DRAFT S24G ASSESSMENT REPORT

NEWGRO S24G Rectification of cultivation of vineyards across small streams and re-location existing evaporation ponds on Portion 75 Farm Keboes no 37, Keimoes.

S24G Reference nr: 02/03/2018
February 2019

Applicant details:
Newgro Farming PTY Ltd
Piet Karsten
P. O. Box 53
Kanoneiland
8806
Tel: 054 431 7000

QUALITY CONTROL

Revision	Date	Author	Checked	Status	Approved
00	30 January 2019	Elanie Kühn		Draft for comment	
01	31 January 2019		Nerine Coertzen		
02					

CONTENTS

TABLE OF FIGURES

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Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

Application form for the regularisation of unlawful commencement or continuation of a listed activity or waste management activity in terms of section 24G of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

2016

Kindly note that:

1. This application form must be completed for all applications in terms of S24G of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

2. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the application form have been published or produced by the relevant competent authority.

3. This application form is structured as follows:

   PART 1
   Section A: Application Information
   Section B: Activity Information
   Section C: Description of Receiving Environment
   Section D: Preliminary Impact Assessment
   Section E: Landfill Parameters
   Section F: Proposed Public Participation Process
   Section G: Alternatives
   Section H: Appendices

   PART 2
   Section A: Directive
   Section B: Deferral
   Section C: Quantum of the fine

   PART 3
   Section A: Declarations
   Annexures

4. An independent EAP must be appointed to complete Part 1 as well as Part 2 Section C Part I of the application form on behalf of the applicant. The applicant must complete the remainder of Part 2 (i.e. excluding Section C part I . Both the EAP and Applicant must sign Part 3.

5. The declaration of independence must be completed by the independent EAP and submitted with the application.

6. 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 extends as each space is filled with typing. A legible font type and size must be used when completing the form. The font size should not be smaller than 10pt (e.g. Arial 10).

7. The use of *"not applicable"* in the application form must be done with circumspection.

8. No faxed or e-mailed applications will be accepted. This application form must be submitted by hand or mailed to the relevant competent authority.

9. Unless protected by law, all information contained in and attached to this application form may become public information on receipt by the competent authority. Upon request, any interested and affected party must be provided with the information contained in and attached to this application form.

10. This application form constitutes the initiation of the S24G application process.

Kindly note further that:

11. Section 24G of the NEMA, without affecting any criminal liability of a person who has acted in contravention of the above, makes provision for that person to submit an application to the relevant MEC/Minister, which, if successful, will enable that person lawfully to continue with the listed activity and/or legalise an otherwise unlawful structure.

12. Before the Minister/MEC may take a decision in respect of the application, the applicant is required to pay an appropriate administrative fine, determined by the competent authority, which fine may not exceed five million Rand (R 5 000 000.00) per listed activity unlawfully commenced or per application where the activities are interrelated.

13. It is the responsibility of the applicant to familiarise himself/herself/itself with all the possible consequences associated with the submission of this application including, but not limited to, the following:

    - This application (including a positive decision in respect hereof) in no way affects any criminal liability that the applicant may have incurred in respect of the activities which were commenced, undertaken and/or conducted unlawfully as listed in paragraph 1 above, and in respect of which this application relates.

    - The processing of this application may be deferred pending the outcome of criminal proceedings, should criminal proceedings be instituted against the applicant in respect of the abovementioned activities; or where criminal proceedings are pending against the applicant in respect of a similar contravention of section 24F of NEMA or section 20(b) of NEM:WA.

    - Before the competent authority may take a decision on the application, an administrative fine determined by the competent authority must be paid, in full, by the applicant.

    - That neither the submission of this application, nor the payment of the administrative fine implies that authorisation will be issued for the continuation of an activity/activities that commenced, undertaken and/or conducted unlawfully. This decision will depend on the merits of the application itself.

14. Activities which result in detrimental impacts to the environment are considered in a serious light by the competent authority and accordingly applicants must understand that by lodging an application for the continuation of an activity/ activities that commenced/ was undertaken or conducted unlawfully does not necessarily imply that the activity will be authorised. In terms of the NEMA the Minister/MEC may either refuse to issue an environmental authorisation/waste management licence; conditionally authorise the activity or direct you, the applicant, to provide further information or take further steps prior to making a decision.

DEPARTMENTAL DETAILS

Department of Environment and Nature Conservation
Compliance and Enforcement
90 Long Street
Private Bag X6102
Kimberley
8300

Tel. 053-807 7300
Fax: 053-807 7328

PART 1

SECTION A: APPLICATION INFORMATION

1. APPLICANT PROFILE INDEX

Cross out the appropriate box "☒".

1.1	The applicant is an individual	~~YES~~	~~NO~~
1.2	The applicant is a company	YES	~~NO~~
1.3	The applicant is a state-owned enterprise or municipality	~~YES~~	~~NO~~
1.4	Other (specify)	~~YES~~	~~NO~~
1.5	There is more than one individual / company responsible for the unlawful commencement of listed activities / listed waste management activities.	~~YES~~	~~NO~~

Name of Project applicant:	Newgro Farming (Pty) Ltd		
RSA Identity number:	4 8 0 8 2 8 5 0 5 4 0 8 8		
Contact person:	Petrus Abraham Karsten		
Position in company	CEO		
Registered Name of Company/ Closed Corporation	Newgro Farming (Pty) Ltd		
Trading name (if any):	Newgro Farming (Pty) Ltd		
Registration number	2009/025439/07		
Postal address:	P.O. Box 53		
	Kanoneiland	Postal code:	8806
Telephone:	(054) 431 7000	Cell:	
E-mail:	zeldavd@karsten.co.za	Fax:	

Please Note: In instances where there is more than one individual / company responsible for the unlawful commencement of listed activities / waste management activities, please attach a list of with all contact details to the back of this page.

Environmental Assessment Practitioner (EAP):	Pieter Badenhorst Professional Services		
Contact person:	Elanie Kuhn		
Postal address:	PO Box 1058		
	Wellington	Postal code:	8870
Telephone:	(021) 873 7228	Cell:	076 584 0822
E-mail:	elaniem@iafrica.com	Fax:	(086) 672 1916
EAP Qualifications	Pieter Badenhorst - 46 **years' experience (16 @ CSIR) in environmental management; report** writing; project management; facilitation Elanie Kuhn **–** 12 **years' experience**, environmental management, report writing, project management		
EAP Registrations/Associations	Pieter Badenhorst - IAIAsa, Pr Eng, SAICE Elanie Kühn **–** IAIAsa		

Name of Landowner(s):	Newgro Farming (Pty) Ltd		
Contact person(s):	P.A. Karsten		
Postal address:	P.O. Box 53		
	Kanoneiland	Postal code:	8870
Telephone:	(054) 431 7000	Cell:	

E-mail:	zeldavd@karsten.co.za	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 page.

Municipality in whose area of jurisdiction the activity falls:	Kai! Garib Municipality		
Contact person:	Municipal Manager		
Postal address:	Private Bag X6		
	Kakamas	Postal code:	8870
Telephone	(054) 461 6700	Cell:	
E-mail:		Fax:	(054) 461 6401

Please Note: In instances where there is more than one Municipality involved, please attach a list of Municipalities with their contact details to the back of this page.

Project title:	Newgro S24G Rectification of cultivation vineyards across small streams and construction and relocation of existing sewage evaporation ponds on Portion 75 of Farm Keboes no 37, Keimoes.
Property location:	Newgro Farm – Kanoneiland
Farm/Erf name & number (incl. portion):	Portion 75 of Farm Keboes no 37
SG21 Digit code:	C02800110000003700075

Cultivated area: Co-ordinates:	Latitude (S):			Longitude (E):		
	28º	40‘	04.58 “	21º	09‘	02.47“
Existing Sewage evaporation ponds: Co-ordinates:	Latitude (S):			Longitude (E):		
	28º	39‘	39.62 “	21º	08‘	46.10“
Relocated Sewage evaporation ponds: Co-ordinates:	Latitude (S):			Longitude (E):		
	28º	39‘	46.59 “	21º	08‘	49.33“

Please Note:
Where a large number of properties are involved (e.g. linear activities), attach a list of property descriptions to the back of this page.
Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates must be in degrees, minutes and seconds. The minutes must be given to at least three decimals to ensure adequate accuracy. The EAP is required to contact the relevant competent authority with regards to the projection that must be used.

Street address:	Kai! Garib Municipality
Magisterial District or Town:	Keimoes/Kanoneiland

Please Note: In instances where there is more than one town or district involved, please attach a list of towns or districts as well as complete physical address information for the entire area to the back of this page.

Closest City/Town:	Kanoneiland	Distance	2 Km
Zoning of Property:	Agricultural Zone 1		

Please Note: In instances where there is more than one zoning, please attach a map clearly indicating the zoning of the different portions.

Was a rezoning application required?	~~YES~~	NO

Was a consent use application required?	~~YES~~	NO
Please Note: Where planning approvals have been granted please attach the relevant approvals.		
Owners consent:	**NOT REQUIRED AS PROJECT IS ON APPLICANT'S** PROPERTY Letters of consent from all landowners or a detailed explanation by the applicant explaining why such letters of consent are not furnished must be attached to the application form. .	

2. APPLICATION HISTORY

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

Has any national, provincial or local authority considered any development / waste management applications on the property previously?	Yes	~~No~~

If so, please give a brief description of the type and/or nature of the application/s: (In instances where there were more than one application, please attach a list of these applications)

During 2007 an EIA study was conducted for the development of a 900ha cultivation area across Portion 75 and 76 of Farm Keboes no 37. See Figure A, green block.
During 2009 an EIA study was conducted for the development of 75ha cultivation area across Portion 76 of Farm Keboes no 37. See Figure A, pink block.
During 2009 a S24G process was followed for the development of 655ha cultivation area across Portion 76 of Farm Keboes no 37. See Figure A, yellow block.

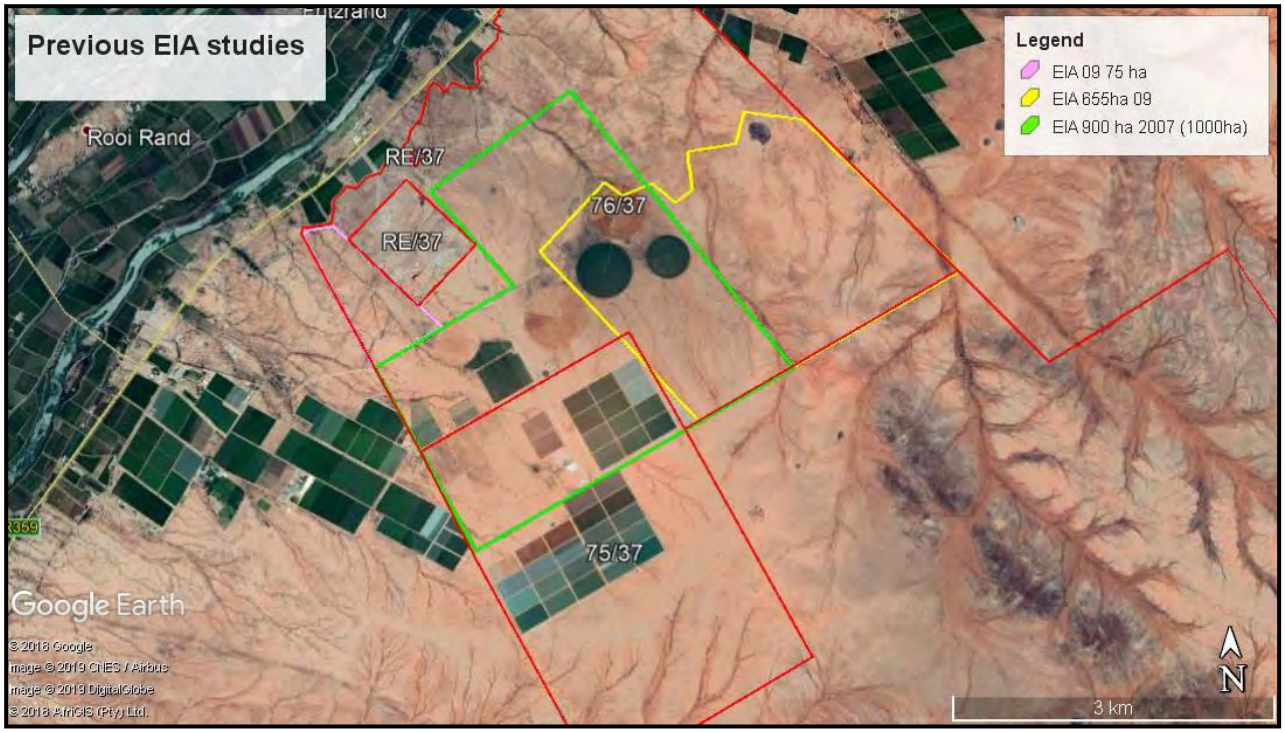

Figure A: Previous EIA/S24G studies conducted on site.

An EIA was conducted in 2008 for the development of a 900ha cultivation area on three different properties, of which 245ha is on the subject property (Portion 75 of Keboes no 37). However, the section of the development that triggered this S24G was not covered under this existing Environmental Authorisation issued on the 28 April 2008, Reference

number NNO25/19 NC/SIY/UPING1/04/2008. With regards to the new S24G Application, the applicant did not construct the vineyards on purpose, they were under the impression that this falls within the ambit of their existing EA.		
Which authority considered the application(s): Department of Tourism, Environment and Conservation: Northern Cape – Case officer: S.G. Mbanjwa.		
Has any one of the previous application/s on the property been approved or rejected? 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(s) and expiry dates of the above applications / licences etc.		
The Environmental Authorisation was valid for 3 years.		

I hereby apply in terms of Section 24G of the National Environmental Management Act (Act no 107 of 1998 as amended) for the regularisation of the unlawful commencement or continuation of the listed activity(ies) in Section B of the application form:

Applicant (Full names)__ Petrus Abraham Karsten _____ Signature:_____

Place: __Kanoneiland_____ Date: _____

EAP (Full names)_Pieter Badenhorst _____ Signature:_____

Place: __Wellington_____ Date: _____

SECTION B: ACTIVITY INFORMATION

1. ACTIVITIES APPLIED FOR:

Separate applications are required for one site where more than one listed activity has commenced and where these unlawfully commenced activities constitute offences in terms of different EIA regulations and / or the listed waste management activities.

Applicants and EAPS are strongly advised to discuss the merits of a combined application (if deemed applicable) with the relevant competent authority prior to the completion of this application form and submission thereof.

The relevant competent authority will use its discretion in deciding to allow the submission of a single application for more than one NEMA section 24F(1) and / or NEM:WA section 20(b) contravention on one site.

All potential listed activities / waste management activities associated with the site must be indicated below. Only those activities for which the applicant applies will be considered.

The onus is on the applicant to ensure that all the applicable listed activities are included in the application.

Listed activities applied for. Identify the relevant listed activities applied for below:

ECA EIA Contraventions : Between 08 September 1997 end of day 09 May 2002	
Activities unlawfully commenced with on or after 08 September 1997 and before end 09 May 2002: EIA Regulations promulgated in terms of the ECA, Act No 73 of 1989, as amended	
Listed Activity(ies)	Details of Activity(ies)
	NONE APPLICABLE

ECA EIA Contraventions : Between 10 May 2002 and before end of day 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 No 73 of 1989, as amended	
Listed Activity(ies)	Details of Activity(ies)
	NONE APPLICABLE

NEMA EIA Contraventions : Between 03 July 2006 and before end of day 01 August 2010	
Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 03 July 2006 and before end of day 01 August 2010	
Government Notice No. R386 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
	NONE APPLICABLE
Government Notice No. R387 Activity No(s):	Details of Activity(ies) requiring a Scoping Report and EIA
	NONE APPLICABLE

NEMA EIA Contraventions : On or after 02 August 2010 until 7 December 2014

Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 02 August 2010 until 7 December 2014	
Government Notice No. R544 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
Activity 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more Where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of the watercourses, excluding where such construction will occur behind the development setback line.	The construction of the infrastructure associated with the cultivation of the vineyards within water courses, during 2010 to 2013.
Activity 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) watercourse	Approximately 112 hectares of land were cleared within watercourses, prior to 30 September 2013 (refer to Appendix B).
Government Notice No. R545 Activity No(s):	Details of Activity(ies) requiring a Scoping Report and EIA
None applicable	
Government Notice No. R546 Activity No(s):	Details of Activity(ies) requiring S&EIR
Activity 12: The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation. (b) within critical biodiversity areas identified in bioregional plans	Approximately 30 hectares of indigenous vegetation falling within a CBA of the total 112ha hectares of land that were cultivated in July 2010 to September 2013. This resulted in the clearance of an area of more than 300 square metres or more of vegetation, where 75% or more of the vegetative cover constitutes indigenous vegetation, within a CBA (Refer to Figure 8).
Activity 13: The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation... (a) Critical biodiversity areas and ecological support areas as identified in systematic biodiversity plans adopted by the competent authority (c) In Northern Cape (ii) Outside urban areas, the following: **(ff) Areas within 10 kilometres from national parks…**	Approximately 30 hectares of indigenous vegetation falling within a CBA of the total 112ha hectares of land that were cultivated in July 2010 to September 2013. This resulted in the clearance of an area of more than 1 ha or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, located within a CBA (Refer to Figure 8).

NEMA EIA Contraventions : On or after 8 December 2014	
Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 8 December 2014	
Government Notice No. R983 Appendix 1 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
Activity 12: The development of**—** (vi) bulk storm water outlet structures exceeding 100 square metres in size;	For the construction of evaporation ponds within a watercourse.

(xii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;	Approximately 30 hectares of land were cleared prior to February 2016 (refer to Appendix D1: Historical Photographic Imagery), within watercourses.
Activity 19: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from— **(i)** a watercourse;	For the infilling and depositing of more than 5 cubic meters of material within a watercourse. Approximately 30 hectares of land were cleared prior to February 2016 (refer to Appendix D1: Historical Photographic Imagery), within watercourses.
Government Notice No. R984 Appendix 2 Activity No(s):	Details of Activity(ies) requiring a Scoping Report
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. (a) In Northern Cape: i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;	For the construction of evaporation ponds within a CBA.
Activity 14: The development of— (iv) (iv)dams, where the dam, including infrastructure and water surface area exceeds 10 square metres in size; (xii) (xii)infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs— (a) within a watercourse; Northern Cape: Ii Outside urban areas (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;	For the construction of evaporation ponds larger than 10 square metres within a water course.
Government Notice No. R985 Appendix 3 Activity No(s):	Details of Activity(ies) requiring Environmental Impact Assessment Report
None Applicable	

Waste Management Activities Contraventions: On or after 3 July 2007 up to end of day 28 November 2013
Activities unlawfully commenced with in terms of GNR 718 of 3 July 2009 published under the National Environmental Management Waste Act 59 of 2008

Listed Activity(ies)	Details of Activity(ies)
None applicable	

Waste Management Activities Contraventions: On or after 29 November 2013	
Activities unlawfully commenced with in terms of GNR 921 of 29 November 2013 published under the National Environmental Management Waste Act 59 of 2008	
Listed Activity(ies)	Details of Activity(ies)
None applicable	

2. ACTIVITY DESCRIPTION

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

(a) Is/was the project a new development or an upgrade of an existing development.	New – agricultural development.	Upgrade – Relocation and upgrade of an existing development.

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

Locality:

The farm where the activity occurs is situated approximately 2 kilometers outside of the small town of Kanoneiland, between the Upington and Keimoes in the Northern Cape, in the Kai! Garib Municipal area. The property gains access via gravel roads off the R359.

Refer to the Locality Plan attached at Appendix A (and inserted below as Figure 1).

Figure 1: Locality plan

Refer to the Historical Google Earth images attached at Appendix D1: Figures 1 to 5.

During the development of the applicant's farm, he unknowingly activated certain listed activities that is included in the NEMA 2010 and 2014 Regulations. The applicant was under the impression that the specific site was part of the previous **EIA's conducted. Only during an Audit Report conducted by Mnr Pieter Badenhorst, did it become apparent that this is** not the case. The following activities are applied for:

NEMA 2010 Regulations:

1. Clearance of approximately 112 hectares of indigenous vegetation between July 2010 and prior to September 2013, also clearing within a watercourse. (Refer to Figure 2).
2. Construction of internal pipelines and roads as part of the clearance of indigenous vegetation to establish new agricultural areas.

By 30 September 2013, a total of 112 hectares had been cleared (Figure 2).

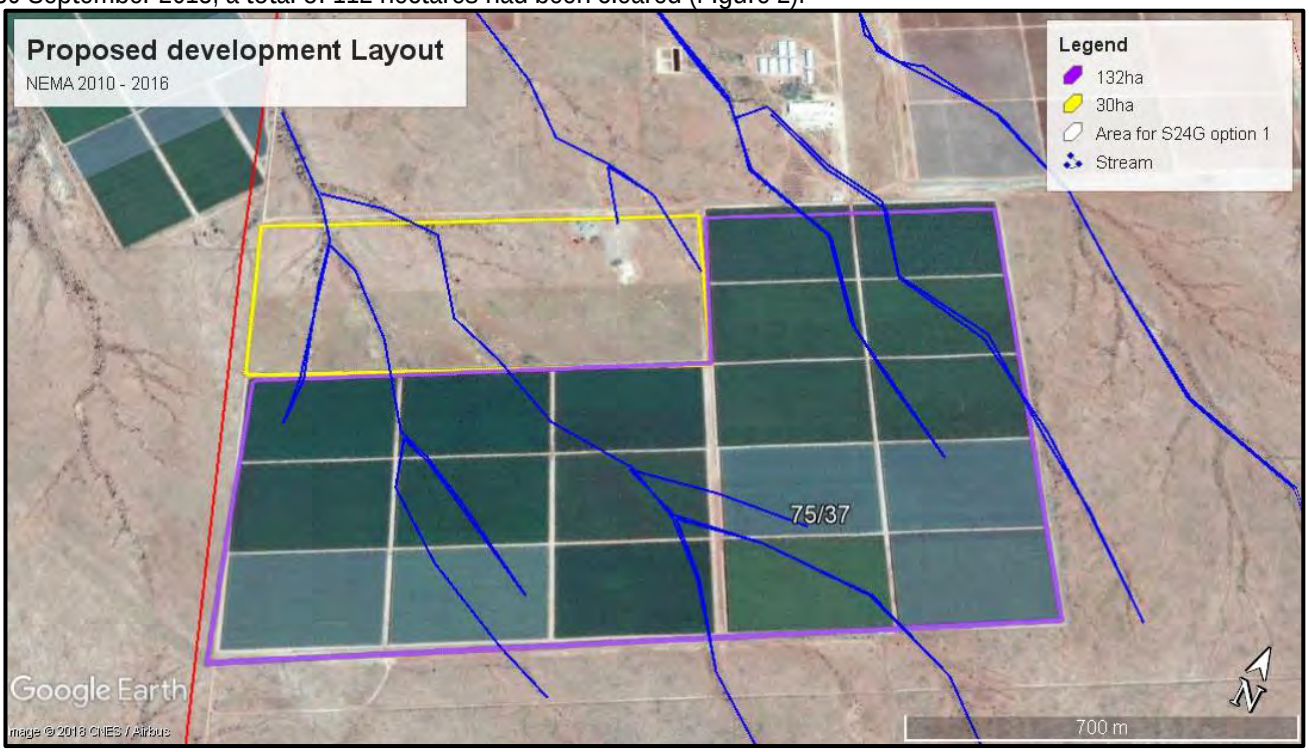

Figure 2: The development layout

The following NEMA 2014 Regulations were also triggered by the development of the **applicant's** farm:

1. Clearance of 30 hectares of indigenous vegetation after 2014, for the clearance within a watercourse, during the development of the agricultural area, see Figure 2.
2. Clearance of approximately 0.5 hectares of indigenous vegetation after 2014, as well as clearing within a watercourse for the construction of evaporation ponds, and for onsite treatment of waste water (sewage). (Refer to Figure 3).
3. The relocation of the existing ponds is included as part of this application, as the existing ponds are constructed within a watercourse and currently over capacitated. The new ponds will be lined and will have a better design to adequately address the need for treatment of the waste water (Figure 3).

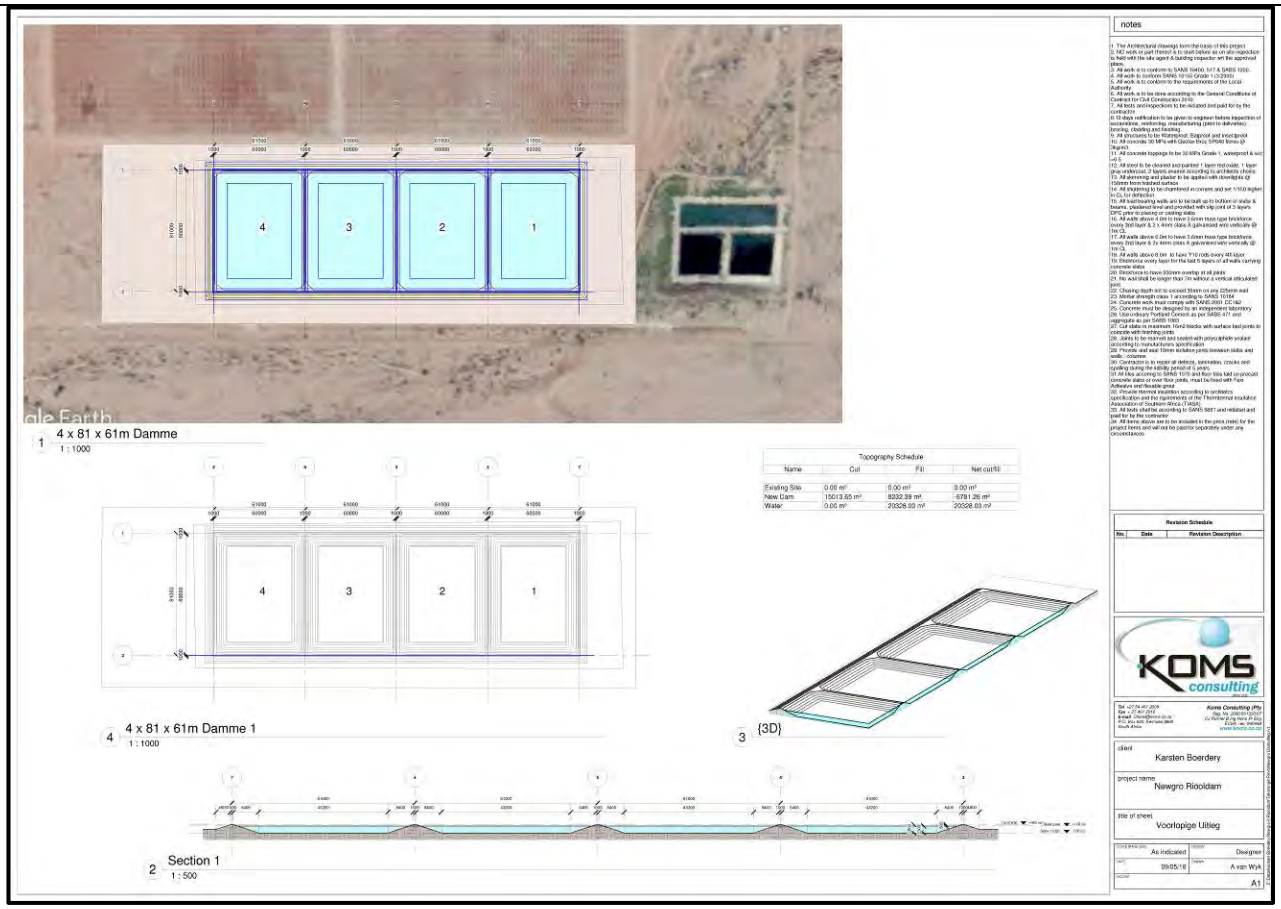

Figure 3: Evaporation pond layout (existing versus new proposed)

(c) 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:		
No buildings were developed as part of the new agricultural areas or for the evaporation ponds. However, engineering drawings of the new proposed evaporation dams, see Figure 3.		
Infrastructure (e.g. roads, power and water supply/ storage)	YES	NO
Provide brief description:		

Roads:

Access is gained off the R359 district road. The internal farm tracks are not surfaced and are compacted earth with no formal storm water management control structures in place. The low rainfall characteristic of the area negates the need to provide for formal storm water control.

Pipelines:

Water is required for the drip irrigation of the established vineyards and is supplied via pipelines from the booster pump station and pump lines (white) as shown in Figure 4. The other pipelines established is from the homesteads towards the evaporation ponds. These pipelines have a diameter of 160mm and do not need environmental authorization.

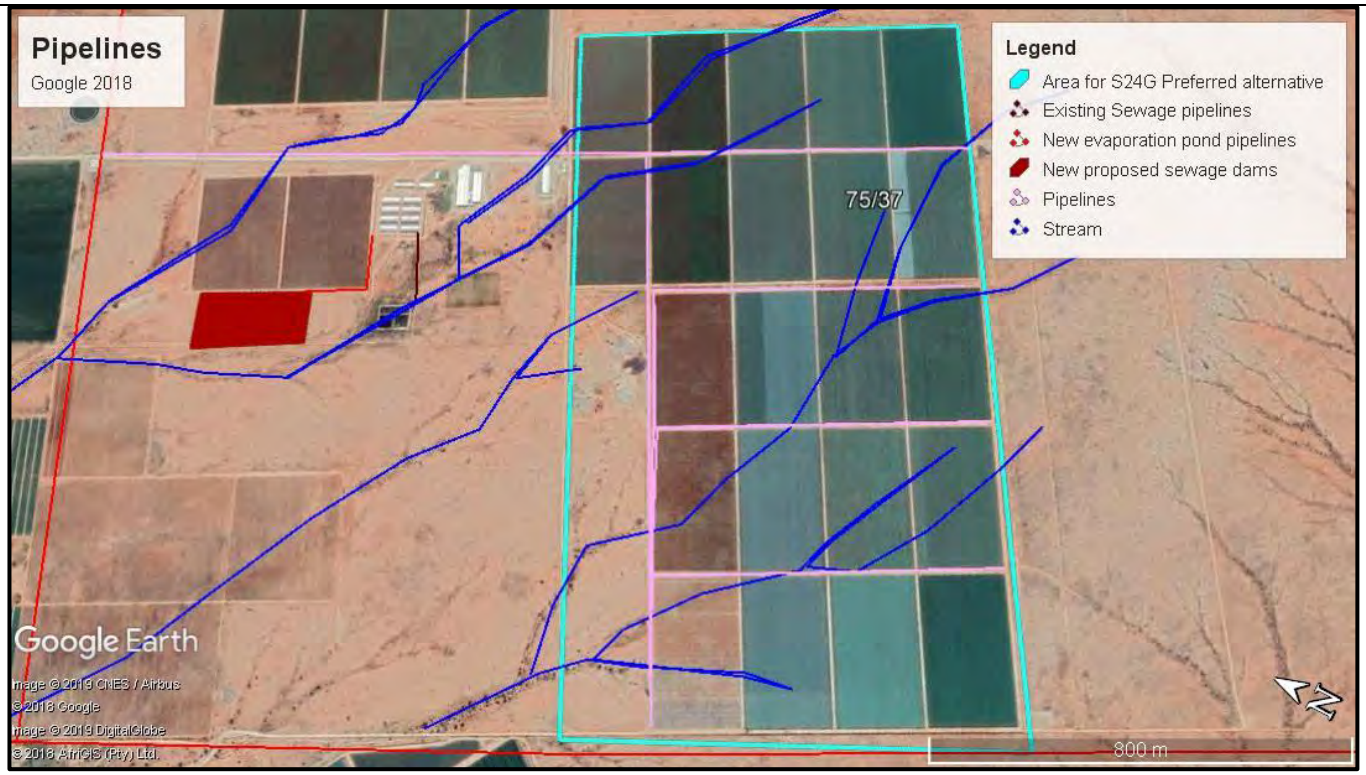

Figure 4: Pipelines (pink lines)

Water:

Portion 75 of Farm Keboes no 37 has water use rights allocated to the property. Under the existing old Water Use license (License no 27/2/1/D673/1/110/1) the Farm Portion 0 of Keboes no 37 has 400ha of water use rights in the name of Karsten Vrouerwerkstrust. Hereafter the applicant subdivided the Portion 0 of Keboes no 37 into three properties, Ptn 75, Ptn 76 and Remainder of Farm Keboes no 37. After a site visit and discussions with DWS it was determined that, the applicant will apply for a succession in transfer and Amendment of the existing old license (License no 27/2/1/D673/1/110/1) to incorporate the corrections. The corrections will also include the correct property location of the dam, which is currently in the license linked to Portion 0 of Farm Keboes no 37 and should be allocated to Portion 76 of farm Keboes no 37. Water use taking place on Portion 75 of Keboes no 37 is currently for the property is currently 270 hectares. As part of the succession in transfer the water will be transferred, 259ha, from Portion 0 of Keboes no 37 to Portion 75 of Keboes no 37 and to transfer the remaining 141ha of water from Portion 0 of Keboes no 37 to Portion 76 of Keboes no 37. Transfer and allocations as outlined below:

	TRANSFER FROM		TRANSFER TO		
Succession in title transfer: Property transferred from	Existing water rights - Ha	Ha transferred	Property transferred to	Existing water rights ha	New allocations
Portion 0 of Keboes	400ha	259ha	Portion 75 of Keboes no 37	0ha	259ha
Portion 0 of Keboes	400ha	141ha	Portion 76 of Keboes no 37	0ha	141ha
TOTAL	400ha	400ha		0ha	400ha

Refer to Appendix E1: Irrigation rights from department of water affairs and Appendix E2: EXISTING WATER USE LICENSE.

Additionally, a Water Use License Application will be submitted for Section 21(c) and (i) of the National Water Act for the streams that were diverted and crossed as part of the illegal establishment of vineyards. The establishment of the vineyards on Portion 75 of Farm Keboes no 37 took place across small sections of the unnamed drainage system that is located on

site. This drainage system is classified as an ephemeral course as it will only flow sporadically after rain. As can be seen in the historical imagery below in Figure 5, these ephemeral watercourses are not considered to be seasonal rivers, as they do not regularly contain water in a seasonal pattern.

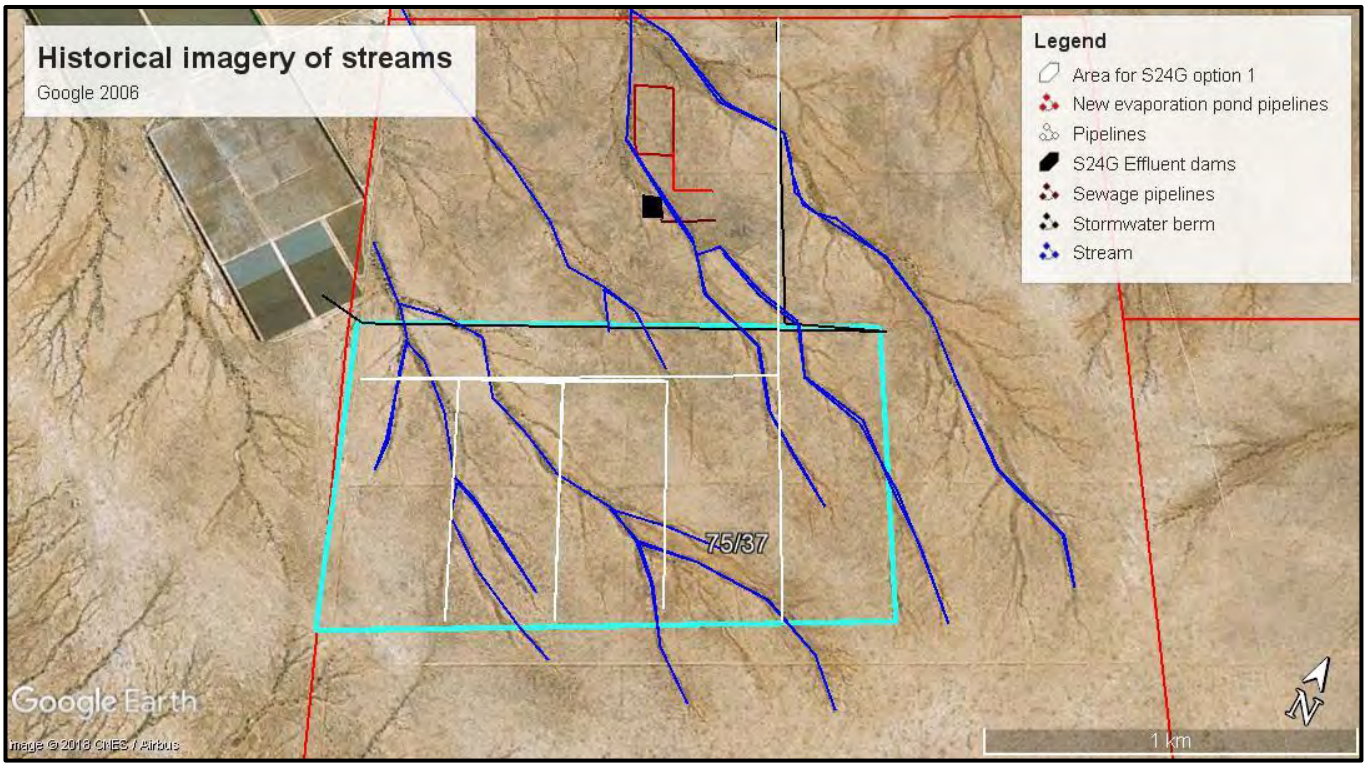

Figure 5: Ephemeral streams/drainage areas

The WULA application is summarised, in the table below, for the following water usages:

(c) impeding or diverting flow of water in a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(i) altering the bed, banks, course or characteristics of a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(g) Disposing of waste in a manner which may detrimentally impact on a water resource	[Disposing of waste in a manner which may detrimentally impact on a water resource] For the disposal of waste water into evaporation ponds.

Evaporation ponds:

The applicant, Newgro Farming PTY Ltd, wishes to comply with the National Water Act (1998) by relocating and upgrading the existing sewage/evaporation ponds for the treatment of sewage that flows from the existing worker accommodations etc. The various details pertaining to the evaporation dams are shown below in Table 2.

Specifications for the sewage evaporation pond	
Capacity evaporation pond/s	11 364.3m³/ pond
Footprint area of all 4 dams	3.0ha
Total volume of sewage annually	11 931m³/annum

Table 2: Dam specifications

Electricity:

Electricity is provided by Eskom for the irrigation process and is linked to the booster pump. See Figure 6, showing the existing Eskom connection, that has existing capacity.

