FINAL 24G APPLICATION FORM & CHECKLIST

for

BYEVANGER DAM

on

Portion 3 of 36 Buffelsfontein & Portion 66 of 42 Voorbaat, Ladismith

In terms of the

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

Prepared for Applicant: Johannes Gerhardus Nel Familietrust

Date: 2 November 2021

Author of Report: Melissa Mackay
Author Email: mel@cape-eaprac.co.za

Report Reference: KAN557/06
Department Reference: 14/2/4/2/3/D3/8/0035/21
Case Officer: Mr Shafeeq Mallick

Cape EAPrac
Cape Environmental Assessment Practitioners

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Fax: +27 44 874 0432 17 Progress Street, George

www.cape-eaprac.co.za

APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER:

***Cape EAPrac* Environmental Assessment Practitioners**

PO Box 2070

George

6530

Tel: 044-874 0365

Fax: 044-874 0432

Report written & compiled by: **Melissa Mackay**(BTech & ND Nature Conservation), who has fifteen years' experience as an environmental practitioner.

Registrations: **Louise-Mari van Zyl** (MA Geography & Environmental Science [US]; Registered Environmental Assessment Practitioner with the Environmental Assessment Practitioners of South Africa, EAPSA, Registration Number **2019/1444**. Ms van Zyl has over nineteen years' experience as an environmental practitioner.

PURPOSE OF THIS REPORT:

Application for 24G Environmental Authorisation

APPLICANT:

JG Nel Familietrust

CAPE EAPRAC REFERENCE NO:

KAN557/06

SUBMISSION DATE

02 November 2021

FINAL 24G APPLICATION FORM & CHECKLIST

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

BYEVANGER DAM

Portion 3 of 36 Buffelsfontein & Portion 66 of 42 Voorbaat, Ladismith

Submitted for:
Departmental Compliance

Report Issued by:
Cape Environmental Assessment Practitioners

Tel: 044 874 0365
Fax: 044 874 0432
Web: www.cape-eaprac.co.za

PO Box 2070
17 Progress Street
George 6530

ORDER OF REPORT

24G Application Form FINAL

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BETTER TOGETHER.

NEMA SECTION 24G APPLICATION

COMPLETENESS CHECKLIST

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. **(Note: Failure to meet the Regulation 8 will result in rejection of the application)**	
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 **similarly listed** activities in terms of the current EIA regulations (if applicable).	✓
	2.3. A description of the receiving environment **before** commences of the activity(ies).	✓
	2.4. A description of the receiving environment **after** 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	✓
	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)	✓

	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, *inter alia*, notices, adverts etc.	✓
	10.2 Copies of comments and responses included in the application.	✓
	10.2 Comments and Response report attached to the application.	✓
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)* **(if conducted/undertaken)**	✓

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. <u>The contents of this Application Form includes the following:</u>

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
1st 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/D3/8/0027/19
Administrative Fine Reference	

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

File Reference number (Enforcement), if applicable	14/1/1/E3/6/2/3/L961/18
File reference number (EIA), if applicable:	
File reference number (Waste), if applicable:	
File reference number (Other (specify)):	

PART 1

PROJECT TITLE

Byevanger Dam

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~~			

Applicant's details (duplicate this section where there is more than one applicant)			
Applicant Name:	JG Nel Familietrust		
RSA Identity Number/ Passport Number of Applicant, if natural person:			
Name of Firm (if applicable):			
Firm Registration Number:	4444/97		
Contact Person at the Firm:	Mr Stephanus Nel		
List of all (as applicable at the relevant time):	Please insert the names and RSA ID numbers of the relevant persons below – **(In the list below, delete the firms that are not applicable to this application)**		
~~• Directors of a company; or~~ ~~• Members of the board; or~~ ~~• Executive committee or other managing body of a corporate body or parastatal; or~~ ~~• Members of close corporation; or~~ ~~• Partners of a partnership; or~~ • **Trustees of a trust**	Name: Mr Stephanus Nel RSA ID No. 5504255088086		
Postal address:	PO BOX 6		
	Ladismith	Postal code:	6655
Telephone:	0879417562	Cell:	0833817293
E-mail:	fanienel32@gmail.com	Fax:	( )
Project Consultant			
Contact person:			
Postal address:			
		Postal code:	
Telephone:		Cell:	
E-mail:		Fax:	
Name of the Environmental Assessment Practitioner ("EAP") responsible for the application:	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 certified as an Environmental Assessment Practitioners with the Interim Certification Board for Environmental Assessment Practitioners of South Africa (EAPSA).		
Name of the Landowner:	JG Nel Familietrust (Portion 3 of Farm 36 Buffelsfontein)		
Name of the contact person for the land owner (if other):	Mr Stephanus Nel		
Postal address:	PO BOX 6		
	Ladismith	Postal code:	6655
Telephone:	0879417562	Cell:	0833817293
E-mail:	fanienel32@gmail.com	Fax:	( )
Name of the Landowner:	Lofpoort Boerdery (Pty) Ltd (Portion 66 of Farm 42 Lofpoort)		
Name of the contact person for the land owner (if other):			
Postal address:	PO Box 11		
	Ladismith	Postal code:	6655
Telephone:		Cell:	
E-mail:		Fax:	( )
Person in control of land:	JG Nel Familietrust		
Contact person:	Mr Stephanus Nel		
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:	Kannaland Municipality		
Contact person, if known:	Mr Reynold Stevens (Municipal Manager)		
Postal address:	PO BOX 30		
	Ladismith	Postal code:	6655
Telephone	(028) 551 8000	Cell:	
E-mail:	mm@kannaland.gov.za	Fax:	028 551 1766

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):	DR1710 between Km 3 and 4, west of the town of Ladismith and adjacent to the Groot River.
	Portion 3 of 36 Buffelsfontein, Ladismith Portion 42 of 66, Voorbaat, Ladismith
Farm/Erf name(s) & number(s) including portion(s)	3/36 – 251.29ha 42/66 – 64.13ha
Property size(s) (m^2)	±36 006m^2 (3.6ha)
Development footprint size(s) (m^2)	C04200000000003600003 C04200000000004200066
SG21 Digit code(s)	DR1710 between Km 3 and 4, west of the town of Ladismith and adjacent to the Groot River.

Property boundary:

Portion 3 of 36:

Point	Latitude (S)	Longitude (E)

1	33°	28'	27"	South	21°	02'	19" East
2	33°	28 '	32 "	South	21°	02'	32" East
3	33°	28'	52"	South	21°	02'	34" East
4	33°	29'	17"	South	21°	02'	12" East
5	33°	29'	18"	South	21°	03'	44" East

Portion 42 of 66

Point	Latitude (S)				Longitude (E)			
1	33°	28'	20"	South	21°	03'	36"	East
2	33°	29'	01"	South	21°	03'	40"	East
3	33°	29'	04"	South	21°	03'	59"	East
4	33°	28'	55"	South	21°	04'	08"	East
5	33°	28'	51"	South	21°	03'	55"	East
6	33°	28'	20"	South	21°	03'	54"	East

The co-ordinates for the site boundary are:

Point	Latitude (S)				Longitude (E)			
1	33°	28'	41"	South	21°	03'	35"	East
2	33°	28'	44"	South	21°	03'	34"	East
3	33°	28'	48"	South	21°	03'	33"	East
4	33°	28'	49"	South	21°	03'	34"	East
5	33°	28'	48"	South	21°	03'	39"	East
6	33°	28'	48"	South	21°	03'	39"	East
7	33°	28'	42"	South	21°	03'	36"	East

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:	DR1710 between Km 3 and 4.

Magisterial District or Town:	Ladismith		
Closest City/Town:	Ladismith	Distance	±20(km)
Zoning of Property:	Agriculture		

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?		

It must be noted that there is a servitude for a dam registered on Portion 3 of 36 for a Dam Easement, Reference ID 2168/2010001.

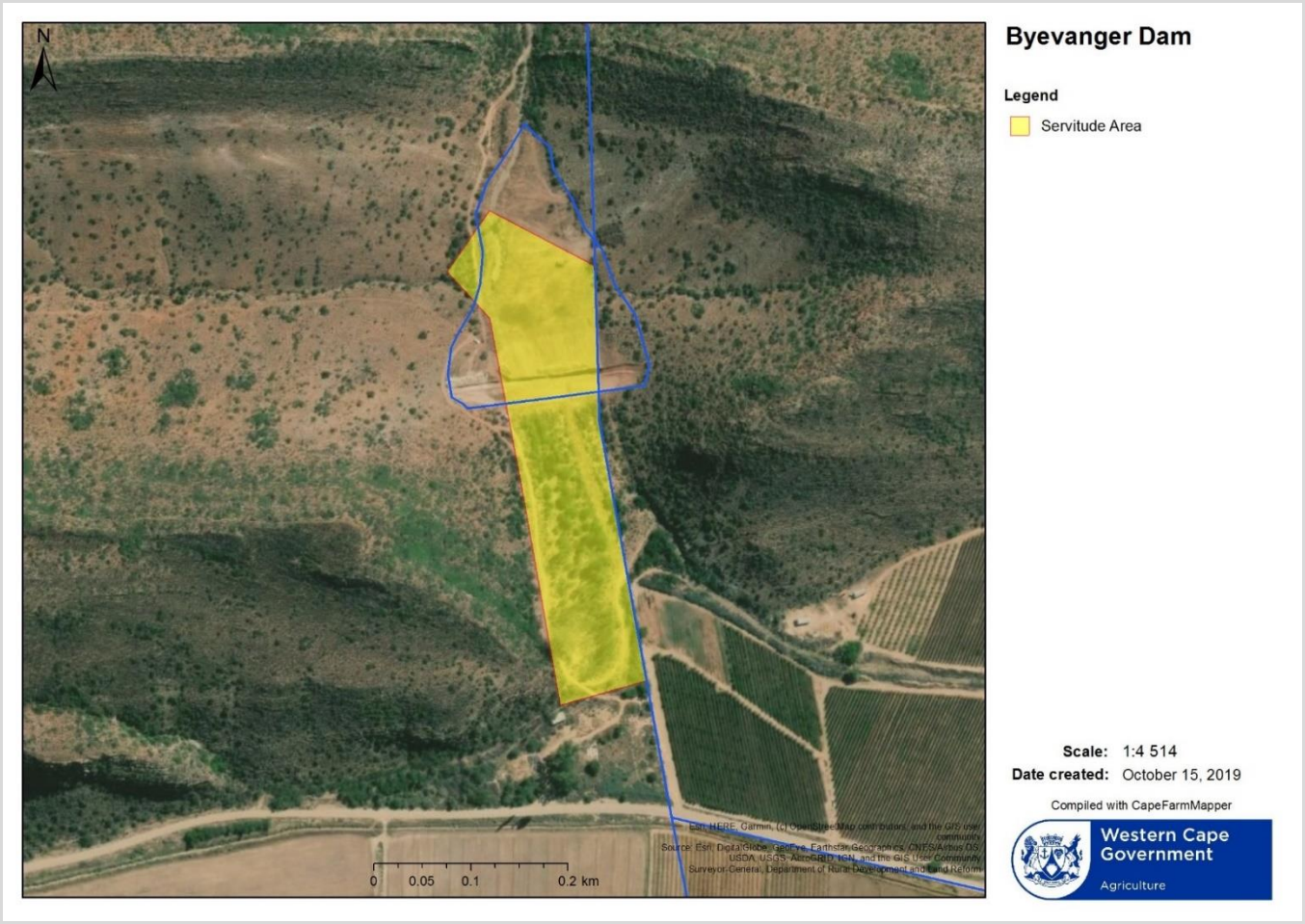

Figure 1: Dam Servitude (CapeFarmMapper, 2019)

Is a rezoning application required?	~~YES~~	**NO**
Is a consent use application required?	~~YES~~	**NO**

Locality map:	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: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; • the prevailing wind direction; and • 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)
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 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. **Note:** 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 *Infrastructure Development Act, 2014 (Act No. 23 of 2014)*.

2. APPLICATION HISTORY

(Cross out the appropriate box "☒" 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 any one of the previous application/s on the property been approved **or** 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 Stephanus Nel Signature: (SNEL)

Place: Ladismith WC Date: 29/10/2021.

EAP (Full names): Ms Melissa Mackay Signature: Melissa Mackay

Digitally signed by Melissa Mackay
DN: cn=Melissa Mackay, o=Cape EAPrac, ou, email=mel@cape-eaprac.co.za, c=ZA
Date: 2021.11.02 10:46:01 +02'00'

Place: Date:

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

1.1 Applicable EIA listed activities

ECA EIA Contraventions: between 08 September 1997 and end of 09 May 2002			
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			
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
ECA EIA Contraventions: between 10 May 2002 and end of 02 July 2006			
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.			
NEMA EIA Contraventions: between 03 July 2006 and end of 01 August 2010			
Activities unlawfully commenced with on or after 03 July 2006 and before end 01 August 2010: EIA regulations promulgated in terms of the NEMA			
GN R386 Activity No(s): (Listing Notice 1 of 2006)	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): (Listing Notice 2 of 2006)	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
NEMA EIA Contraventions: between 02 August 2010 and end of 07 December 2014			
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.			

~~GN No. R. 544 Activity No(s): **(Listing Notice 1 of 2010)**~~	~~Describe the relevant listed activity(ies) in writing as per GN No. R. 544 of 2010 ("NEMA 2010 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~~
~~GN No. R. 545 Activity No(s): **(Listing Notice 2 of 2010)**~~	~~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): **(Listing Notice 3 of 2010)**~~	~~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~~
NEMA EIA Contraventions: on or after 08 December 2014			
Activities unlawfully commenced with on or after 08 December 2014: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998,			
GN No. R. 327 Activity No(s): **(Listing Notice 1 of 2014)**	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)(c)	The development of – (i) **Dams or weirs, where the dam or weir, including associated infrastructure and water surface area, exceeds 100m²;** or (ii) Infrastructure or structures with a physical footprint of 100m² or more; Where such development occurs – (a) **Within a watercourse**; (b) In front of development setback; or If no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse.	The applicant constructed a dam within a watercourse tributary of the Groot River. The dam is approximately 3.6ha in size, with a wall height of ±11m.	March 2018
19	The infilling or depositing of any material of more	The applicant constructed a dam within a watercourse	March 2018

	than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from a watercourse.	tributary of the Groot River. The dam is approximately 3.6ha in size, with a wall height of ±11m.	
27	The clearance of an area of 1ha or more, but less than 20ha of indigenous vegetation.	The applicant constructed a dam within a watercourse tributary of the Groot River. The dam is approximately 3.6ha in size, with a wall height of ±11m.	March 2018
~~GN No. R. 325 Activity No(s):~~ **~~(Listing Notice 2 of 2014)~~**	~~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):~~ **~~(Listing Notice 3 of 2014)~~**	~~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~~

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:~~

~~Waste Management Activity Contraventions: On or after 03 July 2007 up to end of 28 November 2013~~			
~~Activities unlawfully commenced with in terms of GNR 718 of 03 July 2009 under the National Environmental Management Waste Act, Act 59 of 2008~~			
~~GN No. 718 – Category A Activity No(s):~~	~~Describe the relevant Category A 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 Category B 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~~

~~Waste Management Activity Contraventions: On or after 29 November 2013~~			
~~Activities unlawfully commenced with in terms of GNR 921 of 29 November 2013 under the National Environmental Management Waste Act, Act 59 of 2008,~~			
~~GN No. 921 - Category A Activity No(s):~~	~~Describe the relevant Category A 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 Category B 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.

The similarly listed activities in terms of the EIA Regulations promulgated in terms of the NEMA, Act 107 of 1998,		
GN No. R. 327 Activity No(s): **(Listing Notice 1 of 2014)**	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): **(Listing Notice 2 of 2014)**	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): **(Listing Notice 3 of 2014)**	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 as well as the original date of commencement if the application is an upgrade.	**NEW**	UPGRADE
The dam was a new development on a non-perennial water course north of an existing dam located on the Groot River.		

(b) Clearly describe the activity and associated infrastructure commenced with, indicating what has been completed and what still has to be completed.

The applicant had an existing earth wall dam on the non-perennial watercourse that failed. When looking at repairing the dam, they moved the dam wall northwards into the valley in order to make use of the steeper area and better material. The dam was also expanded from its original size. The image below from 2003 shows the existing dam in blue with the new dam area northwards.

The second image is dated May 2020 and shows the semi completed new dam.

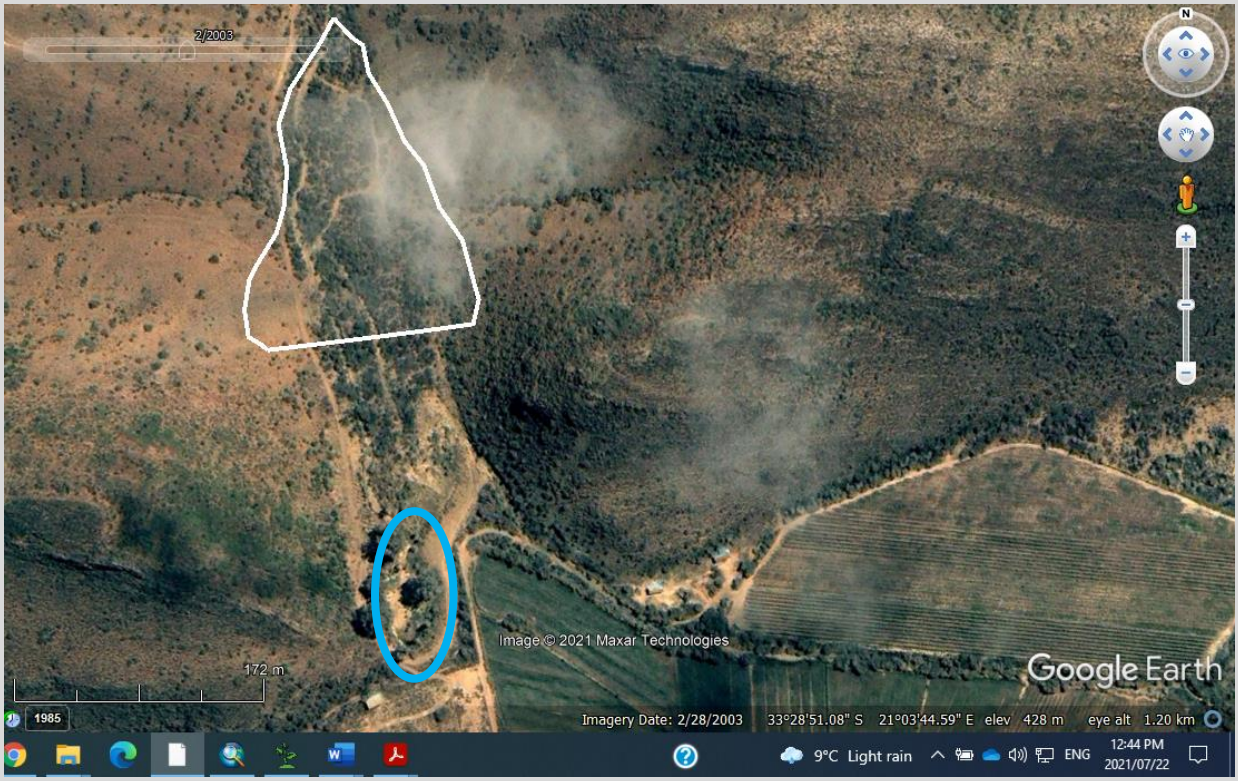

Figure 2: Original earth dam from 2003 (Google Earth Pro, 2021)

