



# 24G APPLICATION FORM & CHECKLIST

for

## BOSSE DAM, LOWER SCHOONBERG FARM

on

Remainder & Portion 1 of Farm 108, Lower Schoonberg

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as amended) & 2014 Environmental Impact Regulations

Prepared for Applicant: Langkloof Please (Pty) Ltd

Date: 17 May 2021

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Department Reference: 14/2/4/1/D2/28/0024/19

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**PURPOSE OF THIS REPORT:**

Application for 24G Environmental Authorisation

**APPLICANT:**

Langkloof Plase (Pty) Ltd

**CAPE EAPRAC REFERENCE NO:**

GEO601/02

**SUBMISSION DATE**

17 May 2021

## 24G APPLICATION FORM & CHECKLIST

in terms of the  
National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended &  
Environmental Impact Regulations 2014

### Bosse Dam, Lower Schoonberg Farm

Remainder & Portion 1 of Farm 108, Lower Lower Schoonberg

Submitted for:

#### Stakeholder Review & Comment

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**IMPORTANT:** Kindly ensure that this checklist is completed and attached to the NEMA SECTION 24G Application.

Please indicate by ticking the following below to serve as confirmation that the required information has been included in the application.

No.	Application Requirements	Please tick for confirmation
1.	Requirements of Preliminary Advertisement (pre-application public participation requirements including register of all I&APs), in accordance with Annexure A, Section D of the Section 24G Fine Regulations. <b>(Note: Failure to meet the Regulation 8 will result in rejection of the application)</b>	
2.	Application form has been completed and attached, which includes among others:	
	2.1. A list of all listed activities and/or waste management activities that was triggered when the development activity was commenced with.	✓
	2.2. A list of all <b>similarly listed</b> activities in terms of the current EIA regulations (if applicable).	✓
	2.3. A description of the receiving environment <b>before</b> commences of the activity(ies).	✓
	2.4. A description of the receiving environment <b>after</b> commences of the activity(ies).	✓
	2.5. All appendices and annexures:	
	2.5.1. Locality map	✓
	2.5.2. Site plans or/and Layout plan	✓
	2.5.3. Building plans (if applicable)	✓
	2.5.4. Colour photographs	✓
	2.5.5. Biodiversity overlay map	✓
	2.5.6. Permit(s) / license(s) from any other organ of state including service letters from the municipality	x
	2.5.7. Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements, Land owner consent and any other public participation information	✓
	2.5.8. Environmental Management Programme	✓
	2.5.9. Certified copy of Identity Document of Applicant	✓
	2.5.10. Certified copy of the title deed (or title deeds in the case of linear activities)	✓

## COMPLETENESS CHECKLIST

	2.6. Signed declaration forms.	✓	
3.	Are any specialist assessments required: e.g. Botanical, Hydro-geological, soil, socio-economic?	YES	NO
	3.1. If yes, has the specialist assessment report been attached to the application?	✓	
4.	An assessment of the impacts of the activity or activities in terms of the following categories:		
	• Socio-economic		
	• Biodiversity	✓	
	• Sense of place &/or Heritage/ Cultural		
	• Any pollution or environmental degradation which has been, is being, is being or may be caused		
5.	A methodology of how the investigation into the impacts associated with the unlawful activity was undertaken.	✓	
6.	Completed and attached representations of Annexure A, Section A (Directives) in terms of the S24G Fine Regulations: Information/ Representation submitted in terms of any Directives the Minister/ decision maker may issue in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) s24G(1)(b)(i)-(viii).	✓	
7.	Completed and attached representations in terms of Annexure A, Section B (Deferral) of the S24G Fine Regulations.	✓	
8.	Completed and attached representations in terms of Annexure A, Section C, Part 1 (Fine Quantum based on the assessment as specified above (4).	✓	
	Confirmation that Annexure A, Section C, Part 1 has been completed by an environmental assessment practitioner (EAP)	✓	
9.	Compliance history of the applicant:		
	9.1. Completed Annexure A, Section C, Part 2 and 3; namely:	✓	
	9.1.1. Whether or not administrative enforcement notices, including pre -notices where appropriate, have previously been issued to the applicant in respect of a contravention of section 24F(1) of the NEMA and/or section 20(b) of the National Environmental Management: Waste Act (Act 59 of 2008) (NEM: WA).	✓	
	9.1.2. Whether or not the applicant has previously been convicted in respect of a contravention of section 24F(1) of the Act and /or section 20(b) of the NEM: WA;	✓	
	9.1.3. Whether or not the applicant has previously submitted a section 24G application in respect of an activity or activities which commenced prior to the activity or activities that are the subject of the current application; and	✓	
	9.1.4. Whether the applicant is a firm or a natural person. (see Section 24G Fine Regulations for definition of "firm")	✓	
	9.2. Provided information or whether or not any of the directors of the applicant firm are, or were, at the relevant time, directors of a firm to whom the above (9.1.1. - 9.1.3.) applies;	✓	
	9.3. Advise on whether an applicant who is a natural person is, or was, at the relevant time a director of a firm to whom the above (9.1.1.- 9.1.3.) may apply.	✓	
10.	Consultation with relevant State departments in terms of section 24O(2) & 24O(3) of the NEMA.		
	10.1 Proof of Consultation with relevant State departments, including, <i>inter alia</i> , notices, adverts etc.	✓	
	10.2 Copies of comments and responses included in the application.	PENDING	
	10.2 Comments and Response report attached to the application.	PENDING	
11.	Public Participation Process undertaken in terms of Chapter 6 of the Environmental Impact Assessment Regulations, 2014 ("EIA Regulations, 2014") (GN No. R.326 of 7 April 2017) <b>(if conducted/undertaken)</b>	✓	



BETTER TOGETHER.

### Section 24G Application Form for the consequences of unlawful commencement of listed activity/ies in terms of the:

- National Environmental Management Act, 1998 (Act No. 107 of 1998), ("NEMA");
- National Environmental Management: Waste Act, 2008 (Act 59 of 2008) ("NEM: WA")

April 2018

Form Number S24GAF/04/2018

#### Kindly note that:

1. This application must be submitted where a person has commenced with a listed or specified activity without an environmental authorisation in contravention of section 24F(1) of NEMA (i.e. where the person commenced with an activity listed or specified in terms of section 24(2) (a) or (b) of NEMA - the activities contained in the EIA Listing Notices) or has commenced, undertaken or conducted a waste management activity without a waste management licence in terms of section 20 (b) of the NEM:WA.

2. This **Application Form** must be completed for all section 24G applications, by an independent Environmental Assessment Practitioner ("EAP").

3. This Application Form is current as of 01 April 2018. It is the responsibility of the Applicant/EAP to ascertain whether subsequent versions of the Application Form have been published or produced by the competent authority. Note that this Application Form replaces all the previous versions. This updated Application Form must be used for all new applications submitted from 01 April 2018.

#### 4. The contents of this Application Form includes the following:

##### PART 1 -

Section A: Background Information

Section B: Activity Information

Section C: Description of Receiving Environment

Section D: Need and Desirability

Section E: Alternatives

Section F: Impact Assessment, Management, Mitigation and Monitoring Measures

Section G: Assessment Methodologies and Criteria, Gaps in Knowledge, underlying Assumptions and Uncertainties

Section H: Recommendations of the EAP

Section I: Representations - Response to an Incident or Emergency Situation

Section J: Public Participation Process

##### PART 2 -

ANNEXURE A of Fine Regulations

Section A: Directives

Section B: Deferral of the Application

Section C: Quantum of the section 24G fine

Section D: Preliminary advertisement

##### PART 3 -

Appendices and Declarations

##### PART 4 -

ANNEXURE B: Waste Management Activity Supporting Information (if relevant)

5. An independent EAP must be appointed to complete the required sections (in terms of NEMA and its Regulations) of the Application Form on behalf of the applicant; the declaration of independence must be completed by the independent EAP and submitted with this Application Form. If a specialist report is required, the specialist will also be required to complete the declaration of independence.
6. Two hard copies (including the original) and one electronic copy (CD/DVD/Flash drive) of this application form must be submitted.
7. The required information must be typed within the spaces provided. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. The space provided extend as each space is filled with typing. **A legible font type and size must be used when completing the form.** A digital copy of the Application Form is available on the Department's website <https://www.westerncape.gov.za/eadp/>
8. The use of "not applicable" in the Application Form must be done with circumspection.
- 9. No faxed or e-mailed application forms will be accepted.**
10. Unless protected by law, all information contained in and attached to this application will become public information on receipt by the competent authority. Please note that, unless exemption has been granted in terms of the National Exemption Regulations published under GN R994 in GG 38303 of 8 December 2014, any Interested and Affected Party should be provided with the information contained in and attached to this Application Form as well as any subsequent information submitted.
11. This Application Form must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department.

#### PROCESS TO BE FOLLOWED:

- a) **Prior to submission of an Application Form**, the applicant is required to undertake a pre-application public participation process in terms of Regulation 8 of the Regulations relating to the procedure to be followed and criteria to be considered when determining an appropriate fine in terms of section 24G published in the Government Gazette on 20 July 2017, Gazette No 40994, No. R. 698 ("Section 24G Fine Regulations").
- b) Together with the submission of a section 24G Application Form, the form **must include Proof of compliance of with Regulation 8** of the Section 24G Fine Regulations, including, but not limited to, proof of the pre-application advertisement in a local newspaper and register of I&APs.
- c) The Department will acknowledge receipt of the application (within 14 days) and provide the Applicant / EAP with the relevant application reference number to be used in all future correspondence and the application public participation processes.
- d) Upon receipt of the application, the MEC/Competent Authority may direct the applicant in terms of section 24G(1)(i-viii) of the NEMA.
- e) In terms of the provisions of section 24G of NEMA, the applicant must pay an administrative fine up to a maximum of R5 million before the MEC/Competent Authority decides on the application.
- f) The applicant **must within 14 days** of receipt of the determination of the quantum of the fine, ensure that all registered interested and affected parties are notified of the determination of the quantum of the fine, including the reasons and provided with access to the determination.
- g) The administrative fine **must be paid within the time period stipulated** in the determination. Failure to pay the fine within the specified period, will result in the lapse of the application and any partial amounts paid in will not be refunded.
- h) **Proof of payment of the fine must be submitted to the Department.** Upon payment of the administrative fine, the MEC/Competent Authority may-
  - refuse to issue an environmental authorisation; or
  - issue an environmental authorisation to such person to continue, conduct or undertake the activity subject to such conditions as may be deemed necessary, which environmental authorisation shall only take effect from the date on which it has been issued; or
  - direct the applicant to provide further information or take further steps prior to making a decision provided for above;
  - together with the above decision the MEC/Competent Authority may direct a person to rehabilitate the environment within such time and subject to such conditions as may deem necessary or take any other steps necessary under the circumstances.

**PLEASE NOTE THE FOLLOWING:**

1. Failure to comply with a directive may result in the institution of appropriate legal action as is deemed necessary and as provided for in the legislation.
  2. The submission of an application or the granting of an environmental authorisation shall in no way derogate from—
    - (a) the environmental management inspector's or the South African Police Services' authority to investigate any transgression in terms of NEMA or any specific environmental management Act;
    - (b) the National Prosecuting Authority's legal authority to institute any criminal prosecution.
  3. If, at any stage after the submission of an application it comes to the attention of the Minister, Minister for mineral resources or MEC that the applicant is under criminal investigation for the contravention of or failure to comply with section 24F(1) or section 20(b) of the *National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)*, the Minister, Minister for mineral resources or MEC may defer a decision to issue an environmental authorisation until such time that the investigation is concluded and—
    - (a) the National Prosecuting Authority has decided not to institute prosecution in respect of such contravention or failure;
    - (b) the applicant concerned is acquitted or found not guilty after prosecution in respect of such contravention or failure has been instituted; or
    - (c) the applicant concerned has been convicted by a court of law of an offence in respect of such contravention or failure and the applicant has in respect of the conviction exhausted all the recognised legal proceedings pertaining to appeal or review.
  4. A person is guilty of an offence if that person:
    - Prior to submission of a section 24G application:
      - o fails, in terms of Regulation 8(1), to place a preliminary advertisement in a local newspaper in circulation in the area in which the activity was, or activities were, commenced and on the applicant's website, if any or
      - o fails, in terms of Regulation 8(2), to comply with the advertisement requirements set out in Annexure A, section D or
      - o fails, in terms of Regulation 8(3), to open and maintain a register of interested and affected parties)); or
      - o fails, in terms of Regulation 8(4), to attach to the application form the register of interested and affected parties, which must be included in the report, or form part of the information submitted in terms of section 24G(1) of NEMA.
    - Provides incorrect, false or misleading information in any form, including in any document submitted to a competent authority in terms of the Section 24G Fine Regulations or omits information that may have an influence on the outcome of a recommendation of the fine committee or determination of the competent authority.
  5. A person convicted of an offence in terms of these Regulations is liable to a fine not exceeding R5 million or to imprisonment for a period not exceeding 5 years, and in the case of a second or subsequent conviction to a fine not exceeding R10 million or to imprisonment for a period not exceeding 10 years, and in both instances to both such fine and such imprisonment.
-

**DEPARTMENTAL DETAILS**

Department of Environmental Affairs  
and Development Planning,  
**Directorate:** Environmental  
Governance  
**Attention:** Sub-directorate:  
Rectification  
Private Bag X9086  
Cape Town, 8000

Registry Office  
1<sup>st</sup> Floor Utilitas Building  
1 Dorp Street, Cape Town

Queries should be directed to the  
Sub-directorate: Rectification at:  
Tel: (021) 483-5827 Fax: (021) 483-  
4033

View the Department's website on  
<http://www.westerncape.gov.za/eadp> for  
the latest version of the documents

**DEPARTMENTAL REFERENCE NUMBER(S) (for official use)**

File Reference number (S24G)	14/2/4/1/D2/28/0024/19
Administrative Fine Reference	

**DEPARTMENTAL REFERENCE NUMBER(S) (to be completed by the EAP)**

File Reference number (Enforcement), if applicable	
File reference number (EIA), if applicable:	
File reference number (Waste), if applicable:	
File reference number (Other (specify)):	

**PART 1****PROJECT TITLE**

Bosse Dam, Lower Lower Schoonberg Farm

**RELEVANT REGION IN WHICH THE ACTIVITY COMMENCED**

Cross out the appropriate box "☒" in which region the unlawful activity/ies has commenced.

REGION 1 City of Cape Town and West Coast District	REGION 2 Cape Winelands District and Overberg District	REGION 3 Central Karoo District and Eden District
		✓

**SECTION A: BACKGROUND INFORMATION****1. APPLICANT PROFILE INDEX**

Cross out the appropriate box "☒".

1.1	The applicant is a Natural Person (individual)					
1.2	The applicant is a Firm (i.e. any body incorporated by, or established in terms of, any law as well as any partnership, trust, parastatal or organ of state)					✓
1.2.1	If a firm, please tick the relevant box below:					
	Body Corporate	Partnership	Trust	Parastatal	Organ of State	
✓	Directors of a Company	Members of a Board	Other, please specify			

<b>Applicant's details</b> (duplicate this section where there is more than one applicant)			
Applicant Name:		Langkloof Plase (Pty) Ltd	
RSA Identity Number/ Passport Number of Applicant, if natural person:			
Name of Firm (if applicable):			
Firm Registration Number:		2018/054585/07	
Contact Person at the Firm:		Mr Heinrich Jonker & Mr Johannes Petrus Schoeman	
List of all (as applicable at the relevant time):		Please insert the names and RSA ID numbers of the relevant persons below – <b>(In the list below, delete the firms that are not applicable to this application)</b>	
<ul style="list-style-type: none"> <li>• Directors of a company; or</li> <li>• <del>Members of the board; or</del></li> <li>• <del>Executive committee or other managing body of a corporate body or parastatal; or</del></li> <li>• <del>Members of close corporation; or</del></li> <li>• <del>Partners of a partnership; or</del></li> <li>• Trustees of a trust</li> </ul>		Name: Mr Heinrich Jonker RSA ID No. 6907095225082  Name: Mr Johannes Petrus Schoeman RSA ID No. 7211035116082	
Postal address:		PO Box 689	
		Postal code:	6620
Telephone:		Cell:	082 652 7416
E-mail:		Fax:	044-203 3228
<b>Project Consultant</b>			
Contact person:			
Postal address:			
		Postal code:	
Telephone:		Cell:	
E-mail:		Fax:	
<b>Name of the Environmental Assessment Practitioner ("EAP") responsible for the application:</b>		Cape Environmental Assessment Practitioners (Cape EAPrac)	

Company name (if any):	Ms Melissa Mackay / Ms Louise-Mari van Zyl (Director)		
Postal address:	P.O. Box 2070		
	George	Postal code:	6530
Telephone:	(044) 874 0365	Cell:	071 603 4132
E-mail:	mel@cape-eaprac.co.za	Fax:	(044) 874 0432
EAP Qualifications	BTech & ND Nature Conservation / MA Geography and Environmental Science (Director)		
EAP Registrations/Associations	Director is a Registered Environmental Assessment Practitioner with the Environmental Assessment Practitioners of South Africa, EAPSA, Registration Number <b>2019/1444</b> .		
<b>Name of the Landowner:</b>	Langkloof Plase (Pty) Ltd		
Name of the contact person for the land owner (if other):	Mr Heinrich Jonker & Mr Johannes Petrus Schoeman		
Postal address:	PO Box 689		
	Oudtshoorn	Postal code:	6620
Telephone:	044-203 3220	Cell:	082 652 7416
E-mail:	hein.jonker@opsa.co.za / jps@scwireless.co.za	Fax:	044-203 3228
Person in control of land:	As Above		
Contact person:			
Postal address:			
		Postal code:	
Telephone:	(   )	Cell:	
E-mail:		Fax:	(   )

**Please note:**

In instances where there is more than one landowner, please attach a list of landowners with their contact details to the back of this form.

A certified copy of the applicant's (if natural person), alternatively a director's (as defined), Identity Document must be attached to the application.

A certified copy of the title deed of the property/s on which the unlawful listed activity/ies has commenced must be attached to the application.

Municipality in whose area of jurisdiction the activity falls:	George Municipality
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Contact person, if known:	Ms Delia Powers		
Postal address:	PO Box 19		
	George	Postal code:	6530
Telephone	044 801 9117	Cell:	
E-mail:	dpower@george.gov.za	Fax:	(    )

**Please note:**

In instances where there is more than one Municipality involved, please attach a list of Municipalities with their respective contact details to the form.

Property location(s):	Approximately 24km east from the N9 / N12 intersection (the turn-off to Oudtshoorn coming from George), direction Uniondale. The dam is situated approximately 2.8km from the farm turn-off from the N9.
Farm/Erf name(s) & number(s) including portion(s)	Remainder Farm 108 Lower Schoonberg Portion 1 of the Farm 108 Lower Schoonberg
Property size(s) (m <sup>2</sup> )	RE/108: 633.06ha 1/108: ±671.67ha
Development footprint size(s) (m <sup>2</sup> )	ALS Clearing: ±24ha Bosse Dam: ±3ha
SG21 Digit code(s)	C027000000000010800000 C027000000000010800001

**Property boundary:****Remainder Farm 108:**

Point	Latitude (S)			Longitude (E)		
1	33°	49'	06.56" S	22°	37'	36.60" E
2	33°	49'	09.94" S	22°	37'	38.93" E
3	33°	49'	08.64" S	22°	37'	42.11" E
4	33°	49'	05.53" S	22°	37'	44.55" E

**Portion 1 of Farm 108:**

Point	Latitude (S)			Longitude (E)		
1	33°	49'	06.56" S	22°	37'	36.60" E
2	33°	49'	09.94" S	22°	37'	38.93" E
3	33°	49'	08.64" S	22°	37'	42.11" E
4	33°	49'	05.53" S	22°	37'	44.55" E

**The co-ordinates for the site boundary are:****Bosse Dam:**

Point	Latitude (S)			Longitude (E)		
1	33°	49'	06.56" S	22°	37'	36.60" E

2	33°	49'	09.94" S	22°	37'	38.93" E
3	33°	49'	08.64" S	22°	37'	42.11" E
4	33°	49'	05.53" S	22°	37'	44.55" E

**AIS clearing:**

Point	Latitude (S)			Longitude (E)		
1	33°	49'	06.39" S	22°	37'	36.92" E
2	33°	48'	38.28" S	22°	37'	36.62" E
3	33°	48'	33.42" S	22°	37'	17.41" E
4	33°	48'	29.67" S	22°	37'	20.27" E
5	33°	48'	33.41" S	22°	37'	36.14" E
6	33°	48'	36.21" S	22°	37'	41.91" E
7	33°	48'	34.56" S	22°	37'	49.20" E
8	33°	48'	38.85" S	22°	37'	50.08" E
9	33°	48'	41.05" S	22°	37'	41.22" E
10	33°	48'	51.04" S	22°	37'	40.53" E
11	33°	48'	51.09" S	22°	37'	38.69" E
12	33°	49'	05.40" S	22°	37'	44.25" E

**Please note:**

Where numerous properties/sites are involved (e.g. linear activities), attach a list of property descriptions and street addresses to the consultation form.

Street address:	N9 (Lower Schoonberg Farm)		
Magisterial District or Town:	George Municipality		
Closest City/Town:	Herold	Distance	18(km)
Zoning of Property:	Agriculture I		

**Please note:**

In instances where there is more than one zoning applicable, please attach a list or map of the properties indicating their respective zoning to the Application Form.

Was the property rezoned after commencement of activities?		YES	NO
If yes, what was the previous zoning?			
Is a rezoning application required?		YES	NO
Is a consent use application required?		YES	NO
Locality map:	<p>A locality map must be attached to the Application Form as an appendix. The scale of the locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following:</p> <ul style="list-style-type: none"> <li>• an accurate indication of the project site position as well as the positions of the alternative sites, if any;</li> <li>• road names or numbers of all the major roads as well as the roads that provide access to the site(s)</li> <li>• a north arrow;</li> <li>• a legend;</li> <li>• the prevailing wind direction; and</li> <li>• GPS co-ordinates (Indicate the position of the proposed activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS-84 spheroid in a national or local projection)</li> </ul>		
Landowner(s) Consent:	If the applicant is not the owner or person in control of the land on which the activity has been undertaken, he/she must obtain written consent from all landowners or		

	<p>persons in control of the land (of the site and all alternative sites). This must be attached to this document as Appendix G. Such consent must indicate whether or not the owner or person in control of the land would support approval of the application and that the land need not be rehabilitated.</p> <p><b>Note:</b> The consent of the landowner or person in control of the land is not required for: a) linear activities; b) an activity directly related to prospecting or exploration of a mineral and petroleum resource or extraction and primary processing of a mineral resource; or c) strategic integrated projects ("SIPs") as contemplated in the <i>Infrastructure Development Act, 2014 (Act No. 23 of 2014)</i>.</p>
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## 2. APPLICATION HISTORY

(Cross out the appropriate box "X" and provide a description where required).

