

# **Draft Basic Assessment Report & Environmental Management Programme**

**Application for the proposed construction of an agri-  
processing facility on**

**Portion 64 of Vaal Koppies No 40, Kenhardt,**

**Dawid Kruiper Municipality.**

**DAEARD&LR Reference No: NC/BA/25/ZFM/DAW/KEN2/2022.**

**16 January 2023**



Prepared for:

*Carpe Diem Landgoed Pty Ltd*

PO Box 1928, Upington, 8800

Email address: [istvan@cdgroup.co.za](mailto:istvan@cdgroup.co.za)

Compiled by:

*The ECO Balance Planning Co.*

Email address: [susandekock@oranjenet.net](mailto:susandekock@oranjenet.net)

**PROJECT DETAILS:**

**TITLE:** Application for the proposed construction of an agri-processing facility on  
Portion 64 of Vaal Koppies No 40, Kenhardt,  
Dawid Kruijer Municipality.

**APPLICANT:** *Carpe Diem Landgoed Pty Ltd*

**DEPARTMENTAL REF NO:** NC/BA/25/ZFM/DAW/KEN2/2022

**PROCESS:** Basic Assessment

**REPORT STATUS:** DRAFT BAR & EMP

**REPORT DATE:** 16 January 2023

**APPOINTED EAP:**

The Eco Balance Planning Co. (Susan de Kock)

P.O. Box 1593, Upington, 8800

Tel: 082 679 6780

Email: susandekock@oranjenet.net

**APPLICANT:**

*Carpe Diem Landgoed Pty Ltd*

PO Box 1928, Upington, 8800

Email address: istvan@cdgroup.co.za

## EXECUTIVE SUMMARY

*Carpe Diem Landgoed Pty Ltd* (the Applicant) is proposing the construction of a facility for the processing of pecan nuts on Portion 64 of Vaal Koppies No 40, Kenhardt. The property is located approximately 10km south east of Upington and has a size of 366.2080ha. Existing activities on the property consist of table grape cultivation as well as an existing pack house. The southern part of the property, the section along the western boundary as well as the northern part of the property is covered with natural vegetation identified as Bushmanland Arid Grassland.

*Carpe Diem Landgoed Pty Ltd* is the grower of organic pecan nuts and the processing and packaging of the nuts has always been challenging as none of the pecan nut pack houses in the region make provision for the processing and packaging of organic pecan nuts. (The processing and packaging of organic pecan nuts require different procedures and thus different management measures).

The development footprint of the proposed pecan nut facility on Vaal Koppies 64/40 is estimated at approximately 5.61ha. This includes offices, parking areas, loading zones, water evaporation ponds and inside the facility the following: control room, intake area, sorting lanes, popper area, packing lanes, cold rooms, dispatch area, canteen area, rest rooms and a carton storage area.

In terms of the Environmental Impact Assessment Regulations, 2014 as amended, made under section 24(5) of the Act, the following activities are being applied for:

<b>Detailed description of listed activities associated with the project</b>		
	<b>Listed activity as described in GN R.327</b>	<b>Description of project activity that triggers listed activity</b>
8	The development and related operation of hatcheries or agri-processing facilities outside industrial complexes where the development footprint covers an area of 2 000 square metres or more.	The proposed development consists of an agri-processing facility with an estimated development footprint of 5.61ha (including all associated infrastructure and services).
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for — (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The development footprint is estimated at 5.61ha and the area where the facility is proposed is covered with natural vegetation identified as Bushmanland Arid Grassland (Least Threatened in The National List of Ecosystems).

The development is proposed in the north western part of the property on an area that is covered with semi-intact natural vegetation mapped as Bushmanland Arid Grassland. This vegetation type is a Least Concern vegetation type with over 94% of the original area still intact. A number of very small drainage lines occur in the northern section of the property. Apart from these drainage lines, the site sensitivity is rated as Low or Very low from a botanical perspective due to the large areas of natural vegetation that remain on the subject property, surrounding areas and the ecosystem as a whole. A buffer of 30 m was placed over the drainage lines. Note that the drainage lines are not located within the preferred development footprint.

The facility will require 150 000m<sup>3</sup> of water per annum. This will be mainly used for the washing of the pecan nuts upon entry at the facility and for the kitchens & rest rooms. HDL Consulting was appointed to administer the required Water Use Licence Application which will include the change of sector from irrigation to industrial plus the evaporation pond.

The property is "Agriculture" zoned and the development area will be re-zoned to "Agriculture Industry". Macroplan Town & Regional Planners was appointed to administer the re-zoning application.

---

**Acknowledgement of submitted Application Form, dated 19 November 2022.**



agriculture, environmental affairs,  
rural development and land reform

Department:  
agriculture, environmental affairs,  
rural development and land reform .  
NORTHERN CAPE PROVINCE  
REPUBLIC OF SOUTH AFRICA

SASKO Building  
90 Long Street  
Private Bag X6102  
Kimberley  
8300

Tel. 053-8077300  
Fax: 053-8077328

Enquiries :  
Dipatliso : Mr O Seshupo  
Imibuzo :  
Navrae :  
Reference : NC/BA/25/ZFM/DAW/KEN1/2022  
Tshupelo :  
Isalathiso :  
Verwysing :

Date :  
Leshupelo:  
Umhla : 16<sup>th</sup> November 2022  
Datum :

**THE ECO BALANCE PLANING CO**

Susan de Kock  
P.O. Box 1593  
UPINGTON  
8800

Email: [susandekock@oranjinet.net](mailto:susandekock@oranjinet.net)

Dear Sir/Madam

**RE: APPLICATION FOR AUTHORIZATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998): PROPOSED CONSTRUCTION OF AN AGRI-PROCESSING FACILITY ON PORTION 64 OF VAAL KOPPIES NO 44: DAWID KRUIPER LOCAL MUNICIPALITY: ZF MGCAWU DISTRICT.**

The Department confirms having receipt of the **application form** for environmental authorisation of the above mentioned project on the 15<sup>th</sup> November 2022.

The application reference number **NC/BA/25/ZFM/DAW/KEN2/2022** Kindly quote this reference number in any future correspondence in respect of the application.

**Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorization being granted by the Department**

Kindly note the responsible officer for this project is **Mr O Seshupo** and can be contacted at this number **053 631 0601**.

Regards

Ms G Letimela  
**Senior Administration Clerk**



**agriculture, environmental affairs,  
rural development and land reform**

Department:  
agriculture, environmental affairs,  
rural development and land reform .  
NORTHERN CAPE PROVINCE  
REPUBLIC OF SOUTH AFRICA

SASKO Building, 90 Long Street, Private Bag X6102, Kimberley 8300 Tel. 053-8077300 Fax: 053-8077328

<b>Project applicant:</b>	<i>Carpe Diem Landgoed Pty Ltd</i>		
<b>Business reg. no. /ID. no.:</b>	2007/004661/07		
<b>Contact person:</b>	Mr. G. van der Colff		
<b>Postal address:</b>	PO Box 1928, Upington		
<b>Telephone:</b>	054 – 332 2901	Cell:	083 324 0340
<b>E-mail:</b>	gog@cdgroup.co.za	Fax:	086 622 7095

**Prepared by:**

<b>Environmental Assessment Practitioner/Firm:</b>	The ECO Balance Planning Co		
<b>Business reg. no. /ID. no.:</b>	750621 0138 086		
<b>Contact person:</b>	Susan de Kock		
<b>Postal address:</b>	PO Box 1895		
<b>Telephone:</b>	082 679 6780	Cell:	082 679 6780
<b>E-mail:</b>	susandekock@oranjenet.net	Fax:	0872 34 34 34

(For official use only)

**File Reference  
Number:**  
**Application  
Number:**  
**Date Received:**


**Basic Assessment Report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.**

---

**Kindly note that:**

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of 07 April 2017. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

**Table of Contents**

**SECTION A: ACTIVITY INFORMATION** ..... 15

1. ACTIVITY DESCRIPTION ..... 15

2. FEASIBLE AND REASONABLE ALTERNATIVES ..... 21

3. PHYSICAL SIZE OF THE ACTIVITY ..... 26

4. SITE ACCESS ..... 26

5. LOCALITY MAP ..... 26

6. LAYOUT/ROUTE PLAN..... 27

7. SENSITIVITY MAP..... 27

8. SITE PHOTOGRAPHS ..... 28

9. FACILITY ILLUSTRATION ..... 28

10. ACTIVITY MOTIVATION ..... 28

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES..... 36

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT ..... 37

13. WATER USE ..... 39

14. ENERGY EFFICIENCY ..... 39

**SECTION B: SITE/AREA/PROPERTY DESCRIPTION** ..... 40

1. GRADIENT OF THE SITE ..... 41

2. LOCATION IN LANDSCAPE ..... 41

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE ..... 41

4. GROUNDCOVER..... 42

5. SURFACE WATER ..... 42

6. LAND USE CHARACTER OF SURROUNDING AREA..... 42



7. CULTURAL/HISTORICAL FEATURES .....	45
8. SOCIO-ECONOMIC CHARACTER .....	47
9. BIODIVERSITY .....	50
<b>SECTION C: PUBLIC PARTICIPATION.....</b>	<b>59</b>
1. ADVERTISEMENT AND NOTICE.....	59
2. DETERMINATION OF APPROPRIATE MEASURES .....	59
2.1 Public Participation tasks undertaken during Pre-Application Draft BAR & EMP: 17 January 2023 – 17 February 2023: .....	60
2.2 Public Participation tasks to be undertaken during 30 PPP on Draft BAR & EMP: to complete. ....	60
3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES .....	62
4. COMMENTS AND RESPONSE REPORT .....	62
5. AUTHORITY PARTICIPATION .....	62
6. CONSULTATION WITH OTHER STAKEHOLDERS .....	63
<b>SECTION D: IMPACT ASSESSMENT .....</b>	<b>64</b>
1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES.....	68
2. ENVIRONMENTAL IMPACT STATEMENT .....	72
<b>SECTION E. RECOMMENDATION OF PRACTITIONER.....</b>	<b>75</b>
<b>SECTION F: DECLARATIONS .....</b>	<b>77</b>

## List of Figures

Figure 1. The location of Vaal Koppies 64/40, indicated as a red coloured star, slightly south east of Upington. .	16
Figure 2. The location of Vaal Koppies 64/40 slightly south east of Upington. ....	16
Figure 3. Property boundary of Vaal Koppies 64/50 in yellow. Existing cultivation and development are visible in the middle and eastern sections. ....	17
Figure 4. 1:50 000 topographical map with property boundary in red. ....	18
Figure 5. An illustration of the proposed agri-processing facility on Vaal Koppies 64/40. Offices are located on the eastern side with the main processing facility to the west. The evaporation ponds are proposed to the north of the main facility. (The blue filled polygons are drainage lines while the green around them indicate the 30m ecological buffers). ....	19
Figure 6. The blue line indicates the water pipeline which supply water to the cultivation operation. This pipeline will also supply water to the proposed facility. The facility's offices are proposed on the eastern portion that overlaps the pipeline route. A new diversion tap will be inserted in the pipeline at the location indicated by the pink coloured star. From here water will be transferred via a 110mm PVC pipeline to the offices and in a westerly direction for the facility. ....	20
Figure 7. Alternative 1 (preferred alternative) in yellow. Property boundary in red. ....	22
Figure 8. The preferred Alternative in yellow. Drainage lines plus applied 30m buffers are indicated in blue. Property boundary in red. ....	23
Figure 9. Areas A – D screened for possible locations for the proposed agri-facility. Area B is where the Preferred Alternative is located. Property boundary in yellow. ....	24
Figure 10. The pink circle indicates a 700m radius around the proposed development footprint (indicated in orange). ....	43
Figure 11. The NPAES map for the area. The proposed development footprint is located within the area referred to as "Study area". ....	44
Figure 12. The development footprint in orange with the identified heritage resources. VK-011 is located within the proposed footprint with VK-014 outside of the western boundary. ....	46
Figure 13. VK-011 is mapped within the southern section of the proposed development footprint. ....	47

Figure 14. The Dawid Kruiper Municipality in the northern section of the ZF MGCAWU District Municipality ..... 48

Figure 15. The development footprint indicated as an orange coloured polygon. The area is undisturbed with a small section of an existing road in the eastern section. .... 51

Figure 16. HABITAT MAP. The habitats mapped at the site by the author, overlaid on a Google Earth™ aerial image. .... 53

Figure 17. SENSITIVITY MAP: Google Maps™ image showing the sensitivities mapped within the Study area. 57

Figure 18. CONSTRAINTS MAP: Google Maps™ image showing the Potentially developable and No-Go areas mapped within the Study area. The small areas between the site boundary and the No-Go areas should be avoided. .... 58

Figure 19. Map of relative plant species theme sensitivity. .... 59

## List of Plates

Plate 1. The typical sparse habitat of Bushmanland Arid Grassland dominated by low shrubs and grasses.....	54
Plate 2. The exposed rocky areas host some succulents (see Aloe in the right side of the image) and medium sized shrubs (blackthorn).....	54
Plate 3. <i>Adenium oleifolium</i> was found in the rocky areas.....	54
Plate 4. <i>Aloidendron dochotomum</i> has been planted within the study area within landscaped areas close to the road to the farm buildings.....	55
Plate 5. <i>Boscia albitrunca</i> is a protected tree species and is found within the subject property but not within the proposed development footprint.....	55
Plate 6. The drainage lines on the north-eastern part of the site have been degraded and a number of black thorn individuals have been felled.....	56
Plate 7. Typical vegetation found along the drainage lines dominated by the black thorn ( <i>Senegali mellifera</i> ). ...	56

## List of Plates

Table 1. Stone age resources identified within the proposed development footprint.....	45
Table 2. The habitat condition descriptions used for the vegetation on the site.....	52

**ABBREVIATIONS:**

AGIS	Agricultural Geo-reference Information System
CBA	Critical Biodiversity Area
DFFE	Department of Fisheries, Forestry and Environment
DEA	Department of Environmental Affairs (National)
DAEALR&RD	Department of Agriculture, Environment Affairs, Land Reform and Rural Development
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ELU	Existing Lawful Water Use
EMF	Environmental Management Framework
EMP	Environmental Management Programme / Plan
ESA	Ecological Support Area
GDPR	Gross Domestic Product Regional
GN	Government Notice
IDP	Integrated Development Plan
LUPO	Land Use Planning Ordinance
NEMA	National Environmental Management Act (No. 107 of 1998), as amended
NEMWA	National Environmental Management: Waste Act (No. 59 of 2008)
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act (No. 25 of 1999)
NID	Notice of Intent to Develop
NWA	National Water Act (Act 36 of 1998)
NT	Near Threatened
PPP	Public Participation Process
PSDF	Provincial Spatial Development Framework
SANBI	South African National Biodiversity Institute

SCC	Species of Conservation Concern
SDF	Spatial Development Framework
V&V	Verification & Validation
WUA	Water Users Association
WUL	Water Use Licence

**SECTION A: ACTIVITY INFORMATION**

Has a specialist been consulted to assist with the completion of this section?

YES	NO
-----	----

**1. ACTIVITY DESCRIPTION**

**a) Describe the project associated with the listed activities applied for**

*Carpe Diem Landgoed Pty Ltd* is proposing the construction of a facility for the processing of pecan nuts on Portion 64 of Vaal Koppies No 40, Kenhardt.

The Applicant is the grower of organic pecan nuts and the processing and packaging of the nuts has always been challenging as none of the pecan nut pack houses in the region make provision for the processing and packaging of organic pecan nuts. (The processing and packaging of organic pecan nuts require different procedures and thus different management measures). In the past the Applicant always had to rely on a packing facility located more than 200km from the farm to process and pack the fruit. The result was that the fruit had to be transferred by road to that facility where it had to be stored separate from the facility's other intake. The cost and risk of transport, having the fruit processed at a facility far away from the grower farm as well as security threats once off-loaded, has motivated the Applicant to construct a facility on his property to process and pack the organically cultivated pecan nuts. It is estimated that approximately 15 000 tons of pecan nuts will be processed in the proposed facility.

Pecan nuts for the proposed facility will therefore be from the Applicant's own orchards. Upon intake at the facility the nuts will be washed to ensure an uncontaminated product. The fruit will then go to the sorting area in the facility where all extraneous materials and inedible in-shell nuts are disposed. The in-shell nuts will then be classified in different sizes before it will be mechanically cracked and shelled.

The final step in the facility is where the pecan nuts will be vacuum packed to ensure prolonged freshness. After packaging, the pecans will be stored in digitally-controlled cold rooms at optimal temperatures and humidity.

The development footprint of the proposed pecan nut facility on Vaal Koppies 64/40 is estimated at approximately 5.61ha. This includes offices, parking areas, loading zones, water evaporation ponds and inside the facility the following: control room, intake area, sorting lanes, popper area, packing lanes, cold rooms, dispatch area, canteen area, rest rooms and a carton storage area.