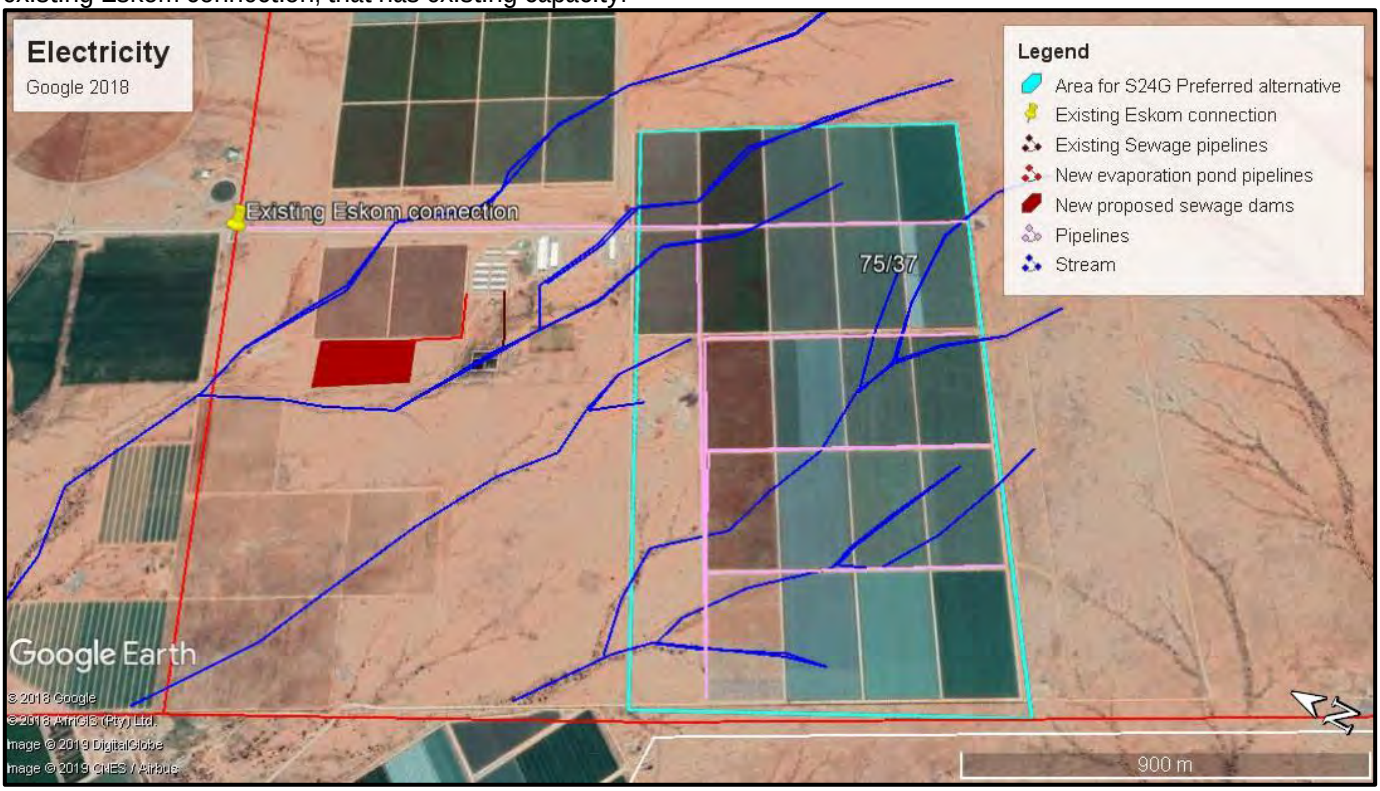

Figure 6: Eskom connection

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		

Evaporation ponds:

The applicant, Newgro Farming PTY Ltd wishes to comply with the National Water Act (1998) by relocating and upgrading of existing sewage/evaporation ponds for the treatment of sewage from the existing worker accommodations etc.

The various details pertaining to the evaporation dams are shown below in Table 2.

Specifications for the sewage evaporation pond	
Capacity evaporation pond/s	11 364.3m³/ pond
Footprint area of all 4 dams	3.0ha
Total volume of sewage annually	11 931m³/annum

Table 2: Dam specifications

Other activities (e.g. water abstraction activities, crop planting activities)	YES	~~No~~

Provide brief description

Crop Planting:

The applicant has developed an area of 142ha of cultivation areas without environmental authorization. Table grapes are being cultivated as indicated in the project area (refer to Appendix D2: Site Photographs).

3. ACTIVITY NEED AND DESIRABILITY

Describe the need and desirability of the activity:

According to a report prepared by DAFF (2012), South African table grape exports totalled 2 708 767 metric tons that year. The majority of exports are to the European Market, with most table grapes being exported to the Netherlands (40%), followed by Great Britain (21%), Belgium (7,4%), Germany (5,5%), Hong Kong (3,1%) and other African countries (0,3%). During the summer season, India, Chile, South Africa and Israel are the major exporting countries.

Major production areas in South Africa

The Hex River Valley is the country's main table grape production area. More than half of all grape exports come from this district, which has the longest harvesting period in the country. The Northern Cape is a very dry province, so most of the grapes in this province are cultivated in the Orange River region and they are harvested very early.

The project area is located within the Lower Orange River wine region (Refer to Figure 7 below.)

Portion 75 of Farm Keboes no 37 contributes to the production of table grapes that are harvested early for the export market, in time for the Christmas festive season overseas. This particular characteristic of growing table grapes in this region gives the growers a highly competitive advantage in the global market.

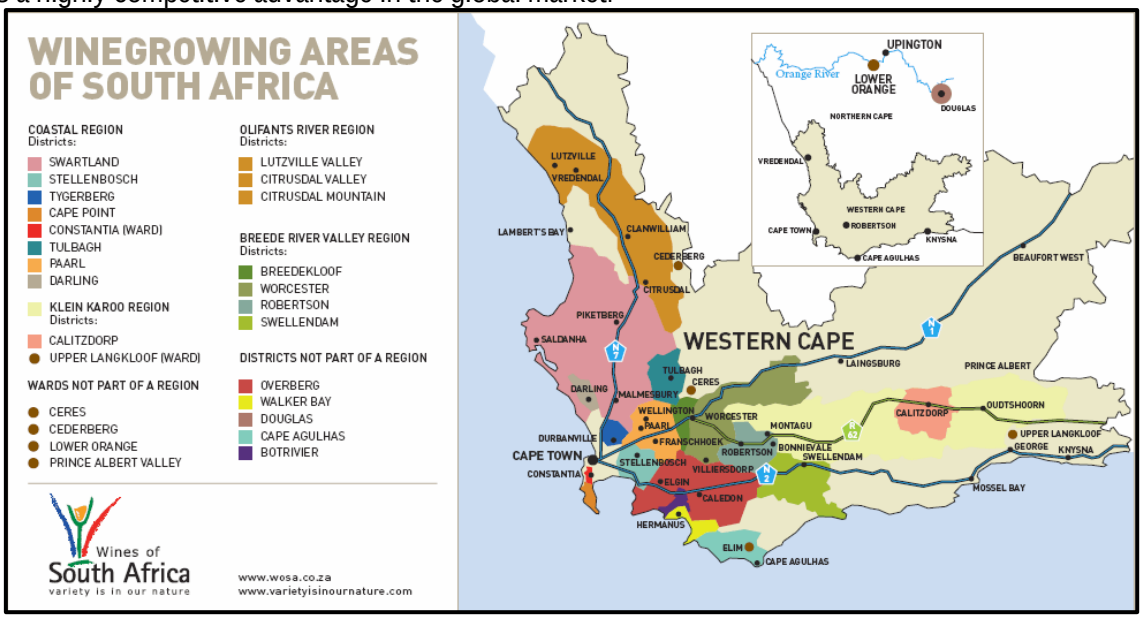

Figure 7: Winegrowing areas of South Africa (sourced from www.wosa.co.za)

Indicate the benefits that the activity has/had for society in general and also indicate what benefits the activity has/had for the local communities where it is located:
The cultivation of table grapes created short-term employment during the construction/development phase, and long-term employment during the operational phase. The grower (Karstens) has to employ a large number of workers to harvest the grapes by hand and to sort them during harvest time, and there is a team to ensure the maintenance of the vineyards in general. Local employment has a positive economic spin-off for the local economy and results in community upliftment through being able to provide for basic needs such as housing and education of the children of the employed staff. The export of grapes contributes to the National Gross Domestic Profit (GDP). **The Karsten Women Trust and Karsten SA Holdings are Newgro Farming's only shareholders. The beneficiaries of The** Karsten Women Trust are previously disadvantaged women who have been under the employment of The Karsten Group for 5 years and longer. 184 ha of table grapes have been established on the Newgro Farming unit on land that was previously semi-desert land. This shareholding endeavour greatly benefits the previously disadvantaged women.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical spatial size of the activity as well as associated infrastructure (footprints):	142ha for vineyards 0.5ha for the existing evaporation ponds 3ha for the relocated evaporation ponds
Indicate the area that has been transformed / cleared to allow for the activity as well as associated infrastructure	142ha for vineyards 0.5ha for the existing evaporation ponds 3ha for the relocated evaporation ponds
Total area (sum of the footprint area and transformed area)	142ha for vineyards 0.5ha for the existing evaporation ponds 3ha for the relocated evaporation ponds

5. SITE ACCESS

Was there an existing access road?	YES	~~NO~~
If no, what was the distance over which the new access road was built?		*m*
Describe the type of access road constructed: [indicate the position of the access road on the site plan]		
The access road is an existing road as shown below in the Google Earth photograph (Figure 8) and is just under 4 metres wide. This road was constructed as part of a previous EIA across Portion 76 of Farm Keboes no 37 (EIA Ref: NNO25/19 NC/SIY/UPING1/04/2008).		

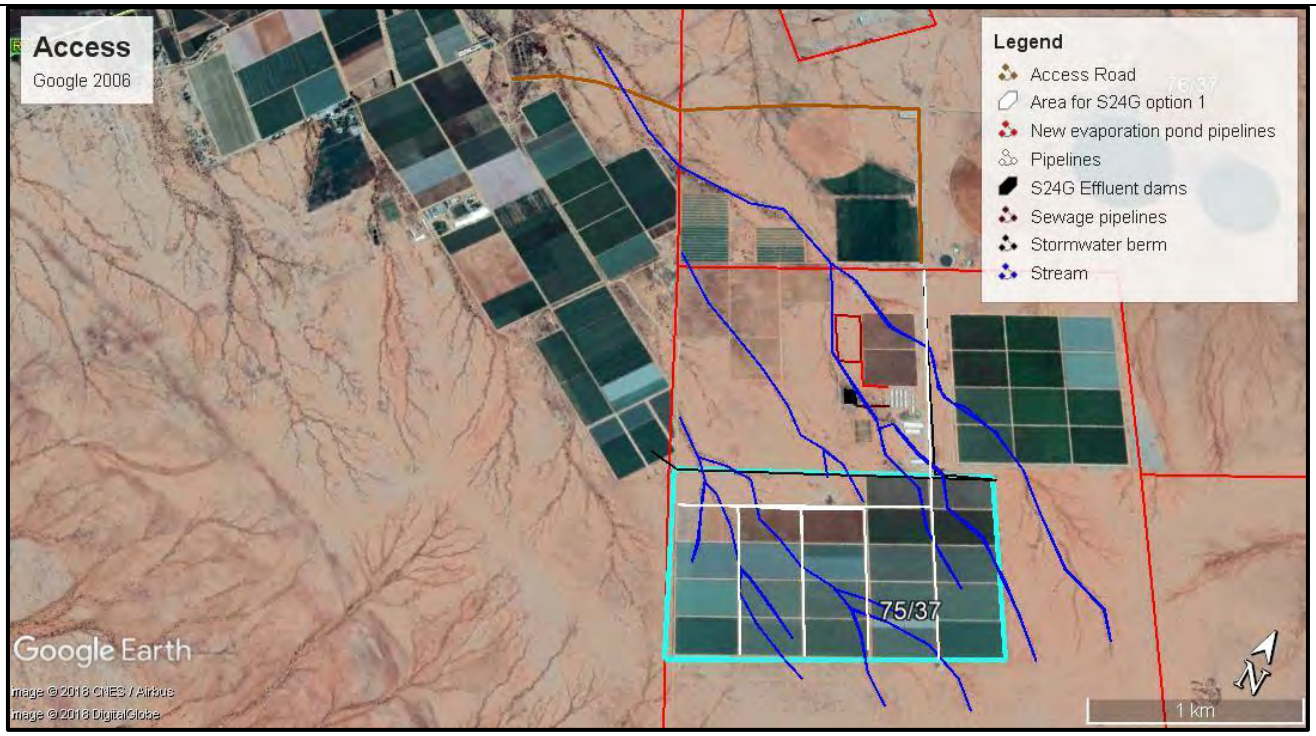

Figure 8: Access Roads

EIA Regulations dated 21 April 2006, include roads wider than 4 metres and longer than 30 metres; therefore GNR 386 dated 21 April 2006 is not applicable. The small road was an existing old farm road.

6. 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 of photographs must be included. Photographs must be attached under Appendix D to this form.

Historical Aerial photographs dated back to 2006 are provided as Figures 1 to 5, attached at Appendix D1: Historical Photographic Imagery.
Site Photographs taken is attached as Appendix D2: Site Photographs.

7. 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/ authorization/comment	DATE (if already obtained):
National Environmental Management Act	Department Environment and Nature Conservation (DENC)	Authorisation	In progress
National Heritage Resources Act	SAHRA	Comment.	In progress
National Water Act	Department of water and Sanitation	Water Use Licence or General Authorisation	In progress
Conservation of Agricultural Resources Act	Department of Agriculture	Plough Certificate for Water Use licence; Comment on EIA	In progress

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Guidelines published in terms of NEMA Regulations	Department of Environmental Affairs
Guidelines published in terms of the National Water Act	Department of Water and Sanitation

8. WASTE QUANTITIES (WHERE THE ACTIVITY IS A LISTED WASTE MANAGEMENT ACTIVITY)

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)

Hazardous waste	Non-hazardous waste	Total waste handled (tonnes per day)
Sewage		173m³/day

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

Determined from volumes	X
Determined with weighbridge/scale	
Estimated	

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	M³/ MONTH	method & location	method location and contractor details	
Sewage	Worker Accommodation – Newgro Farming PTY Ltd		11931m³ in total/ only for 5 months of the year.	Onsite treatment via evaporation ponds	N/A	N/A

9. GENERAL (WHERE THE ACTIVITY IS A LISTED WASTE MANAGEMENT ACTIVITY)

Prevailing wind direction (e.g. NWW)

November – April	NE
May - October	S - SSE

The size of population to be served by the facility

	Mark with **"X"**	Comment
0-499		

500-9,999	X	Amount of Workers living on site: September – November = 500 and December – January = 1000
10,000-199,999		
200,000 upwards		

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. 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~~

2. LOCATION IN THE LANDSCAPE

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

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/mountain~~	~~Closed valley~~	~~Open valley~~	Plain	~~Undulating plain/low hills~~	~~Dune~~	~~Sea-front~~	~~Other~~

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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~~

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 exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used.

4. SURFACE WATER

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 (mainly drainage areas and a small stream)	YES	~~NO~~	UNSURE
Permanent Wetland	~~YES~~	NO	UNSURE
Seasonal Wetland	~~YES~~	NO	UNSURE
Artificial Wetland	~~YES~~	NO	UNSURE
Estuarine / Lagoonal wetland	~~YES~~	NO	UNSURE

The drainage system is classified as an ephemeral course as it will only flow sporadically after rain. These watercourses are not considered to be seasonal rivers which will regularly contain water in a seasonal pattern.

5. VEGETATION AND GROUNDWATER

5.1 VEGETATION / GROUNDCOVER (PRE-COMMENCEMENT)

Cross out ("☒") the block or describe (where required) the vegetation types / groundcover present on the site before commencement of the activity.

~~Indigenous Vegetation - good condition~~		Indigenous Vegetation with scattered aliens	X	~~Indigenous Vegetation with heavy alien infestation~~	
Describe the vegetation type above: N/A		Describe the vegetation type above: Bushmanland Arid Grassland		Describe the vegetation type above: N/A	
Provide ecosystem status for above: N/A		Provide ecosystem status for above: Least threatened [according to Mucina & Rutherford (2006) Critical Biodiversity Area 2 (Refer to Appendix F1 showing the CBA status as sourced from bgis.sanbi.org) and inserted below as Figure 9.		Provide Ecosystem status for above: N/A	
~~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: The average depth of the soil is 1.8 metres. There are no hard or impermeable soil layers. The granite that occurs in the sub-surface is already in a serious degree of weathering.	
~~Bare soil~~		~~Building or other structure~~		~~Sport field~~	
~~Other (describe below)~~		~~Cultivated land~~		~~Paved surface~~	
Critical Biodiversity area: According to Namakwa District Biodiversity Sector Plan (2008), the development encroaches on an ecological support area (ESA) (yellow) which was established as a terrestrial migration corridor associated with the Orange River corridor. However, it must be noted that most of this corridor in this vicinity is compromised as a result of existing agricultural development. Most of the neighbouring areas to the west, north and east of the site have already been transformed into agricultural land. To the east of the development site is a small area (app. 30ha) that is established as CBA1, see Figure 8 below and Appendix D3: CBA 2 and ESA located on Portion 75 of Farm Keboes no 37. Note however, the upstream catchment area has already been highly modified.					

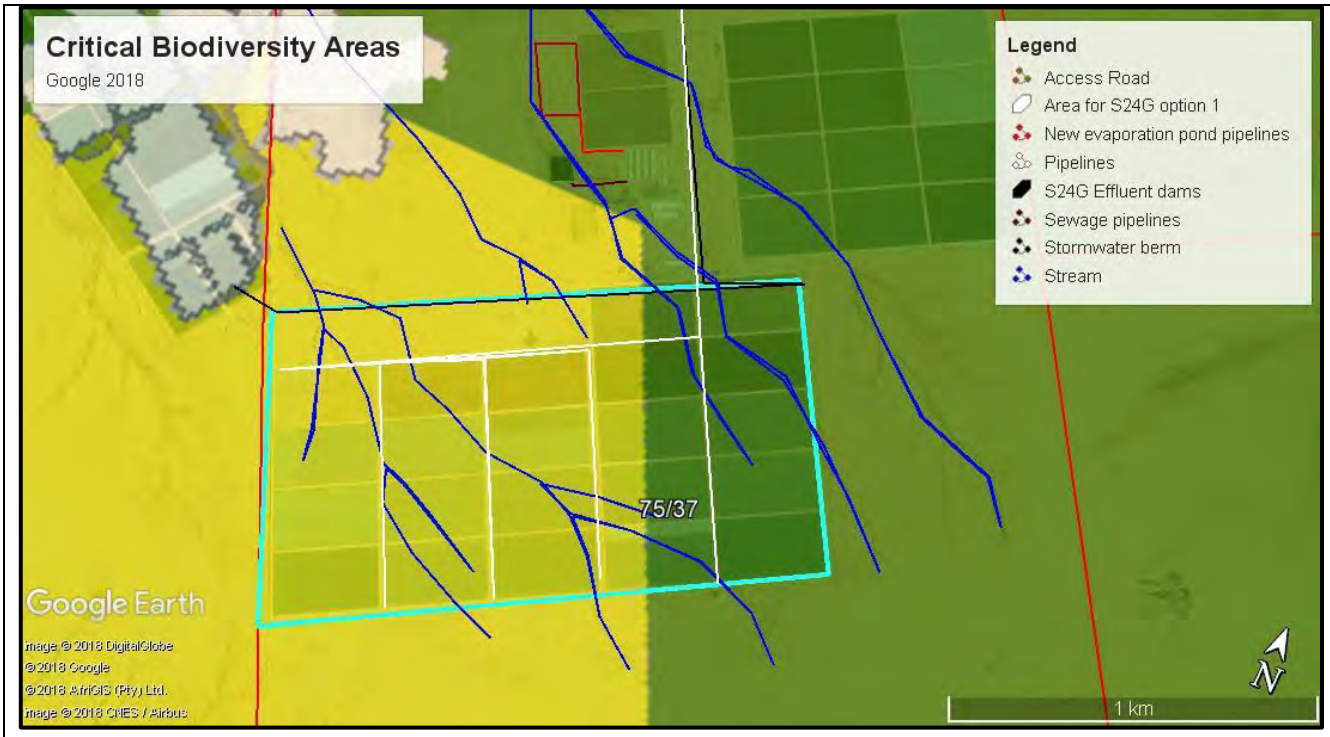

Figure 9: Layout showing the CBA (green) and ESA (yellow)

5.2. VEGETATION / GROUNDCOVER (POST-COMMENCEMENT)

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

Indigenous Vegetation - good condition – No vegetation left	X	Indigenous Vegetation with scattered aliens – No vegetation left.	X	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) Access roads within cultivated area		Cultivated land		~~Paved surface~~	

Please note: The Department may request specialist input/studies depending on the nature of the vegetation type / groundcover and impact(s) of the activity/ies. To assist with the identification of the vegetation type and ecosystem status consult http://bgis.sanbi.org or BGISHelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. 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.

5.3 VEGETATION / GROUNDCOVER MANAGEMENT

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

The vegetation was removed, and the brush-cut has been removed. No further mitigation necessary.

The area is cultivated with vineyards. Areas around buildings have been cleared, small amount of landscaping surrounding the buildings. No landscaping surrounding vineyards.

Mitigation measures associated with Storm Water Management is included in the WULA in Appendix H3.

6. THE GEOLOGICAL FORMATIONS UNDERLYING THE SITE

GRANITE	X	QUARTZITE	
SHALE		DOLOMITE	
SANDSTONE		DOLERITE	

OTHER_____NONE_____

7. 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 center~~	~~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):~~				

8. REGIONAL PLANNING CONTEXT

Is/was the activity permitted in terms of the property's existing land use rights? Please explain

Yes, Portion 75 of Farm Keboes no 37 is zoned as Agriculture.			
Is/was the activity in line with the following?			
Provincial Spatial Development Framework (PSDF)	YES	~~NO~~	Please explain
Portion 75 of Farm Keboes no 37 is zoned for Agricultural use, and the agricultural activities are in line with the PSDF.			
Urban edge / Edge of Built environment for the area	YES	~~NO~~	Please explain
The agricultural activities have taken place outside the urban edge/urban area on land for agricultural use.			
Integrated Development Plan of the Local Municipality	YES	~~NO~~	Please explain
Portion 75 of Farm Keboes no 37 is zoned for Agricultural use, and the agricultural activities are in line with the IDP.			
Spatial Development Framework of the Local Municipality	YES	~~NO~~	Please explain
Portion 75 of Farm Keboes no 37 is zoned for Agricultural use, and the agricultural activities are in line with the SDF.			
Approved Structure Plan of the Municipality	YES	~~NO~~	Please explain
Portion 75 of Farm Keboes no 37 is zoned for Agricultural use, and the agricultural activities are in line with the Structure Plan.			
Any other Plans	~~YES~~	~~NO~~	Please explain

9. SOCIO-ECONOMIC CONTEXT

9.1 SOCIO-ECONOMIC CONTEXT (PRE-COMMENCEMENT)

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

The following summary is taken from the IDP (2014) summarising the agricultural sector:

"The agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai! Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.

There are also three wine cellars in the area at Keimoes, Kakamas and Kanoneiland. High quality table wine is produced at these wine cellars, as well as quality grape juice. Several permanent jobs are created through these wine cellars. Two major Raison export companies (Frut da Sud & Red Sun Raisin) also established in Kai! Garib Area.

The emerging farmers focus more on small stock farming, lucern, cotton, corn, and nuts which are cultivated under irrigation from the Orange River. Kenhardt area is more known for small stock farming especially the dorper sheep. Abattoirs are available at Kenhardt and Kakamas.

Major constraints for agricultural development include poor quality of access roads to and from farms, farming skills amongst the youth and finances for emerging farmers.

Opportunities in the agricultural sector include the expansion of the production of Lucern and citrus fruits as well as the possible establishment of ostrich farming. Other sectors that show potential within the sector is agri-tourism which is not investigated or explored as yet.

The municipality embarked on a process to become an active facilitator of local economic development when it established a LED Strategy with assistance from the Dept of Economic Development and Tourism. The LED Strategy was adopted by council in December 2012.**"**

9.2 SOCIO-ECONOMIC CONTEXT (POST-COMMENCEMENT)

Describe the post commencement social and economic characteristics of the community in order to determine any change.

The following summary is taken from the IDP (2018/2019) summarising the agricultural sector:

"The agricultural sector is still the main economic sector who made the biggest contribution to the economy of Kai! Garib in 2010.The Agriculture sector is also a major employer in the Municipality in terms of all formal employment. According to Statistics South Africa (Census 2011) about 399 of the households work on crops only; 1382 on livestock only; 222 on mix farming and 69 on other farming methods. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.

There are also three wine cellars in the area at Keimoes, Kakamas and Kanoneiland. High quality table grapes are produced at these cellars, as well as quality grape juice. Several permanent jobs are created through these wine cellars. Two major raisin export companies (Fruit da Sud & Red Sun Raisin) are also established in Kai! Garib area.

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Major constraints for agricultural development include poor quality of access roads to and from farms, farming skills amongst the youth and finances for emerging farmers. Opportunities in the agricultural sector include the expansion of

the production of lucern and citrus fruits as well as the possible establishment of ostrich farming. Other sectors that show potential within the sector is agri-tourism which is not investigated or explored as yet.**"**

Karsten Group Empowerment within the company:

The Karsten Group strive to remain the front runners of the industry through continued focus on the competitive edge, diversification, strategic management and optimal use of water and other resources.

The Karsten Group firmly believes in the empowerment of its employees; not only by means of financial and land ownership, and senior management positions but also through promotion, wider responsibilities given to people on the lowest possible level and a sense of ownership for what you do in any position you might occupy.

The Karsten Group provides seasonal and permanent employment for a large community **of people in South Africa's** poorest regions. All workers share in benefits such as training and development programmes which are offered in association with various institutions, development programmes and projects are directed towards all workers and their families, including seasonal workers, irrespective of their worker status. Fringe benefits, apart from the provident fund scheme, apply equally to all workers, and people are paid according to their job grading and not their employment status.

Training and career planning are initiated for each permanent worker, ensuring that workers have a clear vision of their future and are able to plan their future in the company. Vacancies are always advertised internally, and continuous training and development is done to ensure that workers are equipped with the basic skills for the next level for which they might qualify.

Social and other benefits are offered to the large community of people working within the group, including preschool care, bursary and study schemes for children of workers, health care and housing for both permanent staff and temporary workers.

Community involvement projects facilitated includes special gardening programmes at schools in the region; crèche facilities on all farms with pre-school **children; women's clubs; adult literacy classes; computer training; sports facilities;** social skills training workshops to enhance family and social life; leadership training; low interest student loans to parents; housing for employees staying on farms; a comprehensive healthcare plan through clinics on the various farms; recreation facilities and transport that allows staff to attend sport and other social activities; and spiritual counselling.

The importance of balance between career and social development are continuously emphasises and strives to spend ample resources to facilitate and develop both.

Relationships with workers are built in order to create trust and security. This applies especially to seasonal workers and is executed in practice through new developments with different fruit, different regions and different seasons in order to ensure longer working periods for seasonal workers who are in need of prolonged contracts to supply them with a more stable source of income.

The importance on ensuring that the basic needs of the people who work for them are met, with specific focus on clean water, decent housing, medical services and bonuses for top performers.

The training department plays a major role in achieving productivity and sound human relations by ensuring that a full-scale training programme takes place throughout the year.

Learnerships are an important part of the programme to aid workers in getting a formal national qualification combined with their practical skills.

The HIV/AIDS programme has been running for more than ten years. The main focus is to educate people about the dangers of this disease and how to prevent it. Peer group leaders are trained regularly and are supported by a full time co-ordinator, health workers and production managers. Counselling, vitamins, and medication are provided to workers to improve their quality of life.

10. CULTURAL/HISTORICAL FEATURES

Were there any signs or evidence (unearthed during construction) of culturally or historically significant elements including archaeological or palaeontological sites, on or in close proximity to the site?		~~YES~~	NO
		~~UNCERTAIN~~	
If YES, explain:	The site has entirely been transformed with agricultural activities and therefore possibility of any further finds is scarce. However, a specialist was consulted, and the following findings outlined: ***"The affected property (i. e. Farm No. 37) is situated a****pproximately 2kms outside the small town of Kanon Eiland (Kai! Garib Municipal Area) between Upington and Keimoes in the Northern Cape. Agricultural development (mainly vineyard production) characterises most of the surrounding area and historical land use.* *The following is noted:* *In 2008, a Heritage Impact Assessment (HIA) was conducted on a 900ha portion of the Farm Keboes No. 37, in which low density of lithics, `but no sites, fossil bones or graves of* ***any age, was recorded'2. The writer of the report, Mr Peter Beaumont of the McGregor Museum in Kimberly, argued that that Farm No. 37 had `no heritage potential'.*** *In 2010 a Heritage Impact Assessment was also undertaken on two portions of Farm Keboes No. 37 by Dr Robert de Jong of Cultmatrix, in which only marginal traces of archaeological heritage were recorded at the base of small hillock near the abandoned norite quarry. The archaeological landscape was rated as having, a `relatively low heritage* ***sensitivity' by the writer of the AIA report, Dr Jannie van Schalkwyk.*** *It is my professional opinion that a field-based Heritage Impact Assessment (HIA) of the affected landholding (i. e. Portion 75 of Farm Keboes No. 37) is not required as part of the S24G Rectification Process, since it is considered highly unlikely that any important heritage remains will be encountered. The affected site is already cultivated with vineyards and has* ***therefore been entirely transformed by agriculture. In addition, two HIA's on Farm No. 37*** *Keboes, conducted in 2008 and 2010, recorded only marginal traces of archaeological* ***heritage."*** Note these findings will be submitted on the SAHRIS online application for comments. Find this letter included in Appendix E3: Heritage letter.		
If uncertain, the Department may request that specialist input be provided to establish whether such possibilities occurred on or close to the site.			
Briefly explain the findings of the specialist if one was already appointed:	See above.		
Were any buildings or structures older than 60 years affected in any way?		~~YES~~	NO
Was it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		~~YES~~	NO
If yes, please submit or, make sure that the applicant or a specialist submit the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application.			

SECTION D: PRELIMINARY IMPACT ASSESSMENT

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.

1. WASTE, EFFLUENT AND EMISSION MANAGEMENT

(a) Solid waste management

Did/does the activity produce any general waste (e.g. domestic-, commercial-, certain industrial waste, including building rubble also known as solid waste) during the construction phase and/or the operational phase?	YES	~~NO~~
If yes, briefly describe what type of waste was produced (i.e. green waste, building rubble, etc.) in which phase.		
Construction phase: A small amount of construction related waste associated with vineyards would have been generated, such as cement bags, paint tins, etc. Operational phase: Operational waste is limited to broken materials associated with the farming activities, and with solid waste associated with food eaten by the farm workers.		
What quantity was/is produced during the construction period?	App. 2	m^3
What was/is the estimated quantity that will be produced per month during the operational phase?	Negligible	m^3

Did/does the activity produce any hazardous waste (e.g. chemical, medical waste, infectious, nuclear etc.) during the construction and/or the operational phase?	~~YES~~	NO
If yes, briefly describe what type of waste was produced (i.e. infectious waste, medical waste, etc.) in which phase.		
What quantity was/is produced during the construction period?		m^3
What was/is the estimated quantity that will be produced per month during the operational phase?		m^3

Where and how was/is waste treated / disposed of (describe each waste stream)?		
Very little solid waste is produced by farm workers and general farming activities. General solid waste collection and disposal by the municipality will be confirmed during the public consultation process.		
Has the municipality or relevant authority confirmed that sufficient capacity exists for treating / disposing of the solid waste to be generated by this activity(ies)? If yes, provide written confirmation from municipality or relevant authority	~~YES~~	NO
Does/did the activity produce solid waste that was/will be treated and/or disposed of at another facility other than into a municipal waste stream?	~~YES~~	NO
If yes, did/has this facility confirmed that sufficient capacity exists for treating / disposing of the solid waste to be generated by this activity(ies)? Provide written confirmation from the facility and provide the following particulars of the facility:	~~YES~~	NO
Did/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:	

(b) Effluent

Did/does the activity produce sewage and or any other effluent?	YES	~~NO~~

What was/is the estimated quantity produced per month?	11931m³ in total/ only for 5 months of the year.	
Was/is the effluent treated and/or disposed of in a municipal system?	~~YES~~	NO
If Yes, did/has the Municipality or relevant authority confirmed that sufficient unallocated capacity exist for treating / disposing of the sewage or any other effluent generated by this activity(ies)? Provide written confirmation from the Municipality or relevant authority.		
N/A		
Was/is any effluent produced be treated and/or disposed of on site?	YES	~~NO~~
If yes, briefly describe the nature of the effluent and how it was/will be disposed of:		

Evaporation ponds:

The applicant, Newgro Farming PTY Ltd wishes to comply with the National Water Act (1998) by relocating and upgrading of existing sewage/evaporation ponds for the treatment of sewage from the existing worker accommodations etc. The various details pertaining to the evaporation dams are shown below in Table 2.

Specifications for the sewage evaporation pond	
Capacity evaporation pond/s	11 364.3m³/ pond
Footprint area of all 4 dams	3.0ha
Total volume of sewage annually	11 931m³/annum

Table 2: Dam specifications

The proposal is rectifying the illegal construction of the original ponds(black) and to replace them with the new ponds (red) which is situated adjacent to the stream and not within the stream. The new ponds will be lined and comply with standards so as to allow no seepage into the groundwater. See Figure 10 and 11.

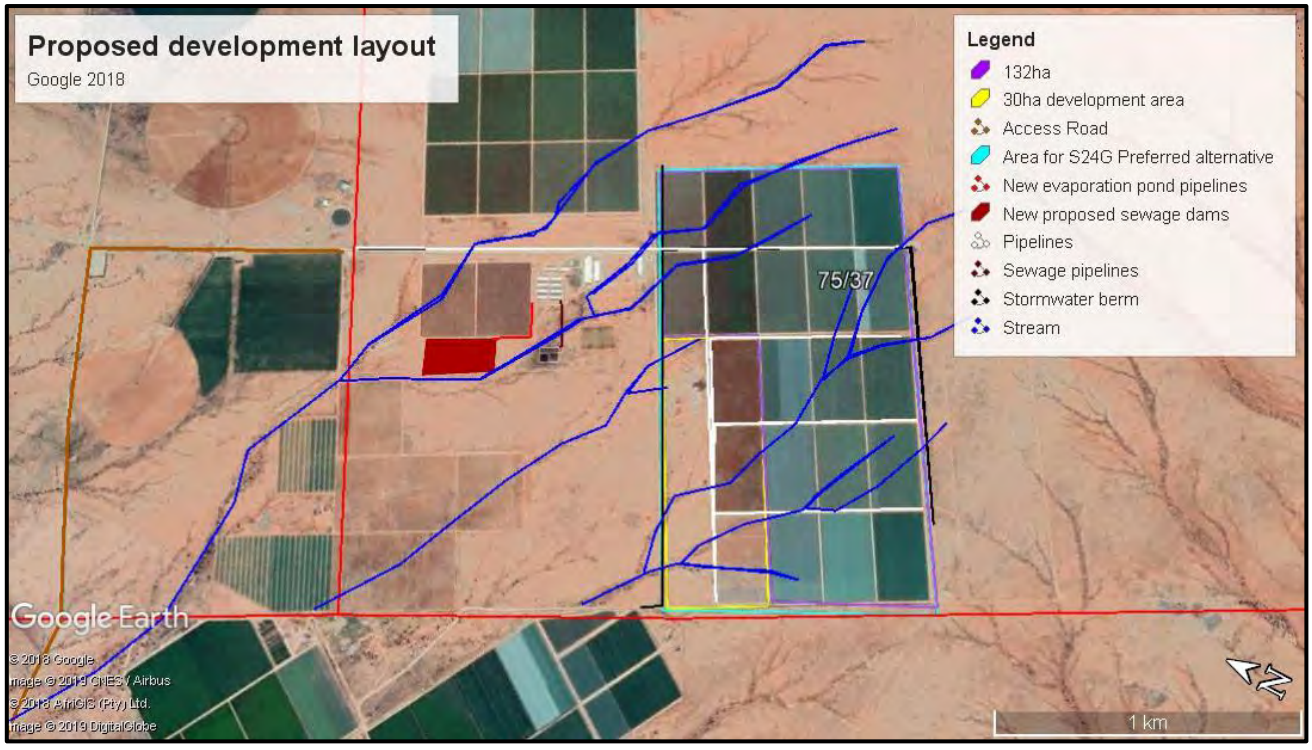


Figure 10: Locality of evaporation ponds (shown in red)

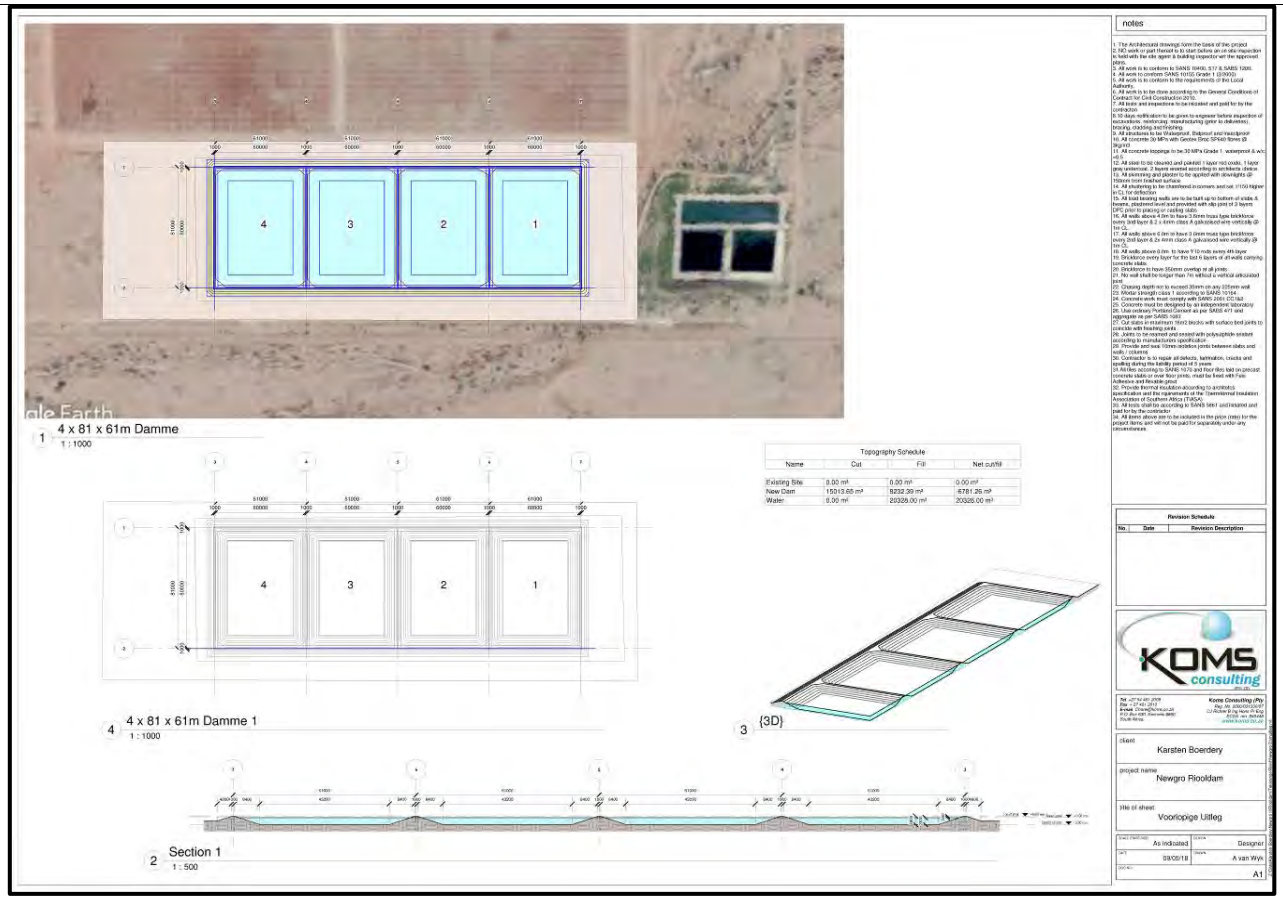


Figure 11: Engineering drawings of evaporation ponds

Did/does the activity produce effluent that was/will be treated and/or disposed of at another facility?	~~YES~~	NO
If yes, did/has this facility confirmed that sufficient capacity exist(ed) for treating / disposing of the liquid effluent 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 was/will be taken to ensure the optimal reuse or recycling of waste water, if any:
An application is also made to the Department of Water and Sanitation for the evaporation treatment ponds.