Has any national, provincial or local authority considered any development applications on the property previously?	YES	NO
If so, please give a brief description of the type and/or nature of the application/s as well as a reference number, if applicable: (In instances where there was more than one application, please attach a list of these applications)		
Which authority considered the application:		
Has <u>any</u> one of the previous application/s on the property been approved <del>or</del> refused? If so provide a list of the successful and unsuccessful application/s and the reasons for decision(s).		
YES		
NO		
Provide detail on the period of validity of decision and expiry dates of the above applications/ permits etc.		

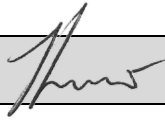
## SECTION B: ACTIVITY INFORMATION

### 1. ACTIVITIES APPLIED FOR

I hereby apply in terms of section 24G of the National Environmental Management Act (Act 107 of 1998) for the regularisation of the unlawful commencement or continuation of the listed or waste management activities as specified in Section B:1 below.

Applicant (Full names): Mr Heinrich Jonker

Signature:



Place: OUDTSHOORN

Date: 11/05/2021

EAP(Full names): Ms Melissa Mackay

Signature:

Place: George

Date: 17/05/2021

All listed activities associated with the development must be indicated below.

### 1.1 Applicable EIA listed activities

<b>ECA EIA Contraventions: between 08 September 1997 and end of 09 May 2002</b>			
<b>Activities commenced with on or after 08 September 1997 and before end 09 May 2002: EIA regulations promulgated in terms of the ECA, Act 73 of 1989</b>			
Government Notice No. ("GN") R1182 Activity No(s):	Describe the relevant listed activity/ies in writing as per GN No. 1182 of 1997	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
<b>ECA EIA Contraventions: between 10 May 2002 and end of 02 July 2006</b>			
<b>Activities unlawfully commenced with on or after 10 May 2002 and before end 02 July 2006: EIA regulations promulgated in terms of the ECA, Act 73 of 1989,</b>			
<b>NEMA EIA Contraventions: between 03 July 2006 and end of 01 August 2010</b>			
<b>Activities unlawfully commenced with on or after 03 July 2006 and before end 01 August 2010: EIA regulations promulgated in terms of the NEMA</b>			
GN R386 Activity No(s): <b>(Listing Notice 1 of 2006)</b>	Describe the relevant listed activity/ies in writing as per GN No. R. 386 of 2006 ("NEMA 2006 Basic Assessment listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
Government Notice No. R387 Activity No(s): <b>(Listing Notice 2 of 2006)</b>	Describe the relevant listed activity/ies in writing as per GN No. R. 387 of 2006 ("NEMA 2006 Scoping/EIA listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
<b>NEMA EIA Contraventions: between 02 August 2010 and end of 07 December 2014</b>			
<b>Activities unlawfully commenced with on or after 02 August 2010 and before end 07 December 2014: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998,</b>			
GN No. R. 544 Activity No(s): <b>(Listing Notice 1 of 2010)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R. 544 of 2010	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity

	("NEMA 2010 Basic Assessment listed activity/ies")		
GN No. R. 545 Activity No(s): <b>(Listing Notice 2 of 2010)</b>	Describe the relevant listed activity/ies in writing as per GN No. R. 545 of 2010. ("NEMA 2010 Scoping/EIA listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
GN No. R. 546 Activity No(s): <b>(Listing Notice 3 of 2010)</b>	Describe the relevant listed Activity(ies) in writing as per GN No. R. 546 of 2010	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
<b>NEMA EIA Contraventions: on or after 08 December 2014</b>			
<b>Activities unlawfully commenced with on or after 08 December 2014: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998,</b>			
GN No. R. 327 Activity No(s): <b>(Listing Notice 1 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R. 327 of 2014 ("NEMA 2014 Basic Assessment listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
12(i)(a)	<p>The development of –</p> <p>(i) <b>Dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100m<sup>2</sup>; or</b></p> <p>(ii) Infrastructure or structures with a physical footprint of 100m<sup>2</sup> or more;</p> <p>Where such development occurs –</p> <p><b>(a) Within a watercourse;</b></p> <p>(b) In front of a development setback line; or</p> <p>(c) If no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse.</p>	<p>The existing instream storage dam has a surface area of approximately 2.5ha.</p> <p>Maintenance work was undertaken within the dam basin, as well as upstream and downstream to remove silt, fix leaks in the dam wall and relocate the spillway.</p> <p>In addition, alien invasive vegetation was removed from the watercourse downstream of the dam mechanically. This was in response to devastating wildfires which burnt all the vegetation in Sept / Oct 2018.</p>	The maintenance and clearing work took place at the beginning 2019.
19	The infilling or depositing of any material of more than 10m <sup>3</sup> into, or the dredging, excavation, removal or moving of soil,	Maintenance work was undertaken within the dam basin, as well as upstream and downstream to remove silt, fix	Beginning 2019

	sand, shells, shell grit, pebbles or rock of <b>more than 10m³ from a watercourse.</b>	leaks in the dam wall and relocate the spillway.  In addition, alien invasive vegetation was removed from the watercourse downstream of the dam mechanically. This was in response to devastating wildfires which burnt all the vegetation in Sept / Oct 2018.	
GN No. R. 325 Activity No(s): <b>(Listing Notice 2 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R.325 of 2014 ("NEMA 2014 Scoping/EIA listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
GN No. R. 324 Activity No(s): <b>(Listing Notice 3 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R.324 of 2014	Describe the portion of the development as per the project description that relates to the applicable listed activity.	State the date of commencement of each activity
12	The clearance of an area of 300m² or more of indigenous vegetation within and area containing endangered vegetation.	Maintenance work resulted in the removal of vegetation within the dam footprint as well as upstream and downstream. The vegetation that was cleared was mostly wattle and bluegum. The clearing was in response to devastating wildfires which burnt all the vegetation in Sept / Oct 2018.  The area is mapped as Langkloof Shale Renosterveld which was gazetted as Endangered in 2011 and currently rated as Critically Endangered (2018). It must be noted however that it is more likely that the riparian habitat would have occurred along the watercourse prior to be outcompeted by the bluegums.	Beginning 2019

Please ensure that you have provided the similarly listed activities if the listed activities were commenced before the period the EIA Regulations came into effect, i.e. before 08 December 2014.

## 1.2 Applicable Waste Management Activities

List the relevant waste management activity/ies applied for:

<b>Waste Management Activity Contraventions: On or after 03 July 2007 up to end of 28 November 2013</b>			
<b>Activities unlawfully commenced with in terms of GNR 718 of 03 July 2009 under the National Environmental Management Waste Act, Act 59 of 2008</b>			
GN No. 718 – Category A Activity No(s):	Describe the relevant <u>Category A</u> waste management activity/ies in writing.	Describe the portion of the development as per the project description that relates to the applicable waste activity.	State the date of commencement of each activity
GN No. 718 – Category B Activity No(s):	Describe the relevant <u>Category B</u> waste management activity/ies in writing.	Describe the portion of the development as per the project description that relates to the applicable waste activity.	State the date of commencement of each activity

<b>Waste Management Activity Contraventions: On or after 29 November 2013</b>			
<b>Activities unlawfully commenced with in terms of GNR 921 of 29 November 2013 under the National Environmental Management Waste Act, Act 59 of 2008,</b>			
GN No. 921 – Category A Activity No(s):	Describe the relevant <u>Category A</u> waste management activity/ies in writing.	Describe the portion of the development as per the project description that relates to the applicable waste activity.	State the date of commencement of each activity
GN No. 921 – Category B Activity No(s):	Describe the relevant <u>Category B</u> waste management activity/ies in writing.	Describe the portion of the development as per the project description that relates to the applicable waste activity.	State the date of commencement of each activity

Please note:

The National Department of Environmental Affairs is the competent authority for activities regarded as hazardous waste. Such activities must be indicated as hazardous waste in the abovementioned lists.

Only those activities listed above shall be considered for authorisation. The onus is on the applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, an application for amendment or a new application for Environmental Authorisation will have to be submitted.

### 1.3 Activities listed similarly in terms of the EIA Regulations

Kindly indicate the listed activities in terms of the EIA Regulations that is listed similar to the unlawfully commenced activities. The descriptions provided below must clearly state why the activity/development is still similarly listed in terms of the EIA Regulations, 2014.

<b>The similarly listed activities in terms of the EIA Regulations promulgated in terms of the NEMA, Act 107 of 1998,</b>		
GN No. R. 327 Activity No(s): <b>(Listing Notice 1 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R.327 of 2014 ("NEMA 2014 Basic Assessment listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.
GN No. R. 325 Activity No(s): <b>(Listing Notice 2 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R.325 of 2014 ("NEMA 2014 Scoping/EIA listed activity/ies")	Describe the portion of the development as per the project description that relates to the applicable listed activity.

GN No. R. 324 Activity No(s): <b>(Listing Notice 3 of 2014)</b>	Describe the relevant listed activity(ies) in writing as per GN No. R.324 of 2014	Describe the portion of the development as per the project description that relates to the applicable listed activity.

Please note:

Where approvals for the activity have been obtained in terms of any other legislation (e.g. National Water Act, Act 36 of 1998), certified copies of such approvals must be attached to this form.

## 2. ACTIVITY DESCRIPTION

(Cross out the appropriate box "☒" and provide a description where required).

Is/are the activity(ies) complete or is/are the activity(ies) still to be completed?	COMPLETED	INCOMPLETE
(a) Is/was the project a new development or an upgrade of an existing development? Also indicate the date (e.g. 2 August 2010) when the activity commenced <u>as well as</u> the original date of commencement if the application is an upgrade.	NEW	UPGRADE
<p>The Applicant commenced maintenance work on an existing instream dam early in 2019.</p> <p>Note that the Applicant stopped all work on the activity upon receipt of the Pre-Compliance Notice in July 2019. The intention (prior to receiving the Pre-Compliance Notice) was to clear the dam of all the silt and to remove the invasive alien vegetation (mostly burned blue gum trees) from within the high-water level mark and upstream to improve water flow into the dam.</p> <p>The blue gum was also cleared downstream of the dam along the watercourse. The clearing was also in response to devastating wildfires which burnt all the vegetation in Sept / Oct 2018.</p>		

(b) Clearly describe the activity and associated infrastructure commenced with, indicating what has been completed and what still has to be completed.
<p>Maintenance work entailed the following:</p> <ul style="list-style-type: none"> <li>Relocating the existing spillway from the eastern corner of the dam wall to the western side of the dam wall (the eastern side formed an erosion gulley);</li> <li>Partial restoration of the above-mentioned gulley;</li> <li>Breaching of the dam wall to install a new throughflow pipe to address leakage;</li> <li>Removal of silt from within the dam basin (fires from 2017 resulted in exposed soils upstream of the dam and subsequent rainfall caused silt to collect in the dam thereby reducing the storage volume of the dam);</li> <li>Resealing of the dam wall along the outer wall to combat leakage;</li> <li>Removal of mostly burned blue gums above the below the dam footprint to accommodate machinery to get into and out of the basin of the dam and to deposit material along the outer bank of the dam wall.</li> </ul> <p><u>Work that must still be done include the following:</u></p> <ul style="list-style-type: none"> <li>Rehabilitation of the old spillway erosion gulley;</li> <li>Rehabilitation of the downstream stream bed where machinery was used to remove mostly burned blue gum trees;</li> <li>Rehabilitation of the upstream stream bed where machinery was used to remove mostly burned blue gum trees to access the dam basin for purposes of removing silt;</li> </ul>

- Removal of remaining silt within the dam basin;
- Implement measures to stabilise the dam wall.

(c) Please provide details of all components of the activity and attach diagrams (e.g. architectural drawings or perspectives, engineering drawings, process flow charts etc.).

Buildings

YES

NO

Provide brief description:

Infrastructure (e.g. roads, power and water supply/ storage)

YES

NO

Provide brief description:

- Relocating the existing spillway from the eastern corner of the dam wall to the western side of the dam wall (the eastern side formed an erosion gulley);
- Partial restoration of the above-mentioned gulley;
- Breaching of the dam wall to install a new throughflow pipe to address leakage;
- Removal of silt from within the dam basin (floods from 2017 resulted in exposed soils upstream of the dam and subsequent rainfall caused silt to collect in the dam thereby reducing the storage volume of the dam);
- Resealing of the dam wall along the outer wall to combat leakage;
- Removal of mostly burned blue gums above and below the dam footprint to accommodate machinery to get into and out of the basin of the dam and to deposit material along the outer bank of the dam wall.
- Previous dimensions of the dam were unknown, apart from the volume which appears to be 59 450 m<sup>3</sup> according to a historical Validation and Verification conducted at the site. The new storage volume is expected to be 1 63 500 m<sup>3</sup>.

Processing activities (e.g. manufacturing, storage, distribution)

YES

NO

Provide brief description:

Storage facilities for raw materials and products (e.g. volume and substances to be stored)

Provide brief description

YES

NO

Storage and treatment facilities for solid waste and effluent generated by the project

Provide brief description

YES

NO

(d) Other activities (e.g. water abstraction activities, crop planting activities)

YES

NO


Provide brief description

### 3. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical spatial size of the activity as well as associated infrastructure (footprints):	±3ha
Indicate the area that has been transformed / cleared to allow for the activity as well as associated infrastructure	±10ha
Total area:	±10ha

### 4. SITE ACCESS

Was there an existing access road?	YES	NO
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If NO, what was the distance over which the new access road was built? Please indicate the length and width of the new road.	(Length) m (width) m
Describe the type of access road constructed:	
<p>The properties have existing road access off the N9 throughout the property including the dam and cleared areas. The existing dam wall is also an existing vehicle crossing (see below figure indicating the existing track crossing the dam wall). Figure 1 below shows the access routes over the dam and adjacent to the cleared area's western edge prior to the activities taken place.</p> 	
<p>Photo 1: Road access over the dam (pre commencement)</p> <p>There is no change to the access post commencement.</p>	

**Please Note:**

Indicate the position of the access road on the site plan (See Section 5 below)

## 5. SITE PHOTOGRAPHS

Colour photographs of the site and its surroundings (taken of the site and from the site), both before (if available) and after the activity commenced, with a description of each photograph, must be attached to this application. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide past and recent aerial photographs. It should be supplemented with additional photographs of relevant features on the site. Date and source of photographs must be included. Photographs must be attached as an **appendix** to this form.

**Please note:**

Should the relevant photographs not be included in the application, the application may be deemed insufficient and further information in this regard will be requested.

## 6. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

Please list all legislation, policies and/or guidelines that were or are relevant to this activity.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/comment	DATE (if already obtained):
National Environmental Management Act (NEMA, Act 107 of 1998O)	DEA&DP	Environmental Authorisation	Pending
National Environmental Management Laws Amendment Act (Act 25 of 2014)	DEA&DP	Public participation as part of the Environmental Authorisation	Pending
National Environmental Management: Biodiversity Act (Act 10 of 2004)	DEA&DP	Management of alien invasive vegetation	Ongoing
National Heritage Resources Act (Act 25 of 1999)	Heritage Western Cape	None	None
National Water Act (Act 36 of 1998)	Department of Water & Sanitation	Water Use License (change of water allocation & storage of water)	Pending
National Forest Act (Act 84 of 1998)	Department of Forestry	None	None
Conservation of Agricultural Resources Act (CARA,	Department of Agriculture	Management of alien invasive vegetation	Ongoing

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
National Environmental Management Act (Act 107 of 1998 as amended)	DEA&DP  NEMA requires a Basic Assessment process be undertaken which includes that a Report be drafted and submitted in order for the Authorisation to be issued for the clearance of vegetation. This is a 24G process for an activity that commenced unlawfully.
National Environmental Management Laws Amendment Act (Act 25 of 2014)	DEA&DP

	The public participation requirements must form part of the Basic Assessment process.
Conservation of Agricultural Resources Act (CARA,	WCDOA / DALRRD  The protection of agricultural resources from alien invasive vegetation is an ongoing requirement of CARA.
Guideline for the review of specialist input into the EIA process (June 2005)	DEA&DP  A freshwater Impact Assessment has been undertaken for the proposal.
Guideline for involving biodiversity specialists in the EIA process (June 2005)	DEA&DP  A freshwater Impact Assessment has been undertaken for the proposal.
Guideline for environmental management plans (June 2005)	DEA&DP  This guideline was consulted in the drafting of the EMPr.
Guideline on Alternatives (March 2013)	DEA&DP  The consideration of alternatives is mandatory, however given that this application is for the rectification of an unlawful activity, the property is zoned for agriculture, the dam is an existing dam and is registered for water storage and the removal of alien invasive is a legal obligation, the only alternative to be considered with be the No Go Alternative.
Guideline on Need & Desirability (March 2013)	DEA&DP  This guideline was consulted along with the relevant IDP and SDP documentation to determine the need for the development. In addition the dam is an existing dam that is registered for water storage and the clearance of alien invasive vegetation is a legal obligation.
Guideline on Public Participation (March 2013)	DEA&DP  The consultation process was undertaken in terms of these guidelines and the legislated requirements for PPP.
Information Document for the Development of a Maintenance Management Plan for a Watercourse (July 2017)	DEA&DP  Once the watercourse has been cleared of wattle it will be rehabilitated and should

	start improving to a more nature state than pre clearing. The freshwater specialist has made recommendations for rehabilitation of the watercourse.
Standards and Guidelines for the Improved Efficiency of Irrigation Water Use from Dam Wall Release to Root Zone Application; Volume 2 of 3: Guidelines.	DALRRD
2015/16 – 2019/20 Strategic Plan for Agriculture	DALRRD
The Green Choice Living Farms Reference 2009/2010	WWF

## 7. APPLICATIONS IN TERMS OF NEMA AND SPECIFIC ENVIRONMENTAL MANAGEMENT ACTS ("SEMAS")

If not specifically applied for in terms of this application, does the development require an application for a waste management license in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)?	YES	NO
If yes, has an application been submitted to the licensing authority?	YES	NO
Does the proposed project require an application for a water use license in terms of the National Water Act, 1998 (Act No. 36 of 1998)?	YES	NO
If yes, has an application been submitted to the licensing authority?	YES	NO
If no, please provide evidence of existing water use rights (if applicable) with this application form.		
Does the proposed project require an application for an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)?	YES	NO
If yes, has an application been submitted to the licensing authority?	YES	NO
Does the proposed project require an application in terms of the National Environmental Management: Integrated Coastal Management Act ("NEM: ICMA")?	YES	NO
If yes, has an application been submitted to the relevant competent authority?	YES	NO
If yes, provide more details of the application submitted/to be submitted in terms of the NEM: ICMA		

## 8. APPLICATIONS IN TERMS OF OTHER LEGISLATION

Is any permission, licence or other approval required in terms of any other legislation? (Please tick)	YES	NO
--	-----	----

If yes, please complete the table below:

Type of approval required (List the applicable legislation & approval required):	Name of the authority responsible for administering the applicable legislation	Application submitted (Yes / No)	Status of application (e.g. pending/ granted/ refused)

## SECTION C: DESCRIPTION OF RECEIVING ENVIRONMENT

### Site/Area Description

For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete copies of this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area which is covered by each copy No. on the site plan.

Section C Copy No. (e.g. 1, 2, or 3):

### 1. THE GEOLOGICAL FORMATIONS UNDERLYING THE SITE

(Tick the appropriate box)

GRANITE		QUARTZITE	
SHALE	✓	DOLOMITE	
SANDSTONE	✓	DOLERITE	
OTHER (specify)			

According to CapeFarmMapper, the soil types and geology of the site are as follows:

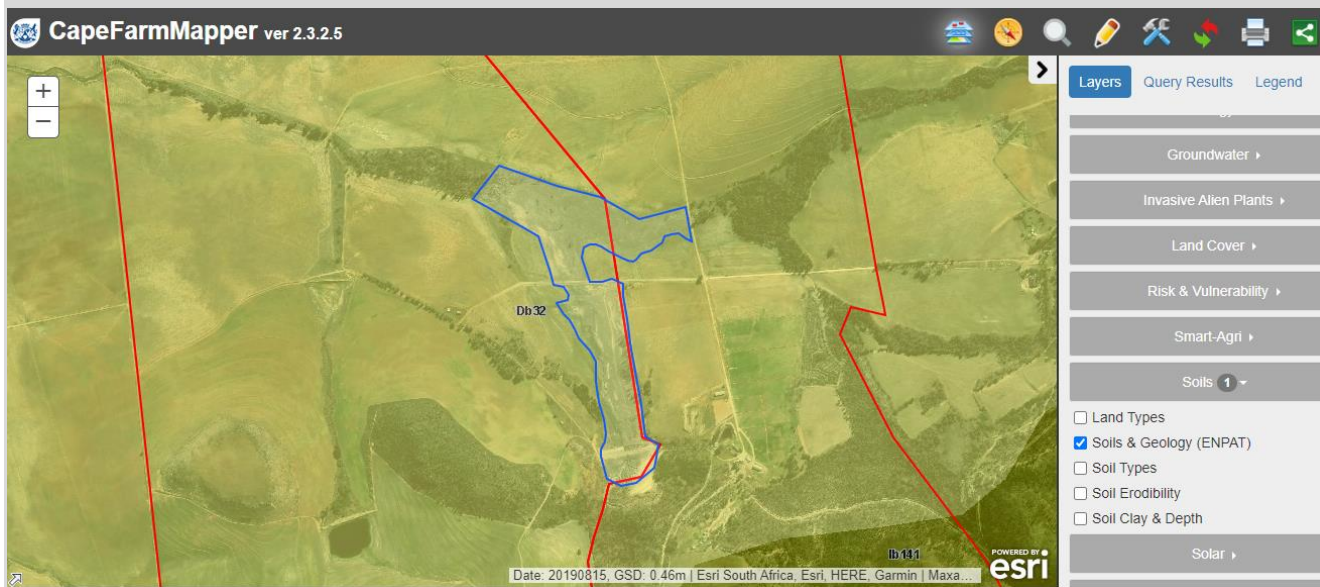


Figure 1: Soil Types (CapeFarmMapper, 2020)

### Soils & Geology (ENPAT)

Land Type: Db32

Soil: Prisma-cutanic and/or pedocutanic diagnostic horizons dominant, B horizons mainly not red

**Geology:** Mainly shale and siltstone of the Bokkeveld Group, as well as quartzitic and feldspathic sandstone of the uppermost Table Mountain Group, both of the Cape Supergroup.

