ECO-CON ENVIRONMENTAL

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DRAFT BASIC ASSESSMENT REPORT

Proposed cultivation of 15 ha virgin soil for the establishment of organic pumpkin farming or grazing pastures and associated water pipeline on the Remaining Extent of the Farm Donegal no 217 near Hopetown, Northern Cape Province

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EXECUTIVE SUMMARY

The company Olyf Trust is proposing to commence with establishment of organic pumpkin farming or grazing pastures on the Remaining Extent of the Farm Donegal no 217 near the town of Hopetown in the Northern Cape Province (15 ha). The purpose of the cultivation will either be for commercial organic pumpkin planting for export purposes or for planting of grazing pastures.

Eco-Con Environmental (Pty) Ltd. was appointed by Olyf Trust as the independent Environmental Assessment Practitioner (EAP) to conduct a Basic Assessment process for the proposed project. Eco-Con Environmental was established in May 2017. Although the formal establishment of the company took place in 2017, it is backed by more than 15 years of collective professional service and experience in the environmental field. The qualifications, expertise and experience of our professional team form the backbone of the company's continued success.

NEMA LISTED ACTIVITIES TRIGGERED BY THE PROPOSED PROJECT

The development activities in the National Environmental Management Act (Act 107 of 1998): Environmental Impact Assessment Regulations, 2017 (Government Notices 327, 326 and 324 in *Government Gazette 40772 dated 7 April 2017*) which are triggered by the proposed project are listed in the table below:

Regulation	Activity	Description of trigger activity in proposed project
GN 327: Listing Notice 1	**Activity 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 project will entail the clearance of 15ha of indigenous vegetation

PROJECT LOCATION

The proposed project area is approximately 15 ha in surface size and is situated on the Remaining Extent of the Farm Donegal no 217 (SG 21 Digit Code: C03200000000021700000). The proposed water pipeline will also be located on the above property and will not traverse any other portions or farms. The farm is situated approximately 17 km north of the town of Hopetown. The property falls inside the Siyancuma Local Municipality which in turn, forms part of the greater Pixley Ka Seme District

Municipality. Access to the assessment area is obtained via the R 385 provincial road and subsequent dirt road from the south.

NEEDS AND DESIRABILITY OF THE PROJECT

Various key factors must be taken into consideration as motivation/incentive for the potential benefits involved with the proposed project. The Remaining Extent of the Farm Donegal no 217 is currently of little economic value due to low grazing capacity for livestock purposes. Should the portion not be developed and efficiently utilised, the economic value will stay low. The development of organic pumpkins and grazing pastures on the farm will significantly increase the agricultural potential of the property, which will in turn increase the economic value. Construction and operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) of this project will aid in immediate and continuous local community upliftment and poverty alleviation and are therefore regarded as significant socio-economic benefits associated with the proposed project to motivate the need and desirability. The outcomes of this project are also in line with the requirements and objectives of the National Development Plan; Northern Cape Provincial Spatial Development Framework; Northern Cape Provincial Growth and Development Strategy as well as the Siyancuma Local Municipality and Pixley Ka Seme District Municipality Integrated Development Plans.

ALTERNATIVES CONSIDERED

An alternative viable site location was not identified and evaluated for the project. The specific proposed location for said project is preferred as it is the only viable portion of land available in that vicinity which is up for procurement. The landowner and the applicant is the same person / company and therefore no Procurements arrangements had to be made. The portion is also situated directly adjacent to the homestead of the intending developer/project applicant which is on the farm portion from where water will be obtained for irrigation through extraction from boreholes. This will render the project viable from and economic and logistic perspective.

Layout Alternative 1 (Preferred Alternative)

The preferred layout alternative includes the development of 15ha of organic pumpkin farming or grazing pastures which will constitute a 15ha cultivated land. The preferred layout alternative is located 150m east of the existing residential dwelling and existing gravel access road. This 15 ha will not traverse any existing wetland and water courses.

Olyf Trust Alternative 1 (Preferred Alternative)

Layout Alternative 2

Layout alternative 2 includes the development of 5ha of organic pumpkin farming or grazing pastures which will constitute a 5ha cultivated land. Studies was conducted that indicated that the PH values and drainage was not suitable for the preferred development area and thus the area was reduced to 5 ha. Layout alternative 2 is located 150m east of the existing residential dwelling and existing gravel access road. This 5 ha will not traverse any existing wetland and water courses

Olyf Trust Alternative 2

PUBLIC PARTICIPATION PROCESS

A continual and comprehensive Public Participation Process (PPP) will be undertaken throughout the entire Basic Assessment with all stakeholders and Interested and Affected Parties (I & AP's), including the relevant organs of state and competent authority (Northern Cape Department of Environment and Nature Conservation) as identified during the Draft Basic Assessment Phase. The PPP will be conducted in accordance with the requirements of Regulation 41 of the EIA Regulations, 2017 and the designated Public Participation Officer will ensure that the PPP is facilitated in a manner which ensures reasonable opportunity for all stakeholders and registered I & AP's to comment and provide input on the proposed project.

ENVIRONMENTAL IMPACT ASSESSMENT

The Scoping phase has identified various potential impacts which are discussed in detail in this report (below is only the summary of the impacts identified). At this preliminary stage, no "red flag" impacts were identified.

Impact Summary

Construction / Development Phase

PLANNING, DESIGN AND CONSTRUCTION PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	68	44	60	44	14
Significance rating:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	26	24	26	24	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	36	27	30	27	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
	Alternative 1 (Preferred)		**Alternative 2**		**No-Go Alternative**

Evaluation Component:	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	0
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures

Evaluation Component:	Alternative 1 (Preferred)		Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to construction activities.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	10	30	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities on-site.					**Activity:** Proposed development of organic pumpkin farming

					fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job creation					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	52	75	52	75	60
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

Operational Phase

OPPERATIONAL PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on flora as a result of continuous vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	30	33	30	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Continuous impact on Fauna as a result of cleared vegetation / habitat loss.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	26	24	26	24	16

Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the operational phase of the project.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	21	33	21	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during the operational phase.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	6	7	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the operational phase by means of fertilizer and/or any other hazardous substances or pesticides.					**Activity:** Proposed development of organic pumpkin

					farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	0
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	6	7	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Medium (M)

Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	100	72	14	3	4
Significance rating:	High (H)	Medium (M)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to operational activities.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	10	33	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities during the operational phase.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job creation					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	

Total SP:	52	75	52	75	60
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

Decommissioning Phase

DECOMMISION PHASE					
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the decommissioning phase of the project.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the decommissioning phase by means of fertilizer and/or any other hazardous substances or pesticides.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the decommissioning phase of the developed fields.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	6	6	6	6	16

Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to decommissioning activities.					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	33	10	30	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job loss					**Activity:** Proposed development of organic pumpkin farming fields and/or grazing pastures
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	32	24	32	24	52
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	+ Medium (M)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	+ Medium (M)

SUMMARY OF SPECIALIST STUDIES

The section below outlines the main finding of all specialists involved in the Basic Assessment process. More detailed insight may be gathered from the specialist report which is attached as Appendix D.

Ecological and Wetland Specialist study

The proposed cultivated field development will in all probability completely transform the existing surface vegetation on its 15 ha footprint area while the irrigation pipeline will only transform a narrow linear section of approximately 900 mm along its length.

Although the footprint area is in a pristine undisturbed natural state and scored a high PES value, the Northern Upper Karoo vegetation type (NKu 3) associated with the area is merely classified as least threatened as very little has been transformed thus far (Mucina & Rutherford, 2006). The surrounding natural area associated with the relevant vegetation type, is extremely vast and homogenous and largely undeveloped. The entire assessment area is also merely categorised as other natural land in accordance with the Northern Cape Provincial Spatial Biodiversity Plan.

No Red Data Listed, provincially- or nationally protected or any other species of conservational significance were found to be present within the assessment area. It must however be noted that the time of the assessment was not necessarily favourable for successful identification of all plant species individuals. It is therefore recommended that an additional ecological walkthrough be conducted prior to commencement of the project during the flowering period of underground bulbous plant species. This will ensure that no provincially protected or significant species have potentially been omitted. The assessment area does not fall within an Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important bird areas/iba-map), and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the assessment area for breeding or persistence purposes. A small isolated clump of small mammal burrows is present within the assessment area. The mobility of such animals along with the vast, continuous, undeveloped surrounding natural landscape however allows for individuals to simply leave an area where disturbance is taking place and disperse to other similar, adequate areas.

Due to the flat topography of the assessment area and surrounding landscape, there are no watercourses or any drainage lines within the immediate vicinity of the assessment area. The assessment area scored a low EIS value because the biodiversity is ubiquitous and not unique due to the extremely vast and homogenous and largely undeveloped surrounding natural landscape. The assessment area is therefore not viewed as being of high conservational significance for habitat 47

preservation or ecological functionality persistence in support of the surrounding ecosystem, broader vegetation type or surface water catchment and drainage area.

It is in the opinion of the specialist that there are no potentially significant ecological impacts associated with the proposed agricultural development. Al identified potential ecological impacts can be suitably reduced and mitigated to within acceptable levels. Although Alternative 1 (preferred) scored slightly higher risk ratings than Alternative 2, the difference in ecological impact is not deemed significant due to the small relative increase in transformed footprint. Either of the alternatives can therefore be considered by the competent authority for environmental authorisation and approval.

The proposed development may however only continue if all recommended mitigations measures as per this ecological report are adequately implemented and managed for both the construction and operational phases of the proposed project. All necessary authorisations and permits must also be obtained prior to any commencement.

Heritage Specialist study

The study area is not located within a historically or prehistorically significant landscape. The proposed development will primarily affect geologically recent soils, Quaternary surface limestone and calcretes regarded to be of moderate to high palaeontological significance. However, since the study area is not located in the immediate vicinity of a major drainage line, favourable for past fluvial depositional environments, potential for the occurrence of or impact on Quaternary fossil remains are considered to be very low.