The facility will require 150 000m<sup>3</sup> of water per annum. This will be mainly used for the washing of the pecan nuts upon entry at the facility and for the kitchens & rest rooms. An existing water pipeline supply water to the existing cultivation operations on the property and this pipeline will also supply water to the proposed agri-processing facility. The facility's offices are proposed on the eastern portion that overlaps the pipeline route and a diversion tap will be constructed adjacent north of the proposed offices. From this diversion tap water will

be transferred via a 110mm PVC pipeline to the offices and in a westerly direction for the facility.

The N10 national road that connects Upington with Groblershoop forms the northern boundary and the Kleinbegin Road forms the western boundary of the property. The property has a size of 366.2080ha. Existing activities on the property consist of table grape cultivation as well as an existing Pack house. The southern part of the property, the section along the western boundary as well as the northern part of the property is covered with natural vegetation identified as Bushmanland Arid Grassland.

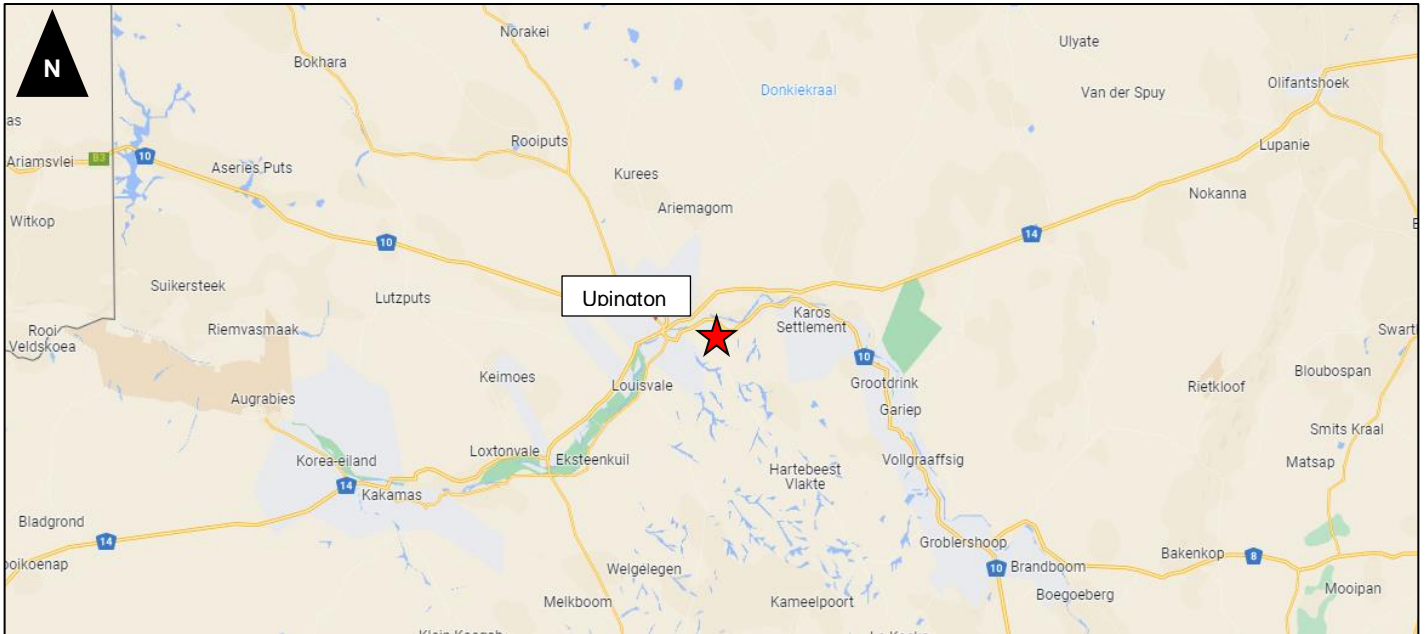


Figure 1. The location of Vaal Koppies 64/40, indicated as a red coloured star, slightly south east of Upington.

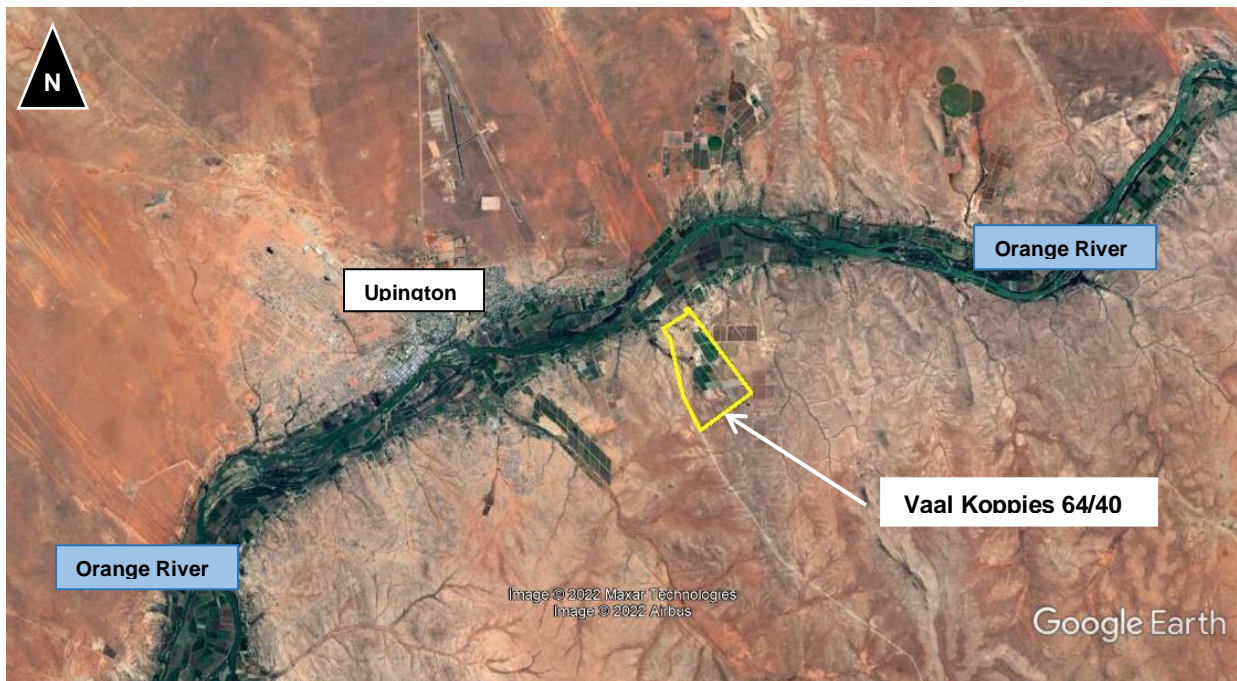


Figure 2. The location of Vaal Koppies 64/40 slightly south east of Upington.



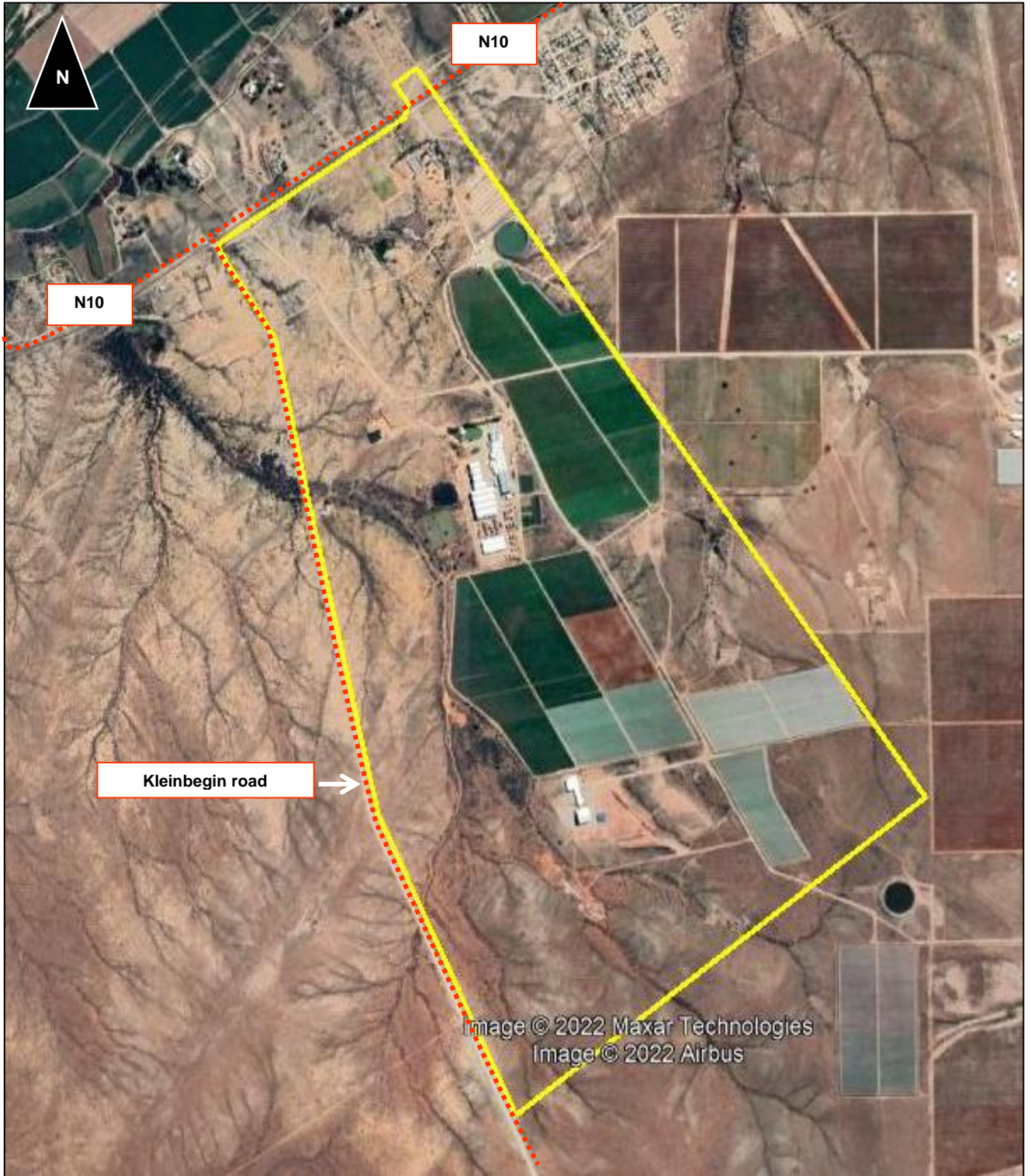
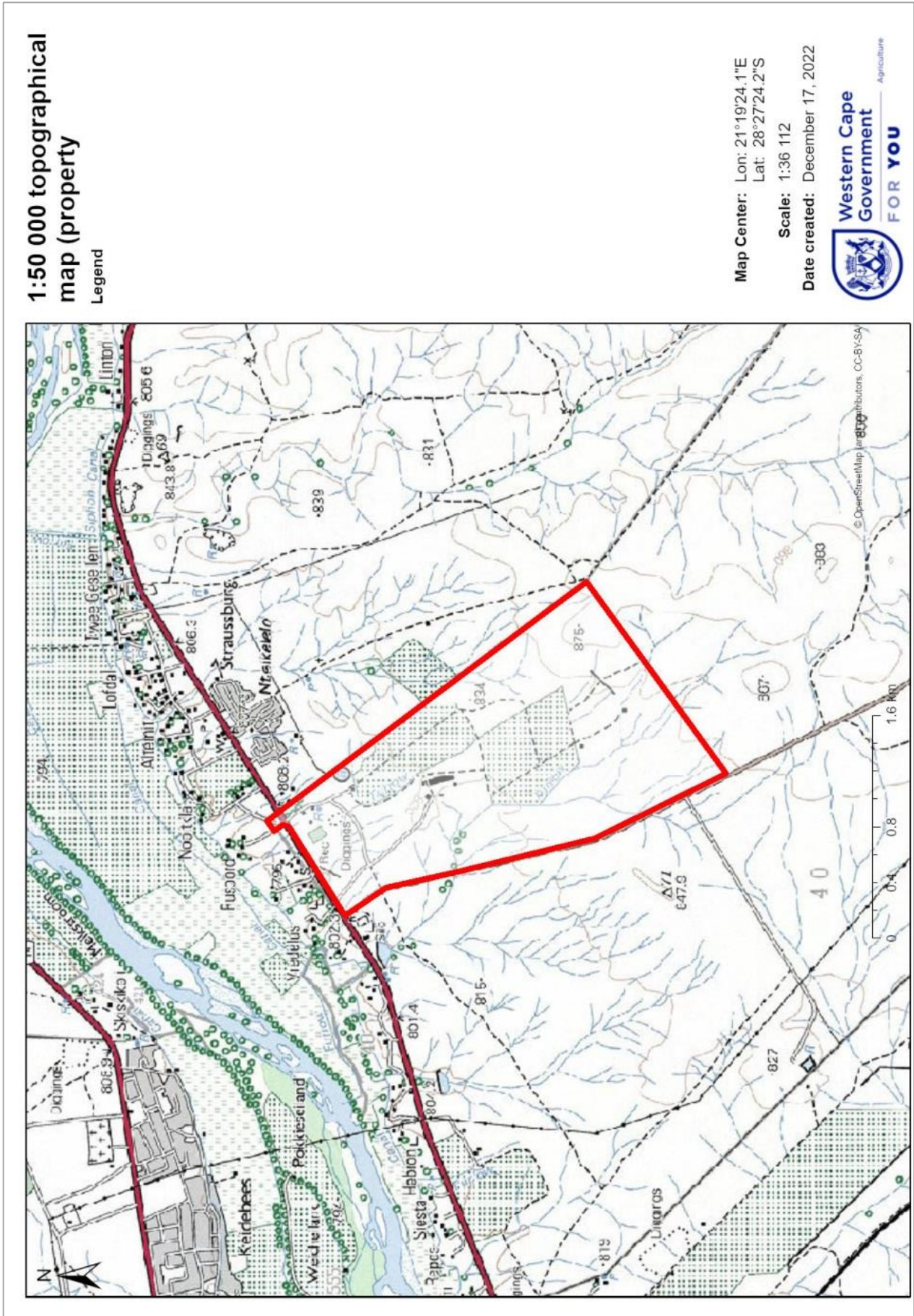


Figure 3. Property boundary of Vaal Koppies 64/50 in yellow. Existing cultivation and development are visible in the middle and eastern sections.



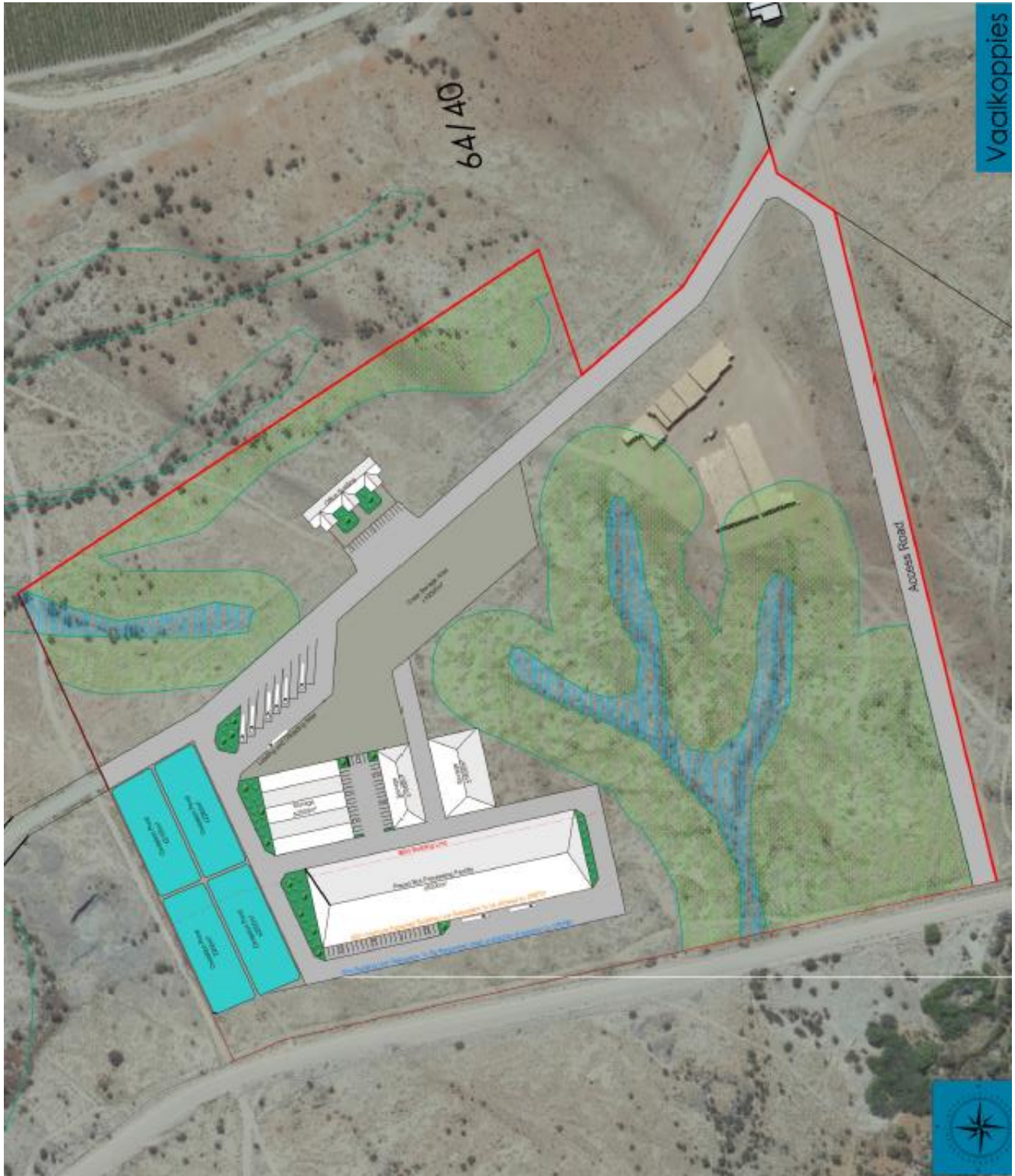


Figure 5. An illustration of the proposed agri-processing facility on Vaal Koppies 64/40. Offices are located on the eastern side with the main processing facility to the west. The evaporation ponds are proposed to the north of the main facility. (The blue filled polygons are drainage lines while the green around them indicate the 30m ecological buffers).