### Soil Types

**Symbol:** CA

**Class:** Soils with a strong texture contrast

**Description:** Soils with a marked clay accumulation, strongly structured and a non-reddish colour. In addition one or more of vertic, melanic and plinthic soils may be present

**Depth:** < 450 mm

**Clay:** < 15%

### Soil Erodibility

**Erodibility:** High

**Erodibility Factor:** 0.66

## 2. GRADIENT OF THE SITE

Indicate the general gradient of the site(s) (cross out the appropriate box).

Flat	Flatter than 1:10	1:10 – 1:5	Steeper than 1:5
------	-------------------	------------	------------------

According to CapeFarmMapper, the location of the cleared site and dam have a slope of between  $\pm 0.67$  and  $6.83$  degrees or  $\pm 1.70 - 11.98\%$  gradient. The calculation below shows the general gradient ratio as being 1:85.512– 1: 8.3491. (<http://www.1728.org/gradient.htm>, accessed 2 July 2020).

INPUT Angle In Degrees		0.67
*****		
<b>CALCULATE</b>		
Using Rise / Run	1 in 85.512 Ratio	1.1694 % Grade
Using Rise / Hypotenuse	1 in 85.518 Ratio	1.1693 % Grade
*****	*****	*****

INPUT Angle In Degrees		6.83
*****		
<b>CALCULATE</b>		
Using Rise / Run	1 in 8.3491 Ratio	11.977 % Grade
Using Rise / Hypotenuse	1 in 8.4087 Ratio	11.892 % Grade
*****	*****	*****

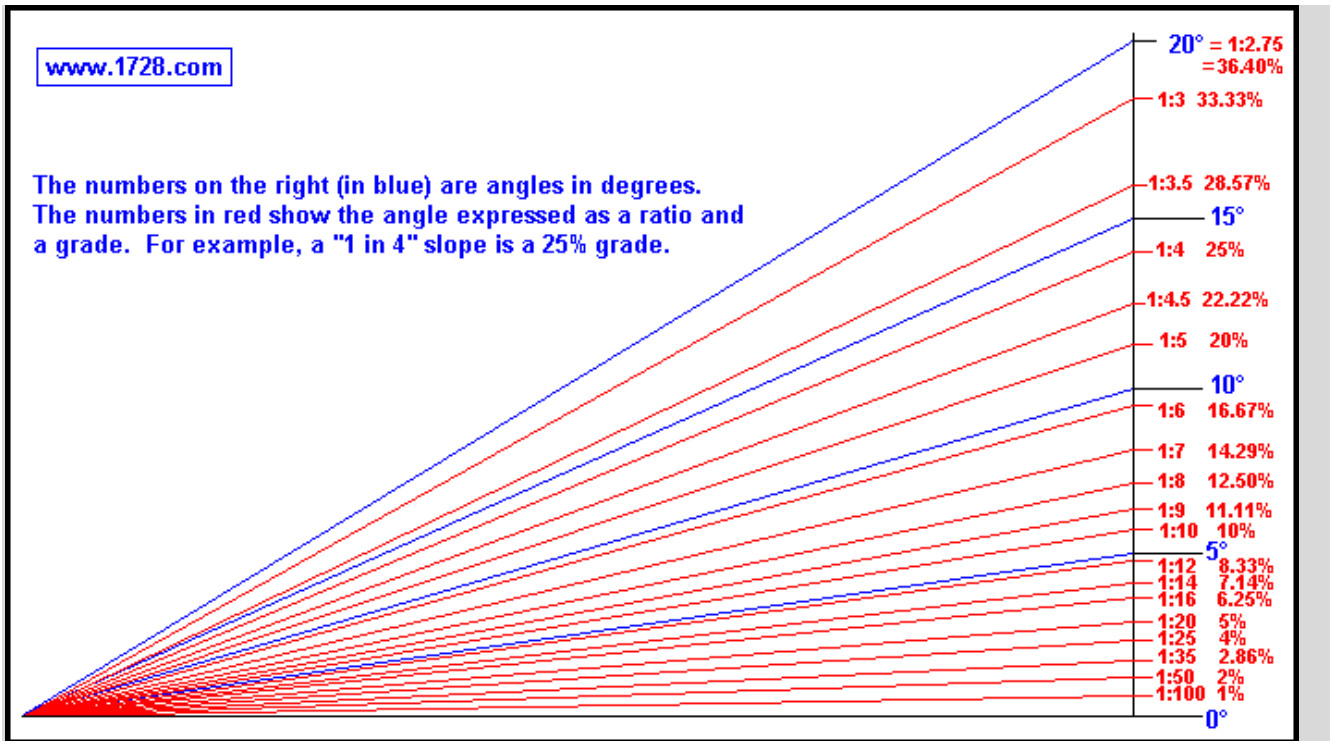


Figure 2: Gradient explanation <http://www.1728.org/gradient.htm>

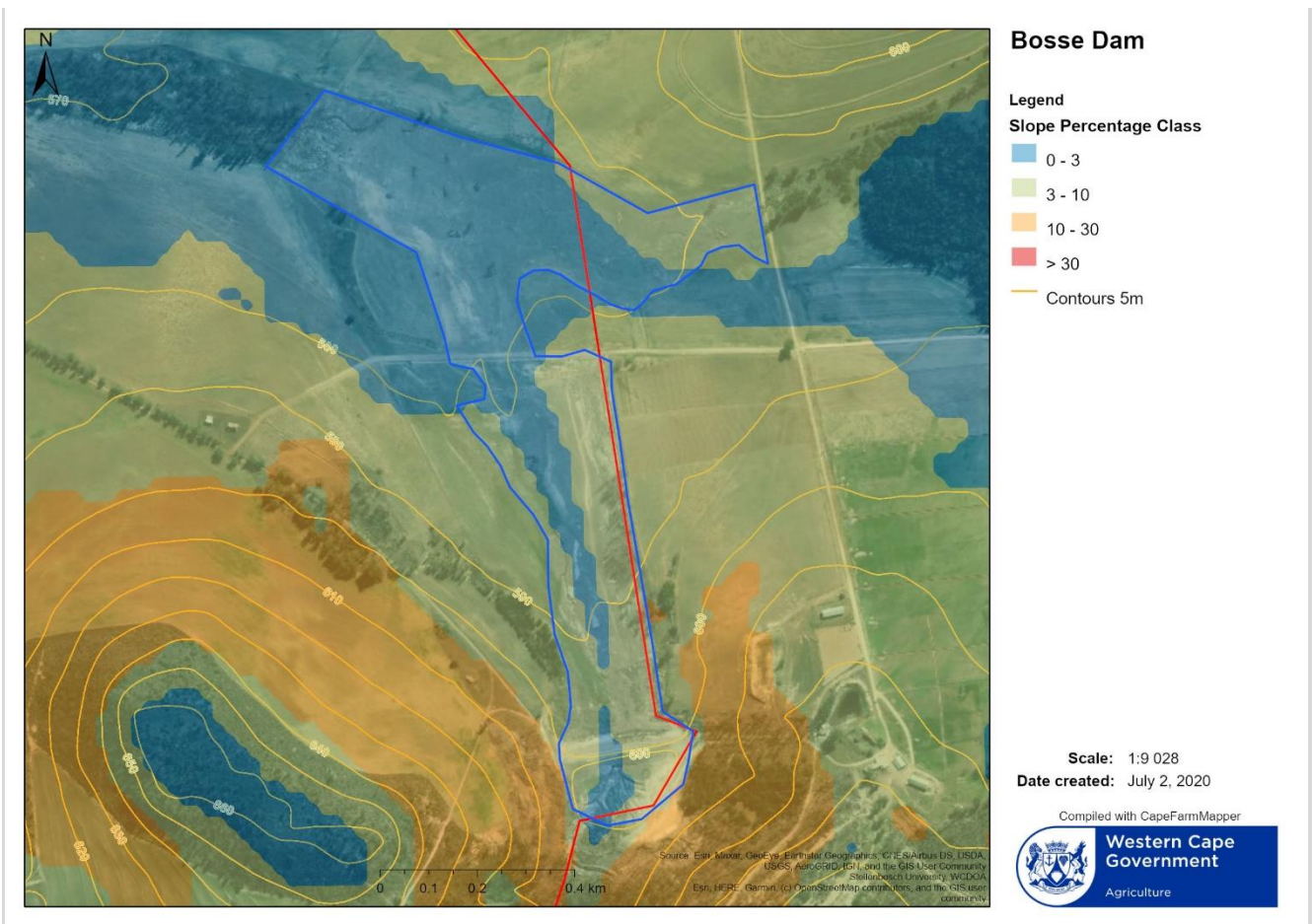


Figure 3: 5m Contours & Slope Classification (CapeFarmMapper, 2020)

### 3. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site (cross out ("X") the appropriate boxes).

Ridgeline	Plateau	Side-slope of hill/mountain	Closed valley	<b>Open valley</b>	Plain	Undulating plain/low hills	Dune	Sea-front	Other
If other, please describe									

The property is located on the lower slopes of the Outeniqua foothills in the Langkloof valley.

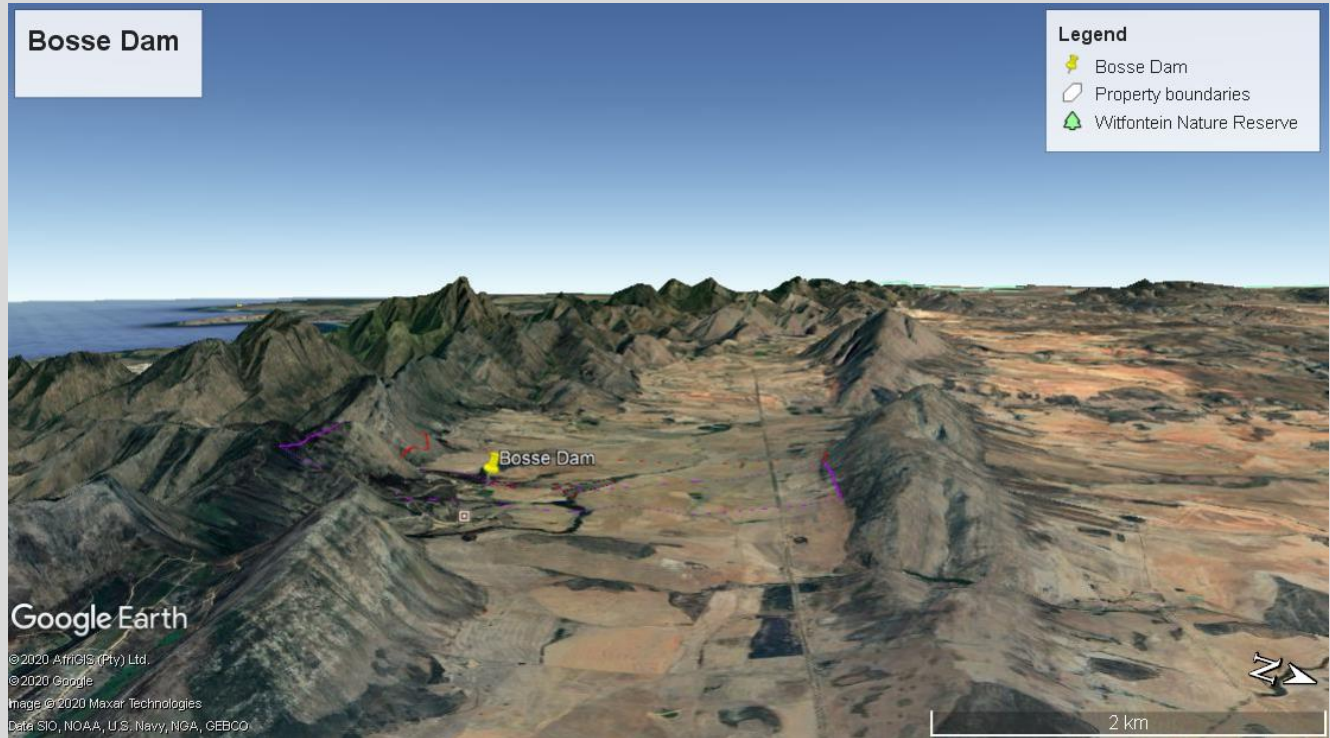


Figure 4: Location in landscape 1 (Google Earth Pro, 2020)

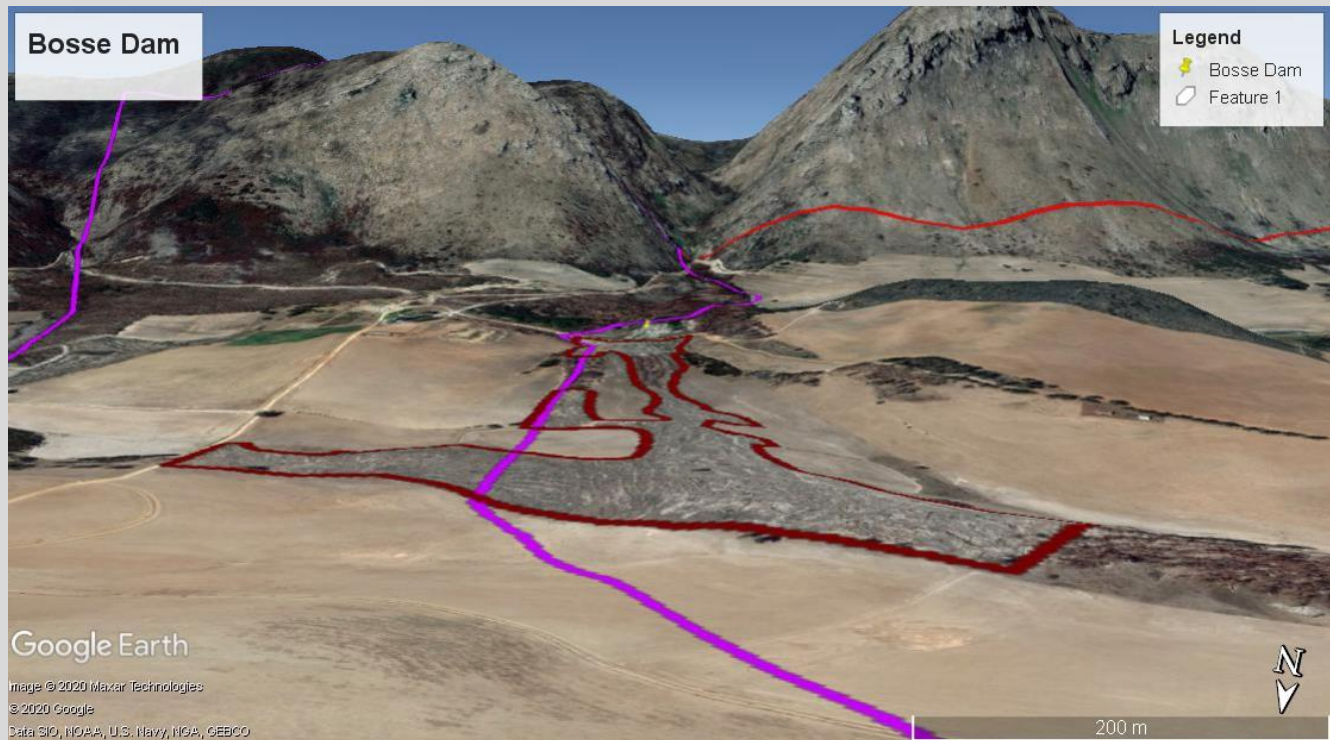


Figure 5: Location in landscape North / South (Google Earth Pro, 2020)

## 4. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

### 4.1 GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE (PRE-COMMENCEMENT)

Is the site(s) located on or near any of the following (cross out ("X") the appropriate boxes)?

Shallow water table (less than 1.5m deep)	<b>YES</b>	NO	UNSURE
Seasonally wet soils (often close to water bodies)	<b>YES</b>	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	<del>YES</del>	<b>NO</b>	UNSURE
Dispersive soils (soils that dissolve in water)	<del>YES</del>	<b>NO</b>	UNSURE
Soils with high clay content	<del>YES</del>	<b>NO</b>	UNSURE
Any other unstable soil or geological feature	<del>YES</del>	<b>NO</b>	UNSURE
An area sensitive to erosion	<b>YES</b>	NO	UNSURE

### 4.2 GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE (POST-COMMENCEMENT)

Shallow water table (less than 1.5m deep)	<b>YES</b>	NO	UNSURE
Seasonally wet soils (often close to water bodies)	<b>YES</b>	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	<del>YES</del>	<b>NO</b>	UNSURE
Dispersive soils (soils that dissolve in water)	<del>YES</del>	<b>NO</b>	UNSURE
Soils with high clay content	<del>YES</del>	<b>NO</b>	UNSURE
Any other unstable soil or geological feature	<del>YES</del>	<b>NO</b>	UNSURE
An area sensitive to erosion	<b>YES</b>	NO	UNSURE

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department. (Information in respect of the above will often be available at the planning sections of local authorities. Where it does not exist, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

The clearance of AIS and maintenance of the dam took place in stream of a non-perennial watercourse. According to CapeFarmMapper the area is considered High for soil erodibility.

A Freshwater Impact Assessment has been undertaken. The report is available an Appendix to this document.

## 5. SURFACE WATER

### 5.1 SURFACE WATER (PRE-COMMENCEMENT)

Indicate the surface water present on and or adjacent to the site and alternative sites (cross out ("X") the appropriate boxes)?

Perennial River	<del>YES</del>	<b>NO</b>	UNSURE
Non-Perennial River	<b>YES</b>	NO	UNSURE
Permanent Wetland	<del>YES</del>	<b>NO</b>	UNSURE
Seasonal Wetland	<b>YES</b>	NO	UNSURE
Artificial Wetland	<b>YES</b>	NO	UNSURE
Estuarine / Lagoonal wetland	<del>YES</del>	<b>NO</b>	UNSURE

### 5.2 SURFACE WATER (POST-COMMENCEMENT)

Indicate the surface water present on and or adjacent to the site and alternative sites (cross out ("X") the appropriate boxes)?

Perennial River	YES	<b>NO</b>	UNSURE
Non-Perennial River	<b>YES</b>	NO	UNSURE
Permanent Wetland	YES	<b>NO</b>	UNSURE
Seasonal Wetland	<b>YES</b>	NO	UNSURE
Artificial Wetland	<b>YES</b>	NO	UNSURE
Estuarine / Lagoonal wetland	YES	<b>NO</b>	UNSURE

The clearance of AIS and maintenance of the dam took place in stream of a non-perennial watercourse. According to CapeFarmMapper the area is considered High for soil erodibility.

A Freshwater Impact Assessment has been undertaken. The report is available an Appendix to this document.

## 6. VEGETATION AND/OR GROUNDCOVER

**Please note:** The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org.za> or [BGIShelp@sanbi.org.za](mailto:BGIShelp@sanbi.org.za). Information is also available on compact disc ("cd") from the Biodiversity-GIS Unit, Ph (021) 799 8738. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as an **appendix** to this form.

### 6.1 VEGETATION AND/OR GROUNDCOVER (PRE-COMMENCEMENT)

Cross out ("X") the block **and** describe (where applicable) the vegetation types / groundcover present on the site before commencement of the activity.

Indigenous Vegetation - good condition		Indigenous Vegetation with scattered aliens		Indigenous Vegetation with heavy alien infestation	✓
Describe the vegetation type above:		Describe the vegetation type above:		Describe the vegetation type above:	
				The vegetation type is mapped as Langkloof Shale Renosterveld, however the watercourse was heavily infested with wattle and bluegum. Outside of the infested watercourse areas, the property has been extensively used for agriculture, mostly dryland crops (lucerne and wheat) for grazing. Aerial imagery from 2004 shows the same make of agriculture and vegetation up until the clearing in 2019. The Sept / Oct 2018 fires in the area completely burnt all the vegetation in this area.	
Provide ecosystem status for above:		Provide ecosystem status for above:		Provide Ecosystem status for above:	

		According to the 2011 NEMBA gazette, Langkloof Shale Renosterveld was listed as Endangered. According to Skowno et al (2019), as of 2018 it is considered Critically Endangered.
Indigenous Vegetation in an ecological corridor or along a soil boundary / interface	<b>Veld dominated by alien species</b>	Distinctive soil conditions (e.g. Sand over shale, quartz patches, limestone, alluvial deposits, termitaria etc.) – describe
Bare soil	Building or other structure	Sport field
Other (describe below)	<b>Cultivated land</b>	Paved surface

Comparisons of the extent of agricultural lands adjacent to the watercourse shows that the lands have been actively worked since 2004. Furthermore, the extent of alien invasives is also shown since 2004. Thus it is unlikely that there is much remnant of Langkloof Shale Renosterveld. It is more likely that only some wetland / aquatic vegetation would have remained, although these would have been severely outcompeted by the alien invasive vegetation. Rehabilitation therefore should rather focus on aquatic and semi aquatic species.