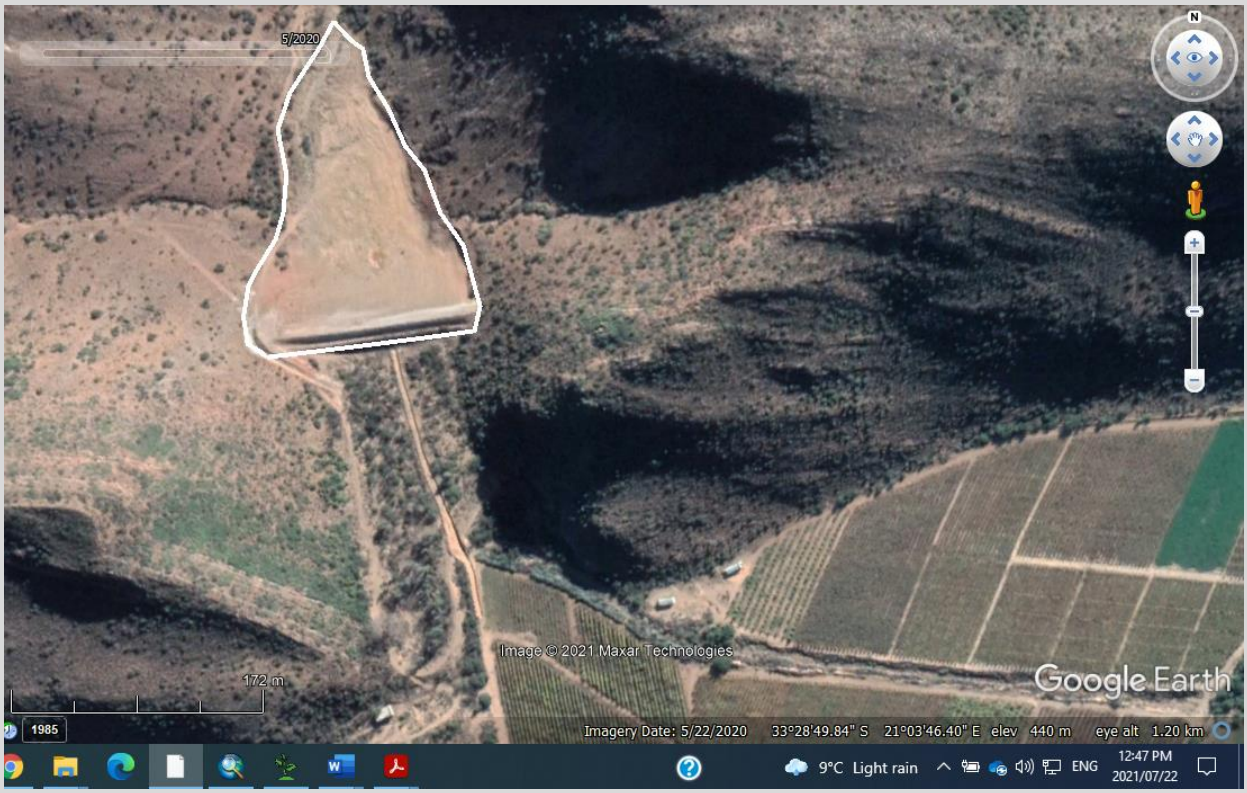

Figure 3: New dam 2020 (Google Earth Pro, 2021)

(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:		
The activity entails the unlawful construction of a dam of approximately 3.6ha on a non-perennial watercourse draining into the Groot River on Portion 3 of 36 Buffelsfontein and Portion 42 of 66 Voorbaat. The dam is a replacement of an existing dam that was previously located in the Groot River that was washed away.		
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	~~YES~~	**NO**
Provide brief description		

(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):	m^2
Indicate the area that has been transformed / cleared to allow for the activity as well as associated infrastructure	36 006m^2
Total area:	36 006m^2

4. SITE ACCESS

Was there an existing access road?	**YES**	~~NO~~
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:		
The existing access road is a gravel farm access road.		

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	Comment received from HWC – no further studies required.	14/09/2020
National Water Act (Act 36 of 1998)	Department of Water & Sanitation	Water Use License (change of water allocation, storage of water, impeding water & altering of beds or banks of a watercourse)	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:

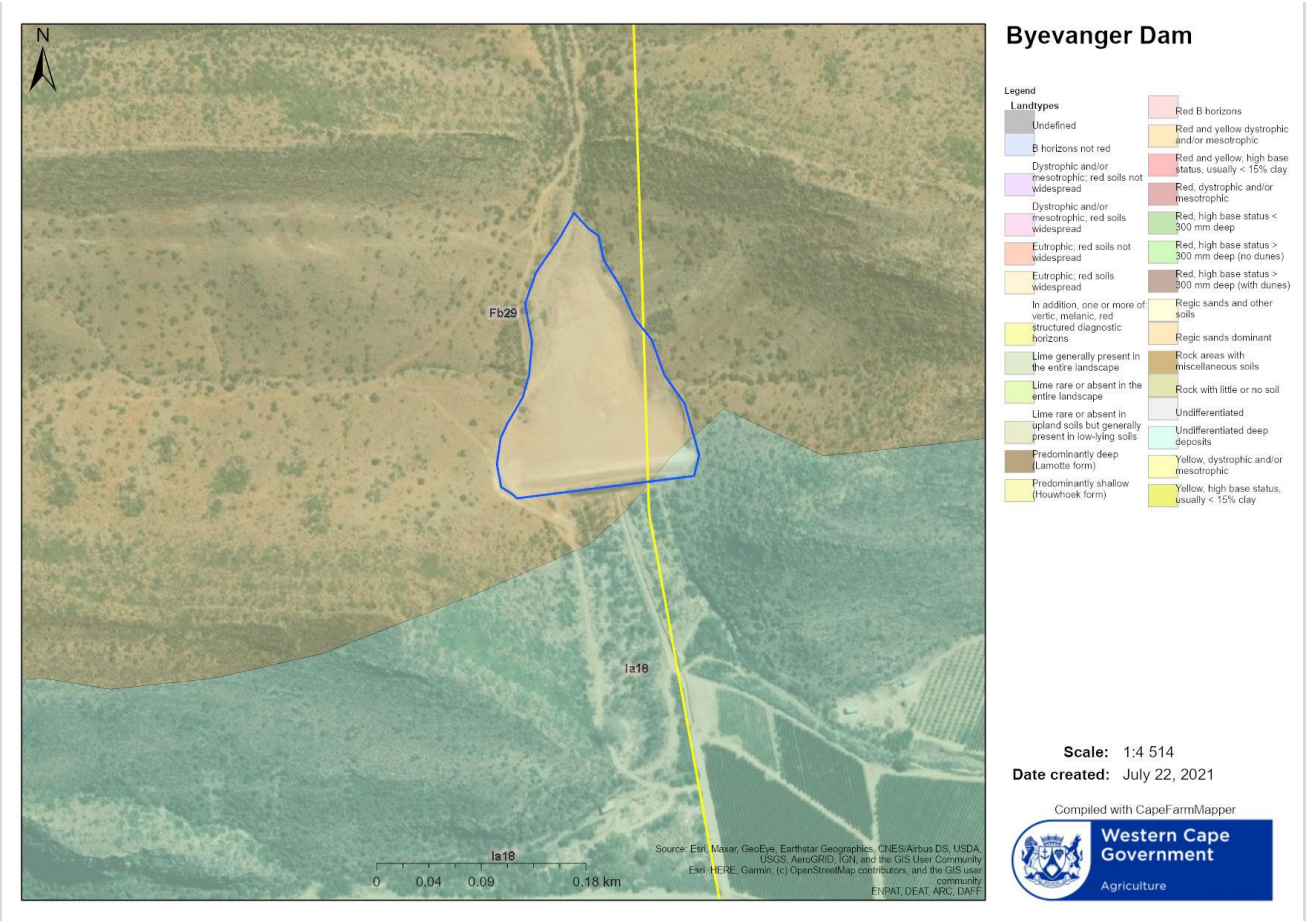

Figure 4: Land Types (CapeFarmMapper, 2021)

Land Types

Land Type:	Fb29
Description:	Lime rare or absent in upland soils but generally present in low-lying soils
Class:	GLENROSA AND/OR MISPAH FORMS (other soils may occur)
Area (Ha):	12906.446

Land Type:	Ia18
Description:	Undifferentiated deep deposits
Class:	MISCELLANEOUS LAND CLASSES
Area (Ha):	2675.302

Soils & Geology (ENPAT)

Land Type:	Fb29
Soil:	Glenrosa and/or Mispah forms (other soils may occur), lime rare or absent in upland soils but generally present in low-lying soils
Geology:	Mainly siltstone, shale, sandstone and quartzitic sandstone of the Witteberg Group as well as siltstone, shale and sandstone of the Bokkeveld Group, occasional talus

Land Type:	Ia18
Soil:	Miscellaneous land classes, undifferentiated deep deposits
Geology:	Alluvium mainly covering siltstone, shale and sandstone of the Bokkeveld and Witte- berg Groups

Soil Types

Symbol:	EB (Fb29)
Class:	Soils with limited pedological development

Description:	Soils with minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils. Lime generally present in part or most of the landscape
Depth:	< 450 mm
Clay:	< 15%

Symbol:	EE (Ia18)
Class:	Soils with limited pedological development
Description:	Soils with negligible to weak profile development, usually occurring on recent flood plains
Depth:	>= 750 mm
Clay:	< 15%

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 dam has a slope of between ±0.57 and 19.05 degrees or ±0.99 – 34.53% gradient. The calculation below shows the general gradient ratio as being 1:100.52– 1: 2.896. (http://www.1728.org/gradient.htm, accessed 22 July 2021).

The edges of the dam are reflecting as steep slopes.

INPUT Angle In Degrees	0.57	
**********		

CALCULATE

Using Rise / Run	1 in 100.52 Ratio	0.99487 % Grade
Using Rise / Hypotenuse	1 in 100.52 Ratio	0.99482 % Grade
**********	**********	**********

INPUT Angle In Degrees	19.05	
**********		

CALCULATE

Using Rise / Run	1 in 2.896 Ratio	34.53 % Grade
Using Rise / Hypotenuse	1 in 3.0638 Ratio	32.639 % Grade
**********	**********	**********

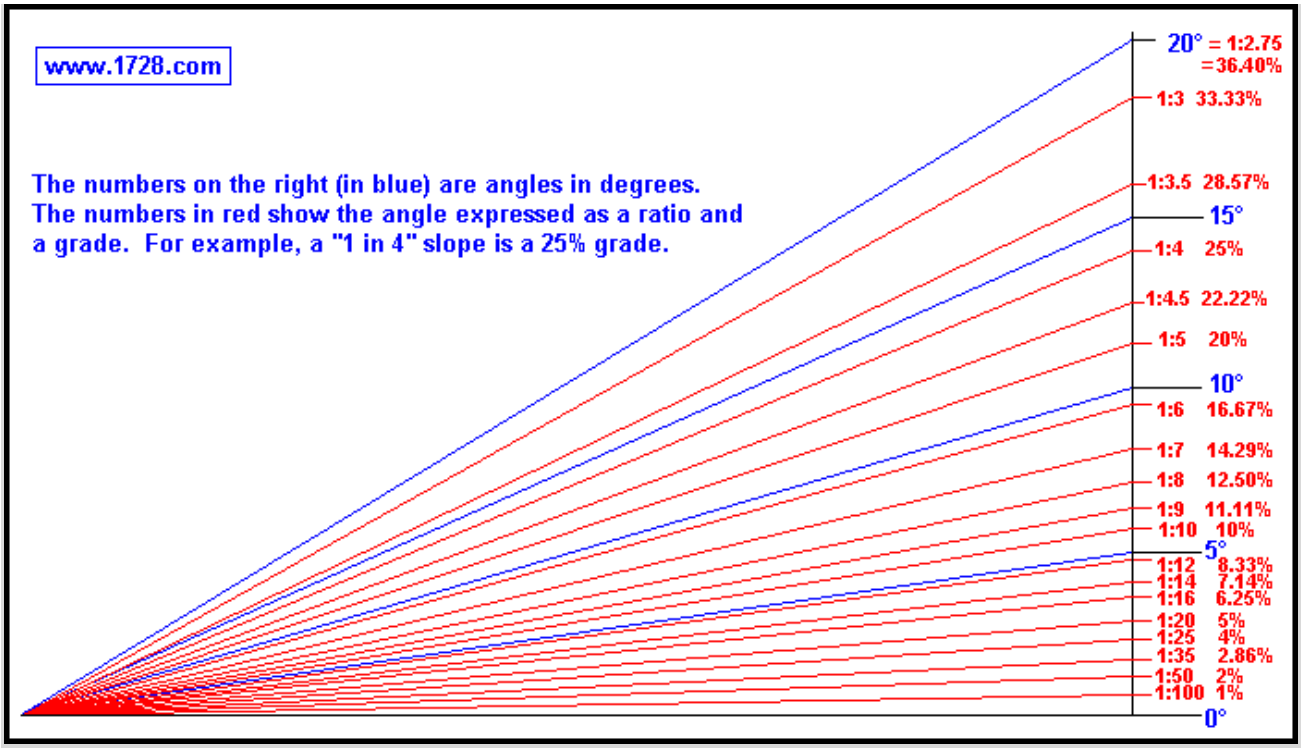

Figure 5: Gradient explanation http://www.1728.org/gradient.htm (Accessed 22 July 2021)

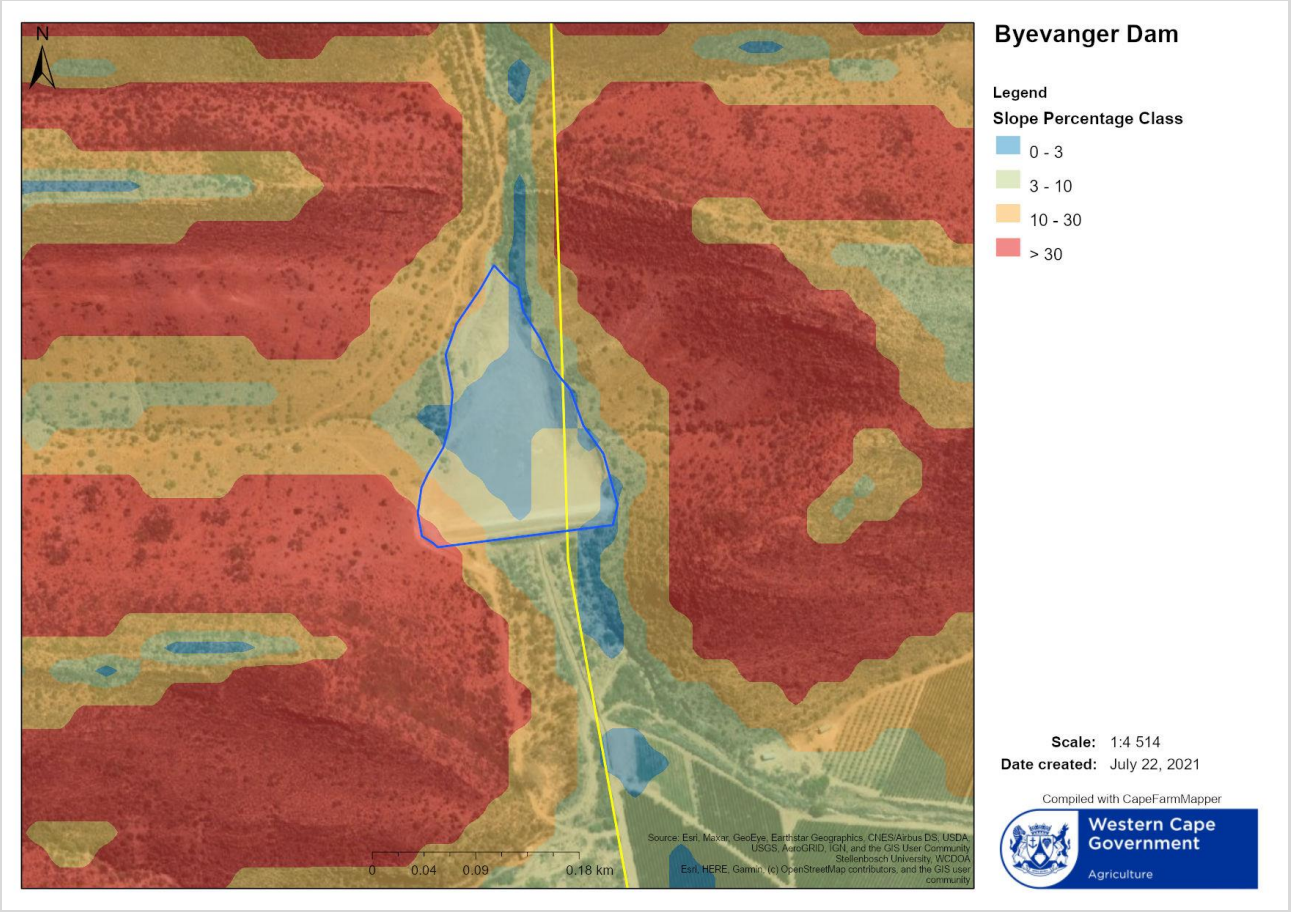

Figure 6: Slope Classification (CapeFarmMapper, 2021)

Photo 1: Dam basin 2019

3. LOCATION IN LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/mountain~~	~~Closed valley~~	**Open valley**	Plain	Undulating plain/low hills	Dune	Sea-front	Other
If other, please describe									
The dam is located in a non-perennial open valley that flows towards the Groot River. The site is at the footfills of the Klein Swartberg mountains.									

Figure 7: North facing location in landscape (Google Earth Pro, 2021)

Figure 8: East facing location in landscape (Google Earth Pro, 2021)

Figure 9: South facing location in landscape (Google Earth Pro, 2021)

Figure 10: West facing location in landscape (Google Earth Pro, 2021)

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 ("☒") the appropriate boxes)?

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

4.2 Groundwater, Soil and Geological stability of the site (POST-COMMENCEMENT)

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

A Freshwater Impact Assessment and a Hydrology study has been undertaken. The reports are available an Appendix to this document.

Groundwater is indicated as low according to CapeFarmMapper.

Aquifer Type and Yield

Classification: Fractured 0.5 - 2.0 l/s

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 ("☒") the appropriate boxes)?

Perennial River	~~YES~~	**NO**	~~UNSURE~~
Non-Perennial River	**YES**	~~NO~~	~~UNSURE~~
Permanent Wetland	~~YES~~	**NO**	~~UNSURE~~
Seasonal Wetland	~~YES~~	**NO**	~~UNSURE~~
Artificial Wetland	~~YES~~	**NO**	~~UNSURE~~

Estuarine / Lagoonal wetland	~~YES~~	**NO**	~~UNSURE~~

5.2 SURFACE WATER (POST-COMMENCEMENT)

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

Perennial River	~~YES~~	**NO**	~~UNSURE~~
Non-Perennial River	**YES**	~~NO~~	~~UNSURE~~
Permanent Wetland	~~YES~~	**NO**	~~UNSURE~~
Seasonal Wetland	~~YES~~	**NO**	~~UNSURE~~
Artificial Wetland	~~YES~~	**NO**	~~UNSURE~~
Estuarine / Lagoonal wetland	~~YES~~	**NO**	~~UNSURE~~

The surface water pre an post commencement remain the same. This region has been gripped by a serious drought for several years, to the extent that a State of Disaster has recently been declared. The dam is a vital part of the socio economic aspect of this area, in that it not only will catch some of the flow from the non-perennial watercourse, but will also provide for storage from the Buffelsrivier Irrigation Scheme. The scheme provided the farm in the past with 7 900m³ water three times a year.