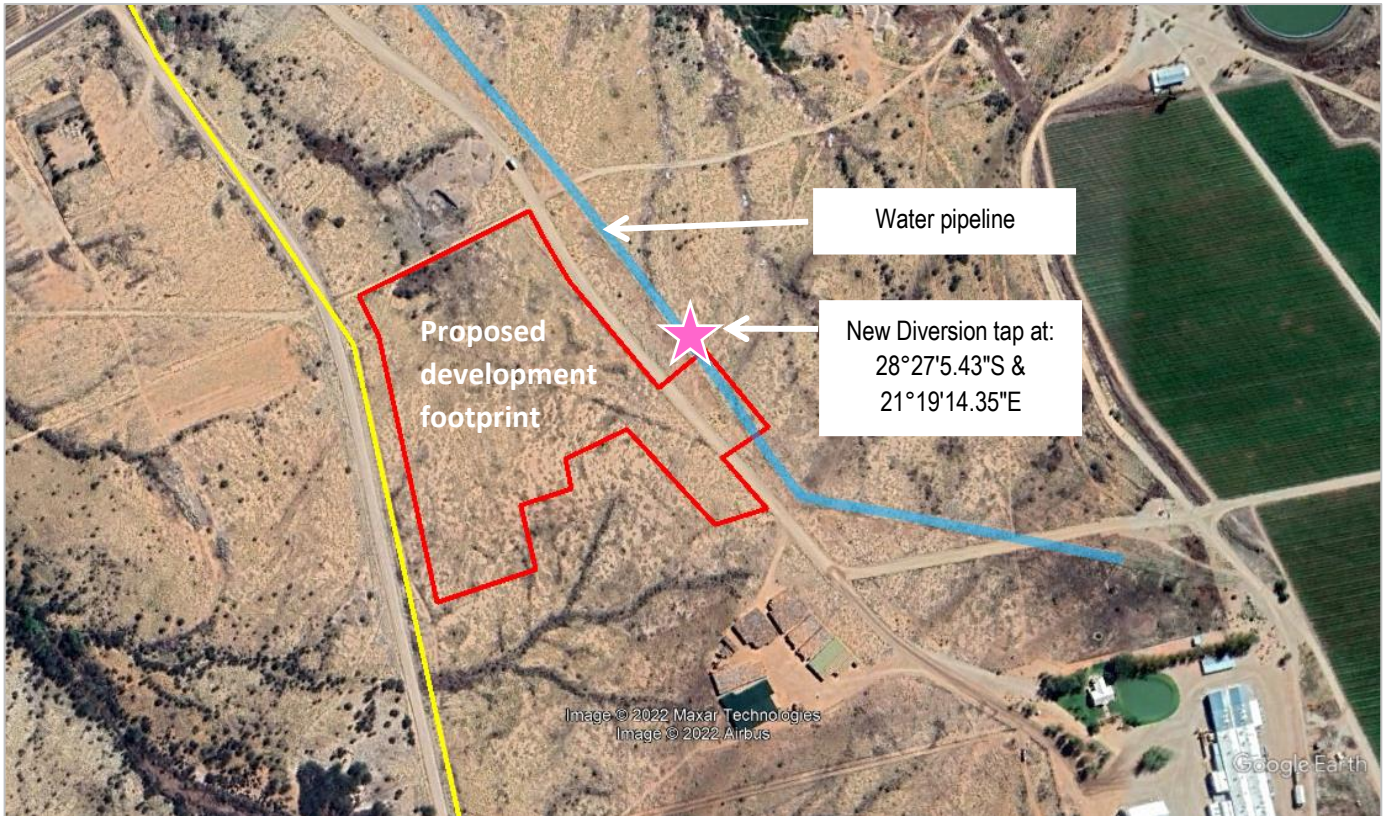


Figure 6. The blue line indicates the water pipeline which supply water to the cultivation operation. This pipeline will also supply water to the proposed facility. The facility's offices are proposed on the eastern portion that overlaps the pipeline route. A new diversion tap will be inserted in the pipeline at the location indicated by the pink coloured star. From here water will be transferred via a 110mm PVC pipeline to the offices and in a westerly direction for the facility.

**b) Provide a detailed description of the listed activities associated with the project as applied for**

Detailed description of listed activities associated with the project		
Listed activity as described in GN R.327	Description of project activity that triggers listed activity	
8	The development and related operation of hatcheries or agri-processing facilities outside industrial complexes where the development footprint covers an area of 2 000 square metres or more.	The proposed development consists of an agri-processing facility with an estimated development footprint of 5.61ha (including all associated infrastructure and services).
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for — (iii) the undertaking of a linear activity; or (iv) maintenance purposes undertaken in accordance with a maintenance management plan.	The development footprint is estimated at 5.61ha and the area where the facility is proposed is covered with natural vegetation identified as Bushmanland Arid Grassland (Least Threatened in The National List of Ecosystems).
Listed activity as described in GN R. 325	Description of project activity that triggers listed	

		<b>activity</b>
-	-	-
	<b>Listed activity as described in GN R. 324</b>	<b>Description of project activity that triggers listed activity</b>
-	-	

**2. FEASIBLE AND REASONABLE ALTERNATIVES**

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

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

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent. 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 should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

**a) Site alternatives**

All undeveloped areas on the property were screened for a possible location of the proposed agri-facility. For ease and to assist in the following discussion, please refer to Figure 9.

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS): 28°27'6.82"S	Long (DDMMSS): 21°19'8.51"E
One Site Alternative is being put forward which is also the Preferred Alternative. This Alternative is located adjacent east of the western boundary of the property, approximately 400m south of the northern boundary (which is also the N14 National Road).		

The proposed development footprint is approximately 5.61ha in size. The vegetation type occurring in the site is mapped as Bushmanland Arid Grassland. No naturally occurring species of conservation concern (SCC) were found within this alternative development footprint.

This Alternative excludes all seasonal drainage lines plus an applied 30m buffer around each of these drainage lines. For this reason a Freshwater Assessment will not be conducted.

The Botanist confirmed that the proposed development footprint has a Low Botanical Sensitive value with no Species of Conservation Concern recorded.



Figure 7. Alternative 1 (preferred alternative) in yellow. Property boundary in red.



Figure 8. The preferred Alternative in yellow. Drainage lines plus applied 30m buffers are indicated in blue. Property boundary in red.

<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Area A is located in the northern section of the property. A prominent seasonal drainage line transects this area from south to north with another smaller seasonal drainage line also located in the western part of Area A. The proposed agri-facility requires approximately 6ha development footprint and if a buffer of 30m is applied to these two drainage lines there is not sufficient space available for the facility.</p> <p>This Alternative is therefore not attainable and is consequently screened out.</p>		
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Area C is located adjacent west of existing table grape orchards and this area is earmarked for future extension of these orchards. Area C is thus screened out and will not be assessed any further.</p>		
<b>Alternative 4</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Area D is located in the far southern section of the property. The EAP advised that this southern section fo the property should remain it's <i>status quo</i> for the following reasons:</p> <ul style="list-style-type: none"> <li>• This area is much less exposed to development and human activities than the northern part of the property, which is where most of the development and disturbance are located. It is advised that developments, if the biophysical environment allows, remain clustered and to allow the status quo of larger undisturbed areas.</li> </ul>		

- A new access road will be required for Area D, where an access road is already included for the preferred Alternative. This access road will have to cross a prominent drainage line which may carry water during periods of heavy flash rains.
  - The produce will have to be transported nearly 2.2km longer on a gravel road to reach the N14.
- This alternative is not preferable for the above reasons and is thus screened out.

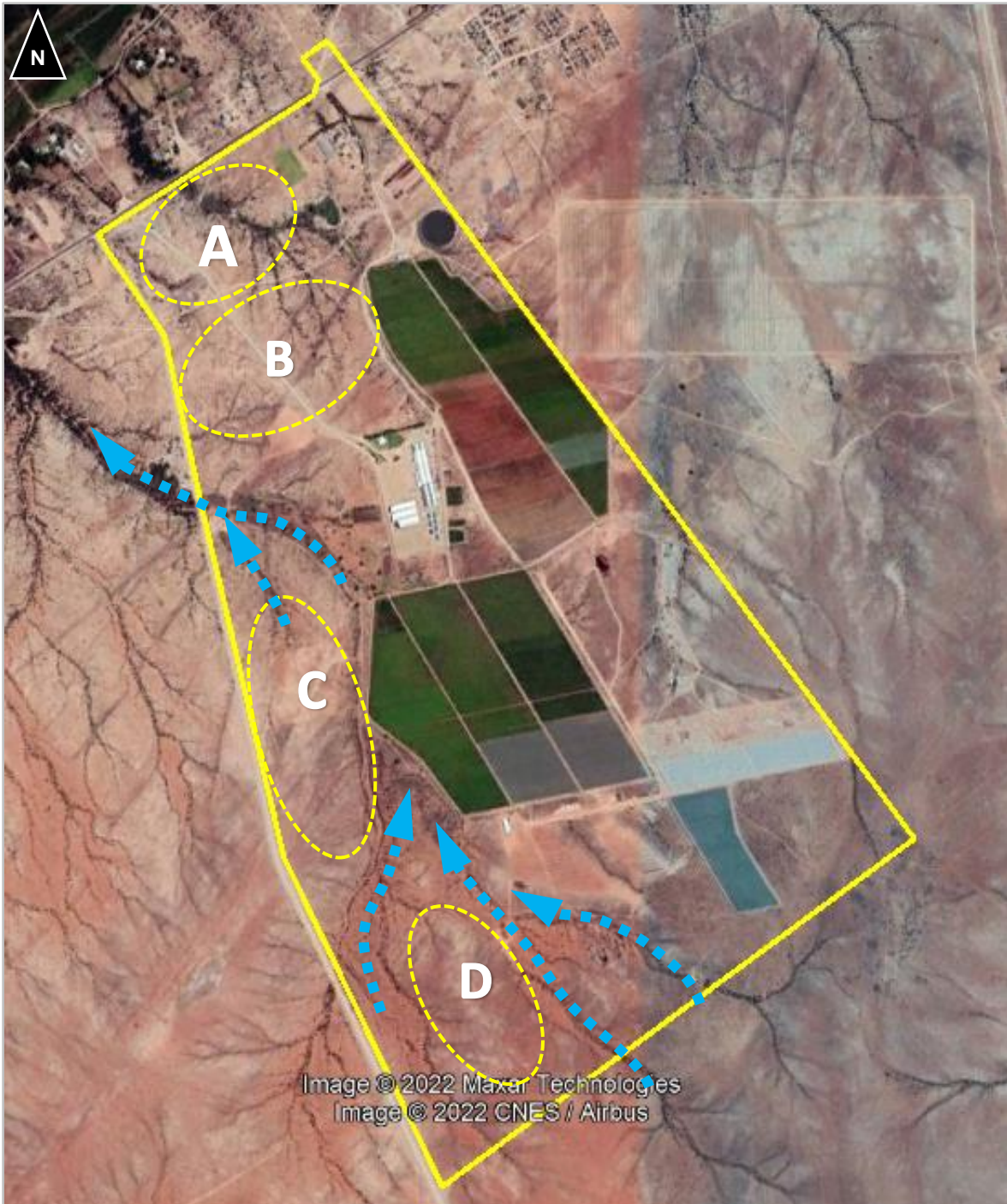


Figure 9. Areas A – D screened for possible locations for the proposed agri-facility. Area B is where the Preferred Alternative is located. Property boundary in yellow.



In the case of linear activities: NO LINEAR ACTIVITIES ARE INCLUDED IN THE DEVELOPMENT

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

**b) Lay-out alternatives**

No Lay-out Alternatives are being put forward since the EA-Application was preceded by comprehensive planning to intentionally avoid biophysical sensitive areas and areas with high a conservation value.

**c) Technology alternatives**

No Technology Alternatives will obtain the same results/outcomes as what is expected from the proposed agri-facility and thus no Technology Alternatives are proposed to be assessed.

**d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)**

No other Alternatives are being put forward since the EA-Application was preceded by comprehensive planning to intentionally avoid biophysical sensitive areas and areas with high a conservation value.

**e) No-go alternative**

The No-Go alternative means remaining the status quo, in other words, not constructing the proposed facility. The No-Go alternative may have no significant negative biophysical environmental impacts, however, it will result in the potential employment and skills development opportunities for the local community not being realised. In turn, the potential opportunity for economic growth in the community will be lost.

Paragraphs 3 – 13 below should be completed for each alternative.

**3. PHYSICAL SIZE OF THE ACTIVITY**

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

**Alternative:**

Alternative A1<sup>1</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the activity:**

56 163 m <sup>2</sup>
m <sup>2</sup>
m <sup>2</sup>

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Length of the activity:**

M
M
M

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur): **Not Applicable**

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the site/servitude:**

m <sup>2</sup>
m <sup>2</sup>
m <sup>2</sup>

**4. SITE ACCESS**

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

YES	NO
M	

N/A
-----

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

**5. LOCALITY MAP**

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25

<sup>1</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (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 should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

## **6. LAYOUT/ROUTE PLAN**

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

## **7. SENSITIVITY MAP**

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

**8. SITE PHOTOGRAPHS**

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

**9. FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

**10. ACTIVITY MOTIVATION**

Motivate and explain the need and desirability of the activity (including demand for the activity):

<b>1. Is the activity permitted in terms of the property’s existing land use rights?</b>	YES	NO	Please explain
The property is “Agriculture” zoned and the development area will be re-zoned to “Agriculture Industry”. Macroplan Town & Regional Planners was appointed to administer the re-zoning application.			
<b>2. Will the activity be in line with the following?</b>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	YES	NO	Please explain
<p>The 2012 version of the PSDF is still in use with no newer version to be used. The 20212 PSDF is based on the Bio-Regional Approach, taking into consideration that DKLM forms an integral part of the global biosphere of which the cultural, social and economic functions are uniquely interdependent.</p> <p>The PSDF is also based on the principle that, in order to achieve the goal of building a prosperous, sustainable growing provincial economy and to eradicate poverty and improve social development, a holistic and all-embracing approach to the management of the Northern Cape is required.</p> <p>Such an approach was taken directly into consideration with the DKLM SDF and focus on ensuring the sustainability and management of the existing resources, but also taking into consideration the general well-being and prosperity of people living in the Municipal area.</p> <p>The Applicant, <i>Carpe Diem Landgoed Pty Ltd</i>, is a well-established primary producer in the agricultural value chain with the necessary backwards and forwards linkages. The Applicant’s proposed agri-processing facility will contribute to the economic viability of the farm and the immediate rural surroundings, agricultural diversification will increase, approximately 60 new jobs will be created and current jobs will be secured. This</p>			

will all contribute to the on-going sustainability of the farming operation.

Local economic development will also be supported not only in the products and services chosen to support the project, but also as an injection into the local economy by means of wages. The local sale of commodities will assist in combating food security not only by increased food stocks, but also by related households' ability to buy food.

The proposed development will improve the production capacity of the farm, support the commodity value chain and boost food security, GDP and LED.