Impact on potentially intact Stone Age archaeological remains is considered unlikely. The extent of the proposed upgrade is considered low in terms of palaeontological and archaeological impact. The terrain is not considered palaeontologically or archaeologically vulnerable and is assigned a site rating of Generally Protected C.

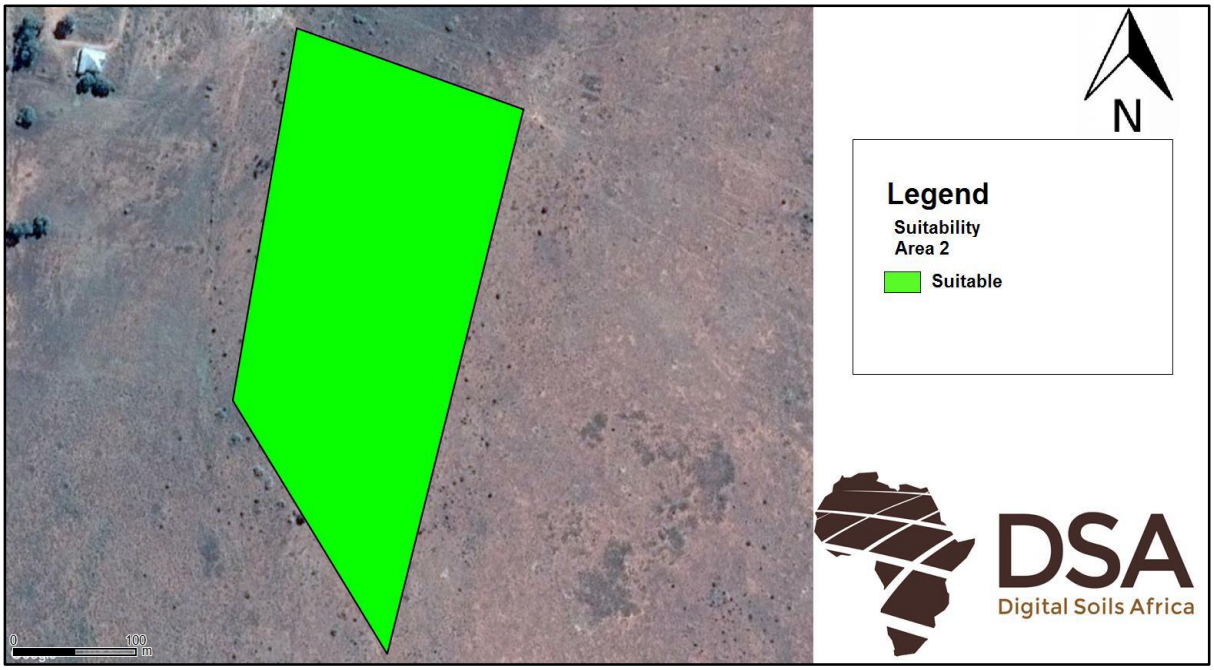
Soil Suitability Study

The soils of this study area are dominated by the Prieska soil form with an apedal structure which is well drained up until the hard carbonate horizon. The clay contents of the soils, drainable depth, EC values and exchangeable sodium percentage are all within the norms as stipulated by the Department of Agriculture, Northern Cape. As a result, only the 5 ha area (Alternative 2) is described as suitable for irrigation.

The soil samples tested indicate that the texture of the soil profiles within the suitable area is sandy-loam with a topsoil clay percentage of 20.29% and a subsoil clay percentage of 18.3%. This is within the optimal range for pumpkin production.

Pumpkin can be produced on soils with a $pH_{(H2O)}$ of 5.5-7.5, but the optimum $pH_{(H2O)}$ range for pumpkin production is between 6 and 6.5. The $pH_{(KCl)}$ of the soil samples are in the area of 8. It is anticipated that the pH will lower once irrigation commence and regular soil sampling will inform the farmer of best management practices concerning alkalinity/acidity.

Based on the soil morphology and laboratory analysis, the area shown below is suitable for irrigation according to the norms of the Department of Agriculture, Northern Cape.



Suitable Irrigation soil on the Remaining Extent of the Farm Donegal no 217

CONCLUSION

No significant red flag impacts were noted. Both the Ecological and Heritage reports have not indicated any fatal flaws. The Soil Suitability report has however indicated that only the 5 ha area (alternative 2) is suitable for development. Although the removal of vegetation might be seen as a Medium impact, the ecological specialist is of the opinion that impact can be mitigates to an acceptable level.

From an Independent Environmental Assessment Practitioners point of view, an approval of Alternative 2 of the Basic Assessment is highly recommended.

Table of Contents

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

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(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 **08 December 2014**. 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.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	**NO X**

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. ACTIVITY DESCRIPTION

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

Olyf Trust is proposing to commence with the establishment of organic pumpkin farming or grazing pastures on the Remaining Extent of the Farm Donegal no 217 near the town of Hopetown in the Northern Cape Province (15 ha). The purpose of the cultivation will either be for commercial organic pumpkin planting for export purposes or for planting of grazing pastures.

The completion of the farm portion procurement process is however dependent on a number of factors. The major conditional factors are the suitability of the area for organic pumpkin farming or grazing pastures (soil, water, transformation of natural resources, heritage significance) as well as the successful acquisition of an environmental authorisation (EA) from the competent authority. The Northern Cape Department of Environment and Nature Conservation has in this case been identified as the competent authority.

In accordance with the National Environmental Management Act (Act 107 of 1998); Environmental Impact Assessment Regulations of 2017, a Basic Assessment Impact Assessment (BA) processes is required for the proposed project in order to obtain the necessary environmental authorisation from the competent authority. Eco-Con Environmental was appointed by Koos de Wet on behalf of Olyf Trust to act as the independent Environmental Assessment Practitioner (EAP) to facilitate the entire environmental authorisation application process and complete the Basic Assessment processes for the construction and operational phases of the proposed project.

The project will entail two major aspects namely:

- The construction of a pipeline for irrigation from existing boreholes.
- Cultivation of 15 ha organic pumpkin farming or grazing pastures and some two track access roads.

Cultivation of 15 ha organic pumpkin farming or grazing pastures

15 ha organic pumpkin farming or grazing pastures will be established on the proposed project footprint.

The cultivation and planting process will work as follows:

- The area will be cleared with the use of a Bulldozer and deep-ripped with the dozer tines to breakup and aerate the soils.
- Surface rocks will be manually removed from the area.
- Soil preparation will then be conducted by cultivation with the use of a chisel plough.

- Amelioration recommendations will be obtained from a soil scientist through chemical and organic soil analyses in order to ensure the appropriate nutrients/minerals, as required for the area to be cultivated, are incorporated into the growth medium (soil) prior to planting.
- Irrigation water will be abstracted from existing boreholes. A water use License is also being undertaken for the registration of these boreholes with the Department of Water and Sanitation in the Northern Cape.
- Planting of organic pumpkins or grazing pastures will be conducted manually through manual labour.

In order to achieve the above, two Layout Alternatives are proposed:

Layout Alternative 1 (Preferred Alternative)

The preferred layout alternative includes the development of 15ha of organic pumpkin farming or grazing pastures which will constitute a 15ha cultivated land. The preferred layout alternative is located 150m east of the existing residential dwelling and existing gravel access road. This 15 ha will not traverse any existing wetland and water courses.

Layout Alternative 2

Layout alternative 2 includes the development of 5ha of organic pumpkin farming or grazing pastures which will constitute a 5ha cultivated land. Studies was conducted that indicated that the PH values and drainage was not suitable for the preferred development area and thus the area

was reduced to 5 ha. Layout alternative 2 is located 150m east of the existing residential dwelling and existing gravel access road. This 5 ha will not traverse any existing wetland and water courses.

Already established two track farm roads are already in place and will link up most of the area. In some cases, where tracks do not exist, some new two track farm road might be established.

<u>Construction of a pipeline and water extraction point</u>

A new water pipeline will be constructed and put in place to extract water from the already existing 4 X boreholes. This will be used for the irrigation of the 15ha organic pumpkin area as described

in this report. A water use license application will be submitted to the relevant authority once both the environmental authorisation and the ploughing certificate have been obtained.

Extraction Pump:

- The following extraction pumps will be erected at each of the boreholes: 1 x 5.5kW, pump and 3 x 2.2kW pumps which will pump into an existing 532 000 litre concrete dam. Water will be pumped by a centrifugal pump from the dam to the cultivated area.
- The power for the extraction pumps will be obtained from existing 100 KVA point.
- The extraction pumps will run for approximately 12 hours per day, pumping water to the amount of 95 m3 per hour (Monday to Saturday for a 3-month period.

Pipelines:

- A new 250 mm pipeline of approximately 0.8 km in length will be constructed to transport water from the existing concrete dam to the developed area. A narrow section of approximately 900mm will be cleared in order to accommodate the piping infrastructure. A trench of approximately 900 mm wide will be excavated in order to accommodate the subsurface burial of the pipeline.

On site Settling Dams:

As part of the above-mentioned pipeline and extraction pumps, the following settling dam already exists on site:

- The existing boreholes will feed into an existing concrete dam (532m^2 / 12270m^3). The co-ordinates of the dam: 29°28'47.87"S; 24°05'56.22"E. The dam level will be kept between 50% and 90% by a level sensor that automatically switches the borehole pumps on/off as required.
- The dam will also be fitted with a 35 kW pump that will feed into the pipeline towards the cultivated area.

