

**PROPOSED TOWNSHIP DEVELOPMENT ON ERF 2642  
AND PORTION 14 OF FARM 48, OPWAG, !KHEIS  
LOCAL MUNICIPALITY**



OCTOBER 2020

**!KHEIS LOCAL MUNICIPALITY**

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AND PORTION 14 OF FARM 48, OPWAG, !KHEIS  
LOCAL MUNICIPALITY**

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## ACRONYMS

BGIS	Biodiversity Geographic Information System
CBA	Critical Biodiversity Area
DEA	Department of Environmental Affairs
DENC	Department of Environment and Nature Conservation
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
ECA	Environment Conservation Act (Act No. 73 of 1989)
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMP	Environmental Management Programme
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NID	Notice of Intent to Develop
NWA	National Water Act
OESA	Other Ecological Support Area
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
WULA	Water Use Licence Application

# 1. INTRODUCTION

## 1.1 BACKGROUND

Consideration is being given to the development of a new township, consisting of approximately 730 erven, including associated infrastructure, on Erf 2642 and Portion 14 of Farm 48, Opwag, !Kheis Local Municipality.

The applicant is !Kheis Local Municipality who will undertake the activity should it be approved. EnviroAfrica CC has been appointed as the independent environmental assessment practitioner (EAP) responsible for undertaking the relevant EIA and the Public Participation Process required in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA).

This Scoping Report, which will be submitted to the Department of Environment and Nature Conservation (DE&NC) for consideration, forms part of the EIA process.

The purpose of this Final Environmental Scoping Report is to describe the proposed project, the process followed to date, to present alternatives and to list issues identified for further study and comment by specialists.

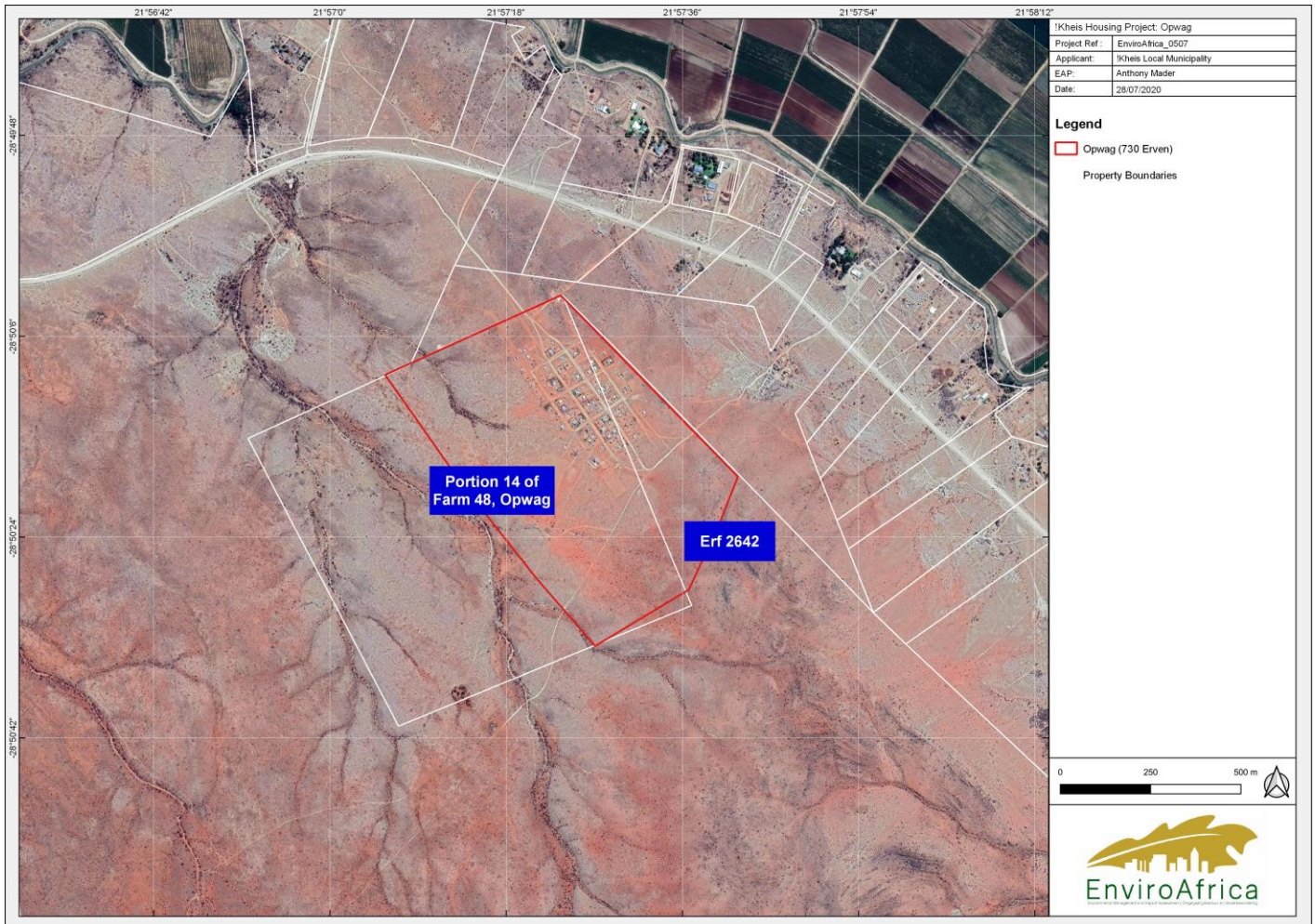
Should the EIA process be authorised by DE&NC, the Specialist Studies (noted in Section 8) will be undertaken and the significant issues (noted in Section 6) will be investigated and assessed during the next phase of this application.

