GEORGE
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TEL: +27 (0) 21 554 5195 **FAX:** +27 (0) 86 575 2869
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ADDRESS: Tableview, Cape Town, 7441
PO BOX: 443, Milnerton, 7435

SECTION 24G APPLICATION FORM AND CHECKLIST

FOR

REMAINDER OF FARM FERNKLOOF NO. 157, KLAARSTROOM, PRINCE ALBERT

WESTERN CAPE PROVINCE

In terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the amended (April 2017) Environmental Impact Assessment Regulations, 2014

PREPARED FOR:	Mr. J. Klue PO Box 1 Klaarstroom 6932	**DATE:**	13 May 2022
DEADP REF:	14/2/4/2/3/C2/7/0013/22		

Western Cape Government
Environmental Affairs and Development Planning

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)**	X
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.	X
	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).	X
	2.4. A description of the receiving environment **after** commences of the activity(ies).	X
	2.5. All appendices and annexures:	
	2.5.1. Locality map	X
	2.5.2. Site plans or/and Layout plan	X
	2.5.3. Building plans (if applicable)	
	2.5.4. Colour photographs	X
	2.5.5. Biodiversity overlay map	X
	2.5.6. Permit(s) / license(s) from any other organ of state including service letters from the municipality	X
	2.5.7. Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements, Land owner consent and any other public participation information	X
	2.5.8. Environmental Management Programme	X
	2.5.9. Certified copy of Identity Document of Applicant	X
	2.5.10. Certified copy of the title deed (or title deeds in the case of linear activities)	X
	2.6. Signed declaration forms.	
3.	Are any specialist assessments required: e.g. Botanical, Hydro-geological, soil, socio-economic?	**Y** ~~N~~
	3.1. If yes, has the specialist assessment report been attached to the application?	Yes
4.	An assessment of the impacts of the activity or activities in terms of the following categories:	
	• Socio-economic	
	• Biodiversity	X
	• 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.	X
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).	X
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).	X
	Confirmation that Annexure A, Section C, Part 1 has been completed by an environmental assessment practitioner (EAP)	X
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).	X
	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;	X
	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	X
	9.1.4. Whether the applicant is a firm or a natural person. (see Section 24G Fine Regulations for definition of "firm")	X
	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.	X
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.	X
	10.2 Copies of comments and responses included in the application.	X
	10.2 Comments and Response report attached to the application.	X
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)**	X

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

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

April 2018

Form Number S24GAF/04/2018

Kindly note that:

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

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

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

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

   PART 1 -
   Section A: Background Information
   Section B: Activity Information
   Section C: Description of Receiving Environment
   Section D: Need and Desirability
   Section E: Alternatives
   Section F: Impact Assessment, Management, Mitigation and Monitoring Measures
   Section G: Assessment Methodologies and Criteria, Gaps in Knowledge, underlying Assumptions and Uncertainties
   Section H: Recommendations of the EAP
   Section I: Representations - Response to an Incident or Emergency Situation
   Section J: Public Participation Process

   PART 2 –
   ANNEXURE A of Fine Regulations
   Section A: Directives
   Section B: Deferral of the Application
   Section C: Quantum of the section 24G fine
   Section D: Preliminary advertisement

   PART 3 –
   Appendices and Declarations

   PART 4 –
   ANNEXURE B: Waste Management Activity Supporting Information (if relevant)

5. An independent EAP must be appointed to complete the required sections (in terms of NEMA and its Regulations) of the Application Form on behalf of the applicant; the declaration of independence must be completed by the independent EAP and submitted with this Application Form. If a specialist report is required, the specialist will also be required to complete the declaration of independence.

6. Two hard copies (including the original) and one electronic copy (CD/DVD/Flash drive) of this application form must be submitted.

7. The required information must be typed within the spaces provided. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. The space provided extend as each space is filled with typing. **A legible font type and size must be used when completing the form.** A digital copy of the Application Form is available on the Department's website https://www.westerncape.gov.za/eadp/

8. The use of "not applicable" in the Application Form must be done with circumspection.

9. **No faxed or e-mailed application forms will be accepted.**

10. Unless protected by law, all information contained in and attached to this application will become public information on receipt by the competent authority. Please note that, unless exemption has been granted in terms of the National Exemption Regulations published under GN R994 in GG 38303 of 8 December 2014, any Interested and Affected Party should be provided with the information contained in and attached to this Application Form as well as any subsequent information submitted.

11. This Application Form must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department.

PROCESS TO BE FOLLOWED:

a) **Prior to submission of an Application Form,** the applicant is required to undertake a pre-application public participation process in terms of Regulation 8 of the Regulations relating to the procedure to be followed and criteria to be considered when determining an appropriate fine in terms of section 24G published in the Government Gazette on 20 July 2017, Gazette No 40994, No. R. 698 ("Section 24G Fine Regulations").

b) Together with the submission of a section 24G Application Form, the form **must include Proof of compliance of with Regulation 8** of the Section 24G Fine Regulations, including, but not limited to, proof of the pre-application advertisement in a local newspaper and register of I&APs.

c) The Department will acknowledge receipt of the application (within 14 days) and provide the Applicant / EAP with the relevant application reference number to be used in all future correspondence and the application public participation processes.

d) Upon receipt of the application, the MEC/Competent Authority may direct the applicant in terms of section 24G(1)(i-viii) of the NEMA.

e) In terms of the provisions of section 24G of NEMA, the applicant must pay an administrative fine up to a maximum of R5 million before the MEC/Competent Authority decides on the application.

f) The applicant **must within 14 days** of receipt of the determination of the quantum of the fine, ensure that all registered interested and affected parties are notified of the determination of the quantum of the fine, including the reasons and provided with access to the determination.

g) The administrative fine **must be paid within the time period stipulated** in the determination. Failure to pay the fine within the specified period, will result in the lapse of the application and any partial amounts paid in will not be refunded.

h) **Proof of payment of the fine must be submitted to the Department**. Upon payment of the administrative fine, the MEC/Competent Authority may-

- refuse to issue an environmental authorisation; or
- issue an environmental authorisation to such person to continue, conduct or undertake the activity subject to such conditions as may be deemed necessary, which environmental authorisation shall only take effect from the date on which it has been issued; or
- direct the applicant to provide further information or take further steps prior to making a decision provided for above;
- together with the above decision the MEC/Competent Authority may direct a person to rehabilitate the environment within such time and subject to such conditions as may deem necessary or take any other steps necessary under the circumstances.

PLEASE NOTE THE FOLLOWING:

1. Failure to comply with a directive may result in the institution of appropriate legal action as is deemed necessary and as provided for in the legislation.

2. The submission of an application or the granting of an environmental authorisation shall in no way derogate from—

(a) the environmental management inspector's or the South African Police Services' authority to investigate any transgression in terms of NEMA or any specific environmental management Act;
(b) the National Prosecuting Authority's legal authority to institute any criminal prosecution.

3. If, at any stage after the submission of an application it comes to the attention of the Minister, Minister for mineral resources or MEC that the applicant is under criminal investigation for the contravention of or failure to comply with section 24F(1) or section 20(b) of the *National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)*, the Minister, Minister for mineral resources or MEC may defer a decision to issue an environmental authorisation until such time that the investigation is concluded and—
   (a) the National Prosecuting Authority has decided not to institute prosecution in respect of such contravention or failure;
   (b) the applicant concerned is acquitted or found not guilty after prosecution in respect of such contravention or failure has been instituted; or
   (c) the applicant concerned has been convicted by a court of law of an offence in respect of such contravention or failure and the applicant has in respect of the conviction exhausted all the recognised legal proceedings pertaining to appeal or review.

4. A person is guilty of an offence if that person:

   - Prior to submission of a section 24G application:
     - 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
     - fails, in terms of Regulation 8(2), to comply with the advertisement requirements set out in Annexure A, section D or
     - fails, in terms of Regulation 8(3), to open and maintain a register of interested and affected parties)); or
     - 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

DEPARTMENTAL REFERENCE NUMBER(S) (for official use)

File Reference number (S24G)	
Administrative Fine Reference	

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

File Reference number (Enforcement), if applicable	14/1/1/E3/2/9/3/L1131/20
File reference number (EIA), if applicable:	
File reference number (Waste), if applicable:	
File reference number (Other (specify)):	

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

PART 1

PROJECT TITLE

ALLEGED UNLAWFUL CLEARANCE OF VEGETATION ON FARM ANGELIERS BOSCH (FERNKLOOF) RE/157, PRINCE ALBERT

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**
		X

SECTION A: BACKGROUND INFORMATION

1. APPLICANT PROFILE INDEX

Cross out the appropriate box "☒".

1.1	The applicant is a Natural Person (individual)					X
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)	Mr. Jurie Klue

Applicant Name:	Mr. Jurie Klue		
RSA Identity Number/ Passport Number of Applicant, if natural person:	7305235235088		
Name of Firm (if applicable):			
Firm Registration Number:			
Contact Person at the Firm:			
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: RSA ID No. Name: RSA ID No. Name: RSA ID No. Name: RSA ID No. Name: RSA ID No. Name: RSA ID No.		
Postal address:	PO Box 1		
	Klaarstroom	Postal code:	6932
Telephone:	( )	Cell:	0799879867
E-mail:	avondrust@pawireless.co.za	Fax:	( )
Project Consultant	Mr. Jurie Klue		
Contact person:			
Postal address:	As above		
		Postal code:	
Telephone:	( )	Cell:	
E-mail:		Fax:	( )
Name of the Environmental Assessment Practitioner ("EAP") responsible for the application:	John Sharples Michael Bennett		
Company name (if any):	Sharples Environmental Services cc		
Postal address:	PO Box 9087		
	George	Postal code:	6530
Telephone:	044 873 4923	Cell:	
E-mail:	michael@sescc.net info@sescc.net	Fax:	( )
EAP Qualifications	John Sharples: • Master Degree in Environmental Management • B-Tech in Nature Conservation Michael Bennett: • BSc: Environmental Science and Oceanography		
EAP Registrations/Associations	John Sharples, EAPSA registration no: 1485		
Name of the Landowner:	Mr Jurie Klue		
Name of the contact person for the land owner (if other):	Same as above		
Postal address:	Same as above		
		Postal code:	
Telephone:	( )	Cell:	
E-mail:		Fax:	( )
Person in control of land:	landowner		

Contact person:			
Postal address:			
		Postal code:	
Telephone:	( )	Cell:	
E-mail:		Fax:	( )

Please note:

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

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

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

Municipality in whose area of jurisdiction the activity falls:	Prince Albert Local Municipality		
Contact person, if known:	Anneleen Vorster Ashley America		
Postal address:	15 Church St		
	Prince Albert	Postal code:	6930
Telephone	+27 (0)23 541 1036	Cell:	
E-mail:	anneleen@pamun.gov.za ashley@pamun.gov.za	Fax:	+27 (0)23 541 1321

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):	Adjacent to the R407 between Klaarstroom and Prince Albert
Farm/Erf name(s) & number(s) including portion(s)	RE/157
Property size(s) (m^2)	872.01 ha
Development footprint size(s) (m^2)	(75433+143091+12581)= 231105 m^2 = 23.1ha
SG21 Digit code(s)	C06100000000015700000

Property boundary, please refer to Figure 1:

Point	Latitude (S), Longitude (E)
1	33°18'24.53"S, 22°12'33.37"E
2	33°18'10.44"S, 22°11'39.43"E
3	33°15'29.42"S, 22°10'29.90"E
4	33°15'27.64"S, 22°11'56.70"E

Figure 1: Property boundaries

The co-ordinates for the sites are, (refer to Figure 2):

Point	Latitude (S), Longitude (E)
1	33°16'15.02"S, 22°10'53.94"E
2	33°16'23.40"S, 22°11'12.65"E
3	33°17'1.95"S, 22°11'51.64"E

Figure 2: Sites 1 to 3

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:	R407		
Magisterial District or Town:	Central Karoo		
Closest City/Town:	Prince Albert	Distance	15 (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?		
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): Johannes Jurie Klue **Signature:** _____

Place: Klaarstroom **Date:** 6 June 2022

EAP (Full names): John Sharples **Signature:** _____

Place: George **Date:** 13 June 2022

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

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, 2014 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.
12	**The development of—** **(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres;** or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (**a) within a watercourse;** (b) in front of a development setback; or **(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse**; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.	Site 3: A dam, which exceeds 100m2, has been constructed within 32 meters of a water course (a tributary of the Cordiers River)
13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.	The volume of the dam must still be determined however it is unlikely that the Dam will exceed the 50 000m3 threshold as that is a significant volume. This activity is however being included until such time that it is evident that the volume threshold is not exceeded.
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or	The vegetation clearance and reshaping of the watercourse (Cordiers River) resulted in more than 10 m3 being moved, thereby triggering this activity.

	rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The total area cleared of vegetation will be better measured before the submission of the S24G application form however using our preliminary measurements we believe that approximately 23 ha of vegetation may have been cleared (combination of all three sites). Therefore at this stage it does not appear that this activity was triggered as the total area exceeds the 20 ha upper limit of this 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.
15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	May not be triggered due to old disturbed areas on site being excluded from the clearance footprint
16	The development of a dam where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the highwater mark of the dam covers an area of 10 hectares or more.	Dam Wall height still to be determined/measured
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.
12	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. i. Western Cape i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the	This activity will be triggered as the clearance threshold has been exceeded and the site is zoned for Agriculture, which is regarded as equivalent to conservation

	publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans; iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.	

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 / EXPANSION**

(b) Clearly describe the activity and associated infrastructure commenced with, indicating what has been completed and what still has to be completed.
Clearance of vegetation and reshaping of the Condiers River and tributaries to expand agricultural fields, as highlighted in Figures 3 to 5. The applicant cleared old agricultural fields that had been laying unused for more than 15 years, as well as repaired and improved old existing water flushing channels. Most of the topsoil was spread over the disturbed areas. Vegetation was removed along the Cordiers River, one section was widened by approximately 6m, and a donga was infilled along the Cordiers river

Figure 3: Clearance of vegetation area for the new agricultural lands prior to clearance

Figure 4: New Agricultural fields post clearance

1: 143 091 m²
2: 75 433 m²
3: 12 581 m²
Total: 231 105 m²

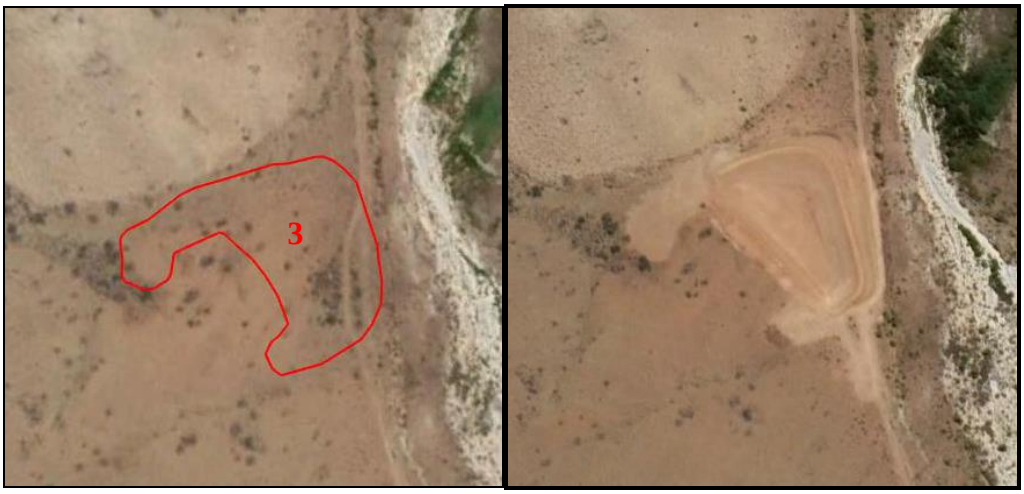

Figure 5: New dam site prior to and post clearance

(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:		
A water pipeline was installed from the new dam towards the existing dam adjacent to the R407. Above and below ground irrigation will still be installed on the New Lands 2.		
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		
Water abstraction and storage in the new dam. The new agricultural lands will be used to harvest onion seeds, pumpkin seeds, carrot seeds and lucerne will be grown to raise ostriches on the farm among other crops.		