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

Listed activity as described in GN 983, 984 and 985	Description of project activity
GN. 327: Activity 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 project will entail the clearance of 15ha of indigenous vegetation

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

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The area to be developed is located near existing water infrastructure as well as a residential dwelling as opposed to other areas that does not have the necessary water infrastructure and a residential dwelling in place. As a result, not Property / Site alternatives have been considered. 	29°28'58.73"S	24°06'06.18"E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

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

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred layout alternative includes the development of 15ha of organic pumpkin farming or grazing pastures which will constitute a 15ha cultivated land. The preferred layout alternative is located 150m east of the existing residential dwelling and existing gravel access road. This 15 ha will not traverse any existing wetland and water courses.	29°28'58.73"S	24°06'06.18"E

		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Layout alternative 2 includes the development of 5ha of organic pumpkin farming or grazing pastures which will constitute a 5ha cultivated land. Studies was conducted that indicated that the PH values and drainage was not suitable for the preferred development area and thus the area was reduced to 5 ha. Layout alternative 2 is located 150m east of the existing residential dwelling and existing gravel access road. This 5 ha will not traverse any existing wetland and water courses.	29°28'56.23"S	24°06'04.55"E

Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternative 1 (preferred alternative)		
Alternative 2		
Alternative 3		

e) No-go alternative

Advantages:

- The minimal negative environmental impacts associated with the proposed project will be avoided if the proposed project is not implemented.
- The proposed project will contribute to local job creation by means of 250 seasonal staff and 30 permanent staff;
- The low crazing capacity of the current land will be changed and developed which will have a positive influence on local economic growth.

Disadvantages

If the proposed project however does not go ahead, the local communities will forego the economic benefits which the project will have on the area such as immediate additional employment opportunities and revenue streams and most importantly, sustainable capacity building (skills, experience and resources development) for the future.

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:	**Size of the activity:**
Alternative A1[1] (preferred activity alternative)	15ha (150 000m^2)
Alternative A2 (if any)	5ha (50 000m^2)
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	**2310 ha (23 100 000m²)**
Alternative A2 (if any)	m²
Alternative A3 (if any)	m²

4. SITE ACCESS

Does ready access to the site exist?	**YES X**	NO
If NO, what is the distance over which a new access road will be built	N/A	

Describe the type of access road planned:

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 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):

1. Is the activity permitted in terms of the property's existing land use rights?	**YES X**	NO	Please explain
The Remaining Extent of the Farm Donegal no 217 is currently zoned as Agricultural. In the past, the property was used for cattle farming. With this application organic pumpkin farming and/or grazing pastures are proposed which is also an agricultural activity.			

2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES X**	NO	Please explain
A focus for achieving sustainable development as discussed in the framework, requires four areas of capital, being environmental, human, infrastructure and monetary. The plan further stresses the need for integrative participation, positive interventions and innovative finance. The SDF makes specific reference to the importance of agriculture and capacity increase in this sector in the Northern Cape Province.			
(b) Urban edge / Edge of Built environment for the area	**YES X**	NO	Please explain
The farm is located approximately 17 km North of the town of Hopetown and is situated outside the urban area of the town of Hopetown.			
(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?).	YES	NO	Please explain
The following vision and mission is engrained into the Integrated Development Plan (IDP) of the Siyancuma local municipality **Vision** We Siyancuma Municipality commit ourselves to be a sustainable, economically viable, developmental municipality where the community enjoys a high quality of life. **Mission** We will Strive to put the needs of the community first by: • To economically and socially develop the municipal area; • Empower the community through transparent, accountable democratic governance and sound financial management • By utilizing all available resources and human skills. The proposed project will be able to contribute positively to these objectives through job creation and sustainable capacity building (skills development and experience).			
(d) Approved Structure Plan of the Municipality	**YES X**	NO	Please explain
The property is located approximately 17 km North of the town of Hopetown and does not form part of any Development properties by the Local Municipality. As a result, and due to its current Agricultural zoning, the property is in line with the SDF and form part of the programmes identified in the IDP of the municipality.			

(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?)	**YES X**	NO	Please explain
An Environmental Management Framework could not be obtained for both the Local and / or District municipality. However, the property is located approximately 17 km North of the town of Hopetown and does not form part of any Development properties by the Local Municipality. As a result, and due to its current Agricultural zoning, the property is in line with the SDF and form part of the programmes identified in the IDP of the municipality.			
(f) Any other Plans (e.g. Guide Plan)	**YES X**	NO	Please explain
Northern Cape Provincial Growth and Development Strategy (NCPGDS) The Northern Cape Provincial Growth and Development Strategy (NCPGDS) (2004 – 2014) highlights the most significant growth and development challenge as the reduction of poverty, and that only through long-term sustainable economic growth and development shall this be achieved. Important areas where growth can be achieved include agriculture and agro-processing, transport and tourism. In support of such growth areas the creation of opportunities for life-long learning, improvement of labour force skills to enhance productivity and expanding access to education and knowledge shall lead to the further realisation of such growth. The inclusion of macro-level objectives shall mobilize these primary growth areas. Such objectives include the developing of human and social capital, improving the efficiency and effectiveness of governance and associated institutions and enhancing infrastructure for economic growth and development.			
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)?	**YES X**	NO	Please explain
The property does not form part of any Development properties by the Local Municipality. As a result, and due to its current Agricultural zoning, the property is in line with the SDF and form part of the programmes identified in the IDP of the municipality.			
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.)	**YES X**	NO	Please explain
The property in its current state has a very low socio-economic value for the local area as the grazing capacity is very low. By implementing the organic pumpkin farming fields, the socio-economic value, not only for the land, but for the surrounding communities will enhance, thus, having a positive and needful influence on the local area.			

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.)	**YES X**	NO	Please explain
The only service required for the proposed development, is that of water and electricity to run the irrigation system. The electricity will be obtained from an existing Eskom power point, while water will be obtained from existing boreholes on the property.			
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.)	**YES X**	NO	Please explain
The only services required for this project is the provision of water. Water will be obtained from existing boreholes and the electricity to drive the pumps is also already in place as pumps where installed for the irrigation purposes.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	**NO X**	Please explain
Organic Pumpkin farming or grazing pastures is not a national concern or of importance, however, agricultural activities in general plays a major and vital role in promoting economic condition in South Africa. As a result, any farming activity is important to the overall economic growth in the country.			
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.)	**YES X**	NO	Please explain
The majority of the surrounding areas is already in use for Agricultural activity by means of cattle farming on the terrain it is situated in. This is the only suitable area near water infrastructure that will allow for this development. The property in its current state has a very low socio-economic value for the local area as the grazing capacity is very low. By implementing the organic pumpkin farming fields or grazing pastures, the socio-economic value, not only for the land, but for the surrounding communities will enhance, thus, having a positive and needful influence on the local area.			
9. Is the development the best practicable environmental option for this land/site?	**YES X**	NO	Please explain
The property in its current state has a very low socio-economic value for the local area as the grazing capacity is very low. By implementing the organic pumpkin farming fields or grazing pastures, the socio-economic value, not only for the land, but for the surrounding communities will enhance, thus, having a positive and needful influence on the local area.			

10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	**YES X**	NO	Please explain
As per the impact assessment, the overall impacts are low. The positive impacts will be greater as it will ensure job creation and a growth in the local economy in the area.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	**NO X**	Please explain
The majority of the surrounding areas is already in use for Agricultural activity by means of cattle farming on the terrain it is situated in. This is the only suitable area near water infrastructure that will allow for this development			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	**NO X**	Please explain
No person`s rights will be negatively affected. The property is earmarked for agricultural development and the majority of the surrounding area is already developed for agricultural use.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	**NO X**	Please explain
The farm is located approximately 17 km North of the town of Hopetown and is situated outside the urban area of the town of Hopetown.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	**NO X**	Please explain
N/A			
15. What will the benefits be to society in general and to the local communities?			Please explain
Job creation will be created during the construction and operational phases of the project. One of the EMP conditions stipulate that local labour are to be used during the construction and operational phases. The project will also hold major positive socio-economic benefits during the operational phase mainly due to the enhancement of economic condition in the local area.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
None			
17. How does the project fit into the National Development Plan for 2030?			Please explain
It will contribute towards the achievement of the following enabling milestones of the NDP 2030: • Increase employment • Ensure that skilled, technical, professional and managerial posts better reflect the country's racial and gender and disability makeup • Broaden social cohesion and unity while redressing the inequalities of the past.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
Through the undertaking of this Assessment Process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of public participation and specialist investigations form part of the process, whilst mitigation measures and the need and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such Integrated Environmental Management were accounted for.			

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

Through the undertaking of the Assessment process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of a public participation process and specialist investigations formed part of this basic assessment process, whilst mitigation measures and the needs and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for as follow:

(2) Environmental Management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural heritage and social interests equitably.

The goal of this BA is to identify and mitigate potential socio-economic impacts in order to meet the terms of Section 24 of the Constitution.

(3) Development must be socially, environmentally and economically sustainable.

The overall goal of this BA is to predict, identify and manage potential positive and negative impacts in the socio-economic, cultural-heritage and biophysical environments in order to meet the needs of present generations without compromising the needs of future generations which will give effect to sustainable development.

(4)(a) Sustainable development requires the consideration of all relevant factors including the following:

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

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

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

iv. that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

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

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

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

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

An Environmental Management Program Report (EMP`r) was compiled to mitigate and manage all activities during the planning, construction and operational phases.

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

All aspects, including socio-economic, cultural-heritage and biophysical was evaluated and assessed in order to minimize potential negative impacts which will give effect to Integrated Environmental Management, as set out in Chapter 5 of NEMA, 1998.

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

A public participation process was undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 7 April 2017, in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

The proposed project will ensure better socio-economic growth in the area.

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

The EMPr will be applicable throughout the lifecycle of the project.

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

A public participation process was undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 7 April 2017 in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

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

The Department of Environmental and Nature Conservation (DENC) decision making process has to be in accordance with the above.

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

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

This Impact Assessment report does give effect to Section 5 of NEMA whereby all social, economic and environmental impacts of activities were considered, assessed and evaluated.