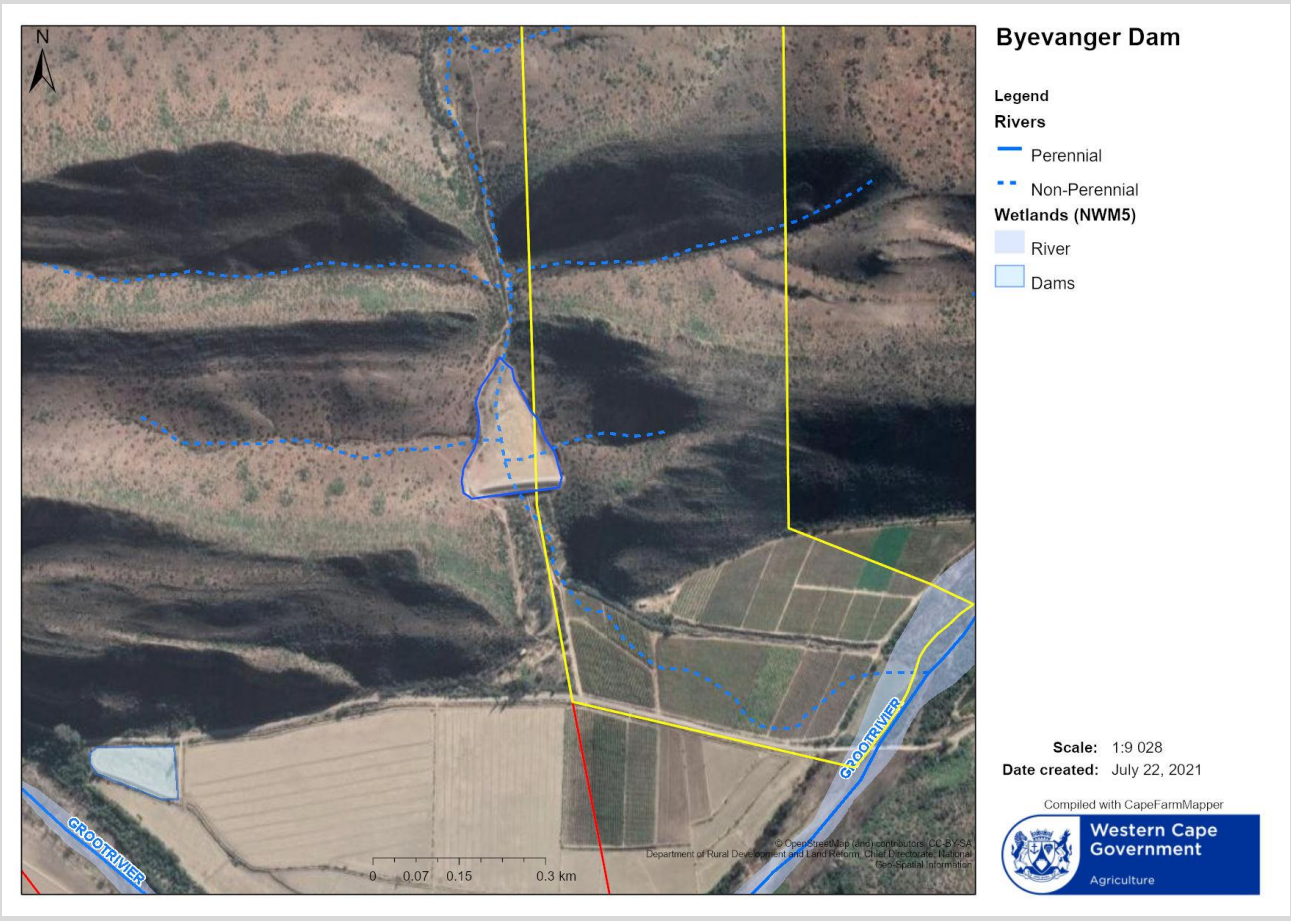

Figure 11: Water Resources (CapeFarmMapper, 2021)

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. 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 ("☒") 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: The vegetation on the site is mapped as Matjiesfontein Quartzite Fynbos and Western Gwarrieveld. There are scattered aliens in and around, probably due to disturbance associated with agriculture.	~~Describe the vegetation type above:~~
~~Provide ecosystem status for above:~~	Provide ecosystem status for above: Matjiesfontein Quartzite Fynbos – LC (2011) & LC (2018) Western Gwarrieveld – LC (2011) & LC (2018)	~~Provide Ecosystem status for above:~~
Indigenous Vegetation in an ecological corridor or along a soil boundary / interface	~~Veld dominated by alien species~~	~~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)~~	~~Cultivated land~~	~~Paved surface~~

(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 (NNR)	

(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	75%	The majority of the dam site was indigenous vegetation with small amounts of alien invasive.
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	The majority of the dam site was indigenous vegetation with small amounts of alien invasive.
Degraded (includes areas heavily invaded by alien plants)	%	

Transformed (includes cultivation, dams, urban, plantation, roads, etc)	5%	A two spoor road follows the valley and was in the area of the new dam.

(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 in the watercourse was mostly indigenous with a series of two spoor roads in the valley.

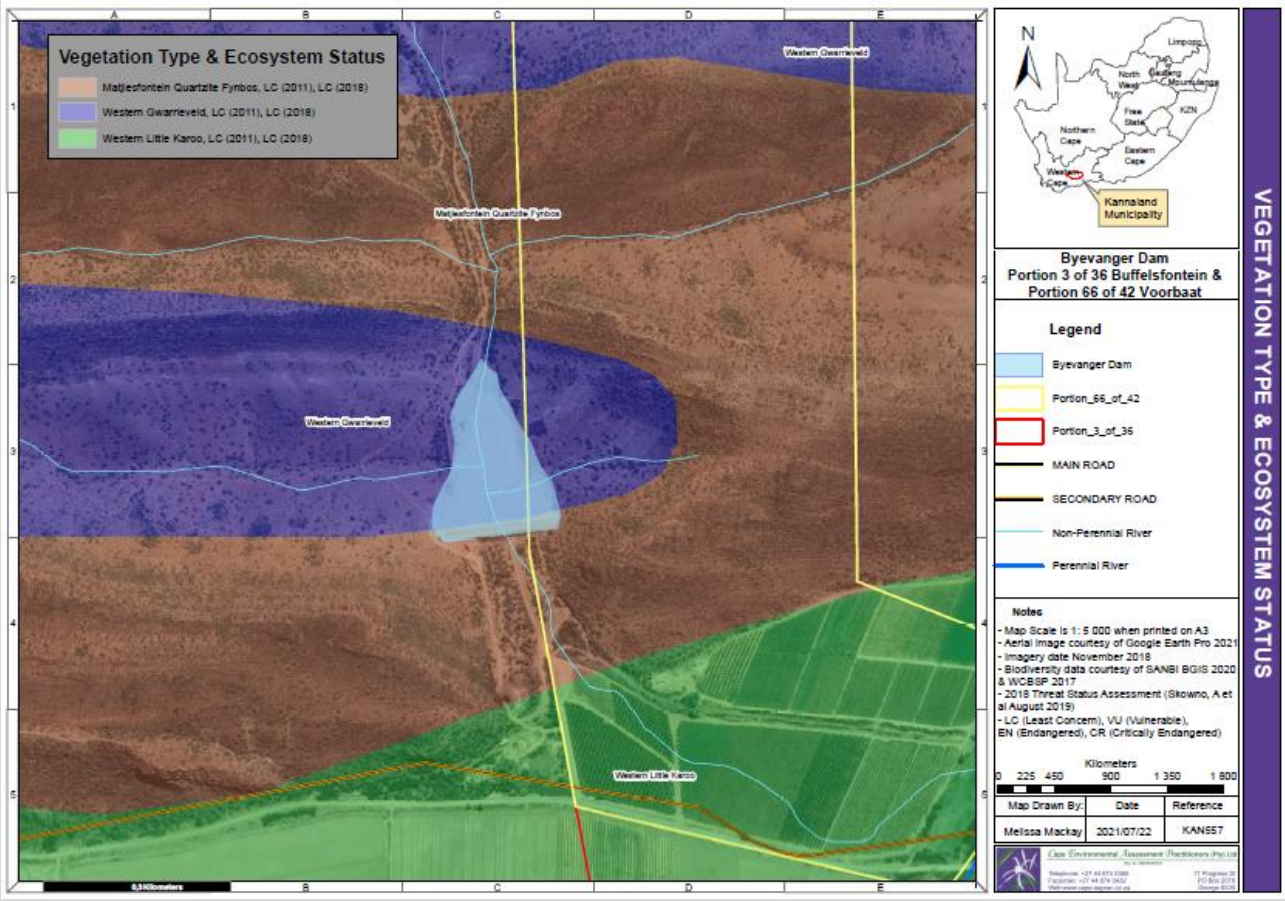

Figure 12: Vegetation Type & Ecosystem Status

6.2 Vegetation AND/OR GROUNDCOVER (Post-commencement)

Cross out ("☒") 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:~~	

~~Provide ecosystem status for above:~~	~~Provide ecosystem status for above:~~	~~Provide Ecosystem status for above:~~
~~Indigenous Vegetation in an ecological corridor or along a soil boundary / interface~~	~~Veld dominated by alien species~~	~~Distinctive soil conditions (e.g. Sand over shale, quartz patches, limestone, alluvial deposits, termitaria etc.) – describe~~
Bare soil	**Building or other structure (Dam)**	~~Sport field~~
~~Other (describe below)~~	~~Cultivated land~~	~~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)~~	~~%~~	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100%	The dam has led to the complete transformation of the area it impacts on (±3.1ha)

(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 dam has led to the removal of all vegetation, including alien vegetation within its basin.

Photo 2: Dam basin

6.3 Vegetation / Groundcover Management

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

The applicant has attempted to plant indigenous spekboom on disturbed areas outside of the dam basin. The drought unfortunately has meant that rehabilitation efforts are thwarted as no irrigation can be provided to the plants. The dam itself has been dry for the last few years.

Photo 3: Rehabilitation Attempt

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~~	**Dam or reservoir**
~~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~~	**Agriculture**	**River, stream or wetland**	~~Nature conservation area~~
Mountain, koppie or ridge	~~Museum~~	~~Historical building~~	~~Graveyard~~	~~Archaeological site~~
Other land uses (describe):				

(a) Please provide a description.

According to the heritage specialist, both early loan farms Voorbaat and Buffelsfontein, then situated within the Fieldcornetcy of Groot Swartberg, were occupied long before first being surveyed during the 19th century. The **farm Buffelsfontein**, then part of the Swellendam District, was first surveyed during 1832

and comprised an area of 2,090 morgen (± 1,790 ha)1. At the time land use of the farm included two cultivated fields (±13,5 morgen and 2,5 morgen, respectively), a "garden" (± 3 morgen), extensive grazing grounds and unutilised areas described on the diagram as being "waste land".

During its tenure by the entity Vanzylsdamme Boerdery (Pty) Ltd (1973 – 2002) this farm was owned and developed by Professor Francois Daniel du Toit ("Francie") van Zijl, who also established a vineyard and produced wine here. Professor van Zijl was a well-known Cape Town-based surgeon, administrator and businessman (Warren, 2004). He served as Head and then Dean of the Surgery of the University of Stellenbosch's Medical Faculty based at the current Tygerberg Hospital Estate, Parow (TGB HE) until his retired in 1967. The boulevard flanking the western boundary of the TGB HE was named after Prof van Zijl. The subject farm is still referred to as "Vanzylsdamme".

Figure 13: Land use character (Perception Planning, 2020)

It has thus been under various types of agriculture for centuries. The moving of the dam from its original position to its current position does not make any change to the land use character of the site.

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

Cross out ("☒") 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~~	**Dam or reservoir**
~~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~~	**Agriculture**	**River, stream or wetland**	~~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 ("☒") 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~~	**Dam or reservoir**
~~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~~	**Agriculture**	**River, stream or wetland**	~~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.

The following is taken from the Socio-Economic Impact Report drafted by MA & Associates for the 24G & WULA processes:

The Byevanger dam is an in-channel dam. The Trustees/owners stated that the objective of building the dam was to replace the broken Rooikrans dam. The Rooikrans dam, existed close to the current dam. Storage in the Rooikrans dam was verified for 10000m3. It was an off-channel dam and was situated in a lower position in the valley than the Byevanger dam. It was also an older dam that was built before the Floriskraal dam was built (1957). Floods in the valley above the dam damaged the old dam wall and lands below the dam. In 2014 it was damaged in a flood to such an extent that it could not be repaired. The owners decided after the last floods to move the dam wall upstream to get a better position for the wall and overflow of the dam in case of floods.

The J G Nel Family Trust owns the farm Vanzylsdamme. The production company is Vanzylsdamme Boerdery (Pty)Ltd.

The farm VanZylsdamme consists of 49 divisions, that make up a total of 9951, 6954 hectares.

The Trust rents 40 hectares of the farm to the neighbour, Mr ZJ Tua of the farm Lofdal, and the rest of the farm to the company, Vanzylsdamme Boerdery (Pty)Ltd.

The neighbour Mr Toua is the owner of the farm Lofpoort. He bought Section 66 of Voorbaat 42 on 1/3/2015. A dam servitude was registered at that stage on section 3 of the farm Buffelskloof 36 (Registered on 29/06/2010). The Byevanger dam is situated partly on 66/42 - Mr Toua gave permission for the construction and water storage on his farm. Verbal confirmation was that the servitude entitles Mr Toua to 1/3 of the water in the dam.

VanZylsdamme (Pty)Ltd rents the land from the JG Nel Familie Trust and does not own any land. The trustees of the JG Nel Familie Trust stated that no land may be sold by any trustee. The Trust is willing to rent land to the Association if a viable option for empowerment is identified. VanZylsdamme (Pty)Ltd will assist the Association to become commercial farmers. It is also exploring the possibility of making shares in the new pomegranate pack shed available for the Association.

VanZylsdamme (Pty)Ltd has been involved in setting up the Dam Worker Association, a Partnership with 5 Partners. All the Partners are employees on the farm and part of the management team. They are individuals who did not have voting rights in South Africa before 1994.

The farm employs thirty-seven (37) permanent staff, of which twenty-one (21) are men and sixteen (16) women. Nineteen (19) of the permanent staff are youth. Twenty (20) temporary staff is employed fulltime for 9 months of the year. Ten (10) of the temporary staff are youth.

There are thirty-five (35) staff houses on VanZylsdamme. All the houses have running water and either flushing or VIP toilets. All the houses have electricity. One hundred and thirteen (113) adults and forty (40) children live on the farm. Thirty-two (32) are school going children. Twenty-one (21) are pensioners and nine (9) receive disability grants. Six (6) are female-headed households.

The Trust is willing to rent land to the Association if a viable option for empowerment is identified. VanZylsdamme (Pty)Ltd will assist the Association to become commercial farmers. It is also exploring the possibility of making shares in the new pomegranate pack shed available for the Association. The Contract between JG Nel Familie Trust, VanZylsdamme (Pty)Ltd and the Dam Workers Association is in the process of being finalized

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 dam provides some additional water security to the farming enterprises but does not change the agricultural context by very much, given its relatively small size.

MA & Associates state the following:

The agricultural and employment status after commencement of the unlawful activity is unchanged from before the commencement. The economic status after commencement of the unlawful activity is changed from before the commencement. R1 314019 was spent in the regional economy to build the dam.

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 m² 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 m² 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:	A Heritage specialist study was undertaken and found that the proposal would not impact on any heritage resource of cultural significance and that no further heritage-related studies would be warranted in this instance. This has been confirmed by Heritage Western Cape in their correspondence of 14 September 2020 included in Appendix		
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	UNSURE	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

Yes, the property is zoned Agriculture and dams form an integral part of the functioning of agricultural entities. The new dam takes the place of an old earth wall dam that was located approximately 140m south in the same watercourse.

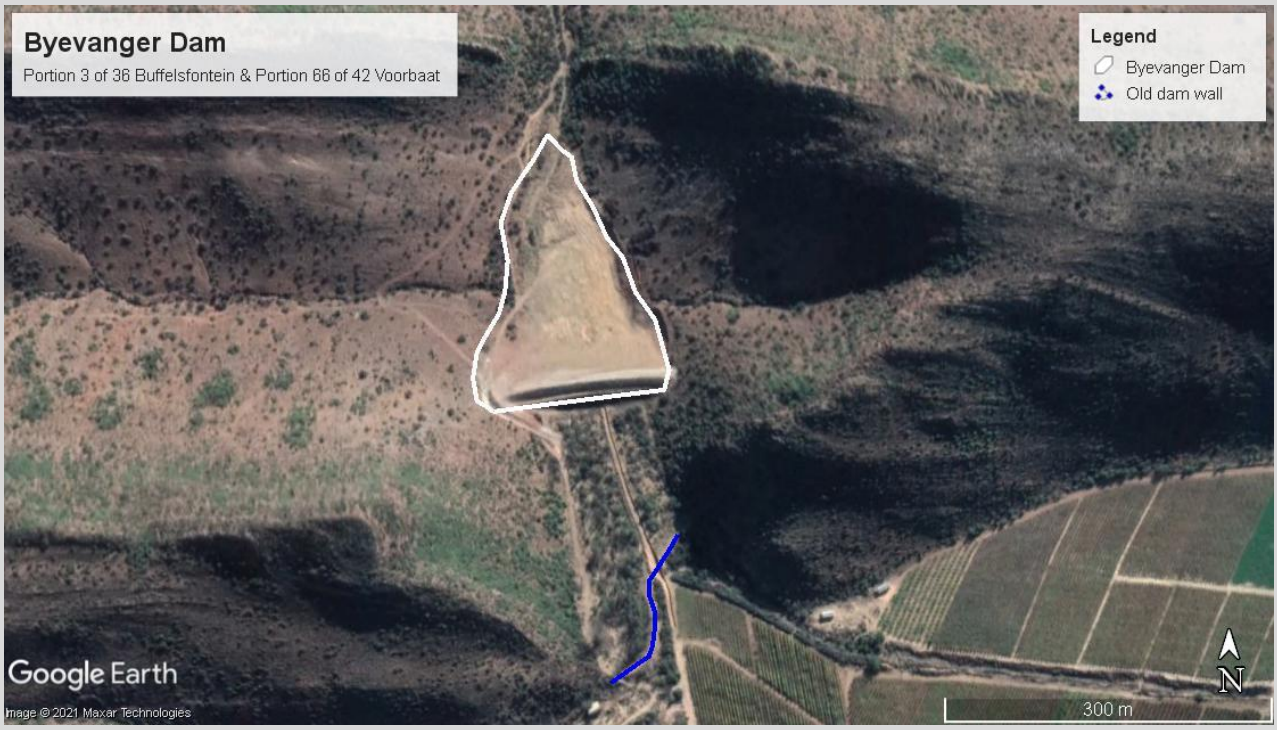

Figure 14: Location of old and new dams (Google Earth Pro, 2021)

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 Western Cape Government Socio-economic Profile 2018 for Kannaland Municipality stated that poverty levels increased between 2011 and 2015 according to Statistics South Africa in 2017 (p 20-27). The Kannaland Municipal area showed an increase in the population in the dependency ratio in the period 2011 to 2019 with a growth from 57,5% in 2011 to 60,16% in 2019. It has an unemployment level of 17,3%. The agricultural sector (Agriculture, Forestry and Fishing) contributes 17% to the GDPR according to the IDP. 34% of labour in the primary sector works in the agricultural sector. The the 2nd Review of the IDP 2017-2022 Kannaland Municipality points out that the Kannaland Municipal areas are dependent on the agricultural sector. The Key Performance Area 4 of the IDP is: *To facilitate economic growth and social and community development.* The relevant outcomes are: • Reducing poverty • Creating opportunities for growth and development in the rural area sector. The IDP (p96-98) refers to the Integrated Rural Development Strategy of the National Government that states that rural areas over the world tend to have similar characteristics and the Kannaland Municipality area is characterised by these similar factors: • Factor 2 is that agriculture is the dominant economic sector. • Factor 5 is that people living in rural areas face a set of factors that pose major changes to development. • Factor 7 is that the specific economic conditions in rural areas result in fewer opportunities than in non-rural locations. It further states that policies have consistently discriminated against agriculture through high levels of taxation and other macro-economic policies that have adversely affected agricultural performance and the rural tax base. The Kannaland municipality as a rural municipality declares in the IDP(p99) that it will promote the stimulation of agricultural production with a view to contributing to food security and promoting the enhancement of rural livelihoods. It also states as a general priority issue that it focuses on water as a general priority issue, and states that agricultural water users had a low priority in the current environment, but that the severe impact of the recent drought brought the importance of irrigation to the forefront, not only to boost food production but also to provide vital support with respect to employment in the industry. The IDP points out (p92) that economic pressures in the agricultural sector over the past few years forced farm workers to migrate to towns where in most cases these families became indigents. Growth in the sector recovered and peaked in 2014 before the drought started, having an impact from 2015 onwards. The Plan states that the severity of the current drought has re-emphasised the importance of a vibrant and sustainable agricultural sector. The IDP (p101) highlights the importance of education and training of farm workers. It contributes to higher productivity, better communication and job satisfaction and improves the quality of human capital. The IDP states (p21) that the municipality will introduce improved processes in the agricultural sector to support inclusive participation in agricultural value chain and fostering an environment conducive to local and regional private sector investment.			
Spatial Development Framework of the Local Municipality	**YES**	~~NO~~	~~Please explain~~

The properties are identified as agricultural properties and zoned as such. The dam replaces a previously existing dam that formed part of the agricultural business of the applicant.			
Approved Structure Plan of the Municipality	~~YES~~	~~NO~~	~~Please explain~~
Not relevant			
An Environmental Management Framework (EMF) adopted by the Department	~~YES~~	**~~NO~~**	~~Please explain~~
Not applicable.			
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~~
Yes, the property is zoned Agriculture and dams form an integral part of the functioning of agricultural entities. The new dam takes the place of an old earth wall dam that was located approximately 140m south in the same watercourse.			