<b>(b) Urban edge / Edge of Built environment for the area</b>	YES	NO	Please explain
--	-----	----	----------------

The proposed development is located on privately owned land a distance away from the nearest town of Upington. The urban edge is not applicable.

<b>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</b>	YES	NO	Please explain
---	-----	----	----------------

Agricultural activities take up portions of land abutting the Orange River in the southern sections of the Municipality. The Agricultural sector is very important to the local economy and therefore represents an emerging strength for the Municipality, which creates further opportunities for expansion.

The IDP (2022 – 2027) further states that agriculture and agro-processing agriculture is the base of developing economies and is still regarded as an important sector in South Africa as it is the sector that most people depend on for survival. Furthermore, it is the sector that offers the best potential for poverty and inequality reduction, as it provides sources of productivity from which the most disadvantaged people working in the sector can benefit. A healthy agricultural industry is also central to a country's gross domestic product (GDP), food security, social welfare, job creation and ecotourism, while adding value to raw materials.

<b>(d) Approved Structure Plan of the Municipality</b>	YES	NO	Please explain
--	-----	----	----------------

An Approved Structure Plan for the Dawid Kruiper Municipality has not been drafted.

<b>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</b>	YES	NO	Please explain
--	-----	----	----------------

It is important to note that this function is a function of the District Municipality which must give guidance and assist Dawid Kruiper Municipality with the implementation of the ZF Mgcau DM's Environmental Management

Framework.

The purpose of the EMF is to integrate municipal and provincial decision-making and align different government mandates in a way that will put the area on a sustainable development path. It describes the following four physical geographical regions namely: The Kalahari; Bushmanland; The Griqua fold belt; and The Ghaap Plateau.

The EMF also identifies environmental control zones. The purpose of environmental control zones is to indicate areas that require a specific type or regime of control due to unique environmental elements that occur in these areas. It may or may not be linked to the application of EIA legislation and should be dealt with at a more strategic level, where it should serve a guide for decision-making and planning.

It also identified a few geographical areas based on environmental attributes of the areas, which means that different types of areas based on different environmental attributes are identified.

A few strategies derived from this EMF. The purpose of strategies is to create a mechanism for implementing action to address some of the most pertinent issues that came out of the EMF. The strategies are focused on the alleviation of potential key development/environment friction areas by providing direction in respect to how these friction areas should be dealt with. The following strategies have been compiled:

- Strategy for the protection and conservation of high quality natural vegetation across the ZF Mgcawu District;
- Strategy for development on sensitive areas in the Orange River floodplain;
- Protection of sensitive environmental features on large properties across ZF Mgcawu District; and
- Strategy for the protection of sensitive environmental features surrounded or abutted by small properties.

The implementation of this Environmental Impact Assessment process will ensure that the proposed development is in line with the EMF and and the above mentioned strategies.

<b>(f) Any other Plans (e.g. Guide Plan)</b>	<b>YES</b>	<b>NO</b>	<b>Please explain</b>
--	------------	-----------	-----------------------

The LED Strategy of the DKM has identified the following economic Sectors to be the drivers of economic development to realise the Municipality's 2030 LED vision:

- Transport and logistics
- Agriculture and **Agro-processing**
- Renewable energy
- Tourism (events, hunting and business tourism)
- Services (banking, insurances, construction etc.)
- Manufacturing and Special Economic Zone (SEZ).

<p><b>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The agri-processing facility will be privately funded and is proposed on privately owned land and thus the intended timeframes of the Municipal SDF is thus not applicable. The proposed project will however result in very high positive socio-economic impacts for example job creation.</p>			
<p><b>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The project is located on a privately owned farm in the rural area south east of Upington. Members of the local community will benefit from the proposed project as it will result in the creation of approximately 60 unskilled, semi-skilled and skilled jobs, all permanent and temporary.</p>			
<p><b>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>Electricity: Eskom has confirmed that the closest point to the proposed facility is a 500KVA supply point has registered a highest maximum demand of 405.53KVA during February`22. This leaves an estimated 95KVA of surplus capacity available to be used by the proposed facility.</p> <p>Sewage: Confirmation of handling the expected sewage from the proposed facility is being awaited from the Dawid Kruijer Municipality.</p>			
<p><b>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed development privately funded on privately owned land and is thus not part of the infrastructure planning of the local municipality.</p>			

<p><b>7. Is this project part of a national programme to address an issue of national concern or importance?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed project is not part of a national programme addressing an issue of national concern.</p>			
<p><b>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed development entails an agri-processing facility. The project is privately funded on privately owned land. The approximate footprint of the facility is estimated at 5.6ha. The proposed development site is located between the N10 national road and an existing pack house. Due to the very low carrying capacity of the veld, the 5.6ha cannot be used for grazing. Another possible option is the cultivation of long term agricultural crops (irrigation) or any associated agriculture operation. As the Applicant needs a facility for the processing of his pecan nuts, this area is ideal for such use.</p>			
<p><b>9. Is the development the best practicable environmental option for this land/site?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed development has followed due process by undertaking a comprehensive screening study to identify sensitive areas within the site and inform the design layout. A Terrestrial Compliance Statement was conducted to determine the presence of any SCC as well as to identify areas of high botanical sensitivity. A Heritage Assessment was done to determine the presence of any heritage resources and the possible impact of the proposed development on such possible heritage resources. In addition, all the drainage lines as well as an applied 30m buffer are excluded from the development footprint.</p> <p>The preferred and proposed alternative therefore takes cognisance of all sensitive areas by excluding them from the development.</p> <p>Provided that all the mitigation measures which address terrestrial, heritage resources and the exclusion of the drainage lines (including applied 30m buffers) are implemented, there are no assessed negative environmental impacts that are of sufficient significance to justify the implementation of the No-Go alternative. Retaining the status quo could be considered as a lost opportunity, to secure further job opportunities into the future (uplifting the lives of the local community), further develop skills as well as increase revenue to the local, regional and national economy. As a result, the proposed project (i.e. the preferred alternative) is regarded as the best practicable and sustainable environmental option for the farm at this time.</p>			
<p><b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>The proposed development site has an estimated footprint of 5.6ha. The negative impacts are of local extent and most of these temporary. Contrary to these are the Very High positive impacts on the economy and socio-</p>			



economic environment. Also see Appendix F.			
<b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b>	YES	NO	Please explain
The project is privately funded on proposed on privately owned land. Any other similar projects will either have to be privately or government funded and whether the current proposal will set a precedent is irrelevant.			
<b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b>	YES	NO	Please explain
The proposed project is for the construction of an agri-processing facility for the processing and packing of pecan nuts. It will into negatively affect any person's rights.			
<b>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b>	YES	NO	Please explain
The proposed development is not located within the urban edge of the local municipality.			
<b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</b>	YES	NO	Please explain
No. The project is for a privately funded agri-processing facility on privately owned land.			
<b>15. What will the benefits be to society in general and to the local communities?</b>	Please explain		
<p>The Applicant, <i>Carpe Diem Landgoed Pty Ltd</i>, is a well-established primary producer in the agricultural value chain with the necessary backwards and forwards linkages.</p> <p>The Applicant's proposed agri-processing facility will contribute to the economic viability of the farm and the immediate rural surroundings, agricultural diversification will increase, approximately 60 new jobs will be created and current jobs will be secured. This will all contribute to the on-going sustainability of the farming operation.</p> <p>Local economic development will also be supported not only in the products and services chosen to support the project, but also as an injection into the local economy by means of wages. The local sale of commodities will assist in combating food security not only by increased food stocks, but also by related households' ability to buy food.</p> <p>The proposed development will improve the production capacity of the farm, support the commodity value chain and boost food security, GDP and LED.</p>			
<b>16. Any other need and desirability considerations related to the proposed activity?</b>	Please explain		
The Applicant is the grower of organic pecan nuts and the processing and packaging of the nuts has always			

been challenging as none of the pecan nut pack houses in the region make provision for the processing and packaging of organic pecan nuts. (The processing and packaging of organic pecan nuts require different procedures and thus different management measures). In the past the Applicant always had to rely on a packing facility located more than 200km from the farm to process and pack the fruit. The result was that the fruit had to be transferred by road to that facility where it had to be stored separate from the facility's other intake. The cost and risk of transport, having the fruit processed at a facility far away from the grower farm as well as security threats once off-loaded, has motivated the Applicant to construct a facility on his property to process and pack the organically cultivated pecan nuts. It is estimated that approximately 15 000 tons of pecan nuts will be processed in the proposed facility.

**17. How does the project fit into the National Development Plan for 2030?**

Please explain

The South African 2030 Development Plan identifies the following 9 key challenges facing South Africa:

1. Too few people work;
2. The standard of education for most black learners is of poor quality;
3. Infrastructure is poorly located, under-maintained and insufficient to foster higher growth;
4. Spatial patterns exclude the poor from the fruits of development;
5. The economy is overly and unsustainably resource intensive;
6. A widespread disease burden is compounded by a failing public health system;
7. Public services are uneven and often of poor quality;
8. Corruption is widespread;
9. South Africa remains a divided society.

Priorities for creating jobs identified by SA 2030 include:

- Realising an environment for sustainable employment and inclusive economic growth;
- Promoting employment in labour-absorbing industries;
- Raising exports and competitiveness by focusing on those areas where South Africa already has the endowments and comparative advantage, such as mining, construction, mid-skill manufacturing, agriculture and agro-processing, tourism and business services;
- Mobilising all sectors of society around a national vision.

SA 2030 focus areas are:

- Increase the size and effective effectiveness of the innovation system, and ensure closer alignment with companies that operate in sectors consistent with the growth strategy.
- Improve the functioning of the labour market to help the economy absorb more labour, through reforms and specific proposals concerning dispute resolution and discipline.
- Support small businesses through better coordination of activities in small business agencies,

development finance institutions, and public and private incubators.

- Improve the skills base through better education and vocational training.
- Increase investment in social and economic infrastructure to lower costs, raise productivity and bring more people into the mainstream of the economy.
- Reduce the regulatory burden in sectors where the private sector is the main investor, such as broadband Internet connectivity, to achieve greater capacity and lower prices.
- Improve the capacity of the state to effectively implement economic policy.
- Rural development including agriculture.

The proposed development supports all of the above-mentioned priorities with specific references to the creation of a sustainable rural development and employment development.

**18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.**

The purpose of Section 23 of NEMA is to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities. The general objectives were taken into account by doing the following:

- A Heritage Specialist as well as a Terrestrial Ecologist were appointed to assess the ecological condition of the heritage and terrestrial ecology on the site, to identify possible heritage and ecological constraints associated with the proposed project and to describe possible potential impacts (positive and negative) of the proposed activities and provide recommendations.
- All significant impacts on the environment and the community are considered and discussed in this application. Where impacts could not be avoided, mitigation measures have been proposed to reduce the impact to acceptable limits. It is the opinion of the EAP that all impacts are within acceptable limits.
- An Environmental Management Programme was compiled to ensure that clearing and construction is done according to best environmental management practices.
- Public participation processes (PPP's) was undertaken as per the EIA Regulations 2014, as amended, which allowed sufficient opportunity for public consultation. An advertisement was placed in a newspaper, informing members of the public of the application and available information. Details on how members of the public can register as interested and affected parties (I&APs) or comment on the application was included. Other stakeholders (ward councillor, local authorities, adjacent landowners, organs of state, state departments, etc.) were identified and were notified of the process. A site notice was also placed on site.

**19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.**

The principles of environmental management as set out in section 2 of The National Environmental Management Act (No. 107 of 1998) (NEMA) will be considered. The principles pertinent to the proposed development include:

- People and their needs are placed at the forefront while serving their physical, psychological, developmental, cultural and social interests.
- Development is socially, culturally, environmentally and economically sustainable.
- The use of non-renewable natural resources is responsible and equitable.
- The negative impacts on the environment and on people's environmental rights are anticipated and prevented, and where they cannot be prevented, are minimised and remedied.
- The interests, needs and values of all interested and affected parties are taken into account in any decisions through the Public Participation Processes.
- The social, economic and environmental impacts of the activity are considered, assessed and evaluated, including the disadvantages and benefits.
- The effects of decisions on all aspects of the environment and all people in the environment are considered, by pursuing what is considered the best practicable environmental option.

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

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

<b>Title of legislation, policy or guideline</b>	<b>Applicability to the project</b>	<b>Administering authority</b>	<b>Date</b>
The Constitution of the Republic of South Africa	General duty of care	Parliament of South Africa	1996
National Environmental Management Act (No. 107 of 1998), as amended	Activities listed in Listing notice 1 are triggered by the proposed development.	Department of Agriculture, Environmental Affairs, Rural Development & Land Reform	1998
National Environmental Management: Biodiversity Act (No. 10 of 2004)	Applicable if the proposed development impact on any protected ecosystems and species .	Department of Forestry, Fisheries & Environment	2004
Conservation of Agricultural Resources Act (No. 43 of 1983)	Virgin soil will be removed to make provision for the proposed agri-facility.	Department of Agriculture, Land Reform & Rural Development	1983
National Water Act (No. 36 of 1998)	Water Use License for industrial water use to separate it from the current water use registration.	Department of Water Affairs	1998

SPLUMA (Act 16 of 2013)	Land Use Change Application from Agriculture to Agricultural Industry.	Dawid Kruiper Municipality	2013
Northern Cape Provincial Development and Resource Management Plan / Provincial Spatial Development Framework (PSDF)	Possible applicability to the proposed project.	Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform	2022
IDPs & SDFs for the ZF Mgcawu District Municipality and Kai !Garib Local Municipality (2022/2027)	Possible applicability to the proposed project.	ZF Mgcawu District Municipality and Kai !Garib Local Municipality	

## 12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

### a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	<b>YES</b>	<b>NO</b>
If YES, what estimated quantity will be produced per month? (20m <sup>3</sup> for 3 months)	20m <sup>3</sup>	

How will the construction solid waste be disposed of (describe)?

Construction phase solid waste will be transported by the Contractor to the De Duine Landfill Site where it will be disposed.

Where will the construction solid waste be disposed of (describe)?

De Duine Landfill Site.

Will the activity produce solid waste during its operational phase?	<b>YES</b>	<b>NO</b>
If YES, what estimated quantity will be produced per month?	3 000m <sup>3</sup>	
How will the solid waste be disposed of (describe)?		

Operational phase solid waste will be transported and disposed by the Applicant to the De Duine Landfill Site where it will be disposed.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

N/A

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

De Duine Landfill Site

*If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.*

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?	YES	NO
<i>If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.</i>		

Is the activity that is being applied for a solid waste handling or treatment facility? 

YES	NO
-----	----

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

**b) Liquid effluent**

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO
If YES, what estimated quantity will be produced per month?	N/A	
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	NO
On entering the facility the pecan nuts will be washed in a very low percentage chlorine water mixture (the same as for treated drinking water). This “wash water” will be collected from the respective washing areas and pumped to the evaporation ponds.		
<i>If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.</i>		
Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	NO
If YES, provide the particulars of the facility:		
<b>Facility name:</b>	N/A	
<b>Contact person:</b>		
<b>Postal address:</b>		
<b>Postal code:</b>		
<b>Telephone:</b>	<b>Cell:</b>	
<b>E-mail:</b>	<b>Fax:</b>	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Wash water will be conveyed to the evaporation ponds and sewage will be disposed No waste water will be generated as a result of the proposed development.
--

**c) Emissions into the atmosphere**

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities? 

YES	NO
-----	----

If YES, is it controlled by any legislation of any sphere of government? 

YES	NO
-----	----

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe

the emissions in terms of type and concentration:

No emissions will be generated as a result of the development.

**d) Waste permit**

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO
-----	----

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority: N/A

**e) Generation of noise**

Will the activity generate noise?

YES	NO
YES	NO

If YES, is it controlled by any legislation of any sphere of government? Not required

Describe the noise in terms of type and level:

Noise will occur during construction phase with vehicles transporting materials and workers to the area. The activity is also labour intensive. Significant noise levels are not anticipated in the operational phase.

**13. WATER USE**

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
-----------	-------------	-------------	-------------------------------	-------	------------------------------------

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

12 000 litres per month per annum
--------------------------------------

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

YES	NO
-----	----

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. HDL Consulting was appointed to administer the Water Use Licence Application. Proof of the WULA will be submitted as part of the Final BAR.

**14. ENERGY EFFICIENCY**

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

Solar energy to supply electricity to the facility is currently being considered and the intention is to switch from ESKOM to solar power within the first five years of operation.

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

The Applicant intends to switch from Eskom to solar power within the first 5 years of the operational phase.