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	Please refer to Figures 6 and 7. 1: 73566/48172 2: 144026/110278 3: 12581	m^2
Total area:	230173/171031	m^2

Figure 6: New Agricultural lands (Site 1 and Site 2)

Figure 7: New Dam (Site 3)

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:		

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 refer to Appendix D for the Site Photographs

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, 1998 (Act No. 107 of 1998),	Department of Environment, Forestry and Fisheries (DEFF)	Environmental Authorisation	In process
2014 Environmental Impact Assessment Regulations, promulgated in terms of Section 24(5) of NEMA (as amended on 07 April 2017)	DEFF	Environmental Authorisation	
National Water Act, 1998 (Act No. 36 of 1998), as amended.	Department of Human Settlements, Water and Sanitation	Water Use Licence	In process
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Heritage Western Cape	Record of Decision	18 February 2022

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System"	Circular and guidelines consulted and adhered to when undertaking this Basic Assessment Report.
Guidelines on EIA Regulations 2014	Guideline was consulted while compiling the S24G Application.
Guidelines on Public Participation, 2014	Guideline was consulted while compiling the S24G Application.
Guidelines on Need and Desirability, 2013	Guideline was consulted while compiling the S24G Application.
Guidelines on Alternatives, 2014	Guideline was consulted while compiling the S24G Application.
Guideline for Environmental Management Plans (June 2005)	Guideline was consulted while compiling the S24G Application.
Guideline for the Review of Specialist Input in the EIA process (June 2005).	Guideline was consulted while compiling the S24G Application.
Eden Spatial Development Framework (2017)	Guideline was consulted while compiling the S24G Application.
Prince Albert Spatial Development Framework (2014)	Guideline was consulted while compiling the S24G Application.
Prince Albert Municipality – IDP 2017 – 2022	Guideline was consulted while compiling the S24G Application.

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.	PLEASE REFER TO APPENDIX F	
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)
Water use licence for (c) and (i) (modify bed and banks and diverting the river)	DWS	No	
Water use licence for storage of water	DWS	No	

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	**X**	DOLOMITE	

SANDSTONE	**X**	DOLERITE	
OTHER (specify)	According to the 3322 Oudtshoorn 1:250 000 geological map, the study area is underlain by Bokkeveld and Witteberg Group sediments, both of which are members of the Cape Supergroup. More specifically, the southern part of the farm (south of the Klaarstroom road) where the new farm dam is located, is underlain by Traka Subgroup (Bokkeveld Group) sediments, which comprise siltstone, shale and arenaceous shale. The northern part where the cleared land areas are located, is underlain by alluvial valley deposits and bordered on the northern and southern sides by Weltevrede Formation (Witteberg Group) sediments. The latter comprises arenaceous shale, siltstone and sandstone. An interesting feature of the latter formation is the presence of numerous Spirophyton impressions (Toerien 1979).		

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~~

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 study site is located on the southern edge of the Great Karoo basin (750-850 masl) at the foot of the Groot Swartberg Mountains. The new farm dam is located in a north-south orientated side valley, while the cleared new land areas are located in a valley that connects Klaarstroom in the east with Prince Albert in the west. The Groot Swartberg, which separates the Great from the Little Karoo, rises a further 1150 m above the valley to 1921 masl (Blouberg). The general terrain around the subject areas is relatively flat to moderately sloped, the result of the eroding effects of the Cordiers River and its numerous smaller tributaries									

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).

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

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.

New Dam (Site 3)

Indigenous Vegetation - good condition	X	Indigenous Vegetation with scattered aliens		Indigenous Vegetation with heavy alien infestation	
Describe the vegetation type above: The new dam was established inside **shale renosterveld**. The vegetation around the dam site is still recovering from a landscape-scale fire event in 2018, which burnt a large part of the Groot Swartberg and terminated on the northern foot slopes. Structurally, it can be described as a low (±0.4 m) open		Describe the vegetation type above:		Describe the vegetation type above:	

(40%) shrubland following Campbell's (1981) classification. Apart from the fire and a farm track leading up the small valley, no other disturbances were noted around the dam site. Indigenous shrub species recorded in the veld adjacent to the dam and slope directly above include Galenia africana (dominant pioneer), Leipoldtia schultzei, Ruschia pungens (dom), R. multiflora, Lampranthus haworthii, Tylecodon wallichii, Cotyledon orbiculata, Crassula rupestris, C. tetragona, Euphorbia mauritanica, Vachellia karroo (dom along nearby watercourse), Calobota pungens (dom), Chrysocoma ciliata, Elytropappus rhinocerotis, Pteronia incana, P. flexicaulis, Euryops lateriflorus, Oedera squarrosa, Athanasia vestita, Dicoma picta, Searsia pallens, S. longispina, Euclea undulata, Diospyros austro-africana, Carissa bispinosa, Lycium sp, Dodonaea viscosa, Hermannia holosericea, Anisodontea triloba and Anginon fruticosum. A few weedy species were also recorded, including Mesembryanthemum guerichianum and Atriplex sp. No Species of Conservation Concern, regional endemics or protected species were recorded. All the species recorded are widespread and common. The presence of Dicoma picta "indicates veld in a healthy condition" (Vlok & Schutte-Vlok 2015).		
Provide ecosystem status for above: About 9% of Swartberg Shale Renosterveld is formally conserved in the Groot Swartberg Nature Reserve and Swartberg East mountain catchment area (Mucina & Rutherford 2006). Only 4% is transformed (Skowno et al. 2019). Only about 1.5% of Southern Karoo Riviere is formally conserved in the Karoo National Park, and a few other nature reserves, including the Gamkapoort and Karoo Nature Reserves (Mucina & Rutherford 2006). About 86.8% of the latter still remains (Skowno et al. 2019). Both vegetation types are therefore well represented in the larger area. The vegetation Type is currently not listed as threatened. No Species of Conservation Concern, regional endemics or protected species were recorded. All the species recorded are widespread and common.	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~~	~~Sport field~~
Other (describe below)	~~Cultivated land~~	~~Paved surface~~

New Agricultural lands (Site 1 and Site 2)

Indigenous Vegetation - good condition	X	Indigenous Vegetation with scattered aliens		Indigenous Vegetation with heavy alien infestation	
Describe the vegetation type above: A large area was cleared inside **Southern Karoo Riviere** alongside the Cordiers River. Prior to clearing, large parts of it comprised intact Riviere vegetation, fallow land and other disturbed areas, including an old farm dam (in the western part) and goat/ostrich camps (in eastern part). Ostriches and goats were kept on the farm from around 1985 until 2010 (Klue pers. comm.). The old farm dam was filled in and levelled during the clearing operation. GoogleEarth also shows a severely degraded area below the farm dam prior to clearing. Structurally, the undisturbed Riviere vegetation adjacent to the cleared areas can be described as a closed woodland following Campbell's (1981) classification. Indigenous tree and shrub species recorded in the adjacent Riviere vegetation include Vachellia karroo (dom), Calobota pungens, Searsia lancea, S. longispina, S. pyroides, S. pallens, Gymnosporia buxifolia, Galenia africana (dom pioneer), Mesembryanthemum junceum, M. granulicaule, Ruschia multiflora, Elytropappus rhinocerotis (dom), Asparagus suaveolens, Melianthus comosus and Lacomucinaea lineata. All the species recorded are widespread and common. A single invasive Opuntia ficus-indica was also noted in the riverine corridor next the eastern new land. It is listed as a category 1b invader in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) Alien and Invasive Species List (2016). The new stormwater cut-off trench on the northern side of the western new land is located on the edge of Riviere habitat encroaching slightly onto renosterveld. Some bush cutting was noted in the veld directly above the trench, but this is considered minor and is expected to recover fully without intervention. Shrub species recorded above the trench include Pteronia incana (dominant), Eriocephalus ericoides, Vachellia karroo, Euclea undulata, Drosanthemum cf karrooense, Mesembryanthemum splendens, Tylecodon wallichii, Euphorbia mauritanica, Lycium cf cinereum, Roepera sp, Salsola kali and Cissampelos capensis. Two vygies Peersia macradenia and Ruschia archeri were also recorded in renosterveld on a sandstone bench above the eastern end of the western new land. Ruschia archeri is a regional endemic previously only known from the western Klein Karoo and the Laingsburg area. Peersia macradenia is more widespread.		Describe the vegetation type above:		Describe the vegetation type above:	
Provide ecosystem status for above: About 9% of Swartberg Shale Renosterveld is formally conserved in the Groot Swartberg Nature Reserve and Swartberg East mountain catchment area (Mucina & Rutherford 2006). Only 4% is transformed (Skowno et al. 2019). Only about 1.5% of Southern Karoo Riviere is formally conserved in the Karoo National Park, and a few other nature reserves, including the Gamkapoort and Karoo Nature Reserves (Mucina & Rutherford 2006). About 86.8% of the latter still remains (Skowno et al. 2019). Both vegetation types are therefore well represented in the larger area. The vegetation Type is currently not listed as threatened.		Provide ecosystem status for above:		Provide Ecosystem status for above:	

No Species of Conservation Concern, regional endemics or protected species were recorded. All the species recorded are widespread and common.		
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)	The site forms part of the Prince Albert biodiversity network (see Maps 9 & 10), which comprises an extensive east-west orientated critical biodiversity area (CBA) corridor on the northern side of the Groot Swartberg Nature Reserve. Apart from a bypassing farm road the entire dam site is mapped as a CBA for reasons including the presence of Swartberg Shale Renosterveld, ecological processes (upland-lowland interface), threatened vertebrate (Mountain Zebra habitat) and water resource protection. Large portions of the new land areas are mapped as CBA's and ecological support areas (ESA's), including an aquatic CBA associated with the Cordiers River. Reasons are the same as for the dam site. The Cordiers is also indicated as a FEPA (Freshwater Ecosystem Priority Areas) river corridor. CBA's are defined as areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure (Pool-Stanvliet et al. 2017). These sites are selected for meeting national targets for species, habitats and ecological processes (Pool-Stanvliet et al. 2017). Many of these areas support known occurrences of threatened plant species, and/or may be essential elements of designated ecological corridors. Loss of designated CBA's is therefore not recommended. ESA's, on the other hand, are supporting zones required to prevent the degradation of CBA's and Protected Areas. With the cleared areas affecting certain ESA's, one can expect an impact on the network.

(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	Good quality renosterveld (1.22ha) + Good quality Riviere vegetation (12.13ha) = **56.64%**	Please refer to the vegetation descriptions in Section 6.1
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)	Fallow Land (7.08ha) + Highly disturbed areas (3.14 ha) = **43.36%**	

(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)

Vegetation:
Mark Berry Environmental Consultants was appointed to undertake the Botanical Assessment (dated March 2021) of the site, please refer to Appendix H1 for the full report.

The new dam was established inside **shale renosterveld**. The vegetation around the dam site is still recovering from a landscape-scale fire event in 2018, which burnt a large part of the Groot Swartberg and terminated on the northern foot slopes. Structurally, it can be described as a low (±0.4 m) open (40%) shrubland following Campbell's (1981) classification. Apart from the fire and a farm track leading up the small valley, no other disturbances were noted around the dam site.

Indigenous shrub species recorded in the veld adjacent to the dam and slope directly above include Galenia africana (dominant pioneer), Leipoldtia schultzei, Ruschia pungens (dom), R. multiflora, Lampranthus haworthii, Tylecodon wallichii, Cotyledon orbiculata, Crassula rupestris, C. tetragona, Euphorbia mauritanica, Vachellia karroo (dom along nearby watercourse), Calobota pungens (dom), Chrysocoma ciliata, Elytropappus rhinocerotis, Pteronia incana, P. flexicaulis, Euryops lateriflorus, Oedera squarrosa, Athanasia vestita, Dicoma picta, Searsia pallens, S. longispina, Euclea undulata, Diospyros austro-africana, Carissa bispinosa, Lycium sp, Dodonaea viscosa, Hermannia holosericea, Anisodontea triloba and Anginon fruticosum. A few weedy species were also recorded, including Mesembryanthemum guerichianum and Atriplex sp. No Species of Conservation Concern, regional endemics or protected species were recorded. All the species recorded are widespread and common. The presence of Dicoma picta "indicates veld in a healthy condition" (Vlok & Schutte-Vlok 2015).

A large area was cleared inside **Southern Karoo Riviere** alongside the Cordiers River. Prior to clearing, large parts of it comprised intact Riviere vegetation, fallow land and other disturbed areas, including an old farm dam (in the western part) and goat/ostrich camps (in eastern part). Ostriches and goats were kept on the farm from around 1985 until 2010 (Klue pers. comm.). The old farm dam

was filled in and levelled during the clearing operation. GoogleEarth also shows a severely degraded area below the farm dam prior to clearing. Structurally, the undisturbed Riviere vegetation adjacent to the cleared areas can be described as a closed woodland following Campbell's (1981) classification.

Indigenous tree and shrub species recorded in the adjacent Riviere vegetation include Vachellia karroo (dom), Calobota pungens, Searsia lancea, S. longispina, S. pyroides, S. pallens, Gymnosporia buxifolia, Galenia africana (dom pioneer), Mesembryanthemum junceum, M. granulicaule, Ruschia multiflora, Elytropappus rhinocerotis (dom), Asparagus suaveolens, Melianthus comosus and Lacomucinaea lineata. All the species recorded are widespread and common. A single invasive Opuntia ficus-indica was also noted in the riverine corridor next the eastern new land. It is listed as a category 1b invader in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) Alien and Invasive Species List (2016).

The new stormwater cut-off trench on the northern side of the western new land is located on the edge of Riviere habitat encroaching slightly onto renosterveld. Some bush cutting was noted in the veld directly above the trench, but this is considered minor and is expected to recover fully without intervention. Shrub species recorded above the trench include Pteronia incana (dominant), Eriocephalus ericoides, Vachellia karroo, Euclea undulata, Drosanthemum cf karrooense, Mesembryanthemum splendens, Tylecodon wallichii, Euphorbia mauritanica, Lycium cf cinereum, Roepera sp, Salsola kali and Cissampelos capensis. Two vygies Peersia macradenia and Ruschia archeri were also recorded in renosterveld on a sandstone bench above the eastern end of the western new land. Ruschia archeri is a regional endemic previously only known from the western Klein Karoo and the Laingsburg area. Peersia macradenia is more widespread.

Aquatic:

Debbie Fordham of SES was appointed to compile the aquatic assessment (dated 19 May 2021) of the site, please refer to Appendix H2 for the full report.

The study site is situated within the Cordiers River valley at the foot of the Groot Swartberg Mountains. The newly constructed dam is located in a north-south orientated side valley, while the cleared new land areas are located in a valley that connects Klaarstroom in the east with Prince Albert in the west. The dam is separated from the cleared areas of the valley by the R407 Road.

Investigations show that the study area falls within quaternary catchment J23E of the Gouritz Water Management Area. The largest river within the study area is the Cordiers River, a tributary of the Gamka River, which flows in a western direction towards Prince Albert. It is classified as a Southern Folded Mountains Ephemeral Upper Foothill River. The reach of the Cordiers River under assessment is heavily utilised for agricultural purposes. In 1999 the national rivers data described the Cordiers River as being in good- fair health with a present ecological state (PES) category of 'C'. However, the most recent National Biodiversity Assessment data for rivers (2019) has placed the river within the 'D' PES category indicating that the functioning has declined to result in poor river health levels. There are a number of dams on the property but not in the Cordiers River itself. No wetlands have been mapped near the site. The national data also describes the river as having significant ecological importance and that the provision of water for agriculture is critical to the farmers and society. In alignment with this, it is also classified as a Critical Biodiversity Area, and National freshwater Ecosystem Priority Area, necessary to meet international biodiversity targets.

The study area lies within the arid Central Karoo region which experiences a mean annual rainfall of only 275 mm compared to the mean annual evaporation rate of 1231 mm. The mean annual runoff is approximately 30 mm. There are no strategic water resource areas, surface or groundwater, mapped near the study site. Analysis of the climate in this area for future water requirements and planning must consider the predicted impacts of climate change, such as decreased rainfall and increased temperatures. The area falls within the Swartberg Shale Renosterveld vegetation unit of the Fynbos Biome. The riverine vegetation of the area usually consists of woody trees (Acacia caffra, Acacia karoo, Rhus lancea, Tamarix usneoides, etc.), reeds (Phragmitis australis) and bulrush (Typha capensis) that are resilient to brackish conditions (Vlok et al. 2005).