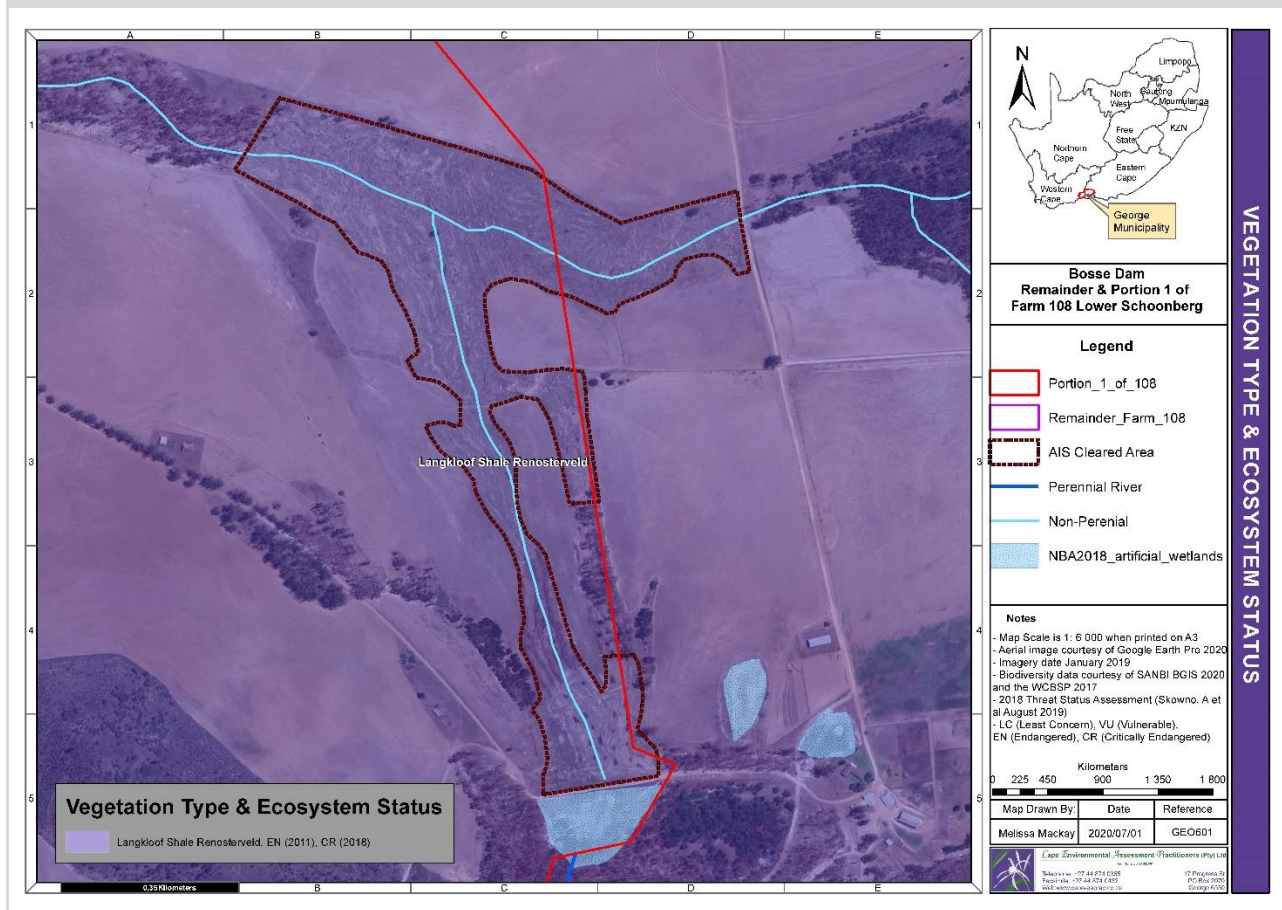


Figure 6: Vegetation Type & Ecosystem Status



Figure 7: Agricultural lands 2004 (Google Earth Pro, 2020)



Figure 8: Agricultural lands 2011 (Google Earth Pro, 2020)

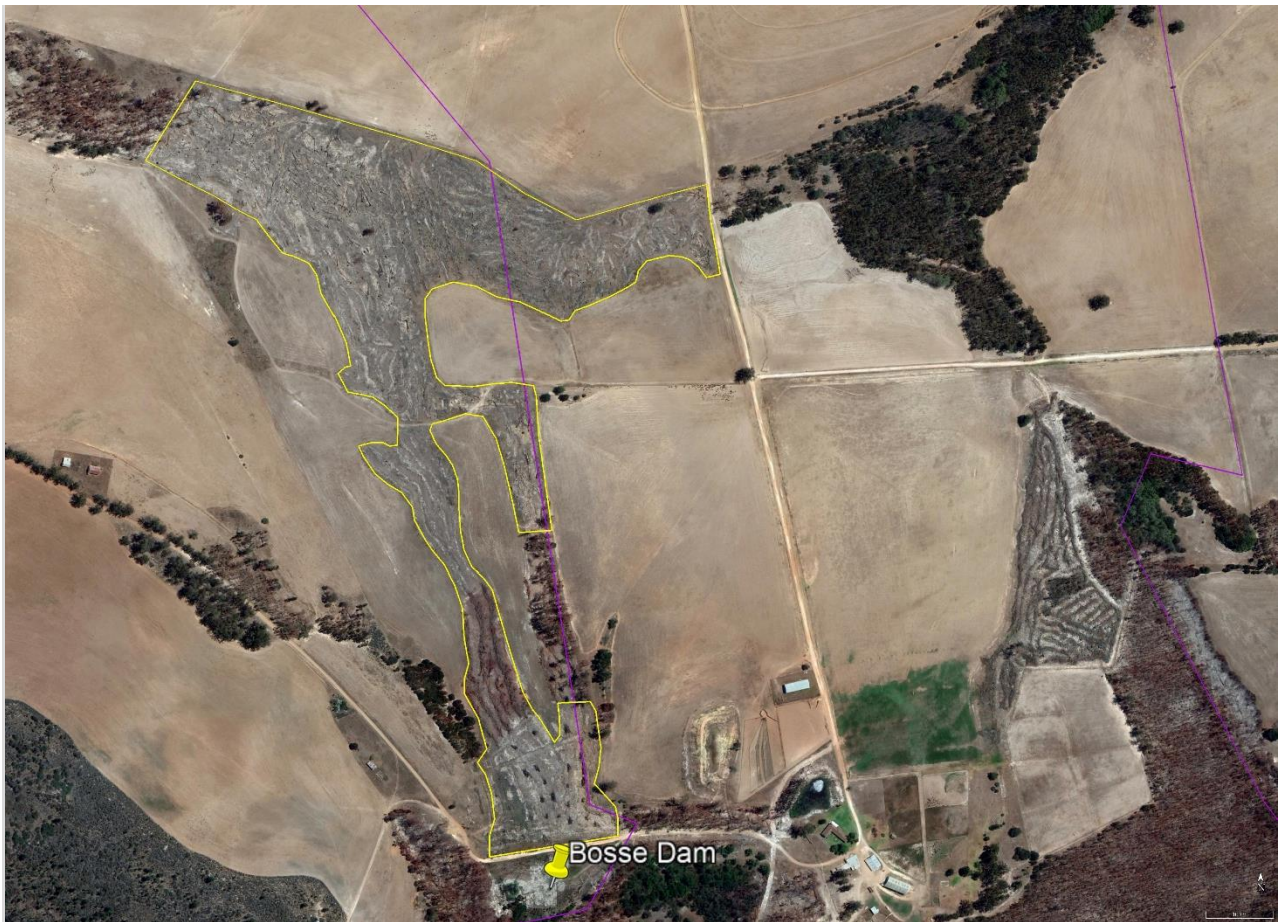


Figure 9: Agricultural lands 2019 post clearance (Google Earth Pro, 2020)

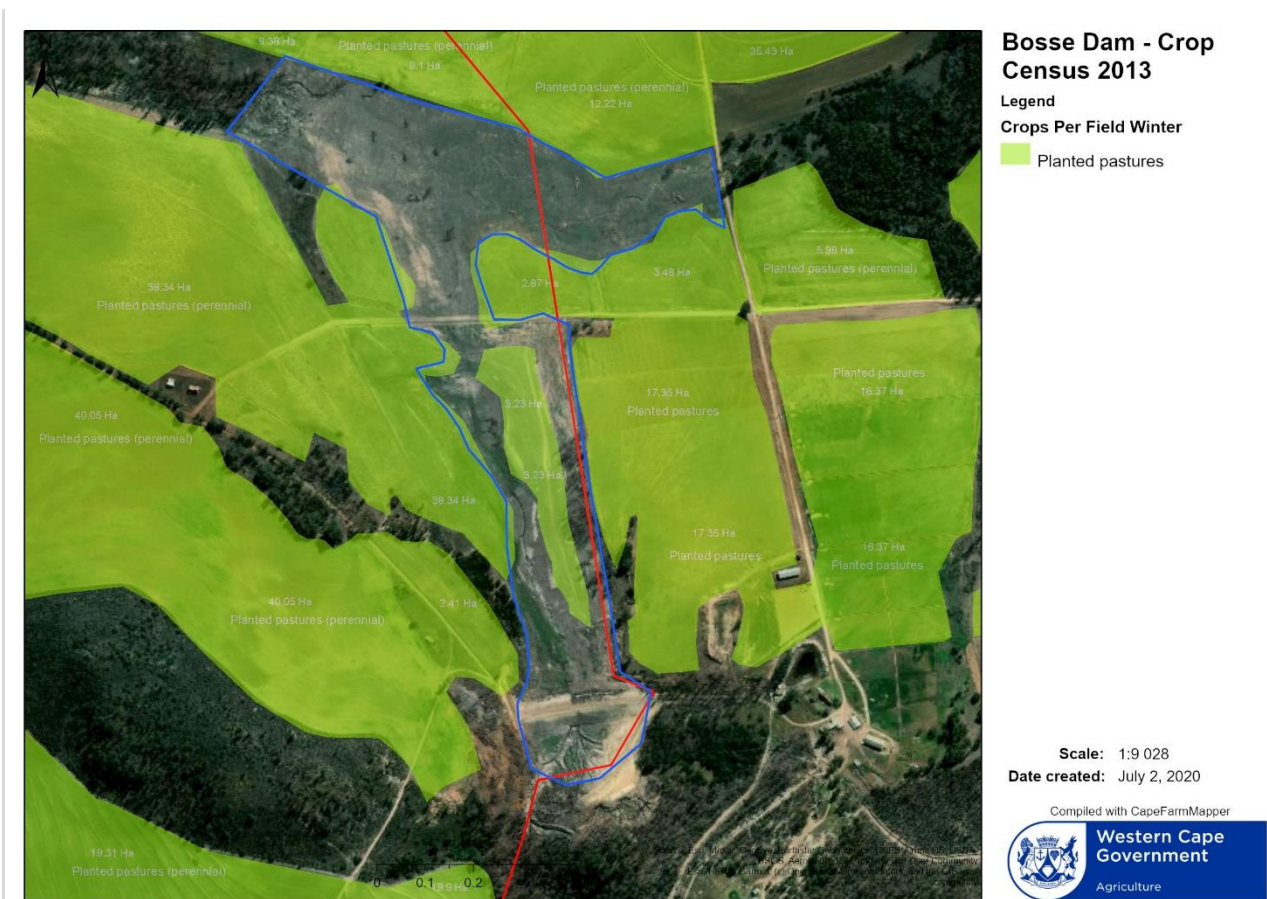


Figure 10: Crop Census 2013 (CapeFarmMapper, 2020)

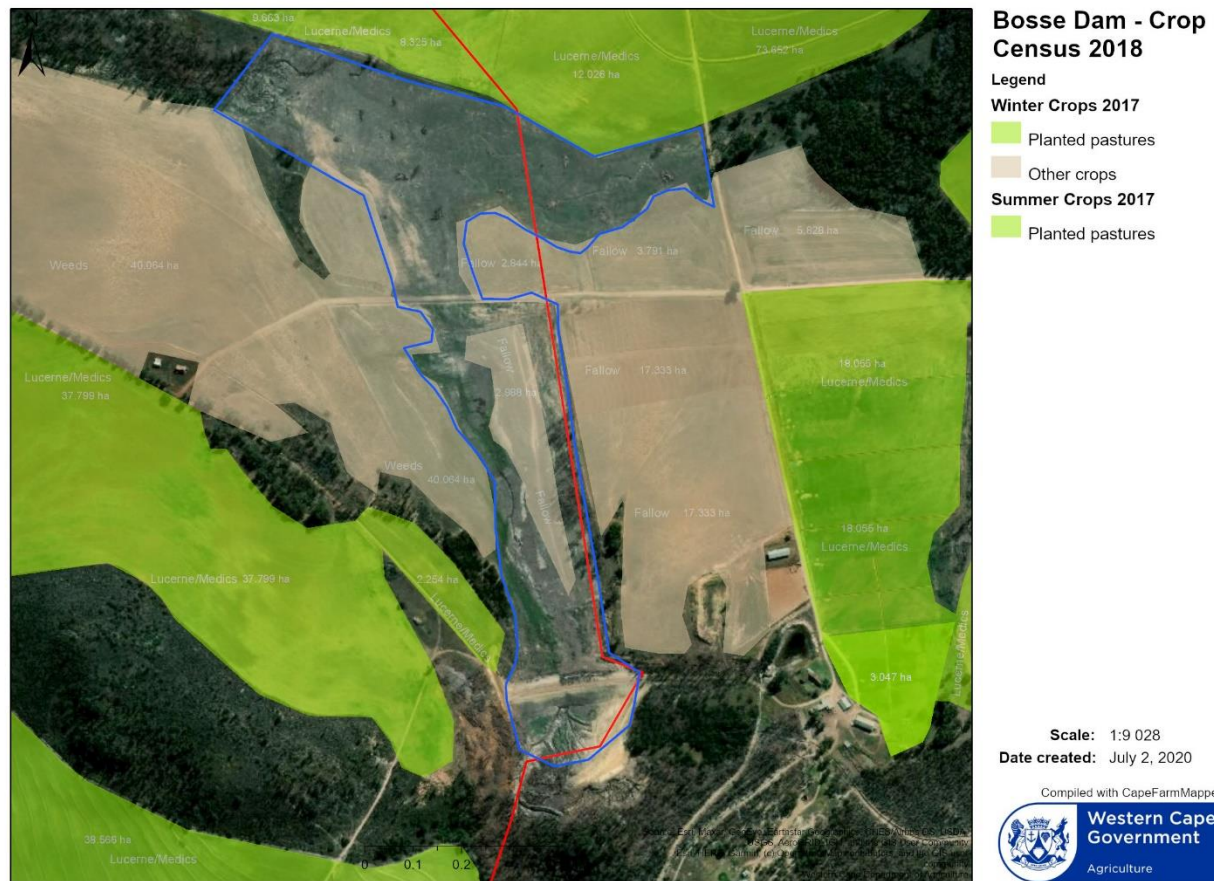


Figure 11: Crop Census 2018 (CapeFarmMapper, 2020)

(a) Highlight the applicable pre-commencement biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category.

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNA)	The majority of the cleared area is considered an ESA 2. A portion of the cleared area which is identified as a CBA2 for Aquatic and Terrestrial reasons. The wetland was severely impacted by alien invasive species and the clearance of these plants provides an opportunity to assist in the rehabilitation of this wetland.

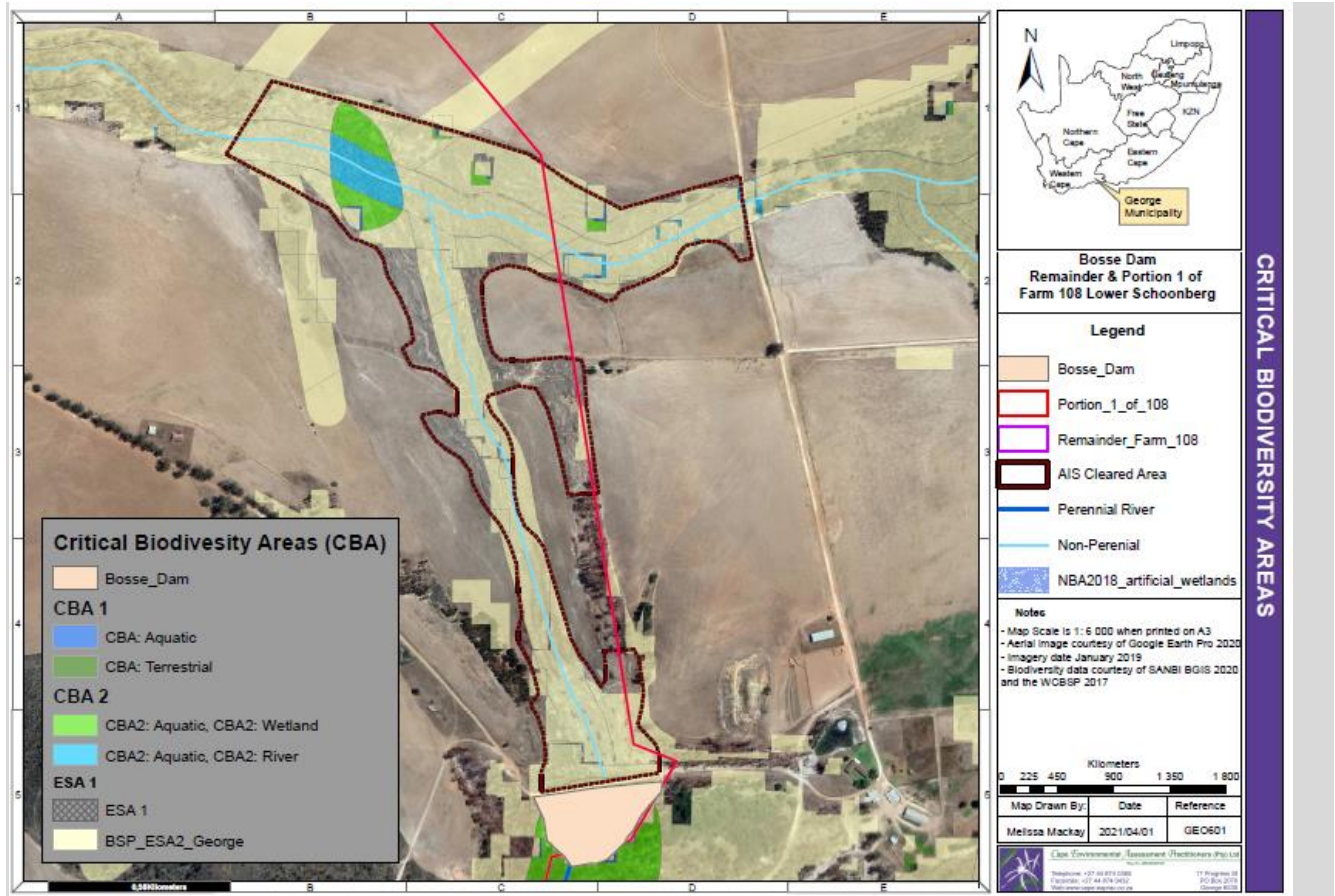


Figure 12: Critical Biodiversity Areas

(b) Highlight and describe the habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).
Natural	%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	70%	The degraded area is associated with the area downstream of the dam which was heavily infested alien invasive vegetation, notably blue gum.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	30%	The transformed areas are those of the dam and roads.

The watercourse above and below the Bosse dam has been heavily infested with alien invasive species, notably blue gum, for many decades. The severity of the fires that took place in Sept / Oct 2018 have been a main driver for landowners to remove this vegetation type. This area in particular was severely impacted on by the fires.

(c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, that was previously present on the site; and  
(ii) whether an aquatic ecosystem was previously present on site.

Terrestrial Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and un-channelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened							
		YES	NO	UNSURE	YES	NO	YES	NO

(d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The vegetation on site is mapped as Langkloof Shale Renosterveld considered to be listed as Endangered in the 2011 NEMBA Gazetted Threatened Ecosystems. According to Skowno et al (2019), as of 2018 it is considered Critically Endangered. However, historical aerial imagery shows that the farm has been extensively farmed for decades and the watercourses have been heavily infested with alien invasive vegetation for equally as long. It is thus very unlikely that there is much remnant of this vegetation type. Furthermore, the clearing activities took place in the riparian areas, and as such the vegetation type would have been more in keeping with aquatic type species as opposed to Langkloof Shale Renosterveld.

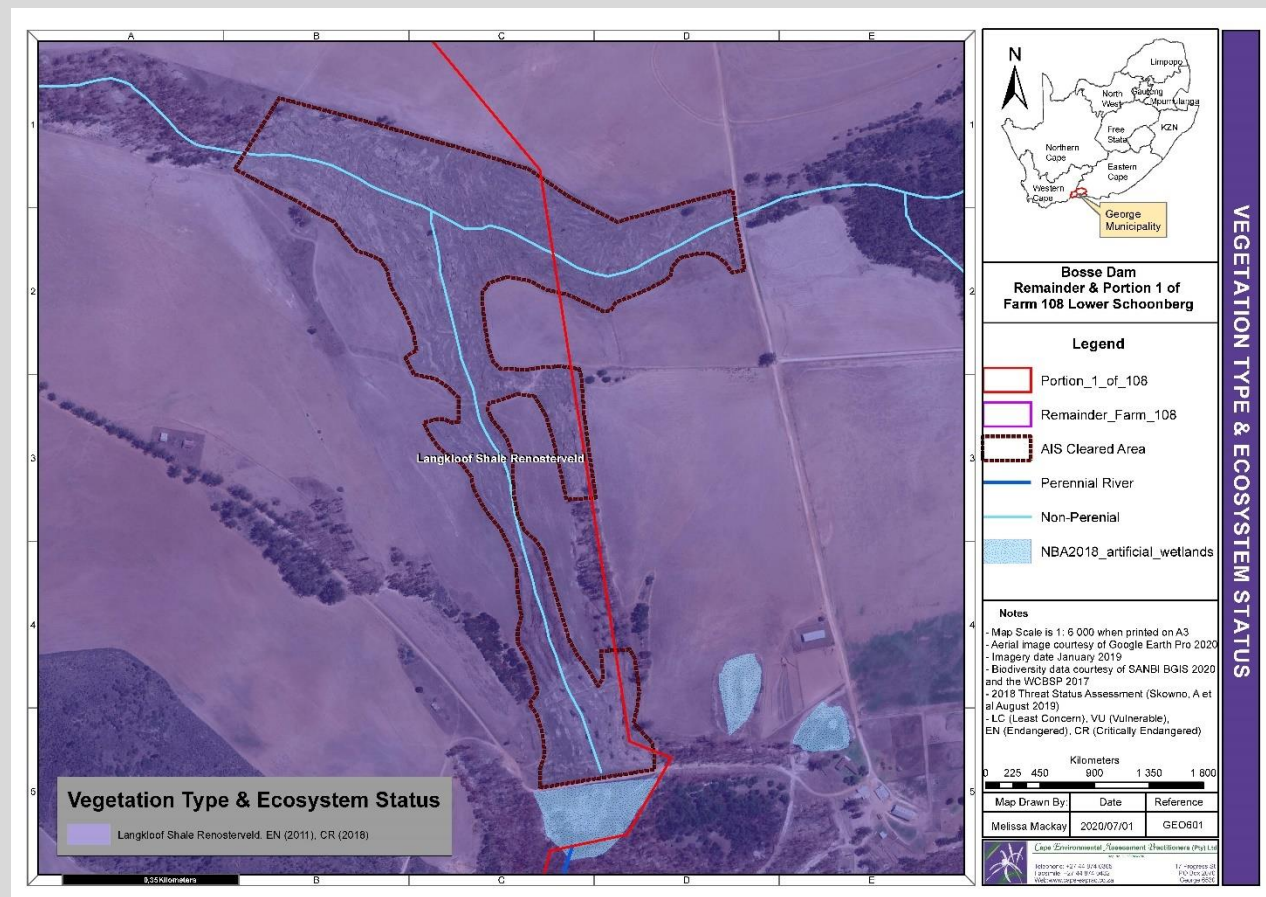


Figure 13: Vegetation Type & Ecosystem Status



Figure 14: 1968 Aerial image (Confluent, 2020)



Figure 15: 2018 Aerial image prior to clearing (Confluent, 2020)

## 6.2 Vegetation AND/OR GROUNDCOVER (Post-commencement)

Cross out ("X") the block **and** describe (where required) the vegetation types / groundcover present on the site after commencement of the activity.