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

### Important notes:

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

Section B Copy No. (e.g. A):

N/A

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

YES

NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

### Property

**description/physical address:**

<b>Province</b>	Northern Cape
<b>District Municipality</b>	ZF Mgcawu District Municipality
<b>Local Municipality</b>	Dawid Kruiper Municipality
<b>Ward Number(s)</b>	Ward no 10
<b>Farm name and number</b>	Vaal Koppies No 40
<b>Portion number</b>	Portion 64
<b>SG Code</b>	C0360000000004000000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

**Current land-use zoning as per local municipality IDP/records:**

Agriculture

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES

NO

The property is "Agriculture" zoned and the development area will be re-zoned to "Agriculture Industry". Macroplan Town & Regional Planners was appointed to administer the re-zoning application.



**1. GRADIENT OF THE SITE**

Indicate the general gradient of the site.

**Alternative S1:**

Flat	1:50—1:20	1:20—1:15	1:15—1:10	1:10—1:7,5	1:7,5—1:5	Steeper than 1:5
------	-----------	-----------	-----------	------------	-----------	------------------

**Alternative S2 (if any):**

Flat	1:50—1:20	1:20—1:15	1:15—1:10	1:10—1:7,5	1:7,5—1:5	Steeper than 1:5
------	-----------	-----------	-----------	------------	-----------	------------------

**Alternative S3 (if any):**

Flat	1:50—1:20	1:20—1:15	1:15—1:10	1:10—1:7,5	1:7,5—1:5	Steeper than 1:5
------	-----------	-----------	-----------	------------	-----------	------------------

**2. LOCATION IN LANDSCAPE**

Indicate the landform(s) that best describes the site:

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

**3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

Is the site(s) located on any of the following?

**Alternative S1:**

**Alternative S2**

**Alternative S3**

**(if any):**

**(if any):**

	YES	NO	YES	NO	YES	NO
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	NO	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

#### 4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

<del>Natural veld - good condition<sup>E</sup></del>	<del>Natural veld with scattered aliens<sup>E</sup></del>	<del>Natural veld with heavy alien infestation<sup>E</sup></del>	<del>Veld dominated by alien species<sup>E</sup></del>	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “<sup>E</sup>” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

#### 5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

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

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

#### 6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

<del>Natural area</del>	<del>Dam or reservoir</del>	<del>Pole fields</del>
<del>Low density residential</del>	<del>Hospital/medical centre</del>	<del>Filling station<sup>H</sup></del>
<del>Medium density residential</del>	<del>School</del>	<del>Landfill or waste treatment site</del>
<del>High density residential</del>	<del>Tertiary education facility</del>	<del>Plantation</del>
<del>Informal residential<sup>A</sup></del>	<del>Church</del>	<del>Agriculture</del>
<del>Retail commercial &amp; warehousing</del>	<del>Old age home</del>	<del>River, stream or wetland</del>
<del>Light industrial</del>	<del>Sewage treatment plant<sup>A</sup></del>	<del>Nature conservation area</del>
<del>Medium industrial<sup>AN</sup></del>	<del>Train station or shunting yard<sup>N</sup></del>	<del>Mountain, koppie<sup>Koppie</sup> or ridge</del>
<del>Heavy industrial<sup>AN</sup></del>	<del>Railway line<sup>N</sup></del>	<del>Museum</del>
<del>Power station</del>	<del>Major road (4 lanes or more)<sup>N</sup></del>	<del>Historical building</del>

Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity? Specify and explain:

None of the boxes marked with an "N" is ticked.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

None of the boxes marked with an "An" is ticked.

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

None of the boxes marked with an "H" is ticked.

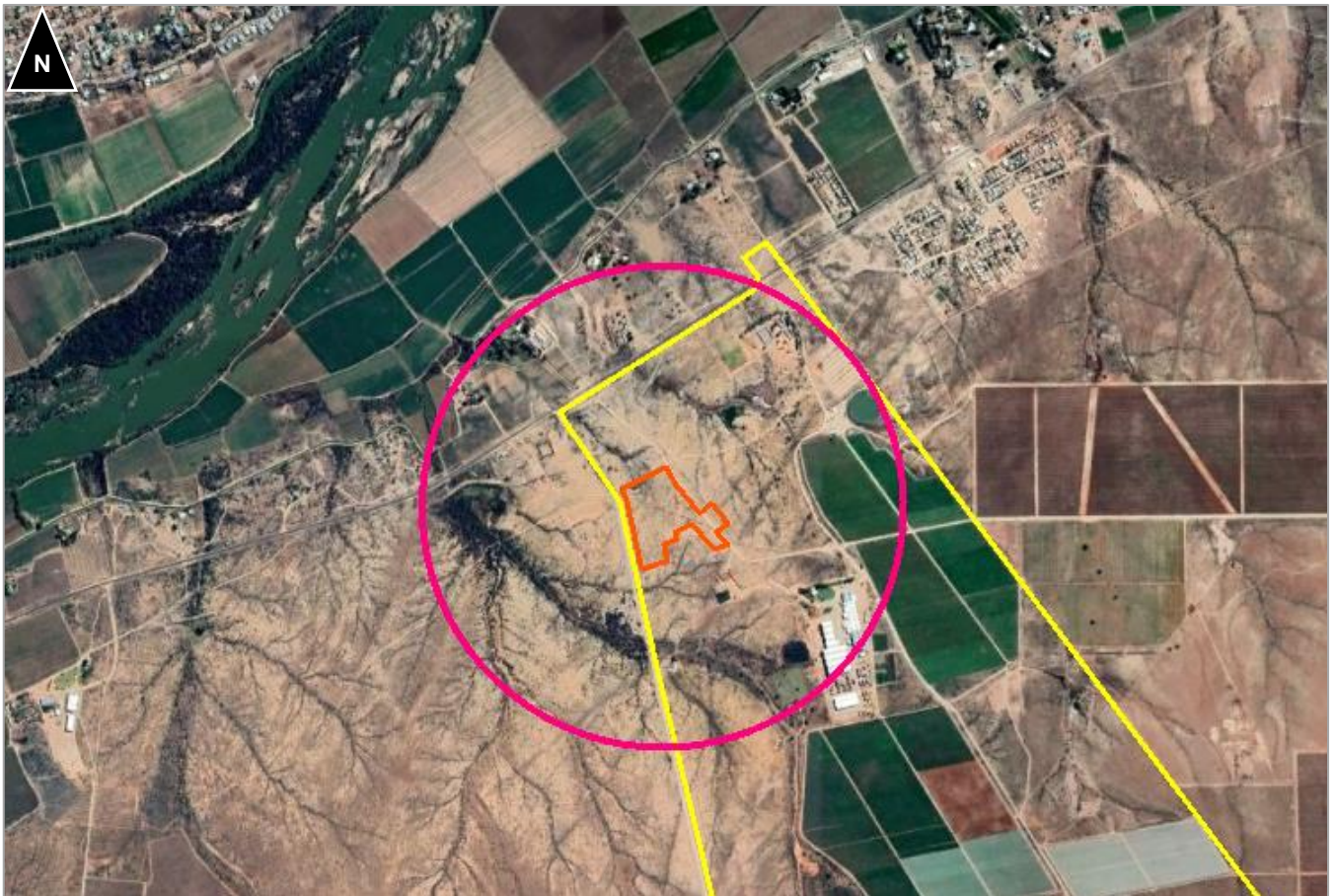


Figure 10. The pink circle indicates a 700m radius around the proposed development footprint (indicated in orange).

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area? See Figure 11.	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO
Buffer area of the SKA?	YES	NO
The development footprint is classified as ESA (ecological support area).		

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

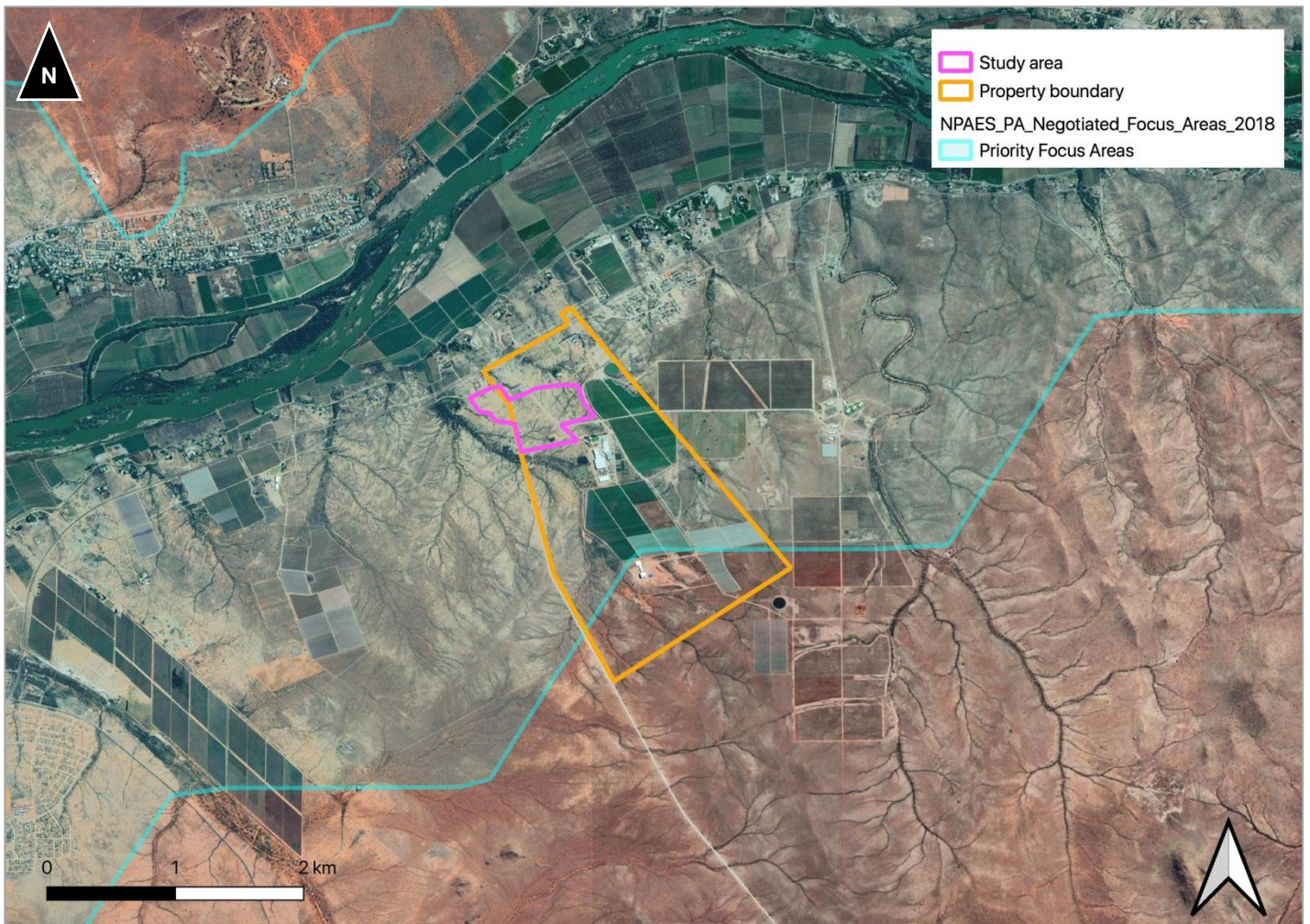


Figure 11. The NPAES map for the area. The proposed development footprint is located within the area referred to as “Study area”.

**7. CULTURAL/HISTORICAL FEATURES**

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:

<b>YES</b>	<b>NO</b>
Uncertain	

See below.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

The proposed development triggers Section 38 of the National Heritage Resources Act: “38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake (c) any development or other activity which will change the character of a site (i) exceeding 5 000m<sup>2</sup> in extent.”

UBIQUE Heritage Consultants were appointed by the ECO Balance Planning C as independent heritage specialists in accordance with Section 38 of the NHRA and the National Environmental Management Act 107 of 1998 (NEMA) to conduct a cultural heritage assessment to determine the impact of the proposed construction of an agri-industrial facility on Portion 64 of Vaal Koppies No 40, on any sites, features, or objects of cultural heritage significance. The HIA Report is attached as Appendix D.

Seven occurrences of low-density surface scatters of MSA lithics (referred to as VK-001 to 004 and VK-006, 011, 016) were recorded within the assessed footprint of which one was recorded within the proposed development: VK-011. The impact on the MSA lithic occurrences recorded at sites VK-011 is not conservation worthy, and therefore, the impact is negligible.

Table 1. Stone age resources identified within the proposed development footprint.

SITE ID #	DESCRIPTION		Period	Location	FIELD RATING/ SIGNIFICANCE/ RECOMMENDED MITIGATION
	Type lithic/s	Flakes and bladelet			
VK-011	Raw material	BIF	MSA	28°27'10.6"S 21°19'08.4"E	Field Rating IV C
	N in m2	5/100m2			Low significance
	Content	Surface scatter			No Mitigation Required
	Additional	No content, MSA debris			

Further summarized findings of the HIA:

- No historical/colonial period resources were identified.
- An abandoned graveyard/cemetery (VK-008) and a possible isolated unmarked grave (VK-009) were recorded during the survey. The abandoned graveyard and the possible unmarked grave are situated outside the formal

development footprint. This indicates that the impact of the development footprint will be of low significance in palaeontological terms. Therefore, it is considered that the proposed development is deemed appropriate and feasible and will not lead to detrimental impacts on the palaeontological reserves of the area.

- No other significant heritage resources that may be impacted negatively were identified.
- The proposed development area is primarily underlain by the Dagbreek Formation and the Keimoes Suite (Namaqua-Natal Province). These sediments are igneous in origin and thus unfossiliferous.
- The proposed construction of an agri-industrial facility on Portion 64 of Vaal Koppies No 40, Kenhardt, in the Z.F. Mgcawu District Municipality and within the Dawid Kruiper Local Municipality in the Northern Cape Province, may continue, provided the recommendations stipulated within the HIA Report, and the subsequent decision by SARHA, are followed.

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is 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 provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority. See Appendix D.

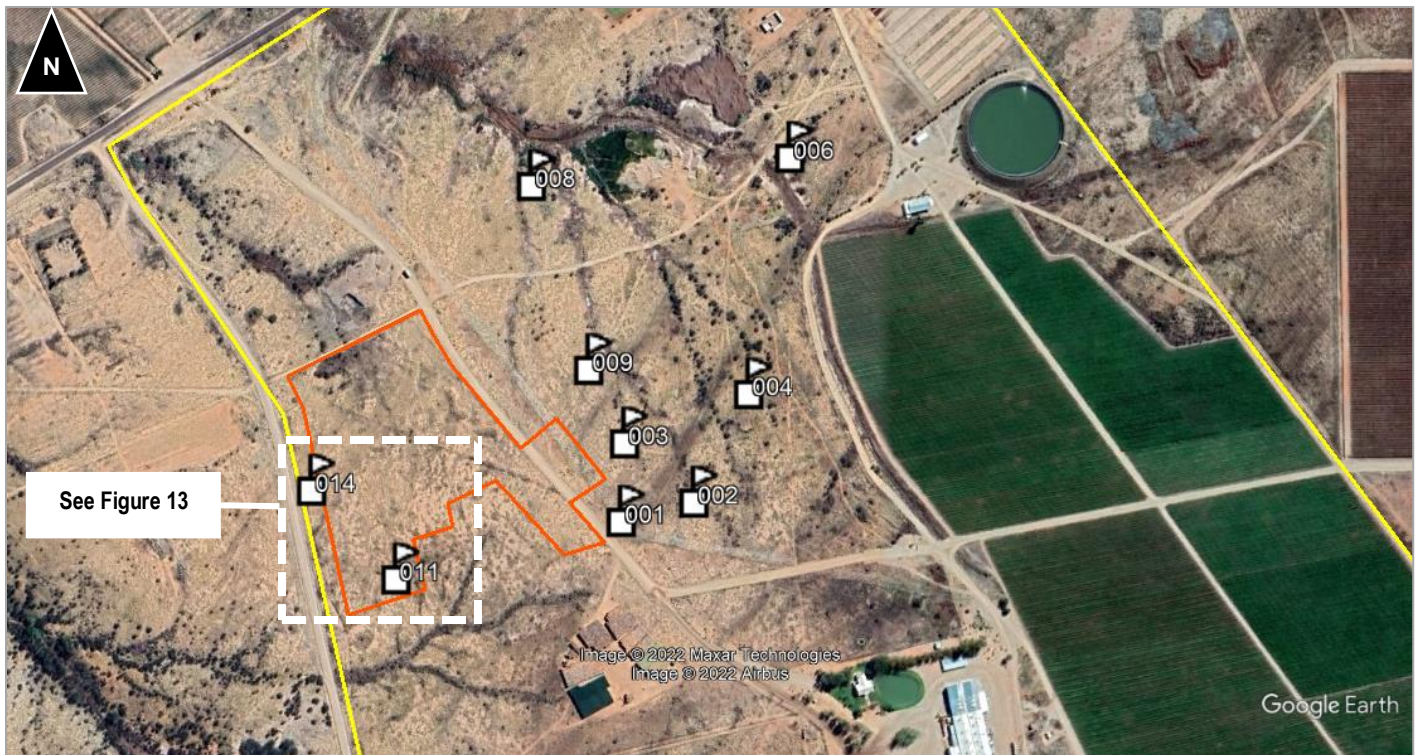


Figure 12. The development footprint in orange with the identified heritage resources. VK-011 is located within the proposed footprint with VK-014 outside of the western boundary.