Table 1: Cordiers River and study area characteristics

Quaternary catchment	K10D
Mean annual precipitation	275 mm

Mean annual runoff	30 mm
Mean annual evaporation	1231 mm
Elevation	760 m.a.s.l.
Water Management Area	Gouritz
Biosphere reserve	Gouritz Cluster Biosphere Reserve
Main river in catchment	Gamka River of which Cordiers River is a tributary
NBA 2019 Rivers assessment layer (Identifies Cordiers River only, and does not identify the other watercourses on site)	Cordiers River is a first order, Upper foothills zoned river with ephemeral flow.
	DWA PES 1999: C -Moderately Modified NFEPA condition: AB -Near Natural NBA PES 2018: D -Largely Modified
	ETS: Least threatened EPL: Moderately protected
National Wetland Map (NWM5 2018)	None within the NWA 500 m Regulated Area of the site
National freshwater Ecosystem Priority Area (NFEPA 2011)	Yes
Western Cape Biodiversity Spatial Plan (WCBSP) classification	CBA 1: Aquatic - Southern Folded Mountains Ephemeral Upper Foothill River and FEPA river corridor
Vegetation type	Swartberg Shale Renosterveld
Geology	Weltevrede Subgroup and Witpoort Formation
Soils	Mainly alluvial valley deposits within the floodplain area. Surrounding area comprises of Reddish to white quartz arenite, red to brown thin-bedded sandstone, minor micaceous red or purple siltstone and shale, rhythmite. The soil has a High erodibility factor.

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~~	~~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	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).

	to 100%)	
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%	Agricultural lands

(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)?

Vegetation:

The affected area has been cleared of indigenous vegetation to expand the existing agricultural lands.

The impact on vegetation can be quantified by means of calculating the areas of natural vegetation and fallow land cleared. According to Table 1, 1.22 ha of Swartberg Shale Renosterveld and 12.13 ha of Southern Karoo Riviere were cleared by earthmoving machinery. An additional 7.08 ha of fallow land was also cleared. The age of the fallow land is estimated to be around 15 years and so it qualifies as 'natural vegetation' in terms of the NEMA definition. The rest of the cleared areas (3.14 ha) comprised of severely degraded areas, such as an old farm dam, buildings, farm roads and other disturbed areas. These areas should not be treated as natural and should be left out of the equation. Apart from the fallow land areas, the quality of the cleared vegetation should be considered good to relatively undisturbed.

Due to both Swartberg Shale Renosterveld and Southern Karoo Riviere being well represented in the larger area, the impact on vegetation type per se is of a low to moderate concern. With regards to the biodiversity network, the impact is of greater significance, especially the new lands where the Cordiers River (an aquatic CBA) and an ecological (CBA and ESA) link across the valley were impaired. Restoration of the ecological link across the valley will be difficult to achieve, but at the very least, the Cordiers and a buffer of an appropriate width should be rehabilitated and restored to function accordingly. Of particular concern is the siltation threat currently posed by the exposed riverbanks.

Table 2 presents an ex post facto impact assessment of the current situation compared to a scenario if mitigation measures were applied. The aquatic CBA (Cordiers River) is of particular importance due to the sensitivity/scarcity of water resources in the Karoo. The impact is however not considered to be permanent and can be restored if acted upon quickly. Probably the most important mitigation measure that should have been considered would be the determination of a suitable buffer for the aquatic CBA, as well as a possible ecological link across the eastern cleared land.

Table 2: Impact on vegetation type and biodiversity (CBA) network

Mitigation	Extent	Duration	Intensity	Probability of occurrence	Significance	Confidence
Without mitigation (current situation)	Site & immediate surroundings	Med	High	High	High (-)	Med-high
With mitigation (prior to clearing)	Site & immediate surroundings	Med	High	High	Low-medium (-)	Med-high

It is unlikely that any Species of Conservation Concern (SCC), regional endemics or protected species were directly affected by the clearing activities. Apart from a regional endemic (Ruschia

archeri) recorded on a sandstone bench outside one of the cleared areas, all the recorded species are widespread and mostly common. The possibility of regional endemics being present at the dam site prior to the fire event must however not be excluded. With regards to the new dam, a useful mitigation measure would have been to use the cleared topsoil (containing indigenous plant seeds and nutrients) to rehabilitate the front slope of the dam wall and other disturbed surfaces. It is uncertain what has happened to the topsoil and if this can still be achieved. In any event, stabilisation of the exposed slopes by means of logs or netting and reseeding may still be needed to prevent erosion.

As an indirect impact, soil disturbance caused by clearing activities will provide ideal conditions for the establishment of invasive alien species. As an operational phase impact, alien control will be required in and around the rehabilitation areas as an ongoing management concern. A further operational phase concern is the trampling of vegetation in the rehabilitated areas by livestock. If livestock is kept on the farm and allowed to enter the riverine areas, appropriate fencing should be erected and maintained around the rehabilitation areas until it is fully recovered.

Aquatic:

The reach of the Cordiers River that flows through the western and eastern lands has been severely altered. Large sections of the river have been significantly modified due to the clearance of riparian vegetation, destruction of habitat, change of channel morphology, and subsequent flow diversion as a result of infilling and excavations. The land clearance in the western site has had the largest impact upon this reach of the Cordiers River, with the eastern land clearance activities resulting in localised, indirect impacts to the river channel and riparian zone. However, all of the activities are within the Cordiers River catchment and impacted the already modified floodplain.

The western lands have also impacted upon the small, ephemeral tributary that joins the Cordiers River floodplain from the north. The watercourse has been named 'Northern Tributary' for assessment purposes. The clearance of land and disturbance of soil has extended into this drainage line and altered the channel. A large cut-off berm has been constructed at the foot of the valley to direct any flows away from the floodplain to the west. According to the landowner, there were past measures placed in this location before, but the current excavations are larger and exceed and possible past footprint.

The clearance and levelling of the eastern lands has negatively impacted the left bank of the Cordiers River channel. In this reach (eastern lands), localised areas of riparian thicket have been removed. Additionally, channel infilling for bank protection has occurred to halt lateral channel movement.

The eastern land transformation has also impacted upon the alluvial fan of an ephemeral tributary. The river system, named Droekloof River, enters the Cordiers River floodplain from the south, flowing through a road culvert onto the alluvial fan. An alluvial fan is a sediment deposit which formed at the river apex due to the transition from the confined tributary valley to the unconfined Cordiers River floodplain. There is evidence to suggest that a distributary channel on the alluvial fan once joined the Cordiers River channel but was since abandoned. The alluvial fan and channel no longer exist as a result of the historic infrastructure (such as the R407 Road) and the land clearance, which involved the levelling of the sediments and channelisation of the channel directly into the Cordiers River. Therefore, the lower reach of the Droeikloof River, although already modified, has been significantly modified by the activities associated with the eastern lands.

The construction of the dam has negatively impacted two watercourses: the Middlewater River and a dry drainage channel. It is technically an off-stream dam as it does not have significant runoff from its catchment entering it, but it is situated such that the wall is adjacent to the dry channel banks. The siting of the dam on the hillslope is intended to avoid the valley bottom tributary (Middlewater River) downslope. However, by constructing it upslope, it is located alongside the dry drainage channel which directs surface flows (episodically) towards the tributary river. The construction has modified the bank of the channel, named 'Dry channel' in the aquatic report for hydrogeomorphic (HGM) unit assessment purposes. The characteristics of the identified watercourses are described in detail in the subsections to follow.

Although the dam is located outside of the riparian area of the Middlewater River, the construction activities have had indirect impacts (i.e. sedimentation) from vegetation clearance/soil disturbance

on the valley slope and along the access road within the catchment. It is assumed that the dam is highly unlikely to fail in operation and wash material into the river and scour the bank. A sump has been excavated within the river channel to temporarily abstract subsurface flow for use in dam construction (and in doing so, disturbed the left bank in this locality). The volume abstracted for this construction dust suppression was probably minimal and the footprint easy to restore.

6.3 VEGETATION / GROUNDCOVER MANAGEMENT

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

There was not much in the way of mitigation measures however some brush packing was applied. Brush packing the disturbed areas, amongst other mitigation measures would have been included into the EMPr.

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):	Farming of crops and grazing of animals			

(a) Please provide a description.

The farm was bought by a Jurie Klue who is a successful farmer in the district. He already has a number of farms and intends to turn the farm into a productive unit. This requires a major reconfiguration of the agricultural lands and water provision. The farm as it was, was not used optimally and therefore the clearance of areas which were old lands was required. Similarly the way the water was used to irrigate the lands meant that the electricity costs were high and this could be mitigated by changing the way the water is applied to the land by using gravity fed water from the new dam rather than using expensive electric pumps.

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 farm lies in the district of Prins Albert and is as with most rural communities made up of a combination of wealthy and poor households. Due to the high unemployment rate in South Africa it is estimated that at least 30% of the population who are able to work, do not have employment. Therefore any farm work which usually requires unskilled or semi-skilled labour is welcome. Prior to the Applicant buying the farm, the farm was not being optimally utilised due to a number of reasons including the cost of pumping water and the lack of arable land. Previously some areas of the farm had been used as arable farmland but had since been overgrown with karoo bushes such as Acacia Karoo. These areas were then cleared of vegetation to make room for the planting of crops such as onion seeds, pumpkin seeds, carrot seeds and lucerne will be grown to raise ostriches on the farm.

The farm employs 1 permanent workers with a total of 4 dependants (wife and 3 children)

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 farm is now expected to employ an additional 9 permanent workers and an additional 10 after the first 18 months, thereafter there will be between 25 and 45 seasonal/temporary jobs for planting, harvesting, cleaning and maintenance of the lands.
Additionally some of the labour is used for such things as operating machinery and management positions and therefore they are being upskilled.

The employees also have dependants so the socio-economic benefits will be experienced by the workers and their families.

The activities required a total of 93 workers (238 dependants)

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:	The clearance of more than 5000 square meters means that the NHRA is applicable as this is a trigger for requiring permission from HWC

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
The clearance of land and the construction of a dam is permitted on agricultural land in terms of the zonation of the land.			
Will the activity be in line with the following?			
Provincial Spatial Development Framework (PSDF)	**YES**	~~NO~~	Please explain

The PSDF indicates this area as intensive farming and therefore the farming activities are allowed.			
Urban edge / Edge of Built environment for the area	**YES**	~~NO~~	Please explain
This area is well outside the urban edge but the activity does not need to take place within the urban edge.			
Integrated Development Plan of the Local Municipality	**YES**	~~NO~~	Please explain
This area is designated as a farming area on the IDP.			
Spatial Development Framework of the Local Municipality	**YES**	~~NO~~	Please explain
This area is designated as a farming area on the SDF.			
Approved Structure Plan of the Municipality	~~YES~~	~~NO~~	Please explain
This area is designated as a farming area on the Municipal planning documents. No Structure Plan exists for the Prince Albert Municipality			
An Environmental Management Framework (EMF) adopted by the Department	YES	NO	Please explain
Any other Plans	YES	NO	Please explain

SECTION D: NEED AND DESIRABILITY

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

1. Was the activity permitted in terms of the property's land use rights at the time of commencement?	**YES**	~~NO~~	Please explain
The activity is clearing of lands and the building of a dam for farming and the area is a farm and therefore the applicant was allowed to complete this activity in terms of the properties land use rights.			

2. Was the activity in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES**	~~NO~~	Please explain
The clearance of land and the building of the dam is in line with the PSDF. The PSDF does not specifically mention whether a dam can be built or lands cleared but the activities are in line with farming practices.			
(b) Urban edge / Edge of Built environment for the area	**YES**	~~NO~~	Please explain
These activities normally occur outside the urban edge.			
(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
It is in line with the IDP and SDF			
(d) Approved Structure Plan of the Municipality	~~YES~~	~~NO~~	Please explain

It is in line with the municipal development planning however no Approved Structure Plan exists for the Prince Albert Municipality.

(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
No adopted EMF for the area			
(f) Any other Plans (e.g. Guide Plan)	~~YES~~	**NO**	Please explain

3. Was the land use (associated with the activity for which rectification is sought) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. was the development in line with the projects and programmes identified as priorities within the relevant IDP)?	**YES**	~~NO~~	Please explain
The area was not specifically identified for projects and programmes but is already included into the SDF as an Intensive agricultural area			

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 applicant wanted to increase the overall productivity of the land. In order to do this one needs capital and an understanding of what can be achieved. The previous owner presumably was not able or interested in attempting such a venture. This expansion of the farming activities means that he can achieve economies of scale and therefore make the farm profitable.			
With the increased costs of electricity the logic of having a gravity fed watering system make sense. Instead of the water being stored in a lower dam and then pumped through the irrigation system, the water will be stored in the newly created upper dam which will allow water to be fed into the irrigation system without the need for costly electric pumps.			

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 Prince Albert IDP indicates that the economies of the municipality relies on the agricultural and tourism sectors. The unemployment rate of Prince Albert Local Municipality decreased substantially from 35.2% in 2001 to 19.4% in 2011, any type of employment is most welcome in the area and contributes to national goals of decreasing unemployment. The establishment of infrastructure as well as the construction of the dam would all contribute to the local economy. Any employment opportunities would range from temporary to permanent work. Temporary jobs would include picking and planting jobs for crops such as onion seed, driving of vehicles and sorting and loading of produce. Permanent jobs would include these jobs but would also include management and logistics as well as bookkeeping and other skilled and semi skilled work.			

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
There were no services required from the Local Municipality. The clearing of land and the establishment of the dam were done using hired machinery and the expanded agricultural lands will not require services from the municipality			

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	~~YES~~	**NO**	Please explain

be attached to the Application Form / additional information as an **appendix**, where applicable.)			
There will be no impact on the Local Authority other than an slight increase in the economy due to increased productivity in the area.			

8. Was this project part of a national programme to address an issue of national concern or importance?	~~YES~~	**NO**	Please explain
This was not part of any identified projects but it does contribute to national goals of decreasing unemployment while increase agricultural output.			

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 lands have been used for agriculture in the past and it did make sense to clear the lands to re-establish agricultural activities on the lands.			
There are dams on the property and adding an additional dam makes sense.			
In addition as the new agricultural lands expand the existing lands, no new infrastructure such as access road were required and the new agricultural lands tie into the existing lands			

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
Some of the clearing impacted on the river and riverine environment. This area should be restored / rehabilitated.			
Other parts did not have a negative impact on the sensitive natural environment			
The impact on the cultural environment was very limited as no buildings or any other infrastructure was disturbed.			

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 impact on the peoples health and well being is positive in that more crops will be produced and the local economy will be given a small boost. The impact on the employment of local people will also be positive. The impact on the visual and sense of place will depend on the receiver. To some it will be a positive impact in that more farming is taking place and the land is being used and farmed productively and to others it may be that the clearance of the river has a negative impact on the sense of place.			

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 riverine area can be rehabilitated and will to a certain extent self-rehabilitate while the rest of the cleared lands and the dam are in the right place at the right time and therefore did not result in unacceptable opportunity costs.			

13. What were the cumulative impacts (positive and negative) of the land use associated with the activity applied for?	**YES**	~~NO~~	Please explain

Positive

- Creation of land for agricultural purposes
- Creation of jobs for unskilled and semi-skilled labour
- Creation of local food supply
- Injection of cash into local economy
- Increase in tax revenue for the government
- More efficient use of water resources
- Creation of work for machinery supplies and other contractors
- Saving of electricity and thus reduction of carbon footprint through gravity irrigation
- Creation of social stability through employment

Negative

- Increased potential for erosion
- Increased potential for sediment deposition down stream

14. Is/was the development the best practicable environmental option for this land/site?	YES	NO	Please explain
In some areas yes, in other areas such as the riverine environment, no.			
The most productive agricultural areas are often on the banks of rivers. This is a worldwide phenomenon. There is little point trying to create lands on infertile soils and with silt deposition on the banks of rivers over the years, the riverine areas are often the only areas worth using for crop production. This means these areas are always under pressure but this pressure is driven by the need to provide food for the burgeoning population which keeps growing.			
In other words the need for food means that there will be more and more impact on riverine areas for agricultural production.			
Using things like hydroponics and tunnels is not practical and feasible in such a remote area, where not having to use such expensive methods still has the desired outcome.			

15. What are/were the benefits to society in general and to the local communities?	Please explain
The benefits to society are the increase of employment and food security which leads to a more stable community and country. Put another way if all the farmers in the country could employ another 5 or 10 people the knock on effect would be incredible. It is not a stretch of the imagination to say that many of todays societal ills are a result of unemployment and lack of money for basic necessities.	
Crime and violence are often perpetrated by those with nothing to lose and so the more you give people the more they conform to societal norms. Farm attacks and theft are often carried out due to frustration and desperation.	
Therefore creating work in an area where there is a high level of unskilled labour and creating farming activities in an area where farming is the primary occupation leads to a more stable community and society in general.	