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

Human rights will be taken into account during all phases of the proposed project.

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

The decision will take place in an open and fair manner and to give effect to Section 32 of the Constitution. I&AP's will be notified of the decision in terms of the requirements as set out in Section 41 of the NEMA EIA Regulations, 7 April 2017.

(l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.

All relevant Governmental Authorities will be considered during the BA process to give their inputs on the project.

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

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

(n) Global and international responsibilities relating to the environment must be discharged in the national interest.

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

Through the appointment of various specialists, mitigation measures have been drawn up to ensure that the proposed project does not harm the environment.

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

An EMPr were compiled in order to prevent or minimize any potential negative impacts to the environment. It will be the responsibility of the Applicant and Contractor to adhere to all measures set out in the EMPr, in order to give effect to Section 28 (1) of NEMA.

(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

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

A Sensitivity map containing all vulnerable vegetation, water courses and ecosystems were prepared in order to determine that the proposed project will have no negative impact thereon.

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:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
Constitution of the Republic of South Africa (Act 108 of 1996)	Section 24 of the Constitution of South Africa provides the main national legislative obligation towards sustainable environmental management and development. This section forms the foundation of all other subsequent environmental legislation and governance in South Africa.	National Department	1996
National Environmental Management Act (Act 107 of 1998) (NEMA)	NEMA is the principle/framework legislation governing EIA and subsequent EA processes under the authority of the National Department of Environmental Affairs.	National Department	1998
National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA)	NEMBA aims to provide for the management and conservation of the country's rich biodiversity within the framework of NEMA. It aids in the protection of species and ecosystems which warrant national protection and provides for the sustainable usage of the country's indigenous biological resources.	National Department	2004
National Forests Act (Act 84 of 1998) (NFA)	The aim of the NFA is to promote the sustainable usage, management and development of forests for the benefit of all in South Africa. The Act also makes special provisions for the protection of specific forests and tree species which duly require formal protection in order to ensure their prolonged existence.	National Department	1998

Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA)	CARA aims to provide for the protection and control over utilisation of the country's agricultural resources in order to promote conservation of soils, water and natural vegetation as well as the combatting of weeds and invader plants. Sustainable utilisation is a key objective.	National Department	1983
National Water Act (Act 36 of 1998) (NWA)	The NWA aims to ensure sustainable use of water through the protection of the quality of water resources for the benefit of all water users. Its principal focus is the rectification and equitable allocation and use of the scarce and disproportionately distributed water resources of South Africa.	National Department	1998
National Heritage Resources Act (Act 25 of 1999) (NHRA)	The NHRA aims to provide for the integrated and interactive management and conservation of the national heritage resources in South Africa so that they may be bequeathed for future generations.	National Department	1999
National Development Plan – 2030 (NDP)	The executive summary of the National Development Plan (NDP) initiates with the following paragraph, "The National Development Plan aims to eliminate poverty and reduce inequality by 2030. South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and	National Department	2030

	partnerships throughout society."		
Northern Cape Nature Conservation Act (Act 9 of 2009)	In addition to the NFA, the Northern Cape Nature Conservation Act also makes provision for the protection and sustainable utilisation of wild animals, aquatic biota and plants on a provincial scale in the Northern Cape Province. It is therefore used in conjunction with the NFA to determine the ecological/biodiversity significance, value and subsequent management of the proposed project area.	Provincial Department	2009
Northern Cape Provincial Spatial Development Framework	Prepared in accordance with a bioregional planning approach adapted to suit the site-specific requirements of the Northern Cape, the NCPSDF recognises that no region or area should be planned and managed as an 'island' in isolation from its surroundings.	Provincial Department	2011
Northern Cape Provincial Growth and Development Strategy (NCPGDS)	The Northern Cape Provincial Growth and Development Strategy (NCPGDS) (2004 – 2014) highlights the most significant growth and development challenge as the reduction of poverty, and that only through long-term sustainable economic growth and development shall this be achieved. Important areas where growth can be achieved include agriculture and agro-processing, transport and tourism.	Provincial Department	2004

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES X**	NO
If YES, what estimated quantity will be produced per month?	3 m^3	

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

Construction waste will be collected and transported to the registered Hopetown landfill site.

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

Construction waste will be collected and transported to the registered Hopetown landfill site.

Will the activity produce solid waste during its operational phase?	**YES X**	NO
If YES, what estimated quantity will be produced per month?	1 m^3	

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

Construction waste will be collected and transported to the registered Hopetown landfill site.

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

Construction waste will be collected and transported to the registered Hopetown landfill site.

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

Construction waste will be collected and transported to the registered Hopetown 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 X**

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.

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	**NO X**

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 X**
If YES, what estimated quantity will be produced per month?	0 m^3	
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO X**

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.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	**NO X**

If YES, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		**Cell:**	
E-mail:		**Fax:**	

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

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?	YES	**NO X**
If YES, is it controlled by any legislation of any sphere of government?	YES	**NO X**

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:

The only emissions that will be released are vehicle and machinery exhaust emissions and dust from vegetation clearance and soil preparations.

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 X**

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

e) Generation of noise

Will the activity generate noise?	**YES X**	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	**NO X**

Describe the noise in terms of type and level:

The only noises to be generated are those of vehicles and machinery during the construction phase and communication between workers.

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 X**	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:	**150 000 litres**	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	**YES X**	NO
If YES, please provide proof that the application has been submitted to the Department of Water Affairs.		

14. ENERGY EFFICIENCY

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

N/A

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. 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): [ ]

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

3. Has a specialist been consulted to assist with the completion of this section? **YES X** / 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:

Province	Northern Cape Province
District Municipality	Pixley Ka Sema district Municipality
Local Municipality	Siyancuma Local Municipality
Ward Number(s)	2
Farm name and number	The Remaining Extent of the Farm Donegal no 217
Portion number	The Remaining Extent of the Farm Donegal no 217
SG Code	C03200000000021700000

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:

The property is currently zoned as Agricultural. No need for rezoning applications

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 X**

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat X	1:50 – 1:20 X	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		2.4 Closed valley		2.7 Undulating plain / low hills	
2.2 Plateau		**2.5 Open valley**	**X**	2.8 Dune	
2.3 Side slope of hill/mountain		**2.6 Plain**	**X**	2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	**NO X**	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	**NO X**	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	**NO X**	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	**NO X**	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	**NO X**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	**NO X**	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	**NO X**	YES	NO	YES	NO
An area sensitive to erosion	YES	**NO X**	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).

Natural veld - good condition[E] X	**Natural veld with scattered aliens[E] X**	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "[E] "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 X**	UNSURE
Non-Perennial River	YES	**NO X**	UNSURE
Permanent Wetland	YES	**NO X**	UNSURE
Seasonal Wetland	YES	**NO X**	UNSURE
Artificial Wetland	YES	**NO X**	UNSURE
Estuarine / Lagoonal wetland	YES	**NO X**	UNSURE

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

N/A

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:

Natural area X	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station [H]
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential[A]	Church	**Agriculture X**
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant[A]	Nature conservation area
Medium industrial [AN]	Train station or shunting yard [N]	**Mountain, koppie or ridge X**

Heavy industrial [AN]	Railway line [N]	Museum
Power station	Major road (4 lanes or more) [N]	Historical building
Office/consulting room	Airport [N]	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam[A]	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:

N/A

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:

N/A

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:

N/A

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

Critical Biodiversity Area (as per provincial conservation plan)	YES	**NO X**
Core area of a protected area?	YES	**NO X**
Buffer area of a protected area?	YES	**NO X**
Planned expansion area of an existing protected area?	YES	**NO X**
Existing offset area associated with a previous Environmental Authorisation?	YES	**NO X**
Buffer area of the SKA?	YES	**NO X**

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

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:	YES	**NO X**
	Uncertain	
N/A		

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:

N/A. Please see attached Heritage Specialist report Attached in Appendix D

Will any building or structure older than 60 years be affected in any way?	YES	**NO X**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	**NO X**

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

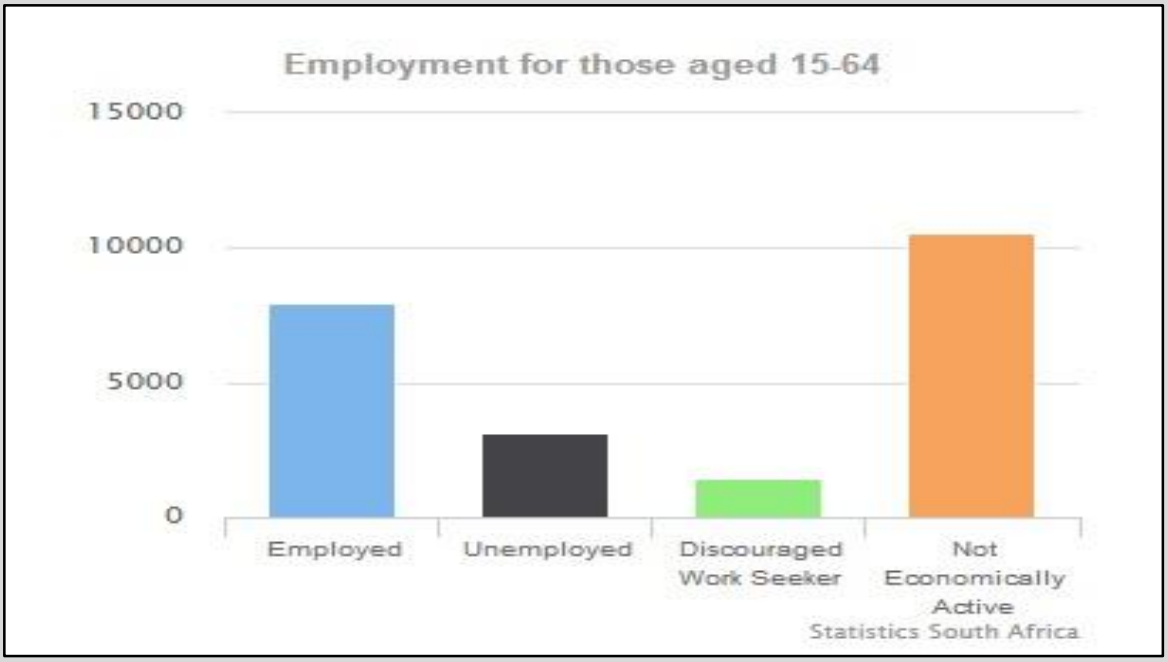
a) Local Municipality

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

Level of unemployment:

There are 11 064 (out of 37 076) people that are economically active (employed or unemployed but looking for work), and of these, 28,2% are unemployed.