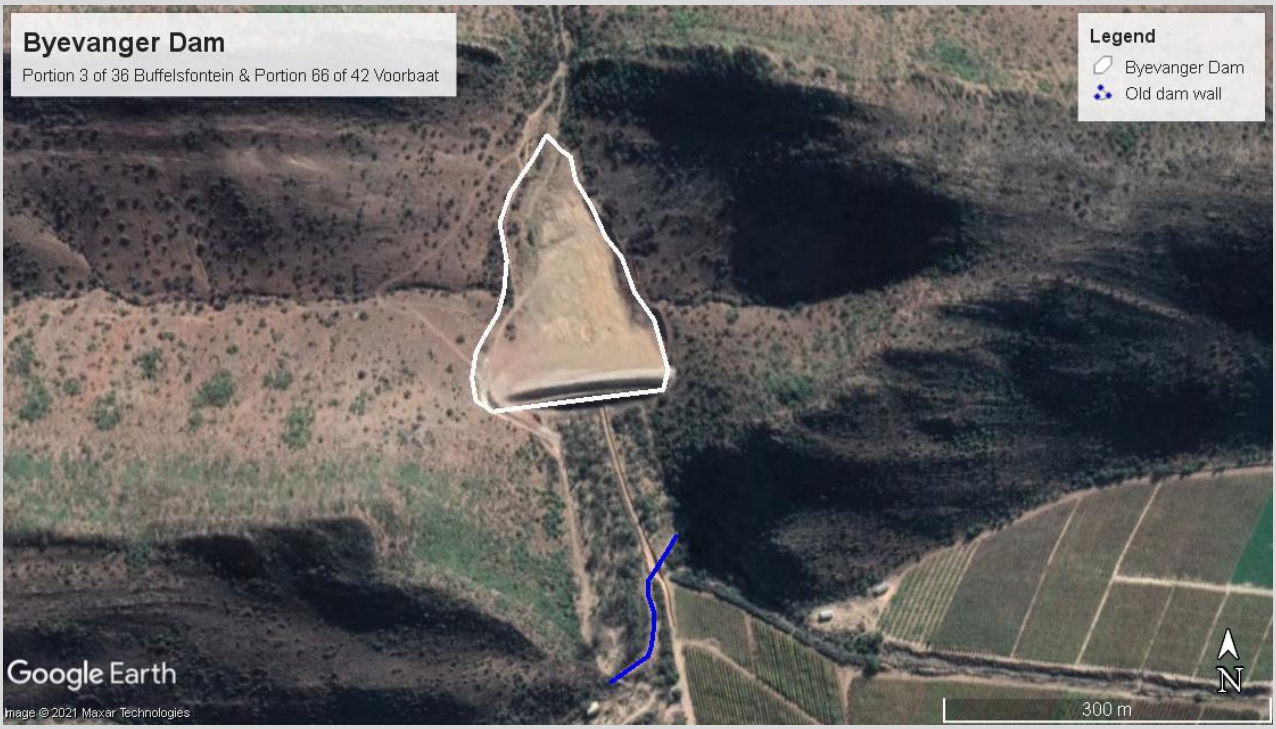

Figure 15: Location of old and new dams (Google Earth Pro, 2021)

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 urban edge does not apply.			
(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 Western Cape Government Socio-economic Profile 2018 for Kannaland Municipality stated that poverty levels increased between 2011 and 2015 according to Statistics South Africa in 2017 (p 20-27). The Kannaland Municipal area showed an increase in the population in the dependency ratio in the period 2011 to 2019 with a growth from 57,5% in 2011 to 60,16% in 2019. It has an unemployment level of 17,3%.

The agricultural sector (Agriculture, Forestry and Fishing) contributes 17% to the GDPR according to the IDP. 34% of labour in the primary sector works in the agricultural sector. The the 2nd Review of the IDP 2017-2022 Kannaland Municipality points out that the Kannaland Municipal areas are dependent on the agricultural sector.

The Key Performance Area 4 of the IDP is:

To facilitate economic growth and social and community development. The relevant outcomes are:

• Reducing poverty

• Creating opportunities for growth and development in the rural area sector.

The IDP (p96-98) refers to the Integrated Rural Development Strategy of the National Government that states that rural areas over the world tend to have similar characteristics and the Kannaland Municipality area is characterised by these similar factors:

• Factor 2 is that agriculture is the dominant economic sector.

• Factor 5 is that people living in rural areas face a set of factors that pose major changes to development.

• Factor 7 is that the specific economic conditions in rural areas result in fewer opportunities than in non-rural locations. It further states that policies have consistently discriminated against agriculture through high levels of taxation and other macro-economic policies that have adversely affected agricultural performance and the rural tax base.

The Kannaland municipality as a rural municipality declares in the IDP(p99) that it will promote the stimulation of agricultural production with a view to contributing to food security and promoting the enhancement of rural livelihoods. It also states as a general priority issue that it focuses on water as a general priority issue, and states that agricultural water users had a low priority in the current environment, but that the severe impact of the recent drought brought the importance of irrigation to the forefront, not only to boost food production but also to provide vital support with respect to employment in the industry.

The IDP points out (p92) that economic pressures in the agricultural sector over the past few years forced farm workers to migrate to towns where in most cases these families became indigents. Growth in the sector recovered and peaked in 2014 before the drought started, having an impact from 2015 onwards. The Plan states that the severity of the current drought has re-emphasised the importance of a vibrant and sustainable agricultural sector.

The IDP (p101) highlights the importance of education and training of farm workers. It contributes to higher productivity, better communication and job satisfaction and improves the quality of human capital. The IDP states (p21) that the municipality will introduce improved processes in the agricultural sector to support inclusive participation in agricultural value chain and fostering an environment conducive to local and regional private sector investment.

The properties are identified as agricultural properties and zoned as such. The dam replaces a previously existing dam that formed part of the agricultural business of the applicant.

(d) Approved Structure Plan of the Municipality	~~YES~~	~~NO~~	~~Please explain~~

Not relevant

(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~~
Not applicable.			
(f) Any other Plans (e.g. Guide Plan)	~~YES~~	**NO**	~~Please explain~~
Not applicable.			

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~~
The property has been actively utilised for agricultural purposes for many decades and will continue to do so. It is thus consistent with the timeframes of the SDP and 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~~
The location of the dam is upstream of the previously failed dam and was relocated in order to provide better integrity for the dam wall and to better manage the flood pulses.			

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~~
The dam supports two farming entities and provides storage of water from the Buffelsrivier Irrigation Scheme. The area has been crippled with a severe drought for many years now and the dam offers some security to the farmers and the community.			

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 **appendix**, where applicable.)	~~YES~~	**NO**	Please explain
The dam does not require any municipal service infrastructure.			

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 **appendix**, where applicable.)	~~YES~~	**NO**	Please explain
Not applicable			

8. Was this project part of a national programme to address an issue of national concern or importance?	~~YES~~	**NO**	Please explain

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
The location of the dam provides better integrity of the dam due to its location in a natural kloof.			

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
The impact on the natural environment is considered to be of Low significance by the specialist. The impact on the cultural environment was zero as per the heritage specialist.			

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
The dam does not have a negative impact on people's health and wellbeing. The socio economic specialist has determined that it has a positive impact on their wellbeing as it provides security for the agricultural businesses that rely on it. This in turn provides security for the personnel and the community.			

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
The dam improves the opportunity costs. 1. The project makes financial sense and is economically worthwhile and justified 2. Dr. Jackie Dabrowski made recommendations for mitigation that can lead to a win-win solution: Authorization of the dam with minimizing environmental concerns. 3. Increase in volume of taking may not be at the detriment of the down- stream users. alternatives can only be considered when that data is available.			

13. What were the cumulative impacts (positive and negative) of the land use associated with the activity applied for?	**YES**	~~NO~~	Please explain
The following cumulative impacts have been identified: **Aquatic:** *Alterations in surface flows reaching the Groot River (negative)* **Socio-Economic:** • Addressing HDI business ownership and racial and gender imbalances already have a HIGH cumulative impact on transformation in the water and agricultural sector and a MEDIUM impact on job opportunities and rural development. HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation. (Positive) • The cumulative impacts of transformation in the water and agricultural sector on rural development, eradication of poverty, job creation and rural development will be MEDIUM-HIGH. Sustainable growth, secure employment and food security are dependent on water security-especially in rural areas dependent on agriculture as the main economic driver. (Positive) • The current trend in addressing racial and gender imbalances can continue should there be water security and drought resilience and will have a HIGHMEDIUM cumulative impact on job creation and rural development. (Positive)			

14. Is/was the development the best practicable environmental option for this land/site?	**YES**	~~NO~~	Please explain
The location of the new dam is better for the integrity of the dam overall and provides better protection for flood damage.			

15. What are/were the benefits to society in general and to the local communities?	Please explain

The following has been sourced from the Socio Economic Impact Assessment:

Authorising the activities will give rise to positive impacts that are local and regionalised. Some decision makers have in recent times developed a disregard for the positive impacts of new employment opportunities and job security. They might have lost touch with the serious scourge of hunger and the other impacts of extreme poverty. ALL OPPORTUNITIES to create sustainable livelihoods must be grabbed if they do not give rise to serious environmental damage. Assessing the best alternative can involve looking for the net benefit that will flow from the next best alternative.

The requirements of Section 27(1) b-d of the NWA, Act 26 of 1998 will be met partially by this application. This application will ensure and protect sustainable livelihoods, create job opportunities and promote local economic development.

16. Any other need and desirability considerations related to the activity?	Please explain

Sustainability of agricultural businesses during drought period is crucial, especially in communities such as this, that depend completely on the success of the business for employment and for development of co-operative business ventures for previously disadvantaged members.

17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA were taken into account:

(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,

(2) The general objective of integrated environmental management is to:

(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:

(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;*

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.

(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 management of the dam and natural areas is undertaken 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 relocation of the existing dam due to its failure 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.

Development must be socially, environmentally and economically sustainable.

The relocation 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.

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 the dam has been deemed to be Minor to Negligible with mitigation.

- *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 improved with the improved dam. The previous dam failed several times and damaged downstream infrastructure regularly during flood events.

- *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 relocation of the existing dam 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;*

The dam does not produce any waste.

- *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 relocation 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 relcoation 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.

- *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 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 faming.

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 development of co-operative farming with community members 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 EMPr 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 relocation 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 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 properties and the location of the dam are strategically required for both Vanzylesdamme (Portion 3 of 36 Buffelsdrift) and Lofpoort (Portion 66 of 42 Voorbaat). The previous earth dam failed numerous times in flood events due to its location and extent of the dam wall. The relocated dam has better integrity with a shorter dam wall and serves both of the farms.

(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 dam is vital to the sustainability of the farming businesses.

(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:

The dam was not fully completed at the time of the commencement of this 24G process. The spillway requires some alignment to improve the overall design and take into consideration downstream flow during rainfall events.

Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation.

(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:

None. The dam technology is finalised.

(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. 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 relocation of the dam is to replace the previous earth dam which has failed numerous times in flood events. The option of ceasing the activity will have a significant negative impact on the socio-economic sustainability of the farms and the communities around them.

(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:

- Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation;
- Manage release of the flows to ensure downstream base flow to the Groot River;

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:

- Fragmentation of the water course;
- Alignment of the watercourse with dam outlets;
- Removal of vegetation;
- Disturbance to the river bed and banks
- Sedimentation of downstream watercourses (in the event of rainfall during construction phase);
- Water quality impacts downstream;
- Risk of reduced flows reaching the Groot River;
- Creation of lentic habitat for aquatic biota.

(b) Biological aspects:

Has the development impacted on critical biodiversity areas (CBAs) or ecological support areas (ESAs)?	**YES**	~~NO~~
If yes, please describe:		
According to the 2017 WCBSP, the dam is located in an ESA 1 area, and leads to an ESA 2 area.		

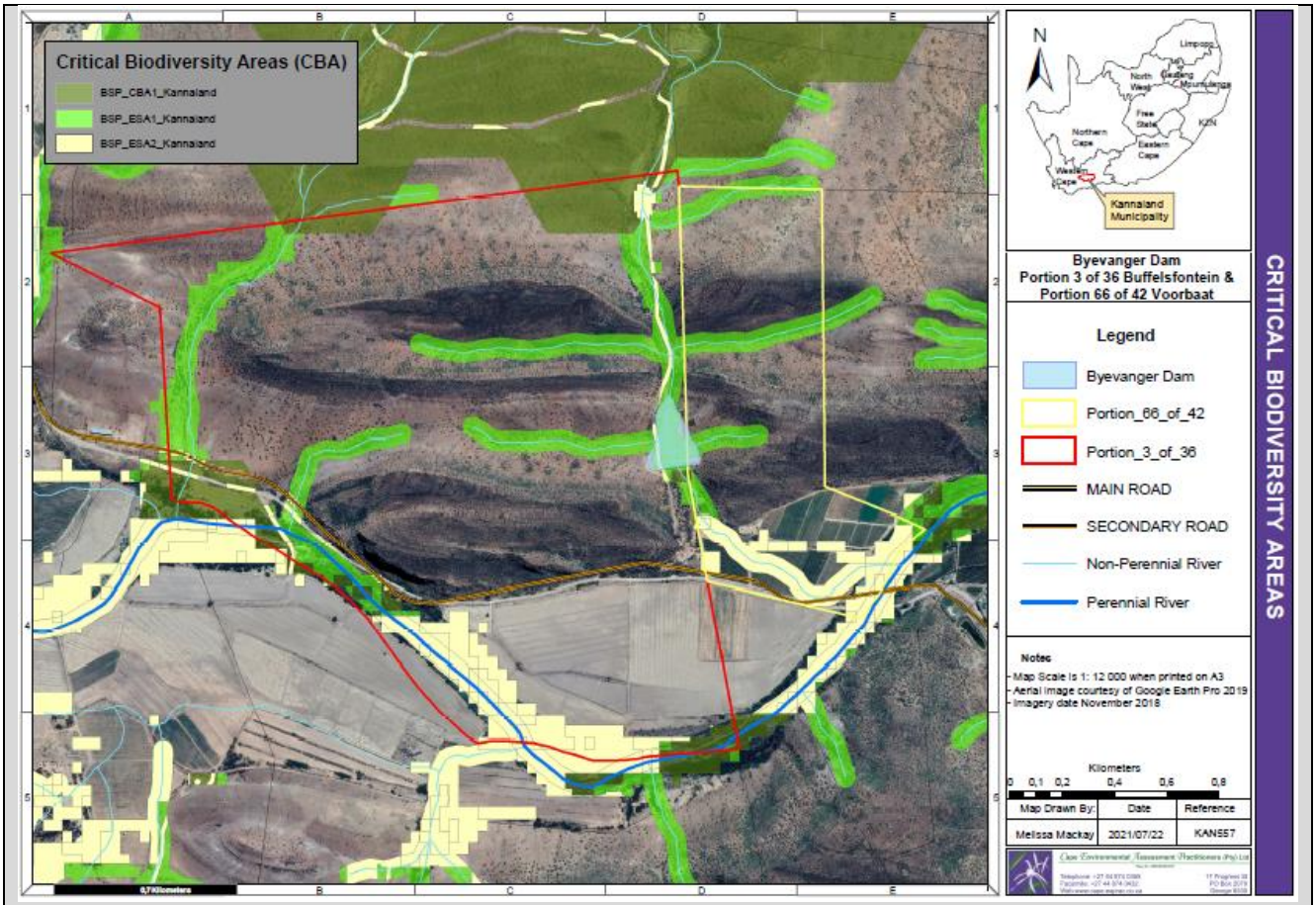

Figure 16: Critical Biodiversity Areas (CBA)

Has the development impacted on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)?	**YES**	~~NO~~

If yes, please describe:

The development is an instream dam on a non-perennial watercourse that ingresses the Groot River. It is likely that some aquatic and terrestrial vegetation was removed to create the dam basin. The area transformed for the dam is approximately 3.1ha in extent, mostly within the Western Gwarrieveld vegetation type. This vegetation type is listed as Least Concern both in the 2011 gazette and the 2018 Terrestrial Threat Status (Skowno et al).

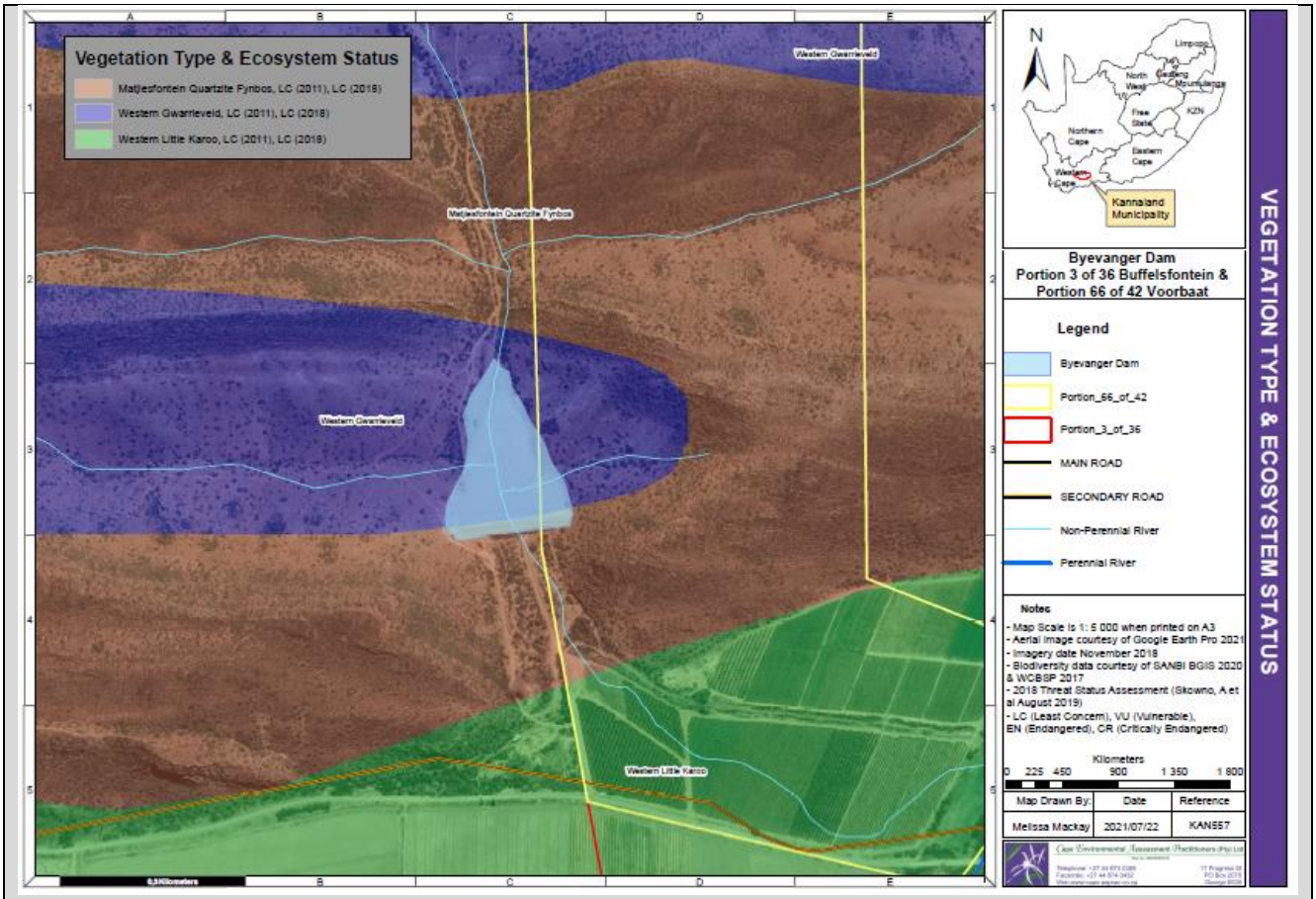

Figure 17: Vegetation Type & Ecosystem Status

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:

It is not possible to know exactly which species were removed from the dam basin, however based on the DFFE Screening Tool report, the species that are listed for this area are of a medium sensitivity and the overall vegetation type is considered to be of Least Concern. There is no means of mitigating for the removal of the vegetation in the basin and with the amount of clay that was utilised to line the dam, it is exceedingly unlikely that the same vegetation will re-establish if the dam was removed.

