consultancy)
(2) Mr. Alwyn Zaayman (Swartland Municipality)

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