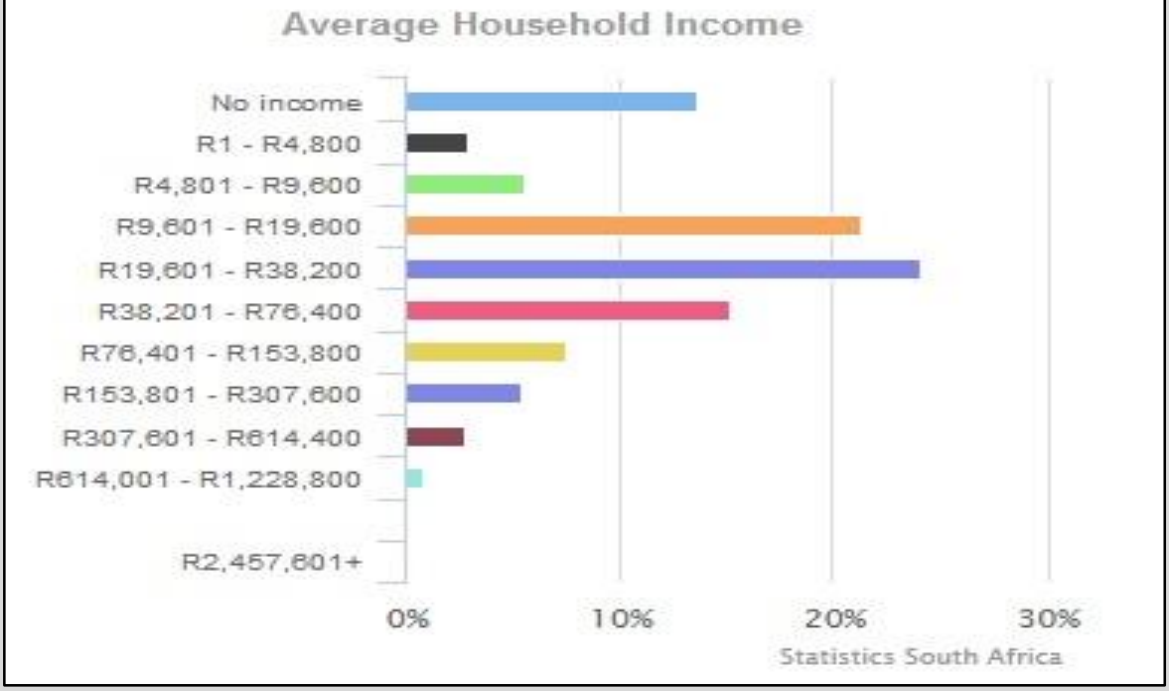
Of the 5 800 economically active youth (15 – 34 years) in the area, 35,2% are unemployed.



Statistics South Africa

Economic profile of local municipality:

The Economic Profile of the Siyancuma Local Municipality is summarized below. It is clear that the fourth highest percentage of people have no income. This project will contribute by providing new working opportunities during the construction/preparations phase and operational phases.

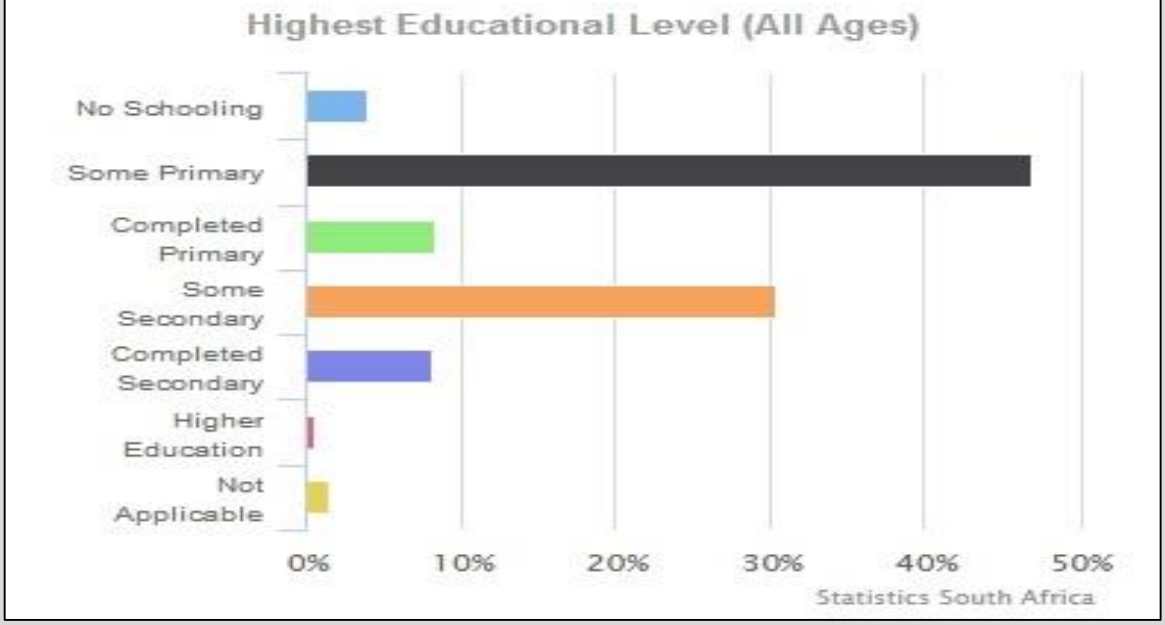


Statistics South Africa

Level of education:

According to the Census, Siyancuma Local Municipality has a total population of 37 076 people. The majority of the population in the municipality are coloured at 57,5%, 33,3% are black African, 7,5% are white, and 0,7% are Indian/Asian, with the other population groups making up the remaining 1,4%.

Of those aged 20 years and older, 7,2% have completed primary school, 30,3% have some secondary education, 16,9% have completed matric, and 5,4% have some form of higher education. Of the mentioned age group, 16,8% have no form of schooling.



Statistics South Africa

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	**R 1 000 000.00**	
What is the expected yearly income that will be generated by or as a result of the activity?	**R 750 000.00**	
Will the activity contribute to service infrastructure?	YES	**NO X**
Is the activity a public amenity?	YES	**NO X**
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	**2**	
What is the expected value of the employment opportunities during the development and construction phase?	**R 100 000.00**	
What percentage of this will accrue to previously disadvantaged individuals?	**90 %**	
How many permanent new employment opportunities will be created during the operational phase of the activity?	**3**	
What is the expected current value of the employment opportunities during the first 10 years?	**R 12 000 000.00**	
What percentage of this will accrue to previously disadvantaged individuals?	**90 %**	

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. 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)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	**Other Natural Area (ONA) X**	No Natural Area Remaining (NNR)	According to Mucina & Rutherford (2006), the entire assessment area falls within the Northern Upper Karoo vegetation type (NKu 3) which mainly consists of flat to slightly sloping shrubland, dominated by dwarf karoo shrubs and sparse grasses. This vegetation type is merely classified as least threatened as very little has been transformed thus far (Mucina & Rutherford, 2006). The entire assessment area is merely categorized as other natural land in accordance with the Northern Cape Provincial Spatial Biodiversity Plan.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	80 %	The majority of the area is covered with natural vegetation. The area was previously used for cattle farming.
Near Natural (includes areas with low to moderate level of alien invasive plants)	15 %	Certain small areas of the area has presence of alien invasive species. Mainly due to the presence of cattle in the area.
Degraded (includes areas heavily invaded by alien plants)	5 %	A very small portion of the area (mainly areas surrounding feeding areas and water points has very little natural vegetation remaining and high volumes of Alien invasive species.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	0 %	No area is completely transformed

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

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 assessment area of 15 ha constitutes a flat karroid shrubland with a well-developed low growing grass layer associated with the relevant Northern Upper Karoo vegetation type (NKu 3). The area is in a pristine undisturbed natural state and the surrounding natural area associated with the relevant vegetation type, is extremely vast and homogenous and largely undeveloped.

The karroid shrub layer is mainly dominated by the species *Phaeoptilum spinosum, Monechma incanum* & *Pentzia globosa.* Other shrub species also found to be present and well represented include *Crotolaria orientalis, Zygophyllum retrofracta, Lycium pumilum, Salsola aphylla* & *Lycium pillifolium.* A small isolated clump of the shrub species *Rigozum trichotomum* is also present in the northern portion of the assessment area. Small woody shrub individuals of the species *Vachellia tortilis* & *Senegalia mellifera* are sparsely spread throughout the assessment area while a small isolated linear clump of the legally declared invasive species *Agave sp.* (Category 2) is also present. A single small tree individual of the species *Searsia lancea* is also associated with this linear clump.

The well-developed low growing grass layer is mainly dominated by the species *Eragrostis lehmanniana, Aristida congesta* & *Stipagrostis obtusa*. Other grass species also found to be present and well represented include *Enneapogon cenchroides, Schmidtia pappophoroides, Aristida adscensionis, Eragrostis obtusa* & *Enneapogon desvauxii.* The forb layer mainly constitutes the species *Thesium hystrix, Senna italica subsp arachoides, Blepharis mitrada* & *Drimia sp.*

No Red Data Listed, provincially- or nationally protected or any other species of conservational significance were found to be present within the assessment area. It must however be noted that the time of the assessment was not necessarily favourable for successful identification of all plant

species individuals. It is therefore recommended that an additional ecological walkthrough be conducted prior to commencement of the project during the flowering period of underground bulbous plant species. This will ensure that no provincially protected or significant species have potentially been omitted.