According to Mucina et al, the following is applicable to this vegetation type:

Conservation

Least threatened. Target 16%. Some 3% statutorily conserved in Ladismith-Klein Karoo Nature Reserve and an additional 1% is under less formal protection in private nature reserves such as Taayskloof, Buffelspoort, Rooiberg and Klein Swartberg. Only about 2% has so far been transformed by cultivation, but overgrazing (by sheep) is not uncommon. Aliens, *Acacia cyclops* and *A. saligna*, can be seen as a threat in places. Erosion is high (42%), very low (38%) and moderate (14%).

Since erosion is one of the most significant impacts on this vegetation type, the applicant must ensure that the dam does not lead to further erosion that may impact on indigenous vegetation and the downstream environment.

It has been recommended by the aquatic specialist that in the event that any further removal of vegetation is required, the following should be implemented:

- A botanical specialist must assess the remaining vegetation prior to further clearance to determine the presence / absence of important taxa.
- Only vegetation within the full supply area of the dam basin may be cleared.

- Where vegetation can be rescued and replanted it should be used on site to stabilise exposed soil prone to erosion. Large Spekboom are likely to survive replanting and should be utilised as opposed to discarded. A botanical specialist must be consulted in this regard.

In terms of animal species, the Screening Report considers the impacts on the following species:

Sensitivity	Feature(s)
High	Aves-Aquila verreauxii
Low	Low sensitivity
Medium	Insecta-Aloeides caledoni

1. The dam does not affect the habitat of the Verreaux's Eagle, its favours rocky hills to high mountains amongst cliffs, gorges and inselbergs often surrounded by savanna, thornbush and sub-desert. It may provide habitat for prey species by providing more permanent water source in the area.
2. According to Edge et al (2013), the *Aloeides caledoni* (Caledon Copper), is found sporadically from Caledon in the west to Nieu-Bethesda in the east of the Western Cape province. Its habitat is summits and slopes of rocky mountains where it is restricted to isolated, high altitude areas. It is a species of Least Concern and there are no conservation actions recommend. It is unlikely that this species would be found in the lower valleys where the dam is located.

Please describe the manner in which any other biological aspects were impacted:

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

- Vegetation removal;
- Import of alien seed and plants to the site;
- Risk of alien fish introductions for recreation.

(c) Socio-Economic aspects:

What was the capital value of the activity on completion?	R1 314 019	
What is the (expected) yearly income or contribution to the economy that is/will be generated by or as a result of the activity?	R	
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?	0	
What was the value of the employment opportunities during the construction phase?	R165 000	
What percentage of this accrued to previously disadvantaged individuals?	100%	
How was this ensured and monitored (please explain):		
Employment records		
How many permanent new employment opportunities were/will be created during the operational phase of the activity?	81 permanent and 40 temporary workers	
What is the current/expected value of the employment opportunities during the first 10 years?	±R9 821 194	
What percentage of this accrued/will accrue to previously disadvantaged individuals?	100%	
How was/will this be ensured and monitored (please explain):		
Employment and financial records.		
Any other information related to the manner in which the socio-economic aspects was/will be impacted:		
None		

(d) Cultural and historic aspects:

The heritage specialist has confirmed that there are no impacts on cultural and historic aspects to the property. Heritage Western Cape (HWC) confirmed this in their final response on 14 September 2020. See Annexure F1 for the full correspondence.

You are hereby notified that, since there is no reason to believe that the proposed dam on Farm Buffelsfontein 36/3, Ladismith District & Voorbaat 24/66. Ladismith and Laingsburg will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.

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?		m^3

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^3

~~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:
Waste management on the property should be done in term of the National Waste Strategy.

(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~~	**River, Stream, Dam or Lake**	~~Other~~	~~The activity did/does/will not use water~~

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:	±149 621.62 m³

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 storage and taking of water requires a Water Use License from the Breede Gouritz Catchment Management Agency (BGCMA). The Existing Lawful Use (ELU) for the previous Rooikrans Dam was ± 10 000m³. The proposed new storage use in the Byevanger Dam is ±149 621m³.

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 BID as provided by the WULA consultant is included as Annexure H5 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.

Impacts are grouped into planning, design & construction, operation, decommissioning and any other impacts. The tables have been colour coded for ease of reference.

(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.**

Impacts on geographical and physical aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Fragmentation of the watercourse This impact is inherent in instream dams, while it may be less of a concern in off-channel dams which don't physically intersect the watercourse. As an instream dam, the Byevanger Dam alters the hydrological regime from intermittent flowing water which mostly reached the Groot River (as the previous dam was small and susceptible to damage), to long periods of lentic (standing) flow within the impoundment as water would be held back from the Groot River. Given the lack of perennial flow in the watercourse at the study site, fragmentation is less concerning for aquatic-dependent species than it is for the reduction in flows that would help maintain the connection to and ecological flows in the Groot River. A potentially positive impact of standing water in the dam is the additional habitat available to fauna such as frogs and birds. But the latter would be also be achieved if the dam was constructed off channel.	Fragmentation of the watercourse This impact is inherent in instream dams, while it may be less of a concern in off-channel dams which don't physically intersect the watercourse. As an instream dam, the Byevanger Dam alters the hydrological regime from intermittent flowing water which mostly reached the Groot River (as the previous dam was small and susceptible to damage), to long periods of lentic (standing) flow within the impoundment as water would be held back from the Groot River. Given the lack of perennial flow in the watercourse at the study site, fragmentation is less concerning for aquatic-dependent species than it is for the reduction in flows that would help maintain the connection to and ecological flows in the Groot River. A potentially positive impact of standing water in the dam is the additional habitat available to fauna such as frogs and birds. But the latter would be also be achieved if the dam was constructed off channel.

Extent and duration of impact:	Local, Ongoing	Local, Ongoing
Probability of occurrence:	Certain	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:	Low	Low
Proposed mitigation:	Develop operating rules which reduce fragmentation of the watercourse. Ie. Manage the release of flows that consider ecological requirements downstream.	Develop operating rules which reduce fragmentation of the watercourse. Ie. Manage the release of flows that consider ecological requirements downstream.
Cumulative impact post mitigation:	Medium	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Moderate (-)	Moderate (-)

Impacts on geographical and physical aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Alignment of the watercourse with dam outlets The dam has two outlets. The piped outlet in the base of the dam wall that is channelled to the orchards for irrigation and the spillway located to the west of the dam wall. It is not clear how the water from either of these outlets will reach the Groot River as neither of them are aligned with the original watercourse located to the east of the dam wall. If the dam fills and overflows in its current state there is likely to be severe erosion in the area below the dam wall as the water makes its way to the original	Alignment of the watercourse with dam outlets The dam has two outlets. The piped outlet in the base of the dam wall that is channelled to the orchards for irrigation and the spillway located to the west of the dam wall. It is not clear how the water from either of these outlets will reach the Groot River as neither of them are aligned with the original watercourse located to the east of the dam wall. If the dam fills and overflows in its current state there is likely to be severe erosion in the area below the dam wall as the water makes its

	watercourse. Therefore this impact must be prioritised for mitigation.	way to the original watercourse. Therefore this impact must be prioritised for mitigation.
Extent and duration of impact:	Limited, Ongoing	Limited, Ongoing
Probability of occurrence:	Likely	Likely
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)	Minor (-)	Minor (-)
Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	Review layout plans and ensure that physical connectivity with the original watercourse and the Groot River is maintained. This must be achieved through aligning outlets with the original watercourse.	Review layout plans and ensure that physical connectivity with the original watercourse and the Groot River is maintained. This must be achieved through aligning outlets with the original watercourse.
Cumulative impact post mitigation:	Low	Low
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:	Disturbance of river bed & banks The bed and banks of the watercourse have already been irreparably modified by excavation of the dam basin and construction of the dam wall. In order to complete the project it is likely that further work with heavy machinery will be required within the original bed	Disturbance of river bed & banks The bed and banks of the watercourse have already been irreparably modified by excavation of the dam basin and construction of the dam wall. In order to complete the project it is likely that further work with heavy machinery will be required within the original

	and banks of the watercourse. This would be necessary for the clearance of vegetation and construction of infrastructure associated with irrigation downstream of the dam. Further disturbance is likely both upstream and downstream of the dam.	bed and banks of the watercourse. This would be necessary for the clearance of vegetation and construction of infrastructure associated with irrigation downstream of the dam. Further disturbance is likely both upstream and downstream of the dam.
Extent and duration of impact:	Limited, Permanent	Limited, Permanent
Probability of occurrence:	Certain	Certain
Degree to which the impact can be reversed:	Low	Low
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:	Low	Low
Proposed mitigation:	• Any sensitive plants identified by the botanical specialist should be relocated for protection if they are located in the construction area. • A limited disturbance area of 10m adjacent to the footprint of the dam and associated infrastructure is permissible. No more than 5 m upstream of the full supply area must be disturbed in the watercourse. These areas must be demarcated using temporary fencing and be considered absolute no-go zones. • Areas below the high water level mark in the basin of the dam may be used	• Any sensitive plants identified by the botanical specialist should be relocated for protection if they are located in the construction area. • A limited disturbance area of 10m adjacent to the footprint of the dam and associated infrastructure is permissible. No more than 5 m upstream of the full supply area must be disturbed in the watercourse. These areas must be demarcated using temporary fencing and be considered absolute no-go zones. • Areas below the high water level mark in the basin of the dam may be used
Cumulative impact post mitigation:	Medium	Medium

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Moderate (-)	Moderate (-)

Impacts on geographical and physical aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Sedimentation of downstream watercourses (in the event of rainfall during construction phase) The constructed dam has extensive areas of soil and vegetation disturbance which are prone to erosion. These include steep slopes, access roads, recently cleared areas and runoff from newly established outlets including the spillway, dam embankment and irrigation outlet. Construction required to finish the project is likely to result in increased areas prone to erosion. Erosion of these areas will lead to degradation of habitat downstream in the Groot River. This occurs where sediment accumulates, forming bars and smothering the river bed. This form of disturbance can have long-reaching consequences for aquatic macro-invertebrate and fish communities which depend on river substrates such as cobbles and gravel for feeding, breeding, and shelter. Creation of new sand bars also provides ideal habitat for colonisation by invasive plants (alien or indigenous) which further alters the instream habitat.	Sedimentation of downstream watercourses (in the event of rainfall during construction phase) The constructed dam has extensive areas of soil and vegetation disturbance which are prone to erosion. These include steep slopes, access roads, recently cleared areas and runoff from newly established outlets including the spillway, dam embankment and irrigation outlet. Construction required to finish the project is likely to result in increased areas prone to erosion. Erosion of these areas will lead to degradation of habitat downstream in the Groot River. This occurs where sediment accumulates, forming bars and smothering the river bed. This form of disturbance can have long-reaching consequences for aquatic macro-invertebrate and fish communities which depend on river substrates such as cobbles and gravel for feeding, breeding, and shelter. Creation of new sand bars also provides ideal habitat for colonisation by invasive plants (alien or indigenous) which further alters the instream habitat.
Extent and duration of impact:	Local, Medium Term	Local, Medium Term
Probability of occurrence:	Almost Certain	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)	Minor (-)	Minor (-)
Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	• Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation. • The next priority should be to establish sediment traps or stabilisation on areas prone to erosion such as the downstream side of the dam embankment, area below the spillway (once alignment has been planned), and the access road. Allowance must be made to clear sediment from the traps if erosion occurs during the construction period. Traps should be implemented immediately as construction has not concluded at the site, and there are many exposed areas susceptible to erosion if it rains heavily. • If active erosion results in the formation of gullies, these areas must be infilled with topsoil and covered with hessian or a geotextile (e.g. GeoJute) prior to revegetation. • Where sedimentation downstream occurs as a direct result of construction activities (past or future) this must be removed manually (using spades) under the supervision of a freshwater ecologist or environmental site officer. • Large quantities of sediment are already present in the basin of the previous dam which is located downstream of the new dam wall. Alignment of the spillway, outflow and watercourse are urgently required to prevent this sediment from	• Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation. • The next priority should be to establish sediment traps or stabilisation on areas prone to erosion such as the downstream side of the dam embankment, area below the spillway (once alignment has been planned), and the access road. Allowance must be made to clear sediment from the traps if erosion occurs during the construction period. Traps should be implemented immediately as construction has not concluded at the site, and there are many exposed areas susceptible to erosion if it rains heavily. • If active erosion results in the formation of gullies, these areas must be infilled with topsoil and covered with hessian or a geotextile (e.g. GeoJute) prior to revegetation. • Where sedimentation downstream occurs as a direct result of construction activities (past or future) this must be removed manually (using spades) under the supervision of a freshwater ecologist or environmental site officer. • Large quantities of sediment are already present in the basin of the previous dam which is located downstream of the new dam wall. Alignment of the spillway, outflow and watercourse are urgently required to prevent

	being deposited in the Groot River. Any sediment accumulated in the original watercourse must be manually removed using spades.	this sediment from being deposited in the Groot River. Any sediment accumulated in the original watercourse must be manually removed using spades.
Cumulative impact post mitigation:	Low	Low
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:	Water quality impacts downstream Construction activities have the risk of introducing a range of detrimental contaminants into the watercourse. Even if there is no flow at the time of construction, these contaminants may leach into groundwater, or be washed into the river system during periods of flowing water. Possible contaminants include hydrocarbons (fuel and oil from vehicles) or cement waste. In addition, solid waste such as plastic litter could be dispersed by construction workers. Furthermore, erosion (as described above) results in increased suspended sediment loads which negatively affects aquatic biota by clogging their gills and reducing visibility.	Water quality impacts downstream Construction activities have the risk of introducing a range of detrimental contaminants into the watercourse. Even if there is no flow at the time of construction, these contaminants may leach into groundwater, or be washed into the river system during periods of flowing water. Possible contaminants include hydrocarbons (fuel and oil from vehicles) or cement waste. In addition, solid waste such as plastic litter could be dispersed by construction workers. Furthermore, erosion (as described above) results in increased suspended sediment loads which negatively affects aquatic biota by clogging their gills and reducing visibility.
Extent and duration of impact:	Local, Short Term	Local, Short Term
Probability of occurrence:	Probably	Probably
Degree to which the impact can be reversed:	High	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium
Cumulative impact prior to mitigation:	Low	Low

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Minor (-)	Minor (-)
Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	• Vehicle parking and refuelling areas must be located > 50m from the high water mark and edge of the watercourse, and be clearly defined. • Any fuel storage areas must be bunded to prevent spills spreading if they occur. • Waste collection and removal must be arranged on a regular basis, and allowance must be made for conducting a litter clean-up for up to a 100m downstream and upstream of the watercourse. • Follow recommended mitigation measures for sedimentation of downstream watercourses as above.	• Vehicle parking and refuelling areas must be located > 50m from the high water mark and edge of the watercourse, and be clearly defined. • Any fuel storage areas must be bunded to prevent spills spreading if they occur. • Waste collection and removal must be arranged on a regular basis, and allowance must be made for conducting a litter clean-up for up to a 100m downstream and upstream of the watercourse. Follow recommended mitigation measures for sedimentation of downstream watercourses as above.
Cumulative impact post mitigation:	Negligible	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible (-)	Negligible (-)

Impact on biological aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Removal of vegetation Approximately 2.5 ha of vegetation was cleared for construction of the dam basin and wall. Based on vegetation present above and below the dam, this would have consisted of a fairly well defined riparian zone along with vegetation beyond this area. Cleared vegetation was likely to include plants associated with both mapped vegetation units (Western Gwarrieveld and Matjiesfontein Quartzite Fynbos) as the dam occupies a transitional zone. While both units are defined as 'Least Threatened' there may be individual	Removal of vegetation Approximately 2.5 ha of vegetation was cleared for construction of the dam basin and wall. Based on vegetation present above and below the dam, this would have consisted of a fairly well defined riparian zone along with vegetation beyond this area. Cleared vegetation was likely to include plants associated with both mapped vegetation units (Western Gwarrieveld and Matjiesfontein Quartzite Fynbos) as the dam occupies a transitional zone.

	plants of importance on site. As approximately 0.6 ha of vegetation remains to be cleared in the Full Supply Area, the mitigation measures recommended below must be applied if construction continues.	While both units are defined as 'Least Threatened' there may be individual plants of importance on site. No further clearance is required.
Extent and duration of impact:	Limited, Ongoing	Limited, Ongoing
Probability of occurrence:	Certain	Certain
Degree to which the impact can be reversed:	Low	Low
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:	Low	Low
Proposed mitigation:	• A botanical specialist must assess the remaining vegetation prior to further clearance to determine the presence / absence of important taxa. • Only vegetation within the full supply area of the dam basin may be cleared. • Where vegetation can be rescued and replanted it should be used on site to stabilise exposed soil prone to erosion. Large Spekboom are likely to survive replanting and should be utilised as opposed to discarded. A botanical specialist must be consulted in this regard.	- No further clearance will be required.
Cumulative impact post mitigation:	Medium	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Moderate (-)	Moderate (-)

Impact on biological aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Import of alien seed and plants to the site Alien seed and/or plants may be introduced or spread at the site and through the watercourse in imported material such as sand or compost. The recently disturbed soil and vegetation makes the site highly vulnerable to alien plant invasion as can be observed on the edge of the dam basin where *Opuntia* sp. and *Datura* sp. are becoming established.	Import of alien seed and plants to the site Alien seed and/or plants may be introduced or spread at the site and through the watercourse in imported material such as sand or compost. The recently disturbed soil and vegetation makes the site highly vulnerable to alien plant invasion as can be observed on the edge of the dam basin where *Opuntia* sp. and *Datura* sp. are becoming established.
Extent and duration of impact:	Limited, Long Term	Limited, Long Term
Probability of occurrence:	Likely	Likely
Degree to which the impact can be reversed:	Medium	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low
Cumulative impact prior to mitigation:	Low	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Minor (-)	Minor (-)
Degree to which the impact can be mitigated:	Medium	Medium
Proposed mitigation:	• Any imports of foreign material to the site should be cleared with a botanical specialist to ensure they do not pose a risk and do not originate from areas with high levels of alien invasion. • Alien plants must be continually removed from disturbed areas throughout the construction period. This activity should commence immediately as there are already alien plants on the perimeter of the dam basin.	• Any imports of foreign material to the site should be cleared with a botanical specialist to ensure they do not pose a risk and do not originate from areas with high levels of alien invasion. • Alien plants must be continually removed from disturbed areas throughout the construction period. This activity should commence

		immediately as there are already alien plants on the perimeter of the dam basin.
Cumulative impact post mitigation:	Very Low	Very Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible (-)	Negligible (-)