16. Any other need and desirability considerations related to the activity?	Please explain
The farmer purchased the farm to increase agricultural output and thereby produce food, employ labour and make a profit.	
In order to do this he needed to expand and rework the lands that were being used. He also needed to create new lands and using the fertile lands near the river, some of which were old lands made the most economic and practical sense	
He sought advice from local consultants and understood that he did not need to apply for permission from the Department.	
He was under the impression that he did not need approvals and therefore did not apply for them.	
He realises that the clearing of the river was a mistake and he will rehabilitate the river.	
Due to the high costs of purchasing the land it is imperative that he start with expansion and production of produce as soon as possible	

17. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA were taken into account:
The general objectives of NEMA were not specifically taken into account by the applicant when he cleared the land or built the dam
However according to the Applicant he did consult with Mr Haasbroek who is currently completing his water use application and understood that what he was doing (construction of the Dam) would not require an impact assessment.
The general objectives of NEMA will in the S24G process be complied with by getting the specialist to assess the impact of the activities on the receiving environment and also conducting public participation
The impacts will be rated and ranked in terms of significance and the socioeconomic impacts will be predicted and evaluated in terms of the risks and consequences as well as what alternatives are available to ensure the impact on the environment is reduced as far as possible.

18. Please describe how the **principles of environmental management** as set out in section 2 of NEMA were taken into account:
The needs of the people have been placed at the forefront of this environmental assessment. The most important need for the country and its people are the creation of jobs and a sustainable livelihood as well as providing shelter and food security.
This activity which the applicant conducted was aimed at creating wealth, jobs and food security.

If the riverine areas are rehabilitated the development of the lands and dam will be socially, environmentally and economically sustainable. The disturbance to the aquatic ecosystem has been assessed in the aquatic report and the impact on the vegetation has been assessed in the vegetation report. The remedies with regard to the impact on the riverine areas have been proposed in the aquatic report.
The principle of using as little power or electricity has been promoted because of the costs and therefore the gravity feeding of the drip system means that less electricity is going to be used.
The need for arable land has been assessed against the need to protect the riverine environment and given the fact that the most productive land is within the riverine environment it is important to ensure that not only can the farming practices continue but that the riverine environment is restored.
the cost of restoration of the riverine environment will be for the applicants account but will need to be practical and implementable
Many of the farm workers to be employed on a permanent and temporary basis will include the youth and woman.
The negative impacts such as clearing of the river have been weighed up against the positive impacts of the provision of food and jobs as well as a more stable socio-economic environment due to the creation or work in the area.
The construction of a dam which will gravity feed the irrigation system also contributes to minimizing the carbon footprint of the farming operation
In terms of public participation, the legislation will be complied with and all neighbours and relevant authorities will be given the opportunity to comment on the S24G process.
Site notices will be placed and a press advertisement will be placed in the local newspaper.
All comment will be encapsulated in a comments and response report to ensure the essence of the comments have been understood and taken into account.

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:

Majority of the Farm Portion is located on the mountain ranges located north and south of the site and is not suited to agriculture. No property alternatives exist.

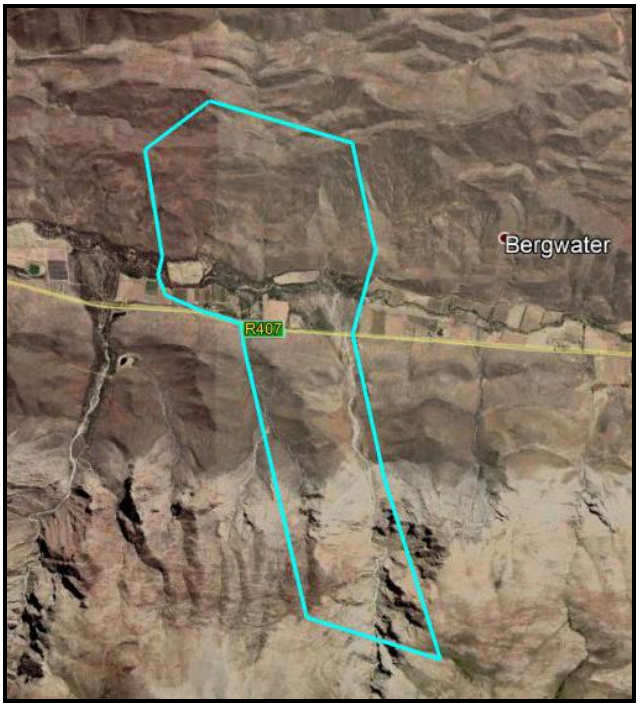

Figure 8: Extent of the property

(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:

No activity alternative will be investigated as the property is used for agricultural purposes and as such the property will be most efficiently for agriculture as there are existing farm workers and machinery

(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:

No alternatives were considered before commencement however in terms of the Section 24G application, the following alternatives are presented to determine if the development was the best practicable alternative for the property.

Alternative C (No-Go)

For this alternative the status quo would have remained unchanged prior to the clearance activities for Alternative A. This alternative has environmental impacts associated such as unproductive farming, low labour, low socio-economic.

Alternative A (commenced with)

Figure 9: Alternative A before commencement

Figure 10: Alternative A post commencement

Alternative B:

For this alternative consideration was given to the fact that the highest environmental impacts are associated with the activities of Alternative A within the watercourses/river. As such the layout aims to maintain vegetated buffers between the agricultural lands and the watercourses.

Figure 11: Alternative B

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

Technology alternatives, such as hydroponics and greenhouse tunnels are not best suited for the agricultural activities undertaken on the property or the farmer/applicant and were therefore no explored.

(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:

Alternative A and B have the same operational aspects as they are both agricultural activities however Alternative C, the No-Go alternative would see no expanded agricultural fields and as such no socio-economic improvements.

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

This is the option with the highest overall impact. Due to the low rainfall nature of the area, indigenous vegetation recovery is extremely slow and could take up to 100 years. For this option no additional job opportunities will be created, which has high significant repercussions. In isolated agricultural areas such as this it is possible that one farm worker could be supporting a family of up to 6 members, as such the creation of 10 new jobs possibly feeds up to 60 people.

The option of ceasing the activity therefore means that a large area will remain in a disturbed and recovering stage for a very long period of time and will not be able to support families through the wages which would've been generated for the farm workers working the land. The recovering lands would also be very susceptible to wind and water erosion.

(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:

No other feasible alternative were explored as there are not many alternative to agriculture. This may be amended once initial comments have been received during the PPP.

(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.

Alternative A is the commenced alternative, as seen in Figure 10,

The Alternative B shown in Figure 11 is only conceptual for the purpose of highlighting an approach to generating the new agricultural lands while still maintaining a buffer to the river/water courses.

Alternatives to the already commenced alternative are however not desirable as the large majority of impacts are associated with the earthworks and clearance of vegetation, therefore if the Alternative B is authorised far more earthworks and vegetation clearance will have to be undertaken. This will greatly increase the impacts on the natural environment and result in a far greater area to try to rehabilitate, which is a very lengthy process due to the low annual rainfall figure of the area.

As such Alternative A is the preferred Alternative given that the rehabilitation measures suggested by the specialist are undertaken to ensure the future integrity of the river system. Alternative B should however not be considered as an Alternative to authorise.

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

(a) Geographical and physical aspects:

The lands adjacent to the existing agricultural lands were reshaped to create new agricultural lands by means of bulldozers. This involved creating a relatively flat platform and included reshaping and diverting of the watercourses into channels. The area for the new dam was excavated and the material use to construct the dam wall.

(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 Botanical assessment:

The site forms part of the Prince Albert biodiversity network (see Figure 12), which comprises an extensive east-west orientated critical biodiversity area (CBA) corridor on the northern side of the Groot Swartberg Nature Reserve. Apart from a bypassing farm road the entire dam site is mapped as a CBA for reasons including the presence of Swartberg Shale Renosterveld, ecological processes (upland-lowland interface), threatened vertebrate (Mountain Zebra habitat) and water resource protection. Large portions of the new land areas are mapped as CBA's and ecological support areas (ESA's), including an aquatic CBA associated with the Cordiers River. Reasons are the same as for the dam site. The Cordiers is also indicated as a FEPA (Freshwater Ecosystem Priority Areas) river corridor.

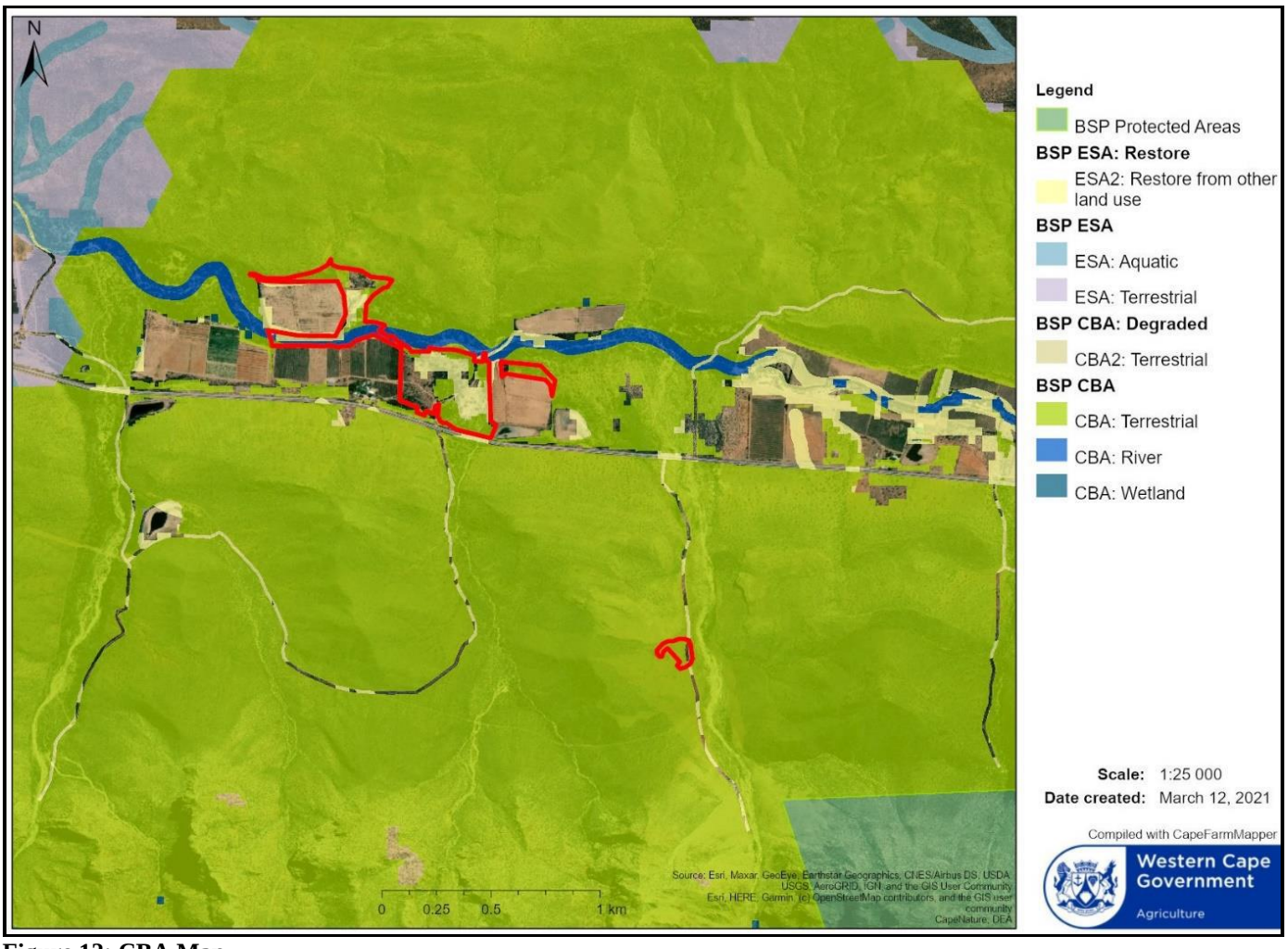

Figure 12: CBA Map

Due to its relatively small size, the new dam should not have a significant implication for the CBA network. The impact of the new land areas impairs a north-south connection across the valley, as well as the river itself, of which sections have been disturbed/modified. A big concern is the potential for a massive silt washaway during a large rainfall event.

According to the Aquatic assessment:

The largest river within the study area is the Cordiers River, a tributary of the Gamka River, which flows in a western direction towards Prince Albert. It is classified as a Southern Folded Mountains Ephemeral Upper

Foothill River and identified as a NFEPA river. The reach under assessment is heavily utilised for agriculture. Large portions of the cleared land are mapped as CBA1 River. An infield site assessment was conducted on the 24th of November 2020 to confirm the location and extent of the systems impacted by the commenced activities. It was determined that five watercourses have been impacted upon, namely:

1. Cordiers River
2. Middlewater River
3. Northern tributary
4. Droekloof distributary channel
5. Dry channel

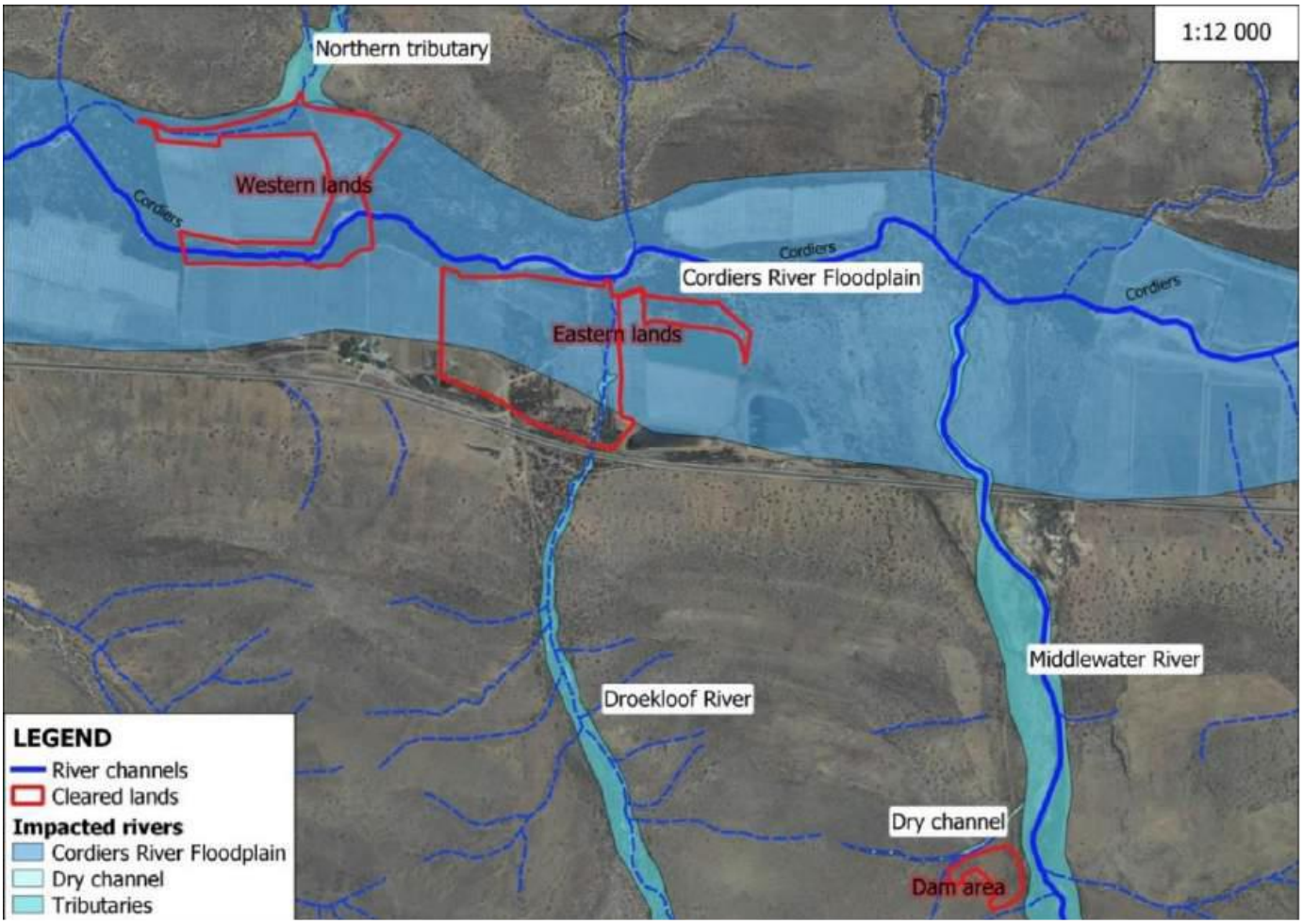

Figure 13: River systems Map

The reach of the Cordiers River that flows through the western and eastern lands has been severely altered by the land clearing activities. Large sections of the river have been significantly modified due to the clearance of riparian vegetation, destruction of habitat, change of channel morphology, and subsequent flow diversion as a result of infilling and excavations. The present ecological state (PES) is currently 'Seriously modified' as the loss of natural habitat, biota and basic ecosystem functions is extensive.