The assessment area does not fall within an Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important bird areas/iba-map), and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the assessment area for breeding or persistence purposes. A small isolated clump of small mammal burrows is present within the assessment area. The mobility of such animals along with the vast, continuous, undeveloped surrounding natural landscape however allows for individuals to simply leave an area where disturbance is taking place and disperse to other similar, adequate areas.

Due to the flat topography of the assessment area and surrounding landscape, there are no watercourses or any drainage lines within the immediate vicinity of the assessment area.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Olyf Trust 15ha Agricultural Deveopment	
Date published	6 June 2018	
Site notice position	**Latitude**	**Longitude**
Notice 1	29°28'42.15"S	24°5'57.46"E
Notice 2	29°28'53.54"S	24°5'52.68"E
In town Notice (Library)	29°37'21.60"S	24°5'24.73"E
In town Notice (Municipality)	29°37'20.98"S	24°4'58.59"E
Date placed	6 June 2018	

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.

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)**
Mr. Koos de Wet	Olyf Trust (Landowner)	lily@inext.co.za
Mr. Pieter Louw	Neighbouring / Surrounding Landowners / Occupiers	admin@louwboerdery.co.za
Mr. Magiel Pretorius	Neighbouring / Surrounding Landowners / Occupiers	Mjlpretorius1949@gmail.com
Mr. Andries	Neighbouring / Surrounding Landowners / Occupiers	Langford@jl.co.za
Mr. Johan v.d. Walt	Neighbouring / Surrounding Landowners / Occupiers	jvdwjcdw@mtnloaded.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 be complete at end of 30 day 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	e-mail
Siyancuma Local Municipality - Municipal Manager	Mr. H.F. Nel	(053) 298 1810	geraldine@siyancuma.gov.za douglas@siyancuma.gov.za
Siyancuma Local Municipality - Environmental Department	Mr. Chris Groenewald	0828440411	groenewald@siyancuma.co.za
Siyancuma Local Municipality - Ward 2 (two) Ward Councillor Municipality	Mr. Patrick Mcklein	0845339330	pmsiyancuma@gmail.com patrickmcklein@gmail.com
Pixley Ka Seme District Municipality - Municipal Manager	Mr. Rodney Pieterse	0536310891	mm@pksdm.gov.za
Pixley Ka Seme District Municipality - Environmental Department	Mr. S. Nkondeshe	0536310891	pixley@telkomsa.net
Department of Environment and Nature Conservation - Ecological and	Me. Natalie Uys	053 807 7300/7472	nuys.denc@gmail.com

Botanical Department			
Department of Environment and Nature Conservation - Environmental Impact Assessment Department	Mr. Thulani Mthombeni	(053) 807 7430 or Cell: 071 673 7525	Tmthombeni@ncpg.gov.za
Agri Noordkaap	Mr. Hannes Roux	0718607550	hrouxx@gmail.com
Northern Cape Department of Water and Sanitation - Commenting Authority for the region	Mr. Khutjo Sekwaila	053 836 7609	sekwailak@dws.gov.za
Northern Cape Department of Water and Sanitation - Commenting Authority for the region	Me. Refilwe Damane	053 836 7609	DamaneR@dws.gov.za
Northern Cape Department Minerals and Resources - Mineral Regulation	Mr. Tony Olyn	053 807 1705	Tony.Olyn@dmr.gov.za
DAFF - Department of Agriculture, Forestry and Fisheries - Commenting Authority	Me. Jacoline Mans	082 808 2737	jacolinema@daff.gov.za

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.

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.

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.

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) Planning, Design and Construction Phase

PLANNING, DESIGN AND CONSTRUCTION PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	68	44	60	44	14
Significance rating:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	26	24	26	24	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields

Evaluation Component:	Alternative 1 (Preferred)		Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Total SP:	36	27	30	27	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	0
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	

Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the development / preparation of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to construction activities.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	10	30	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)

Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities on-site.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job creation					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	52	75	52	75	60
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

b) Operational Phase

OPPERATIONAL PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on flora as a result of continuous vegetation clearance.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	30	33	30	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Continuous impact on Fauna as a result of cleared vegetation / habitat loss.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	

Total SP:	26	24	26	24	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the operational phase of the project.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	21	33	21	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during the operational phase.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	6	7	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the operational phase by means of fertilizer and/or any other hazardous substances or pesticides.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	0
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)

Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	9	6	9	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the operational phase of the fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	6	7	6	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	100	72	14	3	4
Significance rating:	High (H)	Medium (M)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					

Nature of impact: Increased Soil erosion due to operational activities.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	39	10	33	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities during the operational phase.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	14	3	14	3	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job creation					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	52	75	52	75	60
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

c) Decommissioning Phase

DECOMMISION PHASE					
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the decommissioning phase of the project.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	24	18	24	18	16

Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the decommissioning phase by means of fertilizer and/or any other hazardous substances or pesticides.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the decommissioning phase of the developed fields.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	6	6	6	6	16
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	7	4	7	4	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to decommissioning activities.					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Preferred Layout Alternative**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	

Total SP:	33	10	30	10	4
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job loss					**Activity:** Proposed development of organic pumpkin farming fields
Evaluation Component:	**Alternative 1 (Preferred)**		**Alternative 2**		**No-Go Alternative**
	Before Mitigation	**After Mitigation**	**Before Mitigation**	**After Mitigation**	
Total SP:	32	24	32	24	52
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	+ Medium (M)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	+ Medium (M)

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

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)

Olyf Trust is proposing to commence with the establishment of organic pumpkin farming or grazing pastures on the Remaining Extent of the Farm Donegal no 217 near the town of Hopetown in the Northern Cape Province (15 ha). The purpose of the cultivation will either be for commercial organic pumpkin planting for export purposes or for planting of grazing pastures.

The completion of the farm portion procurement process is however dependent on a number of factors. The major conditional factors are the suitability of the area for organic pumpkin farming or grazing pastures (soil, water, transformation of natural resources, heritage significance) as well as the successful acquisition of an environmental authorisation (EA) from the competent authority. The Northern Cape Department of Environment and Nature Conservation has in this case been identified as the competent authority.

In accordance with the National Environmental Management Act (Act 107 of 1998); Environmental Impact Assessment Regulations of 2017, a Basic Assessment Impact Assessment (BA) processes is required for the proposed project in order to obtain the necessary environmental authorisation from the competent authority. Eco-Con Environmental was appointed by Koos de Wet on behalf of Olyf Trust to act as the independent Environmental Assessment Practitioner (EAP) to facilitate

the entire environmental authorisation application process and complete the Basic Assessment processes for the construction and operational phases of the proposed project.

The project will entail two major aspects namely:

- The construction of a pipeline for irrigation from existing boreholes.
- Cultivation of 15 ha organic pumpkin farming or grazing pastures and some two track access roads.

Cultivation of 15 ha organic pumpkin farming or grazing pastures

15 ha organic pumpkin farming or grazing pastures will be established on the proposed project footprint.

The cultivation and planting process will work as follows:

- The area will be cleared with the use of a Bulldozer and deep-ripped with the dozer tines to breakup and aerate the soils.
- Surface rocks will be manually removed from the area.
- Soil preparation will then be conducted by cultivation with the use of a chisel plough.
- Amelioration recommendations will be obtained from a soil scientist through chemical and organic soil analyses in order to ensure the appropriate nutrients/minerals, as required for the area to be cultivated, are incorporated into the growth medium (soil) prior to planting.
- Irrigation water will be abstracted from existing boreholes. A water use License is also being undertaken for the registration of these boreholes with the Department of Water and Sanitation in the Northern Cape.
- Planting of organic pumpkins or grazing pastures will be conducted manually through manual labour.

In order to achieve the above, two Layout Alternatives are proposed:

Layout Alternative 1 (Preferred Alternative)

The preferred layout alternative includes the development of 15ha of organic pumpkin farming or grazing pastures which will constitute a 15ha cultivated land. The preferred layout alternative is located 150m east of the existing residential dwelling and existing gravel access road. This 15 ha will not traverse any existing wetland and water courses.

Layout Alternative 2

Layout alternative 2 includes the development of 5ha of organic pumpkin farming or grazing pastures which will constitute a 5ha cultivated land. Studies was conducted that indicated that the PH values and drainage was not suitable for the preferred development area and thus the area was reduced to 5 ha. Layout alternative 2 is located 150m east of the existing residential dwelling and existing gravel access road. This 5 ha will not traverse any existing wetland and water courses.

Already established two track farm roads are already in place and will link up most of the area. In some cases, where tracks do not exist, some new two track farm road might be established.

Construction of a pipeline and water extraction point

A new water pipeline will be constructed and put in place to extract water from the already existing 4 X boreholes. This will be used for the irrigation of the 15ha organic pumpkin area as described in this report. A water use license application will be submitted to the relevant authority once both the environmental authorisation and the ploughing certificate have been obtained.

Extraction Pump:

- The following extraction pumps will be erected at each of the boreholes: 1 x 5.5kW, pump and 3 x 2.2kW pumps which will pump into an existing 532 000 litre concrete dam. Water will be pumped by a centrifugal pump from the dam to the cultivated area.
- The power for the extraction pumps will be obtained from existing 100 KVA point.
- The extraction pumps will run for approximately 12 hours per day, pumping water to the amount of 95 m3 per hour (Monday to Saturday for a 3-month period.