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

Impacts on 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 during construction.	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)	Negligible	Negligible

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:	Risk of reduced flows reaching the Groot River This is the most important operational phase impact of constructing the dam. The loss of floods from an extensive network of drainage lines will lead to increased sedimentation of the river channel. Resulting sandbars are stabilised by vegetation leading to a narrowing of the channel. In the case of the Groot River, this may happen on a localised basis where flood flows would have scoured sediment at and below the confluence, but will be locally reduced in future due to the presence of the Byevanger Dam. Particularly if the increased water allocation is approved. In addition, the volume of water reaching the Groot River will be reduced. This impact is a recognised cumulative impact in the Groot River system leading to the recently developed RQOs (DWS, 2018) stating that "flows shall be sufficient to maintain the Groot River in an ecological condition that is equal to or better than the ecological condition in summer 2014 (Category D)."	Risk of reduced flows reaching the Groot River This is the most important operational phase impact of constructing the dam. The loss of floods from an extensive network of drainage lines will lead to increased sedimentation of the river channel. Resulting sandbars are stabilised by vegetation leading to a narrowing of the channel. In the case of the Groot River, this may happen on a localised basis where flood flows would have scoured sediment at and below the confluence, but will be locally reduced in future due to the presence of the Byevanger Dam. Particularly if the increased water allocation is approved. In addition, the volume of water reaching the Groot River will be reduced. This impact is a recognised cumulative impact in the Groot River system leading to the recently developed RQOs (DWS, 2018) stating that "flows shall be sufficient to maintain the Groot River in an ecological condition that is equal to or better than the ecological condition in summer 2014 (Category D)."
Extent and duration of impact:	Local, Ongoing	Local, Ongoing
Probability of occurrence:	Certain	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:	• Operating rules must consider the release of water that is sensitive to ecological requirements downstream (informed by the above study). The success of this measure is also dependent on restoring the alignment of the original watercourse with the Groot River. ** Update ** The results of the hydrological study conducted by Mr. B. Haasbroek indicate that no water release is required for maintenance of the EWR in the Groot River.	• Operating rules must consider the release of water that is sensitive to ecological requirements downstream (informed by the above study). The success of this measure is also dependent on restoring the alignment of the original watercourse with the Groot River. ** Update ** The results of the hydrological study conducted by Mr. B. Haasbroek indicate that no water release is required for maintenance of the EWR in the Groot River.
Cumulative impact post mitigation:	Low	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Minor (-)	Minor (-)

Impacts on geographical and physical aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Creation of lentic habitat for aquatic biota When the dam fills it would provide habitat for a range of plants, macro-invertebrates, amphibians and birds. The presence of water could also potentially support wildlife in the area. However, given the intermittent nature of flows in the watercourse, the dam will not be permanently inundated. This would automatically limit	Creation of lentic habitat for aquatic biota When the dam fills it would provide habitat for a range of plants, macro-invertebrates, amphibians and birds. The presence of water could also potentially support wildlife in the area. However, given the intermittent nature of flows in the watercourse, the dam will not be permanently

	colonisation of the dam to mobile species or species able to withstand extended periods of desiccation. While this impact is considered mostly positive, it also creates the opportunity for establishment of alien fauna or flora. Therefore caution must be taken to ensure no alien species including macrophytes/water weed (e.g. water hyacinth and Kariba weed) are introduced	inundated. This would automatically limit colonisation of the dam to mobile species or species able to withstand extended periods of desiccation. While this impact is considered mostly positive, it also creates the opportunity for establishment of alien fauna or flora. Therefore caution must be taken to ensure no alien species including macrophytes/water weed (e.g. water hyacinth and Kariba weed) are introduced
Extent and duration of impact:	Very Limited, Short Term	Very Limited, Short Term
Probability of occurrence:	Likely	Likely
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:	Low	Low
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:	Medium	Medium
Proposed mitigation:	Ensure no alien fauna or flora are introduced or allowed to persist in the dam when it is inundated.	Ensure no alien fauna or flora are introduced or allowed to persist in the dam when it is inundated.
Cumulative impact post mitigation:	Negligible	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Minor (+)	Minor (+)

Impacts on biological aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Risk of alien fish introductions for recreation Despite the likelihood that the dam may periodically dry out, the introduction of alien fish (from other countries or other areas in South Africa) for recreational purposes is a distinct possibility. Many farms in the area stock bass and banded tilapia in their dams which, along with introductions of smallmouth yellowfish, have invaded the Groot River and had a detrimental impact on indigenous fish. Human-assisted dispersal can facilitate and extend the distribution of harmful alien fish in South Africa's freshwater systems. This practice is strongly discouraged. Any decision to introduce alien fish into the dam must be made with prior knowledge of the restrictions of the National Environmental Management: Biodiversity Act (NEMBA, 2004). The act lists invasive species including freshwater fish (List 7) that may or may not be introduced to various catchments in South Africa. Problem fish already occurring in the Groot River included banded tilapia and bass. Advice from Cape Nature and/or a freshwater ecologist must be sought to ensure any fish introductions are legal.	Risk of alien fish introductions for recreation Despite the likelihood that the dam may periodically dry out, the introduction of alien fish (from other countries or other areas in South Africa) for recreational purposes is a distinct possibility. Many farms in the area stock bass and banded tilapia in their dams which, along with introductions of smallmouth yellowfish, have invaded the Groot River and had a detrimental impact on indigenous fish. Human-assisted dispersal can facilitate and extend the distribution of harmful alien fish in South Africa's freshwater systems. This practice is strongly discouraged. Any decision to introduce alien fish into the dam must be made with prior knowledge of the restrictions of the National Environmental Management: Biodiversity Act (NEMBA, 2004). The act lists invasive species including freshwater fish (List 7) that may or may not be introduced to various catchments in South Africa. Problem fish already occurring in the Groot River included banded tilapia and bass. Advice from Cape Nature and/or a freshwater ecologist must be sought to ensure any fish introductions are legal.
Extent and duration of impact:	Local, Medium Term	Local, Medium Term
Probability of occurrence:	Probably	Probably
Degree to which the impact can be reversed:	Low	Low
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)	Minor (-)	Minor (-)
Degree to which the impact can be mitigated:	High	High
Proposed mitigation:	• Consider the hydrological regime of the dam before introducing fish to determine whether it can realistically sustain a fish population. • Do not introduce any fish without ensuring their introduction is legal by consulting the NEMBA act.	• Consider the hydrological regime of the dam before introducing fish to determine whether it can realistically sustain a fish population. - Do not introduce any fish without ensuring their introduction is legal by consulting the NEMBA act.
Cumulative impact post mitigation:	Minor	Minor
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Neutral	Neutral

Impacts on the socio-economic aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Racial and gender imbalances addressed in benefiting from water use	Racial and gender imbalances addressed in benefiting from water use
Extent and duration of impact:	Regional, long term	Local, long term
Probability of occurrence:	Definite	Definite
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	Low	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Medium negative
Degree to which the impact can be mitigated:	None	High

Proposed mitigation:	Implement the dam to improve water security	Implement the dam to improve water security
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 socio-economic aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Transformation in the water and agricultural sector	Transformation in the water and agricultural sector
Extent and duration of impact:	Regional and National, Permanent	Regional and National, Medium Term
Probability of occurrence:	Definite	Probable
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	Low	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Medium positive
Degree to which the impact can be mitigated:	None	High
Proposed mitigation:	Implement the dam to improve water security	Implement the dam to improve water security
Cumulative impact post mitigation:	High positive	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High positive	High positive

Impacts on the socio-economic aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Rural development in terms of food security and agrarian reform addressed	Rural development in terms of food security and agrarian reform addressed

Extent and duration of impact:	Local and Regional, Long term	Local and Regional, Medium long term
Probability of occurrence:	Definite	Probable
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	Medium	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low positive	Low positive
Degree to which the impact can be mitigated:	None	Medium
Proposed mitigation:	Implement the dam to improve water security	Implement the dam to improve water security
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 socio-economic aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Social discrepancies in wealth and opportunities addressed	Social discrepancies in wealth and opportunities addressed
Extent and duration of impact:	Local and Regional, Medium term	Local and Regional, Medium term
Probability of occurrence:	Probable	Probable
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	Medium	Medium

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

Impacts on the socio-economic aspects:	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Job opportunities that will address unemployment and create sustainable livelihoods	Job opportunities that will address unemployment and create sustainable livelihoods
Extent and duration of impact:	Local and Regional, Long term	Local and Regional, Long term
Probability of occurrence:	Highly Probable	Highly Probable
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	None
Cumulative impact prior to mitigation:	Medium	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Medium positive
Degree to which the impact can be mitigated:	None	Medium
Proposed mitigation:	Implement the dam to improve water security	Implement the dam to improve water security
Cumulative impact post mitigation:	High positive	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	High positive	High positive

Impacts on the socio-economic aspects:	Alternative 1 (Preferred)	No Go Option
Nature of impact:	Local economic growth stimulated	Local economic growth stimulated
Extent and duration of impact:	Local and Regional, Medium term	Local and Regional, Medium term
Probability of occurrence:	Definite	Definite
Degree to which the impact can be reversed:	Impact is positive	Impact is positive but low
Degree to which the impact may cause irreplaceable loss of resources:	None	Low
Cumulative impact prior to mitigation:	Medium	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Very low positive
Degree to which the impact can be mitigated:	None	Medium
Proposed mitigation:	Implement the dam to improve water security	Implement the dam to improve water security
Cumulative impact post mitigation:	High positive	High positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive	Low 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)	Negligible	Negligible

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

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

(d) Any other impacts:

Potential impact: Cumulative Impacts (Aquatic)	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	Alterations in surface flows reaching the Groot River The combined capacity of large dams in the catchment of the Groot River (Floriskraal, Verkeerdevlei, Bellair and Miertieskraal) is 82.4 million cubic metres which is approximately 78% of the Mean Annual Runoff (R.H.P., 2007). This combined with general water use authorisations has had a large, cumulative impact on flows in the Groot River. Low rainfall in the region means that water abstraction in the form of large, in-stream dams which store flood flows is very common. The storage capacity of these dams often exceeds the annual runoff of the catchment (R.H.P., 2007).	Alterations in surface flows reaching the Groot River The combined capacity of large dams in the catchment of the Groot River (Floriskraal, Verkeerdevlei, Bellair and Miertieskraal) is 82.4 million cubic metres which is approximately 78% of the Mean Annual Runoff (R.H.P., 2007). This combined with general water use authorisations has had a large, cumulative impact on flows in the Groot River. Low rainfall in the region means that water abstraction in the form of large, in-stream dams which store flood flows is very common. The storage capacity of these dams often exceeds the annual runoff of the catchment (R.H.P., 2007).

	The volume of the Byevangers Dam is approximately 6 times greater than the existing water allocation which if authorised, will no longer enter the river. A rapid scan of 10 drainage lines leading into the Groot River upstream of the site on both banks indicates that approximately 80% of drainage lines contain one or more impoundments to abstract water. The cumulative impact of these dams includes the reduction of flood flows (important natural disturbance) entering the Groot River. This leads to increased siltation as a result of reduced flushing and scouring, altering the shape of the river channel and resulting in excessive growth of instream vegetation.	The volume of the Byevangers Dam is approximately 6 times greater than the existing water allocation which if authorised, will no longer enter the river. A rapid scan of 10 drainage lines leading into the Groot River upstream of the site on both banks indicates that approximately 80% of drainage lines contain one or more impoundments to abstract water. The cumulative impact of these dams includes the reduction of flood flows (important natural disturbance) entering the Groot River. This leads to increased siltation as a result of reduced flushing and scouring, altering the shape of the river channel and resulting in excessive growth of instream vegetation.
Extent and duration of impact:	Local, permanent	Local, permanent
Probability of occurrence:	Unlikely on its own	Unlikely on its own
Degree to which the impact can be reversed:	Unknow	Unknown
Degree to which the impact may cause irreplaceable loss of resources:	Unknown	Unknown
Cumulative impact prior to mitigation:	Negative impact on the Groot River	Negative impact on the Groot River
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Could be significant	Could be significant
Degree to which the impact can be mitigated:	Unknown	Unknown
Proposed mitigation:	Management actions for water quantities in the Gouritz River Estuarine Management Plan (Royal Haskoning, 2018) state that water use activities and licenses in the catchment should be assessed for compliance with Reserve requirements. If the ecological reserve requirements are not being met abstraction activities	Management actions for water quantities in the Gouritz River Estuarine Management Plan (Royal Haskoning, 2018) state that water use activities and licenses in the catchment should be assessed for compliance with Reserve requirements. If the ecological reserve requirements are not being met abstraction activities may be declared as

	may be declared as streamflow reduction activities and temporarily controlled, limited or prohibited.	streamflow reduction activities and temporarily controlled, limited or prohibited.
Cumulative impact post mitigation:	Unknown	Unknown
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Unknown	Unknown

Potential impact: Cumulative Impacts (Socio Economic)	**Alternative 1 (Preferred)**	**No Go Option**
Nature of impact:	The Government Gazette, 24 March 2017 states that "cumulative impact" in relation to a water use, means the impact of a water use that in itself may not be significant, but may become significant when added to an existing and potential impacts eventuating from similar or diverse water use activities or undertakings in the area. Cumulative effects mean the combined impacts. The intensity of the cumulative impact of the authorized water use can be from high to low.	The Government Gazette, 24 March 2017 states that "cumulative impact" in relation to a water use, means the impact of a water use that in itself may not be significant, but may become significant when added to an existing and potential impacts eventuating from similar or diverse water use activities or undertakings in the area. Cumulative effects mean the combined impacts. The intensity of the cumulative impact of the authorized water use can be from high to low.
Extent and duration of impact:	Regional, permanent	Regional, permanent
Probability of occurrence:	High	Medium
Degree to which the impact can be reversed:	Unknow	Unknown
Degree to which the impact may cause irreplaceable loss of resources:	Unknown	Unknown
Cumulative impact prior to mitigation:	• Addressing HDI business ownership and racial and gender imbalances already have a HIGH cumulative impact on transformation in the water and agricultural sector and a MEDIUM impact on job opportunities and rural development. HDI ownership and equitable	• The cumulative impact of HDI ownership on racial and gender imbalances and transformation in the water and agricultural sector addressed will remain HIGH because it has already been implemented. • The cumulative impacts of transformation in the water and agricultural sector (should

	racial and gender balance are not enough inputs for economic growth and job creation. • The cumulative impacts of transformation in the water and agricultural sector on rural development, eradication of poverty, job creation and rural development will be MEDIUM-HIGH. Sustainable growth, secure employment and food security are dependent on water security-especially in rural areas dependent on agriculture as the main economic driver. • The current trend in addressing racial and gender imbalances can continue should there be water security and drought resilience and will have a HIGHMEDIUM cumulative impact on job creation and rural development.	the water NOT be authorised) on rural development, eradication of poverty, job creation and rural development will be MEDIUM. The HDI ownership and partnership are already in place but sustainable growth and secure employment are dependent on water security. • Racial and gender imbalances have already been addressed to a degree through the HDI ownership but the cumulative impact on job creation and rural development will be LOW should lob losses and production cuts occur due to lack of sustainable water • HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	• Addressing HDI business ownership and racial and gender imbalances already have a HIGH cumulative impact on transformation in the water and agricultural sector and a MEDIUM impact on job opportunities and rural development. HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation. • The cumulative impacts of transformation in the water and agricultural sector on rural development, eradication of poverty, job creation and rural development will be MEDIUM-HIGH. Sustainable growth, secure employment and food security are dependent on water security-especially in rural areas dependent on agriculture as the main economic driver.	• The cumulative impact of HDI ownership on racial and gender imbalances and transformation in the water and agricultural sector addressed will remain HIGH because it has already been implemented. • The cumulative impacts of transformation in the water and agricultural sector (should the water NOT be authorised) on rural development, eradication of poverty, job creation and rural development will be MEDIUM. The HDI ownership and partnership are already in place but sustainable growth and secure employment are dependent on water security. • Racial and gender imbalances have already been addressed to a degree through the HDI ownership but the cumulative impact on job creation and rural

	The current trend in addressing racial and gender imbalances can continue should there be water security and drought resilience and will have a HIGHMEDIUM cumulative impact on job creation and rural development.	development will be LOW should lob losses and production cuts occur due to lack of sustainable water • HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation.
Degree to which the impact can be mitigated:	Unknown	Unknown
Proposed mitigation:	Authorisation of the dam	No authorisation of the dam
Cumulative impact post mitigation:	Unknown	Unknown
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	• Addressing HDI business ownership and racial and gender imbalances already have a HIGH cumulative impact on transformation in the water and agricultural sector and a MEDIUM impact on job opportunities and rural development. HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation. • The cumulative impacts of transformation in the water and agricultural sector on rural development, eradication of poverty, job creation and rural development will be MEDIUM-HIGH. Sustainable growth, secure employment and food security are dependent on water security-especially in rural areas dependent on agriculture as the main economic driver. The current trend in addressing racial and gender imbalances can continue should there be water security and drought resilience and will have a HIGHMEDIUM cumulative impact on job creation and rural development.	• The cumulative impact of HDI ownership on racial and gender imbalances and transformation in the water and agricultural sector addressed will remain HIGH because it has already been implemented. • The cumulative impacts of transformation in the water and agricultural sector (should the water NOT be authorised) on rural development, eradication of poverty, job creation and rural development will be MEDIUM. The HDI ownership and partnership are already in place but sustainable growth and secure employment are dependent on water security. • Racial and gender imbalances have already been addressed to a degree through the HDI ownership but the cumulative impact on job creation and rural development will be LOW should lob losses and production cuts occur due to lack of sustainable water

		HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation.

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:

Based on the assessments undertaken, the following recommendations have been made:

Aquatic:

The intermittent drainage line at this site was deemed to be in a Moderately Modified state (C), which has degraded to a Largely Modified state (D) as a result of constructing the unauthorised dam. As part of the impact assessment, a range of mitigation measures have been recommended to limit further degradation of the watercourse at the site and downstream. Flow regimes within the watercourse are naturally ephemeral, and therefore the direct impacts of building the dam within this channel are not as pronounced as those within a perennial watercourse. However, the indirect impact of reduced flow entering the Groot River from a complex network of drainage lines is more difficult to determine and is quite likely to be important when considered from the perspective of cumulative impacts.

Subsequent to compilation of this report, a hydrological study was conducted by Mr. B. Haasbroek (September 2020). The conclusions of this report indicate that Ecological Water Requirement (EWR) for high flows are not met for the Groot River. This is, however, due to the presence of the Floriskraal Dam upstream which represents a significant instream impoundment restricting high flows downstream. Higher flow requirements in the Groot River can only be met by releases and spills from the Floriskraal Dam and are not dependent on incremental downstream catchments such as that for Byevanger Dam.

Mitigations Measures:

Construction:

- Develop operating rules which reduce fragmentation of the watercourse. Ie. Manage the release of flows that consider ecological requirements downstream.
- Review layout plans and ensure that physical connectivity with the original watercourse and the Groot River is maintained. This must be achieved through aligning outlets with the original watercourse.
- Any sensitive plants identified by the botanical specialist should be relocated for protection if they are located in the construction area.
- A limited disturbance area of 10m adjacent to the footprint of the dam and associated infrastructure is permissible. No more than 5 m upstream of the full supply area must be disturbed in the watercourse. These areas must be demarcated using temporary fencing and be considered absolute no-go zones.
- Areas below the high water level mark in the basin of the dam may be used
- Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation.
- The next priority should be to establish sediment traps or stabilisation on areas prone to erosion such as the downstream side of the dam embankment, area below the spillway (once alignment has been planned), and the access road. Allowance must be made to clear sediment from the traps if erosion occurs during the construction period. Traps should be implemented immediately as construction has not concluded at the site, and there are many exposed areas susceptible to erosion if it rains heavily.
- If active erosion results in the formation of gullies, these areas must be infilled with topsoil and covered with hessian or a geotextile (e.g. GeoJute) prior to revegetation.