The construction of the dam did not result in any High impacts as it is an off-channel dam. However, due to the lack of prior planning and mitigation, the construction resulted in Medium negative impacts upon aquatic biodiversity.

Has the development impacted on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)?	**YES**	~~NO~~
If yes, please describe:		
All terrestrial vegetation has been cleared from the site and all aquatic features within the site have been cleared of vegetation and have been reshaped and diverted around and through the new agricultural lands.		
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:
According to the Botanical report: It is unlikely that any Species of Conservation Concern (SCC), regional endemics or protected species were directly affected by the clearing activities. Apart from a regional endemic (Ruschia archeri) recorded on a sandstone bench outside one of the cleared areas, all the recorded species are widespread and mostly common. The possibility of regional endemics being present at the dam site prior to the fire event must however not be excluded. **According to the Aquatic report:** The area falls within the Swartberg Shale Renosterveld vegetation unit of the Fynbos Biome. The riverine vegetation of the area usually consists of woody trees (Acacia caffra, Acacia karoo, Rhus lancea, Tamarix usneoides, etc.), reeds (Phragmitis australis) and bulrush (Typha capensis) that are resilient to brackish conditions (Vlok et al. 2005). Few rare or localized endemic plant species are known to occur in this riverine habitat.
Please describe the manner in which any other biological aspects were impacted:

(c) Socio-Economic aspects:

What was the capital value of the activity on completion?	R 7 342 216.00	
What is the (expected) yearly income or contribution to the economy that is/will be generated by or as a result of the activity?	According to the Applicant "The seed productions we do is for Starke Ayres and Klein Karoo Seed Productions and is for international markets. The oats is for own use for the ostriches. The pumpkin off cuts is for local community and communal farmers for food for the pigs and sheep – for free. All goods and services, we use the local co-op and local labour. Oats value is about R100 000 (one hundred thousand rand), onion seed about R810 000 (eight hundred and ten thousand rand), pumpkin seeds about R300 000 (three hundred thousand rand)."	
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?	54	
What was the value of the employment opportunities during the construction phase?	R 2 687 987.23	
What percentage of this accrued to previously disadvantaged individuals?	100% All local labour used	
How was this ensured and monitored (please explain):		
Still to happen bu the use of local labour is the only option.		
How many permanent new employment opportunities were/will be created during the operational phase of the activity?	6 Permanent and if possible, another 3 after 18 months. 25 to 45 seasonal opportunities	
What is the current/expected value of the employment opportunities during the first 10 years?	Over R 1 000 000	
What percentage of this accrued/will accrue to previously disadvantaged individuals?	All labour is locally source	
How was/will this be ensured and monitored (please explain):		
It's the only option in this remote part of the world.		
Any other information related to the manner in which the socio-economic aspects was/will be impacted:		
Labour will be sourced from as close as possible to the job because otherwise the production cost will be too high.		

(d) Cultural and historic aspects:

Heritage Western Cape has confirmed via email (attached as Appendix M) the no further Heritage requirements.

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?	Only stones from the new lands	

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?	Reusable bags are sold, empty crop spraying holders are collected by reps, everything reusable is used on the farms, that which cannot be recycled is taken to the landfill	

Where and how was/will the waste be treated / disposed of (describe)?		
Reusable bags are sold, empty crop spraying holders are collected by reps, everything reusable is used on the farms, that which cannot be recycled is taken to the landfill		
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:
Reusable bags are sold, empty crop spraying holders are collected by reps, everything reusable is used on the farms, that which cannot be recycled is taken to the landfill

(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:	Unknown, water was used for the compaction of the dam wall, the amounts should be well within the existing water use rights.

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:		
Drip irrigation at the onions and pumpkins and sprinkler irrigation at the oats.		

4. POWER SUPPLY

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

Directly from Eskom

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

5. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
Gravity fed water from new dam for irrigation purposes.

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

The new dam had to be placed at a higher elevation than the agricultural fields to ensure that gravity can be used instead of pumps (electricity)

6. DESCRIPTION AND ASSESSMENT OF THE SIGNIFICANCE OF IMPACTS prior to and after MITIGATION

Please note:

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

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

Impact on biological aspects: Loss of riparian vegetation & habitat	
Nature of impact:	**Negative**
Extent and duration of impact:	**Local and Long term**
Probability of occurrence:	**Definite**
Degree to which the impact can be reversed:	**Partly**
Degree to which the impact may cause irreplaceable loss of resources:	**Partly**
Cumulative impact prior to mitigation:	**<u>Poor Catchment Management</u>** The Cordiers River catchment has been impacted by human activities for a long period of time. The river has been subjected to modification as a result of the surrounding agricultural activities, and those within the watercourse itself. The cumulative impact of activities in the catchment such as the clearance of riparian vegetation, infilling and diversions, agricultural encroachment into the floodplain, water over-abstraction, and an altered sediment regime, has resulted in wide-spread habitat degradation. The assessment of the impacts of the activities specific to this short reach of river will not be representative of the cumulative impact of continued poor agricultural practices and bad land management within this catchment as a whole. The river is an important ecological corridor and buffer and provides irreplaceable services to society. Severing this longitudinal link, as well as the lateral interaction within the landscape, is cumulatively causing loss of the water resource upon which the agriculture relies. An intensely utilised river floodplain, such as that of the Cordiers River, although no longer in a natural condition, should be viewed as critically important to water resource protection due to the significance of the remaining habitat and the increasing threats from poor land use. The significance of the impacts increases in the context of the amount of riparian habitat already lost within the catchment. Each activity resulting in habitat loss (such as within this reach of river) is impacting a smaller remaining area of riparian habitat and thus would have a larger negative effect, cumulatively. **<u>Biodiversity conservation targets</u>** The riparian areas impacted are classified as Critical Biodiversity Areas (CBA 1: Aquatic and CBA 2: River) and fragments as Ecological Support Areas (ESA 2: River) according to the Western Cape Biodiversity Spatial Plan (WCBSP, 2017). CBAs are the areas required to meet biodiversity targets and they need to be maintained in a natural or near-natural state. The Cordiers River is also a Freshwater Ecosystem Priority Area (FEPA) river corridor and as a result plays an important role in allowing biota movement within the landscape. These FEPAs rivers are important in achieving biodiversity targets for riverine ecosystems. FEPAs are strategic spatial priorities for conserving freshwater ecosystems and associated biodiversity. The unauthorised activities have severed landscape connectivity in the ecological corridor and have caused habitat fragmentation. Therefore, without rehabilitation of the Cordiers River, adoption of an aquatic buffer zone, and continued management thereof, the biodiversity conservation targets will not be reached and the cumulative impact upon aquatic habitat is negative and High. The impact can be reduced to cumulatively Medium if rehabilitation is successful and most of the ecological connectivity and functioning is regained. **<u>Dams</u>** Agriculture is a very climate-sensitive sector. Recent prolonged drought conditions have significantly impacted farmers of the Prince Albert area. In the context of climate change, and increased pressure from market demand, water security is increasingly at risk and farmers are naturally seeking ways to protect their future livelihoods. This is resulting in an increase in the construction of dams.

	The increasing number of dams within the catchments and rivers assessed will have cumulatively significant impacts. However, this study does not include the assessment of any potential water use associated with the construction of the dam, as it was outside the scope of works and not occurring at the time of the site visit. Abstraction from rivers without sustainable yield determinations and aquatic specialist input would have cumulative impacts upon aquatic biodiversity from the activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Partly
Proposed mitigation:	1.) Reshaping of banks 2.) Erosion protection and sediment trapping 3.) Revegetation of banks and buffer 4.) Monitoring rehabilitation 5.) Managing riparian buffer zone Please also refer to the Aquatic Report as it focuses certain mitigation measures on specific areas of the site. • Stabilisation of River channel and preventing erosion while allowing for vegetation to establish • Sediment traps to trap sediments that could be washed down the trench from the bare banks during rainfall • The end of the trench must be recontoured into a gentle cross section to introduce any flow into the floodplain in a diffuse pattern to slow velocities from the confined trench and prevent erosion downslope • Small stone berms within the trench and at the toe could be used. • Haybales, geotextile fibre mats may provide a temporary solution while the earth settles.
Cumulative impact post mitigation:	loss of the water resources, river banks susceptible to erosion
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on geographical and physical aspects: Erosion and sedimentation	
Nature of impact:	**Negative**
Extent and duration of impact:	**Regional and Long term**
Probability of occurrence:	**Definite**
Degree to which the impact can be reversed:	**Barely**
Degree to which the impact may cause irreplaceable loss of resources:	**Partly**
Cumulative impact prior to mitigation:	**<u>Poor Catchment Management</u>** The Cordiers River catchment has been impacted by human activities for a long period of time. The river has been subjected to modification as a result of the surrounding agricultural activities, and those within the watercourse itself. The cumulative impact of activities in the catchment such as the clearance of riparian vegetation, infilling and diversions, agricultural encroachment into the floodplain, water over-abstraction, and an altered sediment regime, has resulted in wide-spread habitat degradation. The assessment of the impacts of the activities specific to this short reach of river will not be representative of the cumulative impact of continued poor agricultural practices and bad land management within this catchment as a whole. The river is an important ecological corridor and buffer and provides irreplaceable services to society. Severing this longitudinal link, as well as the lateral interaction within the landscape, is cumulatively causing loss of the water resource upon which the agriculture relies. An intensely utilised river floodplain, such as that of the Cordiers River, although no longer in a natural condition, should be viewed as critically important to water resource protection due to the significance of the remaining habitat and the increasing threats from poor land use. The significance of the impacts increases in the context of the amount of riparian habitat already lost within the catchment. Each activity resulting in habitat loss (such as within this reach of river) is impacting a smaller remaining area of riparian habitat and thus would have a larger negative effect, cumulatively. **<u>Biodiversity conservation targets</u>** The riparian areas impacted are classified as Critical Biodiversity

	Areas (CBA 1: Aquatic and CBA 2: River) and fragments as Ecological Support Areas (ESA 2: River) according to the Western Cape Biodiversity Spatial Plan (WCBSP, 2017). CBAs are the areas required to meet biodiversity targets and they need to be maintained in a natural or near-natural state. The Cordiers River is also a Freshwater Ecosystem Priority Area (FEPA) river corridor and as a result plays an important role in allowing biota movement within the landscape. These FEPAs rivers are important in achieving biodiversity targets for riverine ecosystems. FEPAs are strategic spatial priorities for conserving freshwater ecosystems and associated biodiversity. The unauthorised activities have severed landscape connectivity in the ecological corridor and have caused habitat fragmentation. Therefore, without rehabilitation of the Cordiers River, adoption of an aquatic buffer zone, and continued management thereof, the biodiversity conservation targets will not be reached and the cumulative impact upon aquatic habitat is negative and High. The impact can be reduced to cumulatively Medium if rehabilitation is successful and most of the ecological connectivity and functioning is regained. **Dams** Agriculture is a very climate-sensitive sector. Recent prolonged drought conditions have significantly impacted farmers of the Prince Albert area. In the context of climate change, and increased pressure from market demand, water security is increasingly at risk and farmers are naturally seeking ways to protect their future livelihoods. This is resulting in an increase in the construction of dams. The increasing number of dams within the catchments and rivers assessed will have cumulatively significant impacts. However, this study does not include the assessment of any potential water use associated with the construction of the dam, as it was outside the scope of works and not occurring at the time of the site visit. Abstraction from rivers without sustainable yield determinations and aquatic specialist input would have cumulative impacts upon aquatic biodiversity from the activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Partly
Proposed mitigation:	1.) Reshaping of banks 2.) Erosion protection and sediment trapping 3.) Revegetation of banks and buffer 4.) Monitoring rehabilitation 5.) Managing riparian buffer zone Please also refer to the Aquatic Report as it focuses certain mitigation measures on specific areas of the site. • Stabilisation of River channel and preventing erosion while allowing for vegetation to establish • Sediment traps to trap sediments that could be washed down the trench from the bare banks during rainfall • The end of the trench must be recontoured into a gentle cross section to introduce any flow into the floodplain in a diffuse pattern to slow velocities from the confined trench and prevent erosion downslope • Small stone berms within the trench and at the toe could be used. • Haybales, geotextile fibre mats may provide a temporary solution while the earth settles.
Cumulative impact post mitigation:	Sedimentation loss of the water resources river banks susceptible to erosion
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on geographical and physical aspects: Flow modification	
Nature of impact:	Negative
Extent and duration of impact:	Regional and Long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Partly
Degree to which the impact may cause irreplaceable	Probable

loss of resources:	
Cumulative impact prior to mitigation:	**Poor Catchment Management** The Cordiers River catchment has been impacted by human activities for a long period of time. The river has been subjected to modification as a result of the surrounding agricultural activities, and those within the watercourse itself. The cumulative impact of activities in the catchment such as the clearance of riparian vegetation, infilling and diversions, agricultural encroachment into the floodplain, water over-abstraction, and an altered sediment regime, has resulted in wide-spread habitat degradation. The assessment of the impacts of the activities specific to this short reach of river will not be representative of the cumulative impact of continued poor agricultural practices and bad land management within this catchment as a whole. The river is an important ecological corridor and buffer and provides irreplaceable services to society. Severing this longitudinal link, as well as the lateral interaction within the landscape, is cumulatively causing loss of the water resource upon which the agriculture relies. An intensely utilised river floodplain, such as that of the Cordiers River, although no longer in a natural condition, should be viewed as critically important to water resource protection due to the significance of the remaining habitat and the increasing threats from poor land use. The significance of the impacts increases in the context of the amount of riparian habitat already lost within the catchment. Each activity resulting in habitat loss (such as within this reach of river) is impacting a smaller remaining area of riparian habitat and thus would have a larger negative effect, cumulatively. **Biodiversity conservation targets** The riparian areas impacted are classified as Critical Biodiversity Areas (CBA 1: Aquatic and CBA 2: River) and fragments as Ecological Support Areas (ESA 2: River) according to the Western Cape Biodiversity Spatial Plan (WCBSP, 2017). CBAs are the areas required to meet biodiversity targets and they need to be maintained in a natural or near-natural state. The Cordiers River is also a Freshwater Ecosystem Priority Area (FEPA) river corridor and as a result plays an important role in allowing biota movement within the landscape. These FEPAs rivers are important in achieving biodiversity targets for riverine ecosystems. FEPAs are strategic spatial priorities for conserving freshwater ecosystems and associated biodiversity. The unauthorised activities have severed landscape connectivity in the ecological corridor and have caused habitat fragmentation. Therefore, without rehabilitation of the Cordiers River, adoption of an aquatic buffer zone, and continued management thereof, the biodiversity conservation targets will not be reached and the cumulative impact upon aquatic habitat is negative and High. The impact can be reduced to cumulatively Medium if rehabilitation is successful and most of the ecological connectivity and functioning is regained. **Dams** Agriculture is a very climate-sensitive sector. Recent prolonged drought conditions have significantly impacted farmers of the Prince Albert area. In the context of climate change, and increased pressure from market demand, water security is increasingly at risk and farmers are naturally seeking ways to protect their future livelihoods. This is resulting in an increase in the construction of dams. The increasing number of dams within the catchments and rivers assessed will have cumulatively significant impacts. However, this study does not include the assessment of any potential water use associated with the construction of the dam, as it was outside the scope of works and not occurring at the time of the site visit. Abstraction from rivers without sustainable yield determinations and aquatic specialist input would have cumulative impacts upon aquatic biodiversity from the activities.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Partly
Proposed mitigation:	1.) Reshaping of banks 2.) Erosion protection and sediment trapping 3.) Revegetation of banks and buffer 4.) Monitoring rehabilitation 5.) Managing riparian buffer zone