(c) Emissions into the atmosphere

Did/does the activity produce emissions that will be disposed of into the atmosphere?	~~YES~~	NO
If yes, did/does it require approval in terms of relevant legislation? If yes, attach a copy to this application	~~YES~~	NO
Describe the emissions in terms of type and concentration and how it was/will be treated/mitigated:		

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

2. WATER USE

(a) Please indicate the source(s) of water **for the activity by crossing out ("☒") the appropriate box(es)**

~~Municipal~~	Water Board – Boegoe WUA	~~Groundwater~~	~~River, Stream, Dam or Lake~~	~~Other~~	~~The activity did/does not use water~~

If water was/is extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that was/is extracted per month:	m^3

Please provide proof of assurance of water supply eg. letter of confirmation from Municipality/water user associations, yield of borehole etc. Refer to Appendix E1 providing proof of the water uses for Portion 76 of Farm Keboes no 37 from the Department of Water and Sanitation.
The WULA application is summarised, in the table below, for the following water usages:

(c) impeding or diverting flow of water in a watercourse	For the development of agricultural areas as well as the construction of evaporation ponds across ephemeral streams/natural drainage areas.
(i) altering the bed, banks, course or characteristics of a watercourse	For the development of agricultural areas as well as the construction of evaporation ponds across ephemeral streams/natural drainage areas.
(g) Disposing of waste in a manner which may detrimentally impact on a water resource	[Disposing of waste in a manner which may detrimentally impact on a water resource] For the disposal of waste water into evaporation ponds.

Did/does the activity require a water use permit / license from DWAF? If yes, attach a copy to this application	YES	~~NO~~
If yes, please submit the necessary application to Department of Water Affairs and Forestry and attach proof thereof to this application.		

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

The pumps are selected to provide optimum delivery at minimum demand where water use is managed by applying drip irrigation. This is good agricultural practice.

3. POWER SUPPLY

(a) Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source.

There is an existing Eskom power supply on Portion 75 of Farm Keboes no 37.

Has the Municipality or relevant service provider confirmed that sufficient electricity capacity (i.e. generation, supply and transmission) exist for activity(ies)? This is not necessary as there is existing powerline providing electricity to the site currently. If yes, provide written confirmation from Municipality or relevant service provider.	YES	~~NO~~

If power supply was/is not available, where was/is it sourced from?
Electricity is supplied by powerline to the cultivated areas from the existing grid.

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

The pumps utilized are selected based on their optimum delivery at minimum demand, and there are no other types of pumps available for this type of irrigation.

4. ENERGY EFFICIENCY

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

The pumps utilized are selected based on their optimum delivery at minimum demand, and there are no other types of pumps available for this type of irrigation.

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

Drip irrigation utilizes less energy (and water) than spray irrigation.

5. NOISE IMPACTS

(a) Did/does the activity result in any noise impacts?	~~YES~~	NO
If yes, please describe and indicate the measures implemented to mitigate and manage these impacts?		

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

6. VISUAL IMPACTS

(a) Did/does the activity result in any visual impacts?	~~YES~~	NO
If yes, please describe and indicate the measures implemented to mitigate and manage these impacts?		
The site is not situated close to a road or adjacent homesteads.		
(b) Did/does the activity result in potential lighting impacts at night?	~~YES~~	NO
If yes, please describe and indicate the measures implemented to mitigate and manage these impacts?		
No this is an agricultural development.		
(c) Were/are there any alternatives available to address this impact?	~~YES~~	NO
If yes, please describe these alternatives?		
N/A		

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

7. SOCIO-ECONOMIC IMPLICATIONS OF THE ACTIVITY

(a) What was/is the expected capital value of the activity on completion?	R33 670 000	
(b) What was/is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	R20 267 204	
(c) Did/does the activity contribute to service infrastructure?	~~YES~~	NO
(d) How many permanent new employment opportunities were created?	200	
(e) What was/is the expected current value of the employment opportunities to date?	R6 064 557	
(f) What percentage of this accrued to previously disadvantaged individuals?	95%	

How was (is) this (to be) ensured and monitored (please explain):
As far as possible select contractors using local labour.

8. PRELIMINARY IMPACT ASSESSMENT

Briefly describe the impacts (as appropriate), significance rating of impacts and significance rating of impacts after mitigation. This must include an assessment of the significance of all impacts. Please note: This is a preliminary impact statement. The Department may request specialist input/studies depending on the type and nature of the impact(s) of the activity/ies.

Possible Impacts	Significance rating of impacts after mitigation (Low, Medium, Medium-High, High, Very High):
Loss of indigenous vegetation	Low negative
Loss of non-perennial drainage lines	Medium negative
Water required for irrigation	Medium negative
Visual	Low negative
Noise	Low negative
Cultural	None
Employment creation	Medium-High positive
Production of table grapes for export market	Medium-High positive

Refer to the preliminary impact rating tables below:

Preliminary Impacts that resulted from the construction phase:

Impacts on geographical and physical aspects:	
Nature of impact:	Removal of 142ha of disturbed indigenous vegetation (Bushmanland Arid Grassland rated as least threatened) on Portion 75 of Farm Keboes no 37 of which app. 30ha was located within a CBA2 area and ESA area.
Extent and duration of impact:	Local extent and Long-term duration
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	The conclusions made here have been made after the clearing of the vegetation which presents significant limitations. With those limitations in mind the general conclusions reached are that given the location of the site within a terrestrial Critical Biodiversity Area 2 and ESA and considering available information and evidence (disturbance regime, least threatened vegetation type etc.), the impact of the clearing for the vineyards is low negative. The rating would have been medium negative if the area was completely undisturbed prior to clearing.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	None
Proposed mitigation:	No mitigation is available for the activity already which has already taken place.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Impacts on geographical and physical aspects:	
Nature of impact:	Loss of non-perennial drainage lines: Impeding the flow of water in a watercourse and altering the beds, banks, course and characteristics of the watercourses within the project area through cultivation of vineyards.
Extent and duration of impact:	Local extent and Long-term duration
Probability of occurrence:	High
Degree to which the impact can be reversed:	Impact cannot be reversed.
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	None
Proposed mitigation:	No mitigation is available for the activity which has already taken place. An Application will be lodged with DWS for Section 21 c and i authorization.
Cumulative impact post mitigation:	Medium
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative

Impacts on geographical and physical aspects:	
Nature of impact:	Loss of non-perennial drainage lines: Impeding the flow of water in a watercourse and altering the beds, banks, course and characteristics of the watercourses within the project area the development of evaporation ponds in a stream
Extent and duration of impact:	Local extent and Long-term duration
Probability of occurrence:	High
Degree to which the impact can be reversed:	Impact cannot be reversed.
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	None
Proposed mitigation:	• The mitigation is the relocation of the evaporation ponds outside the stream. • Lining of the new evaporation ponds.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Impacts on socio-economic aspects:	
Nature of impact:	Job creation
Extent and duration of impact:	Local extent and short-term duration is dependent of the lifespan of the agricultural activities (some will be long term and other will be seasonally linked).
Probability of occurrence:	High
Degree to which the impact can be reversed:	The impact is positive
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	Job creation to local communities.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative prior to job creation
Degree to which the impact can be mitigated:	The activity is mitigation
Proposed mitigation:	The activity is mitigation
Cumulative impact post mitigation:	Job creation to local communities.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium positive with job creation

Impacts on cultural-historical aspects:	
Nature of impact:	None
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:	General noise associated with clearing of land.
Extent and duration of impact:	Local extent, long term duration.
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	Noise pollution of low impact, as area is agricultural with no adjacent neighbours in close proximity. The area falls within an agricultural active area and the impact will not be very big.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Restrict working hours from 06:00 to 20:00. The area falls within an agricultural active area and the impact will not low due to lack of receptors (people).
Cumulative impact post mitigation:	Noise of short-term duration during construction phase with negligible cumulative impact.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Visual impacts / Sense of Place:	
Nature of impact:	The removal of vegetation for the establishing of the vineyards.
Extent and duration of impact:	Local extent, Long term duration.
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low

Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	None, the cleared areas although visible to passing traffic from the main road would be temporary during construction phase.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	Low, the activity already took place.
Proposed mitigation:	None, the activity already took place
Cumulative impact post mitigation:	None, the cleared areas although visible to passing traffic from the main road would be temporary during construction phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Preliminary Impacts that result from the Operational Phase:

Impacts on the geographical and physical aspects:	
Nature of impact:	Vegetation has been cleared for the vineyards, and drainage lines cultivated, therefore this impact is not rated further.
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 geographical and physical aspects:	
Nature of impact:	Relocation of existing evaporation ponds and management thereof
Extent and duration of impact:	Local extent and Long-term duration
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	None
Proposed mitigation:	• Ensuring no storm water runs into the ponds • Ensure no leakage of the ponds.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Impacts on the socio-economic aspects:	
Nature of impact:	Job creation
Extent and duration of impact:	Local extent and duration are dependent of the lifespan of the agricultural activities (some will be long term and other will be seasonally linked).
Probability of occurrence:	High
Degree to which the impact can be reversed:	The activity is positive
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	Additional job opportunities created for new agricultural activity.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None
Degree to which the impact can be mitigated:	None
Proposed mitigation:	None, the activity is positive.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None

Impacts on socio-economic aspects:	
Nature of impact:	Financial income to Karstens Boerdery and region.
Extent and duration of impact:	Region
Probability of occurrence:	High
Degree to which the impact can be reversed:	None, the impact is positive.
Degree to which the impact may cause irreplaceable loss of resources:	None, the impact is positive.
Cumulative impact prior to mitigation:	Financial income to the company and the country by selling of produce nationally and internationally.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	None
Degree to which the impact can be mitigated:	None, the impact is positive.
Proposed mitigation:	None
Cumulative impact post mitigation:	Financial income to the company and the country by selling of produce nationally and internationally.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	None

Impacts on the cultural-historical aspects:	
Nature of impact:	None
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:	General noise associated with agricultural activities.
Extent and duration of impact:	Local extent, long term duration.
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	Localised noise pollution. The area falls within an agricultural active area and any noise generation is generally seasonal when the entire area is busy with harvesting.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	The area falls within an agricultural active area and any noise generation is generally seasonal when the entire area is busy with harvesting. No mitigation necessary.
Cumulative impact post mitigation:	The area falls within an agricultural active area and any noise generation is generally seasonal when the entire area is busy with harvesting.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Visual impacts / Sense of Place:	
Nature of impact:	The new vineyards have changed the sense of place, but the nature of impact is limited within the existing established agricultural landscape of the region.
Extent and duration of impact:	Local extent, Long term duration.
Probability of occurrence:	High
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	The new vineyards have changed the sense of place, but the nature of impact is limited within the existing established agricultural landscape of the region.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	Low, the activity already took place.
Proposed mitigation:	None, the activity already took place.
Cumulative impact post mitigation:	The new vineyards have changed the sense of place, but the nature of impact is limited within the existing established agricultural landscape of the region.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Impacts that may result from the decommissioning and closure phase:

The agricultural activities will not be decommissioned in the near future and impacts associated with this phase have not been assessed.

Rehabilitation of the site would include the removal of all newly planted orchards to make way for the rehabilitation of the 142ha with indigenous vegetation present at surrounding areas. This would result in a major financial loss for the applicant as well as the loss of employment opportunities for employees currently working for the applicant. Water that would have been used for the vineyards would now have to be used to water the rehabilitated vegetation until the area is self-sustainable. The water rights are for irrigation only.
The only decommissioning activity is for the existing evaporation ponds.

Impacts on geographical and physical aspects:	
Nature of impact:	Decommissioning of existing evaporation ponds and management thereof
Extent and duration of impact:	Local extent and Long-term duration
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	None
Proposed mitigation:	• Removal of sludge to a licensed waste site in Upington • Reuse of dam walls for the new dams. • Rehabilitation of the small stream.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

ASSESSMENT CRITERIA:

The criteria for the description and assessment of environmental impacts were drawn from the National Environmental Management Act, 1998 (Act No.107 of 1998).
The level of detail was somewhat fine-tuned by assigning specific values to each impact. In order to establish a coherent framework within which all impacts could be objectively assessed it is necessary to establish a rating system, which is consistent throughout all criteria. For such purposes each aspect was assigned a value, ranging from 1-5, depending on its definition.

H-2.1 Potential Impact
This is an appraisal of the type of effect the proposed activity would have on the affected environmental component. Its description should include what is being affected and how it is being affected.

H-2.2 Extent
The physical and spatial scale of the impact is classified as:
Local
The impacted area extends only as far as the activity, e.g. a footprint.
Site
The impact could affect the whole, or a measurable portion of the site.
Regional
The impact could affect the area including the neighbouring erven, the transport routes and the adjoining towns.

H-2.3 Duration
The lifetime of the impact, which is measured in relation to the lifetime of the proposed base?

Short term
The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than any of the phases.
Medium term
The impact will last up to the end of the phases, where after it will be entirely negated.
Long term
The impact will continue or last 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, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

H-2.4 Intensity

The intensity of the impact is considered here by examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself. These are rated as:
Low
The impact alters the affected environment in such a way that the natural processes or functions are not affected.
Medium
The affected environment is altered, but functions and processes continue, albeit in a modified way.
High
Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.
This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project.

H-2.5 Probability

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes are rated as follows:
Improbable
The possibility of the impact occurring is none, due either to the circumstances, design or experience.
Possible
The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Likely
There is a possibility that the impact will occur to the extent that provisions must therefore be made.
Highly Likely
It is most likely that the impacts will occur at some stage of the Development. Plans must be drawn up before carrying out the activity.
Definite
The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on.

H-2.7 Determination of Significance – With Mitigation

Significance is determined through a synthesis of impact characteristics. It is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. In this case the prediction refers to the foreseeable significance of the impact after the successful implementation of the suggested mitigation measures. Significance with mitigation is rated on the following scale:
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.
Low to medium
The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels.
Medium
Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.
Medium to high
The impact is of great importance. Through implementing the correct mitigation measures the negative impacts will be reduced to acceptable levels.
High

The impact is of great importance. 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. This could render the entire development option or entire project proposal unacceptable.

SECTION E: LANDFILL PARAMETERS (WHERE APPLICATION RELATES TO A WASTE MANAGEMENT ACTIVITY)

THIS SECTION IS NOT APPLICABLE TO THIS APPLICATION

1. THE METHOD OF DISPOSAL OF WASTE:

Land-building		Land-filling		Both	

2. THE DIMENSIONS OF THE DISPOSAL SITE IN METRES

	At commencement	After rehabilitation
Height/Depth		
Length		
Breadth		

3. THE TOTAL VOLUME AVAILABLE 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		

4. THE TOTAL VOLUME ALREADY USED FOR WASTE DISPOSAL:

(a) Will the waste body be covered daily	YES	NO
(b) Is sufficient cover material available	YES	NO
(c) Will waste be compacted daily	YES	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?

5. THE SALVAGE METHOD
Mark with an "X" the method to be used.

At source	
Recycling installation	
Formal salvaging	
Contractor	
No salvaging planned	

6. 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 an area with shallow and/or visible water table	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 A-pan evaporation for 6 months	Climatic water balance
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			

7. LOCATION AND DEPTH OF GROUND WATER MONITORING BOREHOLES:

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

8. LOCATION AND DEPTH OF LANDFILL GAS MONITORING TEST PIT:

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

SECTION F: PROPOSED PUBLIC PARTICIPATION

7.1. PUBLIC PARTICIPATION PROCESS

The person conducting the public participation process must fulfil the requirements outlined in Chapter 6 of the 2014 NEMA EIA Regulations and must take into account any applicable guidelines published in terms of Section 24J of NEMA, as well as any other guidance provided by the Department.

Please highlight the appropriate box below to indicate the public participation process that has been or is proposed to be undertaken, including exemptions that have been/will be applied for:

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	~~EXEMPTION~~	
(ii) any alternative site	~~YES~~	EXEMPTION	
(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	~~EXEMPTION~~	~~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	~~EXEMPTION~~	
(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	~~EXEMPTION~~	
(iv) the municipality (Local and District Municipality) which has jurisdiction in the area;	YES	~~EXEMPTION~~	
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	~~EXEMPTION~~	
(vi) any other party as required by the Department;	YES	~~EXEMPTION~~	~~N/A~~
(c) placing an advertisement in -			
(i) one local newspaper; or	YES	~~EXEMPTION~~	
(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~~	~~EXEMPTION~~	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~~	~~EXEMPTION~~	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~~	~~EXEMPTION~~	N/A
If you have indicated that "EXEMPTION" applies to any of the above, then a separate Application for Exemption must be submitted.			
2. The NEM: AQA and NEM:WA requires that a notice must be placed in at least two newspapers. NOT APPLICABLE			
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.			

Note: It is no longer possible to obtain permission to deviate from the requirements to give notice to potential interested and affected parties. Unless exemption has been granted from a particular requirement, the requirement must be met. If an application for exemption is refused, the requirement in question must be met.

7.2. PUBLIC PARTICIPATION UNDERTAKEN PRIOR TO THE SUBMISSION OF THE NOTICE OF INTENT

Where public participation in terms of Regulations 40(3) and 41 was undertaken prior to submission of this Notice of Intent, please provide a summary of the steps followed to date.
An advertisement was placed in the Local Newspaper, the Gemsbok, and was advertised for at least 20 days as per the prescribed legislation. See proof included in Appendix F. Further public participation involves the Advertisement in the Gemsbok from 15 February 2019 until 18 March 2019. **Notifications to all listed I&AP's and Au**thorities as listed below. The final public participation information will be included in the Final Assessment Report.

7.3. LIST OF STATE DEPARTMENTS CONSULTED/TO BE CONSULTED

Provide a list of all the State departments that will be/have been consulted, including the name and contact details of the relevant official.

	Surname	Initials	Representing	Tel	Fax	email	Post Box	Town	Code
1	De Waal	I.G.A	Kai Garib Municipality: Municipal Manager	054 431 6328	054 461 6401	mm@kaigarib.gov.za	Private Bag X6	Kakamas	8870
2	Snyers	A.C.	Kai Garib Municipality: Ward Councillor Ward 2	054 431 6328	054 461 6401	mm@kaigarib.gov.za	Private Bag X6	Kakamas	8870
3	October	L	Department of Agriculture and Land Reform	054 461 6700	054 461 6401		P. O. Box 18	Springbok	8240
4	White	C	Department of Water Affairs	082 887 8866/ 054 338 5819		SchwartzC@dws.gov.za ThebeE@dws.gov.za	Private Bag X5912	Upington	8800
5	De la Fontaine	S	Nature Conservation	054 338 4800		sdelafontaine@gmail.com	Evelina De Bruin (former Provincial) Building, Corner of Rivier & Nelson Mandela Road	Upington	8800
6	Abrahams	N	Department of Transport: Environmental Coordinator	021 957 4602	021 910 1699	Abrahamsn@nra.co.za	Private Bag X19, Sanlamhof	Belville	7535
7	Ceo		Boegoeberg Water Users Association	054 841 0002	054 841 0000	info@boegoebergwater.co.za	P. O. Box 15	Groblershoop	8850

	8	Mans	J	Department of Agriculture Forestry and Fisheries	054 338 5909		jacolinema@daff.gov.za	P. O. Box 2782	Upington	8800	

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's request for comment, submit such comment in writing to the Department. The applicant/EAP is therefor**e required to inform this Department in writing when the Basic Assessment Report / Scoping Report / Environmental Impact Assessment Report 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 (as amended), inform the relevant State Departments of the commencement date of the 30 day commenting period.

SECTION G: ALTERNATIVES

As part of this report, consideration must be given to alternatives that are/may have been possible had an environmental impact assessment been undertaken prior to the commencement of the activity. Please provide a detailed description of the alternatives (whether location, technology or environmental) that were/are possible in terms of this application.

Alternative 1: Removal of vegetation for cultivation of vineyards on Portion 75 of Farm Keboes no 37 (Preferred alternative)

The applicant removed 142 ha of indigenous vegetation to establish vineyards for table grape cultivation for export, as shown in the Appendix B below as Figure 12 and 13:

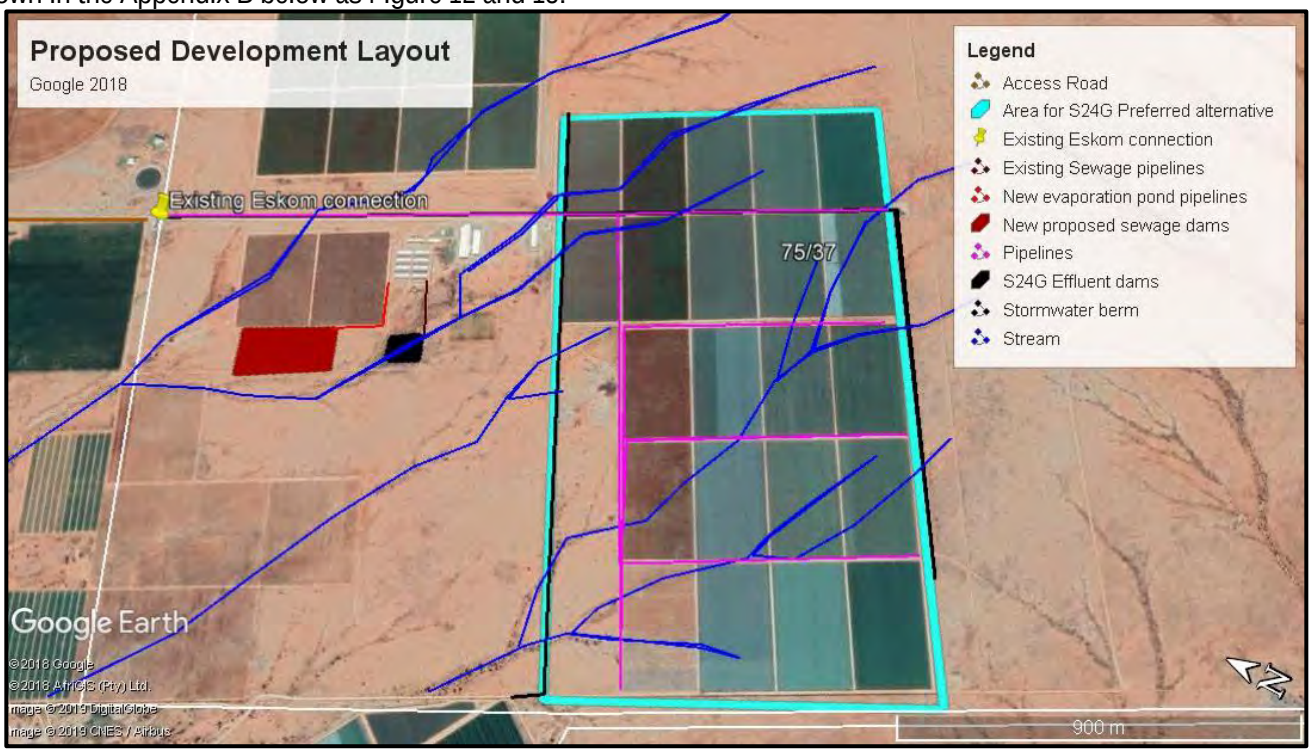


Figure 12: Site Development Master Plan

As the activity has already taken place and rehabilitation will be too costly, this option is the only feasible and preferred alternative.

The evaporation ponds new layout has a new location and the designs are better, the dams will also be lined to prevent any potential seepage into the groundwater. See the new design included in Figure 12. No alternatives sites were deemed desirable.

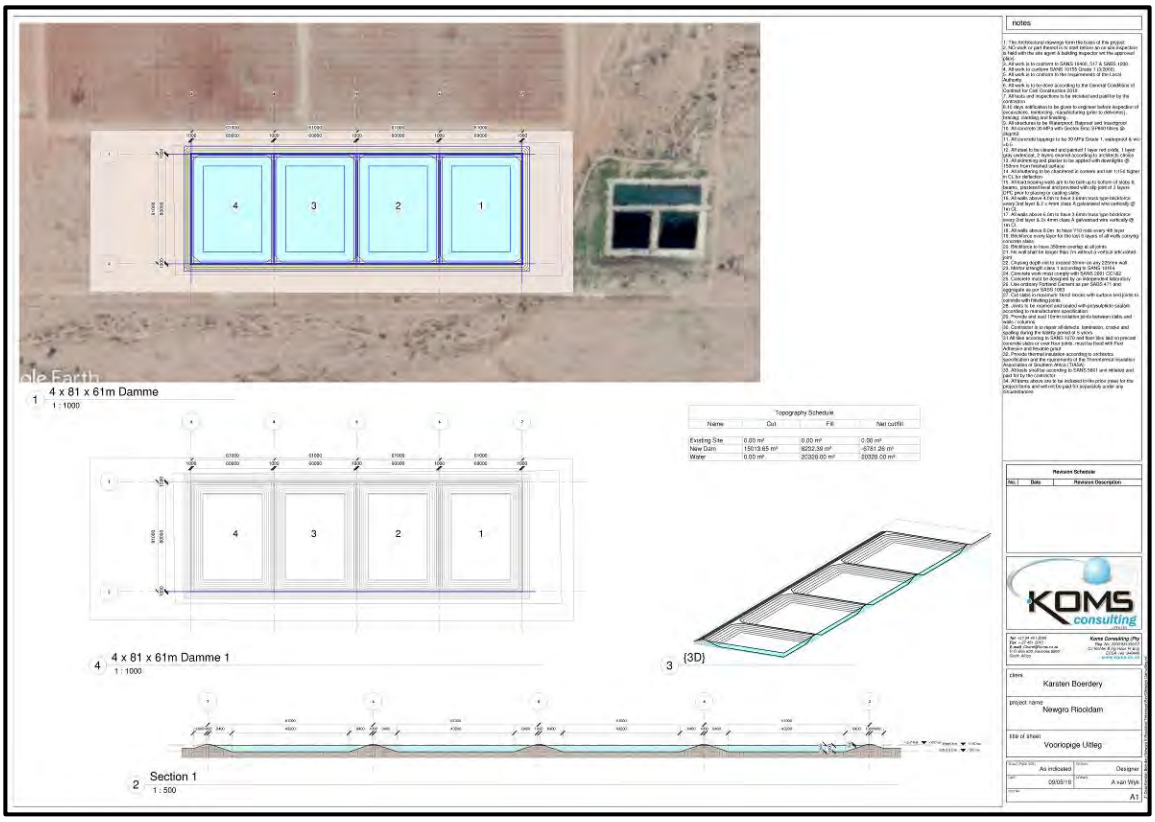


Figure 13: Evaporation pond design

Alternative 2: Existing location of the evaporation ponds.

Alternative 2 is for the continuation of the evaporation ponds on the existing position, see Figure 14. This is note preferred for the following reason:

1. The existing location is within an existing stream
2. The existing evaporation ponds are to small and can not accommodate the capacity.

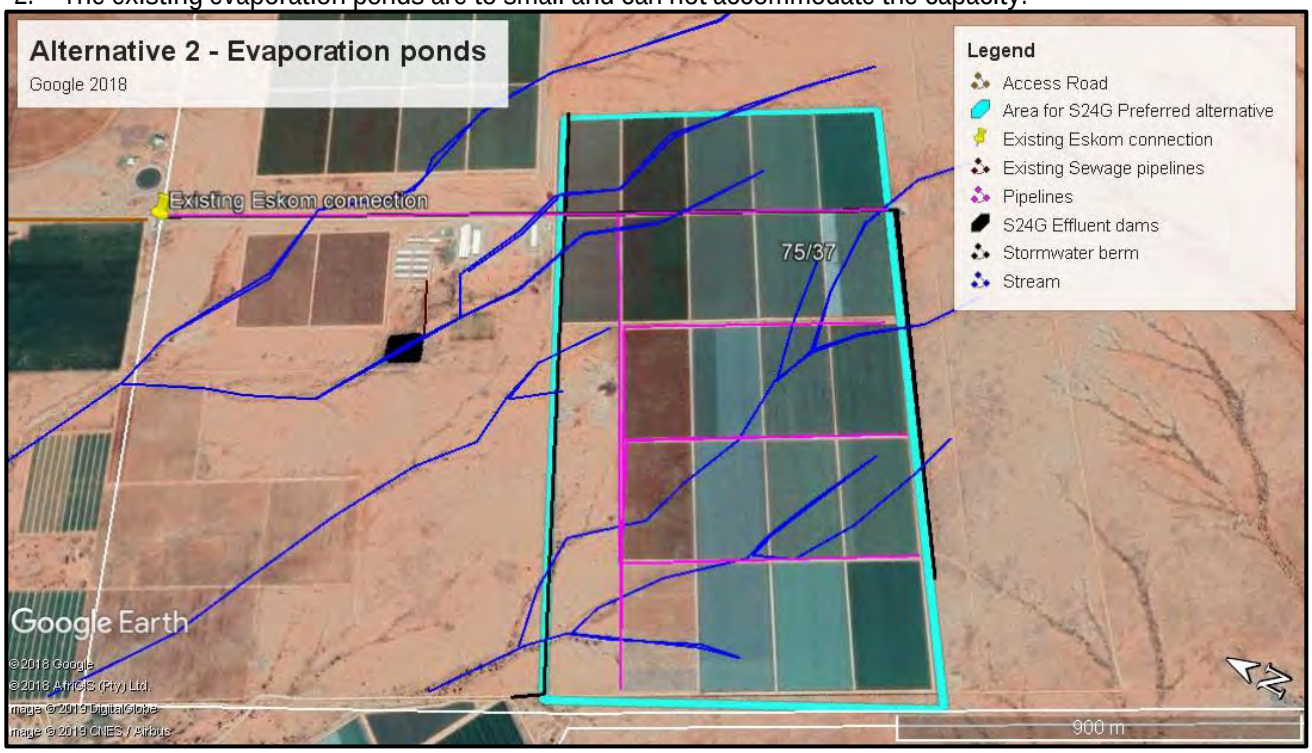


Figure 14: Site Development Master Plan – Alternative 2

Alternative 3: Removal of vegetation for the cultivation of table grapes after obtaining environmental authorisation

Alternative 3 would have been the preferred alternative, by receiving environmental authorisation before any vegetation were removed.

This would have included comment and input from authorities and I&APs to design the best feasible alternative for the property.

No-Go Option

The No-Go Option would have meant that vegetation would not have been removed from the property. Not cultivation of the land would mean that there were no additional table grapes grown for export, with no associated employment creation, and an opportunity cost for the landowners with their land zoned for agricultural use. This would have resulted in no **additional job opportunities for local communities and no income to the business and country's economy.**

Rehabilitation of the site would include the removal of all newly planted orchards to make way for the rehabilitation of the 142ha with indigenous vegetation present at surrounding areas. This would result in a major financial loss for the applicant as well as the loss of employment opportunities for employees currently working for the applicant. Water that would have been used for the vineyards would now have to be used to water the rehabilitated vegetation until the area is self-sustainable.

The No-Go Option for the evaporation ponds is also not preferred as it will result in the no ponds to treat the existing workers accommodation.

SECTION H: APPENDICES

The following appendices must be attached where appropriate:

Appendix	**Cross out ("☒")** the box if Appendix is attached
Appendix A: Location map	X
Appendix B: Site plan(s)	X
Appendix C: Owner(s) consent(s)	N/A
Appendix D: Photographs • Appendix D1: Historic aerial photographs (Figures 1 to 5) • Appendix D2: Site photographs • Appendix D3: CBA 2 and ESA located on Portion 75 of Farm Keboes no 37	X
Appendix E: Permit(s) / license(s) from any other organ of state including service letters from the municipality • Appendix E1: Irrigation rights from the Department of Water Affairs	X
Appendix F: Additional Impact Assessment Information • Appendix F: Public Participation	Not yet completed/ Included in the Assessment Report
Appendix G: Report on alternatives	N/A
Appendix H: Any Other (describe) • Appendix H1: Attendance register of meeting held with DENC and DWS. • Appendix H2: EMP • Appendix H3: WULA	Not yet completed/ Included in the Assessment Report

PART 2

ANNEXURE A TO THE SECTION 24G APPLICATION FORM

SECTION A: DIRECTIVE

Section 24G(1) of the National Environmental Management Act, 1998 (Act 107 of 1998) ("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 Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("NEM:WA") the Minister, Minister responsible for mineral resources or 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 representations into account, a final directive may be issued.

SECTION B: DEFERRAL

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 the 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 NEMWA in terms of which this application directly relates?	~~YES~~	NO	~~UNCERTAIN~~
If yes provide details of the offence being investigated and authority conducting the investigation. If uncertain provide details of the activity or activities in relation to which you suspect you may be under investigation.			

If you have answered yes 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

Section 24G(4) of the NEMA makes it 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 *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.

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 socio-economic impacts.		

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		X
The activity is not giving, has not given and could give rise to localised biodiversity impacts		
The activity is not giving, has not given and 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.		

Index	Sense of Place Impact and / or Heritage Impact Description of variable	**Place an "x"** in the appropriate box
The activity is in keeping with the surrounding environment and / or does not negatively impact on the affected area's sense of place and /or heritage		X
The activity is not in keeping with the surrounding environment and will have a localised impact on the affected area's sense of place and/or heritage		
The activity is not in keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage		
The activity is completely out of keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/ or heritage		

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.		

PART 2: COMPLIANCE HISTORY AND KNOWLEDGE OF THE APPLICANT		
Index	Previous administrative action (i.e. administrative enforcement notices) issued to the applicant in respect of a contravention of section 24F(1) of the National Environmental Management Act and/or section 20(b) of the National Environmental Management Waste Act	**Place an "x" in** the appropriate box
	Description of variable	
Administrative action was previously taken against the applicant in respect of the abovementioned provisions.		X
No previous administrative action was taken against the applicant but previous administrative action was taken against a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time when the administrative action was taken.		
Administrative action was <u>not</u> previously taken against the applicant in respect of the abovementioned provisions.		

Explanation of all previous administrative action taken in respect of the above:
Various EIA 's was conducted on site, in 2009 for 75ha, in 2009 for 655ha and in 2007 for 900ha all on Portion 75, 76 and Remainder of Farm Keboes no 37, see Figure 15.
Overlapping of EIA's conducted took place, as shown in Figure 13 the green (900ha EIA conducted in 2007) had approval for the pivots, shown in the red circle. However, as shown in yellow the 655ha EIA conducted in 2009, included a hefty fine, **for the construction of the pivots, though to have been excluded from the previous EIA's.**

The S24G Application that was lodged with ref: 24G.02/04/10 (NC/SIY/KEBOES1/29/2009 and an EA received. The fine paid by the applicant was R500 000.

<u>The applicant therefore requests to apply for an exemption of paying a fine again as the previous fine was issued on an existing approved EIA.</u>

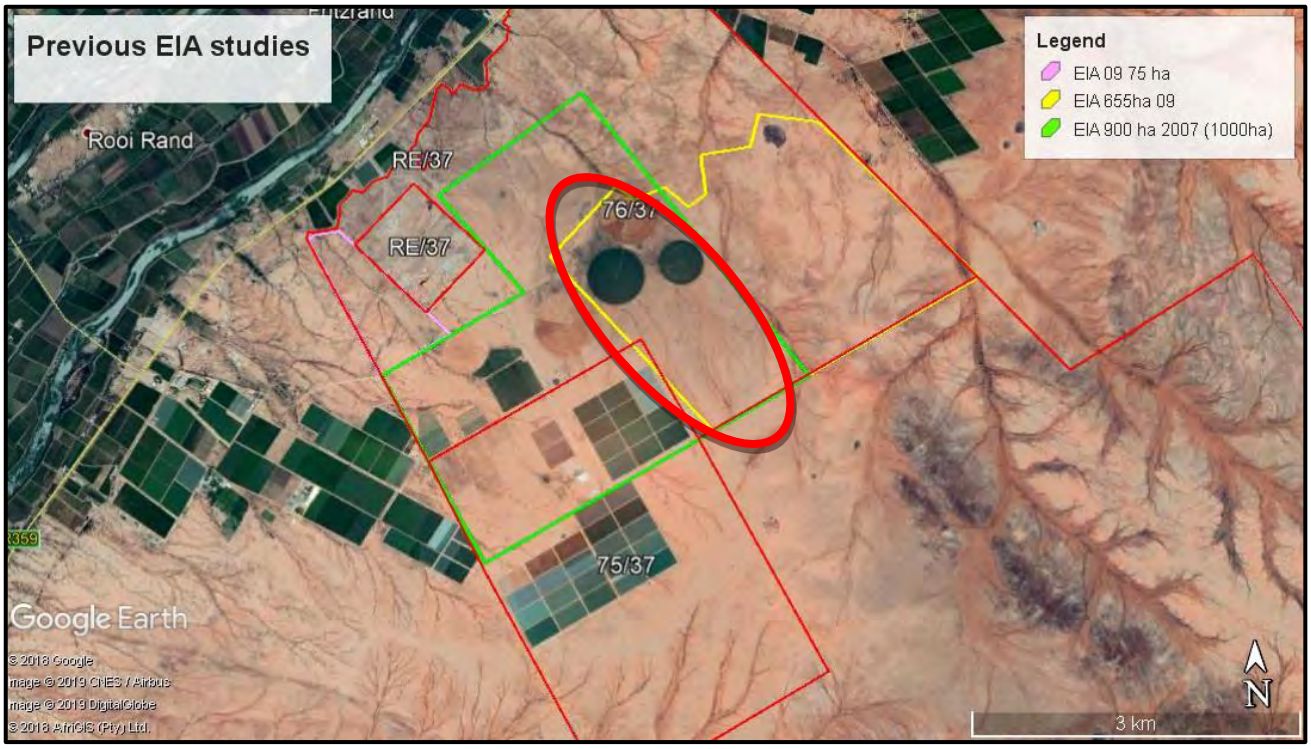


Figure 15: Previous EIA's (yellow 655ha 2009) (green 900ha 2007) (ink 75ha 2009)

With regards to the new S24G Application, the applicant did not construct the vineyards on purpose, they were under the impression that this falls within the ambit of their existing EA.

PBPS recently conducted and GAP Analysis that identified all issues pertaining to existing approvals. In this GAP Analysis the abovementioned issues became apparent. The applicant therefore requests that the fine not be applicable as a hefty fine was already paid for an unnecessary EA.

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.		X
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; 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.		
Explanation of all previous convictions in respect of the above: See 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.		X
No previous applications have been submitted by the applicant but a previous application(s) have been submitted by a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time.		
No previous applications have been submitted by the applicant but the applicant sat on the board of a firm that previously submitted an application.		
Explanation in respect of all previous applications submitted in terms of section 24G: Only one S24G Application submitted with an EA reference: 24G.02/04/10 (NC/SIY/KEBOES1/29/2009) reasons provided above.		

PART 3: APPLICANT'S PERSONAL CIRCUMSTANCES

Index	**Applicant's legal persona** Description of variable	**Place an "x" in the** appropriate box
The applicant is a natural person.		
The applicant is a firm.		X
Describe the firm: Newgrow Farming PTY Ltd falls under Karsten group. <u>History of company:</u> Piet and Babsie Karsten founded their family farming business in 1968 on Kanoneiland west of Upington along the Orange **River. Years later in 1980 they bought the farm Roepersfontein, which is now The Karsten Group's head quarters.** In 2000 The Karsten Group acquired a deciduous fruit and vegetable farm in Ceres in the Western Cape where we focus primarily on apples, pears and cherries. In 2004 New Vision Fruit was established as the export and logistics arm of The Karsten Group. More recently, together with two other shareholders, Horizon Fruits was established to take care of the logistical services, in addition to sharing some of the marketing functions of New Vision Fruit. Karsten UK was established in 2005 as the distribution service provider of The Karsten Group in the United Kingdom and Europe. In 2012 The Karsten Group acquired table grape farms in the Western Cape as part of their strategy to broaden their marketing potential. In 2013 New Vision Fruit B.V. in Rotterdam was established to supply and deliver services to Europe. In partnership with other South African companies The Karsten Group has also established a marketing structure, Hydix, to promote and market its products in the Far- and Middle East. The Karsten Group now has a strong logistics and international marketing		

structure with companies and offices in London, Rotterdam and Cape Town, as well as being backed by companies in the Northern- and Western Cape.