- Where sedimentation downstream occurs as a direct result of construction activities (past or future) this must be removed manually (using spades) under the supervision of a freshwater ecologist or environmental site officer.
- Large quantities of sediment are already present in the basin of the previous dam (see Figure 8f) which is located downstream of the new dam wall. Alignment of the spillway, outflow and watercourse are urgently required to prevent this sediment from being deposited in the Groot River. Any sediment accumulated in the original watercourse must be manually removed using spades.
- Vehicle parking and refuelling areas must be located > 50m from the high water mark and edge of the watercourse, and be clearly defined.
- Any fuel storage areas must be bunded to prevent spills spreading if they occur.
- Waste collection and removal must be arranged on a regular basis, and allowance must be made for conducting a litter clean-up for up to a 100m downstream and upstream of the watercourse.
- Follow recommended mitigation measures for sedimentation of downstream watercourses as above.
- A botanical specialist must assess the remaining vegetation prior to further clearance to determine the presence / absence of important taxa.
- Only vegetation within the full supply area of the dam basin may be cleared.
- Where vegetation can be rescued and replanted it should be used on site to stabilise exposed soil prone to erosion. Large Spekboom are likely to survive replanting and should be utilised as opposed to discarded. A botanical specialist must be consulted in this regard.
- Any imports of foreign material to the site should be cleared with a botanical specialist to ensure they do not pose a risk and do not originate from areas with high levels of alien invasion.
- Alien plants must be continually removed from disturbed areas throughout the construction period. This activity should commence immediately as there are already alien plants on the perimeter of the dam basin.

Operation:

- Operating rules must consider the release of water that is sensitive to ecological requirements downstream (informed by the above study). The success of this measure is also dependent on restoring the alignment of the original watercourse with the Groot River. ** Update ** The results of the hydrological study conducted by Mr. B. Haasbroek indicate that no water release is required for maintenance of the EWR in the Groot River.
- Ensure no alien fauna or flora are introduced or allowed to persist in the dam when it is inundated.
- Consider the hydrological regime of the dam before introducing fish to determine whether it can realistically sustain a fish population.
- Do not introduce any fish without ensuring their introduction is legal by consulting the NEMBA act.

Recommendations:

Based on this assessment a number of rehabilitation actions are recommended in addition to the mitigation measures stipulated in the impact assessment. These actions are intended to restore ecological structure and function where possible, such as improved connectivity, and protect watercourses at the site and downstream.

- Restrict access by livestock to eroded areas of the watercourse upstream of the dam in order to allow vegetation to recover and to reduce sedimentation. Vegetation establishment must be actively supported.

- No livestock must be allowed to access the dam embankment or excavated areas in order to prevent erosion and allow for the re-establishment of vegetation.

- Revegetate the channelled section of the watercourse linking the area downstream of the dam with the Groot River using appropriate indigenous riparian vegetation. Aerial images showed that this section,

which traverses land between orchards, has been cleared. Riparian vegetation clearance (even along an artificially channelled river section) compromises the ability of the watercourse to function as a corridor for the movement of fauna (aquatic and non-aquatic) in the landscape.

- Removal and follow up control of alien and invasive species must be carried out regularly throughout the construction phase of the dam's development and continue on a bi-annual basis during the operational phase.

Socio-Economic:

Authorising the activities will give rise to positive impacts that are local and regionalised. Some decision makers have in recent times developed a disregard for the positive impacts of new employment opportunities and job security. They might have lost touch with the serious scourge of hunger and the other impacts of extreme poverty. ALL OPPORTUNITIES to create sustainable livelihoods must be grabbed if they do not give rise to serious environmental damage. Assessing the best alternative can involve looking for the net benefit that will flow from the next best alternative.

The requirements of Section 27(1) b-d of the NWA, Act 26 of 1998 will be met partially by this application. This application will ensure and protect sustainable livelihoods, create job opportunities and promote local economic development.

Recommendations:

a) The Contract between JG NEL FAMILY TRUST, VANZYLSDAMME BOERDERY(PTY)LTD and Dam Workers Association must in total be added to the EMP.

b) The creation of 80 permanent and 40 temporary job opportunities is an important mitigatory step. A 5-7 year implementation plan, containing timeframes and numbers and taking probable weather scenarios into account should be made part of the EMP.

c) Down- stream users to be identified and the impact of increased taking and storage in the Byevanger dam assessed.

d) I strongly recommend that should any fine be given to JG NEL FAMILY TRUST for the unlawful activities the authorities rather consider contributing to the national goal of land redistribution and rural transformation. the JG NEL FAMILY TRUST can be given the option to rather assist the association with obtaining land of their own.

Heritage:

Having regard to the findings following from above assessment, it is our view that the proposal would not impact on any heritage resource of cultural significance and that no further heritage-related studies would be warranted in this instance.

However, should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without delay.

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):
Planning, Design & Construction	
Fragmentation of the watercourse • Develop operating rules which reduce fragmentation of the watercourse. Ie. Manage the release of flows that consider ecological requirements downstream.	Moderate (-)
Alignment of the watercourse with dam outlets • Review layout plans and ensure that physical connectivity with the original watercourse and the Groot River is maintained. This must be achieved through aligning outlets with the original watercourse	Negligible (-)
Disturbance of river bed & banks • Any sensitive plants identified by the botanical specialist should be relocated for protection if they are located in the construction area. • A limited disturbance area of 10m adjacent to the footprint of the dam and associated infrastructure is permissible. No more than 5 m upstream of the full supply area must be disturbed in the watercourse. These areas must be demarcated using temporary fencing and be considered absolute no-go zones. • Areas below the high water level mark in the basin of the dam may be used	Moderate (-)
Sedimentation of downstream watercourses (in the event of rainfall during construction phase) • Alignment between the original watercourse leading to the Groot River and outlets from the dam should be prioritised in case of heavy rainfall requiring the discharge of water exceeding the lawful allocation. • The next priority should be to establish sediment traps or stabilisation on areas prone to erosion such as the downstream side of the dam embankment, area below the spillway (once alignment has been planned), and the access road. Allowance must be made to clear sediment from the traps if erosion occurs during the construction period. Traps should be implemented immediately as construction has not concluded at the site, and there are many exposed areas susceptible to erosion if it rains heavily. • If active erosion results in the formation of gullies, these areas must be infilled with topsoil and covered with hessian or a geotextile (e.g. GeoJute) prior to revegetation. • Where sedimentation downstream occurs as a direct result of construction activities (past or future) this must be removed manually (using spades) under the supervision of a freshwater ecologist or environmental site officer.	Negligible (-)

• Large quantities of sediment are already present in the basin of the previous dam which is located downstream of the new dam wall. Alignment of the spillway, outflow and watercourse are urgently required to prevent this sediment from being deposited in the Groot River. Any sediment accumulated in the original watercourse must be manually removed using spades	
Water quality impacts downstream • Vehicle parking and refuelling areas must be located > 50m from the high water mark and edge of the watercourse, and be clearly defined. • Any fuel storage areas must be bunded to prevent spills spreading if they occur. • Waste collection and removal must be arranged on a regular basis, and allowance must be made for conducting a litter clean-up for up to a 100m downstream and upstream of the watercourse. • Follow recommended mitigation measures for sedimentation of downstream watercourses as above	Negligible (-)
Removal of vegetation • A botanical specialist must assess the remaining vegetation prior to further clearance to determine the presence / absence of important taxa. • Only vegetation within the full supply area of the dam basin may be cleared. • Where vegetation can be rescued and replanted it should be used on site to stabilise exposed soil prone to erosion. Large Spekboom are likely to survive replanting and should be utilised as opposed to discarded. A botanical specialist must be consulted in this regard.	Moderate (-)
Import of alien seed and plants to the site • Any imports of foreign material to the site should be cleared with a botanical specialist to ensure they do not pose a risk and do not originate from areas with high levels of alien invasion. • Alien plants must be continually removed from disturbed areas throughout the construction period. This activity should commence immediately as there are already alien plants on the perimeter of the dam basin.	Negligible (-)
Socio-Economic	None
Cultural / Historical	None
Noise	Negligible
Visual / Sense of Place	None
Operational	

Risk of reduced flows reaching the Groot River • Operating rules must consider the release of water that is sensitive to ecological requirements downstream (informed by the above study). The success of this measure is also dependent on restoring the alignment of the original watercourse with the Groot River. ** Update ** The results of the hydrological study conducted by Mr. B. Haasbroek indicate that no water release is required for maintenance of the EWR in the Groot River.	Minor (-)
Creation of lentic habitat for aquatic biota • Ensure no alien fauna or flora are introduced or allowed to persist in the dam when it is inundated	Minor (+)
Risk of alien fish introductions for recreation • Consider the hydrological regime of the dam before introducing fish to determine whether it can realistically sustain a fish population. • Do not introduce any fish without ensuring their introduction is legal by consulting the NEMBA act.	Neutral
Racial and gender imbalances addressed in benefiting from water use • Implement the dam to improve water security	Medium positive
Transformation in the water and agricultural sector	High positive
Rural development in terms of food security and agrarian reform addressed • Implement the dam to improve water security	Medium positive
Social discrepancies in wealth and opportunities addressed • Implement the dam to improve water security	Medium to high positive
Job opportunities that will address unemployment and create sustainable livelihoods • Implement the dam to improve water security	High positive
Local economic growth stimulated • Implement the dam to improve water security	Medium positive
Cultural / Historical	None
Noise	Negligible
Visual	None
Decommissioning	
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.	
Decommissioning	None
Other - Cumulative	
Alterations in surface flows reaching the Groot River • Management actions for water quantities in the Gouritz River Estuarine Management Plan (Royal Haskoning, 2018) state that water use activities and licenses in the catchment should be assessed for compliance with Reserve requirements. If the ecological reserve requirements are not being met abstraction activities may be declared as streamflow reduction activities and temporarily controlled, limited or prohibited.	Could be significant but unlikely for this dam on its own to cause impact.
Transformation in the water and agricultural sector • Implement the dam to improve water security	High positive
Job opportunities and rural development • Implement the dam to improve water security	Medium - High positive
Racial and gender imbalances • Implement the dam to improve water security	Medium – High positive

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.

Aquatic:

Impact	Intensity	Duration	Extent	Probability	Significance	Reversibility	Irreplaceability	Confidence
Impact: Removal of vegetation								
Without mitigation	4	6	2	7	Moderate (-)	Low	Medium	High
With mitigation	4	6	2	7	Moderate (-)	Low	Medium	High
Impact: Disturbance to the river bed and banks								
Without mitigation	5	7	2	7	Moderate (-)	Low	Medium	High
With mitigation	5	7	2	6	Moderate (-)	Low	Medium	High
Impact: Sedimentation of downstream watercourses (in the event of rainfall during construction phase)								
Without mitigation	4	4	3	6	Minor (-)	Medium	Medium	High
With mitigation	3	2	1	3	Negligible (-)	High	Medium	Medium
Impact: Water quality impacts downstream								
Without mitigation	4	3	3	4	Minor (-)	High	Medium	High
With mitigation	3	3	2	3	Negligible (-)	High	Medium	High
Impact: Import of alien seed and plants to the site								
Without mitigation	4	5	2	5	Minor (-)	Medium	Low	High
With mitigation	3	2	2	2	Negligible (-)	High	Low	High

Impact	Intensity	Duration	Extent	Probability	Significance	Reversibility	Irreplaceability	Confidence
Impact: Risk of reduced flows reaching the Groot River								
Without mitigation	4	6	3	7	Moderate (-)	Medium	Medium	Low
With mitigation	3	6	2	6	Minor (-)	Medium	Medium	Medium
Impact: Risk of alien fish introductions for recreation								
Without mitigation	5	4	3	4	Minor (-)	Low	Medium	Medium
With mitigation	0	0	0	0	Neutral	High	Low	High
Impact: Creation of lentic habitat for aquatic biota								
Without mitigation	2	3	1	5	Negligible (+)	Medium	Medium	Medium
With mitigation	3	3	1	6	Minor (+)	Medium	Medium	Medium

Decommissioning Phase Impacts:

The impacts of dam removal, capacity reduction or relocation (e.g. to an off-channel site) would all involve the excavation of sediment used to construct the dam wall, and replacement within the original watercourse. While this would restore flows to varying degrees (dependent on the selected option) to the Groot River, it would inevitably result in erosion of the watercourse at the site, and downstream sedimentation. This could be mitigated by stabilising the sediment with extensive re-vegetation and erosion control measures. A comprehensive rehabilitation plan would need to be compiled using relevant expertise in this event. This process is potentially highly damaging to the watercourse if not executed carefully, and therefore expert inputs from engineers and environmental practitioners would be required.

Cumulative Impacts:

The combined capacity of large dams in the catchment of the Groot River (Floriskraal, Verkeerdevlei, Bellair and Miertieskraal) is 82.4 million cubic metres which is approximately 78% of the Mean Annual Runoff (R.H.P., 2007). This combined with general water use authorisations has had a large, cumulative impact on flows in the Groot River. Low rainfall in the region means that water abstraction in the form of large, in-stream dams which store flood flows is very common. The storage capacity of these dams often exceeds the annual runoff of the catchment (R.H.P., 2007).

The volume of the Byevangers Dam is approximately 6 times greater than the existing water allocation which if authorised, will no longer enter the river. A rapid scan of 10 drainage lines leading into the Groot River upstream of the site on both banks indicates that approximately 80% of drainage lines contain one or more impoundments to abstract water. The cumulative impact of these dams includes the reduction of flood flows (important natural disturbance) entering the Groot River. This leads to increased siltation as a result of reduced flushing and scouring, altering the shape of the river channel and resulting in excessive growth of instream vegetation.

This impact has already been identified in the recently published RQOs for the site which specifically state that flows must be sufficient to ensure the ecological condition of the Groot River doesn't decline from its current state. It is unlikely that the increased storage and abstraction provided by the Byevanger Dam would be solely responsible for a decline in the condition of the Groot River, especially given the extent of instream storage upstream. However, if every land-owner in the SQR opted to comparatively increase the capacity of their impoundments without authorisation, the cumulative impact on the ecology of the Groot River would be significant.

From a broader perspective, as the Groot River is an important tributary of the Gourits River, the condition of the estuary must be considered in terms of cumulative impacts in the catchment. The PES of the estuary is B/C with a Recommended Ecological Category (REC) of B (Van Niekerk *et al.*, 2015). Relevant recommended mitigation measures are to restore base flows and floods. Management actions for water quantities in the Gouritz River Estuarine Management Plan (Royal Haskoning, 2018) state that water use activities and licenses in the catchment should be assessed for compliance with Reserve requirements. If the ecological reserve requirements are not being met abstraction activities may be declared as streamflow reduction activities and temporarily controlled, limited or prohibited.

Socio-Economic:

a) Racial and gender imbalances addressed		
	Authorisation	**Not authorised**
Extent of impact	Regional	Local
Duration of impact	Long term	Long term
Intensity of impact	Medium impact	Medium impact
Probability of occurrence	Definite	Definite

Authorising the water uses and infrastructure development for JG NEL FAMILY TRUST will have a long term, medium impact on the empowerment of HDI's and especially HDI women. Five (5) HDI persons are partners an agricultural concern of which 1 is a woman. Racial and gender imbalances will be addressed through the ownership in Dam Workers Association through ongoing training and development and increased job opportunities for women and HDIs. International experiences with empowering women (Oportunidades in Mexico (www.oportunidades.gob.mx and Grameen Bank in Bangladesh (www.grameenfoundation.org)) have proved that the social multiplier effect for empowering women is far greater and more beneficial for transformation than giving opportunities only to men. In this case a woman will be a business owner and farmer and other women will have the opportunity for job security that brings growth and development.

Should the water use and infra structure changes for JG NEL FAMILY TRUST not be authorized and the drought continues, job losses, opportunities for development and loss of income will definitely occur with medium impacts on a local and regional level.

b) Transformation in the water and agricultural sector

	Authorised	Not authorised
Extent of impact	Regional and national	Regional and national
Duration of impact	Permanent	Medium term
Intensity of impact	Medium	Medium
Probability of occurrence	Definite	Probable

Authorising the water use and infra structure changes will ensure sustainability and prevent losses, serving the current national drive around redistribution of assets and sustainable agricultural reform – it will contribute to the sustainability of HDI persons taking part in agricultural businesses. This authorisation can serve as an example of private enterprise involvement in the field of agricultural transformation. The more common pattern nationally is that farmers form trusts with HDI farmers but in effect they themselves keep on farming on their behalf. They obey the letter

of the law but not the spirit.

Should the water use and infra structure changes not be authorized, the impacts will also be regional and national with failed aspirations and hopes and even failed trust in the government system. Failed transformative experiences have a cumulative impact on a national and political level, fostering hopelessness, anger and unrest. The dissemination of information through social media means that failed initiatives in Ladismith can have a national impact.

c) Rural development in terms of food security and agrarian reform addressed

	Authorised	Not authorised
Extent of impact	Local, regional	Local and regional
Duration of impact	Long term	Medium to long term
Intensity of impact	Medium impact	Medium impact
Probability of occurrence	Definite	Probable

Authorising the water use and infra structure changes will have a permanent impact on a local and regional scale. Rural development is linked to land and agrarian reform and food security. Food production addresses food security on a national and regional level. The employment opportunities created also ensures food security for those families who earn income and have the opportunities to acquire skills that can lead to permanent and higher income. This application aligns with the purpose of the Integrated Sustainable Rural Development Strategy to enhance the welfare of the poor that inhabit rural areas of South Africa and catalysing the transformation of local rural areas into

economically viable communities. Rural development is linked to land and agrarian reform and food security.

Should the water use and infra structure changes not be authorized, it can probably threaten food security through income and job losses. This is already happening in other parts of the region and country. The IDP of the Kannaland Municipality also highlighted the impact of agricultural constraints, resulting in the migration of farm workers to towns where in most cases these families became indigents. The impact will be on a medium to long term basis for many families. Research shows that families often never recover from a breadwinner losing a job, even for a medium period.

d) Social discrepancies in wealth and opportunities addressed		
	Authorised	**Not authorised**
Extent of impact	Local and regional	Local and regional
Duration of impact	Medium term	Medium term
Intensity of impact	Medium-high	Medium-high
Probability of occurrence	Probable	Probable

It is probable that authorising the water use and infra structure changes for JG NEL FAMILY TRUST will have a medium term impact on a local and regional scale. Being able to utilize authorised water contributes to developing economically sustainable and strong businesses. JG NEL FAMILY TRUST is in the process of setting up an agricultural business with HDI ownership and shares in the production company. They contracted to transfer skills and facilitate the growth of a Black farming enterprise. The important next step is to create a sustainable environment for continuing growth. Water security and drought measures on JG NEL FAMILY TRUST will have a direct impact on the viability of the Association.

Should the water use and infra structure changes not be authorized, the probability is high that the current social discrepancies will stay the same for a long time in the region.

e) Job opportunities that will address unemployment and create sustainable livelihoods		
	Authorised	**Not authorised**
Extent of impact	Local and regional	Local and regional
Duration of impact	Long term	Long term
Intensity of impact	High	High
Probability of occurrence	Highly probable	Highly probable

A livelihood is comprised of capabilities, assets and activities and it is sustainable when it has the ability to avoid or more usually to be resilient and recover from stressors and shocks. Sustainability serves to maintain and enhance households' capabilities and assets both now and for future generations, while not undermining the natural resource base (DFID 1999). This definition lies at the core of livelihoods analysis.

It is highly probable that authorising the water use and infra structure changes for JG NEL FAMILY TRUST will have a long term impact on sustainable livelihoods on a local and regional level. Job creation is a key intervention in the war on poverty and water is a key strategic factor. Water

provisioning to economic sectors like agriculture is about creating jobs which would otherwise not be viable or created.

Authorising the water will contribute to labour intensive activities, creating 80 permanent and 40 temporary new job opportunities and advance agricultural skills development for HDIs. The agricultural sector is shedding jobs, not creating them. If JG NEL FAMILY TRUST can store water it can create more jobs through its labour intensive business.

