



REFERENCE: 16/3/3/1/B4/12/1023/18
NEAS REFERENCE: WCP/EIA/0000402/2018
ENQUIRIES: Arabel McClelland
DATE OF ISSUE: 2018 -10- 23

The Board of Directors
Keerweder (Franschhoek) (Pty) Ltd
P.O. Box 300
FRANSCHHOEK
7690

Attention: Mr. A. Siebrits

Tel: (021) 876 3420
Fax: (021) 876 3770

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED EXPANSION OF THE SERWITUUT STORAGE DAM ON FARM NO. 1669, FRANSCHHOEK

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and to **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 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, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

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

CC: (1) Ms. H. Botha (Pieter Badenhorst Professional Services cc)
(2) Mr. S. van der Merwe (Stellenbosch Municipality)
(3) Mr. R. Smart (CapeNature)
(4) Ms. L. Zepe (Department of Water and Sanitation)

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ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED EXPANSION OF THE SERWITUUT STORAGE DAM ON FARM NO. 1669, FRANSCHHOEK

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 Department herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to the preferred Site Alternative (Alternative 1B) and preferred Design Alternative (Alternative 2A), as described in the Basic Assessment Report ("BAR"), dated July 2018.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) and Listing Notices 1, 2 and 3 (published in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby **adopts** the Maintenance Management Plan ("MMP"), contained in Chapter 8 of the Environmental Management Programme submitted as part of the application for Environmental Authorisation.

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

Keerweder (Franschhoek) (Pty) Ltd
c/o Mr. Andries Siebrits
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The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as “**the holder**”.

B. LIST OF ACTIVITIES AUTHORISED

Listed Activity	Activity/Project Description
<p>Listing Notice 1 -</p> <p>Activity Number: 19</p> <p><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></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</i></p> <p><i>(a) will occur behind a development setback;</i></p> <p><i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i></p> <p><i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i></p> <p><i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i></p> <p><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 development entails the expansion, and associated stabilisation, of the Serwitut dam, an in-stream dam, resulting in works within the watercourse, including the installation of a concrete outlet pipe, removal of silt, and raising and widening of the dam wall, which would necessitate the movement of more than 10m³ of material in a watercourse.</p>
<p>Listing Notice 1 -</p> <p>Activity Number: 48</p> <p><i>The expansion of—</i></p> <p><i>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more;</i> or</p> <p><i>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres;</i></p> <p><i>where such expansion occurs—</i></p> <p><i>(a) within a watercourse;</i></p> <p><i>(b) in front of a development setback; or</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</i></p> <p><i>excluding—</i></p> <p><i>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</i></p>	<p>The development entails the expansion, and associated stabilisation, of the Serwitut dam (an in-stream dam). This will result in the raising and widening of the dam wall and installation of a concrete outlet pipe, resulting in the expansion of structures and infrastructure associated with the dam by 100m² or more.</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;
- (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.

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 development:

The expansion and stabilisation of the existing Serwitut dam, an in-stream dam located on Farm no. 1669, Franschhoek. This will entail the following:

- An increase in maximum storage capacity from 61 000m³ to 77 000m³.
- An increase in the dam wall height from 9.75m to 10.5m, through the raising of the downstream embankment of the dam. This will increase the crest width from 3m to 4m with the toe of the dam wall moving 4m downstream, to flatten the slope of the dam wall.
- Stabilisation works and improvements to the downstream embankment slope.
- Use of silt taken from within the dam basin to stabilise the downstream slope.
- The installation of a reinforced concrete encased outlet pipe.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on Farm no. 1669, Franschhoek.

The co-ordinates of the existing Serwitut dam are:

Latitude (S)	Longitude (E)
33° 55' 49.88" South	19° 07' 59.37" East

The SG digit code is: C05500030000166900000

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 cc
 c/o Ms. Helene Botha
 P.O Box 1058
WELLINGTON
 7654

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 (Alternative 1B) and preferred Design Alternative (Alternative 2A), described in the BAR, dated July 2018, on 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 **five (5) years** from the date of commencement of the listed activities.
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.
 - 6.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 6.2 The notice must also include proof of compliance with the following conditions described herein:

Conditions: 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;
- 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 notified 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, contained in Chapter 8 of the EMPr, 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 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 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 and the EMPr and submit Environmental Audit Reports to the Competent Authority. The 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 holder must undertake an environmental audit (quarterly for the duration of the construction phase) and submit Environmental Audit Reports to the Competent Authority (once every six months during the construction phase). The final Environmental Audit Report must be submitted to the Competent Authority (six months after operation commenced).