Vision of Company:
The Karsten Group strives to further optimize productivity in order to increase profits and to develop products and markets that will enable us to create jobs and employ more people during the year.
The Group is committed to building volume growth, increase value for all stakeholders, and using successes to the benefit of all.

Empowerment within the company:
The Karsten Group strive to remain the front runners of the industry through continued focus on the competitive edge, diversification, strategic management and optimal use of water and other resources.
The Karsten Group firmly believes in the empowerment of its employees; not only by means of financial and land ownership, and senior management positions but also through promotion, wider responsibilities given to people on the lowest possible level and a sense of ownership for what you do in any position you might occupy.
The Karsten Group **provides seasonal and permanent employment for a large community of people in South Africa's** poorest regions. All workers share in benefits such as training and development programmes which are offered in association with various institutions, development programmes and projects are directed towards all workers and their families, including seasonal workers, irrespective of their worker status. Fringe benefits, apart from the provident fund scheme, apply equally to all workers, and people are paid according to their job grading and not their employment status.
Training and career planning are initiated for each permanent worker, ensuring that workers have a clear vision of their future and are able to plan their future in the company. Vacancies are always advertised internally and continuous training and development is done to ensure that workers are equipped with the basic skills for the next level for which they might qualify.
Social and other benefits are offered to the large community of people working within the group, including preschool care, bursary and study schemes for children of workers, health care and housing for both permanent staff and temporary workers.
Community involvement projects facilitated includes special gardening programmes at schools in the region; crèche facilities on all farms with pre-**school children; women's clubs; adult literacy classes; computer training; sports facilities;** social skills training workshops to enhance family and social life; leadership training; low interest student loans to parents; housing for employees staying on farms; a comprehensive healthcare plan through clinics on the various farms; recreation facilities and transport that allows staff to attend sport and other social activities; and spiritual counselling.
The importance of balance between career and social development are continuously emphasises and strives to spend ample resources to facilitate and develop both.
Relationships with workers are built in order to create trust and security. This applies especially to seasonal workers and is executed in practice through new developments with different fruit, different regions and different seasons in order to ensure longer working periods for seasonal workers who are in need of prolonged contracts to supply them with a more stable source of income.
The importance on ensuring that the basic needs of the people who work for them are met, with specific focus on clean water, decent housing, medical services and bonuses for top performers.
The training department plays a major role in achieving productivity and sound human relations by ensuring that a full-scale training programme takes place throughout the year.

Learnerships are an important part of the programme to aid workers in getting a formal national qualification combined with their practical skills.
The HIV/AIDS programme has been running for more than ten years. The main focus is to educate people about the dangers of this disease and how to prevent it. Peer group leaders are trained regularly and are supported by a full time co-ordinator, health workers and production managers. Counselling, vitamins, and medication are provided to workers to improve their quality of life.

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: ADVERTISMENT – SEE APPENDIX F

When submitting this application form, the applicant must submit proof that the application has been advertised in at least one local newspaper in circulation in the area in which the activity was commenced, in the relevant provincial gazette 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 submit their comment and/or register as an interested and affected party. NOTE: Unless protected by law, all information contained in and attached to this application form may become public information on receipt by the competent authority. This application must be attached to any documentation or information submitted by an applicant further to section 24G(1).

PART 3

SECTION A: DECLARATIONS

A1: DECLARATIONS OF THE EAP

1. The Independent Environmental Assessment Practitioner

I, _____do hereby make oath and say that I –

a. act as the independent environmental assessment practitioner in this application;
b. 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 S24G of the National Environmental Management Act, read together with the relevant Environmental Impact Assessment Regulations;
c. do not have, and will not have, a vested interest in the proposed activity proceeding;
d. have no, and will not engage in, conflicting interests in the undertaking of the activity;
e. undertake to disclose to the competent authority any material information that has, 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 S24G of the National Environmental Management Act, read together with the Environmental Impact Assessment Regulations, 2006;
f. will ensure that all documents contain all relevant facts in respect of the application and that all documentation is timeously distributed or made available to interested and affected parties. I will ensure that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced for this application;
g. will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
h. will keep a register of all interested and affected parties that participated in a public participation process; and
i. will provide the competent authority with access to all information at my disposal regarding the application, whether or not such information is favourable to the applicant.

Signature of the environmental assessment practitioner:

Name of company:

Date:

Signature of the Commissioner of Oaths:

Date:

Designation:

Official stamp (below)

A2: DECLARATIONS OF THE APPLICANT

2. The Applicant

I, _____ to hereby make oath and say that: -

a. I am the applicant in this application / duly authorised by the applicant to complete and submit this application.
b. The information contained in Part 1 and Part 2 of this application form (including annexures thereto) is within my own personal knowledge and is true.
c. I appointed the environmental assessment practitioner as indicated under A1 above to act as the independent environmental assessment practitioner for this application.
d. Undertake to provide the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application.
e. Am responsible for complying with the directive or conditions of any environmental authorisation issued by the competent authority.
f. Understand that I will be required to pay an administration fine in terms of S24G(4 of the Act and that a decision in this regard will only be forthcoming after payment of such a fine and deferral (where applicable); and
g. Hereby indemnify, the government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which the applicant or environmental assessment practitioner is responsible in terms of the Act.

Signature of the applicant:

Name of company:

Date:

Signature of the Commissioner of Oaths:

Date:

Designation:

Official stamp (below):

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. Upon request, any interested and affected party must be provided with the information contained in and attached to this application form.

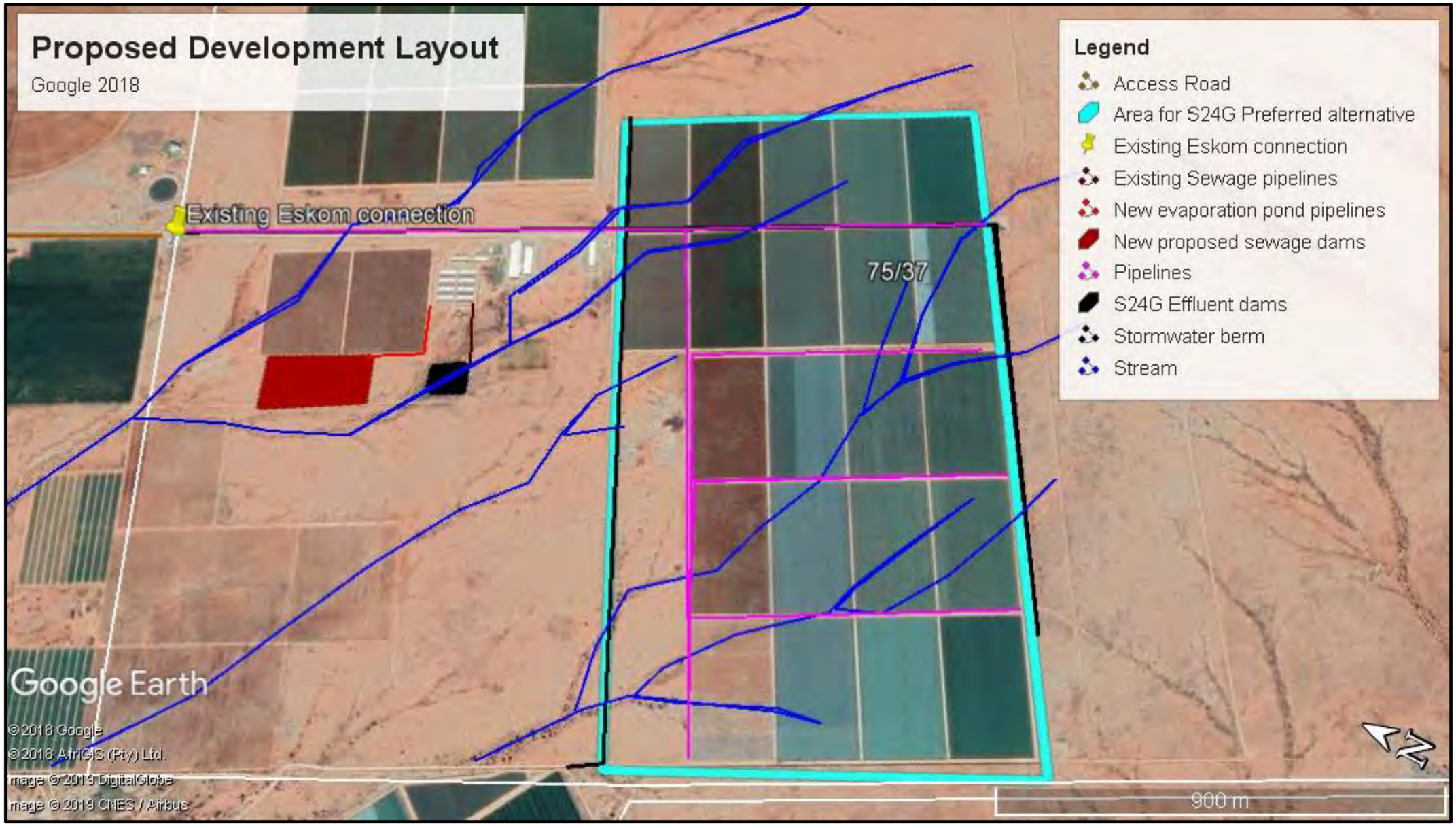
ANNEXURE F CONTACT DETAILS (NATIONAL AND PROVINCIAL S24G REGULATING DIRECTORATES)

Department	Telephone	Fax	Postal address & e-mail
National Department Environmental Affairs and Tourism	(012) 310 3230	(012) 320-7539	Private Bag X447 Pretoria South Africa 0001
Free State Department of Economic Development, Tourism and Environmental Affairs	(051) 400 9535 0827894468	(051) 400 9538	Private Bag X20801 BLOEMFONTEIN 9300 boing@dteea.fs.gov.za
Eastern Cape Department of			
Gauteng Department of Agriculture and Rural Development	(011) 355 1885 (011) 355 1644	(011) 355 1850 (011) 355 1000	P.O. Box 8769 JOHANNESBURG 2000 Green.scorpions@gauteng.gov.za
Kwazulu-Natal Department of Agriculture & Environmental Affairs	(033) 3559427	(033) 355 9614	Private Bag X9059 PIETERMARITZBURG 3200 Christian.Tham@kzndae.gov.za
Limpopo Department of Economic Development, Environment and Tourism	(015) 290 7000 (015) 295 4013	(015) 295 5015	P O Box 55464 POLOKWANE 0700
Mpumalanga Department of Economic Development, Environment and Tourism	(013) 766 6059 082 054 349	(013) 766 8243	Private Bag X 11219 NELSPRUIT 1200
Northern Cape Department of Environment & Nature Conservation	(053) 807 7430	053 831 3530	Private Bag X6102 KIMBERLEY 8300
North West Dept. of Agriculture, Conservation, Environment & Rural Development	(018) 389 5995 (082) 901 8362	(018) 389 5006	Private Bag X2039 MMABATHO 2735 mnkosi@nwpg.gov.za
Western Cape Dept of Environmental Affairs & Development Planning	(021) 483 4093 (021) 483 3722 (044) 805 8781	(021) 483 4372 (021) 483 3633 (044) 874 2423	Private Bag X 9086 CAPE TOWN 8000

ANNEXURE G CONTACT DETAILS (NATIONAL AND PROVINVIAL ENVIRONMENTAL MANAGEMENT INSPECTORATE)

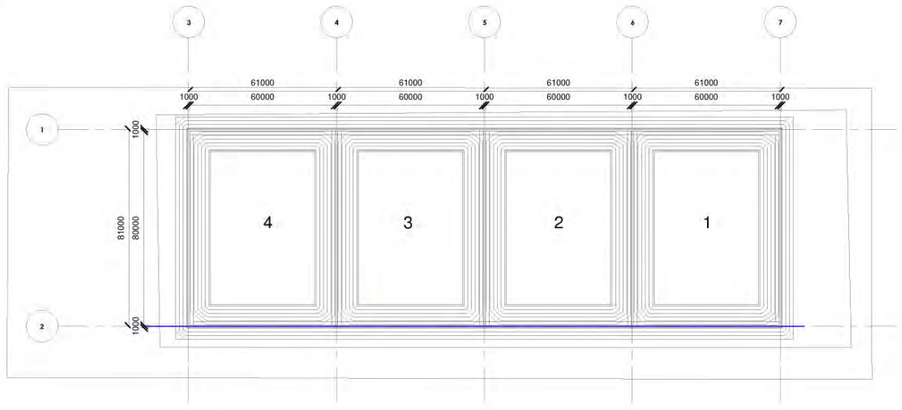
Department	Telephone	Fax	Postal address
National Department Environmental Affairs and Tourism	0800 205 005	(031) 560 7995	Private Bag X447 Pretoria South Africa 0001 pi@toanon.co.za
Eastern Cape Department	082 417 0155		
Free State Department of Tourism, Environmental and Economic Affairs	082 789 4468	(051) 400 4772	Private Bag X20801 BLOEMFONTEIN 9300
Gauteng Department of Agriculture and Rural Development	(011) 355 1440	(011) 355 1850	P.O. Box 8769 JOHANNESBURG 2000 Green.scorpions@gauteng.gov.za
Kwazulu-Natal Department of Agriculture & Environmental Affairs	(033) 355 9427	(033) 355 9614	Private Bag X9059 PIETERMARITZBURG 3200 Christian.Tham@kzndae.gov.za
Limpopo Department of Economic Development, Environment and Tourism	015 295 3980	015 295 4869	P O Box 55464 POLOKWANE 0700
Mpumalanga Department of Economic Development, Environment and Tourism	013 766 6077 084 520 3680	(013) 766 8243	Private Bag X 11219 NELSPRUIT 1200
Northern Cape Department of Environment & Nature Conservation	(053) 807 7430 (053) 807 7300		Private Bag 6102 KIMBERLEY 8300
North West Dept. of Agriculture, Conservation, Environment & Rural Development	(018) 389 5995 (018) 389 5698	018 389 5006	Private Bag X2039 MMABATHO 2735 mnkosi@nwpg.gov.za cwessels@nwpg.gov.za
Western Cape Dept of Environmental Affairs & Development Planning	(021) 483 3197 (021) 483 4363	(021) 483 4440	Private Bag X 9086 CAPE TOWN 8000

APPENDIX A: LOCALITY MAP



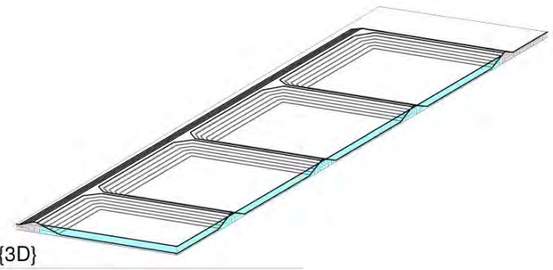
Google Earth Imagery of areas developed

1 4 x 81 x 61m Damme
1 : 1000

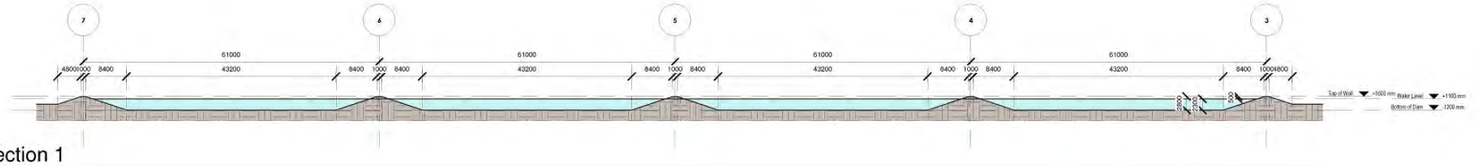


4 4 x 81 x 61m Damme 1
1 : 1000

Topography Schedule			
Name	Cut	Fill	Net cut/fill
Existing Site	0.00 m³	0.00 m³	0.00 m³
New Dam	15013.65 m³	8232.39 m³	-6781.26 m³
Water	0.00 m³	20328.00 m³	20328.00 m³



3 {3D}



2 Section 1
1 : 500

notes

1. The Architectural drawings form the basis of this project
2. NO work or part thereof is to start before an on site inspection is held with the site agent & building inspector wrt the approved plans.
3. All work is to conform to SANS 10400, 517 & SABS 1200.
4. All work to conform SANS 10155 Grade 1 (3/2000)
5. All work is to conform to the requirements of the Local Authority.
6. All work is to be done according to the General Conditions of Contract for Civil Construction 2010.
7. All tests and inspections to be iniciated and paid for by the contracton
8.10 days notification to be given to engineer before inspection of excavations, reinforcing, manufacturing (prior to deliveries), bracing, cladding and finishing.
9. All structures to be Waterproof, Batproof and Insectproof
10. All concrete 30 MPa with Geotex Broc SP640 fibres @ 3kg/m3
11. All concrete toppings to be 30 MPa Grade 1, waterproof & w/c =0.5
12. All steel to be cleaned and painted 1 layer red oxide, 1 layer gray undercoat, 2 layers enamel according to architects choice
13. All skimming and plaster to be applied with downlights @ 150mm from finished surface
14. All shuttering to be chamfered in corners and set 1/150 higher in CL for deflection
15. All load bearing walls are to be built up to bottom of slabs & beams, plastered level and provided with slip joint of 3 layers DPC prior to placing or casting slabs
16. All walls above 4.0m to have 3.6mm truss type brickforce every 3nd layer & 2 x 4mm class A galvanised wire vertically @ 1m CL
17. All walls above 6.0m to have 3.6mm truss type brickforce every 2nd layer & 2x 4mm class A galvanised wire vertically @ 1m CL
18. All walls above 8.0m to have Y10 rods every 4th layer
19. Brickforce every layer for the last 6 layers of all walls carrying concrete slabs
20. Brickforce to have 350mm overlap at all joints
21. No wall shall be longer than 7m without a vertical articulated joint
22. Chasing depth not to exceed 35mm on any 225mm wall
23. Mortar strength class 1 according to SANS 10164
24. Concrete work must comply with SANS 2001 CC1&2
25. Concrete must be designed by an independent laboratory
26. Use ordinary Portland Cement as per SABS 471 and aggregate as per SABS 1083
27. Cut slabs in maximum 16m2 blocks with surface bed joints to coincide with finishing joints
28. Joints to be reamed and sealed with polysulphide sealant according to manufacturers specification
29. Provide and seal 10mm isolation joints between slabs and walls / columns
30. Contractor is to repair all defects, lamination, cracks and spalling during the liability period of 5 years
31.All tiles accoring to SANS 1070 and floor tiles laid on precast concrete slabs or over floor joints, must be fixed with Fexi Adhesive and flexable grout
32. Provide thermal insulation according to architetcs specification and the rquirements of the Thermtermal Insulation Association of Southern Africa (TIASA)
33. All tests shall be according to SANS 5861 and initiated and paid for by the contractor
34. All items above are to be included in the price (rate) for the project items and will not be paid for separately under any circumstances

Revision Schedule		
No.	Date	Revision Description

KOMS consulting (PTY) LTD

Tel +27 54 461 2009
Fax + 27 461 2010
E-mail Charl@koms.co.za
P.O. Box 630, Kenmore 8660
South Africa

Koms Consulting (Pty
Reg. No. 2000/031350/07
CJ Richter B Ing Hons Pr Eng
ECSA reg 940448
www.koms.co.za

client
Karsten Boerdery

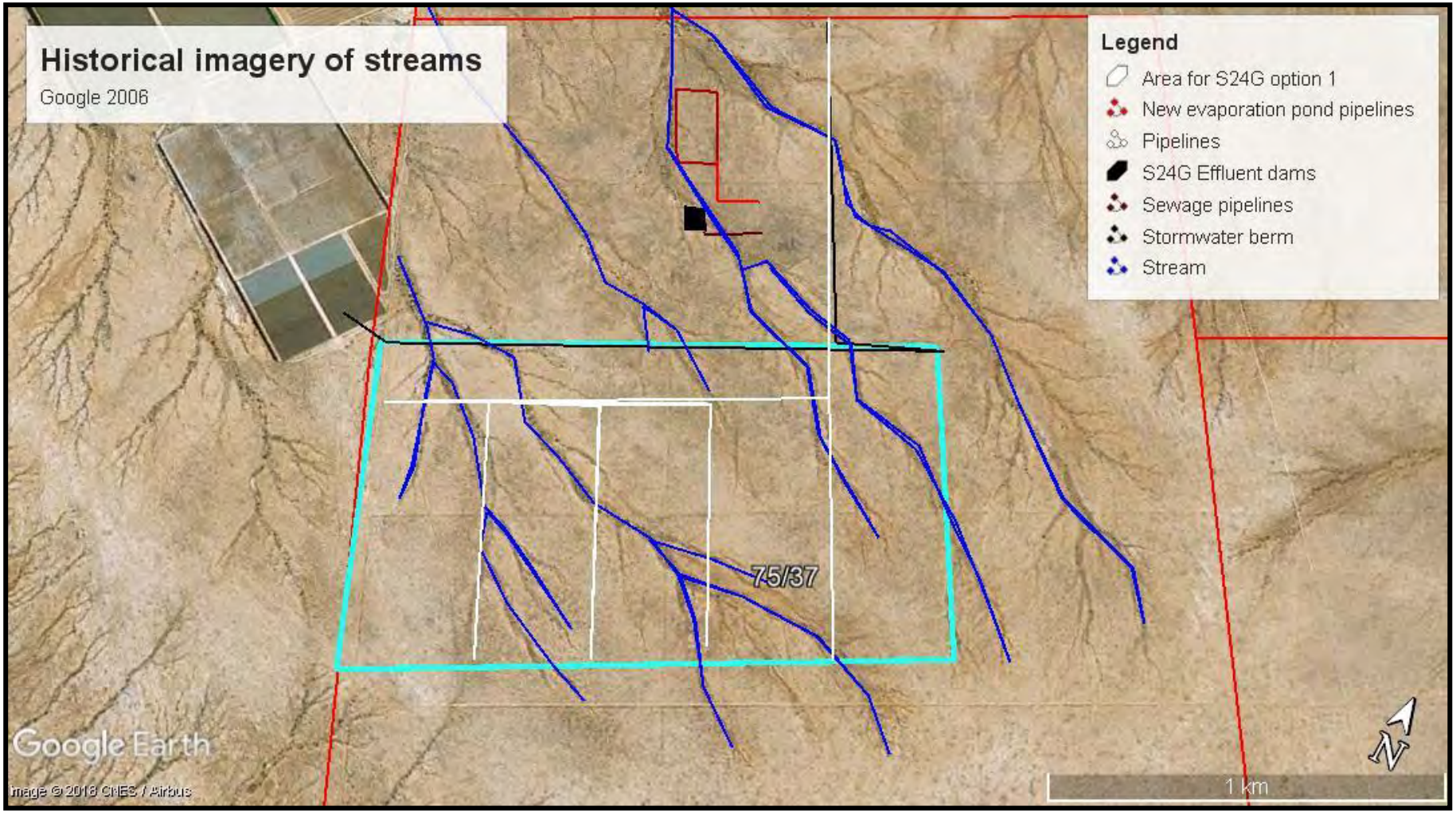
project name
Newgro Riooldam

title of sheet
Voorlopige Uitleg

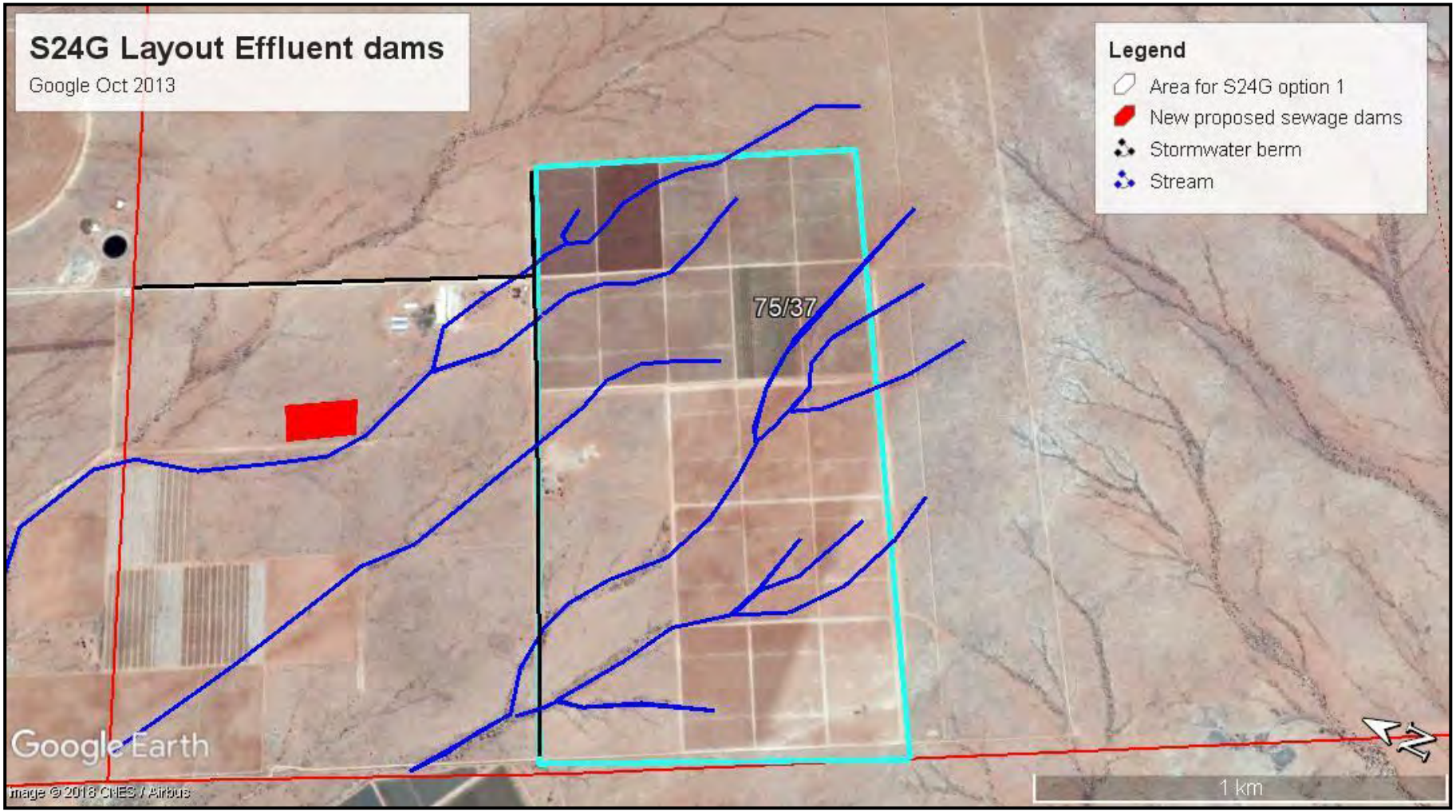
SCALE (PAGE SIZE)		DESIGN	
	As indicated		Designer
DATE	09/05/18	DRAWN	A van Wyk
DOC NR			A1

Z:\Data\Karsten Boerdery\Newgro #Rooidam-Tekeningwerk\Revit\Newgro Dammetjie.rvt

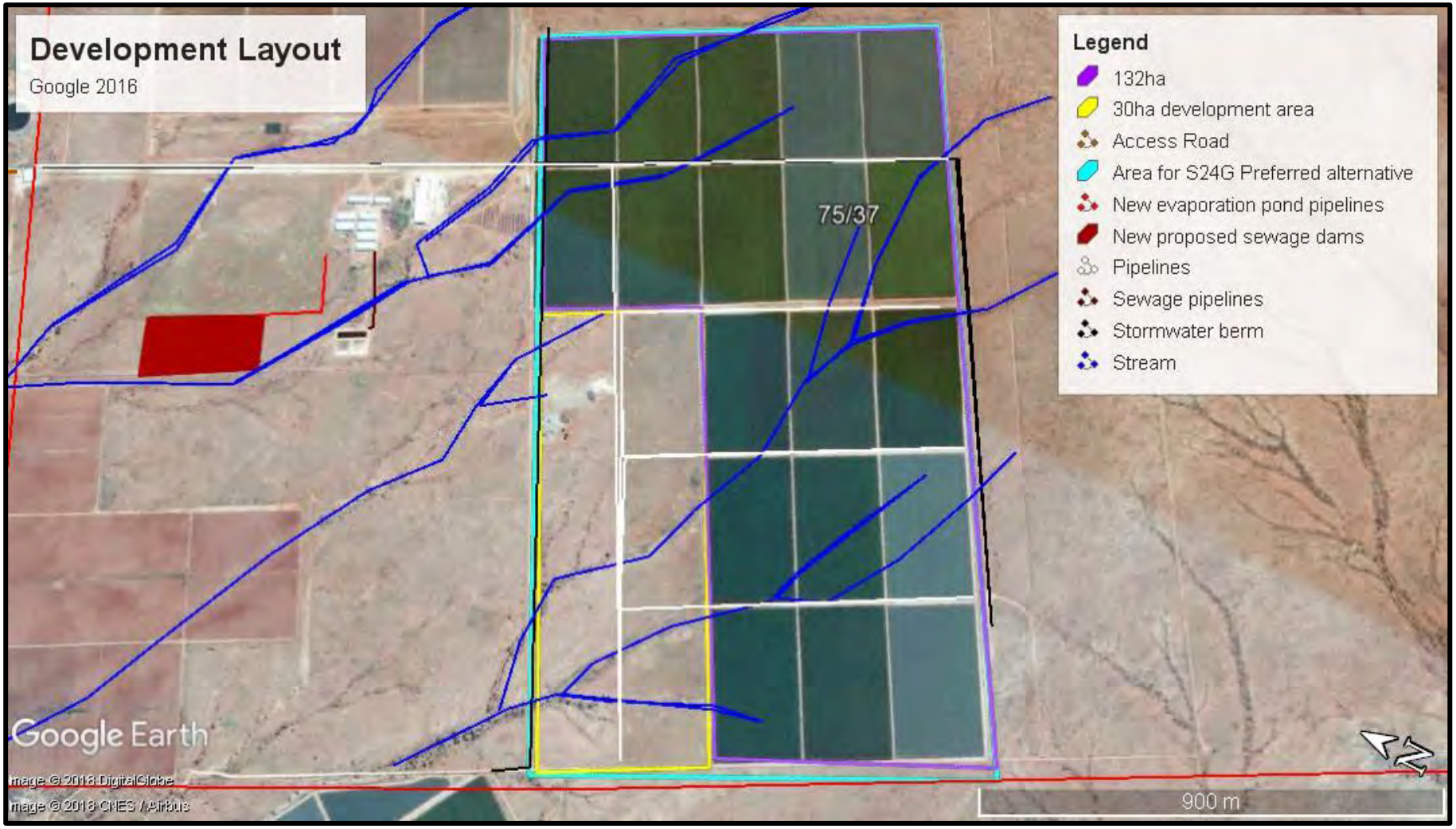
Evaporation Ponds Design


Historical imagery of streams
Google 2006
Legend
Area for S24G option 1
New evaporation pond pipelines
Pipelines
S24G Effluent dams
Sewage pipelines
Stormwater berm
Stream
75/37
Google Earth
Image © 2018 CNES / Airbus
1 km
N

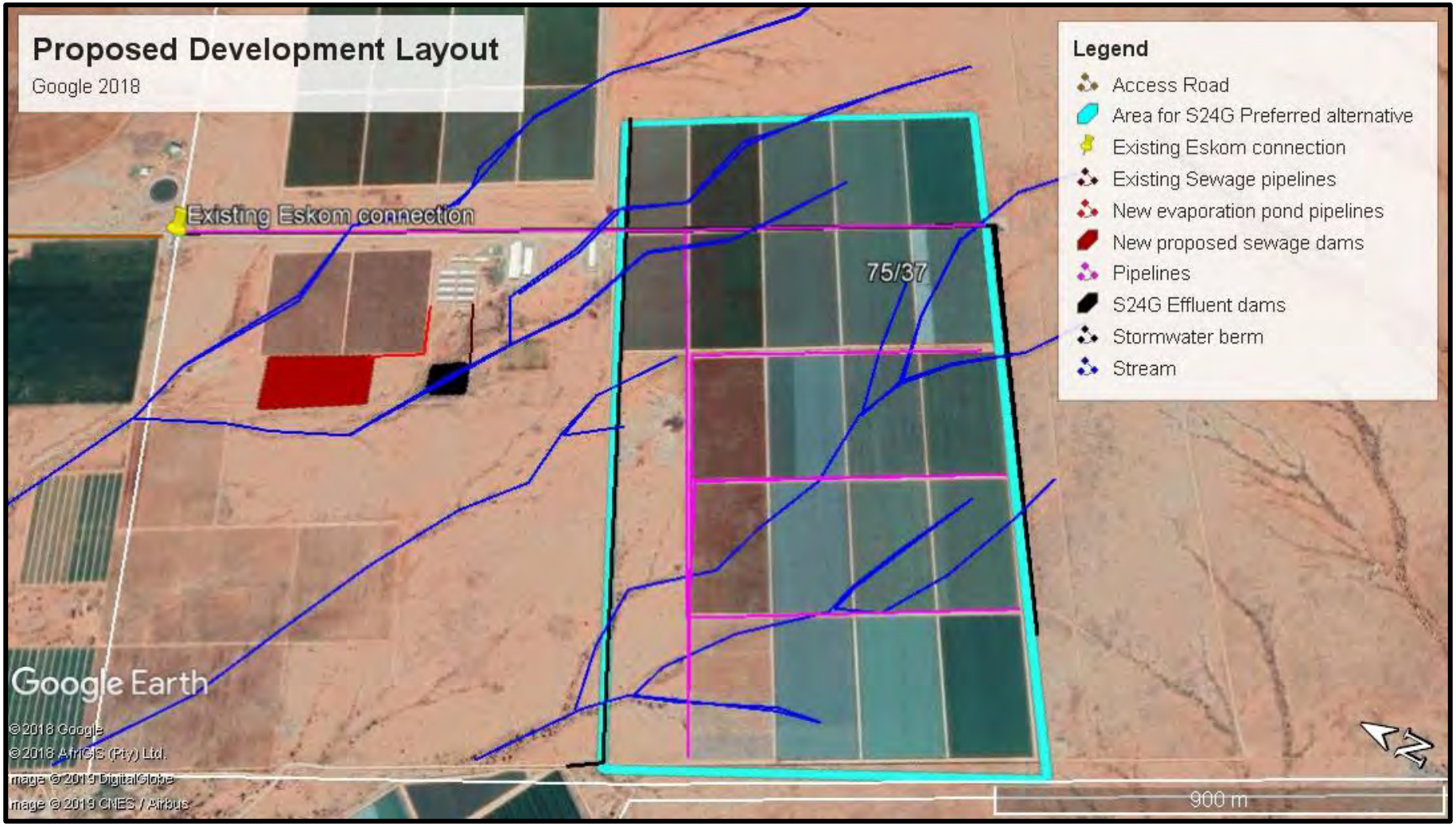
Google 2006


S24G Layout Effluent dams
Google Oct 2013
Legend
Area for S24G option 1
New proposed sewage dams
Stormwater berm
Stream
75/37
Google Earth
Image © 2013 CNES / Airbus
1 km
N

Google 2013


Development Layout
Google 2016
Legend
132ha
30ha development area
Access Road
Area for S24G Preferred alternative
New evaporation pond pipelines
New proposed sewage dams
Pipelines
Sewage pipelines
Stormwater berm
Stream
75/37
Google Earth
900 m

Google 2016


Proposed Development Layout
Google 2018
Existing Eskom connection
75/37
Legend
Access Road
Area for S24G Preferred alternative
Existing Eskom connection
Existing Sewage pipelines
New evaporation pond pipelines
New proposed sewage dams
Pipelines
S24G Effluent dams
Stormwater berm
Stream
Google Earth
© 2018 Google
© 2018 AfriGIS (Pty) Ltd.
Image © 2019 DigitalGlobe
Image © 2019 CNES / Airbus
900 m

Google 2018

APPENDIX D2: SITE PHOTOGRAPHS

Development area

Housing

Ephemeral stream continuation downstream of development

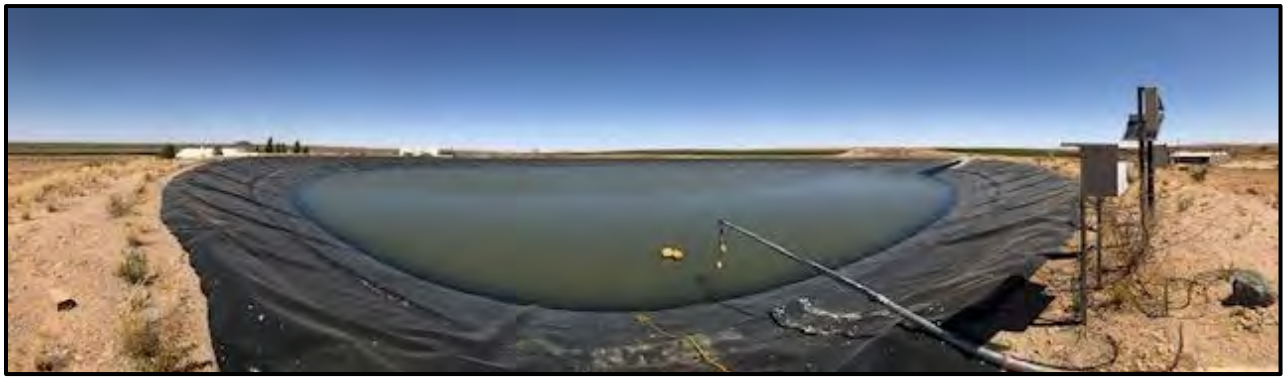
Storm water berms along the access road

Stormwater berm at southern boundary

Evaporation ponds

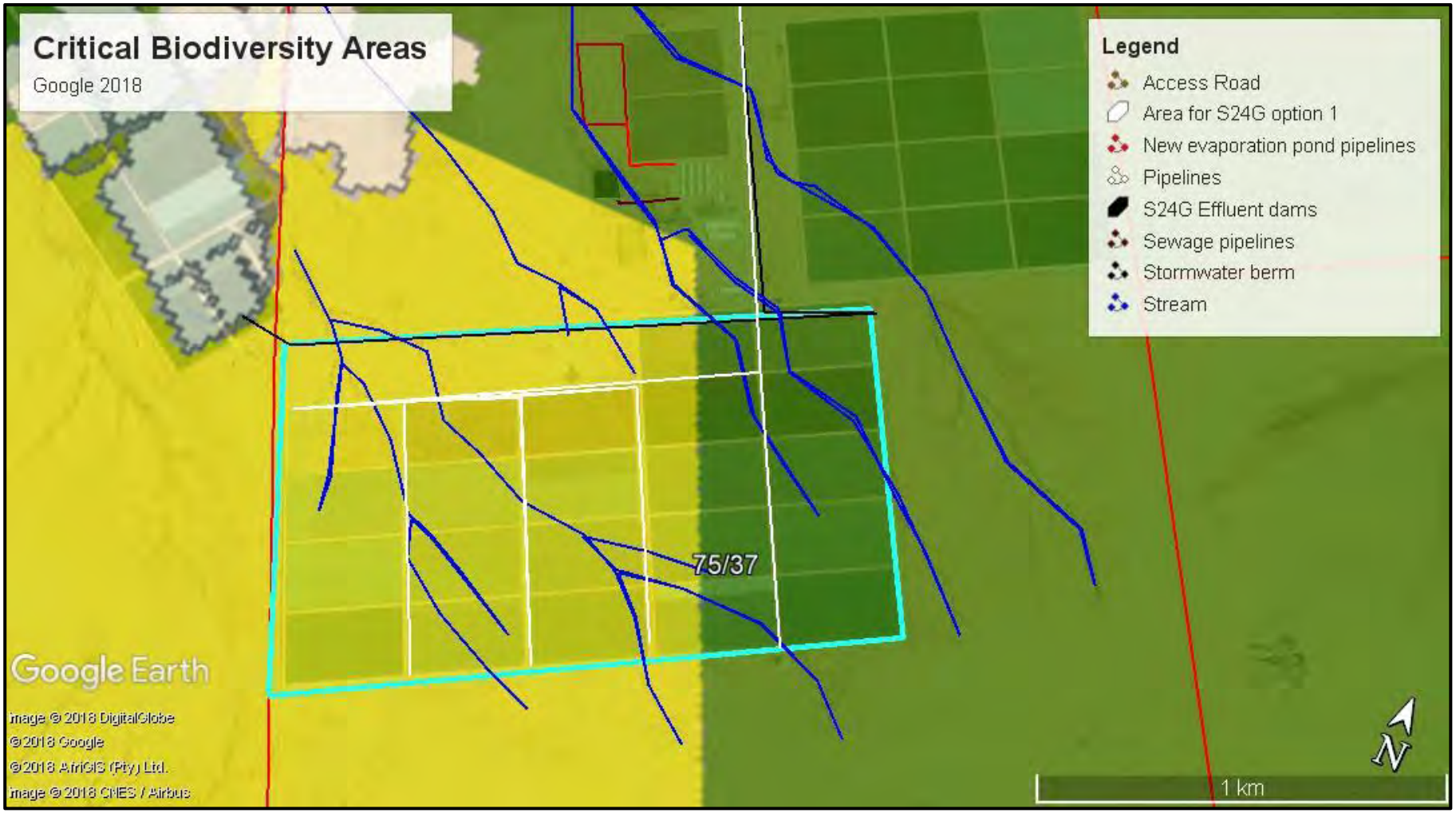
Existing evaporation pond and location of new pond (black arrow) – Drone footage

Dam -Drone footage



Dam site

APPENDIX D3: CBA 2 AND ESA LOCATED ON PORTION 75 OF FARM KEBOES NO 37



APPENDIX E1: IRRIGATION RIGHTS FROM DEPARTMENT OF WATER AFFAIRS

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

National Register of Water Use Certificate 25144521

National Register of Water Use Certificate 25144521, issued in terms of the regulations requiring that a Water Use be registered, promulgated under Section 26(1)(c) of the National Water Act(Act 36 of 1998) to:

Applicant

Applicant Type:	COMPANY
Name:	KARSTENS VROUE WERKERS (BLAAUWS - HOOF)
Enterprise Type	TRUST
Business Registration Number:	IT95/2009
Postal Address:	PO BOX 53 KANONEILAND 8806
VAT Registration Number:	NONE

Water Management Area

Name:	LOWER ORANGE

Register Status

Status:	ACTIVE

Water Uses

Section 21(a) Taking water from a water resource.
Section 21(b) Storing water.