	Please refer to the Aquatic Report as it focuses certain mitigation measures on specific areas of the site. • ongoing rehabilitation of the aquatic habitat from the current degraded state • The end of the trench must be recontoured into a gentle cross section to introduce any flow into the floodplain in a diffuse pattern to slow velocities from the confined trench and prevent erosion downslope •
Cumulative impact post mitigation:	Sedimentation loss of the water resources river banks susceptible to erosion
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Impact on biological aspects: Vegetation Type and Biodiversity Network	
Nature of impact:	Negative
Extent and duration of impact:	Site and Surroundings, and Medium term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Barely
Degree to which the impact may cause irreplaceable loss of resources:	Probable
Cumulative impact prior to mitigation:	Loss of vegetation
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Barely
Proposed mitigation:	• Routine alien clearing to ensure that the indigenous vegetation re-establishes
Cumulative impact post mitigation:	• Vegetation will take a long time to recover due to the low rainfall of the area • No suitable habitat for fauna while the areas are recovering
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-Medium

Impacts on socio-economic aspects: Temporary and Permanent Job Opportunities	
Nature of impact:	Positive
Extent and duration of impact:	Regional, temporary and long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Completely
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	• Sustainable livelihoods for employees and their dependants • Reduction in local and national unemployment rates • Increased income tax revenue for the government • Increased spending potential of employees, which increase the revenue at the shops they make use of
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium - High

Impacts on socio-economic aspects: Creation of Agricultural Land	
Nature of impact:	Positive
Extent and duration of impact:	Site specific and Long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Partly
Degree to which the impact may cause irreplaceable loss of resources:	Low- Medium – Indigenous vegetation was removed to create the extended agricultural fields
Cumulative impact prior to mitigation:	Increase in agricultural carrying capacity Increase potential of the farm Increase in food production / security

	Provides tax revenue with minimal government service Job creation Support to local communities
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	Rehabilitate the sensitive areas as identified by the Botanical and Aquatic Studies (mitigation included in the relevant impact tables above)
Cumulative impact post mitigation:	Increase in agricultural carrying capacity Increase potential of the farm Provides tax revenue with minimal government service Job creation Support to local communities
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

Noise impacts: - Due to the nature of the site being an active farm with no nearby neighbours or other noise receptors the level of noise impacts will be insignificant.	
Nature of impact:	Negative
Extent and duration of impact:	Site and Surroundings, Short term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Barely
Degree to which the impact may cause irreplaceable loss of resources:	Not loss of resources
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Partially
Proposed mitigation:	This insignificant impact has already occurred however restricting activities to normal working hours would ensure that no unreasonable noise impacts are experienced.
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	insignificant

Visual impacts / Sense of Place: Change in character of the site from indigenous vegetation to that of agricultural fields.	
Nature of impact:	Negative
Extent and duration of impact:	Site specific
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Not reversible
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Cumulative impact prior to mitigation:	Visual impacts are subjective, the farmer would likely prefer the look of new and vast farmlands however conservationist would prefer the fields covered in indigenous vegetation. The new farmlands are adjacent to the existing farmlands and as such is in line with the existing character of the site and the farming valley.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	barely
Proposed mitigation:	Maintain an indigenous vegetation barrier
Cumulative impact post mitigation:	Decrease in indigenous landscape with and increase in agricultural landscape
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(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 the geographical and physical aspects: Reduced indigenous habitat for fauna	
Nature of impact:	Negative
Extent and duration of impact:	Site Specific and long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Partly

Degree to which the impact may cause irreplaceable loss of resources:	Minor loss of indigenous vegetation
Cumulative impact prior to mitigation:	Reduced indigenous habitat for fauna
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Barely
Proposed mitigation:	Routine alien clearing to ensure that the indigenous vegetation re-establishes
Cumulative impact post mitigation:	• Vegetation will take a long time to recover due to the low rainfall of the area • No indigenous habitat for fauna while the areas are recovering
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-Medium

Impact on biological aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Impacts on socio-economic aspects: Temporary and Permanent Job Opportunities	
Nature of impact:	Positive
Extent and duration of impact:	Regional, temporary and long term
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Completely
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	• Sustainable livelihoods for employees and their dependants • Reduction in local and national unemployment rates • Increased income tax revenue for the government • Increased spending potential of employees, which increase the revenue at the shops they make use of
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium-High
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium - High

Impacts on the cultural-historical aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Noise impacts:	
Nature of impact:	
Extent and duration of impact:	

Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Visual impacts / Sense of Place: Change in character of the site from indigenous vegetation to that of agricultural fields.	
Nature of impact:	Negative
Extent and duration of impact:	Site specific
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Not reversible
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Cumulative impact prior to mitigation:	Visual impacts are subjective, the farmer would likely prefer the look of new and vast farmlands however conservationist would prefer the fields covered in indigenous vegetation. The new farmlands are adjacent to the existing farmlands and as such is in line with the existing character of the site and the farming valley.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	barely
Proposed mitigation:	Maintain an indigenous vegetation barrier
Cumulative impact post mitigation:	Decrease in indigenous landscape with and increase in agricultural landscape
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(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.

The property is not expected to be decommissioned

Potential impacts on the geographical and physical aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impact on biological aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	

Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impacts on the socio-economic aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impacts on the cultural-historical aspects:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential noise impacts:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential visual impacts:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

(d) Any other impacts:

Potential impact:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

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:

Botanical Recommendations:

The following recommendations should be considered in rehabilitating the disturbed areas:

- Allow renosterveld species to re-establish on the disturbed surfaces around the dam site. Stabilisation (e.g. reseeding and log stabilisation) of the steep front slope of the dam wall may also be required. If still available, topsoil (containing indigenous plant seeds and nutrients) cleared from the dam site when it was constructed should be salvaged and spread over the disturbed surfaces. Seed of locally indigenous species can also be obtained from local nurseries, seed collecting or seed-bearing branches cut from local species. Please note that the surrounding vegetation is still recovering from the last veld fire.
- Rehabilitate the disturbed banks and a buffer of a suitable width along the Cordiers River. Extensive stabilisation of the exposed riverbanks and adjacent surface will be required to prevent soil/silt loss during a major rainfall event. It is recommended that a detailed rehab plan be prepared for this purpose. The following rehab measures are in order of sequence:
    - Before the riverine area is revegetated it must first be reshaped to allow for maximum water retention, e.g. the lowering of embankment profile and creation of swales outside the main channel. The final surface should be rough, not smooth.
    - As a next step, stabilise the exposed river banks, as well as all visible entry points of any tributaries. Geo-fabric netting, sand bags, spreading of cobbles and cut branches can be used for this purpose.
    - Reseed/revegetate the disturbed surfaces. Select indigenous species that are suitable for the local conditions. Local tree/shrub species that can be used in the riverine area include Vachellia karroo, Searsia lancea, S. pyroides, Gymnosporia buxifolia, Diospyros lycioides, Eriocephalus ericoides and Carpobrotus edulis. The latter is a good groundcover species. Commercially available grass species include Ehrharta calycina, Eragrostis curvula and Themeda triandra. The best time for sowing seed in this area would be immediately after the late summer-autumn rain. See Sue Milton-Dean and Richard Dean's veld restoration guidelines (Ecological Consulting - renu-karoo.co.za (renu-karoo.co.za) for further details.
    - An affordable source of seed and aid to rehabilitation would be to cover the banks and bare surfaces further away with seed-bearing cut branches collected from the adjacent riverine vegetation.
    - Approach local ecologists from Prince Albert, for more practical advice and hands on guidance with regards to rehabilitation if possible.

- If the ecological link across the valley is to be rehabilitated, the same approach as above (for

the riverine area) is recommended.

- It will be important to keep livestock out of the rehabilitation areas until it is fully recovered. These areas will need to be fenced off if livestock are kept on the farm and allowed into the riverine areas.
- Alien clearing will be critical in the rehabilitated areas. Continually monitor the areas for infestation by invasive aliens, such as Prosopis glandulosa, Acacia mearnsii and Tamarix ramosissima. One-year old seedlings can be hand-pulled, preferably when soil is wet after a rainfall. If left to grow, removal becomes more difficult and costly. Alien seedlings should not be allowed to grow to a size that requires mechanical or chemical means of removal.\
- Given the location of the farm, one would expect a slow rehabilitation process, depending on the amount of intervention. Recovery will very much depend on rainfall events, the lack of which will mean that the rehabilitation areas need to be irrigated. At least three years (including two winter seasons) should be allowed for monitoring progress of rehabilitation. If rehabilitation is started immediately, one should start seeing results after the next winter months.

Aquatic recommendations:

Approach

Area A & Area C

Area A (northern rehabilitation area) requires stabilising the channel and preventing erosion while allowing for vegetation to establish. There should be measures in place to trap sediments that could be washed down the trench from the bare banks during rainfall. The end of the trench must be recontoured into a gentle cross section to introduce any flow into the floodplain in a diffuse pattern to slow velocities from the confined trench and prevent erosion downslope. Small stone berms within the trench and at the toe could be used. Haybales may provide a temporary solution while the earth settles. This area does not require any large structures but must be monitored for erosion regularly.

Area C

(the toe of the Droekloof channel system routed through the lands to the Cordiers River channel) requires stabilisation to reduce sediment inputs to the main river due to soil disturbance and open ground. This may be achieved with the establishment of indigenous vegetation, geotextile fibre mats of nets, or harder structures provided they prevent the disturbed soils from being transported downslope. Sediment traps should be installed (and maintained) at intervals along the channel length at least temporarily while the channel surface stabilises. The bed and banks at the bottom of the channel, from the trunk river to approx. 60m upslope, must be levelled to a gentle topography (a wide fan). This area must then be revegetated with riverine thicket species (Figure 14). Any erosion in this channel or on the bank must be halted before impacted the trunk river.

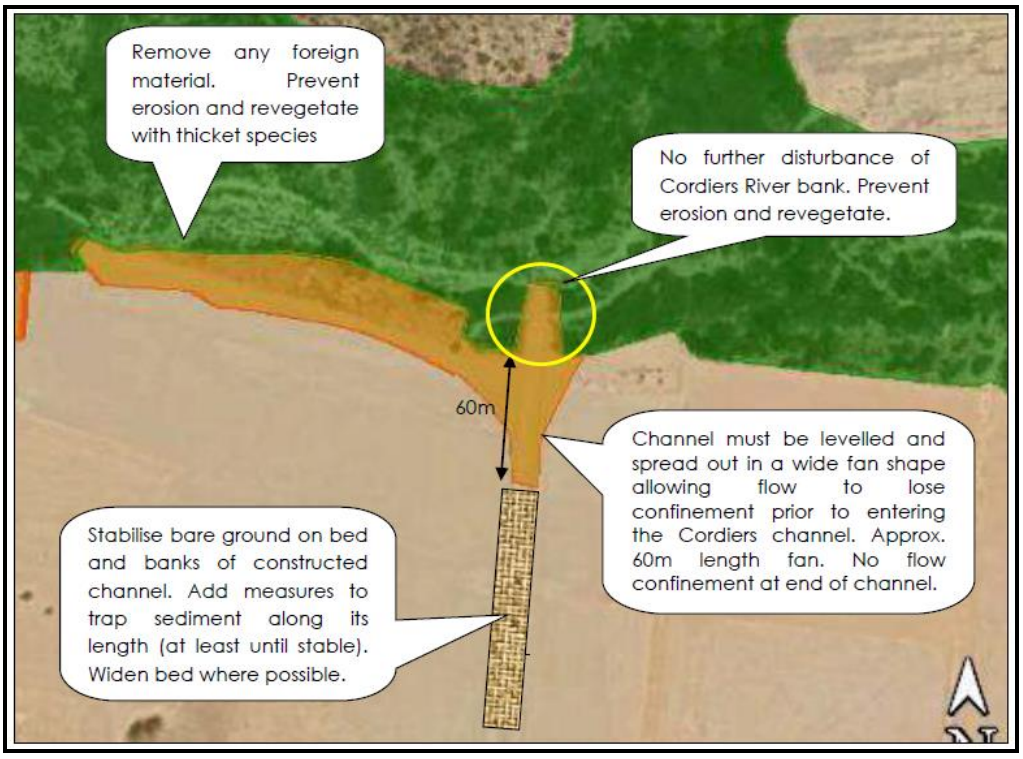

Figure 14: Drawing to illustrate the objectives of rehabilitation on Area C

Cordiers River Rehabilitation - Area B

The rehabilitation will require and integrated approach and maintenance to be successful. It is recommended that the initial step to rehabilitation be reshaping the banks to restore channel geometry and create gentler sloping banks. During this disturbance it is advised that sediment traps be installed (and maintained) at intervals along the channel length. It is imperative that bank reshaping be immediately followed by soil stabilisation to prevent further erosion and sedimentation (i.e., no bare soil surfaces/banks should be left without measures to prevent erosion for longer than a day). Should surface runoff result in erosion or bank collapse then the rehabilitation will be undermined, and reshaping will need to begin again. Once stabilised, the banks and entire rehabilitation zone (cleared buffer area) must be revegetated with locally occurring vegetation. It is not deemed necessary at this point to revegetate the channel bed as species should establish naturally if sedimentation and alien infestation is prevented.

Efforts must continue through monitoring the rehabilitated area to ensure success and managing the riparian buffer zone indefinitely. In general, this approach entails reshaping of the channel cross sectional profile so that its banks are gently sloping, to facilitate the establishment of vegetation that will contribute to bank stabilization, and the establishment of a more spatially complex marginal and riparian habitat. The river rehabilitation plan of actions can be summarised as:

1.) Reshaping of banks
2.) Erosion protection and sediment trapping
3.) Revegetation of banks and buffer
4.) Monitoring rehabilitation
5.) Managing riparian buffer zone

Rehabilitation measures

Re-sloping and stabilising banks

The river banks should be reshaped to provide an increased flow width and gentler slopes. Gentler slopes allow for more effective revegetation and generally simulate natural bank structure. The banks should be pulled back to gradients no steeper than 1:4 and preferably much gentler, taking care to vary the position of the toe of the slope very slightly with distance along the bank, so as to create a meandering effect, and to pull the bank back coarsely, so that the final product has a natural, rough appearance, with vertical and longitudinal heterogeneity. Banks can be terraced rather than entirely graded, with a step comprising a relatively flat shelf (approx. 1 m wide and at least 1m above the toe of the bank). The environmental engineer must approve the dimension on site prior to work commencing and all distances must be clearly marked.

Upstream and downstream extents of shaped banks should be moulded in to remaining, unshaped banks, so that neither protrudes into the channel, where it might trigger erosion. Prior to commencement, the relevant distances and boundaries for work and No-Go areas must be clearly demarcated and approved by an environmental engineer, to ensure that by using the marked measurements and gradients, the rehabilitation objectives will be achieved. Machinery should operate from the top of bank, rather than in-channel, to minimise disturbance and downstream sedimentation. Areas of bank which has since revegetated naturally with indigenous vegetation should be excluded from excavation area, provided the exclusion of the area will not compromise rehabilitation as a whole. The reshaped banks must then be stabilised with a combination of vegetation, coir rolls, and or geofabric.

Erosion control and sediment trapping

Measures to aid soil stability and revegetation include geotextile fibre mats or nets which may be placed on the soil surface on the re-sloped banks (Figure 48). There are many permeable textile material that can be used to holding seed, fertilizers and/or topsoil in place, or holding disturbed soil on graded sites, in order to prevent erosion. The advantages of erosion control mats are that plants can take root and, although not indigenous, they are natural fibres which decompose. In the arid climate these mats are very useful for re-vegetating slopes where a micro-climate needs to be created until small plants appear with leaves shading the soil, creating a habitat where other plants can thrive. By the time these mats have decomposed the vegetation would generally have established to provide erosion control. Another applicable use for geotextile is to trap sediment in the channel itself and prevent bed erosion by making sand bags with the material. These bags filled with locally available sand (there are limited rocks) can be laid across the channel to trap sediment.

Surface preparation is important, as the soil should be relatively smooth and without humps. The mat should extend beyond the edge of the area to be covered, with the top end buried in a trench atleast 10 cm deep by 20 cm wide. The mat will need to be further secured with stakes. There must be maximum soil contact to prevent erosion underneath. Ideally, vegetation is the best form of erosion control, with geotextiles only used for temporary stabilisation purposes until vegetation cover is established.

The area of the new dam does not necessarily require rehabilitation, but measures must be implemented during operation to ensure that no erosion is initiated in the dry channel and sediment from the disturbed slope does not become transported into the Middlewater River. The general objective for the management of this area should be to prevent any activities from indirectly impacting the river, and from direct encroachment into the riparian area.

Re-vegetating riparian area

Vegetation is able to stabilise bank soil through various processes. Vegetation reduces bank erosion above ground as shoots bend and cover the surface and reduce the velocity at the soil/water interface, whilst below ground, roots mechanically restrain or hold soil particles in place preventing surface erosion.