Figure 13. VK-011 is mapped within the southern section of the proposed development footprint.

## 8. SOCIO-ECONOMIC CHARACTER

### a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Dawid Kruiper Municipality is a Local (Category B) Municipality (NC087) located within the ZF MCGAWU District Municipality (DC8). The ZF MCGAWU Municipality is the second largest district (approximately 103 871 km<sup>2</sup>) in the Northern Cape. The Municipality is approximately 344 446 ha in extent and straddles the Orange River. Upington is the main town of the Dawid Kruiper Municipality and has, since its inception, been the hub of activities in the region. The municipality borders with Namibia in the west, the Kgalagadi-Transfrontier Park in the north and Botswana in the northeast. The Municipal Area is divided into 16 wards.

Upington is situated 400km west of Kimberley, and has an airport and a landing strip. Natural boundaries provide a unique aspect to the town – one is the Kalahari Desert and another is the Orange River, South Africa's largest river, which it straddles.

The municipality is the acknowledged commercial, educational, military, agricultural, medical, transport and tourism centre of the area. The main economic Sectors: Agriculture, business services, game farming, tourism and hospitality, manufacturing, transport, community services, social and personal services.

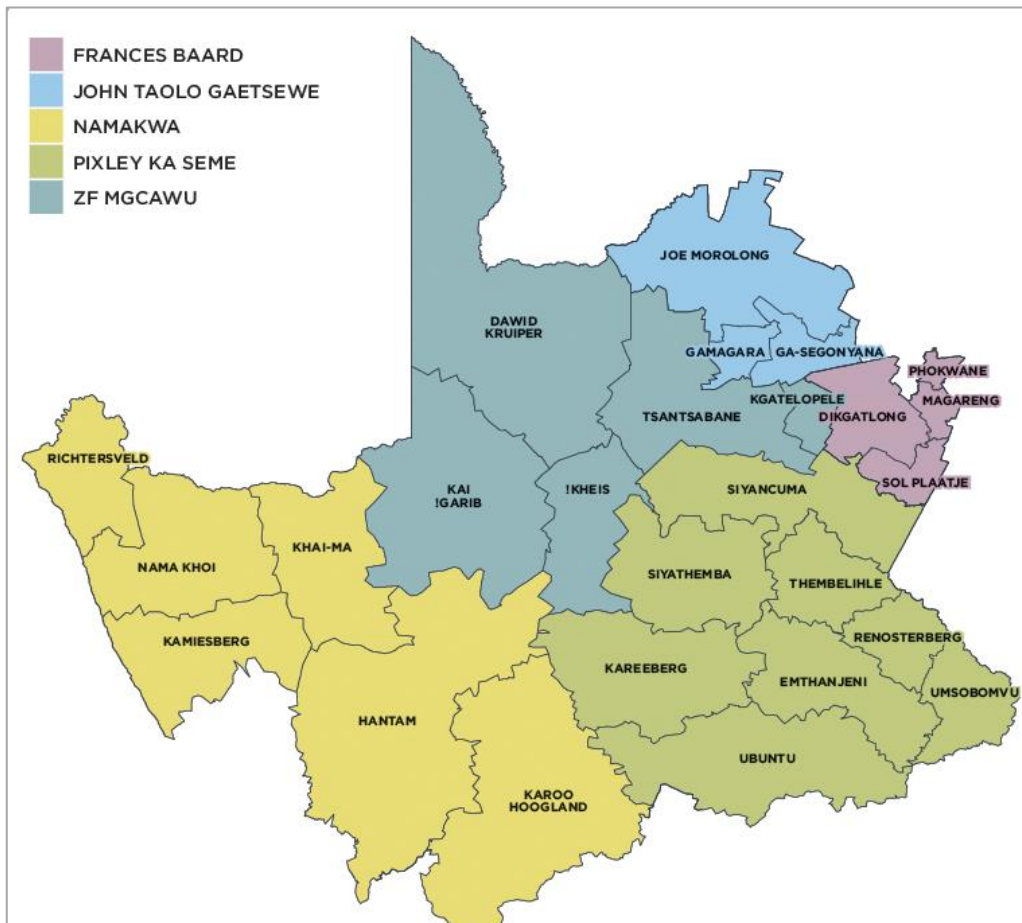


Figure 14. The Dawid Kruiper Municipality in the northern section of the ZF MGCWU District Municipality.

Level of unemployment:

The unemployment rate decreases significantly from 34% in 2001 to 22.1% in 2011. There was a huge decline in the youth unemployment rate too from 42.3% in 2001 to 29% in 2011 but the youth unemployment rate is still very high in comparison with the overall unemployment rate of the municipality. Although about 44.7% of the Dawid Kruiper population is between 14 and 35 years old, youths remain relatively marginalised.

Economic profile of local municipality:

Key constraints/problems/issues in terms of the development of Dawid Kruiper Municipality include a shortage of job opportunities and job creation in the area. The natural resource base and economy does not have the capacity to support the total population, forcing the labour force to seek employment opportunities outside of the Municipality (e.g. Kimberley), etc. Furthermore, low levels of income obtained in the area imply low levels of buying power and, therefore, few opportunities for related activities such as trade. This in turn also supports the leakage of buying power.

Dawid Kruiper Local Municipality benefits from a potentially economically active population that comprises approximately 67% of the total population, which provides the Municipality with a large human resource base.



This allows opportunities for development projects to involve and benefit local people. The age distribution of the Municipality's population also indicates a fairly young potential economically active population, necessitating development to focus on the youth.

In terms of economic indicators, the Municipality also enjoys comparative advantages in all of the economic sectors, except mining, compared to the District. The Municipality should therefore capitalise on these advantages to further strengthen its position in the District. Furthermore, the fastest growing sectors in the Municipality were those of the agriculture, electricity and water, and mining sectors. The current growth occurring in these sectors should be exploited to ensure the creation of new job opportunities for local people.

In 2017, Dawid Kruiper employed 33 100 people which is 36.99% of the total employment in ZF Mgcawu District Municipality (89 500), 10.31% of total employment in Northern Cape Province (321 000), and 0.21% of the total employment of 15.9 million in South Africa. Employment within Dawid Kruiper increased annually at an average rate of 1.45% from 2007 to 2017.

Level of education:

An increase of 5.1% (20.9% in 2001 to 26% in 2011) of people living in Dawid Kruiper over the age of twenty years have completed the 12th grade while there was a significant decline of 6.5% (13.6 in 2001 to 7.1% in 2011) in people that had no schooling at all. Higher education increases from 20.9% in 2001 to 26% in 2011.

**b) Socio-economic value of the activity**

Anticipated CAPEX value of the project on completion	R50m
What is the expected annual income to be generated by or as a result of the project?	R80m
New skilled employment opportunities created in the construction phase of the project	5
New skilled employment opportunities created in the operational phase of the project	15
New un-skilled employment opportunities created in the construction phase of the project	20
New un-skilled employment opportunities created in the operational phase of the project	60
What is the expected value of the employment opportunities during the operational and construction phase?	R1.8m
What percentage of this value that will accrue to previously disadvantaged individuals?	60%
What percentage of this value that will accrue to previously disadvantaged individuals?	60%
The expected current value of the employment opportunities during the first 10 years	R72m
What percentage of this value that will accrue to previously disadvantaged individuals?	60%

**9. BIODIVERSITY**

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or [BGIShelp@sanbi.org](mailto: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. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

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

<b>Systematic Biodiversity Planning Category</b>				<b>If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan</b>
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	Bushmanland Arid Grassland, Kalahari Karroid Shrubland, NPAES PA and Focus, Landscape structural elements.

- b) **Indicate and describe the habitat condition on site**

<b>Habitat Condition</b>	<b>Percentage of habitat condition class (adding up to 100%)</b>	<b>Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).</b>
Natural	99%	99% of the proposed development site is undeveloped.
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	1%	Existing road.



Figure 15. The development footprint indicated as an orange coloured polygon. The area is undisturbed with a small section of an existing road in the eastern section.

**c) Complete the table to indicate:**

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

Terrestrial Ecosystems		Aquatic Ecosystems NO AQUATIC ECOSYSTEM IS PRESENT							
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline		
	Endangered								
	Vulnerable								
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO	
Vegetation type: Bushmanland Arid Grassland									

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

The following information was taken from the BOTANICAL SITE SENSITIVITY VERIFICATION AND COMPLIANCE STATEMENT (dated December 2022) drafted by CAPENSIS (Mr Greg Nicholson) and a copy of such report is attached

as Appendix D.

**NATIONAL VEGETATION TYPE:** According to the Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2018) (VEGMAP), the vegetation type occurring in the study area is Bushmanland Arid Grassland. No vegetation map is provided since the entire study area and surrounds are the same vegetation unit.

The landscape and vegetation of the Western Little Karoo ecosystem is described by Mucina et al. (in Mucina and Rutherford, 2006): *“Extensive to irregular plains on a slightly sloping plateau sparsely vegetated by grassland dominated by white grasses (Stipagrostis species) giving this vegetation type the character of semidesert ‘steppe’. In places low shrubs of Salsola change the vegetation structure. In years of abundant rainfall rich displays of annual herbs can be expected”*.

**ECOSYSTEM THREAT STATUS:** Bushmanland Arid Grassland is listed as **Least Concern** in The National List of Ecosystems that are Threatened and in Need of Protection. It is noted that: “Bushmanland Arid Grassland has experienced low rates of natural habitat loss and biotic disruptions, placing this ecosystem at low risk of collapse” (<http://bgis.sanbi.org/Ecosystems/home/Detail/299>). The ecosystem is listed as **Least Concern** in the NBA with 99.4% still intact.

**SITE INSPECTION:** The vegetation within the study area has been classified into different habitats, these are described below in section 7.1. A description of the various habitat condition classes appears in Table 2 and a habitat map appears in Figure 16.

Table 2. The habitat condition descriptions used for the vegetation on the site.

Habitat condition	Description
Intact vegetation	A true representation of the original vegetation type in terms of structure and species makeup. Minimal soil disturbance. Unlikely to have ever been ploughed. Disturbance may be evident.
Semi-intact	Closely resembles the original vegetation type in terms of structure and species makeup but has undergone some form of current or historical disturbance. Restoration potential is high.
Degraded	Only a few species representative of the original vegetation type are present. The vegetation has undergone heavy disturbance. Restoration potential is either low or moderate.
Highly degraded	The original vegetation is usually absent and has been removed in the past. Only a few remnant or pioneer species are present. Soils usually ploughed in the past. Restoration potential is very low.
Transformed	No remnant species exist anymore. The landscape is altered irreversibly with no restoration potential. Examples include cultivated farmland and the built environment.

**Vegetation condition:** The vegetation within the study area is mapped as Bushmanland Arid Grassland and this is supported based on the site visit. The landscape is relatively flat and dominated by grasses with seasonal drainage lines are common features and distinguished by the presence of shrubland communities. Exposed granite occurs sporadically within the study area and hosts some succulent flora.

Various habitats have been mapped and include: a) Semi-intact (dominant), (b) Drainage lines (in a Semi-intact or Degraded condition) (c) Highly degraded and (d) Transformed.

**Semi-intact:** This habitat is typical Bushmanland Arid Grassland and is dominated by the tall bushman grass (*Stipagrostis ciliata*) and other grasses. Other species found within this are include: grey twin leaf (*Roepera lichtensteiniana*), simple leaved bean caper (*Tetraena simplex*), *Tetraena decumbens*, devil thorn (*Tribulus* sp.), fine vomit daisy (*Geigeria filifolia*), river ganna (*Caroxylon aphylla*) and a gumbush (*Pteronia* sp.)(Plate 1).

The areas that contain exposed granite host a number of other species dominated by the succulent kraal aloe (*Aloe claviflora*)(Plate 2). Other species noted include bitter kambro (*Adenium oleifolium*)(Plate 3), *Boschia foetida* and paintbrush flower (*Kleinia longiflora*).

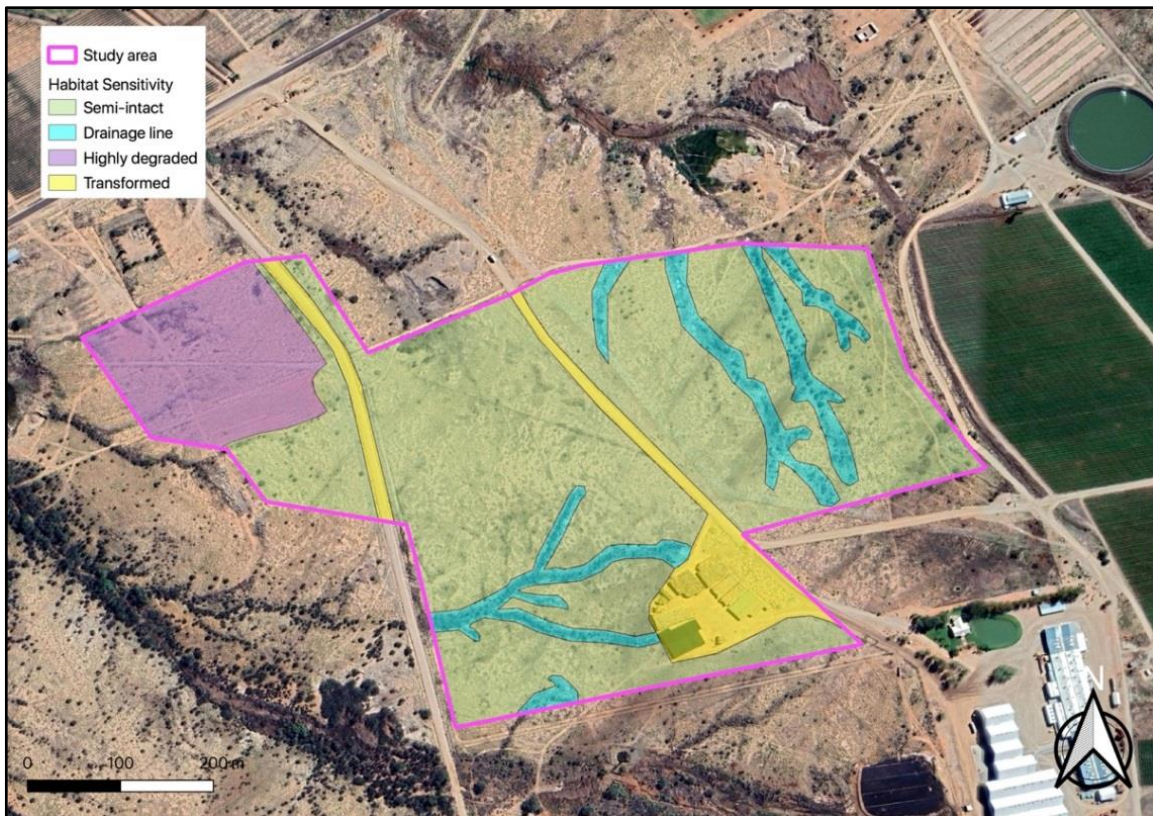


Figure 16. HABITAT MAP. The habitats mapped at the site by the author, overlaid on a Google Earth™ aerial image.



Plate 1. The typical sparse habitat of Bushmanland Arid Grassland dominated by low shrubs and grasses.



Plate 2. The exposed rocky areas host some succulents (see Aloe in the right side of the image) and medium sized shrubs (blackthorn).



Plate 3. *Adenium oleifolium* was found in the rocky areas.

Some parts of this habitat have been landscaped using rocks and succulents. One of the plants found here is a listed species of conservation concern (SCC), the VULNERABLE quiver tree (*Aloidendron dichotomum*)(Plate 4). However, this species has been planted on the site and it is therefore not considered as a natural population. It is also likely that these plants will remain in place and not be removed due to the proposed development.



Plate 4. *Aloidendron dichotomum* has been planted within the study area within landscaped areas close to the road to the farm buildings.

One nationally protected species, the caper bush (*Boscia albitrunca*) was found in close proximity to the Study area but not within the area proposed for development (see Plate 5 below of the plant).



Plate 5. *Boscia albitrunca* is a protected tree species and is found within the subject property but not within the proposed development footprint.