Indigenous Vegetation - good condition		Indigenous Vegetation with scattered aliens		Indigenous Vegetation with heavy alien infestation	✓
Describe the vegetation type above:	Describe the vegetation type above:		Describe the vegetation type above:		
			The vegetation type is mapped as Langkloof Shale Renosterveld, however the watercourse was		

		heavily infested with wattle and bluegum. Outside of the infested watercourse areas, the property has been extensively used for agriculture, mostly dryland crops (lucerne and wheat) for grazing. Aerial imagery from 2004 shows the same make of agriculture and vegetation up until the clearing in 2019.
Provide ecosystem status for above:	Provide ecosystem status for above:	Provide Ecosystem status for above:
		According to the 2011 NEMBA gazette, Langkloof Shale Renosterveld was listed as Endangered. According to Skowno et al (2019), as of 2018 it is considered Critically Endangered.
Indigenous Vegetation in an ecological corridor or along a soil boundary / interface	<b>Veld dominated by alien species</b>	Distinctive soil conditions (e.g. Sand over shale, quartz patches, limestone, alluvial deposits, termitaria etc.) – describe
Bare soil	Building or other structure	Sport field
Other (describe below)	<b>Cultivated land</b>	Paved surface

(a) Highlight and describe the post-construction habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).
Natural	%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	70%	The degraded area is associated with the area downstream of the dam which was heavily infested alien invasive vegetation, notably blue gum.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	30%	The transformed areas are those of the dam and roads.

(b) How have the vegetation and/or aquatic ecosystem(s) present on site (including any important biodiversity features identified on site (e.g. threatened species and special habitats)) been affected by the commencement of the listed activity(ies)?

The clearance of the alien invasive vegetation from the watercourse area will have a positive effect on the riparian vegetation and the wetland areas provided that the area is kept clear of AIS and the rehabilitation of the riparian edge is undertaken. Otherwise the AIS will re-establish itself given the potential seed bed that has established over decades.

The increase in the dam wall for storage capacity will not have much more impact as the previous dam wall had, but base flow to the watercourse must be maintained to ensure the regeneration of the riparian habitat downstream.

### 6.3 Vegetation / Groundcover Management

(a) Describe any mitigation/management measures that were adopted and the adequacy of these:

The vegetation on site is mapped as Langkloof Shale Renosterveld considered to be listed as Endangered in the 2011 NEMBA Gazetted Threatened Ecosystems. According to Skowno et al (2019), as of 2018 it is considered Critically Endangered. However, historical aerial imagery shows that the farm has been extensively farmed for decades and the watercourses have been heavily infested with alien invasive vegetation for equally as long. It is thus very unlikely that there is much remnant of this vegetation type. Furthermore, the clearing activities took place in the riparian areas, and as such the vegetation type would have been more in keeping with aquatic type species as opposed to Langkloof Shale Renosterveld.

The cleared area is already showing signs of recovery and this must be encouraged by implementing the measures below.

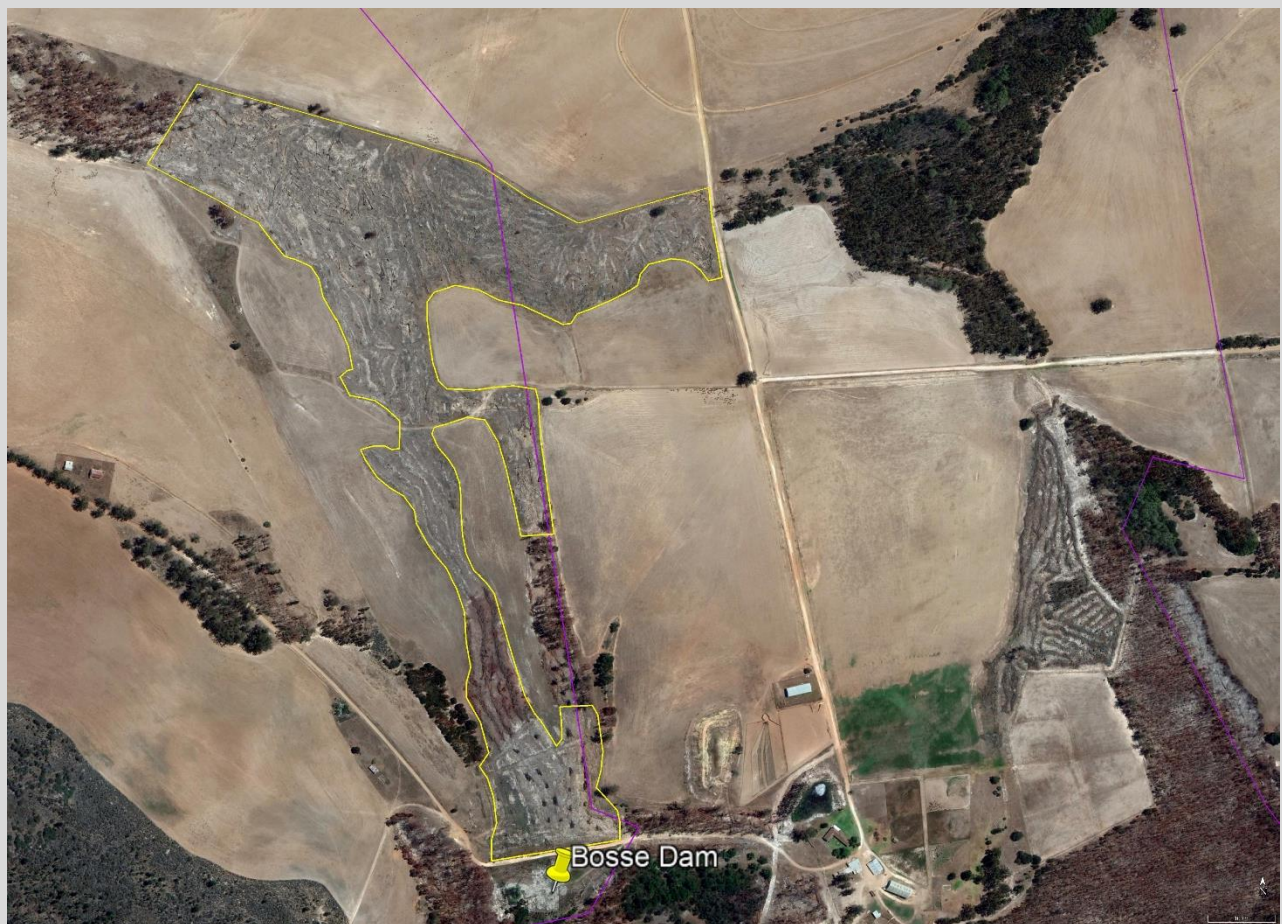


Figure 16: Agricultural lands 2019 post clearance (Google Earth Pro, 2020)



Figure 17: Agricultural lands October 2020 post clearance (Google Earth Pro, 2021)

The clearing was considered a management action in response to the alien invasive vegetation on the site, however the method of clearing was irregular. Future management should include the following:

- Rehabilitate the riparian areas as per the specialist recommendations;
- Continue ongoing alien clearing, however clearing in riparian areas may not be done with heavy machinery;
- Prevent livestock from accessing the riparian area by means of fencing;
- Ensure sufficient base flow is released from the dam to sustain the ecology downstream.

## 7. LAND USE OF THE SITE (PRE-COMMENCEMENT)

**Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the activity/ies.

Untransformed area	Low-density residential	Medium-density residential	High-density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open-cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	<b>Dam or reservoir</b>
Hospital/medical centre	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	<b>Agriculture</b>	<b>River, stream or wetland</b>	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):				

(a) Please provide a description.

The land use of the property and the site does not change pre and post commencement. The activity that took place was the clearing out, repair and increase in storage capacity of the existing dam, along with the clearance of alien vegetation in the watercourse. The agricultural activities continue as before.

## 8. LAND USE CHARACTER OF SURROUNDING AREA (PRE-COMMENCEMENT)

Cross out ("X") the block that reflects the past land uses and/or prominent features that occur/red within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site. **Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and impact(s) of the activity/ies.

Untransformed area	Low-density residential	Medium-density residential	High-density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open-cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	<b>Dam or reservoir</b>
Hospital/medical centre	School	Tertiary education facility	Church	Old-age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	<b>Agriculture</b>	<b>River, stream or wetland</b>	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):				

## 9. LAND USE CHARACTER OF SURROUNDING AREA (POST-COMMENCEMENT)

Cross out ("X") the block that reflects the current land uses and/or prominent features that occur(s) within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site. **Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and impact(s) of the activity/ies.

Untransformed area	Low-density residential	Medium-density residential	High-density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism & Hospitality facility
Open-cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	<b>Dam or reservoir</b>
Hospital/medical centre	School	Tertiary education facility	Church	Old-age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes or more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	<b>Agriculture</b>	<b>River, stream or wetland</b>	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):				

## 10. SOCIO-ECONOMIC CONTEXT

### 10.1 SOCIO-ECONOMIC CONTEXT (PRE-COMMENCEMENT)

Describe the pre-commencement social and economic characteristics of the community in order to provide baseline information.

#### George Municipality: Spatial Development Framework

Agriculture plays a significant role in the George municipality and Garden Route district municipality more broadly. It provides opportunities to increase un- or low skilled employment and grow products for local and international markets and for beneficiation in the manufacturing sector. It also contributes to the GDP, provides food security or a "bread basket" in close proximity to major settlements and is a base for tourism activities (Laskey, 2013:60). Protecting and promoting the agricultural economy is therefore a priority for the George Municipality and the Garden Route District Municipality.

#### Policy Guidelines:

a) Support efforts to rejuvenate the agricultural economy based on the assets and resources of the region. Some of these resources include the forest, hops, fruit, livestock, flowers, honeybush and sustainable fynbos harvesting.

b) Significant rural and agricultural areas to be managed as such in the Greater George Area are understood to be as follows:

Significant Rural Places in the Greater George Area	
<b>Olifantsrivier Valley:</b>	
- Rooilooop	Railway siding
- Snyberg	Railway Station
- Barandas	Railway Station
- Toorwater	Railway Station
- Nietgenaamd	Church/ Convent
Rooirivier	Agri-area
Kammanassierivier Valley	Agri-area
Eseljacht	Agri-area
Ongelegen	Agri-area
Molenvier	Agri-area
Eensaamheid	Agri-area
Geelhoutboom	Agri-area
Hoogekraal	Agri-area
Sinksbrug	Agri-area
Waboomskraal	Agri-area

\*The properties are located in the Eseljacht area.

#### Policy E1

Promote rural development that enhances the agricultural economy, its value chain into the broader economy and rural livelihoods as crucial to growing and balancing the urban-rural municipal space economy.

#### Policy Guidelines:

- c) Protect and support the strengthening of current agricultural and forestry activities, and support the introduction of new production technologies and crops (e.g. bio-fuels) in response to climate change.
- e) All areas of agricultural potential must be protected and enhanced.
- f) Conversion of irrigated, arable land is not supported.
- g) Development directed at ensuring water security for the agricultural sector should be a priority.

h) Development directed at job creation for the inhabitants of the area should be a priority provided that this is rooted in the rural / agricultural economy or activities suitable within this context; i.e. they reinforce the sector and do not compete with it or compete for the same resources with it.

i) Sustainable farming methods and disaster risk management measures must be implemented in order to protect important agricultural land, resources and employment that may be lost through flooding, water shortage and wild fires.

#### **George Municipality: Integrated Development Plan (IDP) 2017 - 2022**

Agriculture is considered a primary sector in the GDP of the George Municipality. The following is an excerpt from the 2017 – 2022 IDP:

This industry comprised R535.9 million (or 4.5 per cent) of the Municipality's GDP in 2015. It displayed modest growth of 2.2 per cent for the period 2005 - 2015, but growth has nevertheless contracted in the post-recessionary period (the sector experienced contraction of 0.5 per cent over the period 2010 – 2015). Agriculture, forestry and fishing employed 9.0 per cent of the municipality's workforce. Employment growth over the period 2005 – 2015 has contracted by 2.1 per cent per annum on average. Employment picked up significantly after the recession and grew at a rate of 3.4 per cent per annum on average since 2010. On net employment, 2 017 jobs have been lost since 2005 - not all of the jobs lost prior to and during the recession have been recovered.

The labour force in the primary sector is characterised by a relatively large proportion of low-skilled labour. The majority (54.9 per cent or 3 936 workers) of the workforce in agriculture, forestry and fishing operate within the low-skill sector, which has experienced a contraction of 2.9 per cent since 2005, but nevertheless grew by 3.2 per cent per annum over the post-recession period (2010 – 2015). The semi-skilled sector employs 1 669 workers and the sector has contracted at a rate of 2.3 per cent per annum since 2005, but did experience a notable recovery of 3.7 per cent per annum over the post-recession period term (2010 – 2015). The skilled sector employs the smallest proportion of the industry's workforce (5.7 per cent or 409 workers). This segment has shown robust growth post-recession (5.4 per cent per annum), with a 0.6 per cent per annum contraction over the long term (2005 – 2015). The informal sector makes up 16.2 per cent of the industry's workforce and was the only sector to experience long term growth (albeit marginal) as employment grew by 1.3 per cent per annum over the period 2005 – 2015. Informal employment within the agriculture, forestry and fishing industry furthermore experienced robust growth of 3.4 per cent per annum since 2010.

## **10.2 SOCIO-ECONOMIC CONTEXT (POST-COMMENCEMENT)**

Describe the post commencement social and economic characteristics of the community in order to determine any change. Where differences between pre- and post-commencement exist, state which are as a result of the activity(ies) for which rectification is being applied for.

The activities undertaken on the property are in furtherance of agricultural development in the area and as such the socio-economic aspects associated with this application do not change from the pre-commencement aspects.

## **11. HISTORICAL AND CULTURAL ASPECTS**

(a) Please be advised that every application for Environmental Authorisation including an application for a Waste Management Licence, must include, where applicable the investigation, assessment and evaluation of the impact of any proposed listed or specified activity on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act.

Please be further advised that if section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to your application, then you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Section 38 of the Act states as follows: "38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site—
- (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development."

(b) The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2)(i) (vi) and (vii), of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), must also be investigated, assessed and evaluated. Section 3(2) states as follows: "3(2) Without limiting the generality of subsection (1), the national estate may include—

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
  - (i) ancestral graves;
  - (ii) royal graves and graves of traditional leaders;
  - (iii) graves of victims of conflict;
  - (iv) graves of individuals designated by the Minister by notice in the Gazette;
  - (v) historical graves and cemeteries; and
- (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including—
  - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - (ii) objects to which oral traditions are attached or which are associated with living heritage;
  - (iii) ethnographic art and objects;
  - (iv) military objects;
  - (v) objects of decorative or fine art;
  - (vi) objects of scientific or technological interest; and
  - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)."

Is section 38 of the National Heritage Resources Act, 1999, applicable to the development?		YES	NO
		UNCERTAIN	
If YES, explain:			
Did/does the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?		YES	NO
		UNCERTAIN	
If YES, explain:			
Was any building or structure older than 60 years affected in any way?	YES	NO	UNCERTAIN
If YES, explain:			

**Please Note:**

**If uncertain, the Department may request that specialist input be provided. If, yes, a copy of the Notice of Intent submitted to Heritage Western Cape must be submitted with this form.**

## 12. COASTAL ASPECTS (SEAFRONT/SEA ENVIRONMENT)

(a) Is the site(s) located within any of the following areas? (highlight the appropriate boxes).  
If the site or alternative site is closer than 100m to such an area, please provide the approximate distance in (m).

AREA	YES	NO	UN SUR E	If "YES": Distance to nearest area (m)
An area within 100m of the high water mark of the sea	YES	NO	UNSURE	
An area within 100m of the high water mark of an estuary/lagoon	YES	NO	UNSURE	
An area within the littoral active zone	YES	NO	UNSURE	
An area in the coastal public property	YES	NO	UNSURE	
Major anthropogenic structures	YES	NO	UNSURE	
An area within a Coastal Protection Zone	YES	NO	UNSURE	
An area seaward of the coastal management line	YES	NO	UNSURE	
An area within the high risk zone (20 years)	YES	NO	UNSURE	
An area within the medium risk zone (50 years)	YES	NO	UNSURE	
An area within the low risk zone (100 years)	YES	NO	UNSURE	
An area below the 5m contour	YES	NO	UNSURE	
An area within 1km from the high water mark of the sea	YES	NO	UNSURE	
A rocky beach	YES	NO	UNSURE	
A sandy beach	YES	NO	UNSURE	

(b) If any of the answers to the above is "YES" or "UNSURE", specialist input may be requested by the Department. (The 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

## 13. REGIONAL PLANNING CONTEXT

Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
The property is zoned Agriculture Zone I and is an active commercial agricultural entity. The dam has been in existence for decades.			
Will the activity be in line with the following?			
Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The PSDF supports the continuation and development of viable agricultural properties.			
Urban edge / Edge of Built environment for the area	YES	NO	Please explain
The properties are not located inside an urban area as they are zoned and used for agricultural purposes.			
Integrated Development Plan of the Local Municipality	YES	NO	Please explain
The 2017 – 2022 IDP for George Municipality has agriculture as a primary sector of their GDP. There is strong support for existing enterprises.			
Spatial Development Framework of the Local Municipality	YES	NO	Please explain
Agriculture plays a significant role in the George municipality and Garden Route t municipality more broadly. It provides opportunities to increase un- or low skilled employment and grow products for local and international markets and for beneficiation in the manufacturing sector. It also contributes to the GDP, provides food security or a "bread basket" in close proximity to major settlements and is a base for tourism activities (Laskey, 2013:60). Protecting and promoting the agricultural economy is therefore a priority for the George Municipality and the Garden Route District Municipality.			
Approved Structure Plan of the Municipality	YES	NO	Please explain
The property is zoned Agriculture Zone I and is an active commercial agricultural entity. The dam has been in existence for decades.			

An Environmental Management Framework (EMF) adopted by the Department	YES	NO	Please explain
The Garden Route EMF does not extend to these properties.			
Any other Plans	YES	NO	Please explain

## SECTION D: NEED AND DESIRABILITY

**Please Note:** Before completing this section, first consult this Department's *Guideline on Need and Desirability* (March 2013) available on the Department's website (<http://www.capegateway.gov.za/eadp>).

1. Was the activity permitted in terms of the property's land use rights at the time of commencement?	YES	NO	Please explain
The property is zoned Agriculture Zone I and is an active commercial agricultural entity. The dam has been in existence for decades.			

2. Was the activity in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The PSDF supports the continuation and development of viable agricultural properties.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
The properties are not located inside an urban area as they are zoned and used for agricultural purposes.			
(c) Integrated Development Plan and Spatial Development Framework of the Local Municipality (e.g. would the approval of this application have compromised the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
The 2017 – 2022 IDP for George Municipality has agriculture as a primary sector of their GDP. There is strong support for existing enterprises.  Agriculture plays a significant role in the George municipality and Garden Route t municipality more broadly. It provides opportunities to increase un- or low skilled employment and grow products for local and international markets and for beneficiation in the manufacturing sector. It also contributes to the GDP, provides food security or a "bread basket" in close proximity to major settlements and is a base for tourism activities (Laskey, 2013:60). Protecting and promoting the agricultural economy is therefore a priority for the George Municipality and the Garden Route District Municipality.			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
The properties have and are zoned and set aside for agricultural use in the local structure plans.			

(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application have compromised the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
The Garden Route EMF does not extend to these properties.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain

3. Was the land use (associated with the activity for which rectification is sought) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. was the development in line with the projects and programmes identified as priorities within the relevant IDP)?	YES	NO	Please explain
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The land use is all in support of an existing agricultural enterprise which is supported in both the SDF and the IDP.

4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) have occurred here when activities commenced?	YES	NO	Please explain
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The existing dam was repaired and expanded on to support ongoing agricultural activities on a farm that has been used for agriculture for decades.

5. Did the community/area need the activity and the associated land use concerned (was it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
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The farming activities provided significant employment benefits to the local community. The ongoing development of the farm for agriculture thus further supports this.

6. Were the necessary services with adequate capacity available (at the time of commencement), or was additional capacity created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the Application Form / additional information as an <b>appendix</b> , where applicable.)	YES	NO	Please explain
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The properties do not make use of municipal services.

7. Is/was this development provided for in the infrastructure planning of the municipality, and if not what was/will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the Application Form / additional information as an <b>appendix</b> , where applicable.)	YES	NO	Please explain
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The development does not form part of the municipal planning and is a private enterprise.

8. Was this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
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Although not part of a national programme, the sustainability and development of existing agricultural enterprises is of national concern to ensure employment and food security.

9. Did location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the land use on this site within its broader context.)	YES	NO	Please explain
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The existing dam has been in place for decades. Repair and expansion of the dam is a more favourable factor than the creation of an entirely new dam elsewhere.

10. How did/does the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	YES	NO	Please explain
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Watercourses and wetlands have been designated a high sensitivity, so the fact that the application pertains to a dam does mean that there is some impact on a highly sensitive area. The clearing of the alien invasive vegetation however, does mean that there is an effort to improve the impact on these sensitive areas as the removal improves water flow and lessens fuel load for wildland fires. There is no impact on cultural areas.

11. How did/does the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc.)?	YES	NO	Please explain
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The activities that took place do not cause any impacts on people as the dam has been in place for many decades without causing impacts.

12. Did/does the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	YES	NO	Please explain

13. What were the cumulative impacts (positive and negative) of the land use associated with the activity applied for?	YES	NO	Please explain
<p>Positive:</p> <ul style="list-style-type: none"> <li>Removal of alien invasive vegetation from a watercourse</li> <li>Improved land yield as a result of water security</li> <li>Improved riparian buffers due to specialist mitigation</li> </ul> <p>Negative:</p> <ul style="list-style-type: none"> <li>Temporary impact on the watercourse due to disturbance by heavy machinery</li> </ul>			

14. Is/was the development the best practicable environmental option for this land/site?	YES	NO	Please explain
<p>The dam has been in existence in the same place for many decades so it is the best practicable place to have undertaken repairs and expansion. The clearance of the alien invasive vegetation within the watercourse could not have taken place elsewhere.</p>			

15. What are/were the benefits to society in general and to the local communities?	Please explain
Employment, job security, food security and agricultural development.	

16. Any other need and desirability considerations related to the activity?	Please explain
None	

17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA were taken into account:
<p>(1) The purpose of this Chapter is to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities,</p> <p>(2) The general objective of integrated environmental management is to:</p> <p>(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment:</p> <p>(b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management set out in section 2;</p> <p><b>This report follows the edicts to identify, predict and evaluate the actual and potential impacts associated with this development. The specialist studies have provided mitigations for minimising negative impacts where they have been identified.</b></p>

(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;

**This has been done by means of specialist investigations to determine baseline and predict the impacts associated with the proposal. The implementable management actions have been identified as having the least negative impacts, avoidance of sensitive areas and making use of existing disturbed areas.**

(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;

**This process follows the requirements of the 2014 EIA Regulations and the NEMA Amendment Laws Act (Act 25 of 2014) for conducting a Public Participation Process.**

(e) ensure the consideration of environmental attributes in management and

**An Environmental Management Programme (EMPr) has been included to ensure that the ongoing clearing of AIS and management of the cultivated and natural areas of the development in the future is managed in line with environmental requirements and Best Practise Principles.**

(f) decision-making which may have a significant effect on the environment; and identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

**This process is being undertaken in terms of Section 2 of NEMA.**

(3) The Director-General must coordinate the activities of organs of state referred to in section 24(1) and assist them in giving effect to the objectives of this section and such assistance may include training, the publication of manuals and guidelines and the co-ordination of procedures.