The planting of vegetation must occur as soon as the re-shaped banks have been stabilised to prevent surface runoff from removing bank material. The banks are a priority area and rehabilitation must start closest to the river channel and move outwards until complete. Input from a botanist regarding revegetation of the banks would help to achieve an appropriate mix of locally indigenous riparian thicket species. Consideration should be given to reseeding with hardy pioneer and understorey species. Failure of the vegetation could result in exposure of the unprotected banks to conditions and undermine rehabilitation efforts. Due to the dry climate irrigation may be required to accelerate vegetation establishment. Depending on the plant species, the propagation period will vary. It will be a minimum of 12 months before plants propagated from seeds or cuttings will be ready to plant out on site, in some cases longer. An establishment maintenance period is necessary to monitor the growth of the plants (a minimum of 12 months is usually required).

Plants should be planted randomly or staggered with gaps; they should not be planted in straight lines. As a general rule, plants should be planted into a hole which is double its size. There are products available which act as water retention substances as well as fertilisers, or in some cases just water retainers.

Monitoring of vegetation

Maintenance of the plants will be required, such as watering, weeding, disease and insect pest control, and replacement of dead material in all planted areas. Alien invasive plant species often establish in disturbed areas and outcompete the natural vegetation. It will be necessary to manage the rehabilitated area constantly and indefinitely for alien invasive plants. Under CARA legislation (Conservation of Agricultural Resources Act No. 43 of 1983) the landowner is required to remove the alien invasive trees on the entire property. The neighbouring landowners and those upstream are also required to manage alien invasive trees on their properties.

Managing riparian buffer zone

Aquatic buffer zones which are designed to act as barriers between human activities and sensitive water resources in order to protect them from adverse negative impacts. Buffer zones associated with water resources have been shown to perform a wide range of functions and have therefore been adopted as a standard measure to protect water resources and associated biodiversity. An aquatic impact buffer zone is defined as a zone of vegetated land designed and managed so that sediment and pollutant transport carried from source areas via diffuse surface runoff is reduced to acceptable levels (Macfarlane and Bredin 2016). Rehabilitation is aimed at facilitating the long-term sustainability of riverine environments by allowing for ecological buffer areas / corridors and implementing various land-use controls.

A buffer must be implemented to achieve the greatest scope for enhancement of habitat quality, diversity or function in degraded transformed environments. River habitat quality depends on the design and management of ecological buffer areas to protect the longitudinal ecological corridors and the interface between the river environment and the adjacent land uses. It is recommended

that a buffer zone be adopted and maintained for the Cordiers River. The width of which will need to correlate with remaining habitat and must include the rehabilitation areas. It is recommended that no fences within the riparian areas (including tributaries) are constructed. Faunal movement within the trunk river and its tributaries should not be restricted. No draining of buffer areas by means of channels and subsurface drains can take place, as this directly affects buffer function. Foreign materials must be removed from the buffer area.
It is understood that kudu and baboons will need to be kept out of the fields otherwise there will be no point planting the crops as it will be eaten by the animals.

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):
Loss of riparian vegetation & habitat	**Low (-)**
Erosion and sedimentation	**Low (-)**
Flow modification	**Low (-)**
Vegetation Type and Biodiversity Network	**Low-Medium (-)**
Temporary and Permanent Job Opportunities	**Medium – High (+)**
Creation of Agricultural Land	**Medium (+)**
Noise impacts	**insignificant**
Visual impacts / Sense of Place	**Low (-)**

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

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

Summary:
It is evident from the specialist reports that the negative impacts associated with the commenced activities relate to the loss of indigenous vegetation and the modification of the watercourses. These impact's significance could have been mitigated to lower levels. Other impacts are associated with the socio-economic aspects and noise and visual impacts, theses impact significance would likely not have been reduced much by means of mitigation measures.

The socio-economic impact of the activities is high especially given the levels of poverty in the area and country as a whole.

Loss of riparian vegetation and habitat
The disturbance or loss of aquatic vegetation and habitat refers to the direct physical destruction or disturbance of aquatic habitat caused by vegetation clearing, disturbance of riparian habitat, encroachment, and colonisation of habitat by invasive alien plants. The reduction or removal of riparian vegetation cover, within rivers which reduces the resistance to flow and thus increases flow velocities, directly reduces the protection of the riverbed and banks which was afforded through the vegetation cover. The disconnection from the floodplain, loss of biodiversity, and loss of natural habitat diversity can result in over-topping of the banks and flooding of the lands.

The stripping of indigenous vegetation and the promotion of un-natural and unstable river geometries will have the most harmful effect on the river. The activities have disturbed the composition of the bed and banks which increases the risk of erosion. The clearance may cause a widespread erosion of sediments and vegetation from the river during a flood event. Thereafter, the disturbance is also highly likely to result in the establishment of alien invasive plant species. The outcome is that of habitat simplification, or loss of diversity. Such losses may relate to losing structural complexity.

Modified banks may also limit lateral connectivity, preventing some riverine fauna from moving up the bank and onto the floodplain. If the structures do this then the quality of longitudinal ecological

corridors along the bank and riparian zone will be reduced. The promotion of a straight, single channel river such as the channellisation of the Droekloof distributary channel, reduces habitat diversity, associated ecosystem services are reduced or lost.
Impact significance without mitigation: Medium (-)
Impact significance with mitigation: Low (-)

Erosion and sedimentation
Sedimentation and erosion refers to the alteration in the physical characteristics of the river as a result of increased turbidity and sediment deposition, caused by soil erosion and earthworks that are associated with infilling and excavation activities, as well as instability and collapse of unstable soils during operation. These impacts can result in the deterioration of aquatic ecosystem integrity and a reduction/loss of habitat for aquatic dependent flora & fauna. Erodibility can be increased by desiccation, rainsplash and rill formation, trampling by people or animals, destruction of riparian vegetation, and by wind against the bank.
The excavations and infilling activities have created a deeper, narrower channel with banks of erodible sediments which will result in the reach being permanently destabilised through lateral and vertical erosion. The change in channel geometry and removal of vegetation (reduced roughness) will also increase the capacity for sediment transport and will lead to erosion of the bare unstable soils.
Impact significance without mitigation: Medium (-)
Impact significance with mitigation: Low (-)

Flow modification
The changes in the quantity, timing and distribution of water inputs and flows within the watercourse. Possible ecological consequences associated with this impact may include deterioration in freshwater ecosystem integrity, reduction/loss of habitat for aquatic dependent flora & fauna, and a reduction in the supply of ecosystem goods & services.

The bank modification has resulted in the straightening and deepening of the channel which will increase the flood conveyance. The channel is now artificially deep and narrow channel, with an associated unnatural increase in flow velocity and sediment transport capacity. The modification to the channel geometry will cause faster flow velocities, reduce natural flood attenuation, increase sediment transportation, and consequently impact downstream reaches. This is also especially relevant to the completely channellised Droekloof tributary. The impacts of any water abstraction from MiddelWater could be highly negative if undertaken without specialist assessment and the relevant authorisations.
Impact significance without mitigation: Medium (-)
Impact significance with mitigation: Low (-)

Vegetation Type and Biodiversity Network
The impact on vegetation can be quantified by means of calculating the areas of natural vegetation and fallow land cleared. 1.22 ha of Swartberg Shale Renosterveld and 12.13 ha of Southern Karoo Riviere were cleared by earthmoving machinery. An additional 7.08 ha of fallow land was also cleared. The age of the fallow land is estimated to be around 15 years, so it qualifies as 'natural vegetation' in terms of the NEMA definition. The rest of the cleared areas (3.14 ha) comprised severely degraded areas, such as an old farm dam, buildings, farm roads and other disturbed areas. These areas should not be treated as natural and should be left out of the equation. Apart from the fallow land areas, the quality of the cleared vegetation should be considered good to relatively undisturbed.
Due to both Swartberg Shale Renosterveld and Southern Karoo Riviere being well represented in the larger area, the impact on vegetation type per se is of a low to moderate concern. With regards to the biodiversity network, the impact is of greater significance, especially the new lands where the Cordiers River (an aquatic CBA) and an ecological (CBA and ESA) link across the valley were impaired. Restoration of the ecological link across the valley will be difficult to achieve, but at the very least, the Cordiers and a buffer of an appropriate width should be rehabilitated and restored to function accordingly. Of particular concern is the siltation threat currently posed by the exposed riverbanks.

It is unlikely that any Species of Conservation Concern (SCC), regional endemics or protected species were directly affected by the clearing activities. Apart from a regional endemic (Ruschia archeri) recorded on a sandstone bench outside one of the cleared areas, all the recorded species are widespread and mostly common. The possibility of regional endemics being present at the dam site prior to the fire event must however not be excluded. With regards to the new dam, a useful mitigation measure would have been to use the cleared topsoil (containing indigenous plant seeds and nutrients) to rehabilitate the front slope of the dam wall and other disturbed surfaces. It is uncertain what has happened to the topsoil and if this can still be achieved. In any event, stabilisation of the exposed slopes by means of logs or netting and reseeding may still be needed to prevent erosion.
Impact significance without mitigation: High (-)
Impact significance with mitigation: Low-Medium (-)

Temporary and Permanent Job Opportunities
The farm is now expected to employ an additional 6 permanent workers and possibly an additional 3 after the first 18 months, thereafter there will be between 25 and 45 seasonal/temporary jobs for planting, harvesting, cleaning and maintenance of the lands. Additionally, some of the labour is used for such things as operating machinery and management positions and therefore they are being upskilled. The employees also have dependants so the socio-economic benefits will be experienced by the workers and their families. The activities required a total of 54 workers (162 dependants)
Impact significance: Medium – High (+)

Creation of Agricultural Land
Expansion of the existing lands means that the farm can produce far more, whereby increasing the local and national agricultural carrying capacity, increase the efficiency of the farm, increase tax revenue with minimal financial burden on the government. In addition the activities on the farm support local community members and has resulted in job creation, decreasing the unemployment rate and contribute to food security.
Impact significance: Medium (+)

Noise impacts
Due to the nature of the site being an active farm with no nearby neighbours or other noise receptors the level of noise impacts will be insignificant.
Impact significance: insignificant

Visual impacts / Sense of Place
Change in character of the site from indigenous vegetation to that of agricultural fields Visual impacts are perceptive, the farmer would likely prefer the look of new and vast farmlands however conservationist would prefer the fields covered in indigenous vegetation. The new farmlands are adjacent to the existing farmlands and as such is in line with the existing character of the site and the farming valley. However, as this report is based on the environmental aspects the significance rating is considered negative.
Impact significance: Low (-)

Impact Assessment conclusion:
From the identified and assessed impacts it is evident that the highest negative impacts occurred to the river and its riparian vegetation. The impact on the vegetation itself it not considered very high however the bare nature of the reshaped river bed and the unvegetated nature of the banks means that the river is highly susceptible to erosion. These impacts to the river system and riparian vegetation could at least have been mitigated by not modify the riverbed and banks and maintaining a reasonable buffer of riparian vegetation.

The positive impacts, job creation and the creation of agricultural fields have been rated to have higher significance as it reduces the unemployment rate, provides sustainable livelihoods for employees and their dependants. In addition the creation of new lands increases the agricultural potential of the area and nationally, while also generating more tax revenue for the government.

Taking this into account the overall desirability of the activities is positive however mitigation measures

would have reduced the impact on the natural environment.

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.

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

The applicant is able and willing to undertake the recommended mitigation measures to rehabilitate the disturbed areas outside of the new agricultural lands

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 methods are in accordance with current guidelines and policies and as such are considered adequate for this assessment.

Botanical Assessment:

Since fieldwork was carried out late in the summer season, flowering plants that only flower at other times of the year (e.g. winter to spring), such as certain bulbs, may have been missed. A recent veld fire also affected the new dam site, and the vegetation is still recovering (albeit very slowly). The overall confidence in the completeness and accuracy of the botanical findings is however considered to be moderate to good and no follow-up survey is considered necessary to aid decision making. Nevertheless, a spring survey will certainly add to the recorded species.

Aquatic Assessment

Desktop Assessment Methods

- The contextualization of each study area was undertaken in terms of important biophysical characteristics and the latest available aquatic conservation planning information in a Geographical Information System (GIS). It is imperative to develop an understanding of the regional drainage setting and longitudinal dynamics of the watercourse. The conservation planning information aids in the determination of importance and sensitivity, management objectives, and the significance of potential impacts.
- Following this, desktop delineation and illustration of all watercourses within the study area was undertaken utilising available site-specific data such as aerial photography, contour data and water resource data. Digitization and mapping were undertaken using QGIS 2.18 GIS software (Table 3, of the aquatic assessment report).
- These results, as well as professional experience, allowed for the identification of specific watercourses that could potentially be impacted by the development and therefore required groundtruthing and detailed assessment.

Baseline Assessment Methods

- An infield site assessment was conducted in November 2020 to confirm the location and extent of the systems identified as likely to be impacted by the proposed project. There are a number of factors which influence the level of impact, such as type of system, position of the system in relation to the project and position the system is located in the landscape. The identified aquatic ecosystems were classified in accordance with the 'National Wetland

Classification System for Wetlands and other Aquatic Ecosystems in South Africa' (Ollis et al. 2013) and WET-Ecoservices (Kotze et al. 2009).

- Infield delineation was undertaken with a hand-held GPS, for mapping of any potentially affected aquatic ecosystems, in alignment with standard field-based procedures in terms of the Department of Water and Sanitation (DWAF 2008) Updated Manual for the Identification and Delineation of Wetlands and Riparian Areas. The delineation is based upon observations of the landscape setting, topography, vegetation and soil characteristics (using a hand-held soil auger for wetland soils).
- Determination of the Present Ecological State (PES), functional importance assessment and The Ecological Importance and Sensitivity (EIS) of freshwater habitats is an expression of the importance of the water resource for the maintenance of biological diversity and ecological functioning on local and wider scales; whilst Ecological Sensitivity (or fragility) refers to a system's ability to resist disturbance and its capability to recover from disturbance once it has occurred (Kleynhans & Louw, 2007).
- Determination of the Present Ecological State (PES) and Ecological Importance and Sensitivity (EIS) assessment of the delineated river/riparian habitats was undertaken utilising:
  ➢ Qualitative Index of Habitat Integrity (IHI) tool adapted from (Kleynhans, 1996) – PES
- ➢ DWAF (DWS) River EIS tool (Kleynhans, 1999) – EIS
- The PES and EIS results then allowed for the determination of management objectives for the potentially impacted aquatic ecosystems. Refer to the Table 4 and Annexure 12 (of the Aquatic Assessment Report) for a list and description of the tools utilised.

Impact Assessment Methods

- The approach adopted is to identify and predict all potential direct and indirect impacts resulting from an activity from planning to rehabilitation. Thereafter, the impact significance for the three alternatives is determined.
- Impact significance is defined broadly as a measure of the desirability, importance and acceptability of an impact to society (Lawrence, 2007). The degree of significance depends upon three dimensions: the measurable characteristics of the impact (e.g. intensity, extent and duration), the importance societies/communities place on the impact, and the likelihood / probability of the impact occurring.
- The potential risk to the watercourses from project impacts was assessed using the Risk Matrix which is specified in the Government Notice R509 of 2016 for section 21 (c) and (i) water uses (impeding or diverting flow or changing the bed, banks or characteristics of a watercourse) as defined under the NWA (1998).
- Actions are thereafter recommended to prevent and mitigate the identified impacts on aquatic habitat, in alignment with the mitigation hierarchy, as well as any measures necessary to restore disturbed areas or ecological processes.
- Any necessary buffer areas or No-Go areas are visually represented. The buffer zone was determined by a tool developed by Macfarlane and Bredin (2016) called Buffer zone guidelines for rivers, wetlands and estuaries, site-based information and professional opinion. The final buffer requirement includes the implementation of practical management considerations/mitigation measures.

(b) Please describe the assessment criteria used.

The assessment criteria utilised in this environmental impact assessment is based on, and adapted from, the *Guideline on Impact Significance, Integrated Environmental Management Information Series 5* (Department of Environmental Affairs and Tourism (DEAT), 2002) and the *Guideline 5: Assessment of Alternatives and Impacts in Support of the Environmental Impact Assessment Regulations* (DEAT, 2006).

Determination of Extent (Scale):

Site specific	On site or within 100 m of the site boundary, but not beyond the property boundaries.
Local	The impacted area includes the whole or a measurable portion of the site and property, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area.