The holder must, within 7 days of the submission of the report 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 palaeontological 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.

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.
18. The maximum storage capacity of the dam, subsequent to completion of stabilisation and expansion work, must be limited to 77 000m³.
19. The construction phase disturbance footprint must be limited as far as possible with the construction area clearly demarcated before commencement of any construction activities. Construction areas must be strictly adhered to. All areas beyond the construction footprint must be considered as no-go areas.

20. Construction is to be undertaken during the drier months of the year.
21. Upon completion of the construction phase, rehabilitation of the dam banks must be undertaken in consultation with a suitably qualified and experienced specialist. This must include revegetation with appropriate locally occurring indigenous vegetation, along with concurrent removal of all alien invasive species immediately up- and downstream of the dam.

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 a listed activity 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, 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 Jaap de Villiers (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to Jaap.DeVilliers@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from 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/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



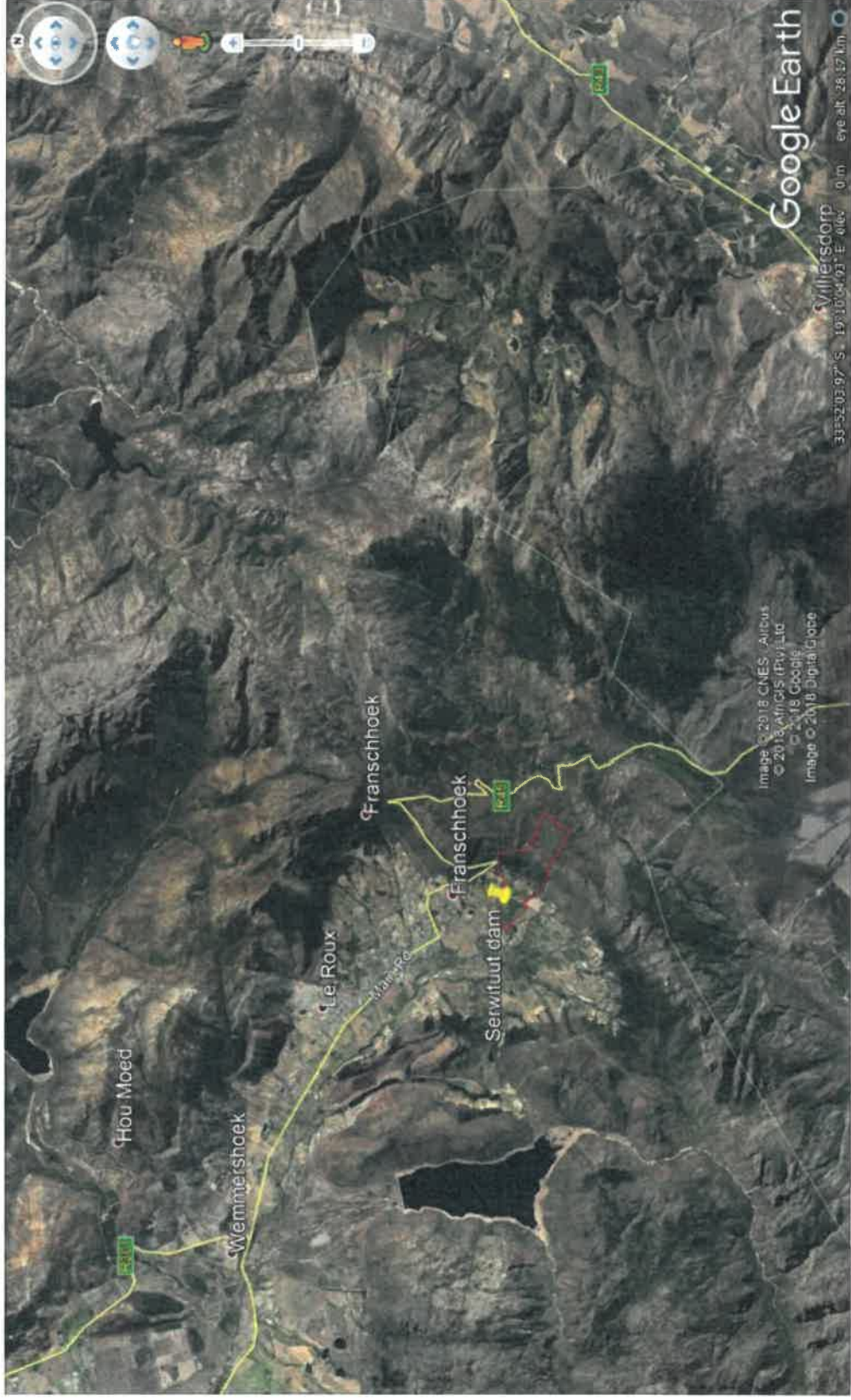
MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 23/10/2018