**All relevant guidelines and procedures have been used to produce this document and provide relevant information in order for sufficient co-governance to be implemented.**

18. Please describe how the **principles of environmental management** as set out in section 2 of NEMA were taken into account:

*Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*

**The repair and expansion of the existing dam provides water security for the farming operations. This will ensure sustainability of the agribusiness which will in turn lead to job security within the organisation and economic development in the region. In addition the removal of alien vegetation from the watercourse improves the natural riparian system and lessens the fuel load for wildland fires in the area.**

*Development must be socially, environmentally and economically sustainable.*

**The repair and expansion of the dam is being done with input from aquatic specialists and the BGCMA which will ensure that environmental sustainability is better than when the original dam was constructed. The clearance and required ongoing management of alien invasive species in the**

**watercourse is also a significant improvement on the previous management strategies that were being practised.**

*Sustainable development requires the consideration of all relevant factors including the following:*

- *That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*

**The impact of alien invasive species (AIS) on biodiversity is significantly detrimental. By providing for commercial agriculture to drive the financial sustainability of the property, resources are made available to continue the clearing of a property that has been determined as reaching a 95% density in the watercourses. This is a significant improvement to the status quo with no active management.**

- *that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*

**Land and soil degradation are minimised due to the removal of AIS.**

- *that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*

**The repair and expansion of the existing dam and the removal of the AIS on this property will not disturb cultural heritage.**

- *that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;*

**Organic material from the AIS clearing cannot be avoided; however it will be re-used on the property.**

- *that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*

**The repair and expansion of the dam does not exploit non-renewable resources.**

- *that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*

**The repair and expansion of the dam is being undertaken with a verification of the availability of water in order to ensure that the ecological integrity of the watercourse is maintained, while at the same time providing for water security for the agricultural enterprises.**

- *that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*

**The specialist studies and the impact predictions for the development are based on current knowledge and expertise. Furthermore extensive studies have shown that the effective removal and management of AIS significantly improves biodiversity and resource resilience.**

- *that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*

**The dam and watercourse area has been subject to several specialist investigations and the implementation and management is based on specialist input and aimed at avoiding significant impacts wherever possible, whilst ensuring the development of facilities for sustainable farming.**

*Environmental management must be integrated. Acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*

**The preferred alternative has been determined to be the best practicable environmental options based on specialist input and existing land uses.**

*Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*

**The diversification of the agribusiness and the commitment of the management to remove alien invasive vegetation leads to more sustainable farming practises which will ensure the persistence of employment, local economic development and food security.**

*Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*

**The development of the property will not lead to discrimination of any persons.**

*Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*

**The consideration for the environment must be practised by the applicant for the duration of the life span of the development. This will be achieved by means of an EMP covering construction, operation and decommissioning. This includes the ongoing management of the property, removal of alien vegetation within the cadastral boundaries and protection of water resources.**

*The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.*

**This process meets the requirements for participation by interested and affected parties.**

*Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.*

**The DEA&DP will take into account the inputs from all interested and affected parties obtained during this process.**

*Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*

**The sharing of the information obtained during this investigation, as well as the input from interested and affected parties is aimed at ensuring that all relevant parties have access to all information and are able to improve their awareness of the impacts associated with this development.**

*The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment.*

**This 24G Application has been developed to ensure that all relevant information can be considered, assessed and evaluated in order for DEA&DP to make their decision.**

*The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*

**The Occupational Health & Safety Act is applicable to construction and operation of the facility.**

*Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*

**All correspondence with and information provided to the competent authority is available to anyone who requests it. The decision by DEA&DP will consider all relevant information and the reasons for any decision will be communicated to all interested and affected parties.**

*There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.*

**Inclusion of all relevant state departments and organs of state encourages intergovernmental strategies.**

*Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*

**Not currently applicable but will be addressed if it becomes necessary.**

*Global and international responsibilities relating to the environment must be discharged in the national interest.*

**The development of sustainable agriculture and ensuring food security whilst minimising significant negative impact to the environment is recognised globally. This project supports these notions.**

*The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*

**The repair and expansion of the dam, along with the required mitigation measures suggested by the aquatic specialist will not cause undue damage to the environment, and will provide for an important aspect of diverse agricultural development in the area. The management of the AIS on the site provides significant improvement to site specific and regional biodiversity.**

*The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or multiplier pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*

**The holders of any authorisation will be required to comply with conditions to ensure that the environment is not adversely affected. Penalties associated with contraventions of these conditions will be applicable.**

*The vital role of women and youth in environment management and development must be recognised and their full participation therein must be promoted.*

**This must be ensured as part of the employment contracts associated with both construction and operation of the development.**

*Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.*

**The proposal takes place in a sensitive environment as it pertains to a dam. The management of the dam, watercourse and riparian areas going forward must follow the prescripts of the aquatic specialist in order to minimise the risks to the environment.**

## SECTION E: ALTERNATIVES

**Please Note:** Before completing this section, first consult this Department's *Guideline on Alternatives* (March 2013) available on the Department's website (<http://www.capegateway.gov.za/eadp>).

"Alternatives", in relation to an activity, means different means of meeting the general purposes and requirements of the activity, which may include alternatives to –

- (a) the property on which, or location where, it is to undertake the activity/the activity was undertaken;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

The NEMA prescribes that the procedures for the investigation, assessment and communication of the (potential) consequences or impacts of activities on the environment must, *inter alia*, with respect to every application for environmental authorisation –

- ensure that the general objectives of integrated environmental management laid down in NEMA and the National Environmental Management Principles set out in NEMA are taken into account; and (where applicable)
- include an investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.

The general objective of integrated environmental management is, *inter alia*, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" set out in NEMA.

1. In the sections below, please provide a description of any considered alternatives and alternatives that were found to be feasible and reasonable.

**Please note:**

- Detailed written proof of the investigation of alternatives must be provided. If no reasonable or feasible alternative exists, a motivation must be provided.
- Alternatives considered for a Section 24G application are used to determine if the development was the best practicable alternative (environmentally, socially and economically) for the site or property.
- In respect of a section 24 application, the option of not implementing the activity ("no-go"), includes the option of ceasing the activity, not implementing continuation of the activity, refusal of the commenced activity and complete rehabilitation of the affected site.

(a) Property and location/site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

None. The repair and expansion took place on an existing dam that has been in place for many decades. As such no alternative properties or sites are being considered.

(b) Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

None. The repair and expansion of the dam is the primary objective and there are no activity alternatives. The clearance of the alien invasive vegetation should in future be done without heavy machinery, but this is an alternative in action as opposed to an alternative in activity.

(c) Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

None. The repair and expansion of the existing dam does not provide for alternative layouts.

(d) Technology alternatives (e.g. to reduce resource demand and resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts or detailed motivation if no reasonable or feasible alternatives exist:

Technology alternatives to alien invasive vegetation clearing should be implemented to minimise the impacts. These have been recommended by the specialist.

(e) Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Operational alternatives include the management of water for ecological purposes and the methods to clear alien invasive vegetation. These are included as Alternative 1 Preferred) alternative.

(f) The option of ceasing the activity (the refusal of the activity(ies) and/or rehabilitation of the site):

The option of ceasing the activity is not a viable option for the sustainability of the agribusiness.

(g) Any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

None.

(h) Please provide a summary of the alternatives investigated and the outcomes of such investigation:

**Please note:** If no feasible and reasonable alternatives exist, the description and proof of the investigation of alternatives, together with motivation of why no feasible or reasonable alternatives exist, must be provided.

The following Alternatives are being proposed:

**Alternative 1 (Preferred):**

The preferred Alternative 1 consists of the following:

Maintenance work entailed the following:

- Relocating the existing spillway from the eastern corner of the dam wall to the western side of the dam wall (the eastern side formed an erosion gulley);
- Partial restoration of the above-mentioned gulley;
- Breaching of the dam wall to install a new throughflow pipe to address leakage;
- Removal of silt from within the dam basin (fires from 2017 resulted in exposed soils upstream of the dam and subsequent rainfall caused silt to collect in the dam thereby reducing the storage volume of the dam);
- Resealing of the dam wall along the outer wall to combat leakage;
- Removal of mostly burned blue gums above the below the dam footprint to accommodate machinery to get into and out of the basin of the dam and to deposit material along the outer bank of the dam wall.

Work that must still be done include the following:

- Rehabilitation of the old spillway erosion gulley;
- Rehabilitation of the downstream stream bed where machinery was used to remove mostly burned blue gum trees;
- Rehabilitation of the upstream stream bed where machinery was used to remove mostly burned blue gum trees to access the dam basin for purposes of removing silt;
- Removal of remaining silt within the dam basin;

Implement measures to stabilise the dam wall.

**No Go Alternative:**

The maintenance of the status quo would consist of the following:

- Retain the dam wall as it is, but limit the storage capacity to the Existing Lawful Use. The removal of the dam wall would require additional works that will cause an impact and potentially jeopardise the integrity of the wall.

This option is not feasible as it does not provide the applicant with the water security that they are seeking. In addition, it creates a potentially risky situation if the integrity of the dam wall is compromised.

This alternative is however being used as a baseline with which to compare impacts with the preferred alternative.

## SECTION F: IMPACT ASSESSMENT, MANAGEMENT, MITIGATION AND MONITORING MEASURES

Please note, the impacts identified below refer to general impacts commonly associated with development activities. The list below is not exhaustive and may need to be supplemented. Where required, please append the information on any additional impacts to this application.

Please note: The information in this section must be duplicated for all the feasible and reasonable alternatives (where relevant).

### 1. DEVELOPMENT IMPACTS

PLEASE DESCRIBE THE MANNER IN WHICH THE DEVELOPMENT HAS IMPACTED ON THE FOLLOWING ASPECTS:

(a) Geographical and physical aspects:

The following impacts were considered as part of the works associated with the dam and alien vegetation clearing:

- Vegetation removal;
- Dam Embankment Erosion;
- Watercourse channel and Habitat loss;
- Alien invasive vegetation removal.

(b) Biological aspects:

Has the development impacted on critical biodiversity areas (CBAs) or ecological support areas (ESAs)?	YES	NO
If yes, please describe:		
The majority of the clearing took place in areas designated as ESA 2, with a small wetland designated as a CBA 2 Aquatic. These areas were heavily infested with alien invasive vegetation and with mitigation can be improved from their previous state. The clearing took place following the devastating fires of Sept / Oct 2018.		
Has the development impacted on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)?	YES	NO
If yes, please describe:		
The activities all took place within an existing dam and a watercourse.		
Has the development impacted on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species?	YES	NO
If yes, please describe:		
Please describe the manner in which any other biological aspects were impacted:		
Approximately 6 hectares of vegetation was cleared from along the Suikerboslaagte Stream and 12.3 hectares was cleared along the Brak Stream. According to the land-owner, this vegetation largely consisted of alien tree species, which is supported by vegetation upstream and downstream of the cleared area of the Brak Stream. However, adjacent to cleared areas of the Suikerboslaagte Stream are sections of indigenous wetland vegetation indicating that similar plant communities may have been cleared along with aliens during work along this watercourse.		

(c) Socio-Economic aspects:

What was the capital value of the activity on completion?	R1 200 000
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What is the (expected) yearly income or contribution to the economy that is/will be generated by or as a result of the activity?	R200 000/ ha	
Has/will the activity have contributed to service infrastructure?	YES	NO
How many new employment opportunities were/will be created in the construction phase of the activity?	5	
What was the value of the employment opportunities during the construction phase?	R100 000	
What percentage of this accrued to previously disadvantaged individuals?	100%	
How was this ensured and monitored (please explain):		
Employment records. Where possible local labour was used to help clear aliens. All machine operators were local staff.		
How many permanent new employment opportunities were/will be created during the operational phase of the activity?	3 people / ha	
What is the current/expected value of the employment opportunities during the first 10 years?	R30 000 000	
What percentage of this accrued/will accrue to previously disadvantaged individuals?	100%	
How was/will this be ensured and monitored (please explain):		
Employment records. Fruit farming is labour intensive and only local labour will be given work		
Any other information related to the manner in which the socio-economic aspects was/will be impacted:		
Many young adults who have completed school are unable to find work. These individuals still live on the farm and once they receive this work their household's socio-economic conditions will benefit.		

(d) Cultural and historic aspects:

None.

## 2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Did the activity produce waste (including rubble) during the construction phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	±8m <sup>3</sup>	
It is likely that some waste material such as cement bags and pipe pieces would have been created, however these have already been removed. There will be some additional waste generated for the remediation and final completion of the dam but this is not expected to be too much.		

Does the activity produce waste during its operational phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	m <sup>3</sup>	

Where and how was/will the waste be treated / disposed of (describe)?		
Has the municipality or relevant authority confirmed that sufficient capacity exists for treating / disposing of the waste (to be) generated by this activity(ies)? If yes, provide written confirmation from Municipality or relevant authority		
YES	NO	
Does/will the activity produce waste that is/will be treated and/or disposed of at another facility other than into a municipal waste stream?		
YES	NO	
If yes, has this facility confirmed that sufficient capacity exists for treating / disposing of the waste (to be) generated by this activity(ies)? Provide written confirmation from the facility and provide the following particulars of the facility:		
YES	NO	
Does the facility have an operating license? (If yes, please attach a copy of the license.)		
YES	NO	
Facility name:		
Contact person:		

Postal address:		Postal code:	
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that were/will be taken to reduce, reuse or recycle waste:

Not applicable in this instance. By their nature in being so isolated from municipal services, farms generally practise recycling and reuse far more than residential landowners.

(b) Emissions into the atmosphere

Does/will the activity produce emissions that will be disposed of into the atmosphere?	YES	NO
If yes, does it require approval in terms of relevant legislation?	YES	NO
Describe the emissions in terms of type and concentration and how it is/will be treated/mitigated:		

### 3. WATER USE

Please indicate the source(s) of water for the activity by ticking the appropriate boxes)

Municipal	Water board	Groundwater	<b>River, Stream, Dam or Lake</b>	Other	The activity did/does/will not use water
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If water was extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that was extracted per month:

m<sup>3</sup>

Please provide proof of assurance of water supply (e.g. Letter of confirmation from municipality / water user associations, yield of borehole)

Did/does the activity require a water use permit / license from DWA?

YES

NO

If yes, please submit a certified copy of the water use permit/license or submit the necessary application to Department of Water Affairs and attach proof thereof to this application, whichever is applicable.

Describe the measures that were/ will be taken to reduce water demand, and measures to reuse or recycle water:

The additional storage and taking of water requires a Water Use License from the Breede Gouritz Catchment Management Agency (BGCMA). The Existing Lawful Use (ELU) for Bosse Dam has been confirmed as being 59 450m<sup>3</sup>. The proposed expanded storage use is 1 63 500m<sup>3</sup>. The application will also include abstraction of 188 000 m<sup>3</sup> per annum for irrigation of seedlings/crops.

According to the National Water Act (Act No. 36 of 1998) activities for which a WUL needs to be applied under Section 21 are as follows:

- **Section 21 (a)** - Taking water from a water resource;
- **Section 21 (b)** - Storing water;
- **Section 21 (c)** - Impeding or diverting the flow of water in a watercourse; and
- **Section 21 (i)** - Altering the bed, banks, course or characteristic of a watercourse.

A copy of the Water Use Assessment form is included as Annexure H2 of this report.

### 4. POWER SUPPLY

Please indicate the source of power supply e.g. Municipality / Eskom / Renewable energy source

Eskom

If power supply is not available, where will power be sourced from?

Not applicable.

**5. ENERGY EFFICIENCY**

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Not applicable.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Not applicable.

## 6. DESCRIPTION AND ASSESSMENT OF THE SIGNIFICANCE OF IMPACTS PRIOR TO AND AFTER MITIGATION

**Please note:**

- While sections are provided for impacts on certain aspects of the environment and certain impacts, the sections should also be copied and completed for all other impacts.
- Mitigation measures that were implemented and mitigation measures that are to be implemented should be clearly distinguished.

(a) Impacts that resulted from the **planning, design and construction phases** (briefly describe and compare the impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that occurred as a result of the planning, design and construction phases.

**The aquatic specialist has assessed the activities on site as operational rather than construction, as the original dam construction took place decades ago. As such this has been reflected in the tables below.**

Impacts on geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
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Impact on biological aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	- None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Impacts on socio-economic aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None

Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

<b>Impacts on cultural-historical aspects:</b>	<b>Alternative 1 (Preferred)</b>	<b>No Go Option</b>
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None

Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Noise impacts:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Visual impacts / Sense of Place:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None

Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

(b) **Impacts that result from the operational phase** (briefly describe and compare impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

Impacts on geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Removal of vegetation	Removal of vegetation
Extent and duration of impact:	Site specific, Short Term	Site specific, Long Term
Probability of occurrence:	Rare	Likely
Degree to which the impact can be reversed:	High	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low	Medium
Cumulative impact prior to mitigation:	Low	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Moderate	Moderate

Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	<ul style="list-style-type: none"> <li>- Burnt tree trunks should not be placed on the dam embankment, and should be removed.</li> <li>- The embankment should be re-vegetated using an appropriate grass cover by hydro-seeding or by hand if necessary. Compaction, exposure and the arid climate may reduce the speed and success of re-vegetation, and therefore grass may require additional support to establish. It will be important to consider: <ul style="list-style-type: none"> <li>- Including a seed mixture that includes a fast-growing annual grasses such as sterile Italian Rye Grass (<i>Lolium perenne</i>) and commercial oats (<i>Avena sativa</i>);</li> <li>- Perennial grass species should be commercially available indigenous species such as <i>Ehrharta calycina</i>;</li> <li>- Provision of mulch and water until vegetation cover becomes established;</li> <li>- Provide additional erosion control and seed protection by pinning woven mats over the seeded area such as coir, jute or coconut fibre.</li> <li>- Inspect and re-seed areas that fail to establish.</li> </ul> </li> </ul>	None
Cumulative impact post mitigation:	Negligible	Moderate
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible (-)	Moderate (-)

Impacts on geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Dam Embankment Erosion	Dam Embankment Erosion
Extent and duration of impact:	Site specific, Brief	Site specific, Medium Term
Probability of occurrence:	Rare	Probably
Degree to which the impact can be reversed:	High	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low
Cumulative impact prior to mitigation:	Very Low negative	Low negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible	Negligible
Degree to which the impact can be mitigated:	High	High
Proposed mitigation:	<ul style="list-style-type: none"> <li>- Burnt tree trunks should not be placed on the dam embankment, and should be removed.</li> <li>- The embankment should be re-vegetated using an appropriate grass cover by hydro-seeding or by hand if necessary. Compaction, exposure and the arid climate may reduce the speed and success of re-vegetation, and therefore grass may require additional support to establish. It will be important to consider:</li> <li>- Including a seed mixture that includes a fast-growing annual grasses such as sterile Italian Rye Grass (<i>Lolium perenne</i>) and commercial oats (<i>Avena sativa</i>);</li> </ul>	- None

	<ul style="list-style-type: none"> <li>- Perennial grass species should be commercially available indigenous species such as <i>Ehrharta calycina</i>;</li> <li>- Provision of mulch and water until vegetation cover becomes established;</li> <li>- Provide additional erosion control and seed protection by pinning woven mats over the seeded area such as coir, jute or coconut fibre.</li> <li>- Inspect and re-seed areas that fail to establish.</li> <li>-</li> </ul>	
Cumulative impact post mitigation:	Very Low negative	Very Low negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible (-)	Negligible (-)

Impacts on geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Watercourse channel and habitat loss	Watercourse channel and habitat loss
Extent and duration of impact:	Site specific, Medium Term	Site specific, Ongoing
Probability of occurrence:	Unlikely	Almost certain
Degree to which the impact can be reversed:	Medium	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium
Cumulative impact prior to mitigation:	Medium	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Moderate	Moderate

Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	<ul style="list-style-type: none"> <li>Heavy machinery must never be permitted in the buffer zone;</li> <li>The length of the buffer zone should be fenced to prevent access by livestock, but allow for the movement of aquatic associated fauna like otters and water mongoose for instance;</li> <li>The channel should be allowed to reform naturally in the landscape, and if it deviates significantly from the selected corridor then fencing should be re-routed to maintain the buffered area around the watercourse;</li> <li>Alien vegetation must be strictly controlled within the buffer zone in order to prevent re-establishment;</li> <li>A cover crop should be planted within the buffer zone to protect the soil and improve the micro-climate for the germination of indigenous plant seeds that may be preserved in the seed bank.</li> <li>The length of the buffered area must be inspected after every overspill or heavy rainfall event to check for erosion hotspots and the appearance of a channel;</li> <li>The spillway needs to be checked after every overspill or heavy rainfall to check for erosion which must be addressed if it occurs.</li> </ul>	None
Cumulative impact post mitigation:	Minor	Moderate
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible (-)	Moderate (-)

Impacts on the socio-economic aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Overall upgrade of the existing dam to be more beneficial	No upgrade of the existing dam to be more beneficial
Extent and duration of impact:	Regional, long term	Regional, long term
Probability of occurrence:	Highly probable	Highly probable
Degree to which the impact can be reversed:	Impact is positive	Impact is negative
Degree to which the impact may cause irreplaceable loss of resources:	None	Medium
Cumulative impact prior to mitigation:	Medium	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High positive	Medium negative
Degree to which the impact can be mitigated:	None	High
Proposed mitigation:	Implement environmental mitigation to improve overall ratings.	Approve existing development with proposed mitigations.
Cumulative impact post mitigation:	High positive	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Medium positive

Impacts on the cultural-historical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None

Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Noise impacts:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Noise impacts related to machinery on site for maintenance.	Noise impacts related to machinery on site for maintenance.
Extent and duration of impact:	Site specific, Short Term	Site specific, Short Term
Probability of occurrence:	Highly improbable	Highly improbable
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Unlikely	Unlikely
Degree to which the impact can be mitigated:	None	None

Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Visual impacts / Sense of Place:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

(c) Impacts that may result from the **decommissioning and closure phase** (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.

Farming, and in particular crop farming is a long term projected use of the property. Thus in terms of decommissioning, it is not possible to foresee the closure of the facility in the near future. The requirements for closure must comply with any legislative mechanisms in place at the time of closure as a minimum.