Pipelines:

- A new 250 mm pipeline of approximately 0.8 km in length will be constructed to transport water from the existing concrete dam to the developed area. A narrow section of approximately 900mm will be cleared in order to accommodate the piping infrastructure. A

trench of approximately 900 mm wide will be excavated in order to accommodate the subsurface burial of the pipeline.

On site Settling Dams:

As part of the above-mentioned pipeline and extraction pumps, the following settling dam already exists on site:

- The existing boreholes will feed into an existing concrete dam (532m^2 / 12270m^3). The co-ordinates of the dam: 29°28'47.87"S; 24°05'56.22"E. The dam level will be kept between 50% and 90% by a level sensor that automatically switches the borehole pumps on/off as required.
- The dam will also be fitted with a 35 kW pump that will feed into the pipeline towards the cultivated area.

No-go alternative (compulsory)

Advantages:

- The minimal negative environmental impacts associated with the proposed project will be avoided if the proposed project is not implemented.
- The proposed project will contribute to local job creation by means of 250 seasonal staff and 30 permanent staff;
- The low crazing capacity of the current land will be changed and developed which will have a positive influence on local economic growth.

Disadvantages

If the proposed project however does not go ahead, the local communities will forego the economic benefits which the project will have on the area such as immediate additional employment opportunities and revenue streams and most importantly, sustainable capacity building (skills, experience and resources development) for the future.

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)?	**YES X**	NO

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.

Construction Phase

The potential environmental impacts associated with the construction / development phase of the proposed development.

Flora Impacts

A direct impact on flora will arise as a result of vegetation clearance.

Mitigation measures to reduce this potential impacts:

- Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation.
- Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill.
- The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- Natural veld situated in-between the proposed fields lands must not be impacted upon and must be left in situ.
- Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
- Areas within and immediately surrounding the proposed project footprint must be adequately rehabilitated to prevent significant alien invasive species establishment.
- Alien and invasive species need to be eradicated and controlled.

Fauna Impacts

A direct impact on flora will arise as a result of vegetation clearance / habitat loss

Mitigation measures to reduce potential impacts:

- The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- Natural veld situated in-between the proposed fields must not be impacted upon and must be left in situ.
- Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
- Areas within and immediately surrounding the proposed project footprint must be adequately rehabilitated to prevent significant alien invasive species establishment.
- Alien and invasive species need to be eradicated and controlled.

Dust Impacts

Dust nuisance generated during the development / preparation of the fields.
Mitigation measures to reduce potential impacts:

- Dust Management measures must be implemented in order to manage and minimize undesired dust emissions.
- Access roads need to be well maintained and dust suppression need to be applied during windy days.
- Fields need to be rehabilitated by planting buffalo grass while not in use.

Noise Impacts

Noise nuisance will be generated during the development / preparation of the fields resulting from individuals and equipment.

Mitigation measures to reduce potential impacts:

- Limit working hours of noisy equipment to daylight hours.
- Fit silencers to equipment.
- Unless otherwise specified, normal working hours will apply (i.e. from 07:00 to 17:00 Mondays to Fridays).
- Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.

- No loud music is permitted on site or in the camp.

Cultural and Heritage Impacts

Damage and destruction of vertebrate fossils during excavation activities may occur.

Mitigation measures to reduce potential impacts:

- Should any heritage resources (including but not limited to fossils, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and or built features, rock art and rock engravings) be exposed during excavations for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.
- Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given.
- Under no circumstances shall any heritage material be destroyed or removed from site.
- Excavations must be limited to the footprint area and be maintained in a narrow corridor.
- All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:
    - All construction in the immediate 50 metre vicinity of the site must be ceased.
    - The heritage practitioner must be informed as soon as possible.
    - In the event of obvious human remains SAPS must be notified.
    - Mitigation measures (such as refilling) must not be attempted.
    - The area in a 50 metre radius of the find must be barricaded with visible taping.
    - Public access must be limited and the area must be placed under guard.

Surface and Groundwater Contamination Impacts

Surface and Groundwater Contamination during the development / preparation of the fields.

Mitigation measures to reduce potential impacts:

- Ensure that excavation areas have a predetermined stockpile area for excavated materials.
- Use overburden for rehabilitation.
- Any remaining overburden to be disposed of at a licensed waste site.

- Alternatively, concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose.
- Material Safety Data Sheets (MSDS) must be available on site for all chemicals and hazardous substances to be used on site, including information on their ecological impacts and how to minimise the impacts in case of any leakages.
- All spills must be cleaned as soon as they occur. A spill kit must be used and proof of clean up must be given to the ECO.
- Spillages of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.
- Provide suitable and sufficient ablution facilities (1 for every 15 personnel on site and 1 for each gender).
- Vehicles and machinery must be regularly serviced to avoid spillages.
- Drip trays must be placed beneath all stationary construction equipment and beneath all generators present on site.

Waste Management Impacts

Waste impacts by means of waste storage and littering during the development / preparation of the fields.

Mitigation measures to reduce potential impacts:

- An adequate number of scavenger proof litter bins are to be placed throughout the site, dumping of waste on the site is prohibited.
- Waste sorting and separation should form part of the environmental induction and awareness programme to encourage and educate personnel to recycle.
- Keep all work sites including storage areas, offices and workshops neat and tidy.
- All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site.
- Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill site. If needed, a tarpaulin can be utilised.
- The burning and burying of solid waste on site is prohibited.
- Littering by construction workers shall not be permitted.

- General waste shall be removed from site on a weekly basis to an approved landfill site.
- Minimise waste by sorting waste into recyclable and non-recyclable materials. Small scale agricultural job creation in the.

Traffic Impacts

Traffic impacts by means of additional truck and transportation to and from site during the development / preparation of the fields.

Mitigation measures to reduce potential impacts:

- Abnormal loads should be timed to avoid times of the year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods.
- All vehicles should be road worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle.
- Any damage to public roads is to be reported to the management authority and repaired to its original condition.
- Signage is to be placed on vehicles at all times.

Fire Risk Impacts

Increase risk of fires during the development / preparation of the fields.

Mitigation measures to reduce potential impacts:

- Ensure the work site and the contractor's camp is equipped with adequate firefighting equipment.
- All construction equipment must have at least one firefighting extinguisher.
- Workers must be adequately trained in the handling of firefighting equipment.
- No open fires are permitted anywhere on site due to the handling of gas on site. No fires will be permitted for heating or cooking purposes on site.
- Fuel and chemicals must be stored in an area that is acceptable for the client.
- No smoking will be allowed within close vicinity of the site.

Soil Contamination Impacts

Increased Soil contamination by means of hazardous substances.

Mitigation measures to reduce potential impacts:

- No leaked oil or fuel tankers may contaminate soil
- All tanks and pipes containing fuel or oil must be inspected on a regular basis
- Spills outside the bund area must be treated with a spill kit
- All significant leaks must be reported to the competent authority in terms of NEMA
- UST must be fitted with leak detectors in order to alert when a leak is occurring.
- Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices.
- Tanker delivery drivers must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher
- A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the USTs to prevent fugitive emissions.
- All personnel working with fuel must undergo spill kit training
- The oil/water separator must be inspected on a regular basis and the inspection report must be provided to the ECO and relevant authority.
- Following a leak or accidental spill, a remediation plan must be compiled and executed.
- Fuel stock must be monitored on a daily basis in order to identify if the tank is leaking.

Soil Erosion Impacts

Increased Soil erosion due to construction activities.

Mitigation measures to reduce potential impacts:

- During construction, un-channelled flow must be controlled to avoid soil erosion. Where large areas of soil are left exposed, rows of straw or hay bales, or bundles of cut vegetation sourced with the ECO's knowledge and consent, should be dug into the soil in contours to slow surface wash and capture eroded soil. The method may also be used where surface run-off becomes concentrated,
- All water flow must be controlled using storm water management techniques before discharge into the existing natural drainage line,
- Temporary cut off drains may be required to capture storm water and promote infiltration,
- All storm water management features must be constructed in a manner that will ensure the continued functioning of the emergent vegetation. Construction must coincide with the dry season.

Visual Impacts

Increased visual impact due to increased working activities on-site.

Mitigation measures to reduce potential impacts:

- All waste must be placed in bins during operational phase. Keeping the area litter free.
- Construction activities may only take place during normal working hours.

Socio-Economic Impacts

Increased socio-economic conditions due to job creation.

Mitigation measures to reduce potential impacts:

- Ensure that low-, medium- and high skilled workers use provided working opportunities.
- Low-, medium- and high skilled workers must be sourced locally.
- Were practically possible, previously disadvantaged individuals should be provided preference with regards to employment opportunities.
- Individuals must be trained and continuously developed.

Operational Phase

The potential environmental impacts associated with the operational phase of the proposed development.

Flora Impacts

Direct impact on flora as a result of continuous vegetation clearance.

Mitigation measures to reduce potential impacts:

- Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill.
- The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- Natural veld situated in-between the proposed fields must not be impacted upon and must be left in situ.
- Existing roads and farm tracks in close proximity to the proposed project area must be used during operation.
- Alien and invasive species need to be eradicated and controlled.

Fauna Impacts

Continuous impact on Fauna as a result of cleared vegetation / habitat loss.

Mitigation measures to reduce potential impacts:

- Natural veld situated in-between the proposed fields must not be impacted upon and must be left in situ.
- Existing roads and farm tracks in close proximity to the proposed project area must be used during operation.
- No hunting of any animal is to take place on site.
- Specials care are to be taken not to work near or disturb any vulture nests, especially during breading seasons.

Dust Impacts

Dust nuisance generated during the operational phase of the project.
Mitigation measures to reduce potential impacts:

- Dust Management measures must be implemented in order to manage and minimize undesired dust emissions.
- Access roads need to be well maintained and dust suppression need to be applied during windy days.
- Fields need to be rehabilitated by planting buffalo grass while not in use (7-year cycle apply to these fields).

Noise Impacts

Noise nuisance generated during the operational phase of the fields.