**Drainage lines:** The drainage lines are seasonal and evident by dominance of medium sized shrubs. The dominant species is the blackthorn (*Senegalia mellifera*) (Plate 7). Other species of shrub found on the site and most commonly within this habitat include trithorn (*Rhigozum trichotomum*), karee (*Searsia lancea*) and namnambush (*Tapinanthus oleifolius*). Some parts of this habitat have been disturbed by agricultural activities and some blackthorn individuals have been felled in the drainage lines, and some fires have also occurred in this habitat (Plate 6).



Plate 6. The drainage lines on the north-eastern part of the site have been degraded and a number of black thorn individuals have been felled.



Plate 7. Typical vegetation found along the drainage lines dominated by the black thorn (*Senegalia mellifera*).

**Compliance statement:** The study area has been identified as a site of Very high sensitivity under the terrestrial biodiversity category in the Screening Tool. This sensitivity rating has been assessed through a desktop study and site visit described above. The findings of the site visit are that the site is in a Semi-intact to Transformed condition from a botanical perspective.

The site has been included in the Northern Cape CBA Map in two categories. The north-western corner of the site is



classified as a CBA 2 site and the remainder of the site is classified as an ESA. The CBA 2 area has been recently cleared and is Highly degraded, with a low conservation value. The remainder of the site is a valid ESA area with moderate conservation value.

The entire Study area falls within a Priority focus area for the National Protected Areas Expansion Strategy. This focus area extends along the entire width of the Orange River and far to the east and west. Whereas this focus area is supported for future conservation, the loss of this small area in an already partially developed area will not impact the ecological functioning of the area.

The vegetation type present, Bushmanland Arid Grassland is a Least Concern vegetation type with over 94% of the original area still intact. Apart from the drainage lines, the site sensitivity is rated as Low or Very low from a botanical perspective due to the large areas of natural vegetation that remain on the subject property, surrounding areas and the ecosystem as a whole. A buffer of 30 m was placed over the drainage lines and this area is of Medium sensitivity (Figure 17) and should not be developed. The applicant has agreed to exclude these Medium sensitivity areas from the development footprint. The proposed development of 10 ha will fit within the remaining Low or Very low sensitivity areas.

The Very High Sensitivity rating applied by the Screening Tool is therefore disputed. The proposed agricultural processing plant of 10 ha will not have a significant impact on the ecological functionality of the site or surrounding area and can be supported from a botanical perspective as the Medium sensitivity areas are avoided. The potentially developable areas are shown in Figure 18.

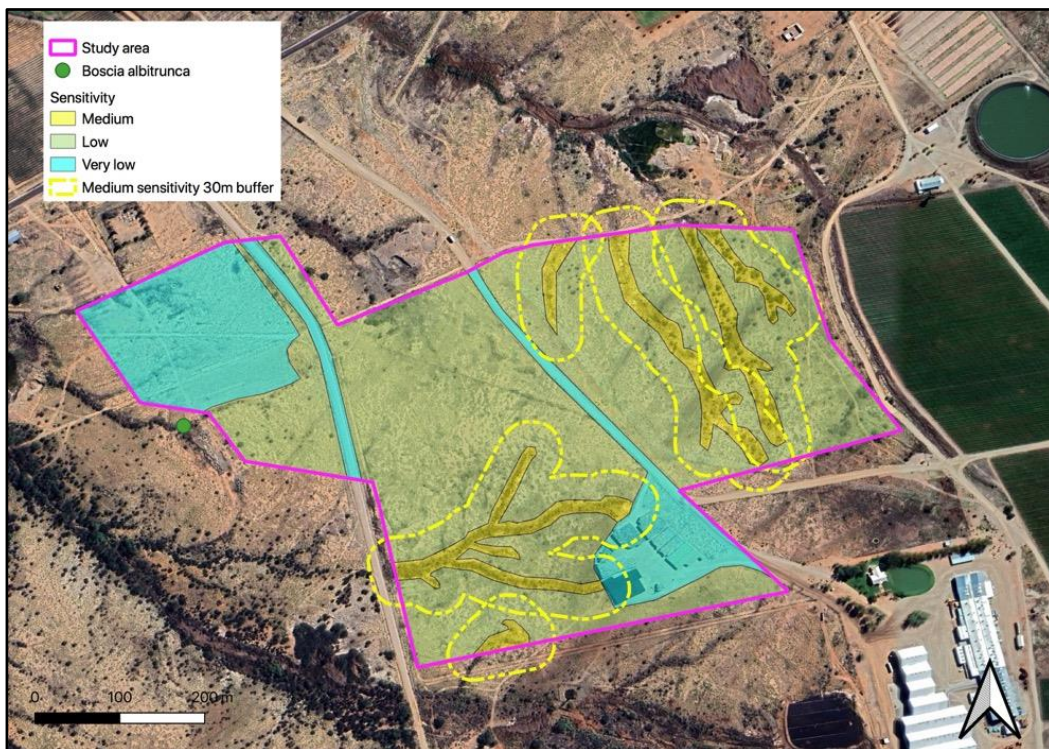


Figure 17. SENSITIVITY MAP: Google Maps™ image showing the sensitivities mapped within the Study area.

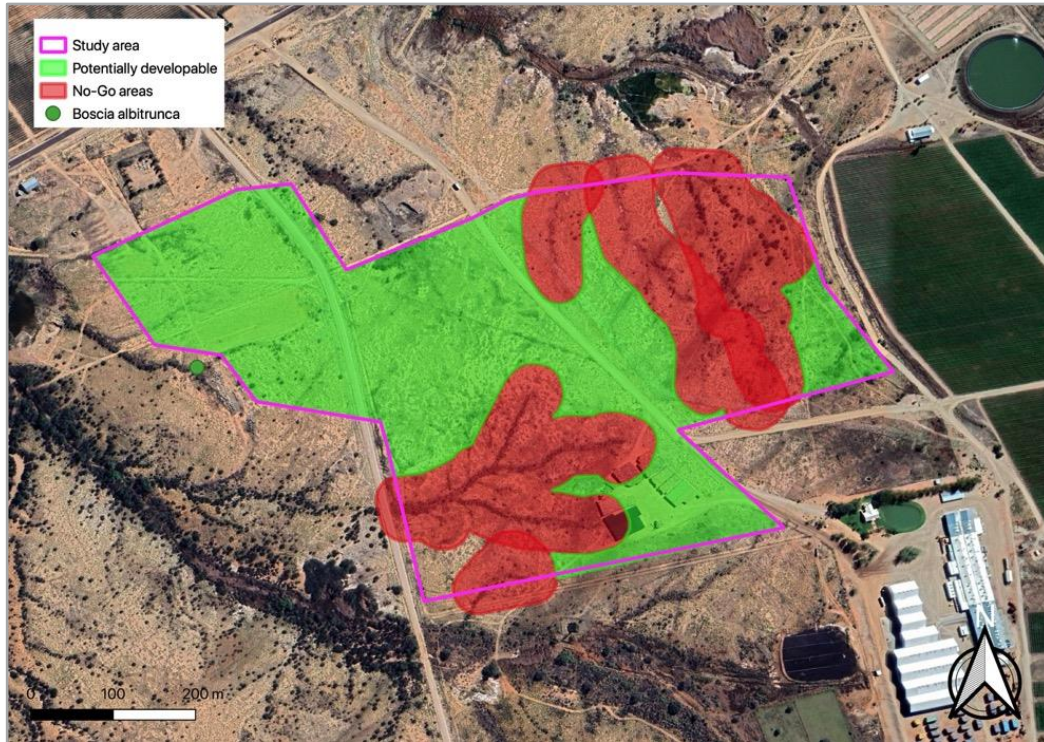


Figure 18. CONSTRAINTS MAP: Google Maps™ image showing the Potentially developable and No-Go areas mapped within the Study area. The small areas between the site boundary and the No-Go areas should be avoided.

The study area has been identified as a site of Low sensitivity under the relative plants species theme sensitivity. No naturally occurring species of conservation concern (SCC) were found within the development footprint. One SCC has been planted in landscaped areas, however, due to the fact that it is not a natural population, it is not assessed as an SCC. One protected tree species was found within the subject property, but will not be disturbed for the proposed development. The Low sensitivity plants species theme rating is correct. A **Terrestrial Plant Species Compliance Statement** follows below:

The requirement for assessment and reporting of impacts on terrestrial plant species is in accordance with new procedures for reporting on identified environmental themes published in October 2020 (Government Gazette No. 43844, 2020). The Screening Tool used to derive the plant sensitivity (<https://screening.environment.gov.za>) assigned a Low sensitivity theme for the Study area (**Figure 19**). Note that based on the site verification no Species of Conservation Concern (SCC) or Sensitive Species were found.



Figure 19. Map of relative plant species theme sensitivity.

**Findings and Conclusions**

No natural populations of Species of Conservation Concern (SCC) were found within the proposed development footprint and there would be no significant impact on any SCC should any development be given the go-ahead.

**SECTION C: PUBLIC PARTICIPATION**

**1. ADVERTISEMENT AND NOTICE**

<b>Publication name</b>	Gemsbok Newspaper	
<b>Date published</b>	18 January 2022	
<b>Site notice position</b>	<b>Latitude:</b> 28°26'53.77"S	<b>Longitude:</b> 21°18'59.90"E
<b>Date placed</b>	18 January 2022	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

**2. DETERMINATION OF APPROPRIATE MEASURES**

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Two public participation processes (“PPP”) will be implemented: a 30day PPP on Pre-Application Draft BAR & EMP and another 30 day PPP on the DRAFT BAR & EMP.

**2.1 Public Participation tasks undertaken during Pre-Application Draft BAR & EMP: 17 January 2023 – 17 February 2023:**

- A Notice board was fixed at the entrance to the property (Plates 1 & 2 in Appendix E.1) on zx January 2023. This notice board contained all the required information plus contact details of the EAP should any I&AP require a copy of the Pre-App Draft BAR & EMP.
- Notification letters (Appendix E.1.2) as well as an electronic copy of the Pre-App DRAFT BAR & EMP were sent on zx January 2023 via email and WE TRANSFER links to each of the following identified Interested & Affected parties (I&AP’s) (See Appendix E.1.3 for proof of postage):
  - neighbours (including owners, persons in control of, and occupiers of land adjacent to the property);
  - Municipal councillor;
  - Municipal Manager (MM) of the DAWID KRUPER Municipality;
  - Municipal Manager (MM) of the ZM Mqawu District Municipality;
  - Officials representing Organs of State as listed below:
    - Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform;
    - Department of Agriculture, Forestry and Fisheries;
    - Department of Water and Sanitation;
    - *Upington Eilande* Users Association;
    - Strausburg Irrigation Board;
    - Louisvale Irrigation Board;
    - South African Heritage Resource Agency (SAHRA).
- An advertisement was placed in the Gemsbok newspaper of 18 January 2023 indicating how and where I&AP’s can register as well as information on where a copy of the Pre-App DRAFT BAR & EMP can be accessed.

**2.2 Public Participation tasks to be undertaken during 30 PPP on Draft BAR & EMP: to complete.**

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
The Chairperson	<i>Upington Eilande</i> Users Association	Tel: 054 – 334 0488 ludwig.hoofraad@gmail.com olyvenhoutsdrift-suid@compufinupt.co.za

The Chairperson	Straussburg Irrigation Board	Tel: 054 – 334 0488 ludwig.hoofraad@gmail.com olyvenhoutsdrift-suid@compufinupt.co.za
The Chairperson	Louisvale Irrigation Board	Tel: 054 – 334 0488 ludwig.hoofraad@gmail.com olyvenhoutsdrift-suid@compufinupt.co.za
Municipal Manager (Mr. Gilbert Lategan)	ZM Mgcawu District Municipality	admin@zfm-dm.gov.za gil@zfm-dm.gov.za
Municipal Manager – Dawid Kruiper Municipality	Dawid Kruiper Municipality	054 338 7001 manager@kharahais.gov.za; suzzelle.coetzee@dkm.gov.za elias.ntoba@dkm.gov.za
Mr. Jeremy du Plessis	Dawid Kruiper Municipality - Manager Land Use Management	054 338 7372 townplanner@kharahais.gov.za
Mr. James Moya	Ward Councillor	0763543962 moyajam80@gmail.com
Mr. Hendry Christians	Dawid Kruiper Municipality: Control Technician: Water Purification, Sewerage Treatment & Sanitation (Vacuum Tanker Service)	060 834 2222 hendry.christian@dkm.gov.za; hendryc.dkm@gmail.com
Colleen Runkel René de Kock Shaun Dyers	SANRAL	runkelc@nra.co.za decockr@nra.co.za DyersS@nra.co.za
Carmen Abrahams	Neighbour - Provincial Road	053 838 5200 Carmen.abrahams@dpw.gov.za
Hendrik van Niekerk	Neighbour - Provincial Road	053 838 5302 Hendrik.vanniekerk@dpw.gov.za
James Tawine	Roads Dept, DRPW, Upington	072 057 9741 jtawine@vodamail.co.za
Gerrit Lottering	Roads Dept, DRPW, Upington	082 807 1173 glottering@vodamail.co.za
A. van Gense	ESKOM	051 404 2040 vgenseal@eskom.co.za; Andrea.vanGensen@eskom.co.za
Debbie Harding	ESKOM	053 830 5774 hardind@eskom.co.za
Mario Eygelaar	ESKOM	083 654 3755 eygelama@eskom.co.za
Mr. Johan van der Colff	Neighbour	054 332 2901 gog@cdgroup.co.za

Mr. Eduard Goussard	Neighbour	082 210 2117 willa@cdgroup.co.za
Mr. Stirling Strauss	Neighbour	082 783 5252 stirlingstrauss@isat.co.za
Mr. David Van Der Merwe	Neighbour	082 338 8733 david@merwelandgoed.co.za
Mr. Jurgens Basson	Neighbour	082 883 1981 jurgens@gigs.co.za

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2.

This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

### 3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
To complete throughout PPP	

### 4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

### 5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform;	Ms Dineo Moleko Ms Gail Letlemela	053 – 8077 300	053 – 8077 328-	dmoleko@ncpg.gov.za gaildenc@gmail.com	PBag X6102, Kimberley, 8300

Department of Agriculture, Forestry and Fisheries	Mrs. Jacoline Mans	060 973 1660	-	jmans@dffe.gov.za	26 Olien Street, Louisvaleroad, Upington, 8801
Department of Water and Sanitation	Mpho Mangwegape	Tel: 054 338 5827	054 – 334 0505	MangwegapeM@dws.gov.za	PBag X5912, Upington, 8800
South African Heritage Resource Agency (SAHRA) (electronic submission / upload via Ubique Heritage Consultants)	Mr. Jan Engelbrecht			jan@ubiquecrm.com heidi@ubiquecrm.com	
Department of Agriculture	Mr. Nico Toerien	Tel: 054 338 5800	054 – 334 0505	ntoerien1@gmail.com	PBag X5912, Upington, 8800

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

~~In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.~~

## 6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority. **N/A**

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process. **N/A**

A list of registered I&APs must be included as appendix E5. Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

## SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

An impact refers to any change in the environment, whether adverse or beneficial, resulting from the proposed development. The significance ratings are based on largely objective criteria and inform decision-making at a project level as opposed to a local community level. In some instances, therefore, whilst the significance rating of potential impacts might be “low” or “very low”, the importance of these impacts to local communities or individuals might be extremely high. The importance which I&APs attach to impacts must be taken into consideration, and recommendations should be made as to ways of avoiding or minimising these negative impacts through project design, selection of appropriate alternatives and / or management.

The impact assessment methodology criteria used to assess and rank potential impacts and risks are outlined below.

- a Nature of impact;
- b Extent / Scale;
- c Duration;
- d Probability of occurrence;
- e Irreplaceable loss of resources;
- f Reversibility of impact;
- g Cumulative impact;
- h Degree to which the impact can be avoided;
- i Degree to which the impact can be mitigated;
- j Degree to which the impact can be managed;
- k Consequence of impact;
- l Indirect impacts;
- m Residual impacts;
- n Significance.

### ***i. Nature of Impact***

The nature of an impact indicates whether the impact would have a negative, positive or zero effect on the affected environment. An impact may therefore be negative, positive or neutral.

### ***ii. Extent / Scale***

“Extent” defines the physical extent or spatial scale of the impact. The impact could be:



Rating	Description
SITE SPECIFIC	Limited to the site.
LOCAL	Limited to the site and the immediate surrounding area (1 – 10km)
REGIONAL	Covers an area that includes a certain geographic region and / or extends from one region to another.
PROVINCIAL	Impact considered of provincial importance.
NATIONAL	Across national boundaries and could have implications on a national scale.

### ***iii. Duration***

“Duration” gives an indication of how long the impact would occur.

Rating	Description
SHORT TERM	0 - 5 years
MEDIUM TERM	5 - 15 years
LONG TERM	Where the impact extends beyond the operational life of the activity, but not permanently.
PERMANENT - mitigated	Mitigation measures of natural process will reduce impact – impact will remain after operational life of project.
PERMANENT – no mitigation	No mitigation measures of natural process will reduce impact after implementation – impact will remain after operational life of project.