Potential impacts on the geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Potential impact on biological aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None

Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Potential impacts on the socio-economic aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
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Potential impacts on the cultural-historical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Potential noise impacts:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None

Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

Potential visual impacts:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
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**(d) Any other impacts:**

Potential impact:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	None	None
Extent and duration of impact:	None	None
Probability of occurrence:	None	None
Degree to which the impact can be reversed:	None	None
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	None	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None
Degree to which the impact can be mitigated:	None	None
Proposed mitigation:	None	None
Cumulative impact post mitigation:	None	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None	None

**Please note:** If any of the above information is not available, specialist input may be requested.

## 7. SPECIALIST INPUTS/STUDIES AND RECOMMENDATIONS

**Please note:** Specialist inputs/studies that will be undertaken as part of this application. These specialist inputs/studies must take into account the Department's relevant Guidelines on the Involvement of Specialists in EIA Processes available on the Department's website (<http://www.capegateway.gov.za/eadp>). A summary of all the specialist inputs/studies must be provided with the additional information.

Specialist inputs/studies and recommendations:

### Freshwater:

Activities to manage and maintain watercourses at Lower Schoonberg Farm resulted in degradation of two watercourses due to the methods of vegetation removal and subsequent infilling that has occurred. Identification of the watercourse path and accurate classification of hydrogeomorphic units was compromised due to the channel and vegetation being obscured by earth-moving and vegetation removal. Watercourses at the site were classified as valley bottom wetlands with a Present Ecological State of E, Seriously Modified.

In order to mitigate the impacts of clearing, and rehabilitate both streams to a PES of D, the best approximation of each watercourse was mapped and buffered. The Suikerboslaagte Stream has a buffer of 15 m (total) and the Brak Stream has a buffer of 20 m (total). Mitigation measures must be fully implemented in buffer zones in order to maintain the 'Low' risk determined by the Section 21 c) and i) Risk Assessment Matrix.

Future efforts to control alien vegetation on Lower Schoonberg Farm must follow recommendations given in this report, and be cognisant of the presence of watercourses which could have riparian zones or wetland areas which require protection.

### Recommended mitigation measures

#### Removal of Vegetation:

- Implement a riparian buffer zone along watercourses where no heavy machinery is permitted to enter, and vegetation is to be rehabilitated;
- Where alien infestations occur directly along watercourses and within buffer zones, **ring bark** large trees to kill them, remove medium-sized trees by **sawing them down and painting herbicide on stumps**, and remove small trees using **tree-poppers** (available in 3 sizes). The purpose of this approach is to protect top-soil, prevent erosion, protect indigenous plants, and retain shade over the watercourse.
- All alien woody debris must be **removed** from the watercourse(s), whether it has fallen over naturally or been cut down.
- Encourage and support the growth of indigenous vegetation which may begin to regenerate from the existing seedbank by constantly following up on alien tree removal using tree poppers and hand-pulling of seedlings.
- No vegetation (or other material) must be dumped adjacent to, or within, any watercourse.
- Where trees have fallen, or been dumped into the watercourse, they should be removed from the channel.

#### Dam Embankment Erosion:

- Burnt tree trunks should not be placed on the dam embankment, and should be removed.
- The embankment should be re-vegetated using an appropriate grass cover by hydro-seeding or by hand if necessary. Compaction, exposure and the arid climate may reduce the speed and

success of re-vegetation, and therefore grass may require additional support to establish. It will be important to consider:

- Including a seed mixture that includes a fast-growing annual grasses such as sterile Italian Rye Grass (*Lolium perenne*) and commercial oats (*Avena sativa*);
- Perennial grass species should be commercially available indigenous species such as *Ehrharta calycina*;
- Provision of mulch and water until vegetation cover becomes established;
- Provide additional erosion control and seed protection by pinning woven mats over the seeded area such as coir, jute or coconut fibre;
- Inspect and re-seed areas that fail to establish.

#### **Watercourse Channel & Habitat Loss:**

- Heavy machinery must never be permitted in the buffer zone;
- The length of the buffer zone should be fenced to prevent access by livestock, but allow for the movement of aquatic associated fauna like otters and water mongoose for instance;
- The channel should be allowed to reform naturally in the landscape, and if it deviates significantly from the selected corridor then fencing should be re-routed to maintain the buffered area around the watercourse;
- Alien vegetation must be strictly controlled within the buffer zone in order to prevent re-establishment;
- A cover crop should be planted within the buffer zone to protect the soil and improve the micro-climate for the germination of indigenous plant seeds that may be preserved in the seed bank.
- The length of the buffered area must be inspected after every overflow or heavy rainfall event to check for erosion hotspots and the appearance of a channel;
- The spillway needs to be checked after every overflow or heavy rainfall to check for erosion which must be addressed if it occurs.

## **8. IMPACT ASSESSMENT SUMMARY**

Briefly describe the impacts (as appropriate), significance rating of impacts, mitigation and significance rating of impacts of the activity. This must include an assessment of the significance of all impacts.

Impacts	Significance rating of impacts after mitigation (Low, Medium, Medium-High, High, Very High):
<p><b>Removal of Vegetation:</b></p> <p>Approximately 6 hectares of vegetation was cleared from along the Suikerboslaagte Stream and 12.3 hectares was cleared along the Brak Stream. According to the land-owner, this vegetation largely consisted of alien tree species, which is supported by vegetation upstream and downstream of the cleared area of the Brak Stream. However, adjacent to cleared areas of the Suikerboslaagte Stream are sections of indigenous wetland vegetation indicating that similar plant communities may have been cleared along with aliens during work along this watercourse. Vegetation was cleared using heavy machinery such as bulldozers</p>	<p><b>Negligible</b></p>

and backacters which are highly detrimental to habitat, soil and non-target vegetation associated with wetlands.

Recommended mitigation measures

- Implement a riparian buffer zone along watercourses where no heavy machinery is permitted to enter, and vegetation is to be rehabilitated;
- Where alien infestations occur directly along watercourses and within buffer zones, **ring bark** large trees to kill them, remove medium-sized trees by **sawing them down and painting herbicide on stumps**, and remove small trees using **tree-poppers** (available in 3 sizes). The purpose of this approach is to protect top-soil, prevent erosion, protect indigenous plants, and retain shade over the watercourse.
- All alien woody debris must be **removed** from the watercourse(s), whether it has fallen over naturally or been cut down.
- Encourage and support the growth of indigenous vegetation which may begin to regenerate from the existing seedbank by constantly following up on alien tree removal using tree poppers and hand-pulling of seedlings.
- No vegetation (or other material) must be dumped adjacent to, or within, any watercourse.
- Where trees have fallen, or been dumped into the watercourse, they should be removed from the channel.

**Dam Embankment Erosion:**

Currently the dam embankment is steep, without vegetation cover, and had numerous large burnt tree trunks placed on it. All of these factors increase the susceptibility of the embankment to erosion which will compromise dam safety and further degrade the watercourse downstream.

Recommended mitigation measures

- Burnt tree trunks should not be placed on the dam embankment, and should be removed.
- The embankment should be re-vegetated using an appropriate grass cover by hydro-seeding or by hand if necessary. Compaction, exposure and the arid climate may reduce the speed and success of re-vegetation, and therefore grass may require additional support to establish. It will be important to consider:
  - Including a seed mixture that includes a fast-growing annual grasses such as sterile Italian Rye Grass (*Lolium perenne*) and commercial oats (*Avena sativa*);
  - Perennial grass species should be commercially available indigenous species such as *Ehrharta calycina*;

**Negligible**

<ul style="list-style-type: none"> <li>○ Provision of mulch and water until vegetation cover becomes established;</li> <li>○ Provide additional erosion control and seed protection by pinning woven mats over the seeded area such as coir, jute or coconut fibre.</li> <li>○ Inspect and re-seed areas that fail to establish.</li> </ul>	
<p><b>Watercourse Channel &amp; Habitat Loss:</b></p> <p>Vegetation clearing and infilling have obscured the original path of the watercourse for both the Suikerboslaagte and Brak Streams. This practice is not permissible in future, and the impacts of current clearing need to be mitigated in order to restore and improve the ecological state of both watercourses. The primary step to ensure the protection of both watercourses is to define a buffer zone around the watercourses within which mitigation and rehabilitation measures must be implemented. This exercise is constrained by the lack of a clearly defined channel along with the classification of the watercourse as being more characteristic of wetlands in certain areas. Furthermore, historical imagery does not indicate a defined channel in either watercourse. Therefore, it is proposed that a 15 m wide corridor be delineated which begins at the new spillway and follows the best approximation of the channel to the confluence with the Brak Stream which should have a 20 m corridor (as it is a larger stream;). The areas within the watercourse buffer should be treated according to the mitigation measures recommended below.</p> <p><u>Recommended mitigation measures</u></p> <ul style="list-style-type: none"> <li>• Heavy machinery must never be permitted in the buffer zone;</li> <li>• The length of the buffer zone should be fenced to prevent access by livestock, but allow for the movement of aquatic associated fauna like otters and water mongoose for instance;</li> <li>• The channel should be allowed to reform naturally in the landscape, and if it deviates significantly from the selected corridor then fencing should be re-routed to maintain the buffered area around the watercourse;</li> <li>• Alien vegetation must be strictly controlled within the buffer zone in order to prevent re-establishment;</li> <li>• A cover crop should be planted within the buffer zone to protect the soil and improve the micro-climate for the germination of indigenous plant seeds that may be preserved in the seed bank.</li> <li>• The length of the buffered area must be inspected after every overspill or heavy rainfall event to check for erosion hotspots and the appearance of a channel;</li> </ul>	<p><b>Negligible</b></p>

- The spillway needs to be checked after every overspill or heavy rainfall to check for erosion which must be addressed if it occurs.

## 9. SUMMARY OF THE CONSEQUENCES OF/ IMPACTS OF THE UNLAWFULLY COMMENCED ACTIVITY/IES

Please provide a detailed summary of the consequences/impacts of commencement of the activity/ies on the environment.

Summary:								
Impact	Intensity	Duration	Extent	Probability	Significance	Reversibility	Irreplaceability	Confidence
<b>Impact: Removal of Vegetation</b>								
<b>Without mitigation</b>	Very High (6)	Long-term (5)	Limited (2)	Likely (5)	Moderate (-65)	Medium	Medium	Medium
<b>With mitigation</b>	Low (3)	Short-term (3)	Very limited (1)	Rare (2)	Negligible (-14)	High	Low	Medium
<b>Impact: Dam Embankment Erosion</b>								
<b>Without mitigation</b>	Low (3)	Medium term (4)	Very limited (1)	Probably (4)	Negligible (-32)	Medium	Low	High
<b>With mitigation</b>	Negligible (1)	Brief (2)	Very limited (1)	Rare (2)	Negligible (-8)	High	Low	High
<b>Impact: Watercourse Channel and Habitat Loss</b>								
<b>Without mitigation</b>	Very High (6)	Ongoing (6)	Limited (2)	Almost certain (6)	Moderate (-84)	Medium	Medium	Medium
<b>With mitigation</b>	Moderate (4)	Medium term (4)	Very limited (1)	Unlikely (3)	Negligible (-27)	Medium	Medium	Medium

## 10. OTHER MANAGEMENT, MITIGATION AND MONITORING MEASURES

(a) Over and above the mitigation measures described above, please indicate any additional management, mitigation and monitoring measures.

The following recommendations were provided by the dam engineer:

The deficiencies in the original dam would eventually lead to failure of the dam and upgrades were vital. The upgrades appear to be largely successful.

The following recommendations are made:

- The dam should be registered as a **Category 1** dam with the Dam Safety Office.
- The extreme floods and spillway capacity should be re-evaluated in greater detail.
- The tree stumps must be removed from the downstream slope and more appropriate erosion protection implemented.
- During the first year the dam must be inspected for erosion damage after every rain storm.
- The spillway and downstream area must be inspected for erosion damage after every spill.

(b) Describe the ability of the applicant to implement the management, mitigation and monitoring measures.

The applicant and the company have many years' experience in land management and farming. The mitigations that are being proposed can easily be implemented by them and will ensure that the farming activities are greatly improved.

**Please note:** A draft **ENVIRONMENTAL MANAGEMENT PROGRAMME** must be attached to this application as **Appendix I**.

## SECTION G: ASSESSMENT METHODOLOGIES AND CRITERIA, GAPS IN KNOWLEDGE, UNDERLYING ASSUMPTIONS AND UNCERTAINTIES

(a) Please describe adequacy of the assessment methods used.

The assessment was undertaken using national and international criteria for assessment and its adequacy is of a high standard.

The specialists all have extensive knowledge and experience in their respective fields which further supports the adequacy of the assessments.

(b) Please describe the assessment criteria used.

### Criteria for Assessment

These criteria are drawn from the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989.

These criteria include:

- **Nature of the impact**

This is the appraisal of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.

- **Extent of the impact**

Describe whether the impact will be: local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region, or will have an impact on a national scale or across international borders.

- **Duration of the impact**

The specialist / EAP should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent.

- **Intensity**

The specialist / EAP should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The study must attempt to quantify the magnitude of the impacts and outline the rationale used.

- **Probability of occurrence**

The specialist / EAP should describe the probability of the impact actually occurring and should be described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

The impacts should also be assessed in terms of the following aspects:

- **Legal requirements**

The specialist / EAP should identify and list the relevant South African legislation and permit requirements pertaining to the development proposals. He / she should provide reference to the procedures required to obtain permits and describe whether the development proposals contravene the applicable legislation.

- **Status of the impact**

The specialist / EAP should determine whether the impacts are negative, positive or neutral ("cost – benefit" analysis). The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.

- **Accumulative impact**

Consideration must be given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

- **Degree of confidence in predictions**

The specialist / EAP should state what degree of confidence (low, medium or high) is there in the predictions based on the available information and level of knowledge and expertise.

Based on a synthesis of the information contained in the above-described procedure, you are required to assess the potential impacts in terms of the following significance criteria:

**No significance:** the impacts do not influence the proposed development and/or environment in any way.

**Low significance:** the impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.

**Moderate significance:** the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.

**High significance:** the impacts will have a major influence on the proposed development and/or environment and will result in the “no-go” option on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated.

(c) Please describe the gaps in knowledge.

None currently identified.

(d) Please describe the underlying assumptions.

**Freshwater:**

- A major limitation of this assessment is the recent disturbance (infilling, fire and vegetation clearance) that has occurred adjacent to, and within the watercourses at the site. This has obscured the natural path of the watercourse and made it challenging to correctly classify the hydrogeomorphic units;
- With ecology being dynamic and complex, there is the likelihood that some aspects (some of which may be important) may have been overlooked. Similarly, sampling by its nature, means that generally not all aspects of ecosystems can be assessed and identified; and,
- This assessment is based on the findings of a visual assessment of the site combined with available desktop resources. This study was not informed by detailed hydraulic, hydrological, faunal or floral assessments.

(e) Please describe the uncertainties.

**Freshwater:**

- A major limitation of this assessment is the recent disturbance (infilling, fire and vegetation clearance) that has occurred adjacent to, and within the watercourses at the site. This has obscured the natural path of the watercourse and made it challenging to correctly classify the hydrogeomorphic units;
- With ecology being dynamic and complex, there is the likelihood that some aspects (some of which may be important) may have been overlooked. Similarly, sampling by its nature, means that generally not all aspects of ecosystems can be assessed and identified; and,
- This assessment is based on the findings of a visual assessment of the site combined with available desktop resources. This study was not informed by detailed hydraulic, hydrological, faunal or floral assessments.

## SECTION H: RECOMMENDATIONS OF THE EAP

In my view (EAP), the information contained in the Application and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for.	YES	NO
If "NO", list the aspects that should be further assessed through additional specialist input/assessment:		
If "YES", please indicate below whether in your opinion the applicant should be directed to cease the activity or if it should be authorised:		
Applicant should be directed to cease the activity:	YES	NO
Please provide reasons for your opinion		
The specialist assessment has concluded that the impacts are Very Low to Negligible with a Very Low Risk Assessment in terms of the National Water Act.		
If you are of the opinion that the activity should be authorised, then please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an authorisation.		
The following conditions should be included: <ul style="list-style-type: none"> <li>• The mitigation measures and Rehabilitation Plan as provided by the specialist must be implemented;</li> <li>• An Environmental Control Officer (ECO) should be appointed to inspect the site before, during and after the remedial construction work for the rehabilitation of the watercourse crossings;</li> <li>• Alien invasive clearing should continue on site;;</li> <li>• During the first year the dam must be inspected for erosion damage after every rain storm.</li> </ul>		

## SECTION I: REPRESENTATIONS – RESPONSE TO AN INCIDENT OR EMERGENCY SITUATION

This section is only applicable to instances where Section 49A (2) of NEMA applies. Please list all steps that were taken in response to the incident or emergency situation.
Not applicable.

Please note:

Section 30 of NEMA deals with the procedures to be followed for the control of emergency incidents and Section 30A deals with procedures to be followed in the case of emergency situations.

## SECTION J: PUBLIC PARTICIPATION

### 1. PUBLIC PARTICIPATION PROCESS TO BE FOLLOWED

#### 1.1 THE PUBLIC PARTICIPATION PROCESS IN TERMS OF THE SECTION 24G FINE REGULATIONS, 2017

Regulation 8 of the Section 24G Fine Regulations require that all applicants must conduct public participation **prior to submission** of a section 24G application (as outlined in Annexure A of the Section 24G Fine Regulations - Section D: Preliminary Advertisement).

<b>"The applicant must place a preliminary advertisement in-</b>
(1) A local newspaper in circulation in the area in which the activity was, or activities were, commenced; and on the applicant's website, if any.

(2) This advertisement must comply with the requirements set out in Annexure A, Section D of the Section 24G Fine Regulations, 2017.

(3) The applicant must open and maintain of a register of interested and affected parties.

(4) The **register must be attached to the application form and included in the report**, or form part of the information submitted in terms of section 24G(1) of the Act, which the register must, as a minimum, contain the names, contact details and addresses of-

(a) all persons who, as a consequence of the public participation process conducted in respect of the application, have submitted written comments or attended meetings with the applicant or any environmental assessment practitioner or other specialist appointed by the applicant to assist with the application;

(b) all persons who have requested the applicant, in writing, to place their names on the register; and

(c) all organs of state that have jurisdiction in respect of the activity to which application relates."

Please provide a summary of the steps followed where public participation was undertaken in accordance with Regulation 8 prior to submission of this Application Form. Ensure that proof of compliance with Regulation 8 is submitted with this Application Form, including, *inter alia*, proof of preliminary advertisement in a local newspaper.

The following public participation will be undertaken as part of the s24G application:

- Site notices will be placed at the entrance to the property;
- An advertisement will be placed in the local newspaper (*George Herald*) calling for registration and making the Application and specialist reports available for comment for a period of 60 days;
- Neighbours immediately adjacent to the property will be notified in writing of the process and availability of the various documents;
- Key stakeholders have been identified and will be notified in writing of the process and availability of the various documents;
- A stakeholder register will be opened and maintained, and all registered Interested & Affected Parties (I&APs) will be provided with opportunities to comment on various documentation;
- All comments received will be included in a Comments & Responses report which will be circulated to all registered I&APs once the final documentation is submitted to the DEA&DP.

Please note that due to the inclusion of the Water Use License process, the comment period will be **60 days**.

Please indicate whether the applicant has a website (please tick relevant box):

YES	NO
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If yes, please note that the application information as specified above must have been advertised on such website and proof thereof must accompany this application.

The documentation will be made available on the Cape EAPrac website ([www.cape-eaprac.co.za](http://www.cape-eaprac.co.za)).

**Please note: Annexure A: Section D attached to this Application form must be strictly adhered to.**

## 1.2 THE PUBLIC PARTICIPATION PROCESS IN TERMS OF NEMA EIA REGULATIONS, 2014

As the applicant, you may be directed to conduct the public participation process that fulfils the requirements outlined in Chapter 6 of the EIA Regulations, 2014. In doing so, you must take into account any applicable guidelines published in terms of Section 24J of NEMA, the Department's Circular EADP 0028/2014 on the "One Environmental Management System" and the EIA Regulations, 2014 as well as any other guidance provided by the Department. Note that the public participation requirements are applicable to all proposed sites.

Please highlight the appropriate box below to indicate the public participation process that has been or will be undertaken to give notice of the application to all potential interested and affected parties, including deviations that may be agreed to by the competent authority:

1. In terms of regulation 41 of the EIA Regulations, 2014 -		
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of -		
(i) the site where the activity to which the application relates is or is to be undertaken; and	YES	DEVIATION
(ii) any alternative site	YES	DEVIATION
(b) giving written notice, in any manner provided for in section 47D of the NEMA, to -		

(i) the occupiers of the site and, if the applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	DEVIATION	N/A
(ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	DEVIATION	
(iii) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	YES	DEVIATION	
(iv) the municipality (Local and District Municipality) which has jurisdiction in the area;	YES	DEVIATION	
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	DEVIATION	
(vi) any other party as required by the Department;	YES	DEVIATION	N/A
(c) placing an advertisement in -			
(i) one local newspaper; or	YES	DEVIATION	
(ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	YES	DEVIATION	N/A
(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken	YES	DEVIATION	N/A
(e) using reasonable alternative methods, as agreed to by the Department, in those instances where a person is desirous of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	YES	DEVIATION	N/A
If you have indicated that "DEVIATION" applies to any of the above, then Section 2. below must be completed.			
NOTE: 2. The NEM: WA requires that a notice must be placed in at least two newspapers.			
If applicable, have/will an advertisement be placed in at least two newspapers?	YES	NO	
If "NO", then an application for exemption from the requirement must be applied for.			

1. Provide a list of all the state departments that has been / will be consulted:		
List of State Depts.	Comment obtained (YES/NO)	If not, provide reasons
Department of Agriculture	Pending	
Breede Gouritz Catchment Management Agency (BGCMA)	Pending	
CapeNature	Pending	

<b>2. Provide a summary of the issues raised by I&amp;APs and an indication of the manner in which the issues raised were incorporated, or the reasons for not being incorporated or addressed. (The details of the outcomes of this process, including supporting information must be included in the Comments and Report to be attached to this application as Appendix G.)</b>
Pending

<b>3. Provide a summary of any conditional aspects identified / highlighted by any Organs of State, which have jurisdiction in respect of any aspect of the relevant activity.</b>
Pending

**Please note:**

- A list of all the potential interested and affected parties, including the organs of State must be opened, maintained and made available to any person requesting access, in writing, to the register.
- All comments of interested and affected parties on the Application Form and Additional Information must be recorded, responded to and included in the Comments and Responses Report attached as Appendix G to the Application. The Comments and Responses Report must also include a description of the Public Participation Process followed.