See attached Annexure(s)

Office Lower Orange - Northern Cape
Upington
Regional Office Northern Cape Region

2013 -02- 18

Date stamp of issuing office

DISCLAIMER :
This certificate is :

1. not an acknowledgement of an entitlement to the registered water use:
2. issued without alterations or erasures and is invalid if it contains alterations not in conformity with the Department's official copy: and
3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue. However, in the case of any water use having been identified as a licensed water use, this certificate is not to be regarded as a replacement of the applicable licence certificate.The license conditions that are applicable to the water use are not currently incorporated in this National Register of Water Use certificate.

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	2
Water Use Start Date:	2010/10/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Licence Information

NRWU Licence Number:	25144521/2
Licence Status:	APPROVED
Licence Expiry Date:	2031/09/30
Review Period:	60 MONTHS

Lawfulness Authentication

Finding:	LAWFUL
Finding Date:	2011/07/06
Finding Reason:	LICENCE
Finding Confirmed:	YES

Water Use Related Subsidies

RPF (Resource Poor Farmer) Subsidy:	YES

Water Use Details

Water Use Sector(s)(i.e. Purpose(s) of Water Use):	AGRICULTURE: IRRIGATION
Source Type:	SCHEME
Point of Abstraction:	**Latitude** 28.68473° south **Longitude** 21.19231° east
Datum Type:	CAPE (MODIFIED CLARKE 1880)
Quaternary Drainage Region:	D73F
Scheduled Use	YES
Scheduled Area	107 HECTARES

Scheme Details

Scheme Name:	LOWER ORANGE/NAMAQUALAND
Scheme Management Parameter Name:	SECTION OF LOWER ORANGE BETWEEN BOEGOEBERG AND THE SEA.
Servitude Volume:	
Scheduled Quota	15000 CUBIC METRES PER HECTARE PER ANNUM

Registered Volumes

Start Date	Registered Volume (m³)	Time Interval
2010/10/01	1605000	PER YEAR

Irrigated Field and Crop Information

Field Number	Crop	Area (hectares)	Planting Date (mm/dd)	Growing season (days)	Rotation factor %	Irrigation system
A	WHEAT	107			100	CENTRE PIVOT

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	2
Water Use Start Date:	2010/10/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2010/10/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	2
Water Use Start Date:	2010/10/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:
This certificate is :

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2. issued without alterations or erasures and is invalid if it contains alterations not in conformity with the Department's official copy: and
3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue. However, in the case of any water use having been identified as a licensed water use, this certificate is not to be regarded as a replacement of the applicable licence certificate.The license conditions that are applicable to the water use are not currently incorporated in this National Register of Water Use certificate.

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	3
Water Use Start Date:	2011/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Licence Information

NRWU Licence Number:	25144521/3
Licence Status:	APPROVED
Licence Expiry Date:	2032/09/30
Review Period:	60 MONTHS

Lawfulness Authentication

Finding:	LAWFUL
Finding Date:	2011/07/06
Finding Reason:	LICENCE
Finding Confirmed:	YES

Water Use Related Subsidies

RPF (Resource Poor Farmer) Subsidy:	YES

Water Use Details

Water Use Sector(s)(i.e. Purpose(s) of Water Use):	AGRICULTURE: IRRIGATION
Source Type:	SCHEME
Point of Abstraction:	**Latitude** 28.68473° south **Longitude** 21.19231° east
Datum Type:	CAPE (MODIFIED CLARKE 1880)
Quaternary Drainage Region:	D73F
Scheduled Use	YES
Scheduled Area	30 HECTARES

Scheme Details

Scheme Name:	LOWER ORANGE/NAMAQUALAND
Scheme Management Parameter Name:	SECTION OF LOWER ORANGE BETWEEN BOEGOEBERG AND THE SEA.
Servitude Volume:	
Scheduled Quota	15000 CUBIC METRES PER HECTARE PER ANNUM

Registered Volumes

Start Date	Registered Volume (m^3)	Time Interval
2011/07/01	450000	PER YEAR

Irrigated Field and Crop Information

Field Number	Crop	Area (hectares)	Planting Date (mm/dd)	Growing season (days)	Rotation factor %	Irrigation system
A	WATERMELONS	30			100	DRIP

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	3
Water Use Start Date:	2011/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2011/07/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	3
Water Use Start Date:	2011/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:

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National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	4
Water Use Start Date:	2012/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Licence Information

NRWU Licence Number:	25144521/4
Licence Status:	APPROVED
Licence Expiry Date:	2033/09/30
Review Period:	60 MONTHS

Lawfulness Authentication

Finding:	LAWFUL
Finding Date:	2011/07/06
Finding Reason:	LICENCE
Finding Confirmed:	YES

Water Use Related Subsidies

RPF (Resource Poor Farmer) Subsidy:	YES

Water Use Details

Water Use Sector(s)(i.e. Purpose(s) of Water Use):	AGRICULTURE: IRRIGATION
Source Type:	SCHEME
Point of Abstraction:	**Latitude** 28.68473° south **Longitude** 21.19231° east
Datum Type:	CAPE (MODIFIED CLARKE 1880)
Quaternary Drainage Region:	D73F
Scheduled Use	YES
Scheduled Area	50 HECTARES

Scheme Details

Scheme Name:	LOWER ORANGE/NAMAQUALAND
Scheme Management Parameter Name:	SECTION OF LOWER ORANGE BETWEEN BOEGOEBERG AND THE SEA.
Servitude Volume:	
Scheduled Quota	15000 CUBIC METRES PER HECTARE PER ANNUM

Registered Volumes

Start Date	Registered Volume (m³)	Time Interval
2012/07/01	750000	PER YEAR

Irrigated Field and Crop Information

Field Number	Crop	Area (hectares)	Planting Date (mm/dd)	Growing season (days)	Rotation factor %	Irrigation system
A	GRAPES-WINE	50			100	MICRO SPRINKLER

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	4
Water Use Start Date:	2012/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2012/07/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	4
Water Use Start Date:	2012/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:

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3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue. However, in the case of any water use having been identified as a licensed water use, this certificate is not to be regarded as a replacement of the applicable licence certificate.The license conditions that are applicable to the water use are not currently incorporated in this National Register of Water Use certificate.

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	5
Water Use Start Date:	2013/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Licence Information

NRWU Licence Number:	25144521/5
Licence Status:	APPROVED
Licence Expiry Date:	2034/09/30
Review Period:	60 MONTHS

Lawfulness Authentication

Finding:	LAWFUL
Finding Date:	2011/07/06
Finding Reason:	LICENCE
Finding Confirmed:	YES

Water Use Related Subsidies

RPF (Resource Poor Farmer) Subsidy:	YES

Water Use Details

Water Use Sector(s)(i.e. Purpose(s) of Water Use):	AGRICULTURE: IRRIGATION
Source Type:	SCHEME
Point of Abstraction:	**Latitude** 28.68473° south **Longitude** 21.19231° east
Datum Type:	CAPE (MODIFIED CLARKE 1880)
Quaternary Drainage Region:	D73F
Scheduled Use	YES
Scheduled Area	100 HECTARES

Scheme Details

Scheme Name:	LOWER ORANGE/NAMAQUALAND
Scheme Management Parameter Name:	SECTION OF LOWER ORANGE BETWEEN BOEGOEBERG AND THE SEA.
Servitude Volume:	
Scheduled Quota	15000 CUBIC METRES PER HECTARE PER ANNUM

Registered Volumes

Start Date	Registered Volume (m^3)	Time Interval
2013/07/01	1500000	PER YEAR

Irrigated Field and Crop Information

Field Number	Crop	Area (hectares)	Planting Date (mm/dd)	Growing season (days)	Rotation factor %	Irrigation system
A	GRAPES-WINE	100			100	MICRO SPRINKLER

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	5
Water Use Start Date:	2013/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2013/07/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	5
Water Use Start Date:	2013/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:

This certificate is :

1. not an acknowledgement of an entitlement to the registered water use:
2. issued without alterations or erasures and is invalid if it contains alterations not in conformity with the Department's official copy: and
3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue. However, in the case of any water use having been identified as a licensed water use, this certificate is not to be regarded as a replacement of the applicable licence certificate.The license conditions that are applicable to the water use are not currently incorporated in this National Register of Water Use certificate.

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	6
Water Use Start Date:	2014/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Licence Information

NRWU Licence Number:	25144521/6
Licence Status:	APPROVED
Licence Expiry Date:	2035/09/30
Review Period:	60 MONTHS

Lawfulness Authentication

Finding:	LAWFUL
Finding Date:	2011/07/06
Finding Reason:	LICENCE
Finding Confirmed:	YES

Water Use Related Subsidies

RPF (Resource Poor Farmer) Subsidy:	YES

Water Use Details

Water Use Sector(s)(i.e. Purpose(s) of Water Use):	AGRICULTURE: IRRIGATION
Source Type:	SCHEME
Point of Abstraction:	**Latitude** 28.68473° south **Longitude** 21.19231° east
Datum Type:	CAPE (MODIFIED CLARKE 1880)
Quaternary Drainage Region:	D73F
Scheduled Use	YES
Scheduled Area	113 HECTARES

Scheme Details

Scheme Name:	LOWER ORANGE/NAMAQUALAND
Scheme Management Parameter Name:	SECTION OF LOWER ORANGE BETWEEN BOEGOEBERG AND THE SEA.
Servitude Volume:	
Scheduled Quota	15000 CUBIC METRES PER HECTARE PER ANNUM

Registered Volumes

Start Date	Registered Volume (m^3)	Time Interval
2014/07/01	1695000	PER YEAR

Irrigated Field and Crop Information

Field Number	Crop	Area (hectares)	Planting Date (mm/dd)	Growing season (days)	Rotation factor %	Irrigation system
A	GRAPES-WINE	113			100	MICRO SPRINKLER

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	6
Water Use Start Date:	2014/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2014/07/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Taking water from a water resource in terms of Section 21(a) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	6
Water Use Start Date:	2014/07/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:

This certificate is :

1. not an acknowledgement of an entitlement to the registered water use:
2. issued without alterations or erasures and is invalid if it contains alterations not in conformity with the Department's official copy: and
3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue. However, in the case of any water use having been identified as a licensed water use, this certificate is not to be regarded as a replacement of the applicable licence certificate.The license conditions that are applicable to the water use are not currently incorporated in this National Register of Water Use certificate.

National Register of Water Use Certificate 25144521

Storing water in terms of Section 21(b) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	7
Water Use Start Date:	2010/10/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

Storage of Raw Water

Total Number of Dams:	2
Water Course(s):	NEWGRO DAM 1

Dam Details

Name of Dam	Estimated/ Calculated	Measure For Movement of Aquatic Species	Volume Stored (m^3)
NEWGRO DAM 1	ESTIMATED	NO	25000.00

Property Where Water Use Occurs

Property Name:	KEBOES 37 PORTION 0
Property Number:	37
Portion of Property:	0
Title Deed Number:	T94585/1999
SG Cadastral Code:	C03600000000003700000
Deeds Office:	CAPE TOWN
Registration Division:	KENHARDT
Province:	NORTHERN CAPE
Surveyor General Office:	CAPE TOWN

WUN/Property Relationship Details

Relationship Start Date	Relationship End Date
2010/06/01	

Comment

THIS IS A RESOURCE POOR FARMER LICENSE APPLICATION FOR 400 HA WATER RIGHTS, WHICH IS APPROVED

National Register of Water Use Certificate 25144521

Storing water in terms of Section 21(b) of the National Water Act

Water Use Identification

Register Number:	25144521
Water Use Number:	7
Water Use Start Date:	2010/10/01
Water Use Status Date:	2011/07/06
Water Use Status:	REGISTERED

DISCLAIMER:
This certificate is :

1. not an acknowledgement of an entitlement to the registered water use:
2. issued without alterations or erasures and is invalid if it contains alterations not in conformity with the Department's official copy: and
3. in substitution of any National Register of Water Use Certificate the Department may have previously issued and the information is valid as at the date of issue.

Licence No: 27/2/1/D673/1/110/1

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

By Registered Mail

Private Bag X313, Pretoria 0001, 185 Schoeman Street, Sedibeng Building, Pretoria.
Tel: 012 336 7500 Fax (012) 323 4472/ (012) 326 2715. www.dwa.gov.za

LICENCE IN TERMS OF CHAPTER 4 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) (THE ACT)

I, ***Deborah Gabaakelwe Mochotlhi,*** in my capacity as Project Manager: Letsema in the Department of Water Affairs and acting under authority of the powers delegated to me by the Minister of Water and Environmental Affairs, hereby authorize the following water uses in respect of this licence.

SIGNED: .....

DATE: 02/10/2010

LICENCE NO: 27/2/1/D673/1/110/1

1. **Water User:** Karsten Vroue Werkers Trust
   Postal Address of applicant: P O BOX 53
   ROEPERSFONTEIN
   KANONEILAND
   8806

2. **Water uses**

2.1 Section 21(a) of the Act: Taking of water from a water resource, subject to the conditions set out in Appendices I and II.

2.2 Section 21(b) of the Act: Storing of water, subject to the conditions set out in Appendices and III.

3. **Properties on which the water uses will be exercised**

3.1 Portion 0, Remaining extend of the farm Keboes

4. **Registered owners of the Properties**

4.1 Kanoneiland Fruit Farms (PTY) LTD

5. **Licence and Review Period**

5.1 This license is valid for a period of twenty (20) years from the date of issuance and it may be reviewed every five (5) years.

B 0557

6. Definitions

"Any terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) shall bear the same meaning when used in this licence."

"The Regional Chief Director" means the Regional Chief Director: Northern Cape, Department of Water Affairs, Private Bag X 6101, Kimberley, 8300.

APPENDIX I

Conditions for all water uses

1. The responsibility for complying with the provisions of the license is vested in the licensee and not any other person or body.

2. The licensee shall immediately inform the Regional Chief Director of any change of name, address, premises and/or legal status.

3. The licence is subject to all applicable provisions of the Act.

4. If the property mentioned in Clause 3 above is subdivided, sold or consolidated, the owner(s) of the new property (ies) must enter into a written mutual agreement and notify this Department or the responsible authority within 60 days after the said transaction took place.

5. If a water user association is established in the area to manage the resource, membership of the licensee to this association is compulsory and rules, regulations and water management stipulations of the association must be adhered to.

6. The licensee shall be responsible for any water use charges or levies imposed from time to time by a responsible authority or Department in terms of the Raw Water Pricing Strategy, Waste Discharge Charges, Water Resource Management Charge of the Department, or any other water charge or levies that might be imposed in terms of the appropriate legislation.

7. The licensee shall be responsible for appointment of a Responsible Person (s) who will give effect to the various licence conditions and to ensure compliance thereof.

8. An official of the Department of Water Affairs should be granted access to the property at any time.

ANNEXURE II

Section 21 (a) of the Act: Taking water from a water resource

1. This licence authorises the taking of a maximum quantity of 6 000 000 m^3 (six million cubic meters) of water per annum from the Orange River located on Portion 0, Remaining extend of the farm Keboes 37, Siyanda District Municipality for irrigation purposes.

2. The quantity of water authorised to be taken in terms of this licence may not be exceeded without prior authorisation by the Minister.

3. This licence does not imply any guarantee that the said quantities and qualities of water will be available at present or at any time in the future.

4. The abovementioned volume may be reduced when the licence is reviewed.

5. The licensee shall continually investigate new and emerging technologies and put into practice water efficient devices or apply technique for the efficient use of water containing waste, in an endeavour to conserve water at all times.

6. The licensee shall be responsible for any water use charges or levies, which may be imposed from time to time by the Department or responsible authority in terms of the Department's Raw Water Pricing Strategy.

7. The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of:

   7.1 shortage of water
   7.2 inundations or flood
   7.3 siltation of the resource; and
   7.4 required reserve releases.

8. The licensee shall establish and implement a continual process of raising awareness amongst itself, its workers and stakeholders for the need for WC/WDM.

9. **Specific Conditions**

9.1 The water use entitlement must be registered in the name of the Karsten Vroue Werkers Trust and must be utilised on the farm Keboes 37, by Newgro Farming (PTY) LTD, a joint venture by the women and the Karsten Group,

9.2 The water use entitlement must be developed within a period of ten years,

9.3 The licensee cannot trade/permanently transfer or lease/temporary transfer the water use entitlement to any person without notifying the Department of Water Affairs,

9.4 The water use entitlement cannot be used as collateral at financial institutions,

9.5 In the case of joint venture the water use entitlement are allocated to the historically disadvantaged beneficiaries i.e Karsten Vroue Werkers Trust and will remain with them in case of split;

9.6 The water use entitlement must be utilised in accordance with the legislative prescripts including the National Water Act, National Environmental Management Act and the Conservation of Agricultural Resources Act,

9.7 Mr Karsten to be withdrawn as a trustee from the Karsten Vroue Werkers Trust within a period of six months after the date of issuance of this license,

9.8 A shareholder certificate be submitted to the Department of Water Affairs within a period of six month after the date of issuance of this licence, reflecting the 30% ownership by Karsten Vroue Werkers Trust and 70% ownership by the Karsten Group Holdings within the Newgro Farming (PTY)LTD,

9.9 The licensee must provide the Department of Water Affairs with a list of Board Directors/Trustees for the Newgro Farming (PTY) LTD, Karsten Group Holdings and the Karsten Vroue Werkers Trust within six (6) months from the date of issuance of this licence

9.10 Any additional Government grants (e.g. bulk water infrastructure) must reflect an increased shareholdings to the Karsten Vroue Werkers Trust within Newgro Farming(PTY) LTD,

9.11 Water abstracted from the water resource must be measured and a report thereof must be forwarded to the Department of Water Affairs, Kimberley Regional Office,

9.12 The licensee are responsible to install an approved water metering/measuring device as prescribed by the Department of Water Affairs,

9.13 The licensee are responsible for all related cost, instalment and maintenance of the prescribed water meter/measuring device.

APPENDIX III

Section 21 (b) of the Act: Storing of water

1. STORING OF WATER

1.1 The licensee is authorised to store a maximum quantity of 25 000m^3 (twenty five thousand cubic meters) of water in the two balancing dams with the volume of 15 000 m^3 (fifteen thousand cubic meters) and 10 000 m^3 (ten thousand cubic meters) each.

1.2 The licensee must obtain any proprietary rights or servitudes at their own cost.

1.3 The licensee is not exempted from compliance with any applicable Dam Safety Regulations.

1.4 The dams need to be aligned and comply with the Department of Water Affairs specifications.

1.5 The first dam should be at 28"39'09.90"S; 21'08'54'38" E co-ordinates and the second dam should at 28' 39'54.84"S; 21'10'03.25" E co-ordinates.

END OF LICENCE

APPENDIX E3: HERITAGE LETTER

Agency for Cultural Resource Management
Specialists in Archaeological Studies and Heritage Resource Management

31 January, 2019

Att: Ms Elanie Kühn
Pieter Badenhorst Professional Services
PO Box 1058
Wellington
7654

Dear Ms Kühn,

SECTION 24G RECTIFICATION OF CULTIVATION OF VINEYARDS ON PORTION 75 OF FARM KEBOES NO 37 NEAR KEIMOES, KARA HAIS MUNICIPALITY, NORTHERN CAPE

The Draft S24 Assessment Report[1] refers:

The affected property (i. e. Farm No. 37) is situated approximately 2kms outside the small town of Kanon Eiland (Kai! Garib Municipal Area) between Upington and Keimoes in the Northern Cape.

Agricultural development (mainly vineyard production) characterises most of the surrounding area and historical land use.

The following is noted:

- In 2008, a Heritage Impact Assessment (HIA) was conducted on a 900ha portion of the Farm Keboes No. 37, in which low density of lithics, `but no sites, fossil bones or graves of any age, was recorded'[2]. The writer of the report, Mr Peter Beaumont of the McGregor Museum in Kimberly, argued that that Farm No. 37 had `no heritage potential'.

- In 2010 a Heritage Impact Assessment was also undertaken on two portions of Farm Keboes No. 37 by Dr Robert de Jong of Cultmatrix, in which only marginal traces of archaeological heritage were recorded at the base of small hillock near the abandoned norite quarry[3]. The archaeological landscape was rated as having, a `relatively low heritage sensitivity' by the writer of the AIA report, Dr Jannie van Schalkwyk.

It is my professional opinion that a field based Heritage Impact Assessment (HIA) of the affected landholding (i. e. Portion 75 of Farm Keboes No. 37) is not required as part of the S24G Rectification Process, since it is considered highly unlikely that any important heritage remains will be encountered. The affected site, is already cultivated with vineyards, and has therefore been entirely transformed by agriculture.

[1] Kühn, E. 2019. Draft S24G Assessment Report. Newgro S24G Rectification of cultivation of vineyards across small streams on Portion 75 Farm Keboes, No. 37 Keimoes. S24G Reference No. 02/03/2019.
[2] Beaumont, P. 2008. Heritage Impact Assessment Report on a portion of the Farm Keboes 37 near Kanoneiland, Siyanda District Municipality, Northern Cape. Report prepared or MEG Environmental Impact Studies. McGregor Museum, Kimberley.
[3] De Jong, R. 2010. Heritage Impact Assessment Report: Proposed land use change to provide agricultural activities on Portions of the Remainder of the Farm Keboes No. 37, Kail Garib Municipality, Northern Cape. Report prepared for MEG Environmental Impact Studies. Cultmatrix, Pretoria

No. 5 Stuart Road Rondebosch, 7700 Phone/Fax 021-6857589
E-mail: acrm@wcaccess.co.za Mobile: 082 321 0172

In addition, two HIA's on Farm No. 37 Keboes, conducted in 2008 and 2010, recorded only marginal traces of archaeological heritage.

Therefore, no further heritage studies are required.

Yours sincerely

Jonathan Kaplan

No. 5 Stuart Road Rondebosch, 7700 Phone/Fax 021-6857589
E-mail: acrm@wcaccess.co.za Mobile: 082 321 0172

APPENDIX F: PUBLIC PARTICPATION

APPENDIX F2.1: I&AP DATABASE

AUTHORITIES

	Erf no	Surname	Initials	Representing	Tel	Fax	email	Post Box	Town	Code	Reg
1		De Waal	I.G.A.	Kai Garib Municipality: Municipal Manager	054 431 6328	054 461 6401	mm@kaigarib.gov.za	Private Bag X6	Kakamas	8870	L
2		Snyers	A.C.	Kai Garib Municipality: Ward Councillor Ward 2	054 431 6328	054 461 6401	mm@kaigarib.gov.za	Private Bag X6	Kakamas	8870	L
3		October	L	Department of Agriculture and Land Reform	054 461 6700	054 461 6401		P. O. Box 18	Springbok	8240	L
4		Towell	J	Department of Water Affairs	082 887 8866/ 054 338 5819		TowellJ@dws.gov.za	Private Bag X5912	Upington	8800	L
5		Tsimakwane	T	DENC: NC – 24G	0538077300	0538077328	ttsimakwane@ncpg.gov.za	Sasko Building, 90 Long street	Kimberley	8300	L
6		White	H	Department of Water Affairs	082 887 8866/ 054 338 5819		TowellJ@dws.gov.za	Private Bag X5912	Upington	8800	L
7		De la Fontaine	S	Nature Conservation	054 338 4800		sdelafontaine@gmail.com	Evelina De Bruin (former Provincial) Building, Corner of Rivier & Nelson Mandela Road	Upington	8800	L
8		Mans	J	Department of Agriculture Forestry and Fisheries	054 338 5909		jacolinema@daff.gov.za	P. O. Box 2782	Upington	8800	L
9		CEO		Kakamas Water Users Association	054 431 0725/6	054 431 0348	kakamaswgv@isat.co.za	Private Bag X4	Kakamas	8870	L

I&AP's

	Erf no	Surname	Initials	Representing	Tel	Fax	email	Post Box	Town	Code	Reg
10	Ptn 1 of Farm Rietfontein 55	van Niekerk	Albert	Plaasnaam - Sandputs	0823747973		sandputs@vodamail.co.za				

	Erf no	Surname	Initials	Representing	Tel	Fax	email	Post Box	Town	Code	Reg
11	Ptn 4 of Farm Blaauws Kop 36	Carr	Gawie	Plaasnaam - Vaalputs	0769714022		gaweicarr@gmail.com				
12	Remainder and Ptn 7 of Farm Blaauws Kop 36	Potgieter	Louis		0834115043		pottiej.potgieter@gmail.com	P. O. Box 52	Upington	8800	
13	Ptn 33 of Farm Blaauws Kop 36	Karsten	Piet	Plaasnaam – Yarona	054 4919300	0544919352	nicolenec@karsten.co.za				
14	Ptn 25 of Farm Blaauws Kop 36	De Villiers	Anton	Blaauwskop Besproeingsraad	0824529332		adevtomail.co.za				
15	Ptn 2 of Farm Blaauws Kop 36	De Villiers	Anton	Blaauwskop Besproeingsraad	0824529332		adevtomail.co.za				
16	Farm Soleil 429	Wian	Benton		0827817530		bentz@vodamail.co.za				
17	Ptn 31, 71 and 74 of Farm 37	Steyn	Gawie		0823388739		keboes@vodamail.co.za				
18	Ptn 32 of Farm 37	Scholtz	Andries		0722123204		andries007scholtz@gmail.com				
19	Ptn 19, 60, 61, 62, 63, 64, 65, 66, 67 and 68 of Farm 37	Viljoen	Gabriel		0823734769		gabriel@gpviljoenfarms.co.za				
20	Remainder of Bethesda 38	Engelbrecht	Theuns		0827841530		theunis.e@mweb.co.za				
21	Ptn 295 of Bethesda 38	Koortsen	Henkie	Vexma Properties 30 cc	0731469354/0733526240		Have been unable to contact the property owner.				
22	Ptn 15 of Rateldraai 54 and Remainder of Rietfontein no 55	Steenkamp	Nicky	Plaasnaam: Ratteldraai	0827854627		steenkampanet@gmail.com				

APPENDIX F2.2: ADVERTISEMENT

Kolomela vaardigheidsopleiding maak ons jeug meer in diens

Marietjie Barnard (programbestuurder - Imbewu Science Foundation) en Hester Beukes (Creative Minds in Kuruman) met van die suksesvolle kandidate.

GEMSBOK-POSTMASBURG: Volgens Stats SA was die werkloosheidskoers onder jong mense tussen 15 en 34 jaar 38,2% in die eerste kwartaal van 2018. Dit beteken dat meer as een uit elke drie jongmense in die arbeidsmag nie werk gehad het nie.

"Hierdie skokkende hoë syfer het daartoe gelei dat die Kolomela-myn sy pogings om geleenthede om ons jeug te ontwikkel te ontsluit, verdubbel en help om hulle meer indiensneembaar te maak," sê George Benjamin, bestuurder openbare sake.

'n Lae vaardigheidsvlak is dikwels die rede waarom die jeug nie in Postmasburg werk kan kry nie.

Kolomela-myn het in 2015 'n vyfjaar-vaardigheidsontwikkelingsprogram begin, wat fokus op die aanbieding van die kritieke vaardighede wat in Tsantsabane benodig word.

Een van die vaardighede wat Kolomela-myn verlang, is onder sy Gemeenskapsvaardigheidsontwikkelingsprogram, Basiese Rekenaarvaardigheidsopleiding.

20 Jongmense van Tsantsabane het onlangs gegradueer en sertifikate ontvang om hul vaardigheid te bewys.

Benewens basiese rekenaarvaardighede bied die program ook jong mense die geleentheid om opleiding in ingenieurswese N1, N2 en N3 sowel as Kode 10-leerders en -lisensies te ontvang.

"Die doel is om die indiensbaarheid van ons jeug te verbeter deur vaardigheidsontwikkelingsintervensies wat hulle sal toerus met kritiese en relevante vaardighede," sê Benjamin.

"Die Gemeenskapsvaardigheidsontwikkelingsprogram word jaarliks hersien om te verseker dat die vaardighede wat ons bied, reageer op die steeds veranderende omgewing en aan die behoeftes van ons arbeidsmark voldoen."

Keaobaka Matilo (Kolomela-myne), Marietjie Barnard (programbestuurder - Imbewu-wetenskap-stigting), Marna van Zyl (Direkteur - Imbewu Science Foundation) en Hester Beukes (Kreatiewe Mense in Kuruman) met van die suksesvolle kandidate.

"'n Lae vaardigheidsvlak is dikwels die rede waarom die jeug nie in Postmasburg werk kan kry nie."

Dienssentrum trek nuwe baadjie aan

GEMSBOK-CALVINIA: Die Hantam Munisipaliteit, in samewerking met Namakwa Distrik Munisipaliteit en Department Sport Kuns en Kultuur, het verlede week die gerestoreerde gebou aan die Sonskyn Dienssentrum bestuur, terug oorhandig.

Hierdie gebou is onlangs ongeknap sodat die "wyses van ouds" in 'n veilige, skoon omgewing hul passies kan uitleef deur deelname aan verskillende programme soos voorgehou deur die Departement van Maatskaplike Ontwikkeling.

Na die oorhandiging van die gebou was die bejaardes geneem vir ontbyt by 'n plaaslike restaurant.

Die Hantam Munisipaliteit het ook geskiedenis gemaak deur die eerste munisipaliteit in Namakwa te word wat straatname verander het.

Voortrekkerweg heet amptelik: Albertina Sisulu Rylaan terwyl die deurgangs roete wat voorheen Hoop, Kerk en gedeeltelik Hofmeyerstraat was nou Dr. Nelson Mandela Rylaan heet.

Na vele wettige prosesse van straatnaamsverandering het Hantam onder sy huidige raad geskiedenis gemaak deur struggle ikone te vereer.

Hierdie gebou is onlangs ongeknap sodat die "wyses van ouds" in 'n veilige, skoon omgewing hul passies kan uitleef deur deelname aan verskillende programme soos voorgehou deur die Departement van Maatskaplike Ontwikkeling.

Die Hantam Munisipaliteit, in samewerking met Namakwa Distrik Munisipaliteit en Department Sport Kuns en Kultuur, het verlede week die gerestoreerde gebou aan die Sonskyn Dienssentrum bestuur, terug oorhandig.

26. TE LAAT VIR KLASSIFIKASIE BOEDEL KENNISGEWING

KENNISGEWING: In die boedel van wyle Gertryda Magrietha van Niekerk, Identiteitsnommer: 3505120009183 woonagtig was te 9 Villa Vera Maria, Oosterville, X17 Upington, Noordkaap, weduwee wat oorlede is op 6 Augustus 2018. Boedelnr. 2893/2018 Debiteure en krediteure in bogenoemde boedel word hiermee versoek om hulle eise in te dien en hulle skulde te betaal by die kantore van die ondergenoemde prokureurs binne 'n tydperk van 30 dae vanaf datum van publikasie van hierdie kennisgewing. Becker Bergh & More Ing Prokureurs vir die Eksekuteur Kooperasiestraat 13 Posbus 9 Upington 8800

---------- K10/26/10

MUNISIPALITEIT DAWID KRUIPER MUNICIPALITY

KENNISGEWING K61/2018

VOORGESTELDE HERSONERING VAN 'N GEDEELTE VAN ERF 3767, SOUTPANSTRAAT 34, UPINGTON

Dawid Kruiper Munisipaliteit het die onderstaande beplannings - en/of grondgebruiksaansoek ontvang vir oorweging:

Perseel: Ged van Erf 3767, Upington
Ligging: Soutpanstraat 34, Upington
Elenaar: Upingrow Investments (Pty) Ltd
Aansoeker: Highwave Consultants
Huidige Sonering: Nywerheid (E.c.2)
Aard van aansoek:
Om 'n gedeelte (groot ±80m²) van Erf 3767, Upington, te hersoneer na Telekommunikasie- en Data Infrastruktuur (F.h.1) ten einde 'n Telekommunikasie (Selfoon) mas op gemelde eiendom op te rig.

Nadere besonderhede is verkrygbaar vanaf die Raad se Snr Bestuurder Stadsbeplanning en Boubeheer, Telefoon 054 338 7073, gedurende normale kantoorure (Maandag tot Vrydag, 07:30 - 12:30 en 13:30 - 16:30) en besware teen die aansoek, indien enige, moet skriftelik voor of op Vrydag, **16 November 2018**, by die Raad se Stadsbeplanningsafdeling ingedien word. Indien enige persoon wat kommentaar wil lewer/vertoë wil rig, nie kan skryf nie, kan sodanige persoon gedurende normale kantoorure by Mnr CW Geldenhuys by kantoor 073 aanmeld, waar sodanige persoon se kommentaar/vertoë op skrif gestel sal word.

NOTICE N61/2018

PROPOSED REZONING OF A PORTION OF ERF 3767, 34 SOUTPAN STREET, UPINGTON

Dawid Kruiper Municipality has received the following planning- and/or land use application for consideration:

Property: Portion of Erf 3767, Upington
Location: 34 Soutpan Street, Upington
Owner: Upingrow Investments (Pty) Ltd
Applicant: Highwave Consultants
Current Zoning: Industry (E.c.2)
Nature of application:
To Rezone a Portion (in extent ±80m²) of Erf 3767, Upington, to Telecommunication- and data infrastructure (F.h.1) in order to erect a telecommunication (cellphone) mast/facilities on the said property.

Full particulars can be obtained from the Snr Manager Town Planning and Building Control of the Council, Telephone 054 338 7073, during normal office hours (Mondays to Fridays, 07:30 - 12:30 and 13:30 - 16:30) and objections against the application, if any, must be lodged in writing to the Town Planning Section of Council on or before Friday, **16 November 2018**. Any person with objections against the application, who is unable to write, can report to Mr CW Geldenhuys in office 073, during normal office hours, who will put such a person's objections in writing.

E NTOBA MUNISIPALE BESTUURDER / MUNICIPAL MANAGER

NOTICE OF AN APPLICATION FOR THE TRANSFER OF WATER
Proposed transfer of water from various properties to Kakamas South Settlement no 2185, 2092 and 2193.

Notice is hereby given of the application in terms of the National Water Act, 1998 (Act No. 36 of 1998) as amended, and the "Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals", dated 2017.

Description:
An Application is hereby made by Oseiland Eiendomme PTY Ltd for the transfer of water from the various donor properties for the construction of new agricultural activities as well for the construction of orchards across small streams within the Lower Orange River Catchment Management Area. More information will be provided by the EAP, as per the details below.

Details:
Abstraction Point: Kakamas WUA
Magisterial District: Augrabies
Area to be irrigated: Approximately 34ha
Volume water to be transferred per annum: 588 000m³/ha/a

As per the activated listed activities below the proposed development initiated an iWULA and the following listed activities are applicable:

In terms of the WULA, Sections 21 (a), for the transfer of water rights from various properties to Kakamas South Settlement no 2092, 2193 and 2185 and Section 21 (c) and (i) for the construction of orchards across small streams in terms of the National Water Act are applicable.

Any written comments can be lodged from the date of the publication notice until 23 November 2018, with the Department of Water and Sanitation or the EAP, as per the details provided below:

Details of EAP/OBP	Department of Water and Sanitation (DWS/Waterwese): Lower Orange River Proto CMA	Applicant:
Elanie Kühn Pieter Badenhorst Professional Services Environmental Assessment Practioner and Water Use License Consultants P O Box 1058, Wellington 7654; Cell: 076 584 0822; Fax: 0866721916; E-mail: elaniem@iafrica.com; Website: www.pbps.co.za	Mnr. Abe Abrahams Private Bag X6101 Kimberley, 8300 Tel: 053 830 8800	Oseiland Eiendomme PTY Ltd Att: JG du Plessis PO Box 45, Augrabies 8874 Tel: 054-451 7004 Email: jan@oseiland.co.za

PRELIMINARY PUBLIC PARTICIPATION PROCESS AS PART OF A SECTION 24G APPLICATION PROCESS

Development of vineyards and the relocation of an existing in stream effluent dams on the Remainder of Farm Keboes 37 and Portion 75 of the Farm 37, Kanoneiland, Upington, Kai !Garib District Municipality, Northern Cape Province

Notice is hereby given of a public participation process in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Regulations relating to the procedure to be followed in terms of a Section 24G Application (July 2017)

The project consists of the unlawful development of approximately 130ha of vineyards, across natural vegetation and small streams, also for the relocation of unlawful, existing, instream effluent dams.

The development commenced unlawfully and therefore a S24G Process is being undertaken. The following Environmental Impact Assessment (EIA) listed activities apply to the application for rectification; GN R 327: Activity 12,19, 25, 67; GN R 325: Activity: 15; GN R 324: Activity 12, 14. As part of this will also be a Water Use License Application (WULA), under Section 21 (a), (b), (c), (i) and (g).

More information on the S24G Application and the WULA and work undertaken will be available in the Draft Assessment Report (S24G) which will be made available for comment from www.pbps.co.za or the EAP in due course. This notification is for the opportunity to register as an Interested and Affected Party.

Date of this notice: 24 October 2018

In order to ensure that you are identified as an interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter as well as any comment to the EAP before 17:00 on 07 November 2018.