Mitigation measures to reduce potential impacts:

- Limit working hours of noisy equipment to daylight hours.
- Fit silencers to equipment.
- Unless otherwise specified, normal working hours will apply (i.e. from 07:00 to 17:00 Mondays to Fridays).
- Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.
- No loud music is permitted on site or in the camp.

Cultural Heritage Impacts

Damage and destruction of vertebrate fossils during the operational phase.

Mitigation measures to reduce potential impacts:

- Should any heritage resources (including but not limited to fossils, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and or built features, rock art and rock engravings) be exposed during excavations, all works in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.
- Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given.
- Under no circumstances shall any heritage material be destroyed or removed from site.
- Excavations must be limited to the footprint area and be maintained in a narrow corridor.
- All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:
    - All construction in the immediate 50 metre vicinity of the site must be ceased.
    - The heritage practitioner must be informed as soon as possible.
    - In the event of obvious human remains SAPS must be notified.
    - Mitigation measures (such as refilling) must not be attempted.
    - The area in a 50 metre radius of the find must be barricaded with visible taping.
- Public access must be limited and the area must be placed under guard.

Surface and Groundwater Impacts

Surface and Groundwater Contamination during the operational phase by means of fertilizer and/or any other hazardous substances or pesticides.

Mitigation measures to reduce potential impacts:

- When fertilisers / pesticides are used, ensure that all fertilisers / pesticides are environmentally friendly.

- When fertilisers / pesticides are used, only use the correct amount as indicated by the parcels. Do not over use.
- Material Safety Data Sheets (MSDS) must be available on site for all chemicals and hazardous substances to be used on site, including information on their ecological impacts and how to minimise the impacts in case of any leakages.
- All spills must be cleaned as soon as they occur. A spill kit must be used and proof of clean up must be given to the ECO.
- Spillages of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.
- Provide suitable and sufficient ablution facilities (1 for every 15 personnel on site and 1 for each gender).
- Vehicles and machinery must be regularly serviced to avoid spillages.
- Drip trays must be placed beneath all stationary equipment and beneath all generators present on site.

Waste Management Impacts

As per the construction phase the area poses no archaeological and palaeontological significance or value.

Mitigation measures to reduce potential impacts:

- An adequate number of scavenger proof litter bins are to be placed throughout the site, dumping of waste on the site is prohibited.
- Waste sorting and separation should form part of the environmental induction and awareness programme to encourage and educate personnel to recycle.
- Keep all work sites including storage areas, offices and workshops neat and tidy.
- All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site.
- Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill site. If needed, a tarpaulin can be utilised.
- The burning and burying of solid waste on site is prohibited.
- Littering by workers shall not be permitted.
- General waste shall be removed from site on a weekly basis to an approved landfill site.

- Minimise waste by sorting waste into recyclable and non-recyclable materials.

Traffic Impacts

Traffic impacts by means of additional truck and transportation to and from site during the operational phase of the fields.

Mitigation measures to reduce potential impacts:

- Abnormal loads should be timed to avoid times of the year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods.
- All vehicles should be road worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle.
- Any damage to public roads is to be reported to the management authority and repaired to its original condition.
- Signage is to be placed on vehicles at all times.

Fire Risk Impacts

Increase risk of fires during the operational phase of the fields.

Mitigation measures to reduce potential impacts:

- Ensure the work site is equipped with adequate firefighting equipment.
- All equipment must have at least one firefighting extinguisher.
- Workers must be adequately trained in the handling of firefighting equipment.
- No open fires are permitted anywhere on site.
- No fires will be permitted for heating or cooking purposes on site.
- Fuel and chemicals must be stored in an area that is acceptable for the client.
- Dedicated smoking areas are to be provided.

Soil Contamination Impacts

Increased Soil contamination by means of hazardous substances.

Mitigation measures to reduce potential impacts:

- No leaked oil or fuel tankers may contaminate soil
- All tanks and pipes containing fuel or oil must be inspected on a regular basis

- Spills outside the bund area must be treated with a spill kit
- All significant leaks must be reported to the competent authority in terms of NEMA
- UST must be fitted with leak detectors in order to alert when a leak is occurring.
- Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices.
- Tanker delivery drivers must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher
- A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the USTs to prevent fugitive emissions.
- All personnel working with fuel must undergo spill kit training
- Following a leak or accidental spill, a remediation plan must be compiled and executed.
- Fuel stock must be monitored on a daily basis in order to identify if the tank is leaking.

Soil Erosion Impacts

Increased Soil erosion due to operational activities.

Mitigation measures to reduce potential impacts:

- During the operational phase, un-channelled flow must be controlled to avoid soil erosion. Where large areas of soil are left exposed, rows of straw or hay bales, or bundles of cut vegetation sourced with the ECO's knowledge and consent, should be dug into the soil in contours to slow surface wash and capture eroded soil. The method may also be used where surface run-off becomes concentrated,
- All water flow must be controlled using storm water management techniques before discharge into the existing natural drainage line,
- Temporary cut off drains may be required to capture storm water and promote infiltration,
- All storm water management features must be constructed in a manner that will ensure the continued functioning of the emergent vegetation. Construction must coincide with the dry season.

Visual Impacts

Increased visual impact due to increased working activities during the operational phase.

Mitigation measures to reduce potential impacts:

- All waste must be placed in bins during operational phase. Keeping the area litter free.
- Construction activities may only take place during normal working hours.

Socio-Economic Impacts

Increased socio-economic conditions due to job creation.

Mitigation measures to reduce potential impacts:

- Ensure that low-, medium- and high skilled workers use provided working opportunities.
- Low-, medium- and high skilled workers must be sourced locally.
- Were practically possible, previously disadvantaged individuals should be provided preference with regards to employment opportunities.
- Individuals must be trained and continuously developed

Decommissioning Phase

The potential environmental impacts associated with the decommissioning phase of the proposed development.

Dust Impacts

Dust nuisance generated during the decommissioning phase of the project.

Mitigation measures to reduce potential impacts:

- Dust Management measures must be implemented in order to manage and minimize undesired dust emissions.
- Access roads and field areas to be decommissioned are to be ripped and seeded for vegetation regrowth to avoid dust.
- Fields need to be rehabilitated by planting buffalo grass.

Surface and Groundwater Contamination Impacts

Surface and Groundwater Contamination during the decommissioning phase by means of fertilizer and/or any other hazardous substances or pesticides.

Mitigation measures to reduce potential impacts:

- When fertilisers / pesticides are used in the planting of seeds, ensure that all fertilisers / pesticides are environmentally friendly.

- When fertilisers / pesticides are used, only use the correct amount as indicated by the parcels. Do not over use.
- Material Safety Data Sheets (MSDS) must be available on site for all chemicals and hazardous substances to be used on site, including information on their ecological impacts and how to minimise the impacts in case of any leakages.
- All spills must be cleaned as soon as they occur. A spill kit must be used and proof of clean up must be given to the ECO.
- Spillages of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.
- Provide suitable and sufficient ablution facilities (1 for every 15 personnel on site and 1 for each gender).
- Vehicles and machinery must be regularly serviced to avoid spillages.
- Drip trays must be placed beneath all stationary equipment and beneath all generators present on site.

Waste Management Impacts

Waste impacts by means of waste storage and littering during the decommissioning phase of the fields.

Mitigation measures to reduce potential impacts:

- An adequate number of scavenger proof litter bins are to be placed throughout the site, dumping of waste on the site is prohibited.
- Waste sorting and separation should form part of the environmental induction and awareness programme to encourage and educate personnel to recycle.
- Keep all work sites including storage areas, offices and workshops neat and tidy.
- All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site.
- Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill site. If needed, a tarpaulin can be utilised.
- The burning and burying of solid waste on site is prohibited.
- Littering by workers shall not be permitted.

- General waste shall be removed from site to an approved landfill site.

Soil Contamination Impacts

Increased Soil contamination by means of hazardous substances.

Mitigation measures to reduce potential impacts:

- No leaked oil or fuel tankers may contaminate soil
- Spills outside the bund area must be treated with a spill kit
- All significant leaks must be reported to the competent authority in terms of NEMA
- Following a leak or accidental spill, a remediation plan must be compiled and executed.

Soil Erosion Impacts

Increased Soil erosion due to decommissioning activities.

Mitigation measures to reduce potential impacts:

- During the decommissioning phase, un-channelled flow must be controlled to avoid soil erosion. Where large areas of soil are left exposed, rows of straw or hay bales, or bundles of cut vegetation sourced with the ECO's knowledge and consent, should be dug into the soil in contours to slow surface wash and capture eroded soil. The method may also be used where surface run-off becomes concentrated,
- All water flow must be controlled using storm water management techniques before discharge into the existing natural drainage line,
- Temporary cut off drains may be required to capture storm water and promote infiltration,

Socio-Economic Impacts

Increased socio-economic conditions due to job loss.

Mitigation measures to reduce potential impacts:

- Ensure that low-, medium- and high skilled workers working at the farm are given advance notice in terms of the decommissioning.

Assist Low-, medium- and high skilled worker in finding other possible vacancies.

Is an EMPr attached?	**YES X**	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.

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

_____

NAME OF EAP

_____ _____

SIGNATURE OF EAP DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps
- Appendix A1: Locality Map
- Appendix A2: Sensitivity Map
- Appendix A3: Vegetation Map

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)
- Appendix D1: Ecological and Wetland Impact Assessment Report and Alien Invasive Species Management Plan
- Appendix D2: Heritage Impact Assessment Report
- Appendix D3: Soil Suitability Report
- Appendix D4: Geohydrological Report

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
- Appendix I1: Ecological and Wetland Specialist
- Appendix I2: Heritage Specialist
- Appendix I3: Soil Suitability Specialist
- Appendix I4: Geohydrological Specialist

Appendix J: Additional Information
- Appendix J1: Title Deeds or SG Diagrams