- The minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants must also be submitted as part of the public participation information to be attached to the additional information/Environmental Impact Report as Appendix G.
- Proof of all the notices given as indicated, as well as of notice to the interested and affected parties of the availability of the Application Form/Additional Information must be submitted as part of the public participation information to be attached to the application as Appendix G.

### 1.3 REPRESENTATIONS REGARDING DEVIATION FROM PUBLIC PARTICIPATION REQUIREMENTS IN TERMS OF THE EIA REGULATIONS, 2014

Please provide detailed reasons (representations) as to why it would be appropriate not direct you to comply with all of the requirements and to deviate from the requirements of regulation 41 as indicated above.
Not applicable.

### 1.4 LIST OF STATE DEPARTMENTS

Section 24(O)(2) obliges the relevant authority to consult with every State department that administers a law relating to a matter affecting the environment when such authority considers an application for an environmental authorisation.

Provide a list of all the State departments that will be/have been consulted, including the name and contact details of the relevant official.			
State Department	Name of person	Contact details	
Department of Agriculture	Mr Cor van der Walt	Tel	021 808 5093/9
		Fax	086 544 8977
		E-mail	landuse.elsenburg@elsenburg.com
Breede Gouritz Catchment Management Agency (BGCMA)	Mr Carlo Abrahams	Tel	023 346 8000
		Fax	
		E-mail	cabrahams@bgcma.co.za
CapeNature	Ms Megan Simons	Tel	087 087 3058
		Fax	044 802 5313
		E-mail	msimons@capenature.co.za

Please note:

A State department consulted in terms of Section 24O(2) of NEMA and Regulations 3(4) and 43(2) must within 30 days from the date of the Department/EAP's request for comment, submit such comment in writing to the Department. The applicant/EAP is therefore required to inform this Department in writing when the application/relevant information is submitted to the relevant State Departments. Upon receipt of this confirmation, this Department will in accordance with Section 24O (2) & (3) of the NEMA inform the relevant State Departments of the commencement date of the 30-day commenting period.

# PART 2 – ANNEXURE A TO THE SECTION 24G APPLICATION FORM

## SECTION A: DIRECTIVES

Section 24G(1) of NEMA provides that on application by a person who has commenced with a listed or specified activity without an environmental authorisation in contravention of section 24F(1); or a person who has commenced, undertaken or conducted a waste management activity without a waste management licence in terms of section 20(b) of the National Environment Management: Waste Act, 2008 (Act 59 of 2008) ("NEM:WA") the Minister, the Minister responsible for mineral resources or the MEC concerned (or the official to which this power has been delegated), as the case may be, may direct the applicant to-

i	<i>immediately cease the activity pending a decision on the application submitted in terms of this subsection</i>	
ii	<i>investigate, evaluate and assess the impact of the activity on the environment</i>	
iii	<i>remedy any adverse effects of the activity on the environment</i>	
iv	<i>cease, modify or control any act, activity, process or omission causing pollution or environmental degradation</i>	
v	<i>contain or prevent the movement of pollution or degradation of the environment</i>	
vi	<i>eliminate any source of pollution or degradation</i>	
vii	<i>compile a report containing-</i>	
	aa	<i>a description of the need and desirability of the activity</i>
	bb	<i>an assessment of the nature, extent, duration and significance of the consequences for or impacts on the environment of the activity, including the cumulative effects and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity</i>
	cc	<i>a description of mitigation measures undertaken or to be undertaken in respect of the consequences for or impacts on the environment of the activity</i>
	dd	<i>a description of the public participation process followed during the course of compiling the report, including all comments received from interested and affected parties and an indication of how the issues raised have been addressed</i>
	ee	<i>an environmental management programme</i>
viii	<i>provide such other information or undertake such further studies as the Minister, Minister responsible for mineral resources or MEC, as the case may be, may deem necessary.</i>	

You are hereby provided with an opportunity to make representations on any or all of the abovementioned instructions including where you are of the opinion that any of these instructions are not relevant for the purposes of your application setting out the reasons for your assertion. Kindly note further that after taking your representation into account a final directive may be issued.

**Please Note:**

**Notwithstanding the above, subsequent to submission of the application form to the Department, you may be issued with a specific directive in terms of section 24G(1)(i) to (viii), and you will therefore be provided with an opportunity to make further representations as to the specific directive.**

**The appointed Environmental Assessment Practitioner, on behalf of the applicant, may be directed to compile and submit a report that meets the requirements of section 24G(vii)(aa)-(ee) as specified above.**

## SECTION B: DEFERRAL OF THE APPLICATION

Section 24G(7) of the NEMA provides that if at any stage after the submission of an application it comes to the attention of the Minister, the Minister responsible for mineral resources or the MEC, that the applicant is under criminal investigation for the contravention of, or failure to comply with, section 24F(1) of the NEMA or section 20(b) of the NEM:WA, the Minister, Minister responsible for mineral resources or MEC may defer a decision to issue an environmental authorisation until such time as the investigation is concluded and-

- (a) the National Prosecuting Authority has decided not to institute prosecution in respect of such contravention or failure;
- (b) the applicant concerned is acquitted or found not guilty after prosecution in respect of which such contravention or failure has been instituted; or
- (c) the applicant concerned has been convicted by a court of law of an offence in respect of such contravention or failure and the applicant has in respect of the conviction exhausted all the recognised legal proceedings pertaining to appeal or review.

Kindly answer the following questions:

Are you, the applicant, being investigated for a contravention of section 24F(1) of the NEMA in respect of a matter that is <u>not subject to this application</u> and in any province in the Republic?	YES _____	NO _____	UNCERTAIN _____
<del>If yes provide details of the offence being investigated and authority conducting the investigation. If uncertain provide details of the activity or activities in relation to which you suspect you may be under investigation.</del>			
Are you, the applicant, being investigated for the contravention of section 20(b) of the NEMWA in respect of a matter that is <u>not subject to this application</u> and in any province in the Republic?	YES _____	NO _____	UNCERTAIN _____
<del>If yes provide details of the offence being investigated and authority conducting the investigation. If uncertain provide details of the activity or activities in relation to which you suspect you may be under investigation.</del>			
Are you, the applicant, being investigated for an offence in terms of section 24F(1) of the NEMA or section 20(b) of the NEMWA <u>in terms of which this application directly relates</u> ?	YES _____	NO _____	UNCERTAIN _____
<del>If yes provide details of the offence being investigated and authority conducting the investigation. If uncertain provide details of the activity or activities in relation to which you suspect you may be under investigation.</del>			

If you have answered yes or uncertain to any of the above questions, you are hereby provided with an opportunity to make representations as to why the Minister, Minister responsible for mineral resources or MEC, as the case may be, should not defer the application as he or she is entitled to do under section 24G(7).

## SECTION C: QUANTUM OF THE SECTION 24G FINE

In terms of section 24G(4) of the NEMA, it is mandatory for an applicant to pay an administrative fine as determined by the competent authority before the Minister, Minister responsible for mineral resource or MEC may take a decision on whether or not to grant an *ex post facto* environmental authorisation or a waste management licence as the case may be. The quantum of this fine may not exceed R5 million.

Having regard to the factors listed below, you are hereby afforded with an opportunity to make representations in respect of the quantum of the fine and as to why the competent authority should not issue a maximum fine of R5 million.

Please note that Part 1 of this section must be completed by an independent environmental assessment practitioner after conducting the necessary specialist studies, copies of which must be submitted with this completed application form.

Please also include in your representations whether or not the activities applied for in this application (if more than 1) are in your view interrelated and provide reasons therefor.

**PART 1: THE IMPACTS OR POTENTIAL IMPACTS OF THE ACTIVITY/ACTIVITIES**

Index	Socio Economic Impact	Place an "x" in the appropriate box
	Description of variable	
	The activity is not giving, has not given and will not give rise to any negative socio-economic impacts	X
	<del>The activity is giving, has given, or could give rise to negative socio-economic impacts, but highly localised</del>	
	<del>The activity is giving, has given, or could give rise to significant negative socio-economic and regionalized impacts</del>	
	<del>The activity is resulting, has resulted or could result in wide-scale negative socio-economic impacts.</del>	
Motivation:		
The repair and expansion of the existing dam is in furtherance of economic sustainability and diversification of the agribusiness on the property. This will ensure that the socio-economic status is maintained and improved on.		

Index	Biodiversity Impact	Place an "x" in the appropriate box
	Description of variable	
	The activity is not giving, has not given and will not give rise to any impacts on biodiversity	X
	<del>The activity is giving, has given or could give rise to localised biodiversity impacts</del>	
	<del>The activity is giving, has given or could give rise to significant biodiversity impacts</del>	
	<del>The activity is, has or is likely to permanently / irreversibly transform/ destroy a recognised biodiversity 'hot spot' or threaten the existence of a species or sub-species.</del>	
Motivation:		
The aquatic specialist has confirmed that the impacts to the watercourse area are Very Low to Negligible. The alien invasive management of the site will improve the local site conditions from their previous ecological status.		

Index	Sense of Place Impact and / or Heritage Impact	Place an "x" in the appropriate box
	Description of variable	
	The activity is in keeping with the surrounding environment and / or does not negatively impact on the affected area's sense of place and /or heritage	X
	<del>The activity is not in keeping with the surrounding environment and will have a localised impact on the affected area's sense of place and/or heritage</del>	
	<del>The activity is not in keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage</del>	
	<del>The activity is completely out of keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage</del>	
Motivation:		
The activity is related to an existing dam and agricultural operation, thus there is no change to the current sense of place.		

Index	Pollution Impact	Place an "x" in the appropriate box
	Description of variable	
	The activity is not giving, has not given and will not give rise to any pollution	X

The activity is giving, has given or could give rise to pollution with low impacts.	
The activity is giving, has given or could give rise to pollution with moderate impacts.	
The activity is giving, has given or could give rise to pollution with high impacts.	
The activity is giving, has given or could give rise to pollution with major impacts.	
Motivation:	
The repair and maintenance of the dam and the ongoing alien invasive management will not give rise to pollution.	

### PART 2: COMPLIANCE HISTORY AND KNOWLEDGE OF THE APPLICANT

Index	Previous administrative action (i.e. administrative enforcement notices) issued to the applicant in respect of a contravention of section 24F(1) of the National Environmental Management Act and/or section 20(b) of the National Environmental Management Waste Act	Place an "x" in the appropriate box
	Description of variable	
	Administrative action was previously taken against the applicant in respect of the abovementioned provisions.	
	No previous administrative action was taken against the applicant but previous administrative action was taken against a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time when the administrative action was taken.	
	Administrative action was <b>not</b> previously taken against the applicant in respect of the abovementioned provisions.	X
Explanation of all previous administrative action taken in respect of the above:		
Not applicable.		

Index	Previous Convictions in terms of section 24F(1) of the National Environmental Management Act and/or section 20(b) of the National Environmental Management Waste Act	Place an "x" in the appropriate box
	Description of variable	
	The applicant was previously convicted in terms of either or both of the abovementioned provisions.	
	No previous convictions have been secured against the applicant but a conviction has been secured against a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time; or a conviction was secured against a director of the applicant in his or her personal capacity.	
	The applicant has not previously been convicted in terms of either or both of the abovementioned provisions.	X
Explanation of all previous convictions in respect of the above:		
Not applicable.		

Index	Number of section 24G applications previously submitted by the applicant	Place an "x" in the appropriate box
	Description of variable	
	Previous applications in terms of section 24G of NEMA were submitted by the applicant.	
	No previous applications have been submitted by the applicant but a previous application(s) have been submitted by a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time.	
	No previous applications have been submitted by the applicant but the applicant sat on the board of a firm that previously submitted an application.	
Explanation in respect of all previous applications submitted in terms of section 24G		
No previous applications have been submitted by this applicant.		

### PART 3: APPLICANT'S PERSONAL CIRCUMSTANCES

Index	Applicant's legal persona	Place an "x" in the appropriate box
	Description of variable	
	The applicant is a natural person.	
	The applicant is a firm.	X
	Describe the firm:	
	The applicant is a currently active private company registered with CIPC as Langkloof Plase (Pty) Ltd, with registration number 2018/054585/07. The company was started in February 2018 and has two (2) active directors, namely Mr Heinrich Jonker (signatory on this application) and Mr Johannes Petrus Schoeman.	

Index	Any other relevant information that the applicant would like to be considered.
	<p>Motivate and explain fully:</p> <p>Langkloof Plase (Pty) Ltd (LKP) are owners of multiple properties in the Langkloof region. They have moved to diversify many of the properties to adapt to changing climatic and economic impacts in the agricultural sector. These include wheat, lucerne, ostriches, sheep, fruit and citrus. They employ 200 personnel in the region.</p> <p>Due to the long and severe draught and also resulting from the struggling Ostrich-industry, LKP's strategy is to diversify into fruit and vegetable-seed farming. Both are very labour intensive which will result in more job creation.</p>

**NOTE: An explanation as to why the applicant did not obtain an environmental authorisation and/or waste management licence must be attached to this application.**

## SECTION D: PRELIMINARY ADVERTISEMENT

When submitting this application form, the applicant must attach proof that the application has been advertised in at least one local newspaper in circulation in the area in which the activity was commenced, and on the applicant's website, if any.

The advertisement must state that the applicant commenced a listed or specified activity or activities or waste management activity or activities without the necessary environmental authorisation and/or waste management licence and is now applying for *ex post facto* approval. It must include the following:

- the date;
- the location;
- the applicable legislative provision contravened; and
- the activity or activities commenced with without the required authorisation.

Interested and affected parties must be provided with the details of where they can register as an interested and affected party and / or submit their comment. At least 20 days must be provided in which to do so.

This advertisement shall be considered as a preliminary notification and the competent authority may direct the applicant to undertake further public participation and advertising after receipt of this application form.

**NOTE:** Unless protected by law, all information contained in and attached to this application form may become public information on receipt by the competent authority. This application must be attached to any documentation or information submitted by an applicant further to section 24G(1).

## PART 3 -

### 1. APPENDICES

The following appendices must, where applicable, be attached to this form:

Appendix		Tick the box if Appendix is attached
Appendix A:	Locality map	✓
Appendix B:	Site plan(s)	✓
Appendix C:	Building plans (if applicable)	✓
Appendix D:	Colour photographs	✓
Appendix E:	Biodiversity overlay map	✓
Appendix F:	Permit(s) / license(s) from any other organ of state including service letters from the municipality	x
Appendix G:	Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements, Land owner consent and any other public participation information as required in Section J above.	✓
Appendix H:	Specialist Report(s), if any	✓
Appendix I:	Environmental Management Programme	✓
Appendix J:	Supporting documents relating to compliance/enforcement history of the applicant, including but not limited to, Pre-compliance/compliance notices, Pre-directives/directives etc.	✓
Appendix K:	Certified copy of Identity Document of Applicant	✓
Appendix L:	Certified copy of the title deed (or title deeds in the case of linear activities)	✓
Appendix M:	Any Other (if applicable) (describe)	✓

Where an application has been made in terms of the waste management activities, please complete and annex Annexure 1 as in the following:

Annexures for waste listed activity/ies supporting information		Tick the box if Annexure is attached
Annexure 1	<del>Waste listed activities supporting information (as in prescribed attached form)</del>	
Other	<del>(please list accordingly)</del>	

## 2. DECLARATIONS

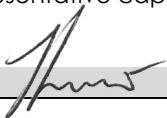
### 2.1 The Applicant

Note: Duplicate this section where there is more than one applicant

- I **Mr Hein Joncker**, in my personal capacity or duly authorised as **Director** (state capacity) by **Langkloof Please (Pty) Ltd** thereto hereby declare/affirm that all the information contained in this application to be true and correct, and that I:
    - am fully aware of my responsibilities in terms of the National Environmental Management Act of 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment Regulations, 2014 ("EIA Regulations") in terms of NEMA, the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) ("NEM:WA") and all relevant specific environmental management Act(s), and that failure to comply with these requirements may constitute an offence in terms of the environmental legislation;
    - appointed the environmental assessment practitioner as indicated above, which meet all the requirements in terms of Regulation 13 of the EIA Regulations to act as the independent Environmental Assessment Practitioner for this application;
    - have provided the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application;
    - am aware that I may be issued with a directive and that I must comply with such a directive;
    - am fully aware of the administrative fine to be paid before a decision, with respect to the continuation of the listed activity(ies), will be made;
    - will be responsible for the costs incurred in complying with the environmental legislation including but not limited to –
      - costs incurred in connection with the appointment of the environmental assessment practitioner or any specialist appointed in terms of Regulation 13 of the EIA Regulations);
      - costs incurred in respect of the undertaking of any process required in terms of this application;
      - costs in respect of any prescribed fee payable in respect of this application;
      - costs in respect of specialist reviews, if the competent authority decides to recover costs;
      - the provision of security to ensure compliance with the applicable management and mitigation measures;
    - and
    - fine costs
    - am responsible for complying with the conditions that might be attached to any decision(s) issued by the competent authority;
    - have the ability to implement the applicable management, mitigation and monitoring measures; and
    - hereby indemnify, the government of the Republic of South Africa, the competent authority and all its officers, agents and employees, from any liability arising out of, inter alia, the content of any report, any procedure or any action for which the applicant or environmental assessment practitioner is responsible.
- am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014 (

**Please Note:** If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the applicant:



Mr Hein Joncker

Name:

Langkloof Plase (Pty) Ltd

Name of Firm (if applicable):

11/05/2021

Date:

## 2.2 The Independent Environmental Assessment Practitioner ("EAP")

I **Ms Melissa Mackay on behalf of Cape EAPrac**, as the appointed independent environmental practitioner ("EAP") hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I:

- act/ed as the independent EAP in this application;
- regard the information contained in this application to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the the National Environmental Management Act of 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment Regulations, 2014 ("EIA Regulations") in terms of NEMA, the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) ("NEM:WA") and the relevant specific environmental management Act(s);
- have and will not have any vested interest in the proposed activity proceeding;
- have disclosed, to the applicant and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the EIA Regulations, the NEM:WA and any specific environmental management Act(s);
- am able to meet the responsibilities in terms of NEMA, the EIA Regulations (specifically in terms of Regulation 13 of the EIA Regulations, 2014) and any specific environmental management Act, and am fully aware that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the application was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- have ensured that the comments of all interested and affected parties were considered, recorded and submitted to the competent authority in respect of the application;
- have kept a register of all interested and affected parties that participated in the public participation process; and
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.
- am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations

**Note:** The terms of reference must be attached.

Signature of the environmental assessment practitioner:

Cape Environmental Assessment Practitioners (Cape EAPrac)

Name of company:

17/05/2021

Date:

**PART 4****ANNEXURE B – SUPPORTING INFORMATION WHERE THE ACTIVITY BEING APPLIED FOR IS A LISTED WASTE MANAGEMENT ACTIVITY/IES (IF RELEVANT)****1. WASTE QUANTITIES**

Indicate or specify types of waste and list the estimated quantities (expected to be) managed daily (should you need more columns; you are advised to add more).

**Note:** In this case of hazardous waste, the National Department of Environmental Affairs is the relevant competent authority to consider the 24G application.

Non-hazardous waste	Total waste handled (tonnes per day)

Source of information supplied in the table above. Mark with an "X"

Determined from volumes

Determined with weighbridge/scale

Estimated


**1.1. Recovery, Reuse, Recycling, treatment and disposal quantities:**

Indicate the applicable waste types and quantities expected to be disposed of and salvaged annually:

TYPES OF WASTE	MAIN SOURCE (NAME OF COMPANY)	QUANTITIES		ON-SITE RECOVERY REUSE RECYCLING TREATMENT OR DISPOSAL	OFFSITE RECOVERY REUSE RECYCLING TREATMENT OR DISPOSAL	OFFSITE DISPOSAL
		Tonnes / Month	M³ / Month	Method & Location	Method & Location and Contractor details	

**2. GENERAL**

Prevailing wind direction (e.g. NWW)

November – April

May – October


The size of population to be served by the facility:

	Mark with "X"	Comment
0-499		
500-9,999		
10,000-199,999		
200,000 upwards		

**LANDFILL PARAMETERS (If applicable)**

The method of disposal of waste:

Land-building ☐ Land-filling ☐ Both ☐**The dimensions of the disposal site in metres**

	At commencement	After rehabilitation

**The total volume for the disposal of waste on the site:**

Volume Available	Mark with "X"	Source of information (Determined by surveyor/ Estimated)
Up to 99		
100-34 999		
35 000-3,5 million		
>3,5 million		

**The total volume already used for waste disposal on the site:**

(a) Will the waste body be covered daily	Yes	No
(b) Is sufficient cover material available	Yes	No
(c) Will waste be compacted daily	No	No

If the answers (a) and/or (b) are No, what measures will be employed to prevent the problems of burning or smouldering of waste and the generation of nuisance?

**The Salvage method**

Mark with an "X" the method to be used.

At source	<input type="checkbox"/>
Recycling installation	<input type="checkbox"/>
Formal salvaging	<input type="checkbox"/>
Contractor	<input type="checkbox"/>
No salvaging planned	<input type="checkbox"/>

**Fatal flaws for the site:**

Indicate which of the following apply to the facility for a waste management activity:

Within a 3000m radius of the end of an airport landing strip	Yes	No
Within the 1 in 50 year flood line of any watercourse	Yes	No
Within an unstable area (fault zone, seismic zone, dolomitic area, sinkholes)	Yes	No

Within the drainage area or within 5 km of water source	Yes	No
Within the drainage area or within 5 km of water source	Yes	No
Within an area adjacent to or above an aquifer	Yes	No
Within an area with shallow bedrock and limited available cover material	Yes	No
Within 100 m of the source of surface water	Yes	No
Within 1 km from the wetland	Yes	No

Indicate the distance to the boundary of the nearest residential  
Indicate the distance to the boundary of the industrial area

metres	area
metres	

#### Wettest six months of the year

November-  April  
May-October

For the wettest six month period indicated above, indicate the following for the preceding 30 years

	Total rainfall for 6 months	Total rainfall for 6 months	Total rainfall for 6 months
For the 1st wettest year			
For the 2nd wettest year			
For the 3rd wettest year			
For the 4th wettest year			
For the 5th wettest year			
For the 6th wettest year			
For the 7th wettest year			
For the 8th wettest year			
For the 9th wettest year			
For the 10th wettest year			

#### Location and depth of ground water monitoring boreholes:

Codes of the boreholes	Borehole locality	Depth (m)	Latitude	Longitude
			° ' "	° ' "
			° ' "	° ' "
			° ' "	° ' "
			° ' "	° ' "
			° ' "	° ' "
			° ' "	° ' "
			° ' "	° ' "

#### Location and depth of landfill gas monitoring test pit:

Codes of the boreholes	Borehole locality	Latitude	Longitude
		° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "

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