Should the water use and infra structure changes not be authorised, it is highly probable that global warming impacts (increased drought cycles) will erode the benefits of the HDI enterprise and will cause severe job losses to persons who live on the farm and are dependent for their whole livelihood on their job.

f) Local economic growth stimulated		
	Authorised	**Not authorised**
Extent of impact	Local and regional	Local and regional
Duration of impact	Medium term	Medium term
Intensity of impact	Medium	Low
Probability of occurrence	Definite	Definite

Authorising the water use and infra structure changes for JG NEL FAMILY TRUST will have a medium term impact on the local economy on a local and regional scale. It will secure agricultural development in an area that showed a shrinking in the agricultural arena, an area with high unemployment and poverty rates. JG NEL FAMILY TRUST spent R9 821 194 the local economy in the 2017-2018 financial year as well as R1 314 019 on the unlawful infrastructure development. It contributes in effect R22 785 170 in terms of the agricultural multiplier effect. An increase of 25% (functioning at 75%) will mean that R6 869 298.00 more will be spend in the economy.

Should the water use and infra structure changes not be authorized, it is highly likely that inputs in the local economy will decrease without water security.

Should the water use and infra structure changes not be authorized, it remains highly probable that the negative community feelings will stay the same. Mitigatory steps can be taken by JG NEL FAMILY TRUST and BGCMA to inform all the stakeholders of the authorisation process.

Cumulative Impacts:

Should the water uses and infrastructure development be authorised:

• Addressing HDI business ownership and racial and gender imbalances already have a HIGH cumulative impact on transformation in the water and agricultural sector and a MEDIUM impact on job opportunities and rural development. HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation.

• The cumulative impacts of transformation in the water and agricultural sector on rural development, eradication of poverty, job creation and rural development will be MEDIUM-HIGH. Sustainable growth, secure employment and food security are dependent on water security- especially in rural areas dependent on agriculture as the main economic driver.

• The current trend in addressing racial and gender imbalances can continue should there be water security and drought resilience and will have a HIGHMEDIUM cumulative impact on job creation and rural development.

Should the water uses and infrastructure NOT be authorised:

• The cumulative impact of HDI ownership on racial and gender imbalances and transformation in the water and agricultural sector addressed will remain HIGH because it has already been implemented.

• The cumulative impacts of transformation in the water and agricultural sector (should the water NOT be authorised) on rural development, eradication of poverty, job creation and rural development will be MEDIUM. The HDI ownership and partnership are already in place but sustainable growth and secure employment are dependent on water security.

• Racial and gender imbalances have already been addressed to a degree through the HDI ownership but the cumulative impact on job creation and rural development will be LOW should lob losses and production cuts occur due to lack of sustainable water

• HDI ownership and equitable racial and gender balance are not enough inputs for economic growth and job creation.

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.

None

(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 farmin 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.

Freshwater:

This section was prepared according to guidelines for specialists published by DEA & DP (Brownlie, 2005). The basis for the impact assessment is the construction of the dam as outlined in Section 2, and takes into account pre-existing impacts discussed in the Index of Habitat Integrity. The assessment considers direct, indirect and cumulative impacts to the aquatic ecosystem that may arise during the design, layout, construction and operational phases of managing the dam.

Individual impacts are rated according to criteria which include their intensity, duration and extent. The ratings are then used to calculate the consequence of the impact which can be either negative or positive as follows:

Consequence = type x (intensity + duration + extent)

Where type is either negative or positive. The significance of the impact is then calculated by applying the probability of occurrence to the consequence as follows:

Significance = consequence x probability

The criteria and their associated ratings are below.

Each impact is considered from the perspective of whether losses / gains would be irreversible or result in the irreplaceable loss of biodiversity of ecosystem services. The level of confidence is also determined and rated as low, medium or high.

Category	Description	Rating
Intensity	Negligible	1
	Very low	2
	Low	3
	Moderate	4
	High	5
	Very high	6
	Extremely high	7
Duration	Immediate	1
	Brief	2
	Short term	3
	Medium term	4
	Long term	5
	Ongoing	6
	Permanent	7
Extent	Very limited	1
	Limited	2
	Local	3
	Municipal area	4
	Regional	5
	National	6
	International	7
Probability	Highly unlikely	1
	Rare	2
	Unlikely	3
	Probably	4
	Likely	5
	Almost certain	6
	Certain	7

Significance rating	Range	
Major (-)	-147	-109
Moderate (-)	-108	-73
Minor (-)	-72	-36
Negligible (-)	-35	-1
Neutral	0	0
Negligible (+)	1	35
Minor (+)	36	72
Moderate (+)	73	108
Major (+)	109	147

Rating	Reversibility	Irreplaceability	Confidence
Low	Permanent modification, no recovery possible.	No irreparable damage and the resource isn't scarce.	Judgement based on intuition.
Medium	Recovery possible with significant intervention.	Irreparable damage, but is represented elsewhere.	Based on common sense and general knowledge
High	Recovery likely.	Irreparable damage, and is not represented elsewhere.	Substantial data supports the assessment

(c) Please describe the gaps in knowledge.

None currently identified.

(d) Please describe the underlying assumptions.

Freshwater:

- As no water was flowing in the watercourse at the time of the assessment, it was not possible to make direct observations of any aquatic biota that may be associated with the aquatic ecosystem, or pinpoint areas of active erosion;
- The area has received below average rainfall for several years and the vegetation on site reflects the drought conditions. Therefore vegetation could not be extensively described in the riparian zone;

- The retrospective nature inherent in Section 24G applications means the assessment is dependent on comparison of the impacted site to suitable reference conditions. In this case the impacted site was compared to sites upstream and downstream of the area. The assumption was made that these sites provide a suitable comparison.
- This assessment is based on the findings of visual assessment of the site combined with available desktop resources. This study was not informed by detailed hydraulic, hydrological, faunal or floral assessments.

Socio-Economic:

- The assessor attempted to obtain as much verified proof as possible for the data provided in this report. Some data and conclusions reached however were based purely on facts and numbers provided by the Trustees
- Limited population data is available on the Kerkplaas and Voorbaat communities where employees who do not live on the farm come from. It is probable that the future cohort of new employees will mainly come from those communities. A final report should contain more information about the significant impact that 80+ persons who earn an income will have on those communities
- Precise data was not yet available on the volume of water for Lofpoort in terms of the servitude (Rooikrans dam) as well as wether the servitude will also be in place for the Byevanger dam. In my opinion it is not necessary to do a Socio-economic Assessemnt for Lofpoort if the volume of water remains 3 000m$^{3/}$
- Down- stream users must be identified by BGCA and the impact of the Byevanger dam assessed in the Final Report

(e) Please describe the uncertainties.

As above

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

There was a previous dam on the non-perennial watercourse which failed multiple times over the years. The dam is an important feature for the sustainability of the agribusiness for both the Vanszylsdamme and Lofpoort farms. The community is almost completely dependant on farming for employment, education, livelihood, skills development and food security thus the sustainability of the farms are very important.

The impacts on the environment range from Minor (+) to Moderate (-) at a local level and all impacts from the activity can be mitigated to an acceptable level.

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:

- The mitigation measures and Rehabilitation Plan as provided by the specialist must be implemented;
- An Environmental Control Officer (ECO) should be appointed to inspect the site before, during and after the remedial construction work;
- Alien invasive clearing should continue on site;
- During the first year the dam must be inspected for erosion damage after every rain storm.

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 where 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 the 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).

"The applicant must place a preliminary advertisement in-
(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 were placed at the entrance to the property;

- An advertisement was placed in the local newspaper (*Oudtshoorn Courant*) 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 were 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 was opened and maintained, and all registered Interested & Affected Parties (I&APs) were provided with opportunities to comment on various documentation;
- All comments received have been included in a Comments & Responses report which has 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**

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 was made available on the Cape EAPrac website (www.cape-eaprac.co.za).

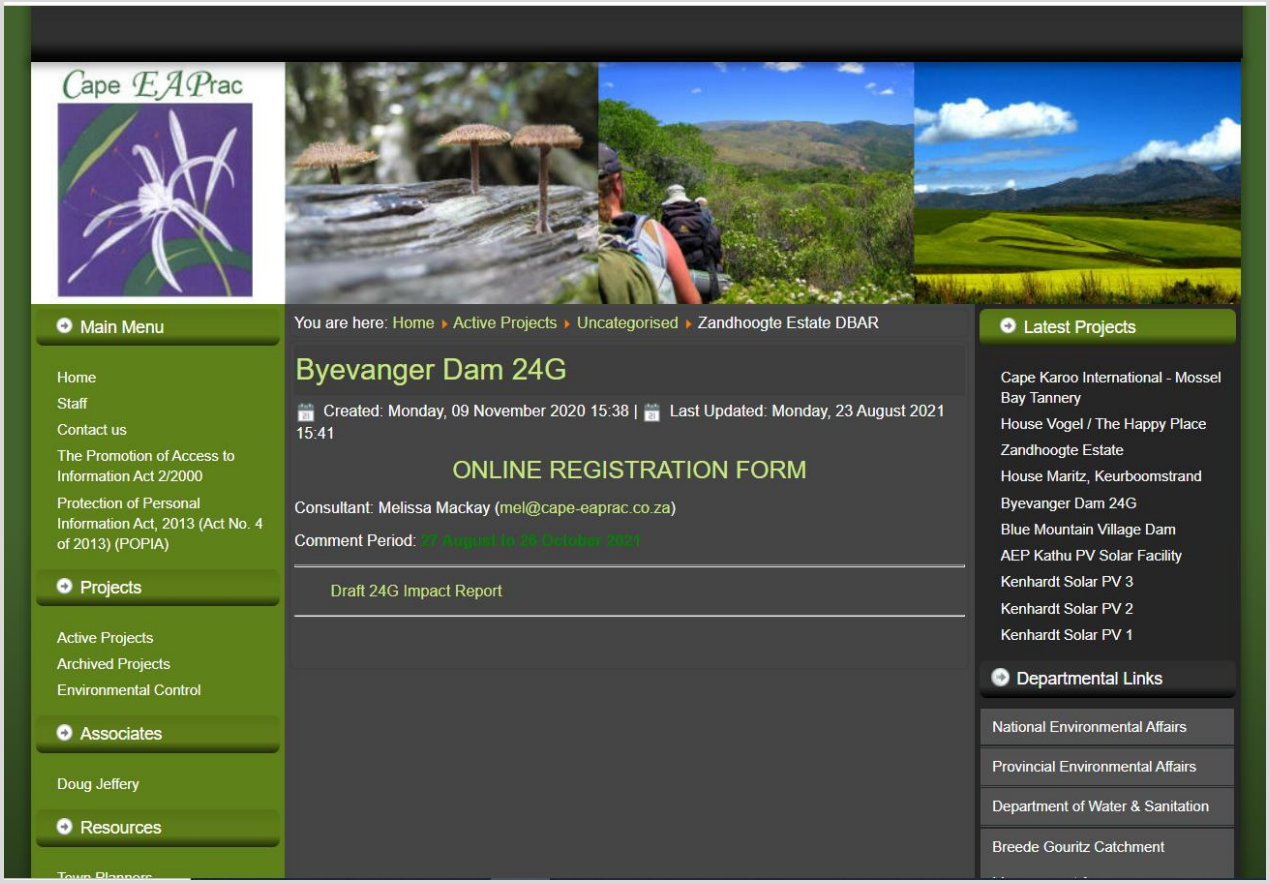

Figure 18: Website public participation

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	No comment received	
Breede Gouritz Catchment Management Agency (BGCMA)	29 October 2021	
CapeNature	07 October 2021	

2. **Provide a summary of the issues raised by I&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.)

In response to the site notices and communication with the DEA&DP Law Enforcement, several neighbouring property owners raised prior to the circulation of the Draft 24G Impact Report, but did not provide any comment on the report. The concerns are related primarily to the following:

- Water use affecting downstream users;
  - The landowner had an existing dam in place, albeit of a smaller volume on the non-perennial watercourse. The new dam is unlikely to collect much more than the previous volume due to the hydrology of the watercourse. The additional storage will come from the Buffelsrivier storage scheme for the water rights already allocated to this property.

Thus the impact on downstream users will not differ significantly to past use. A WULA has been submitted to the BGCMA for the increased storage.

- Water abstraction affecting the environment;
  - According to the aquatic specialist, the impacts are low to moderate and can be managed by implementing the recommendations provided.

CapeNature:

- The dam caused removal of vegetation.
  - Yes, vegetation was removed for the construction. The remedial actions of planting indigenous vegetation on open, disturbed areas has been recommended.
- The dam could potentially have impacted on the objectives of an ESA.
  - The ESA is an aquatic ESA associated with the non-perennial watercourse, and the dam will provide aquatic habitat.
- Alien invasive management must be implemented.
  - Agreed, although the property is not excessively infested but ongoing clearing must continue.
- No alien fish species may be introduced into the dam.
  - Agreed, no alien species will be introduced.
- Monitoring must take place for more than one year
  - Provision has been made in the EMPr for environmental audits to be done for at least two (2) years post completion.

BGCMA:

Our interest in this matter pertains to the fact that the dam has been constructed on a non-perennial waterway that dissects a number of farms (Voorbaat 2/42; Voorbaat 31/42; Voorbaat 32/42; Buffelsfontein 2/36; Byenvangerskloof RE/40; Voorbaat 66/42; Buffelsfontein 3/36) and not just the two farms on which the dam is located (Voorbaat 66/42; Buffelsfontein 3/36) and the dam will affect any water flow into the Groot River, which could influence a number of other farms downstream. We were not consulted prior to this dam's construction and we do not believe that there is a clear understanding of who has the right to access and use water along and this waterway

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.**

The following conditional aspects should be included:

- No alien fish species may be introduced.
- Environmental audits / monitoring should continue for at least two (2) years.

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.~~

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	*immediately cease the activity pending a decision on the application submitted in terms of this subsection*
ii	*investigate, evaluate and assess the impact of the activity on the environment*

iii	*remedy any adverse effects of the activity on the environment*	
iv	*cease, modify or control any act, activity, process or omission causing pollution or environmental degradation*	
v	*contain or prevent the movement of pollution or degradation of the environment*	
vi	*eliminate any source of pollution or degradation*	
vii	*compile a report containing-*	
	aa	*a description of the need and desirability of the activity*
	bb	*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*
	cc	*a description of mitigation measures undertaken or to be undertaken in respect of the consequences for or impacts on the environment of the activity*
	dd	*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*
	ee	*an environmental management programme*
viii	*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.*	

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	~~*YES*~~	***NO***	~~*UNCERTAIN*~~

matter that is not subject to this application and in any province in the Republic?			
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.*			
Are you, the applicant, being investigated for the contravention of section 20(b) of the NEMWA in respect of a matter that is not subject to this application and in any province in the Republic?	~~YES~~	**NO**	~~UNCERTAIN~~
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.*			
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 in terms of which this application directly relates?	~~YES~~	**NO**	~~UNCERTAIN~~
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.*			

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** **Description of variable**	**Place an "x" in the appropriate box**
The activity is not giving, has not given and will not give rise to any negative socio-economic impacts		X
~~The activity is giving, has given, or could give rise to negative socio-economic impacts, but highly localised~~		
~~The activity is giving, has given, or could give rise to significant negative socio-economic and regionalized impacts~~		

~~The activity is resulting, has resulted or could result in wide-scale negative socio-economic impacts.~~	
Motivation:	
According to the Socio-Economic Impact Assessment, the activity will have high positive impacts for the surrounding community and agriculture in the region.	

Index	Biodiversity Impact Description of variable	Place an "x" in the appropriate box
	~~The activity is not giving, has not given and will not give rise to any impacts on biodiversity~~	
	The activity is giving, has given or could give rise to localised biodiversity impacts	X
	~~The activity is giving, has given or could give rise to significant biodiversity impacts~~	
	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.	
Motivation:		
According to the Aquatic Impact Assessment, there is likely to be some Moderate (-) impacts on the local biodiversity due to the construction of the dam. These can be mitigated, but will still have a residual effect on the environment.		

Index	Sense of Place Impact and / or Heritage Impact Description of variable	Place an "x" in the appropriate box
	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
	~~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~~	
	~~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~~	
	~~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~~	
Motivation:		
The activity is related to an existing dam and agricultural operation, thus there is no change to the current sense of place. This was further confirmed by Heritage Western Cape.		

Index	Pollution Impact Description of variable	Place an "x" in the appropriate box
	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 construction of the dam and its operation will not give rise to any 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 **not** previously taken against the applicant in respect of the abovementioned provisions.	X
Explanation of all previous administrative action taken in respect of the above:	
The applicant has not had any previous administrative action taken.	

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 Description of variable	Place an "x" in the appropriate box
	~~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 Description of variable	Place an "x" in the appropriate box
	~~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.	X
	Explanation in respect of all previous applications submitted in terms of section 24G	
	Not applicable.	

PART 3: APPLICANT'S PERSONAL CIRCUMSTANCES

Index	Applicant's legal persona Description of variable	Place an "x" in the appropriate box
	~~The applicant is a natural person.~~	
	The applicant is a firm.	X
	Describe the firm:	
	The applicant is a family trust (JG Nel Familietrust) that was established for the operation of the Vanzylsdamme farming business.	

Index	Any other relevant information that the applicant would like to be considered.
	Motivate and explain fully:

The applicant is responsible for a significant farming operation in the area that supports multiple families in the community.

Authorizing the dam and increased storage

The farm will have the water security for:

• More permanent crops planted which are more labour intensive (plums, grapes and figs)

• Increased production of the pomegranates with better irrigation

• Lucerne production on lands that are now fallow

• More staff required for increased fruit and onion seed production and export(80 new permanent positions to be created)

• More temporary staff for planting and harvesting (40 new temporary positions created. It will mean job security for the current employees and their families living on the farm.

The newly constituted HDI partnership will be able to rent land and plant cash crops. They will also be able to obtain shares in a packing facility.

Vanzylsdamme currently functions at 50% capacity due to water shortage and lack of sustainable water provision. The farm has 420 hectares listed with the Buffelsrivier Irrigation Scheme. The scheme provided the farm in the past with 7 900m³ water three times a year. That enabled the farm to produce about 3 200 tons of lucerne in the period of abundant water @ R3 000,00 per ton. No water has been available from the Buffelsrivier Scheme since the drought because the Floriskraal Dam has been empty for the last five (5) years. There is 276ha of the farm that cannot be farmed since 2015 due to the drought. Taking of water has therefore decreased as well as storage due to the breaking of the Rooikrans dam.

The farm can increase production with 50% standards if they can have water security through sustainable water storage.

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.

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**	✓

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**~~	~~**Waste listed activities supporting information (as in prescribed attached form)**~~	
~~**Other**~~	~~(please list accordingly)~~	

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).

2. DECLARATIONS

2.1 The Applicant

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

- I **Mr Stephanus Nel**, in ~~my personal capacity~~ or duly authorised as **Trustee** (state capacity) by **JG Nel Familletrust** 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 t 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(es), 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.

(SNEL)

Signature of the applicant:

Fonie Nel STEPHANUS NEL.

Name:

JG Nel Familietrust

Name of Firm (if applicable):

29/10/2021

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.

Melissa Mackay

Digitally signed by Melissa Mackay
DN: cn=Melissa Mackay, o=Cape EAPrac, ou, email=mel@cape-eaprac.co.za, c=ZA
Date: 2021.11.02 10:45:28 +02'00'

Signature of the environmental assessment practitioner:

Cape Environmental Assessment Practitioners (Cape EAPrac)

Name of company:

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
		Tons / Month	M^3 / 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	
Recycling installation	
Formal salvaging	
Contractor	
No salvaging planned	

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 1km from the wetland	Yes	No

Indicate the distance to the boundary of the nearest residential area

	metres
	metres

Indicate the distance to the boundary of the industrial area

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**
		° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "

		____ ° ____ ' ____ "	____ ° ____ ' ____ "
		____ ° ____ ' ____ "	____ ° ____ ' ____ "
		____ ° ____ ' ____ "	____ ° ____ ' ____ "