Details of EAP/OBP	Department of Water and Sanitation (DWS/Waterwese): Lower Orange River Proto CMA
Elanie Kühn Pieter Badenhorst Professional Services P O Box 1058, Wellington 7654; Cell: 076 584 0822; Fax: 0866721916; E-mail: elaniem@iafrica.com; Website: www.pbps.co.za	Mnr. Abe Abrahams Private Bag X6101 Kimberley 8300 Tel: 053 830 8800

Will be included in the Final Assessment Report

Will be included in the Final Assessment Report

Will be included in the Final Assessment Report

Will be included in the Final Assessment Report

APPENDIX F2.7: COMMENTS AND RESPONSES SHEET

COMMENTS ON DRAFT ASSESSMENT REPORT				
Date	Comments from	Comments received	Response from	Response received

Will be included in the Final Assessment Report

APPENDIX H1: ATTENDANCE REGISTER OF MEETING HELD

Will be included in the Final Assessment Report

APPENDIX H2: ENVIRONMENTAL MANAGEMENT PROGRAMME

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

NEWGRO S24G Rectification of cultivation of vineyards across small streams on Portion 75 Farm Keboes no 37, Keimoes.

S24G Reference nr: 02/03/2018
February 2019

Applicant details:
Newgro Farming PTY Ltd
Piet Karsten
P. O. Box 53
Kanoneiland
8806
Tel: 054 431 7000

CONTENTS

Contents

List of Figures

List of abbreviations

CA	Competent Authority
DENC:NC	Department of Environment and Nature Conservation: Northern Cape
DEAT	Department of Environmental Affairs and Tourism
dSR	Draft Scoping Report
fSR	Final Scoping Report
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer as per the environmental authorisation
EIA	Environmental Impact Assessment and the process to be followed in terms of the National Environmental Management Act, Act 107 of 1998
EIR	Environmental Impact Report
ELU	Existing Lawful Use
EMF	Environmental Management Framework
EMP	Environmental Management Programme
EO	Environmental officer as appointed by the client or contractor
GG	Government Gazette
GN	Government Notice
I&AP	Interested and Affected Party
IAIAsa	International Association for Impact Assessment for South Africa
NEMA	National Environmental Management Act, Act 107 of 1998
NID	Notice of Intent to Develop
PoSfEIA	Plan of Study for EIA
RE/Engineer	Resident Engineer overseeing the construction activity
ROD	Record of Decision
SDF	Spatial Development Framework
SR	Scoping Report
TOR	Terms of Reference

Definitions

For the purposes of this Specification the following definitions shall apply:

Construction site, working area or Site - means any area within the boundaries of the property(ies) where construction is taking place.

No-Go area - means any area where no access is allowed.

Refuse - refers to all solid waste, including construction debris (cement bags, wrapping materials), waste and surplus food, food packaging, organic waste etc.

Expertise of the EAP

Pieter Badenhorst

The name and details of the EAP are provided in front of the report. He has more than 46 years' experience in project management and report writing. He worked at the CSIR in environmental, coastal and estuarine management for 16 years. During that time he was part of the team that developed coastal management guidelines, the first process for EIAs and undertook numerous environmental studies for DEAT in collaboration with a team of ecologists. The last15 years he has worked mainly in environmental control and environmental impact assessments and has completed EIAs for many projects. He has also undertaken an EIA peer review on a major development for DEAT.

He has a B.Sc. Civil Engineering Degree as well as B.Honours Degree (Irrigation), M. Engineering (Civil) and an MBA from Stellenbosch University.

The consultant is a member of the Engineering Council of South Africa and the South African Institute of Civil Engineers, as well as a member of the International Association for Impact Assessment (South Africa).

The consultant has organized many meetings/workshops/open days to identify issues for similar projects at the CSIR; Blue Flag for DEAT as well as other DEAT projects. The Blue Flag and other projects required interaction with large groups of stakeholders.

Elanie Kühn

The consultant has 12 years' experience in project management and report writing. She has worked for two other environmental assessment companies prior to this. She completed her BSc degree and after this gained an Honours Degree in Environmental Management from the North West University in Potchefstroom. She has been working with Pieter Badenhorst for the last six years working on environmental impact assessments.

1 Introduction

1.1 Locality:

The farm where the activity occurs is situated approximately 2 kilometers outside of the small town of Kanoneiland, between the Upington and Keimoes in the Northern Cape, in the Kai! Garib Municipal area. The property gains access via gravel roads off the R359.

Refer to the Locality Plan attached at Appendix A (and inserted below as Figure 1).

Figure 1: Locality plan

Proposed development:

During the development of the applicant's farm, he unknowingly activated certain listed activities that are included in the NEMA 2010 and 2014 Regulations. The applicant was under the impression that the specific site was part of the previous EIA's conducted. Only during an Audit Report conducted by Mnr Pieter Badenhorst, did it become apparent that this is not the case. The following activities are applied for:

NEMA 2010 Regulations:

1. Clearance of approximately 112 hectares of indigenous vegetation between July 2010 and prior to September 2013, also clearing within a watercourse. (Refer to Figure 2).
2. Construction of internal pipelines and roads as part of the clearance of indigenous vegetation to establish new agricultural areas.

By 30 September 2013, a total of 112 hectares had been cleared (Figure 2).

Figure 2: The development layout

The following NEMA 2014 Regulations were also triggered by the development of the applicant's farm:

1. Clearance of 30 hectares of indigenous vegetation after 2014, for the clearance within a watercourse, during the development of the agricultural area, see Figure 2.
2. Clearance of approximately 0.5 hectares of indigenous vegetation after 2014, as well as clearing within a watercourse for the construction of evaporation ponds, and for onsite treatment of waste water (sewage). (Refer to Figure 3).
3. The relocation of the existing ponds is included as part of this application, as the existing ponds are constructed within a watercourse and currently over capacitated. The new ponds will be lined and will have a better design to adequately address the need for treatment of the waste water (Figure 3).

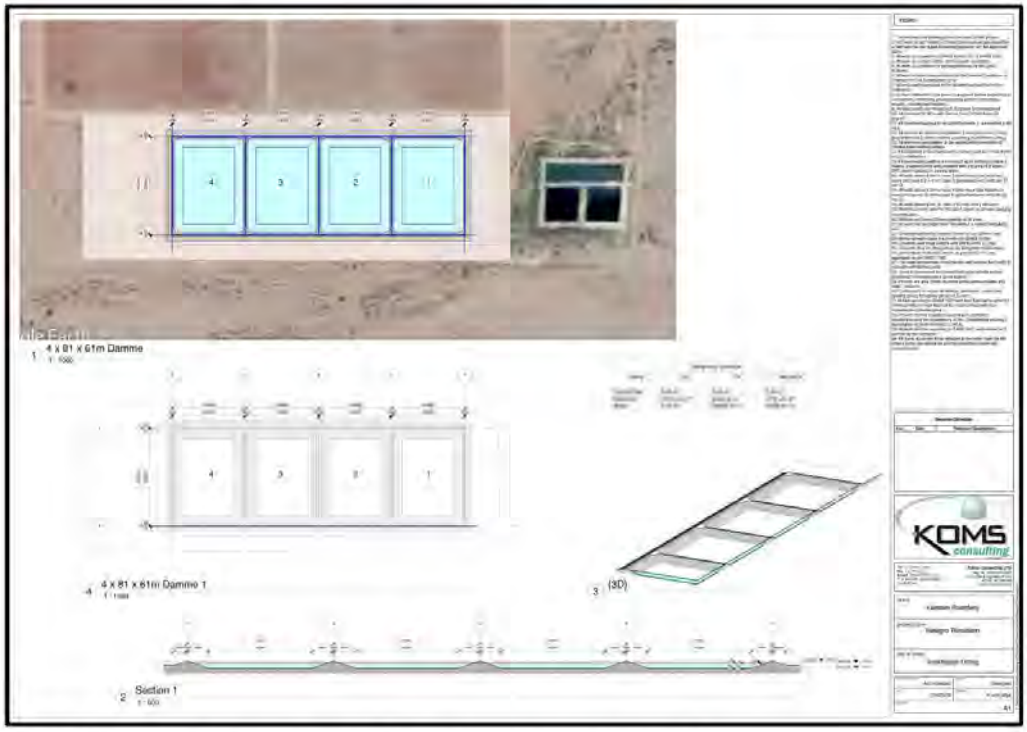


Figure 3: Evaporation pond layout (existing versus new proposed)

The SG 21 Digit Codes of the property indicated in Figure 1 above is provided in the list below:

C	0	3	6	0	0	0	7	0	0	0	0	0	0	3	7	0	0	0	7	5

This document is a requirement for environmental authorization (EA) which is shown in Appendix A. All mitigation measures included in the EA will be inserted into Appendix C. On approval by DENC the developer must ensure that its conditions are implemented by making the document available to the contractor and also ensure that an ECO or the Resident Engineer are appointed, and systems are in place to evaluate compliance. The contractor(s) is expected to familiarise himself with the contents of this document and to implement its conditions.

Overall the EMP will aim to:

- Control the construction activities in such a way that negative impacts on the physical environment, sensitive areas and surrounding residential areas are prevented or minimised.
- Ensure that mitigation and rehabilitation measures are implemented where required.

Please note that this document does not replace any other regulations, laws and bylaws that the contractor must adhere to. It specifically does not replace the regulations of the Occupational Health and Safety act of 1993 (Act No. 85 of 1993).

Funding for the implementation of the Construction EMP is the financial responsibility of the developer.

The project environmental issues are shown in section 2 with the construction EMP in section 3 and the operational EMP in section 4.

2 Environmental issues

2.1 Vegetation

According to Namakwa District Biodiversity Sector Plan (2008), the development encroaches on an ecological support area (ESA) (yellow) which was established as a terrestrial migration corridor associated with the Orange River corridor. However, it must be noted that most of this corridor in this vicinity is compromised as a result of existing agricultural development. Most of the neighbouring areas to the west, north and east of the site have already been transformed into agricultural land. To the east of the development site is a small area (app. 30ha) that is established as CBA1, see Figure 4 below. Note, however, the upstream catchment area has already been highly modified.

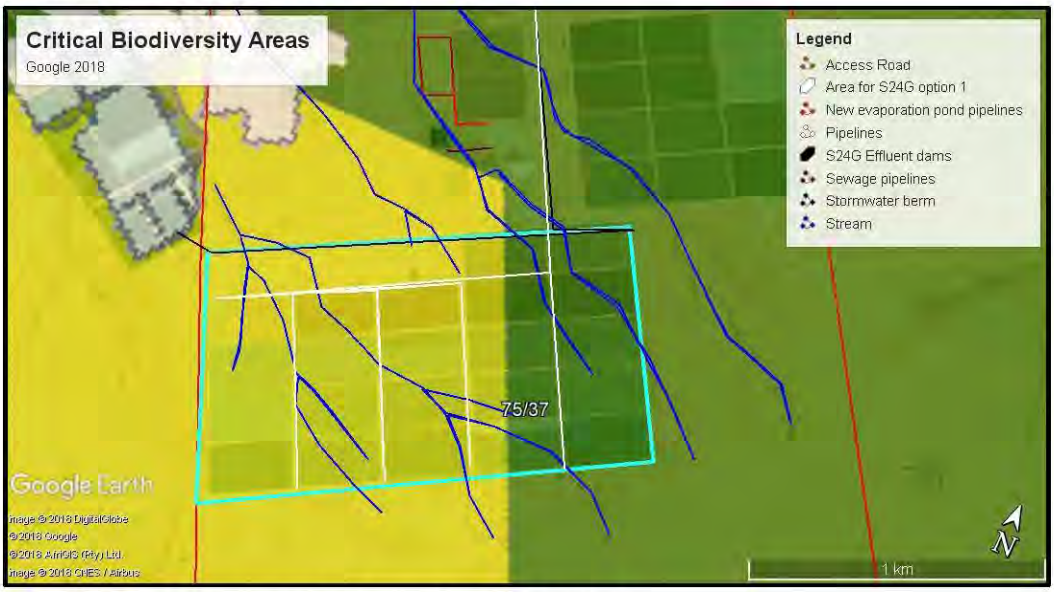


Figure 4: Layout showing the CBA (green) and ESA (yellow)

Mitigation:

Mitigation during for the planning and construction can no longer be applied as the activity already took place, however, the operation phases of this proposed development are as follows:

Very little scope is available for mitigation measures to compensate for the loss of natural or near natural habitat in the study area itself since.

Recommended mitigation for the loss, particularly of seasonal watercourses, would be in the form of storm water management in the channelled areas and to prevent any further degradation of the streams below the site.

2.2 Fauna

Although not observed during the site visit, it is expected that small game such as klipspringer, steenbok, porcupines, baboons and dassies will be found in the area. Some bird species were also found.

Habitat destruction and the possible genetic contamination of species are however all factors that can negatively impact on vertebrate species, but can be minimized through applying the following mitigation measures:

Mitigation

- Regular maintenance of the water network will minimize the damage done by porcupines.
- No hunting of small game with dogs will be allowed.
- In order to ensure that all fauna will be able to relocate to the adjacent veld, openings should be made in the fences surrounding the proposed development area before any construction work may commence
- To ensure environmentally friendly farming practices, the site manager will have to adhere to the requirements and prescriptions which will be included in the environmental management plan to be included as part of the EIA process. This plan will also deal with issues such as the prohibition of the hunting of small game etc.

2.3 Heritage, Archaeology and Palaeontology

The site has already been developed and the possibility of any future finds is low, however, the following mitigation measures should be considered for the operational phase of the site.

If any archaeological material or human burials are uncovered during the course of the operational phase, then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist.

2.4 Access

There is existing access for all areas proposed for cultivation, and for the construction of the evaporation ponds infrastructure.

2.5 Pipelines

Water is required for the drip irrigation of the established vineyards and is supplied via pipelines from the booster pump station and pump lines (white) as shown in Figure 5. The other pipelines established is from the homesteads towards the evaporation ponds. These pipelines have a diameter of 160mm and do not need environmental authorization.

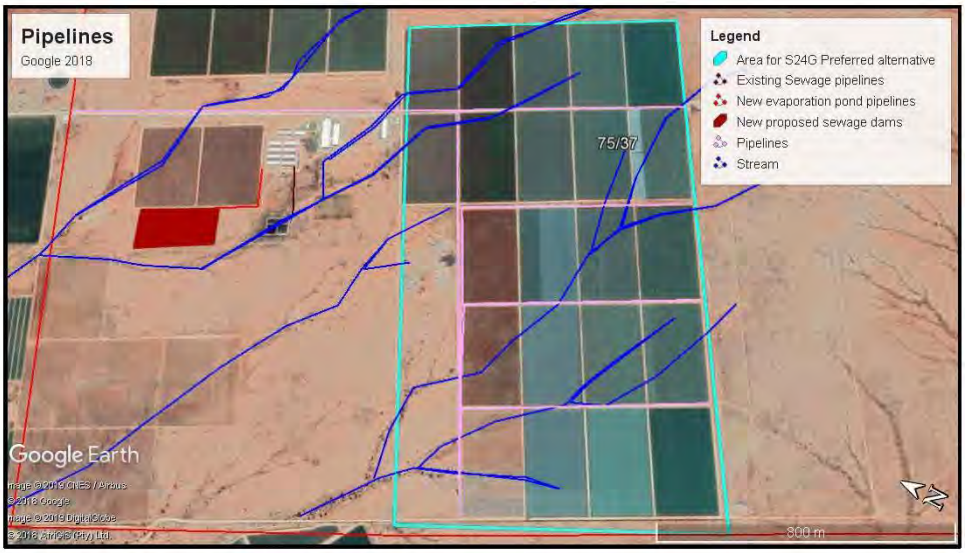


Figure 5: Pipelines (pink lines)

2.6 Electricity

The development falls within the capacity of Eskom. Note that no additional electrical capacity is necessary for the development of the agricultural areas and no capacity necessary for the evaporation as the existing gravitational flow is sufficient.

2.7 Land uses

The planned development is situated within a purely agricultural area with no other land uses in close proximity. The proposed development will, therefore, have no impact on any surrounding land uses in the area.

2.8 Plough certificate

A plough certificate application included as part of the WULA.

2.9 Water Use License

An application for a license in terms of the National Water Act, 1998 is being made by the developer, Newgro Farming PTY Ltd for the application to impede the flow of water and to alter

the beds, banks and course of the watercourses and the construction of evaporation ponds on site summarised as the followed:

Section 21(c) impeding or diverting the flow of water in a watercourse: Impeding flow

Section 21(i): altering the bed, banks, course or characteristics of a watercourse: Altering the banks of a water course

Section (g): Disposing of waste in a manner which may detrimentally impact on a water resource

Refer to the S24G Report for the WULA.

2.10 Ephemeral stream and drainage areas

The establishment of the vineyards on Portion 75 of Farm Keboes no 37 took place across small sections of the unnamed drainage system that is located on site. This drainage system is classified as an ephemeral course as it will only flow sporadically after rain. As can be seen in the historical imagery below in Figure 6, these ephemeral watercourses are not considered to be seasonal rivers, as they do not regularly contain water in a seasonal pattern.

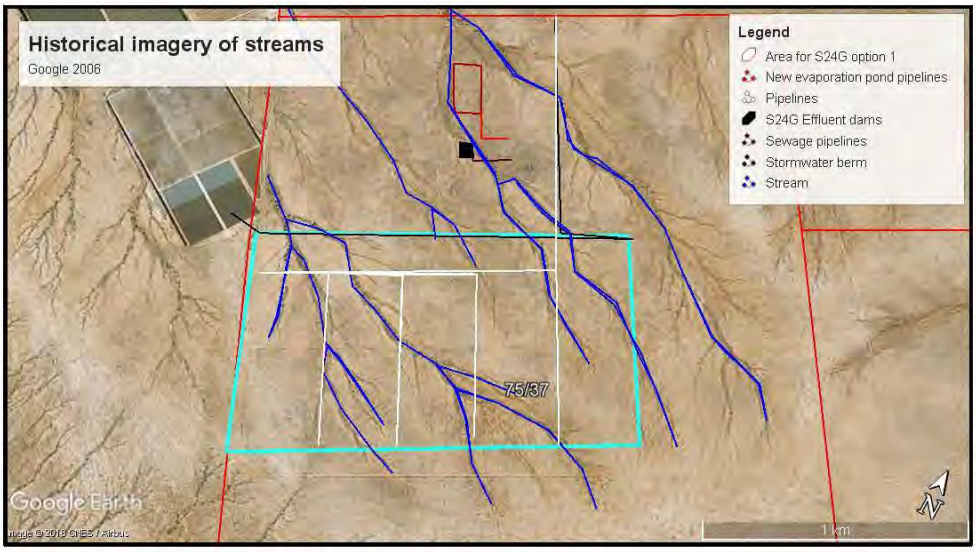


Figure 6: Ephemeral streams/drainage areas

The ephemeral drainages systems spring will ultimately have flowed into the Orange River, this is no longer the case as all these streams are cut off from the Orange River via agricultural developments and the canal.

The drainage lines for most of the year are dry and sandy and flow for short periods after relatively heavy rains and are therefore classified as an ephemeral stream. Refer to further details with regards to management and design measures for the streams contained in the Storm Water Management Plan referred to above in Appendix D.

3 Management Programme – Construction

The construction mitigation measures only pertain to the new evaporation pond construction, the development areas have already been constructed.

Please note that the EMP must be included in any tender documentation and all sub-contractors on the site must be made aware of this EMP and they must at all times adhere to the procedures specified.

Only those sections applicable to the specific construction activity are relevant and to be implemented.

3.1 Contractual obligations

1) The Contractor shall acknowledge receipt of copies of the EMP and confirm in writing that he has familiarised himself with the contents thereof;
2) The Contractor shall comply with all environmental obligations imposed by the RE/ECO/EO.
3) The Contractor shall co-operate fully with the RE/ECO/EO and use his best endeavours to ensure that the objectives of the EMP are fulfilled in the course of the Contractor's execution of the works or the relevant part thereof.
4) The Contractor shall erect an information board containing background information for the construction activity and listing the relevant contact details for complaint.
5) The Contractor must ensure that all workers are given environmental awareness training on the requirements of the EMP. This must form part of the Contractor's contract agreement. The RE/ECO/EO must be informed in writing of implementation.
6) Working hours will be from 7:00pm to 18:00pm Monday to Saturday. No work will be allowed on Sundays or public holidays.
7) Deliveries will only be allowed between 8:00am and 5pm.
8) Preference must be given to local labour.
9) Workers (except security guards) may not be housed on site.

3.2 Penalties

Penalties will be instituted for non-compliance. The penalty is over and above the cost of rectifying the problem and/or damage. Penalties will vary on a sliding scale from R 1 000 to R 20 000 for non-serious to serious issues as determined by the RE/ECO/EO/EO.

These penalties must be paid into a separate account to be administered by the developer. The RE/ECO/EO/EO will decide how the penalties, if any, are to be spent.

3.3 Methodology statement

A methodology statement must be compiled by the contractor(s) before any construction or activity may commence. The statement must include a site establishment plan indicating all relevant areas. The RE/ECO/EO must approve the methodology statement.

The activity indicated highlighted in yellow in the following list will as a minimum require a statement. The contractor must identify any other statements that will be required as part of the project implementation. The method statement must contain the following:

Blasting

- Details of all methods and logistics associated with blasting.

Bunding

- Method of bunding for the static plant.

Camp establishment

- Layout and preparation of the construction camp.
- Method of installing fences required for "no go" areas, working areas and construction camp areas.
- Preparation of the working area.

Cement /concrete batching

- Location, layout and preparation of cement/ concrete batching facilities including the methods employed for the mixing of concrete including the management of runoff water from such areas.

Contaminated water

- The contaminated water management plan, including the containment of runoff and polluted water.

Drilling and jack hammering

- Method of drill coring with water or coolant lubricants.
- Methods to prevent pollution during drilling operations.

Dust

- Dust control.

Earthworks

- Method for the control of erosion during bulk earthwork operations.
- Method of undertaking earthworks, including hand excavation and spoil management.

Emergency

- Emergency construction method statements.

Environmental awareness course

- Logistics for the environmental awareness course for all the Contractors employees.
- Logistics for the environmental awareness course for the Contractors management staff.

Erosion control

- Method of erosion control, including erosion of spoil material

Exposed aggregate finishes

- The method of control, treatment and disposal with respect to exposed aggregate finishes.

Fire, hazardous and poisonous substances

- Handling and storage of hazardous wastes.
- Emergency spillage procedures and compounds to be used.
- Emergency procedures for fire.
- Use of herbicides, pesticides and other poisonous substances.
- Methods for the disposal of hazardous building materials including asbestos, fibre claddings, refrigerants and coolants.

Fuels and fuel spills

- Methods of refuelling vehicles.
- Details of methods for fuel spills and clean-up operations.
- Refuelling of construction vehicles in high flow areas [or in the 1 in 50-year floodplain].
- Method of refuelling dredger during dredging operations.

Solid waste management

- Solid waste control and removal of waste from Site.
- Methods for the disposal of vegetation cuttings, tree trunks, building materials or rubble generated by construction.

Sources of materials

- Details of materials imported to the site (where applicable).

Sensitive environments

- Proposed construction methods within any sensitive environments. These can include but are not limited to wetlands, intertidal zones and estuaries.

Traffic

- Traffic safety measure for entry/ exit onto/ off public roads.
- Traffic control when crossing roads or pedestrian routes with construction activities.

Vegetation clearing

- Method of vegetation clearing during site establishment.

Wash areas

- Location, layout, preparation and operation of all wash areas, including vehicle wash, workshop washing and paint washing and clearing.

3.4 Environmental awareness training

1) All the Contractors employees and Sub-Contractors employees and any suppliers' employees that spend more than 1 day a week or four days in a month on site, must attend an Environmental Awareness Training course presented by the Contractor the first of which shall be held within one week of the Commencement Date. Subsequent courses shall be held as and when required.
2) The Engineer/ECO will provide the Contractor with the course content for the environmental awareness training course, and the Contractor shall communicate this information to his employees on the site, to any new employees coming onto site, to his subcontractors and to his suppliers.
3) The Contractor shall supply the Engineer/ECO with a monthly report indicating the number of employees that will be present on site during the following month and any changes in this number that may occur during the month.
4) The Contractor shall submit a Method Statement detailing the logistics of the environmental awareness training course.

3.5 Demarcation and protection

1) The property must be fenced prior to the start of construction to determine the construction/work area. Proper access control must be implemented to ensure that only authorised people to obtain access to the site.
2) No-Go which includes sensitive areas must be clearly demarcated prior to commencing of demolition and/or earthworks/building operations.
3) The contractor must ensure that fencing and/or demarcations are maintained for the duration of the project.
4) Although not limited to, No-Go areas.
5) No work outside of the property boundary will be allowed.
6) Special features shall be marked on a site layout plan prior to any works commencing on site. These areas may be designated "No go" areas.
7) Outcrops, rock faces, trees and natural vegetation or any other natural or special features inside and outside the Site, shall not be defaced, painted for benchmarks for survey or any other purposes or otherwise damaged in any way without the prior approval of the Engineer/ECO. These features shall be demarcated as "no go" areas and shall be fenced or similarly protected, as determined by the Engineer/ECO.

3.6 Site clearing

1) Prior to earthworks (including site clearance) starting on site, a search and rescue operation for bulbs and other indigenous plants of value, as detailed in the

environmental approval shall be undertaken. This will be done in accordance with the outcome of the Application to DENC for removal of bulbs on site.

2) The stripping and separation of topsoil shall occur as stipulated by the Engineer/ECO/EO. As a guide, the upper 250 mm of soil (topsoil, which includes roots and leaf litter) shall be placed separately. This soil shall be used for re-shaping and filling as required.

3.7 Aesthetics

The aesthetics measures indicated below should be implemented as required by the specific site and situated and as agreed with the RE/ECO/EO/EO.

1) The Contractor shall be required to visually screen the site.
2) Visual screening shall be aesthetically pleasing and shall be erected by the Contractor prior to commencing any activities.
3) Visual screening shall be maintained by the Contractor for the duration of the Contract.
4) Visual screening may be of the following types:
    a) Shade cloth
    b) Hessian
    c) Berms

3.8 Contractor's camp

1) The Contractor's camp, offices, and storage facilities shall not be located within an environmentally sensitive area. The camp's position must be approved by RE/ECO/EO.
2) The camp must be fenced as agreed with the RE/ECO/EO.
3) Water from the kitchens, showers, sinks etc., shall be discharged in a manner approved by the RE/ECO/EO.
4) The contractor must ensure that all temporary structures, equipment, materials, and facilities used or created on-site during the construction phase are removed and appropriately disposed of.

3.9 Sensitive environments

3.9.1 Ephemeral streams/drainage areas

Mitigation

As part of the construction of the development, it is proposed to construct a storm water berm/canal surrounding the agricultural areas to prevent any contamination downstream into any of these ephemeral streams/drainage areas, where applicable.

3.9.2 Fauna

The measures detailed in Section 2.2 above should be implemented.

3.9.3 Sewage disposal

Chemical toilets will be provided for the workers in the vineyard/ agricultural land. These toilets will be emptied on a daily basis in the sewage tank system at the households and at the packing sheds.

Mitigation
With regard to the development work at the site, it must be ensured that the applicant/ contractor provide sufficient sanitation facilities for the use of his employees during the actual construction period. The applicant/ contractor will be solely responsible for the proper use and maintenance thereof in conditions, which are to the satisfaction of both the contractor and the applicant. All facilities must be positioned within walking distance from wherever employees or labourers are at work.

Other specifications to be adhered to are, amongst others, the following;

- All facilities provided at the site must comply with the requirements of the Local Municipality.
- No sewerage facility may be erected within a radius of 100m from a water source.
- The applicant/ contractor must be held responsible for the cleaning of the sanitary facilities to prevent health hazards for the duration of the contract.
- Sanitary facilities must be provided at a ratio of one (1) facility for every fifteen (15) persons.
- All sanitation facilities must be sited, in terms of the specifications of the National Water Act no. 36 of 1998, in such a way that they do not cause water- or other pollution.

3.9.4 Solid waste disposal

The application area is located within the municipal area of Kai! Garib Municipality. No household waste will be generated as part of this application.

All facilities in use during the construction phase must be utilized and maintained in a manner that prevents pollution of any groundwater sources. No waste of any kind may be disposed of in the surrounding environment.

Mitigation
A no-nonsense approach with regard to littering on the farm exists and the neatness of the workplace, as well as the residential areas, are all high priorities for the management.

Sufficient provision should be made for rubbish bins on the farm to prevent workers from littering. These rubbish bins should be clearly marked and be visible.

3.9.5 Air and noise pollution

Air Pollution

During the construction phase, and due to the nature of the project, a small amount of smoke (from machines) and dust could be generated. Dust pollution may have an impact on operational workers.

Mitigation

In order to minimize the effect of dust pollution, the construction area should be kept wet as far as possible and the workers must wear the necessary safety clothing. The applicant is referred to section 19 of the National Water Act no. 36 of 1998 with regard to the prevention of, and remedies for, the effects of pollution. In terms of this section of the Act, the person who owns, controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources and property.

Noise Pollution

During the construction phase, there may be minimal and sporadic incidents of air and noise pollution due to the construction activities such as dust and noise as a result of earthworks. Due to the fact that the area is situated within an agricultural environment, the impact is not expected to be severe.

Mitigation

The contractor should make adequate provision to prevent or minimize the possible effects of air and noise pollution. Should the noise from the construction work be found to cause problems, (which is not anticipated to be the case) work hours in these areas may be restricted between 06:00 and 20:00, or as otherwise agreed between the parties involved. Strict measures should, therefore, be enforced, especially in terms of the contract specifications, to prevent any negative impacts in this regard.

3.9.6 Conditions set out in the WULA

All conditions to be outlined in the approved WULA should be implemented.

3.10 Cement mixing/batching plant

1) The cement mixing or batching plant area(s) must be indicated on the Site Establishment Plan.
2) All wastewater resulting from batching of concrete shall be disposed of via the wastewater management system where available.
3) The cement/ concrete batching works shall be kept neat and clean at all times. No batching activities shall occur on an unprotected substratum of any kind.
4) All runoff from batching areas shall be strictly controlled, and cement-contaminated water shall be collected, stored and disposed of at a site approved by the Engineer/ECO/EO. Dagga boards, mixing trays and impermeable sumps shall be used at

all mixing and supply points. Contaminated water shall be disposed at a waste disposal site approved by the Engineer/ECO/EO.

5) Contaminated water storage facilities shall not be allowed to overflow and appropriate protection from rain and flooding shall be implemented.
6) Contaminated water treatment on Site shall require a method statement approved by Engineer/ECO/EO.
7) Unused cement bags are to be stored so as not to be affected by rain or runoff events.
8) Used bags shall be stored in weatherproof containers to prevent wind-blown cement dust and water contamination. Used bags shall be disposed of on a regular basis via the solid waste management system and shall not be used for any other purpose.
9) Concrete transportation shall not result in spillage.
10) Cleaning of equipment and flushing of mixers shall not result in pollution of the surrounding environment: Care shall be taken to collect contaminated wash water from cleaning activities and dispose of it in a manner approved by the Engineer/ECO/EO. To prevent spillage onto roads, ready mix trucks shall rinse off the delivery shoot into a suitable sump prior to leaving Site.
11) Suitable screening and containment shall be in place to prevent wind-blown contamination associated with bulk cement silos, loading and batching.
12) With respect to exposed aggregate finishes, the Contractor shall collect all contaminated water & fines and store it in sumps for disposal at an approved waste site.
13) All visible remains of excess concrete shall be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable. All excess aggregate shall also be removed. Any mixed cement (for building or plastering) at the work area must be placed on boards or container to prevent spillage or contamination of the soil.
14) During cement delivery boards or other protection, material must be used to prevent spilling on the ground.
15) No mixed concrete/dagga may be placed or stored on bare surfaces. Dagga boards must be used at all times to prevent contamination of surfaces.

3.11 Surface and groundwater pollution

1) The Contractor shall take all reasonable steps to prevent pollution of surface and groundwater as a result of his activities. Such pollution could result from release (accidental or otherwise) of chemicals, oils, fuels, paint, and sewage, water from excavations, construction water, water carrying soil particles or waste products.
2) Cement or concrete mixing must take place in such a way as to prevent any cement water runoff. All pieces of cement or related material are to be stored and dumped at the approved Municipal site.

3) Bulk cement silos and storage areas must be properly lined/screened/contained to prevent windblown cement dust or pollution of water during rain events.
4) On completion, storm water catchpits must be closed with geotextile (biddim) or similar material to prevent sand or other contaminants from entering the system.
5) Ready-mix trucks are not permitted to clean chutes at the work site.
6) Adequate plastic or concrete lined cleaning pits are to be installed to facilitate washing of all cement and painting equipment. A functional, non-leaking, water point must be installed at each pit. The top 75% of the water in the pit may be disposed of down the sewerage system, with approval from the Engineer. The remaining water and sludge must be disposed of at a Municipal approved site or removed by a chemical contractor.
7) The Contractor shall provide water and/or washing facilities at the construction camp for personnel.
8) In the event of any pollution entering any water body, the Contractor shall inform the RE/ECO/EO immediately.
9) The contractor will be responsible for any clean-up costs involved should pollution, erosion or sedimentation have taken place.

3.12 Pipe testing and cleaning

1) Cleaning/flushing of pipelines shall not impair (down grade) downstream baseline water quality.
2) Materials used in the sterilisation of pipelines, viz. chlorine solutions shall be treated as hazardous substances and disposed of at an approved landfill site.
3) Litter traps shall be installed and maintained at the outflow of all pipelines.

3.13 Noise control

1) Working hours will be restricted to daily normal working hours.
2) Limit the use of heavy vehicle machinery and construction activities associated with high level noise to 06h00 to 20h00 from Mondays to Saturdays, particularly to where residential areas or sensitive institutions are situated close to the site.
3) All noise and sounds generated by plant or machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels for residential areas.
4) All plant and machinery are to be fitted with adequate silencers.
5) No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies.
6) If work is to be undertaken outside of normal work hours, permission must be obtained from the Local Authority. Prior to commencing any such activity, the Contractor is also to advise the potentially affected neighbouring residents. Dates, times and the nature

of the work to be undertaken are to be provided. The notification could include letter-drops.

7) The acceptable noise level according to SABS 10103 Code of Practice is 45dBA in the rural district during the day and 35dBA at night. The applicant must comply/adhere to this requirement.

3.14 Erosion control

The Contractor shall take all reasonable precautions to prevent soil erosion resulting from a diversion, restriction or increase in the flow of storm water or water resulting from its operations and activities to the satisfaction of the RE/ECO/EO. Possible measures that can be considered include the following:

1) Brushcut packing
2) Mulch or chip cover
3) Straw stabilising (at the rate of one bale/m² and rotated into the top 100mm of the
4) completed earthworks)
5) Watering
6) Planting / sodding
7) Hand seeding sowing
8) Hydro-seeding
9) Soil binders and anti-erosion compounds
10) Mechanical cover or packing structures
    a) Gabions & mattresses
    b) Geofabric
    c) Hessian cover
    d) Armourflex
    e) Log/pole fencing
    f) Retaining walls
11) The Contractor shall take reasonable measures to control the erosive effects of storm water runoff.
12) The Contractor shall use silt screens to prevent overland flowing water from causing erosion.
13) The use of straw bales as filters, which are placed across the flow of overland storm water flows, shall be used as an erosion protection measure.
14) The ploughing-in of straw offers limited protection against storm water runoff induced erosion and shall be used as an erosion protection measure.
15) The Contractor shall be liable for any damage to downstream property caused by the diversion of overland storm water flows.

3.15 Dust control

DUST - generated by works

1) Sand stockpiles are to be covered with hessian, shade cloth or DPC plastic.
2) Stockpiles are to be located in sheltered areas and the usable/cut face orientated away from the direction of the prevailing wind for that season.
3) Excavating, handling or transporting erodable materials in high wind or when dust plumes visible shall be avoided.
4) If high winds prevail the Engineer shall decide whether water dampening measures or cessation of activities is required, and if necessary, they shall have the authority to temporarily stop certain of the works until wind conditions become more favourable.

Dust – generated by roads and vehicle movement

1) Vehicle speeds shall not exceed 40km/h along gravel roads or 20km/h on unconsolidated or non-vegetated areas. Dust plumes created by vehicle movement are to be monitored.
2) If access roads are generating dust beyond acceptable levels dust suppression measures must be initiated. These include, but are not limited to the following:
3) Reduction of travelling speeds along the road.
4) Restriction of the vehicle or plant usage.
5) Application of chemical soil binders.
6) Application of a suitable sacrificial road surfacing.
7) If water is to be used for dust suppression, then only the critical areas should be watered. The use of water carts or hand watering is preferable. Overhead sprayers shall not be permitted in windy conditions, as the evaporation loss is too high. Watering is to be supervised to prevent unnecessary water wastage, and runoff into potentially sensitive areas. Preferable watering times are early morning and late afternoon/ evening. Water restrictions are to be observed if in place.

3.16 Fire management

1) No open fires or naked flames for heating or cooking shall be allowed on Site. Stoves and other electrical equipment shall only be permitted in the Contractor's camp and never be left unattended.
2) The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on Site. No fires may be lit except at places approved by the Engineer/ECO/EO.
3) The Contractor shall ensure that the basic fire-fighting equipment is to the satisfaction of the Municipal Fire Chief (where applicable).

4) The Contractor shall supply all living quarters, site offices, kitchen areas, workshop areas, materials, stores and any other areas identified by the Engineer/ECO/EO with tested and approved fire-fighting equipment.
5) Fire and "hot work" shall be restricted to a site approved by the Engineer/ECO/EO
6) A braai facility may be considered at the discretion of the Engineer/ECO/EO. The area shall be away from flammable stores. All events shall be under management supervision and a fire extinguisher shall be immediately available. "Low smoke" fuels shall be used. Smoke free zoning regulations shall be considered.
7) Cooking shall be restricted to bottled gas facilities under strict control and supervision. The sensitivity of the surrounding land uses, and the occurrence of natural indigenous vegetation must be considered when assessing the risk of fires.
8) The Contractor shall take precautions when working with welding or grinding equipment near potential sources of combustion. Such precautions include having a suitable, tested and approved fire extinguisher immediately at hand and the use of welding curtains.
9) The Contractor shall identify the authorities responsible for fighting fires in the area and shall liaise with them regarding procedures should a fire start. The Contractor shall ensure that his staff are aware of the fire danger at all times and are aware of the procedure to be followed in the event of a fire. The Contractor shall also ensure that all the necessary telephone numbers etc. are posted at conspicuous and relevant locations in the event of an emergency. The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it.
10) Should a contractor be found responsible for the outbreak of a fire, he shall be liable for any associated costs.

3.17 Water management

1) The Contractor shall provide water for drinking and construction purposes until such time as it is available from the local system. Water from the local system must be used carefully and sparingly with the view of not wasting water.
2) Taps are to be attached to secure supports and leaking taps and hosepipes are to be repaired immediately.
3) Watering as dust suppression must be undertaken as a last resort. It is preferable that sand stockpiles be covered rather than watered.

3.18 Waste management

1) A waste minimisation approach must be followed. This requires recycling wherever possible. All waste, therefore, to be suitably contained and removed regularly from the site in accordance with the municipal waste management procedures. Other examples could include the use of rubble as fill, minimisation of waste concrete and the use of brush cuttings for mulching on rehabilitated areas.

2) The Contractor shall be responsible for the establishment of a refuse control and removal system that prevents the spread of refuse within and beyond the construction sites.

3) The Contractor shall ensure that all refuse is deposited in refuse bins, which he shall supply and arrange to be emptied on a weekly basis. Refuse bins shall be of such a design that the refuse cannot be blown out and that animals or birds are not attracted to the waste and spread it around. Refuse bins shall be water tight, wind-proof and scavenger-proof and shall be appropriately placed throughout the site. Refuse must also be protected from rain, which may cause pollutants to leach out. Refuse bins shall be appropriately placed throughout the Site and shall be conspicuous (e.g. painted bright yellow).

4) Refuse shall be disposed of at an approved waste site (site and method to be agreed with Local Authority). Refuse shall not be burnt or buried on or near the Site.