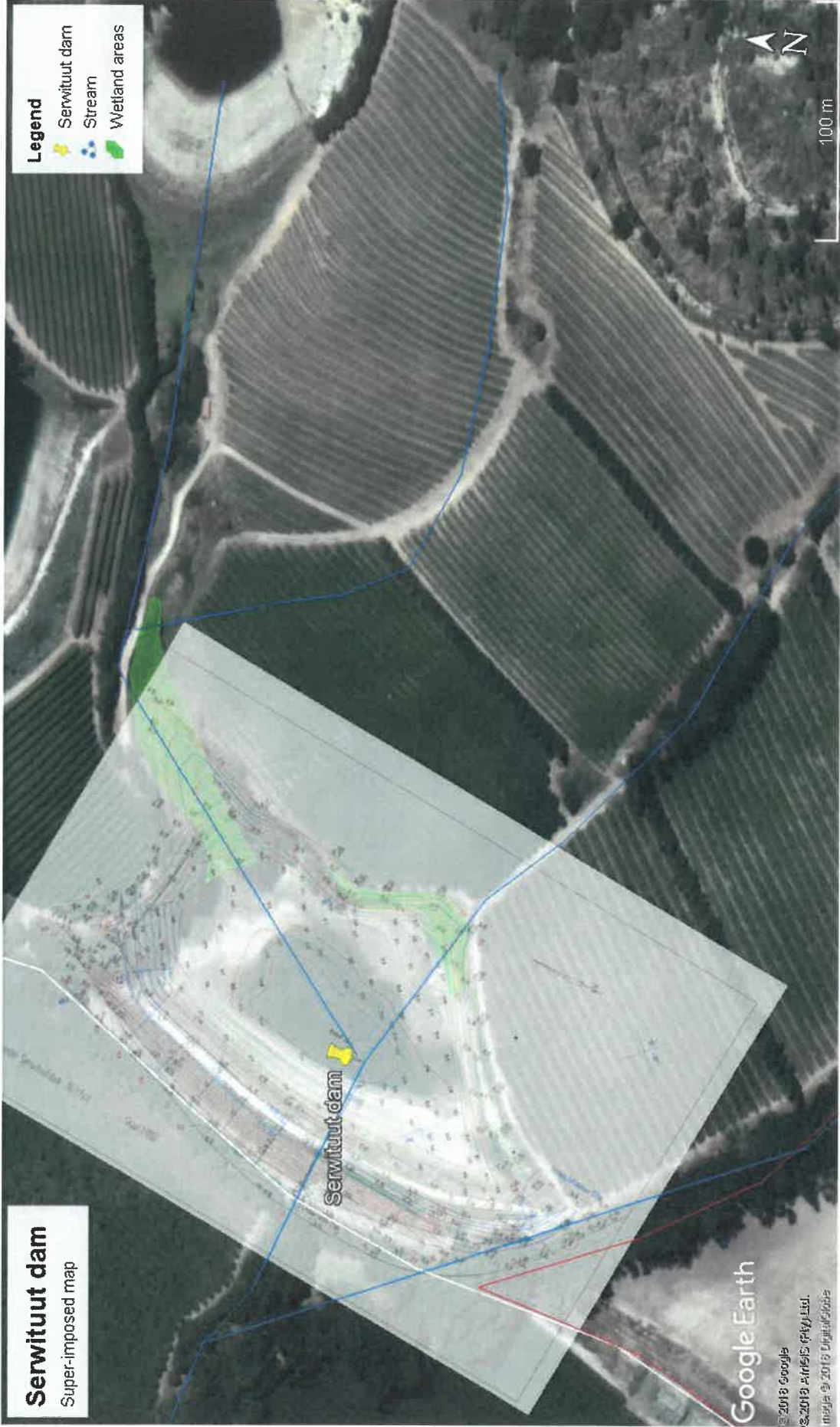
CC: (1) Ms. H. Botha (Pieter Badenhorst Professional Services cc)
(2) Mr. S. van der Merwe (Stellenbosch Municipality)
(3) Mr. R. Smart (CapeNature)
(4) Ms. L. Zepe (Department of Water and Sanitation)