Regional	The impact would affect the broader region (e.g. neighbouring towns) beyond the boundaries of the adjacent properties.
National	The impact would affect the whole country (if applicable).

Determination of Duration:

Temporary	The impact will be limited to the construction phase.
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 8 months after the completion of the construction phase.
Medium term	The impact will last up to the end of the construction phase, where after it will be entirely negated in a period shorter than 3 years after the completion of construction activities.
Long term	The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter.
Permanent	This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied.

Determination of Probability:

Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Probable	There is a possibility that the impact will occur to the extent that provisions must therefore be made.
Highly probable	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences.
Definite	The impact will take place regardless of any prevention plans.

Determination of Significance (without mitigation):

No significance	The impact is not substantial and does not require any mitigation action.
Low	The impact is of little importance, but may require limited mitigation.
Medium	The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
Medium-High	The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels.
High	The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.
Very High	The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable.

Determination of Significance (with mitigation):

No significance	The impact will be mitigated to the point where it is regarded to be insubstantial.
Low	The impact will be mitigated to the point where it is of limited importance.
Medium	Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the

	project, such a persistent impact does not constitute a fatal flaw.
High	Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and, taken within the overall context of the project, is considered to be a fatal flaw in the project proposal.

Determination of Reversibility:

Completely Reversible	The impact is reversible with implementation of minor mitigation measures
Partly Reversible	The impact is partly reversible but more intense mitigation measures
Barely Reversible	The impact is unlikely to be reversed even with intense mitigation measures
Irreversible	The impact is irreversible and no mitigation measures exist

Determination of Degree to which an Impact can be Mitigated:

Can be mitigated	The impact is reversible with implementation of minor mitigation measures
Can be partly mitigated	The impact is partly reversible but more intense mitigation measures
Can be barely mitigated	The impact is unlikely to be reversed even with intense mitigation measures
Not able to mitigate	The impact is irreversible, and no mitigation measures exist

Determination of Loss of Resources:

No loss of resource	The impact will not result in the loss of any resources
Marginal loss of resource	The impact will result in marginal loss of resources
Significant loss of resources	The impact will result in significant loss of resources
Complete loss of resources	The impact will result in a complete loss of all resources

Determination of Cumulative Impact:

Negligible	The impact would result in negligible to no cumulative effects
Low	The impact would result in insignificant cumulative effects
Medium	The impact would result in minor cumulative effects
High	The impact would result in significant cumulative effects

Determination of Consequence significance:

Negligible	The impact would result in negligible to no consequences
Low	The impact would result in insignificant consequences

Medium	The impact would result in minor consequences
High	The impact would result in significant consequences

(c) Please describe the gaps in knowledge.

Plants not in flower during the assessment may have been missed however follow up surveys would not reveal more species as the sites have been completely transformed for the dam and agricultural fields.

The amount and duration of local labour use depends on the success of the crop and therefore the amount of rainfall received.

(d) Please describe the underlying assumptions.

- It is assumed that all the information provided by the specialists and on which the report is based is correct and valid at the time receipt thereof.
- It is assumed that the proposed mitigation and rehabilitation measures will be implemented and adhered to by all the landowner.

Aquatic Assessment Assumptions and Limitations

- This report deals only with the impacts of the known activities taken place on this property up to the time of site assessment. It is assumed that any unauthorised activities ceased as per the DEA&DP Notice. Any activities which may have occurred since have not been assessed. For example, the dam is assessed as transformed habitat, not for its potential uses, as it was not storing any water on the 24th of November 2020.
- Aquatic ecosystems vary both temporally and spatially. Once-off surveys such as this are therefore likely to miss certain ecological information due to seasonality, thus limiting accuracy and confidence. However, regarding this assessment, the confidence level is considered good.
- Infield soil and vegetation sampling was only undertaken within a specific focal area, while the remaining watercourses were delineated at a desktop level with limited accuracy.
- The vegetation information provided is based on observation not formal vegetation plots. As such species documented in this report should be considered as a list of dominant and/or indicator wetland/riparian species and only provide a very general indication of the composition of the riverine vegetation communities. No detailed assessment of aquatic fauna/biota was undertaken. Refer to botanical assessment.
- This report is solely focused upon the rehabilitation of the reach of river modified as a result of the vegetation clearance and modification of the banks. A more comprehensive, catchment-wide planning process was not undertaken and thus reduces the level of certainty surrounding cumulative impacts.
- The assessment of impacts and recommendation of mitigation measures was informed by the site-specific ecological concerns arising from the field survey and based on the assessor's working knowledge and experience with similar development projects.
- The study does not include environmental flow requirement determination, flood line determination or hydrogeological assessment.
- The study does not include the application for water use authorisation under Section 21 of the NWA for any uses, existing or proposed. The recommendations and mitigation measures in this plan do not exempt the landowner from complying with any relevant legislation.

- It is assumed that all the relevant mitigation measures and agreements specified in this report will be implemented in order to ensure minimal negative impacts and maximum environmental benefits. This is not a maintenance management plan, and the riparian habitat must not be modified again without authorisation. Maintenance plans may introduce some ad hoc regulatory relief to farming but will fall substantially short of contributing to the resolution of long-standing and complex environmental problems arising from a long history of human dependence on rivers and floodplains in the Western Cape (Day et al. 2016).

(e) Please describe the uncertainties.

It is uncertain at this stage if all mitigation and rehabilitation measures will be successful.

SECTION H: RECOMMENDATIONS OF THE EAP

In my view (EAP), the information contained in the Application and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for.	**YES**	~~NO~~

If "NO", list the aspects that should be further assessed through additional specialist input/assessment:

If "YES", please indicate below whether in your opinion the applicant should be directed to cease the activity or if it should be authorised:

Applicant should be directed to cease the activity:	~~YES~~	**NO**

Please provide reasons for your opinion

The positive socio-economic impacts are relatively higher compared to the negative environmental impacts, we believe that the activities should be authorised as the damage has already been done and ceased. To approve a different alternative to that which has already been commenced and completed will only create a greater area of impact for additional indigenous vegetation clearing and earth works.

The fact is that the land is now cleared and being used for crops and the dam is used to water the crops. The dam location also means no electricity is used to irrigate. The reality is that the social and economic aspects outweigh the biophysical impacts, certainly this does not mean that the applicant should have commenced before receiving approval but to rehabilitate the areas as a form of punishment is also counterproductive especially in terms of the socio-economic environment. The socio-economic environment plays a huge role in these rural areas as work is very scarce and unemployment very high. In other words it would have been very likely that if the applicant went through normal EIA process the application would have been approved, apart from those areas that need to be rehabilitated.

As such the best option is to apply the recommended rehabilitation measures suggested by the specialists to the commenced alternative. It is important that the river and water courses be rehabilitated and reshaped where necessary as recommended by the Aquatic Specialists and by allowing them to recover and keeping them clear of aliens.

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.

- A buffer should be maintained between the expanded agricultural fields and the watercourses to allow the recovery of riparian vegetation.
- The river/watercourses must be cleared periodically of alien vegetation.
- 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 for the rehabilitation of the watercourse
- A rehabilitation/vegetation specialist should assess the need for rehabilitation and the amount needed. Once the initial assessment has been done the follow up assessment can be done every 6 months for 3 years and a report on the progress sent to the DEADP and CapeNature.

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.

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.		
Proof of the following has been attached as Appendix G • A Public Participation Plan was Submit to the case officer which outlined the planned Public Participation Process. • A newspaper advert was placed in the "Herrie" which was published on 3 February 2022. • Email notifications were sent to the automatically registered Authorities. • Letters were posted to the surrounding landowners • Additionally a letter drop was undertaken on the day the site notice was erected however no neighbours where on their properties at the time, a tenant of one of the neighbouring farms recommended to send a message via WhatsApp, as there is no cell phone signal in the area and that they would receive the message when they were within cell phone tower range. • A site notice was erected at the entrance to the property		
Please indicate whether the applicant has a website (please tick relevant box):	YES	**NO**
The documents were made available on the SES website (www.sescc.net)		

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 Environment Forestry and Fisheries: Biodiversity and conservation	**No**	**Uncertain**
Department of Environmental Affairs and Development Planning: Development Management (Region 3)	**No**	**Uncertain**
Western Cape Government: Department of Agriculture	**No**	**Uncertain**
Garden Route District	**No**	**Uncertain**

Municipality Municipal Manager		
Prince Albert Municipality Municipal Manager	**No**	**Uncertain**
Prince Albert Municipality Ward 2 Councilor	**No**	**Uncertain**
CapeNature Scientific Services: Land Use Advice	**Yes**	**-**
Breede - Gouritz Catchment Management Agency	**Yes**	**-**
Heritage Western Cape	**Yes**	**-**

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.)

Please refer to the Comments and response report (Appendix G)

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.**

Condition/Comment	Response
CapeNature: The botanical specialist included the limitations of the report of which the season of plant surveying was included. CapeNature agrees that regional endemics might have occurred at the dam site before the fire event. Thus, a follow-up spring survey must be conducted considering the vegetation (at the time of sampling) was still recovering from the fire. The vegetation dynamics could have already been transitional, due to the agricultural activities, prior to the fire event.	**We do not believe that this necessary as the specialist also goes on to indicate that "The overall confidence in the completeness and accuracy of the botanical findings is however considered to be moderate to good and no follow-up survey is considered necessary to aid decision making.** **In addition, as the entire site has been transformed into a dam there will be no chance of any vegetation emerging that was not in flower at the time of the assessment.**
CapeNature agrees that seeds with the natural indigenous vegetation or source the indigenous seeds from a local nursery in the region must be used. The seeds of these shrubs must be harvested locally to ensure that the local strains of the species adapted to the local conditions are used. The Renu Karoo nursery (Dr Sue Milton-Dean; http://www.renu-karoo.co.za/) must be consulted regarding the rehabilitation and to recommend which species can be used to rehabilitate the area. Livestock and large game (if there are any in the area) must be eliminated from the rehabilitation are for at least three years to allow plant species to establish.	**Thank you for recommending Dr Sue Milton-Dean, however we would not want to force the applicant to use one specialist over another for obvious reasons such as availability and value of service. Sometime has already passed since the disturbance therefore if the disturbed areas are not recovering sufficiently then seeds will be sourced to aid recovery of the vegetation. No livestock will be allowed into the recovering areas. A botanical/rehabilitation specialist should conduct 6 monthly audits of the site for 3 years after the authorization.**
Suitable monitoring of rehabilitation success is recommended. Long-term monitoring of the vegetation would be more practical to determine whether the mitigation measures are achieving any success, considering the slow recovery in the karoo. CapeNature would require an annual feedback report up to the 3rd or 4th year. The report should include the challenges and successes of the rehabilitation. Arid habitats could take years to rehabilitate, even from temporary disturbances therefore possible erosion points need to be monitored and rehabilitated when needed. CapeNature does not consider any habitat as rehabilitated until a comparable level of ecosystem functionality has been proven.	**This is recommended as a condition of retrospective Environmental Authorisation.**

In terms of the Alien and Invasive Species regulations, specific alien plant species are either prohibited or listed as requiring a permit; aside from restricted activities concerning, inter alia, their spread, and should be removed. The removal of alien plant species can be a phased approach using the nursery plants for rehabilitation of the site. Additional detailed input to append to the rehabilitation plan regarding invasive alien eradication and control should include: 1.1 stipulate a timeframe and strategy for alien plan removal (which are potentially the best months of the year to destablise and remove the alien plants, based on weather conditions/patterns), 1.2 list potential herbicides and their usage against the alien plants, 1.3 list the relevant indigenous plants species use for the rehabilitation (with photographs) 1.4 list when and how seeds or cuttings should be harvested from identified indigenous plants to be used for rehabilitation purposes.	**The botanical Assessment notes that "Alien plant infestation is also minimal." Having been to site we can confirm alien vegetation is minimal as much of the area is farmed and due to the arid conditions there are no stands of wattle or rooikrans. An appendix will however be attached to the EMPr to guide the removal of alien vegetation and application of herbicides, if applicable.**
The specialist reports summarized the negative impacts of the unlawful activities. The proposed mitigation and rehabilitation must be implemented to avoid further impact on biodiversity. A rehabilitation Specialists should be appointed to oversee the rehabilitation phase and ensure that the remedial/mitigation measures are implemented.	**It will be recommended that a rehabilitation specialist assess the need for rehabilitation and the amount needed. Once the initial assessment has been done the follow up assessment can be done every 6 months for 3 years and a report on the progress sent to the DEADP and CapeNature.**

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.**
- **<u>Proof</u> 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.**

2. 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.

3. 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	
Please refer to the I&AP list		Tel	
		Fax	
		E-mail	
		Tel	
		Fax	
		E-mail	
		Tel	
		Fax	
		E-mail	

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

NEMWA in terms of which this application directly relates?			
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: The activity has created temporary and permanent job opportunities to previously disadvantaged individuals who have several dependants to provide for.	

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: The activities resulted in the clearance of indigenous vegetation as well as the reshaping and channelisation of the Cordiers river and its tributaries in the vicinity of the site.	

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	
	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	X
	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 in line with the character of the area (Agriculture), feedback regarding the need for any further heritage studies is still to be received from HWC.		

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: No signs of pollution noted or expected as the land will be used for agricultural purposes		

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 Description of variable	Place an "x" in the appropriate box
	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.	X
	Administrative action was **not** previously taken against the applicant in respect of the abovementioned provisions.	
Explanation of all previous administrative action taken in respect of the above:		

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:

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.	**X**
	No previous applications have been submitted by the applicant but the applicant sat on the board of a firm that previously submitted an application.	
	Explanation in respect of all previous applications submitted in terms of section 24G:	

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.	**X**
	The applicant is a firm.	
	Describe the firm:	

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

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

SECTION D: PRELIMINARY ADVERTISEMENT

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

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

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

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

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

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

Please refer to Appendix G for the proof of advertisement

PART 3 -

APPENDICES

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

Appendix		Tick the box if Appendix is attached
Appendix A:	**Locality map**	X
Appendix B:	**Google Image of disturbance area**	X
~~**Appendix C:**~~	~~**Building plans (if applicable)**~~	
Appendix D:	**Colour photographs**	X
Appendix E:	**Biodiversity overlay map**	X
Appendix F:	**Water use Registration**	X
Appendix G:	**Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements, Land owner consent and any other public participation information as required in Section J above.**	X
Appendix H:	**H1: Botanical Assessment** **H2: Aquatic Assessment**	X X
Appendix I:	**Draft Environmental Management Programme**	X
Appendix J:	**Pre-compliance/compliance notices, Pre-directives/directives etc.**	X
Appendix K:	**Certified copy of Identity Document of Applicant**	X
Appendix L:	**Certified copy of the title deed (or title deeds in the case of linear activities)**	X
Appendix M:	**Heritage Western Cape Email (RoD)**	X

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)	

DECLARATIONS

THE APPLICANT

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

- I Johannes Jurie Klue in my personal capacity or duly authorised as ..... (state capacity) by ..... 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(ies), will be made;

- will be responsible for the costs incurred in complying with the environmental legislation including but not limited to –
  - costs incurred in connection with the appointment of the environmental assessment practitioner or any specialist appointed in terms of Regulation 13 of the EIA Regulations);
  - costs incurred in respect of the undertaking of any process required in terms of this application;
  - costs in respect of any prescribed fee payable in respect of this application;
  - costs in respect of specialist reviews, if the competent authority decides to recover costs;
  - the provision of security to ensure compliance with the applicable management and mitigation measures; and
  - fine costs

- am responsible for complying with the conditions that might be attached to any decision(s) issued by the competent authority;

- have the ability to implement the applicable management, mitigation and monitoring measures; and

- hereby indemnify, the government of the Republic of South Africa, the competent authority and all its officers, agents and employees, from any liability arising out of, inter alia, the content of any report, any procedure or any action for which the applicant or environmental assessment practitioner is responsible.

  am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014 (

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

Signature of the applicant:

Johannes Jurie Klue

Name:

Name of Firm (if applicable):

6 June 2022

Date:

THE INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I **John Sharples**, as the appointed independent environmental practitioner ("EAP") hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I:

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

Note: The terms of reference must be attached.

Signature of the environmental assessment practitioner:

Sharples Environmental Services cc

Name of company:

13 June 2022

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
Indicate the distance to the boundary of the industrial area metres

Wettest six months of the year

November- April
May -October

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

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

Location and depth of ground water monitoring boreholes:

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

Location and depth of landfill gas monitoring test pit:

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

		° ' "	° ' "