5) The Contractor shall provide labourers to clean up the Contractor's camp and Site on a weekly basis.

6) The Contractor shall also clean the Contractor's camp and Site of all structures, equipment, residual litter and building materials at the end of the contract.

3.19 Toilets

1) The Contractor shall be responsible for providing all sanitary arrangements for construction and supervisory staff on the site. A minimum of one chemical toilet shall be provided per 15 persons. Toilets provided by the Contractor must be easily accessible and within a practical distance from the workers. Toilets shall be located within areas of low environmental importance. The toilets shall be of a neat construction and shall be provided with doors and locks and shall be secured to prevent them from blowing over. Toilets shall be placed outside areas susceptible to flooding.

2) The Contractor shall keep the toilets in a clean, neat and hygienic condition. The Contractor shall supply toilet paper at all toilets.

3) The Contractor shall be responsible for the cleaning, maintenance, servicing and emptying of the toilets on a regular basis (by the chemical contractor). No waste to be dumped in the bush or stream. The Contractor shall ensure that the toilets are emptied before the builders' or other holidays and the waste be stored and disposed of at an appropriate place off site. The Contractor shall ensure that no spillage occurs when chemical toilets are cleaned and emptied. The Contractor shall supply a contingency plan for spills from toilets.

4) Performing ablutions in any other area are strictly prohibited.

5) The location for construction camps and toilets must be approved by the ECO.

3.20 Blasting and drilling

1) A current and valid authorisation shall be obtained from the relevant authorities and copied to the Engineer/ECO/EO prior to any blasting activity.
2) A Method Statement shall be required for any blasting or drilling related activities.
3) All Laws and Regulations applicable to blasting/drilling activities shall be adhered to at all times.
4) A qualified and registered blaster shall supervise all blasting and rock splitting operations at all times.
5) The Contractor shall ensure that appropriate pre-blast monitoring records are in place (i.e. photographic and inspection records of structures in close proximity to the blast area).
6) The Contractor shall allow for good quality vibration monitoring equipment and record keeping on Site at all times during blasting operations.
7) The Contractor shall ensure that emergency services are notified, in writing, a minimum of 24 hours prior to any blasting activities commencing on Site.
8) The Contractor shall take necessary precautions to prevent damage to special features and the general environment, which includes the removal of flyrock. Environmental damage caused by blasting/drilling shall be repaired at the Contractors expense to the satisfaction of the Engineer/ECO/EO.
9) The Contractor shall ensure that no pollution results from drilling operations, either as a result of oil and fuel drips or from drilling fluid.
10) Drill coring with water or coolant lubricants shall require a Method Statement approved by the Engineer/ECO/EO.
11) The Contractor shall ensure that adequate warning is provided immediately prior to all blasting/drilling. All signals shall also be clearly given.
12) The Contractor shall use blast mats for cover material during blasting.
13) During demolition, the Contractor shall ensure, where possible, that trees in the area are not damaged.
14) Appropriate blast shaping techniques shall be employed to aid in the landscaping of blast areas, and a Method Statement to be approved by the Engineer/ECO/EO, shall be required in this regard.
15) At least one week prior to blasting or drilling/jack hammering, the relevant occupants/owners of surrounding land shall be notified by the Contractor and any concerns addressed. Buildings within the potential damaging zone of the blast shall be surveyed preferably with the owner present, and any cracks or latent defects pointed out and recorded either using photographs or video. Failing to do so shall render the Contractor fully liable for any claim of whatsoever nature, which may arise. The Contractor shall indemnify the Employer in this regard.

3.21 Fuel and chemical management

1) No open fires or naked flames for heating or cooking shall be allowed on Site. Stoves and other electrical equipment shall only be permitted in the Contractor's camp and never be left unattended.
2) The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on Site. No fires may be lit except at places approved by the Engineer/ECO/EO.
3) The Contractor shall ensure that the basic fire-fighting equipment is to the satisfaction of the Municipal Fire Chief (where applicable).
4) The Contractor shall supply all living quarters, site offices, kitchen areas, workshop areas, materials, stores and any other areas identified by the Engineer/ECO/EO with tested and approved firefighting equipment.
5) Fire and "hot work" shall be restricted to a site approved by the Engineer/ECO/EO
6) A braai facility may be considered at the discretion of the Engineer/ECO/EO. The area shall be away from flammable stores. All events shall be under management supervision and a fire extinguisher shall be immediately available. "Low smoke" fuels shall be used. Smoke free zoning regulations shall be considered.
7) Fires within National Parks, Nature Reserves and natural areas are prohibited.
8) Cooking shall be restricted to bottled gas facilities under strict control and supervision. The sensitivity of the surrounding land uses, and the occurrence of natural indigenous vegetation must be considered when assessing the risk of fires.
9) The Contractor shall take precautions when working with welding or grinding equipment near potential sources of combustion. Such precautions include having a suitable, tested and approved fire extinguisher immediately at hand and the use of welding curtains.
10) The Contractor shall identify the authorities responsible for fighting fires in the area and shall liaise with them regarding procedures should a fire start. The Contractor shall ensure that his staff are aware of the fire danger at all times and are aware of the procedure to be followed in the event of a fire. The Contractor shall also ensure that all the necessary telephone numbers etc. are posted at conspicuous and relevant locations in the event of an emergency. The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it.
11) Should a contractor be found responsible for the outbreak of a fire, he shall be liable for any associated costs.

3.22 Contaminated water

General

1. The Engineer/ECO/EO's approval will be required prior to the discharge of contaminated water to the Municipal sewer system.
2. The Contractor shall prevent discharge of any pollutants, such as cement, concrete, lime, chemicals and fuels into any water sources.

3. Water from kitchens, showers, laboratories, sinks etc. shall be discharged into a conservancy tank for removal from the site.
4. Runoff from fuel depots/workshops/truck washing areas and concrete swills shall be directed into a conservancy tank and disposed of at a site approved by the Engineer/ECO and Local Authority.
5. The contaminated water, contaminated run-off, or effluent released into a water body requires analysis in terms of the National Water Act. Contaminated water must not be released into the environment without authorisation from the relevant authority.

Washing areas

1. Wash areas shall be placed and constructed in such a manner so as to ensure that the surrounding areas, which include groundwater, are not polluted.
2. A Method Statement shall be required for all wash areas where hydrocarbon and hazardous materials, and pollutants are expected to be used. This includes, but is not limited to, vehicle washing, workshop wash bays, paint wash and cleaning.
3. Wash areas for domestic use shall ensure that the disposal of contaminated "grey" water is sanctioned by the Engineer/ECO.

3.23 Vehicles and access roads

1) The movement of any vehicles and/ or personnel outside of the designated working areas shall not be permitted without the written authorisation of the Engineer/ECO.
2) Should the Contractor not exercise sufficient control to restrict all work to the area within the marker boundaries, then these on the instruction of the Engineer/ECO/EO shall be replaced by fencing the additional cost of which shall be borne by the Contractor.
3) Dust control measures such as dampening with water shall be implemented where necessary, as indicated by the Engineer/ECO.
4) Access and haul roads shall be maintained by the Contractor.
5) Maintenance includes adequate drainage and side drains, dust control and restriction of edge use.
6) All temporary access routes shall be rehabilitated at the end of the contract to the satisfaction of the Engineer/ECO.
7) All public roads shall be kept clear of mud and sand. Mud and sand that has been deposited through construction activities shall be cleared regularly.
8) Any materials used for layer works shall be approved by the Engineer/ECO prior to the activity commencing.
9) Damage to the existing access roads as a result of construction activities shall be repaired to the satisfaction of the Engineer/ECO/EO, using a material similar to that originally used. The cost of the repairs shall be borne by the Contractor

10) Traffic safety measures, to the satisfaction of the Engineer/ECO, shall be considered in determining entry/exit onto public roads.

11) All users of haul roads shall not exceed 45 km/h (cars)/ 15 km/h (trucks) {note that the standard spec places a site speed limit of 45 km/h for all vehicles}

12) Appropriate traffic warning signs shall be erected and maintained where applicable.

13) Trained and equipped flagmen shall be used where the access road intersects with any public roads.

14) Attention shall be paid to minimising disruption of the flow of traffic and reducing the danger to other road users and pedestrians.

15) Method statements are required for the following: -

    a) Traffic safety measures with regard to entry and exit on public roads and the control of construction traffic.

    b) The proposed route for new access roads, tracks, or haul roads; the proposed construction of new roads, and the method of upgrading existing roads; and the proposed methods of rehabilitation on completion.

3.24 Stockpiling of materials

The Contractor shall temporarily stockpile topsoil materials in such a way that the spread of materials is minimised, and thus the impact on the natural vegetation. The stockpiles must be placed within areas demarcated for this purpose. The RE/ECO/EO shall approve stockpile areas.

3.25 Heritage remains

Should any heritage remains be exposed during excavations, these must immediately be reported to the Provincial Heritage Resources Authority of the Northern Cape, SAHRA. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from SAHRA.

3.26 Contingency planning

In the event of a spill or leak of product into the ground and/or water courses (e.g. that of hazardous substances used for the construction phase), such incidents must be reported (within 14 days) to all the relevant authorities including the Directorate: Pollution Management in accordance with Section 30(10) of the National Environmental Management Act No. 107 of 1998 (NEMA) and Section 20 (3) of the National Water Act No.36 of 1998 (NWA), that pertains to the control of emergency incidents and the remediation of the affected area. All necessary documentation must be completed and submitted within the prescribed timeframes.

Containment, clean-up, and remediation must commence immediately.

3.27 Environmental Control Officer or Resident Engineer

An Environmental Control Officer (ECO) will implement environmental control of the development. The ECO duties will be as follows:

- Ensure implementation and monitoring of the EMP.
- Make changes to the EMP as required.
- Visit the site regularly on at least a weekly basis.
- Prepare reports as required by mitigation measures or by the EA.
- Maintain a photographic record of the work and environmental issues.

3.28 Documentation control

The ECO will maintain a file containing the following:

- Copy of the EMP
- Methodology statement(s) by the contractor(s)
- Site establishment plan
- Letter from the contractor(s) indicating that he has familiarised himself with the contents of the EMP.
- Letter from the contractor(s) on environmental awareness training
- The applicant must ensure that complaints received by the farm are documented.
- The contractor should maintain a copy of the following documents on-site:
    - All methodology statements;
    - Emergency response and remedial action plan;
    - Environmental Management Plan (EMP) and other documents related to the operation on the file.
- Tracking table (see Appendix B)

3.29 Decommissioning of existing evaporation ponds

The following should be outlined for decommissioning of the evaporation ponds:

- Removal of sludge to a licensed waste site in Upington
- Reuse of dam walls for the new evaporation dams.
- Rehabilitation of the small stream.

4 Management Programme – Operational

This section will only make reference to Operational Management measures.

4.1 Water Use License

If any recommendations or measures are outlined in the WULA they should be included in this section.

4.2 Water Management Section

The proposed development of the agricultural areas will in effect result in the following measures to reduce energy and water usage:

- The irrigation system to be used should be environmentally friendly and best available for water usage as per DWS recommendations.
- Test pits and data collections from these pits are taken on a regular basis to determine the moisture content for soil etc.
- Soil coverage within the vineyards with chaff.
- Regular monitoring and checks from specialists in the field to introduce the best possible irrigation practices.
- Preventative measures to reduce possible spillage or silt accumulation in lower streams from storm water accumulated during heavy rains. Placing of bales within streams in lower areas before entering streams.

4.3 Maintenance of infrastructure

The Applicant will ensure that all pump infrastructure is maintained at the water extraction point along the Orange River, to prevent leakages of hazardous substances contaminating the soil and water. Any parts that are replaced shall be removed from the site on the same day that the repair and maintenance take place.

4.4 Contingency planning

In the event of a spill or leak of product into the ground and/or water courses (e.g. that of hazardous substances used for the construction phase), such incidents must be reported (within 14 days) to all the relevant authorities including the Directorate: Pollution Management in accordance with Section 30(10) of the National Environmental Management Act No. 107 of 1998 (NEMA) and Section 20 (3) of the National Water Act No.36 of 1998 (NWA), that pertains to the control of emergency incidents and the remediation of the affected area. All necessary documentation must be completed and submitted within the prescribed timeframes.

Containment, clean-up, and remediation must commence immediately.

4.5 Storm water management

As per the Storm Water Management Plan included in Appendix D.

Appendix A: Environmental authorisation

Included once received.

Appendix B: Tracking Table

Requirement	Received		Date	Comment
	Yes	No		
Methodology statement				
Site establishment plan				
Letter re contents of EMP				
Letter re awareness training				

Appendix D: Storm Water Management Plan

Note this report is included as part of the WULA.

APPENDIX H3: WULA

DRAFT

INTEGRATED WATER USE LICENSE APPLICATION REPORT

THE RE-LOCATION OF EXISTING EVAPORATION PONDS AND THE CONSTRUCTION OF VINEYARDS ACROSS STREAMS ON PORTION 75 OF FARM KEBOES NO 37, NORTHERN CAPE

Prepared by:

Elanie Kühn

Pieter Badenhorst Professional Services

February 2019

APPLICATION FOR A LICENSE FOR THE USE OF WATER (CONTROLLED ACTIVITY) IN TERMS OF THE NATIONAL WATER ACT, 1998 (ACT NO 36 OF 1998)

TABLE OF CONTENTS

Table of Figures

List of tables

SYNOPSIS

This application is for the Applicant Newgro Farming PTY Ltd to apply for a Water Use License Application in terms of Section 21(c) and (i) of the National Water Act for the streams that were diverted and crossed as part of the illegal establishment of vineyards. The establishment of the vineyards on Portion 75 of Farm Keboes no 37 took place across small sections of the unnamed drainage system that is located on site. The drainage system is classified as an ephemeral course as it will only flow sporadically after rain. These watercourses are not considered to be seasonal rivers which will regularly contain water in a seasonal pattern.

This application is also for the applicant, Newgro Farming PTY Ltd to comply with the National Water Act (1998) under section 21 (g) by relocating and upgrading of existing sewage/evaporation ponds for the treatment of sewage from the existing worker accommodations etc. The various details pertaining to the evaporation dams are shown below in Table i.

Specifications for the sewage evaporation pond/s	
Capacity evaporation pond/s	11 364.3m³/ pond
Footprint area of all 4 dams	3.0ha
Total volume of sewage annually	11 931m³/annum

Table i: Dam specifications

The Applicant Newgro Farming PTY Ltd has 0ha of water use rights on Portion 75 of Farm Keboes no 37 on which the illegal construction across streams took place. The original license has issued the 400ha of water rights to Portion 0 of Farm Keboes no 37 to for Karsten Vrouewerkerstrust. Hereafter, the applicant subdivided the property. After a site visit and discussions with DWS, the applicant will apply for a succession in transfer and Amendment of the existing license (License no 27/2/1/D673/1/110/1) to incorporate the corrections. The corrections also included the correct property location of the dam, which is currently in the license linked to Portion 0 of Farm Keboes no 37 and should be allocated to Portion 76 of farm Keboes no 37. Water use for the property is currently 270 hectares. As part of the succession in transfer the water will be transferred, 259ha, from Portion 0 of Keboes no 37 to Portion 75 of Keboes no 37. Transfer and allocations as outlined below:

Succession in title transfer: Property transferred from	Existing water rights - Ha	Ha transferred	Property transferred to	Existing water rights ha	New allocations
Portion 0 of Keboes	400ha	259ha	Portion 75 of Keboes no 37	0	259ha
Portion 0 of Keboes	400ha	141ha	Portion 76 of Keboes no 37	0	141ha
				0	400ha
TOTAL					400ha

Table ii: Succession in transfer details

The WULA application is summarised, in the table below, for the following water usages:

(c) impeding or diverting flow of water in a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(i) altering the bed, banks, course or characteristics of a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(g) Disposing of waste in a manner which may detrimentally impact on a water resource	[Disposing of waste in a manner which may detrimentally impact on a water resource] For the disposal of waste water into evaporation ponds.

Table iii: Application details

The farms are currently irrigating their vineyards with water that is pumped directly from the Orange River at an existing abstraction point.

The drainage channel system on site has not been mapped (as a watercourse) on any of the maps that are available of the study area. However, upon request from DENC and DWS, the drainage system is seen as a watercourse. Please note: There will be NO planting of vineyards within the **larger drainage channels** most of the channels running towards the Orange River has already been modified and develop across, therefore preventing flow towards the Orange River.

The unnamed drainage system is therefore classified as an ephemeral course as it will only flow sporadically after rain. These watercourses are not considered to be seasonal rivers which will regularly contain water in a seasonal pattern. However, approximately 30ha of the site falls within an area outlined as **CBA1.**

The proposed agricultural development areas fall within the Lower Orange River catchment area. It however does not fall within any NEFPA catchment priority areas.

1. THE APPLICATION AND TECHNICAL DETAIL

1.1 The applicant

The applicant, Newgro Farming PTY Ltd is applying for a section 21 (c) and (i) for the construction of orchards/vineyards across small streams. Further applying for the section 21 (g) for the relocating and upgrading of existing sewage/evaporation ponds for the treatment of sewage from the existing worker accommodations etc. on Portion 75 of Farm Keboes no 37.

The Applicant details:
Newgro Farming PTY Ltd
PO Box 53, Kanoneiland, 8806
Tel: 054 491 9300
Fax: 054 491 9352
E-mail: bekkieva@karsten.co.za

Contact Persons: Bekkie van Aarde

1.2 The property on which the water use is intended

The proposed properties on which the expansion of agricultural activities, pipelines and associated infrastructure and the construction of the evaporation ponds took place on Portion 75 of Farm Keboes no 37, Kanoneiland. The farm gains access of the R359 through various gravel roads, see Figure 1. The site lies south of the Orange River in an otherwise flat landscape. Small ephemeral streams cross the site. The property is currently zoned Agriculture. The owner of the property is Newgro Farming (PTY) Ltd and has appointed PBPS as the independent consultant to undertake the EIA process.

Figure 1: Project Locality

1.3 Existing exemption

N/A.

1.4 Contract between Water Service Authority/Provider and the Developer:

N/A

1.5 Magisterial District and Regional Service Authority

The proposed development site lies within Kai! Garib Municipal area, in the Siyanda District Municipality in the Northern Cape.

1.6 Ownership of the land:

The land, Portion 75 of the farm Keboes no 37 is owned by Newgro Farming (Pty) Ltd.

1.7 Longitude and Latitude of the property/site:

Latitude: 28°40'04.58"S
Longitude: 2°09'02.47"E

1.8 Zoning of the land:

The proposed site is currently zoned for Agricultural Zone II.

1.9 Ownership of the adjacent/potentially impacted land:

Most of the surrounding land (north, west and east of the site) is zoned for agriculture.

1.10 Water Use License Application details

Application for a license in terms of the National Water Act, 1998 is made by the developer, Newgro Farming PTY Ltd, for the following water usages:

(c) impeding or diverting flow of water in a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(i) altering the bed, banks, course or characteristics of a watercourse	For the construction of agricultural areas and evaporation ponds across ephemeral streams/natural drainage areas.
(g) Disposing of waste in a manner which may detrimentally impact on a water resource	[Disposing of waste in a manner which may detrimentally impact on a water resource] For the disposal of waste water into evaporation ponds.

Table 1: Water Use License activities triggered

1.11 Existing lawful water use and development on the property

The Applicant Newgro Farming PTY Ltd has 0ha of water use rights on Portion 75 of Farm Keboes no 37 on which the illegal construction across streams took place. The Farm Portion 0 of Keboes no 37 has 400ha of water use rights in the name of Karsten Vrouerwerkstrust. The original license has issued the water rights to Portion 0 of Farm Keboes no 37. Hereafter the applicant subdivided the property. After a site visit and discussions with DWS, the applicant will apply for a succession in transfer and Amendment of the existing license (License no 27/2/1/D673/1/110/1) to incorporate the corrections. The corrections included the correct property location of the dam, which is currently in the license linked to Portion 0 of Farm Keboes no 37 and should be allocated to Portion 76 of farm Keboes no 37. Water use for the property is currently 270 hectares. As part of the succession in transfer the water will be transferred, 259ha, from Portion 0 of Keboes no 37 to Portion 75 of Keboes no 37. Transfer and allocations as outlined below:

Succession in title transfer: Property transferred from	Existing water rights - Ha	Ha transferred	Property transferred to	Existing water rights ha	New allocations
Portion 0 of Keboes	400ha	259ha	Portion 75 of Keboes no 37	0	259ha
Portion 0 of Keboes	400ha	141ha	Portion 76 of Keboes no 37	0	141ha
				0	400ha
TOTAL					400ha

Table 2: Corrections as part of succession in transfer

1.12 Details of the water use intended

1.12.1 Section 21c & i –impeding and diverting flow in a watercourse; and altering the bed, banks, course or characteristics of a watercourse.

1.12.1.1 Portion 75 of Farm Keboes no 37

The drainage channel system on site has not been mapped (as a watercourse) on any of the maps that are available of the study area. However, upon request from DENC and DWS, the drainage system is seen as a watercourse. See Figure 2, the development layout showing the streams crossing the site. There will be NO planting of vineyards within the **larger drainage channels** most of the channels running towards the Orange River has already been modified and develop across, therefore preventing flow towards the Orange River.

The unnamed drainage system is therefore classified as an ephemeral course as it will only flow sporadically after rain. These watercourses are not considered to be seasonal rivers which will regularly contain water in a seasonal pattern. However, approximately 30ha of the site falls within an area outlined as **CBA1.**

The proposed agricultural development areas fall within the Lower Orange River catchment

area. It however does not fall within any NEFPA catchment priority areas.

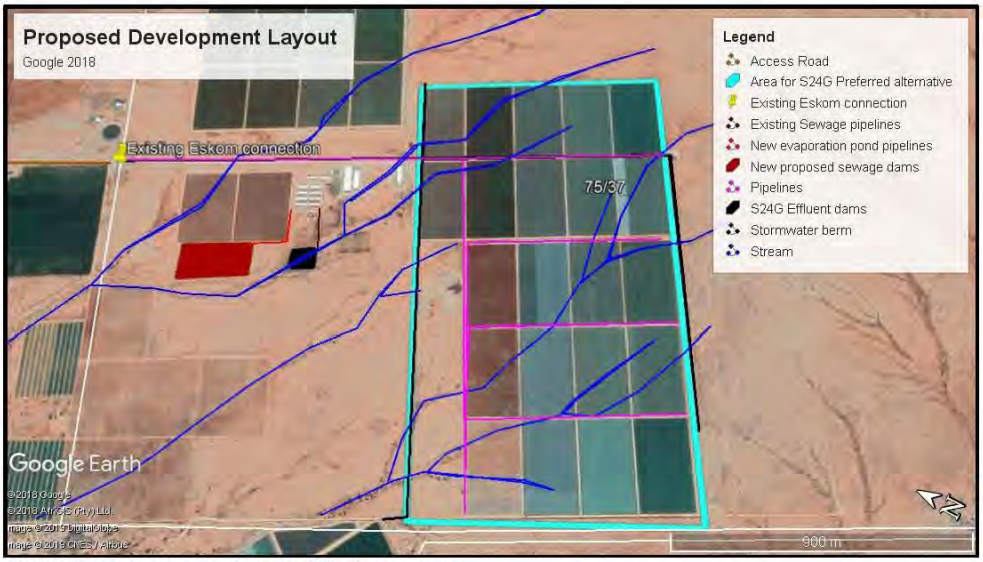


Figure 2: Ephemeral streams/drainage areas

1.12.1.2 Present Ecological Status (PES) & Ecological Importance Sensitivity (EIS)

Reference is made to the Draft Department of Water and Sanitation (DWS) Report (dated August 2016): "Determination of Ecological Water Requirements for Surface Water (rivers, estuaries and wetlands) and groundwater in the Lower Orange WMA; Report No. RDM/WMA06/00/CON/COMP/2016)1.

This Report provides the PES and EIS of the Orange River at EWR 02, located upstream of the confluence of the water courses that flow into the Orange River from the project site, and at EWR 03, downstream of the Augrabies Falls and downstream of the confluence of the watercourses that flow into the Orange River from the project sites.

Refer to Figure 3 below for the location of the Project Site (Portion 75 of Farm Keboes no 37) in relation to EWR 02 and EWR 03.

EWR 02 and EWR 03 both have a:

- PES of C (Moderately Modified); and,
- EIS as High (the river in terms of biota and habitat may be sensitive to flow modifications but in some cases may have a substantial capacity for use.)

Figure 3: Extract of map that shows the locality of the EWR sites in context of the MRUs (referenced from Figure 3.1 in Report No. RDM/WMA06/00/CON/COMP/2016).

The drainage channel system is located in a sub-catchment of an unnamed tributary, the tributary is not really a river, but more fits the description of a mostly dry drainage line. The overall all analysis according to DWS: PES & EIS Desktop Assessment is that the site was not assessed, and the ecological importance of the River is very low. Because it was not assessed fall back to the overall assessment for the EWR:02, which refers to moderately modified.

1.12.1.3 Irrigation of any land

The new corrected water allocation will be pumped directly from the canal and irrigated onto the vineyards/orchards or pumped to the existing storage dam on Portion 75 of Farm Keboes no 37. The new irrigation areas will be located on Portion 75 of Keboes no 37. The new water allocation for Portion 75 of Keboes no 37 will be 3 600 000m³/a and the new development area on the property is 142ha of vineyards.

1.12.2 Section 21g – Disposing of waste in a manner which may detrimentally impact on a water resource

1.12.2.1 Percentage of area served which is unsewered

The pack house and youth hostel are both sewered with septic tank systems. The septic tank from the youth hostel, as well as the overflow from the pack house septic tanks is directed to the evaporation ponds.

1.12.2.2 Percentage of area served which is sewered/to be sewered

The pack house and youth hostel are both sewered with septic tank systems

1.12.2.3 What type of network is in place/will be installed

The existing waste disposal system consists of three evaporation ponds. The evaporation dams are cascading, and the last dam only contains a small amount of wastewater. See Figure 10 below for the engineering designs for the evaporation ponds. The evaporation ponds are not lined, and it was indicated in the audit report that the evaporation dams have not been cleaned to date and that the sludge layer in the dams helps to seal the dams.

The proposal is rectifying the illegal construction of the original ponds (Figure 4) and to replace them with the new ponds (Figure 4: Existing dams) which is situated adjacent to the stream and not within the stream. The new ponds will be lined and comply with standards so as to allow seepage into the groundwater.
The various details pertaining to the evaporation dams are shown below in Table 2.

Specifications for the sewage evaporation pond	
Capacity evaporation pond/s	11 364.3m³/ pond
Footprint area of all 4 dams	3.0ha
Total volume of sewage annually	11 931m³/annum

It is strongly recommended that flow meters be installed so that the exact amount of effluent entering the evaporation dams be measured. Alternatively, because flow meters are expensive, the effluent pump hours and pump characteristics could be used to calculate monthly flows. It has been already been shown that 173m³ waste water/day is distributed to the evaporation ponds per day.

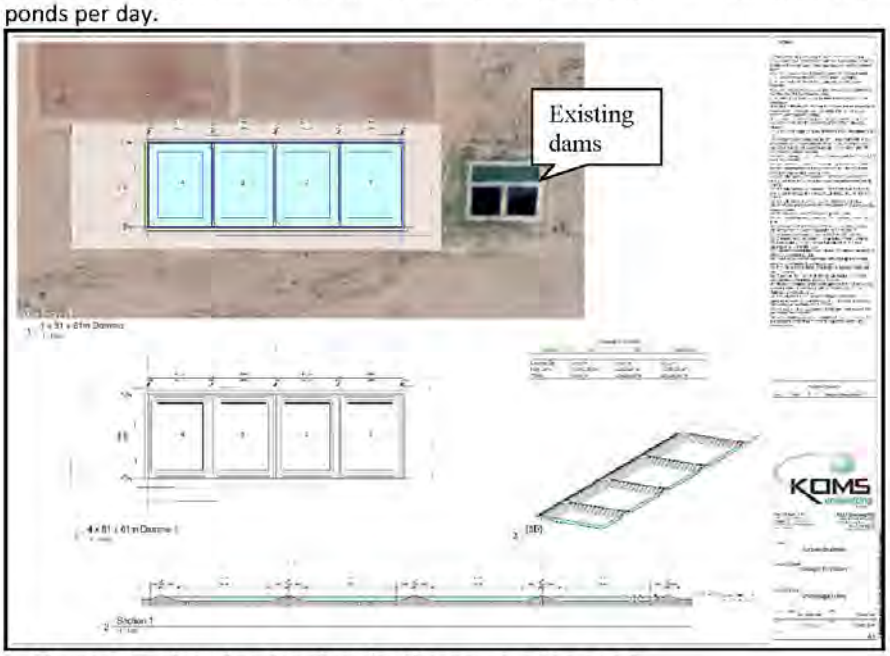


Figure 4: Engineering drawings for the evaporation ponds

1.12.2.4 Location of sewers

The location of the evaporation ponds are shown below in Figure 5.

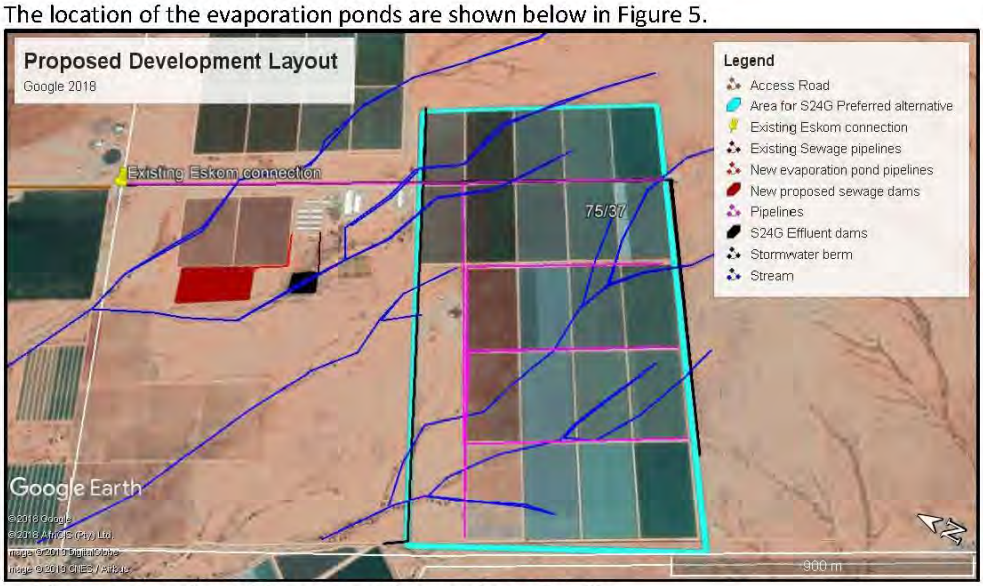


Figure 5: Location of the evaporation ponds on the site

1.12.2.5 Nature of sewage

Wastewater generated at the pack house (including wastewater from the crate washer) as well as sewage overflow from the septic tank installed at the Newgro pack house and the septic tank installed at one of the farm hostels is directed to four evaporation dams situated approximately 200 metres away from the Newgro pack house in a fenced area.

Therefore, wastewater from the following sources is stored in the three evaporation ponds.

1) Water from the crate washer (Dec – Jan)
2) Septic tanks from the farm hostel, (Sept – Jan)
3) Sewerage overflow from pack house septic tanks (Dec – Jan)

The pack house **six to seven weeks per year** and youth hostel is only used for **5months** of the year –between September and January. During the months of September until November there are approximately **500** people who stay in the hostel and work in the pack house. During the harvest time (December and January) there is approximately **1000** people a day in the hostel and pack house.

The waste water volumes flow to the three evaporation ponds from the following sources:

1. Water from the crate washer amounts to **500L/day**
2. Septic tanks from the farm hostel, = **100L/day/person**
3. Sewerage overflow from pack house septic tanks. This overflow is approximately **15L/day/person**

1.12.2.6 Domestic

As can be seen from the tables below, the waste water component that flows to the evaporation dams amounts to approximately **11928m³/a.** The evaporation dams' capacity amounts to **45 457,2m³/a** and the evaporation rate in Upington to **43480.8m³/a**. The high evaporation rate for Upington means that the effluent volume never exceeds the evaporation dams' capacity.

Table 3: Amount of water routed to the evaporation ponds

Sewerage Component	L/Day	Per Person	Days per month	Months per year	Sewerage amount m³/a
Crate Washer (pack house)	500	1	24	1.5	18
Septic tanks (farm hostel) during **(Dec- Jan)**	100	1000	30	2	6000
Septic tanks (farm hostel) during **(Sept - Nov)**	100	500	31	3	4650
Septic tanks (pack house) during **(Dec- Jan)**	15	1000	24	2	720
Septic tanks (pack house) during **(Sept - Nov)**	15	500	24	3	540
Total					**11928.0**

Table 4: The evaporation rate of the evaporation ponds

	Length (m)	Breadth (m)	Depth (m)	Capacity (m³)	Evaporation rate (m/a)	Evaporation loss per annum (m³/a)
Dam 1	81	61	2,3	11 364,3	2,2	10 870.2
Dam 2	81	61	2,3	11 364,3	2,2	10 870.2
Dam 3	81	61	2,3	11 364,3	2,2	10 870.2
Dam 4	81	61	2,3	11 364,3	2,2	10 870.2
Total				**45 457,2**		**43480.8**

The evaporation dams are cascading, and the last dam only contains a small amount of wastewater. See Figure 10 above for the engineering designs for the evaporation ponds. Wastewater generated from crate washing is no longer disposed of as storm water but enters the septic tank of the hostel from where it is directed to the evaporation dams. The existing evaporation ponds are not lined, and are located within a stream, therefore the proposal to develop the new evaporation ponds.

From the tables above, it can be surmised that the wastewater and domestic effluent (sewage) disposed of by the facility **will** evaporate during the course of a year and that the evaporation dams are of adequate volume and surface area.

It is strongly recommended that flow meters be installed so that the exact amount of effluent can be measured. Alternatively, because flow meters are expensive, the effluent pump hours and pump characteristics could be used to calculate monthly flows. It has been already been shown that **173m^3 waste water** is distributed to the evaporation ponds **per day**.

Water is abstracted from the Orange River and temporarily stored in a dam (ca. 25 000 m^3) for use on the farm and in the pack house. Water is treated before use in the pack house. The abstraction of 6 000 000 m^3 water per annum from the Orange River for irrigation purposes is licensed (license. no. 27/2/1/D673//1/110/1) as a water use with the Department of Water and Sanitation or DWS (See Appendix B).

No washing of produce takes place at the pack house and those small amounts of wastewater is generated from cleaning the pack house floors, walls, tables, equipment, hand washing as well as crate washing. Water from the crate washer is no longer directed towards the stormwater system but to the evaporation ponds. The pack house is only operational from the first week in December to January.

Wastewater generated at the pack house (including wastewater from the crate washer) as well as sewage overflow from the septic tank installed at the Newgro pack house and the septic tank installed at one of the farm hostels is directed to four evaporation dams situated approximately 200 metres away from the Newgro pack house in a fenced area.

Therefore, wastewater from the following sources is stored in the four evaporation ponds.
1) Water from the crate washer (Dec – Jan)
2) Septic tanks from the farm hostel, (Sept – Jan)
3) Sewerage overflow from pack house septic tanks (Dec – Jan)

Solid waste disposal

The evaporation ponds currently on site is not lined, and it is currently not able to handle the capacity. The new proposed dams will be able to manage the capacity, no sludge will be removed.

Water use

Sources of water

Karsten Boerdery (Pty) Ltd has an existing registration to abstract 3 000 000m^3/annum from the Orange River (see Annexure 2), this water is temporarily stored in dams (capacity 25 000 m^3) for use on the farm and in the pack house. It is strongly recommended that flow meters be installed so that the exact amount of effluent can be measured. Alternatively, because flow meters are expensive, the effluent pump hours and pump characteristics could be used to calculate monthly flows. It has been already been shown that 1m^3 waste water is distributed to the evaporation ponds per day, and therefore General Authorization applies.

A water meter is installed on the incoming line to the Newgro pack house. Water meter readings were never recorded in the packing seasons. However, since the 2018/19 packing season, water meter readings were recorded on a weekly basis for the duration of the packing season. Water meter readings include water used for toilets, hand washing, cleaning (inside the pack house, harvesting equipment and crates) as well as a small amount of water used for watering the garden around the pack house. No laundering is done at the pack house. If water consumption also takes place after the packing season, water meter readings should be recorded on a weekly basis throughout the year.

1.13 Existing Lawful Water Uses

Karsten Boerdery (Pty) Ltd has an existing registration to abstract 3 000 000 m^3 water per annum from the Orange River for irrigation purposes and this use is registered (reg. no. 25039431) with the Department of Water and Sanitation or DWS (See Appendix B). The water is stored in stored in dams (capacity 25 000 m^3) for use on the farm and in the pack house.

1.14 Groundwater:

No ground water will be used.

1.15 Storm water Management

1.15.1 Management of Agricultural areas:

1.15.1.1 Introduction

This section in the report is intended to provide the Department of Water Affairs with all necessary information to assess the suitability of the measures to be taken by Newgro Farming PTY Ltd regarding the successful storm water management of the proposed irrigation/agricultural development. This section describes the various infrastructure items that are/were to be constructed and the storm water management objectives that the land-owner will undertake to ensure sustainable management of the constructed storm water infrastructure. Find attached F2 the Storm water Management Plan.

1.15.1.2 Mitigation Measures:

The main issues to be addressed with mitigation measures include

1. Design
2. Irrigation
3. Nutrients (fertilisers)
4. Spraying (pesticides)
5. Storm water channels
6. Pipelines
7. Erosion control
8. River pump station

1.15.2 Design

The design of vineyard blocks took into account the natural flows and minimise impacts on the ephemeral streams. A storm water channels divert flow around the planted blocks towards the diversion channel, see Figure 6. Flow entering the diversion channel will then flow downstream and naturally enter an existing stream.

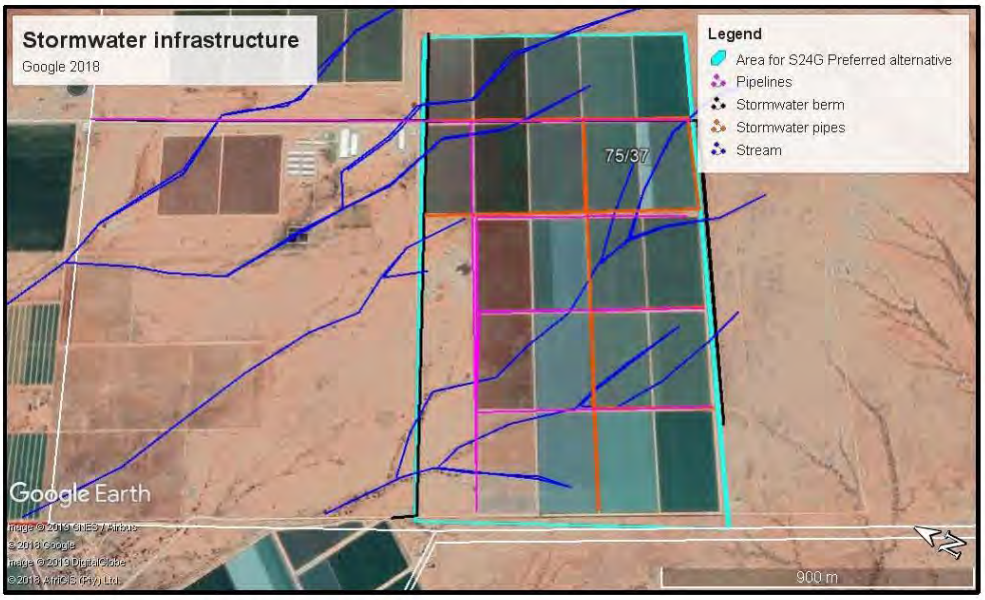


Figure 6: Stormwater infrastructure

1.15.3 Irrigation

In order to prevent over irrigation, which might lead to water flows creating erosion and or transporting nutrients to the retained ephemeral streams, good farming practises such as irrigation on demand should be utilised.