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ANNEXURE 1: LOCALITY MAP



ANNEXURE 2: SITE PLAN



ANNEXURE 3: 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 13 April 2018, and the amended Application Form, EMPr and MMP submitted together with the BAR on 10 July 2018;
- 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 the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the BAR, dated July 2018, and the comment from the Department of Agriculture received on 7 September 2018; 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 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;
- the placing of a newspaper advertisement in the 'Paarl Post' on 5 April 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 on 10 and 13 April 2018;
- placement of notice boards, on 13 April 2018, at the property entrance where the listed activities are to be undertaken;
- making the draft BAR available to I&APs for public review from 13 April 2018;

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, EMPr and MMP to adequately address the concerns raised.

2. Alternatives

As a result of the steep slope and ongoing erosion of the downslope embankment of the existing Serwituu dam, and the inherent risk of current conditions, improvements are required to stabilise and ensure the integrity of the downstream slope of the dam. The proposed work results in an increase in the storage capacity of the Serwituu dam.

Alternative proposals were initially considered around either constructing a new storage dam, only removing the accumulated silt from within the existing Serwituu dam basin or undertaking improvements to the existing dam structure, utilising some silt from within the dam basin. The option of only removing silt from within the dam basin was discarded at an early stage due to the volume of material that would require disposal, which would be in excess of 19 000m³ of silt, and the potential structural weakening of the dam structure as a result. This would exacerbate the current issue of risk associated with dam safety. Therefore, only feasible site and design alternatives were pursued, as outlined below.

Site Alternative (1A)

The construction of an additional new storage dam on Farm no. 1669, Franschoek.

This alternative is not preferred for the following reasons:

- The construction of a new dam would require new and additional infrastructure on the property, including access roads and pipelines. This additional infrastructure would result in increased project costs.
- Existing viable orchards would be removed to accommodate the new dam, resulting in a loss of production and revenue for the farm.
- Large tracts of indigenous vegetation would have to be removed.
- The potential identified site for a new dam is located on steep slopes, rendering the construction process difficult and costly.
- If a new dam were constructed, the additional work on the existing Serwituu Dam would not be undertaken, which would also include the stabilisation work.

Preferred Site Alternative (1B) (Herewith authorised)

The expansion of the existing Serwituu dam in its current location on the subject property.

This alternative is preferred for the following reasons:

- The necessary access and infrastructure is already in existence for the dam, thus negating the need to construct or install any new infrastructure as part of the project to expand water storage capacity on the farm.
- No orchards or areas of indigenous vegetation would have to be removed to accommodate the dam or construction work.

Preferred Design Alternative (2A) (Herewith authorised)

The expansion and stabilisation of the existing Serwituu dam, an in-stream dam located on Farm no. 1669, Franschoek. This will entail the following:

- An increase in maximum storage capacity from 61 000m³ to 77 000m³.
- An increase in the dam wall height from 9.75m to 10.5m, through the raising of the downstream embankment of the dam. This will increase the crest width from 3m to 4m with the toe of the dam wall moving 4m downstream, to flatten the slope of the dam wall.
- Stabilisation works and improvements to the downstream embankment slope.

- Use of silt taken from within the dam basin to stabilise the downstream slope.
- The installation of a reinforced concrete encased outlet pipe.