### ***iv. Probability of occurrence***

“Probability” describes the likelihood of the impact actually occurring.

Rating	Description
IMPROBABLE / UNLIKELY	No impacts expected under normal conditions.
LOW PROBABILITY	Where there is a low likelihood of the impact occurring.
PROBABLE (MEDIUM)	Where there is a distinct possibility that the impact will occur.
HIGH PROBABILITY	Where it is most likely that the impact will occur.
DEFINITE	Where the impact will occur regardless of any prevention measures.

### ***v. Potential for irreplaceable loss of resources***

This describes the degree to which resources will be irreplaceably lost as a result of a proposed activity.

Rating	Description
NO LOSS	No irreplaceable resources will be lost or impacted.
MARGINAL LOSS	Marginal loss of irreplaceable resources occurs. Resources can be replaced, with

	effort.
SIGNIFICANT LOSS	Where a significant loss of resources occurs.
COMPLETE LOSS	Where an activity results in the complete loss of resources. There is no potential for replacing a particular vulnerable resource that will be impacted.

**vi. Reversibility of an impact**

This refers to the degree to which an impact can be reversed.

Rating	Description
IRREVERSIBLE	Where the impact is permanent.
PARTIALLY REVERSIBLE	Where the impact can be partially reversed.
FULLY REVERSIBLE	Where the impact can be completely reversed.

**vii. Cumulative impact**

This describes the cumulative effect of the impacts on the environmental parameter. A cumulative effect/impact is an effect which in itself may not be significant but may become significant if added to other existing or potential impacts that may result from other similar or diverse activities within the surrounding area. Cumulative impact may be described as **negligible**, **low**, **medium** or **high** impact.

**viii. Degree to which impact can be avoided**

Impacts can be **fully avoided** (completely avoidable), **partly avoided** (impact is regarded avoidable with moderate light mitigation and/or management) or the impact is **unavoidable** (it cannot be avoided even with the implementation of significant mitigation measures).

**ix. Degree to which impact can be mitigated**

This indicates the degree to which an impact can be reduced. It can either be **high** (be fully mitigated), **moderate** (be partly mitigated) or **not be mitigated at all** (no change in impact with mitigation).

**x. Degree to which impact can be managed**

Impacts can be **fully managed** (completely manageable), **partly managed** (impact is manageable with moderate mitigation and / or management) or it is **unmanageable** (impact cannot be managed even with significant mitigation measures).

**xi. Consequence of impact**

Indicates how the activity will affect the environment, what will happen if the impact occurs.

**xii. Indirect impacts**

These comprise secondary impacts that usually occur at a different time or place as a result of the direct impact.

**xiii. Residual impact**

Residual impacts are impacts that remain following the implementation of mitigation measures.

**xiv. Significance**

“Significance” attempts to evaluate the importance of a particular impact, and in doing so incorporates the above three scales (i.e. extent, duration and intensity).

Rating	Description
VERY HIGH	Impacts could be EITHER: <i>of high intensity at a regional level and endure in the long term;</i> OR <i>of high intensity at a national level in the medium term;</i> OR <i>of medium intensity at a national level in the long term.</i>
HIGH	Impacts could be EITHER: <i>of high intensity at a regional level and endure in the medium term;</i> OR <i>of high intensity at a national level in the short term;</i> OR <i>of medium intensity at a national level in the medium term;</i> OR <i>of low intensity at a national level in the long term;</i> OR <i>of high intensity at a local level in the long term;</i> OR <i>of medium intensity at a regional level in the long term.</i>
MEDIUM	Impacts could be EITHER: <i>of high intensity at a local level and endure in the medium term;</i> OR <i>of medium intensity at a regional level in the medium term;</i> OR <i>of high intensity at a regional level in the short term;</i> OR <i>of medium intensity at a national level in the short term;</i> OR <i>of medium intensity at a local level in the long term;</i> OR <i>of low intensity at a national level in the medium term;</i> OR <i>of low intensity at a regional level in the long term.</i>
LOW	Impacts could be EITHER <i>of low intensity at a regional level and endure in the medium term;</i> OR <i>of low intensity at a national level in the short term;</i> OR <i>of high intensity at a local level and endure in the short term;</i> OR <i>of medium intensity at a regional level in the short term;</i> OR <i>of low intensity at a local level in the long term;</i> OR <i>of medium intensity at a local level and endure in the medium term.</i>

Rating	Description
VERY LOW	Impacts could be EITHER <i>of low intensity at a local level and endure in the medium term;</i> OR <i>of low intensity at a regional level and endure in the short term;</i> OR <i>of low to medium intensity at a local level and endure in the short term.</i>
INSIGNIFICANT	Impacts with: Zero to very low intensity with any combination of extent and duration.
UNKNOWN	In certain cases it may not be possible to determine the significance of an impact.

**1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES**

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

Activity	Impact summary	Significance	Proposed mitigation
<b>Alternative 1 (preferred alternative)</b>			
<b>Direct Impacts &amp; Indirect Impacts:</b>	During Planning Phase		
	Economic and Socio-economic impacts	Medium positive	
	During Construction Phase		
	Loss of vegetation and ecological processes	Very Low negative	See Appendix F: Impact Assessment & Appendix G: Environmental Management Programme for
	Loss of Terrestrial Species of Conservation Concern	No Impact	
	Loss of Terrestrial Protected Species	No Impact	
	Impact on drainage lines	No Impact	

Activity	Impact summary	Significance	Proposed mitigation
	Proliferation of alien vegetation	Very Low negative to Insignificant	Mitigation measures.
	Impact on Terrestrial fauna	Very Low negative	
	Potential noise impact	Very Low negative to Insignificant	
	Potential visual impact	Very Low negative to Insignificant	
	Dust nuisance due to construction activities	Very Low negative	
	Generation of solid waste	Very Low negative	
	Generation of sewage	Very Low negative	
	Economic and Socio-economic impacts	Very High Positive	
	<b>During Operational Phase</b>		
	Spread of exotic species into surrounding vegetation	Insignificant	See Appendix F: Impact Assessment & Appendix G: Environmental Management Programme for Mitigation measures.
	Potential Noise impact	Very Low negative to Insignificant	
	Potential Visual impact	Low negative	
	Generation of waste associated with pack house operation	Very Low negative	
	Generation of sewage	Very Low negative	
	Economic impacts	Very High positive	
	Socio-economic impacts	Very High positive	
	Job Creation	Very High positive	
	<b>During Decommissioning Phase</b>		
	Due to the service provided by the facility no Decommissioning is foreseen.		
<b>Cumulative impacts:</b>	<b>During Construction Phase</b>		
	Loss of vegetation and ecological processes	Very Low negative	See Appendix F: Impact Assessment & Appendix G: Environmental
	Loss of Terrestrial Species of Conservation Concern	No Impact	

Activity	Impact summary	Significance	Proposed mitigation
	Loss of Terrestrial Protected Species	No Impact	Management Programme for Mitigation measures.
	Impact on drainage lines	No Impact	
	Proliferation of alien vegetation	Very Low negative to Insignificant	
	Impact on Terrestrial fauna	Very Low negative	
	Potential noise impact	Very Low negative	
	Potential visual impact	Very Low negative	
	Dust nuisance due to construction activities	Very Low negative to Insignificant	
	Generation of solid waste	Very Low negative	
	Generation of sewage	Very Low negative	
	Economic and Socio-economic impacts	Very High positive	
<b>During Operational Phase</b>			
	Spread of exotic species into surrounding vegetation	Insignificant	See Appendix F: Impact Assessment & Appendix G: Environmental Management Programme for Mitigation measures.
	Potential Noise impact	Very Low negative to insignificant	
	Potential Visual impact	Very Low negative	
	Generation of waste associated with pack house operation	Very Low negative	
	Generation of sewage	Very Low negative	
	Economic impacts	Very High positive	
	Socio-economic impacts	Very High positive	
	Job Creation	Very High positive	
<b>During Decommissioning Phase</b>			
	Due to the service provided by the facility no Decommissioning is foreseen.		

Activity	Impact summary	Significance	Proposed mitigation
<b>NO-GO ALTERNATIVE</b>			

Activity	Impact summary	Significance	Proposed mitigation	
<b>Direct Impacts &amp; Indirect Impacts:</b>	During Planning Phase			
	Economic and Socio-economic impacts	Medium positive		
	During Construction Phase & Operational Phase			
	Loss of vegetation and ecological processes	No Impact	See Appendix F: Impact Assessment & Appendix G: Environmental Management Programme for Mitigation measures.	
	Loss of Terrestrial Species of Conservation Concern	No Impact		
	Loss of Terrestrial Protected Species	No Impact		
	Impact on drainage lines	No Impact		
	Proliferation of alien vegetation	Medium negative		
	Impact on Terrestrial fauna	No Impact		
	Potential noise impact	No Impact		
	Potential visual impact	No Impact		
	Dust nuisance due to construction activities	No Impact		
	Generation of solid waste	No Impact		
	Generation of sewage	No Impact		
	Economic and Socio-economic impacts	No Impact		
	During Operational Phase			
	Spread of exotic species into surrounding vegetation	No Impact		See Appendix F: Impact Assessment & Appendix G: Environmental Management Programme for Mitigation measures.
	Potential Noise impact	No Impact		
	Potential Visual impact	No Impact		
	Generation of waste associated with pack house operation	No Impact		
	Generation of sewage	No Impact		
Economic impacts	Negative from an economic perspective			

Activity	Impact summary	Significance	Proposed mitigation
	Socio-economic impacts	Negative from a socio-economic perspective	
	Job Creation	Negative as no jobs will be created	
	<b>During Decommissioning Phase</b>		
	Due to the service provided by the facility no Decommissioning is foreseen.		

## 2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

### Alternative A (preferred alternative)

*Carpe Diem Landgoed Pty Ltd* (the Applicant) is proposing the construction of a facility for the processing of pecan nuts on Portion 64 of Vaal Koppies No 40, Kenhardt (located approximately 10km south east of Upington).

The development footprint of the proposed pecan nut facility on Vaal Koppies 64/40 is estimated at approximately 5.61ha. The development is proposed in the north western part of the property on an area that is covered with semi-intact natural vegetation mapped as Bushmanland Arid Grassland. This vegetation type is a Least Concern vegetation type with over 94% of the original area still intact. A number of very small drainage lines occur in the northern section of the property. Apart from these drainage lines, the site sensitivity is rated as Low or Very low from a botanical perspective. Note that the drainage lines are not located within the preferred development footprint and a no-disturbance buffer of 30 m was placed adjacent the drainage lines.

In terms of the Environmental Impact Assessment Regulations, 2014 as amended, made under section 24(5) of the Act, the following activities are being applied for:

Detailed description of listed activities associated with the project		
	Listed activity as described in GN R.327	Description of project activity that triggers listed activity
8	The development and related operation of hatcheries or agri-processing facilities outside industrial complexes where the	The proposed development consists of an agri-processing facility with an



	development footprint covers an area of 2 000 square metres or more.	estimated development footprint of 56 100m <sup>2</sup> (5.61ha)(including all associated infrastructure and services).
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for — (v) the undertaking of a linear activity; or (vi) maintenance purposes undertaken in accordance with a maintenance management plan.	The development footprint is estimated at 5.61ha and the area where the facility is proposed is covered with natural vegetation identified as Bushmanland Arid Grassland (Least Threatened in The National List of Ecosystems).

The following construction phase impacts were identified with the impact ratings AFTER mitigation measures were applied. It should be noted that these impacts are only expected to occur during the construction phase which is foreseen to last 3 months.

Loss of vegetation and ecological processes	Very Low negative
Loss of Terrestrial Species of Conservation Concern	No Impact
Loss of Terrestrial Protected Species	No Impact
Impact on drainage lines	No Impact
Proliferation of alien vegetation	Very Low negative to Insignificant
Impact on Terrestrial fauna	Very Low negative
Potential noise impact	Very Low negative to Insignificant
Potential visual impact	Very Low negative to Insignificant
Dust nuisance due to construction activities	Very Low negative
Generation of solid waste	Very Low negative
Generation of sewage	Very Low negative
Economic and Socio-economic impacts	Very High Positive

Regarding the impact: Loss of vegetation & Ecological processes; the vegetation type present, Bushmanland Arid Grassland is a Least Concern vegetation type with over 94% of the original area still intact. The site sensitivity is rated as Low from a botanical perspective. The Botanical Specialist has confirmed that the proposed removal of 5.61ha will not have a significant impact on the ecological functionality of the site or surrounding area and can be supported from a botanical perspective.

The Medium sensitive drainage lines are excluded from the proposed development footprint and a 30m no-disturbance buffer was applied to each of these drainage lines. The proposed development will not impact on these drainage lines.

No naturally occurring species of conservation concern (SCC) were found within the development footprint and no impact on the ecological functionality of the site or surrounding is foreseen. The proposed development is thus supported from a botanical perspective.

Potential noise and visual impacts are local and temporary (only expected during the construction phase) are Very Low negative to Insignificant after mitigation.

Dust nuisance due to construction activities and the generation of solid waste and sewage are all Very Low negative after mitigation.

The Very High Positive Economic and Socio-economic impacts are highlighted due to the planning inputs and construction cost associated with the proposed facility.

Very few negative impacts are expected during the operational phase and identified impacts can all be easily be mitigated to acceptable levels:

Spread of exotic species into surrounding vegetation	Insignificant
Potential Noise impact	Very Low negative to Insignificant
Potential Visual impact	Low negative
Generation of waste associated with pack house operation	Very Low negative
Generation of sewage	Very Low negative

The Applicant's proposed agri-processing facility will contribute to the economic viability of the farm and the immediate rural surroundings, agricultural diversification will increase, approximately 60 new jobs will be created and current jobs will be secured. This will all contribute to the on-going sustainability of the farming operation.

Local economic development will also be supported not only in the products and services chosen to support the project, but also as an injection into the local economy by means of wages. The local sale of commodities will assist in combating food security not only by increased food stocks, but also by related households' ability to buy food.

The proposed development will improve the production capacity of the farm, support the commodity value chain and boost food security, GDP and LED.

**Alternative B**

-

**Alternative C**

-

**No-go alternative (compulsory)**

The No-Go alternative means remaining the status quo, in other words, not constructing the proposed facility.

The No-Go alternative may have no significant negative biophysical environmental impacts, however, it will result in the potential employment and skills development opportunities for the local community not being realised. In turn, the potential opportunity for economic growth in the community will be lost.

Provided that all the mitigation measures which address terrestrial, heritage resources and the exclusion of the drainage lines (including applied 30m buffers) are implemented, there are no assessed negative environmental impacts that are of sufficient significance to justify the implementation of the No-Go alternative. Retaining the status quo could be considered as a lost opportunity, to secure further job opportunities into the future (uplifting the lives of the local community), further develop skills as well as increase revenue to the local, regional and national economy.

**SECTION E. RECOMMENDATION OF PRACTITIONER**

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

<b>YES</b>	<b>NO</b>
------------	-----------

It is the opinion of the EAP that the proposed development be considered favourably, provided that the mitigation measures are strictly adhered to and integrated into the EMP and that the development and implementation is overseen by a suitably qualified ECO during the construction phase.

If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

- An environmental control officer (ECO) should be appointed to oversee the construction phase to ensure that all conditions and mitigation measures in the EMP and WULA are implemented.
- All Conditions and Legislative requirements of the Environmental Authorization and approved Environmental Management Programme must be adhered to and implemented.
- The Conditions and Legislative requirements of the Water Use License (as issued by the Department of Water & Sanitation) must be adhered to and implemented.

- The authorized development footprint should be demarcated with recycled poles earthworks and soil preparation should be inside this demarcated footprint. The use of plastic to assist in the demarcation is discouraged.
- No personnel, disturbance, roads or dumping of any material is allowed within the nearby drainage lines.

Is an EMPr attached?

YES	NO
-----	----

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I. **Declaration of Interest by Specialists is included in the respective Specialist Report.**

Any other information relevant to this application and not previously included must be attached in Appendix J.

## SECTION F: DECLARATIONS

### DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (“EAP”)

I .....as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

*FINAL BAR will be signed.*

---

Signature of the EAP:

Date:

---

Name of company (if applicable):

## DECLARATION OF THE APPLICANT

I.....,  
ID number .....in my personal capacity or duly authorised thereto  
hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct,  
and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (“NEMA”), the Environmental Impact Assessment (“EIA”) Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I appointed the Environmental Assessment Practitioner (“EAP”) (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;
- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, 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 I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

*FINAL BAR will be signed.*

---

Signature of the Applicant:

Date:

---

Name of company (if applicable):

## **SECTION F: APPENDIXES**

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest. See Specialist's reports attached as Appendix D.

Appendix J: Screening Tool Report + Site Sensitivity Verification Report