In addition, the use of mulching should be used to reduce evaporation losses. The mulch also serves to retain moisture and prevent erosion near the plants at the source of irrigation; microjet or drip.

A typical example with mulching along the planted rows and planting between rows is shown below in Figure 7.

Figure 7: Mulching and planting between rows

1.15.4 Nutrients

Nutrients are usually applied in the irrigation water. Every effort must be made to only apply as required by the plant and soil.

Should fertiliser powder or pellets be used and applied by hand or machine it must only be placed along the vine plants and no mess or waste between rows should be allowed.

Powder or pellet fertiliser may not be spilled between vine rows or on access roads between the vine blocks. Should this happen it must be picked up and removed immediately.

1.15.5 Spraying

Spraying of pesticide is normally applied by machine as a vapour. The main potential source of pollution would be from spillages. Therefore, filling of the spray machine must be done in a safe area where pollution of the soil would not be possible. The best place would be on a concrete area where the pesticide is mixed with water.

1.15.6 Storm water channels

As shown in the Storm water management Layout Plan, the black lines indicated are the storm water berms/channels constructed to accumulate the storm water, the orange lines indicate the drainage pipes from the agricultural areas that flow towards the storm water channels, see Figure 6. The storm water channel flows towards a natural drainage area, from where it flows towards the Orange River.
It should be noted that no dissipation/retention structures other than the storm water channels and drainage pipelines are included to prevent erosion and storm water accumulation. However, natural vegetation has over time accumulated within the channels and does reduce flow. The storm water channels are deep enough to prevent overflow and erosion.

1.15.7 Pipelines

The proposed new pipelines to the irrigation areas will run along the site boundary, the only sections of the pipeline that will affect the streams is shown in Figure 6, this is within the existing development areas. Care will be taken to prevent any future impediment of flow related to this pipe, as the pipes were constructed below the ground. Find included in Appendix C the pipeline method statement for construction of pipelines (PVC Pipes) below ground. The following mitigation measures should be implemented for work on the pipelines:

- Care will be taken to only construct the pipelines during the dry seasons
- As far as possible the section of the pipeline across/within the stream should be done manually, no machinery, resulting in the lowest possible impact.
- Infilling with original soils (as per method statement)
- Flow meters must be equipped on the pipelines. -protective measurement on water losses. This must be monitored on a regular basis and records kept on site.

1.15.7.1 Erosion control

Erosion would normally occur with the following:

1. Over irrigation which create water flows from the planted rows to the area between the rows and then to roads between the blocks.
    a. For mitigation see (3) below.
2. Pipe breakages where water will wash from the plants to the area between the rows to the roads between blocks and from where water can flow towards the retained ephemeral streams – thereby causing erosion gulleys.

a. For mitigation see (3) below.

3. Rain events where the water will flow down slope to reach the ephemeral streams and along the way cause erosion where development took place; that is – between the planted rows and along the roads between blocks.
    a. Mitigation include the following:
        i. Mulching and planting/mulching between rows – see Figure 8 for typical example.
        ii. Scarifying of soil between planted blocks and roads to create a soft/rough area to retain moisture and prevent erosion – see Figure 9.

Figure 8: Scarifying of soil

iii. Create a buffer with natural vegetation between the planted blocks and roads as shown in Figure 9.

Figure 9: Buffer areas with natural vegetation between blocks and roads

Overall therefore, the natural approach is preferred whereby mulching, planting and natural buffer areas are used to serve as mitigation to prevent flows that could create erosion. This has the further advantage that it also acts against spreading of nutrients and pesticides.

1.16 River pump station

The existing pump station located from river on Belle Rio Lifestyle Estate, see Figure 10.

Figure 10: Existing pump station

1.17 Plough certificate

The available Plough Certificate of 2009 does not cover the majority of the planted areas. Plough Certificate required for all planted areas, see Figure 11.
Find included in Appendix N the existing Plough certificate, the requirements will be discussed with Department of Agriculture, Forestry and Fisheries.

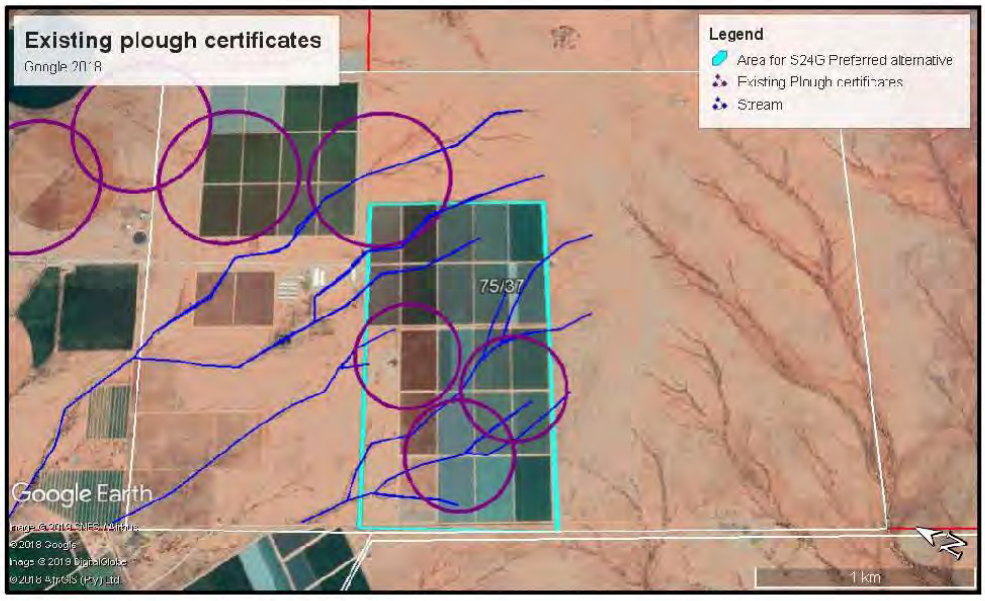


Figure 11: Existing Plough certificate areas

2. Description of the Environment

2.1 Climate

The climatic conditions of this region of the Northern Cape are typical of conditions characteristics of semi—desert / arid savannah areas. The area is characterised by fluctuating temperatures, low and unpredictable rainfall and high evaporation rates. The low annual rainfall (average of 170 — 240 mm in Upington or even lower in some surrounding areas) is significantly lower than the evaporation rate. Rainfall usually occurs during the late spring and summer months.

The area experiences high temperatures, especially in the summer months, where daily maximums of >42°C are experienced. The annual evaporation in the area is approximately 2 281 mm. Winter temperatures can drop to below 4°C. Frost is rare, but occurs occasionally in most years, though usually not severely.

Weather data was received for the Upington area for the time period 2001 — 2005. Figure 12 gives an indication of the average monthly temperatures and humidity over the 5-year period.

Month	Average Temperature (°C)	Maximum Temperature (°C)	Minimum temperature (°C)	Humidity (%)
January	28.22	41.30	14.04	31.42
February	28.37	39.90	15.96	36.00
March	25.76	38.74	11.48	41.84
April	21.24	34.36	6.92	50.39
May	16.80	31.16	1.66	46.22
June	12.62	26.60	-2.78	47.97
July	12.42	27.26	-2.16	41.22
August	14.10	32.00	-2.10	38.96
September	18.64	36.38	2.42	32.95
October	22.95	38.32	6.00	30.07
November	25.45	39.14	10.72	32.27
December	27.41	40.16	14.04	26.65
Average	**21.16**	**35.44**	**6.35**	**38.00**

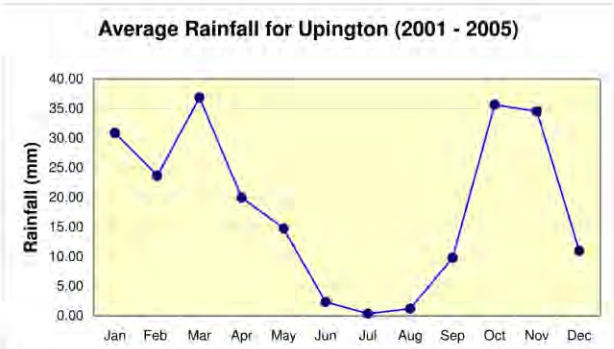


Figure 12: Average monthly rainfall and daily temperatures

2.2 Topography

The area is characterized by flat terrain and is, in general, an area of little topographical relief. Isolated hills and mountains can be found in the area. The area surrounding Upington can be described as large sandy plans with windblown sand dunes and low hills breaking the flat relief.

2.3 Geology and Soils

The soils of most of the area are red-yellow apedal soils, freely drained, with a high base status and <300 mm deep, with about one fifth of the area deeper than 300 mm, typical of Ag and Ae land type.

2.4 Natural vegetation and plant life

According to Namakwa District Biodiversity Sector Plan (2008), the development encroaches on an ecological support area (ESA) (yellow) which was established as a terrestrial migration corridor associated with the Orange River corridor. However, it must be noted that most of this corridor in this vicinity is compromised as a result of existing agricultural development. Most of the neighbouring areas to the west, north and east of the site have already been transformed into agricultural land. To the east of the development site is a small area (app. 30ha) that is established as CBA1, see Figure 13 below. Note however, the upstream catchment area has already been highly modified.

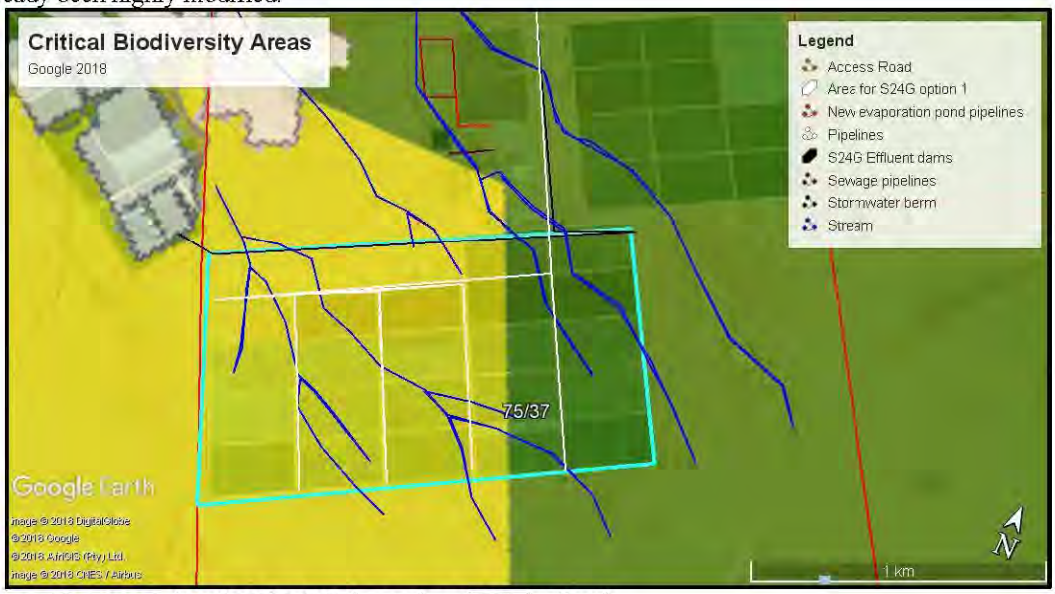


Figure 13: Layout showing the CBA (green) and ESA (yellow)

2.5 Land use

Most areas in the wider study area do not have a high agricultural potential, except few portions in the alluvial zones close to the Orange River, where irrigation may be practiced. In addition, there are also severe climatic restrictions to agricultural potential. Rainfall is very low, while evaporation is extremely high, due to the high temperatures. For this reason, even the best soils are unsuited for dryland agriculture under these conditions.

Land use of the uncultivated areas is predominantly livestock farming, with overgrazing evident in many areas. The grazing capacity of the natural grasslands of the plains can vary between 25 and 35 hectares per large stock unit (equal to 3.5 to 5 hectares per small livestock unit).

2.6 Surface water

Names of watercourses:
The Orange River is located approximately 3km to the north of the site. No rivers flow through the property.
The Orange River is the primary water resource for the area. This river is used extensively for irrigation and is heavily cultivated along its banks. Crop production is reliant on water availability and irrigation potential, and therefore the reliance on the available water supply is great. Abstraction from the river and water storage in reservoirs is common at many sites where it is mainly used for irrigation purposes within the areas flanking the Orange River.

Surface water use
No surface water will be used during the operation of this project.

Presence of wetlands:
No specific wetland areas have been identified.

2.7 Groundwater

No ground water will be used.

2.8 Air quality

No significant impact on the present conditions, which could be classed as fairly good air quality.

2.9 Noise

There will be no significant contribution to noise from any planned activities.

2.10 Sites of archaeological interest

The site is already disturbed by the existing evaporation ponds.

2.11 Sensitive landscapes

The site is already disturbed by the existing evaporation ponds.

2.12 Visual aspects

The site is already disturbed by the existing evaporation ponds. Agricultural development in an existing agricultural area.

2.13 Regional socio-economic structure

Population:

The total population of Kai! Garib Municipality is **65 869.** The total households are estimated at 16 703 and of these 34.6% is female headed households. The average household size is 2.9 people.

Economic activities:

The Orange River played an enormous role in the formation of the municipal area and most of the towns and settlements are to be found close to or adjacent thereto. The economy is heavily depended on the Agricultural Sector, both intensive and extensive. However the major roads (N14, R27 and R359) assist in the growth the municipal area experience.

It is important to note that new opportunities have opened up for Kai! Garib municipal area since the need to facilitate the generation of sustainable energy was introduced in South Africa by Eskom and the South African government. According to SDF, Kai! Garib Municipality immediately became a hotspot for Solar Energy developments and numerous developments are currently in process and the resulting economic spin-offs are eagerly anticipated. Although the Solar Corridor, as identified by the PGDS and NCPSDF, does not include the N14 between Upington and Kakamas, current developments indicate that this area will form the centre of solar development. Figure 14 below shows the economic sectors most active. The various sectors will then further be discussed in more detail:

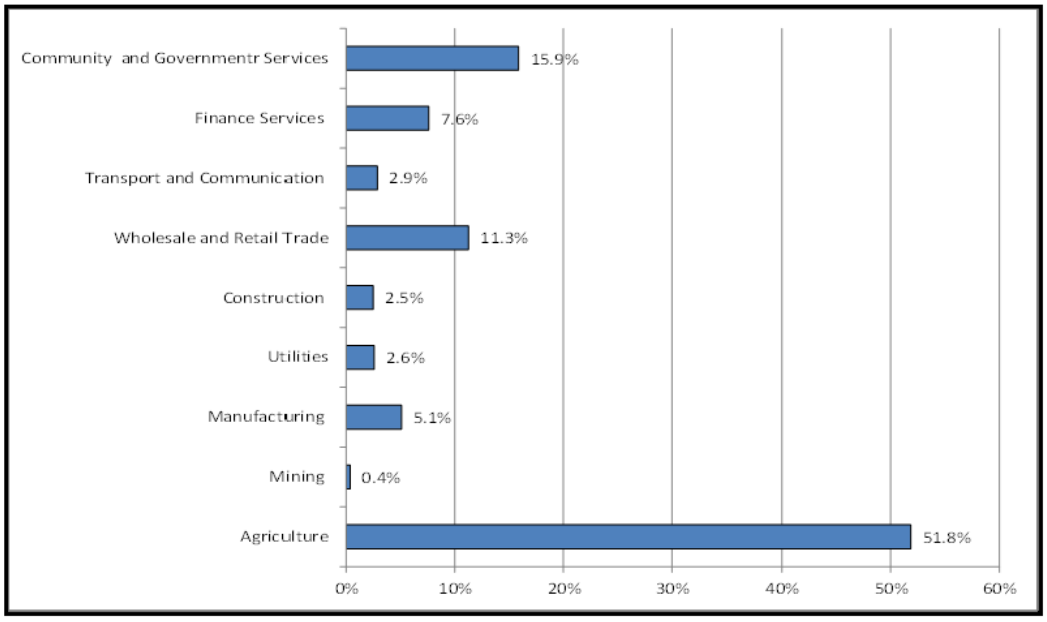
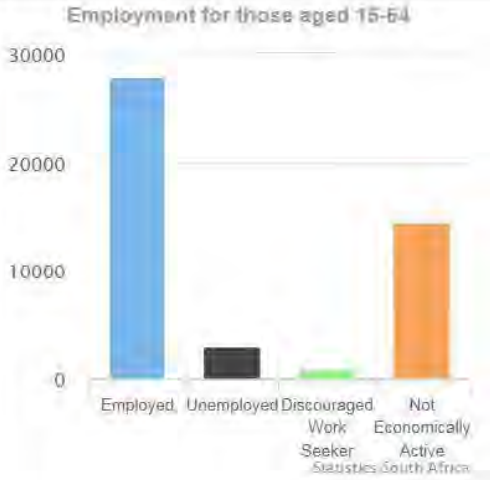


Figure 14: Active economic sectors in the study area

Employment and Income

Of the population, 30 949 people are economically active (employed or unemployed but looking for work), and of these, 10% are unemployed. Of the 19 375 economically active youth (15 – 35 years) in the area, 10% are unemployed as shown in Figure 15 below.



Income	Percentage
None income	6,1%
R1 - R4,800	2,3%
R4,801 - R9,600	4,5%
R9,601 - R19,600	25,7%
R19,601 - R38,200	26,7%
R38,201 - R76,4000	18,1%
R76,401 - R153,800	8,1%
R153,801 - R307,600	4,9%
R307,601 - R614,400	2,6%
R614,001 - R1,228,800	0,6%
R1,228,801 - R2,457,600	0,3%
R2,457,601+	0,2%

Figure 15: Economic profile of the study area

Water supply and sanitation:

Kai! Garib Municipality experience huge problems with sanitation in all of the 9 wards. Many settlements are currently making use of the VIP systems which are currently full and posing health risks to communities. The worse affected areas are Riemvasmaak, Keimoes, Alheit, Augrabies, Lutzburg and Marchand. Almost all informal settlements in Kai! Garib does not have a decent sanitation system.

The municipality launched a pilot program to address the situation. The program proved successful but could not be fully implemented due to a lack of funding. It is also important to note that all informal settlements have no access to any form of sanitation. The sewerage systems within the formal areas or the main towns Keimoes, Kakamas and Kenhardt are currently under much strain and needs to be upgraded. Figure 16 summarise the needs in terms of sanitation in the various wards.

Toilet Facility	Percentage
None	11,9%
Flush toilet (connected to sewerage system)	59,6%
Flush toilet (with septic tank)	12,4%
Chemical toilet	0,1%
Pit toilet with ventilation	5,5%
Pit toilet without ventilation	9,1%
Bucket toilet	0,5%
Other	0,9%

Figure 16: Water supply and sanitation in the study area

Power supply:
The municipality are currently only distributing electricity within the three main towns. The smaller settlements around the three main towns are served by Eskom directly. The challenge however still exist that some of the households within the settlements don't have any access to electricity or electrified. The informal areas within the municipality are posing a great challenge in terms of providing electricity. Households without access to electricity usually make use of wood for fire and candles and paraffin for lighting. All informal settlements are not fully electrified. The need of bulk electricity services also poses a challenge to areas such as Kakamas, Keimoes and to a lesser extends Kenhardt. Reticulation on the Greenfields plots in Kakamas need and installation of bulk service before any reticulation connections can take place. These sources pose various dangers and environmentally unsustainable. The municipality are however very optimistic about the future due to the rise of Solar Energy Developments in the municipal area. The climate of the municipal area is favourable to this environmental friendly source of energy.

Housing
The municipality has indicated that there is a pressing need for houses, especially low cost houses, as well as serviced plots within all of the communities within the Kai !Garib Municipal Area. However, it is quite satisfying to see that a great deal of progress was made in the delivering brick houses to communities since 1994. Unfortunately, the communities need for houses exceed the speed at which houses are built on individual erven.

According to the Census 2011 (Stats SA) 88.4 % of the population live in formal dwellings and 43.1 % households live in houses which they own and have fully paid off. However, according to

service delivery data from the Municipality, the number of informal settlements is growing overnight and the demand for service provision in these areas pose great challenges. The Housing Sector Plan is currently under review. According to the Human Settlement Plan 2012 the housing need is as follow in Figure 17 below:

Table 14.1: Population & Households per ward in 2015

WARD	Population 2015	Households 2015
Ward 1	11 408	3 044
Ward 2	8 191	1 892
Ward 3	9 317	2 044
Ward 4	6 375	1 680
Ward 5	5 499	1 566
Ward 6	7 684	1 730
Ward 7	4 856	1 299
Ward 8	5 660	1 782
Ward 9	6 679	1 666
Total	65 869	16 703

Source: StatsSA, Census 2011

Figure 17: Housing need in the study area

2.14 Interested and Affected parties

The WULA will be distributed to I&AP's form 15 February 2019 until 16 April 2019. An advertisement was placed in the Gemsbok on 15 February 2019.

2.15 Industrial activity

The evaporation ponds do not receive waste water from industrial activities, only domestic use waste water as well as water from the crate washer.

3. CONSIDERATIONS AND ASSESSMENT CRITERIA

Management actions in the Development of an Integrated Water Quality Management Strategy for the Upper and Lower Orange Water Management Areas for the Lower Orange Water Management Area include the following:

Area 1: Boegoeberg to Kanon Islands

It is the vision of all interested and affected parties within Visioning Area 1:

To contribute towards the integrated management of the surface and groundwater resources in all LOWMA catchments between Douglas and Boegoeberg Dam, to secure sufficient water that is fit for all beneficial uses, specifically including domestic and variable agricultural use, and to support a healthy aquatic ecosystem, particularly for ecological sensitive areas such as the Douglas Conservancy.

Area 2: Boegoeberg to Kanon Islands

It is the vision of all interested and affected parties within Visioning Area 2:
(Kakamas/Augrabies/Keimoes falls within this area)

To contribute towards securing suitable water supplies of qualities for all LOWMA catchments between Boegoeberg and Kanon Islands, that will sustain:

- a thriving table grape export marked and wine production;
- local agricultural activities via an extensive irrigation canal system;
- a thriving stock farming industry;
- domestic and light industrial water use in all towns, specifically including Upington;
- supplying water to rural communities via both the Kalahari West and Karos- Geelkoppan water supply schemes.

Area 3: Kanon Islands to Pella It is the vision of all interested and affected parties within *Visioning Area 3:* To promote the participatory and integrated management of all water resources pertaining to the LOWMA catchments situated between Kanon Islands and Pella in order to ensure that water supplies are of an acceptable quality to all water users, in particular to sustain a prominent conservation and ecotourism industry, as well as livestock and private game farming, while allowing room for beneficial water use.

Other legislation and guidelines that have been considered includes the following:

- The Constitution Of South Africa Act No.108 Of 1996
- The National Environmental Management Act, 1998 (Act No. 107 Of 1998)
- The National Heritage Resources Act, 1999 (Act No. 25 Of 1999)
- Conservation Of Agricultural Resources Act No 43 Of 1983
- Subdivision Of Agricultural Land Act, 1970 (Act No. 70 Of 1970)
- Urban Structure Plan for the Cape Metropolitan Area, Volume 4:Paarl/Wellington Region
- National Environmental Management: Biodiversity Act (Act 10 Of 2004)
- Planning Legislation And Guideline

3.1 The reserve

The Department of Water Affairs and Forestry have recently completed the reserve determination for the Berg River: Directorate of Scientific Services in Pretoria.

From the reserve determination it could now be ascertained by your department as to the availability of water for the allocation of the water usages requested as per the issue of a license to the applicant.

3.2 The class and resource quality objectives of the water resource

These aspects could only be addressed and commented on by the Department of Water Affairs.

3.3 The strategic importance of the water to be authorized

This water use has no strategic importance.

3.4 The existing lawful water use in the catchment under consideration

This authorization will have no impact on any existing lawful water use within the investigation area. Please see attached letter from the Kakamas Water Users Associations confirming that the water allocation can be transferred (Appendix B).

3.5 The likely effect of the water use to be authorized on the water resource and on other water users in the catchment

This application, managed by DWS: Upington, will have little effect on the quantity of water available from within the catchment.

3.6 The impact on the environment

The impacts and mitigation measures are summarised in the table below:

Water Uses	Potential Impact on	Proposed Mitigation Measures	Review of the adequacy of suggested mitigation measures
Section 21 (c&i)	New irrigation areas associated with the additional water use rights	Low positive • Measures should be implemented to reduce water use within the proposed development, such as the use of tension meters to avoid over irrigation of the soils. • Environmental education programs for workers will ensure that they will be sensitive to the environment and report incidents such as leaking taps, broken irrigation systems, etc. • The irrigation system to be used is DFM method along with irri-check calibrations and recommendations. • Test pits and data collections from these pits are taken on a regular basis to determine	Mitigation measures adequate to ensure positive impact takes place.

		the moisture content for soil etc. • Soil coverage within the vineyards with chaff. • Regular monitoring and checks from specialists in the field to introduce best possible irrigation practices.	
Section 21 (c&i)	Water Quality	• No impact on water quality, as construction will be conducted outside the rainfall season. (Replanting) • No flow from agricultural areas as storm water berms will be constructed as far as possible. (Replanting) • Measures should be implemented to reduce water use within the proposed development, such as the use of tension meters to avoid over irrigation of the soils.	Mitigation measures adequate to ensure impacts are fully mitigated.
	Impeding and diverting flow within ephemeral streams.	Low negative • The natural drainages areas and small ephemeral stream will be filled in and vineyards established on these areas, therefore a low negative impact on surface water flow. • This will however be mitigated by establishing a storm water management mitigation measures, outlined in the SWMP.	Mitigation measures adequate to ensure impacts are fully mitigated.
Section 21 (g)	Decommissioning of existing evaporation ponds	• Removal of sludge to a licensed waste site in Upington • Reuse of dam walls for the new dams. • Rehabilitation of the small stream.	Mitigation measures adequate to ensure impacts are fully mitigated.

Table 5: Impacts table

3.6.1 Assessment of the impacts associated with the water use:

The impacts associated with the development (already took place) of agricultural areas across stream is low negative, however mitigation measure taken into account can prevent any further negative impacts, see Table 4 above.

3.7 The need to redress the results of the past racial and gender discrimination

It is envisaged that Newgro Farming PTY Ltd will need to create some new permanent and a number of new seasonal employee positions in the near future should the new water use be allocated. The entity also plans to convert some of the current seasonal positions to permanent positions should this water licence use application be successful. However, the main positive impact is job security of current positions.

The new water use licence will lead to the security of the farming operation, and will create a demand for new staff and new skills, eg.

- Skilled agricultural labourers
- Specific knowledge of vineyards production will be needed
- Specific knowledge of management of evaporation ponds on site will be needed.
- Specific knowledge of fruit packing will be needed
- Support staff will be needed: Admin, forklift drivers, tractor operators and Code 14 drivers.

If additional job opportunities arise preference will be given to black/coloured people for these positions, and more specific **black/coloured women** where possible. Please note this water use is a big initiative by Karsten Boerdery towards the Karsten Vrouewerkers Trust.

The Karsten Group strive to remain the front runners of the industry through continued focus on the competitive edge, diversification, strategic management and optimal use of water and other resources.

The Karsten Group firmly believes in the empowerment of its employees; not only by means of financial and land ownership, and senior management positions but also through promotion, wider responsibilities given to people on the lowest possible level and a sense of ownership for what you do in any position you might occupy.

The Karsten Group provides seasonal and permanent employment for a large community of people in South Africa's poorest regions. All workers share in benefits such as training and development programmes which are offered in association with various institutions, development programmes and projects are directed towards all workers and their families, including seasonal workers, irrespective of their worker status. Fringe benefits, apart from the provident fund scheme, apply equally to all workers, and people are paid according to their job grading and not their employment status.

Training and career planning are initiated for each permanent worker, ensuring that workers have a clear vision of their future and are able to plan their future in the company. Vacancies are always advertised internally, and continuous training and development is done to ensure that workers are equipped with the basic skills for the next level for which they might qualify.

Social and other benefits are offered to the large community of people working within the group, including preschool care, bursary and study schemes for children of workers, health care and housing for both permanent staff and temporary workers.

3.8 Efficient and beneficial use of the water in public interest

The new water use will have the following benefits:

Enough water will directly secure existing and new job opportunities.

- More sustainable water will immediately create the opportunity to proceed with the expensive exercise to plant new varieties that can spread the preparation, pruning, harvesting and packing seasons over longer periods. This will support the entity in their efforts to convert as much as possible seasonal job opportunities into permanent job opportunities. The main positive is the job security of the Empowerment Programme for the Vrouewerkers Trust and continues production for exporting and foreign capital.

- The increase in production of export produce will bring more foreign capital to South Africa which is much needed to strengthen our economy and as such fully supported by Government.

3.9 Socio economic impact of water use to be authorized

In a rural area such as this with a high unemployment rate, any new employment positions have a huge impact on the immediate and extended families of such new workers. Add then also the impact of more people with proper housing, undergoing skills training and going to church, sport, etc. and children going to school, to understand the positive impact on this rural community. Even seasonal work opportunities have the advantage of extra income plus the opportunity to gain skills that can in future be used to gain permanent employment on the farm or elsewhere.

Not only are the new employment opportunities important, but also the fact that:

- Existing jobs can be secured: Enough water will directly secure existing and new job opportunities.
- More sustainable water will immediately create the opportunity to proceed with the expensive exercise to plant new varieties that can spread the preparation, pruning, harvesting and packing seasons over longer periods. This will support the entity in their efforts to convert as much as possible seasonal job opportunities into permanent job opportunities. Especially black females from the farm and neighbouring towns will benefit here. The positive impact on their lives will even be more as more of them will now also be promoted to supervisor level to help manage the increased production as well as the increase in value-adding volume.
- The security in production of export produce will bring more foreign capital to South Africa which is much needed to strengthen our economy and as such fully supported by Government. See Appendix H for the Agri-BEE Report.

3.10 Investment already made and to be made by the water user in respect of the water use in question

The following investments have been made:

1. The water allocations are from small properties currently owned.
2. All investments made already as this is part of an existing farming unit with existing infrastructure.
3. Investments made for the upgrading of the evaporation ponds and construction of the new ponds.

The future investments to be made:

1. No additional investments, other than mentioned above.

3.11 The period for which the license is to be issued

The license should be issued for the maximum possible period, as the water use will be of a permanent nature.

3.12 Failure to authorize the water use

Failure to authorize the water use will result in the following:

- Financial loss due to existing investments already made, buying of properties and water use rights,

- The design and processes implemented to obtain authorisation also has a high financial implication that will be lost.
- Loss in current and future employment opportunities and skills development and training opportunities.

4. CONCLUSION

The construction of the agricultural areas across small streams and the re-establishment of the evaporation dams will not negatively impact on any other water users in the area. The site is already largely modified to the Orange River side of the development and already the possibility of the water reaching the Orange River is small. The new evaporation dams will greatly improve the health of the existing streams and the health, safety and possible environmental impacts on workers residing on the property by removing the existing dams from the stream and marginally enlarging the dams to accommodate the evaporation tempo/rate of the area.

The authorisation of the farm and procurement of the correct rights on each property, thereby complying with the necessary legislation will have numerous positive socio-economical impacts not only on the farm but also the region and result in job creations, skills development, social upliftment and earning of foreign currency.

5. CONDITIONS

When instructed to do so by the Responsible Authority the user must fit a self- registering meter at the user's expense to measure water use and the user at his expense must maintain the meter in satisfactory working condition.

Officers from the Department of Water Affairs will at all times have free access to the property and the water works for supervision and control purposes.

The Department's or Responsible Authority's local representative will issue the necessary instructions to the user with regard to the keeping of proper registers of water use and quality, and the owner must at all times comply with such instructions.

The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of: shortage of water; inundation or flood; siltation of the river or dam basin; and/or the shifting of water work in the event of a rise or drop in the water level of river or dam.

The quality or suitability of the water for any purpose is not guaranteed.

The water abstracted/used in terms of this license may only be used for the authorized purposes.

This license is not a permanent, lawful right and is not transferable from one user to another or from one property to another.

The user must take every possible precaution to the satisfaction of the Department, to prevent pollution of water resources.

The Department of Water Affairs reserves the right to withdraw this license in the event of failure to comply with any of the said conditions or provisions.

The applicant has a period of 2 (two) years within which to commence/implement this water use, failing which, the license will lapse.

6. RECOMMENDATION

The following recommendations should be adhered to:

- Any further recommendations outlined in the Environmental Authorisation and the Water Use License issued.
- When instructed to do so by the Responsible Authority the user must fit a self- registering meter at the user's expense to measure water use and the user at his expense must maintain the meter in satisfactory working condition.
- Officers from the Department of Water Affairs will at all times have free access to the property and the water works for supervision and control purposes.
- The Department's or Responsible Authority's local representative will issue the necessary instructions to the user with regard to the keeping of proper registers of water use and quality, and the owner must at all times comply with such instructions.
- The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of: shortage of water; inundation or flood; siltation of the river or dam basin; and/or the shifting of water work in the event of a rise or drop in the water level of river or dam.
- The quality or suitability of the water for any purpose is not guaranteed.
- The water abstracted/used in terms of this license may only be used for the authorized purposes.
- This license is not a permanent, lawful right and is not transferable from one user to another or from one property to another.
- The user must take every possible precaution to the satisfaction of the Department, to prevent pollution of water resources.
- The Department of Water Affairs reserves the right to withdraw this license in the event of failure to comply with any of the said conditions or provisions.
- The applicant has a period of 2 (two) years within which to commence/implement this water use, failing which, the license will lapse.

It is also recommended that the irrigation area across small ephemeral streams on Portion 75 of Farm Keboes no 37 and the re-location and licensing of the existing evaporation ponds be allowed.

7. APPENDICES

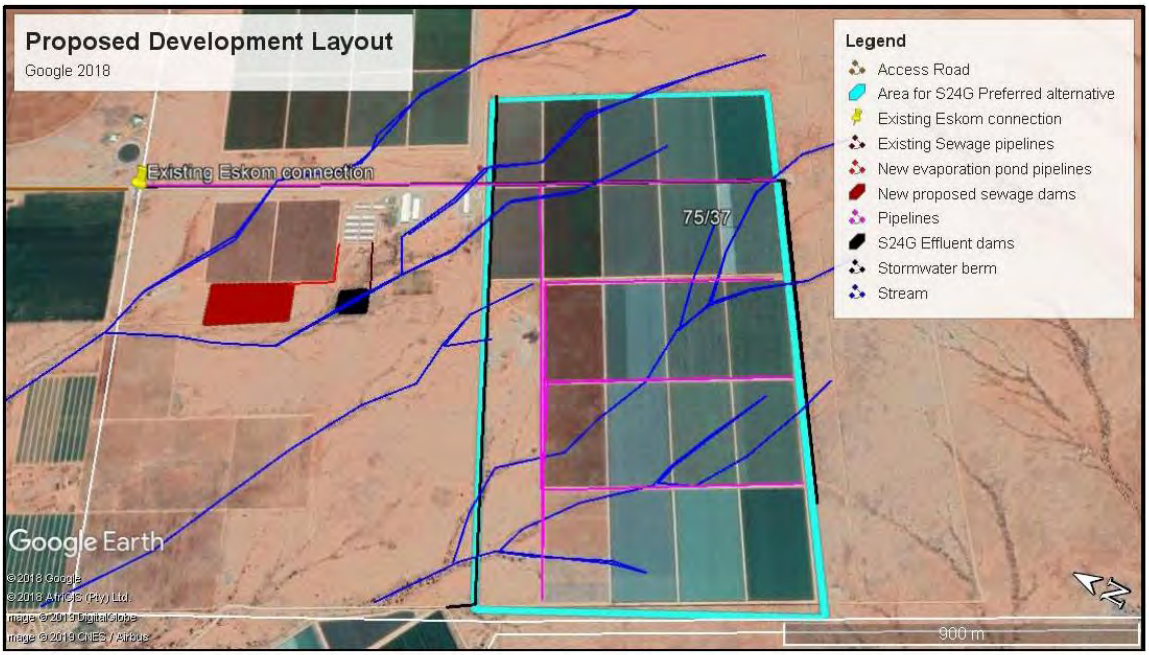
APPENDIX A: Completed License Application Forms

APPENDIX B: Existing Water Use Confirmation

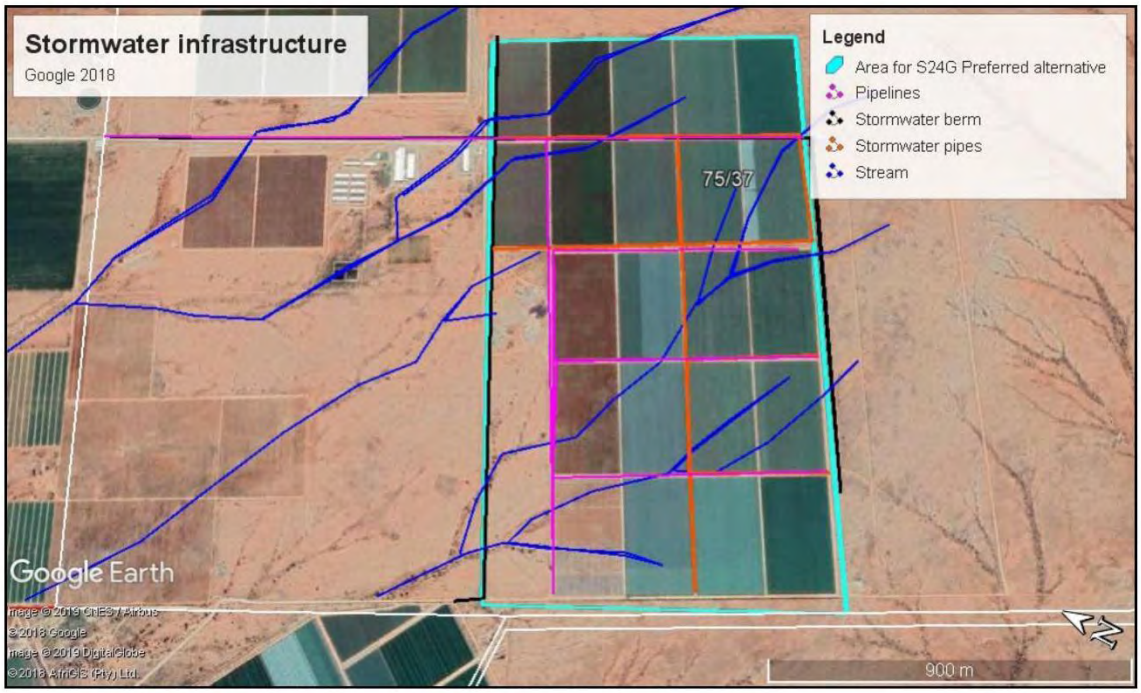
APPENDIX C: Deed Search and Title Deeds

APPENDIX D: Power of Attorney

APPENDIX E1: Proposed Locality and Development layout
Mater Development Layout Plan



Storm Water Management Plan Layout



42

APPENDIX F: Technical Documents
Appendix F.1: Environmental Impact Report
S24G will be submitted to DENC, approval is awaited. Find included on the cd.

Appendix F.2: Storm water Management Plan

APPENDIX G: Proof of Public Participation

APPENDIX H: AGriBEE Report

APPENDIX I: Certified copy of ID

APPENDIX J: Company Registration certificates and Organogram

APPENDIX K: Copy of Receipt

APPENDIX L: Section 21 c and i list of drainage lines coordinates and Risk Matrix

APPENDIX M: Lands Claim confirmation

APPENDIX N: Plough Certificate

Appendix O: Succession in Title Transfer Forms

APPENDIX Q: Indemnity Forms

APPENDIX R: Termination in terms of Section 25 Forms