This alternative is preferred for the following reasons:

- The expansion and improvements to the dam will allow storage of the existing lawful water use as well as additional winter runoff. This will enable better water use management practices on the farm and prevent potential future failure of the dam.
- Raising the downstream embankment of the dam allows for the dam to remain operational during construction works.
- More efficient management of water resources and water use is anticipated.
- The proposed expansion will have a low botanical impact with mitigation and is thus deemed acceptable from a botanical perspective.
- Similarly, if mitigation measures are implemented, the potential freshwater impact of the expansion of the in-stream dam is considered acceptable.
- Storage of additional water will provide water for supplementary irrigation and allow the cultivation of crops on the farm other than wine grapes, thus resulting in socio-economic benefit for the farm and its employees.

"No-Go" Alternative

The "no-go" option was also investigated and was not preferred as the *status quo* on the property would persist. The required dam wall stabilisation work would not be undertaken, which would put the dam at risk of potential failure in the future. The existing water storage capacity would remain, although this would be insufficient for the purposes of introducing new crops on the farm that may have additional irrigation needs. The availability of water for irrigation during the summer months would also remain a concern due to a lack of storage capacity to capture runoff from winter rainfall. This may impact the effective management of water on the property, job security and the financial operations of the farm.

3. Impact Assessment and Mitigation measures

3.1 Activity need and desirability

The property is an active farm situated within the agricultural region of the Franschhoek Valley. The proposed expansion of the dam on the property is in line with the agricultural use of the area. Expansion of the dam will allow the existing lawful water use to be stored, as well as provide the potential for additional water storage, which is being applied for to the mandated water authority. Currently, winter runoff water is stored in five existing dams, which is used, in combination with groundwater, during the dry summer months for irrigation of plum orchards and vineyards. The increased availability of water on the farm will enable an adequate water supply for irrigation purposes during summer, therefore enabling diversification of crops and associated socio-economic benefits for the farm, including employment opportunities, as well as job security. The proposed stabilisation works of the downstream embankment of the existing dam is also required to improve the safety of the dam and minimise the risk of potential dam failure in the future. Structural improvements, such as the outlet pipe, will also improve the overall operation of the dam.

3.2 Biophysical Impacts

A Freshwater Assessment was compiled in March 2018 by EverWater Freshwater Consulting Services to identify and assess the potential impact on the receiving aquatic environment. The dam is situated on an unnamed tributary of the Franschhoek River. Three further unnamed streams,

draining a portion of the slopes of the Franschoek Mountains above, all flow in a westerly direction before meeting at the dam and later flowing into the Franschoek River. The streams are considered to be in a moderately to largely modified state. Several very small wetlands were also identified around the dam, associated with historic streams. It was noted by the specialist that little natural vegetation remains in the area. Riparian vegetation has also been largely modified. The loss of some biodiversity and water quality were identified as potential impacts of the proposed development. Proposed mitigation includes construction during the drier months of the year when low-flow conditions occur in the watercourses. The dam banks must be rehabilitated and revegetated with appropriate indigenous vegetation, along with the removal of all alien invasive species up- and downstream of the dam. The ongoing management of alien invasive vegetation is also an important maintenance requirement for the application, and on the property as a whole. With implementation of the proposed mitigation measures, the cumulative impact of the proposal will be a low to negligible negative impact. The mitigation measures have been carried through to the EMPr, MMP and conditions of this Environmental Authorisation, where appropriate.

Furthermore, a MMP for the affected watercourse on site, including invasive alien vegetation management as a component of ongoing works, has been compiled to address future routine maintenance activities. 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).

As the streams and dam are defined as watercourses, water uses in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA") will apply. Application for a Water Use Licence was submitted to the Department of Water and Sanitation on 17 May 2018.

The development will result in both negative and positive impacts.

Negative Impacts:

- The proposed development will result in construction related impacts such as dust, visual impacts and noise during the construction period.
- The proposed works within the dam and watercourse downstream of the dam will negatively impact the freshwater ecosystem, resulting in a minor loss of biodiversity and habitat.
- Construction-related activities may impact water quality, introduce contaminants and result in sedimentation.
- Maintenance-related work in the dam and on the embankments may result in minor disturbance within the freshwater ecosystem.

Positive impacts:

- The development will provide temporary employment opportunities during the construction phase.
- Availability of additional water for irrigation will enable diversification in crops and associated socio-economic benefits, including job security.
- There will be an improvement in dam safety and reduced risk of failure.
- Alien clearing will be undertaken on an ongoing basis.

4. 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.

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 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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