## 1.2 DESCRIPTION OF THE PROPOSED ACTIVITY

The !Kheis Local Municipality is proposing that a new township development, consisting of approximately 730 erven and associated infrastructure on Erf 2642 and Portion 14 of Farm 48, Opwag, !Kheis Local Municipality.

The proposed project entails the development of approximately 730 erven including associated infrastructure such as roads, and water, stormwater, effluent, and electricity reticulation. The total area for housing to be developed measures 50 (fifty) hectares (housing). The proposed site is located approximately 79km south-east of Upington, 5km north of Groblershoop and 1km south of the Orange River. The proposed site is located within Ward 3 of the !Kheis Local Municipality, ZF Mgcauw District Municipality, Northern Cape. The proposed site for the Opwag Housing development are located at 28°50'14.90"S; 21°57'24.58"E and 28°50'0.82"S; 21°56'54.08"E, respectively.





**Figure 1:** Map showing proposed site for the Opwag Housing development. Source: QGIS, version 3.10.

## 2. NEED AND DESIRABILITY

In terms of the National Environmental Management Act, as amended, EIA 2014 regulations the Scoping/EIA report must provide a description of the need and desirability of the proposed activity. The consideration of “need and desirability” in EIA decision-making requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest.

While the concept of need and desirability relates to the *type* of development being proposed, essentially, the concept of need and desirability can be explained in terms of the general meaning of its two components in which *need* refers to *time* and *desirability* to *place* – i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed? Need and desirability can be equated to *wise use of land* – i.e. the question of what is the most sustainable use of land.

### 2.1 NEED

Housing is a national need, including in the !Kheis Local Municipality.

The !Kheis Local Municipality's aims to promote socioeconomic development through the eradication of backlogs associated with water and sanitation, electricity, and housing, as well as improve basic services within Opwag. In order to meet the needs of the community within Opwag, the Council resolved that a project business plan be submitted to Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA) as well as the construction of 730 erven in Opwag over the short to medium term, along with associated infrastructure. As per the !Kheis Integrated Development Plan (IDP) 2019/2020, a key performance indicator includes the provision of infrastructure and basic service through securing suitable land for human settlement projects, where suitable land was previously identified in Opwag, Topline, Wegdraai, Grootdrink, Gariiep, and Opwag. The provision of affordable housing units remains a high priority for the Municipality which will restore the dignity of poor people by providing shelter and access to basic human rights as enshrined in the Constitution of South Africa.

The proposed !Kheis housing development falls in line with the !Kheis IDPs key strategic and development objectives of the KLM, to improve and maintain basic service delivery through specific infrastructural projects including human settlements, water, sanitation, electricity, as well as streets and storm water management. The demographic profile of the KLM includes the total population of 16 637 individuals in 2011 with a total number of 4 145 households. This community requires formalized, state-instituted housing, and associated, infrastructure. The proposed development will distribute the density of the population, improve community member's standard of living, as well as access to essential services including roads, electricity, water supply, appropriate sewage disposal infrastructure, and environmental health in the area. Therefore, the proposed development will enable adequate housing to be constructed, thereby promoting access to basic service delivery as well as socioeconomic development in Boegoeberg and its surroundings.

The proposed Opwag Housing development is in line with the !Kheis IDPs key strategic and development objectives, namely to improve and maintain basic service delivery through specific infrastructural projects including human settlements and basic services, in the poverty-stricken Opwag Township. The Opwag community requires formalized, state-instituted housing, and associated, infrastructure. The proposed development will distribute the density of the population, improve community member's standard of living, as well as access to essential services including roads, electricity, water supply, appropriate sewage disposal infrastructure, and environmental health in the area. Therefore, the proposed development will enable adequate housing to be constructed, thereby promoting access to basic service delivery as well as



socioeconomic development in the Opwag Township and its surroundings. !Kheis Local Municipality is committed to the vision of the National Government of which it committed itself towards accelerating shared growth to halve poverty and unemployment and promote social inclusions. Housing is one of the social inclusions in this vision.

The majority of the KLM population is located in five settlements, namely: Grootdrink, Topline, Wegdraai, Groblershoop and Boegoeberg, with the largest of those settlements being Groblershoop, Grootdrink and Wegdraai. With regards to the functional age groups, 60% of KLM's population is of working age (15--64). Grootdrink (40%) and Boegoeberg (40%) have the highest percentages of population aged between 0 and 14, which is decidedly higher than the district percentage of 28%. Education levels and school attendance have increased in KLM. Grootdrink has the lowest percentage individuals with Gr.12 at 9,1%, while Topline has the highest percentage of individuals with 'no schooling' at 17,5%. In comparison Groblershoop has the highest percentage of individuals with Gr.12 (18,5%) and individuals with higher education (1,7%).

## **2.2 DESIRABILITY**

The following factors determine the desirability of the area for the proposed development.

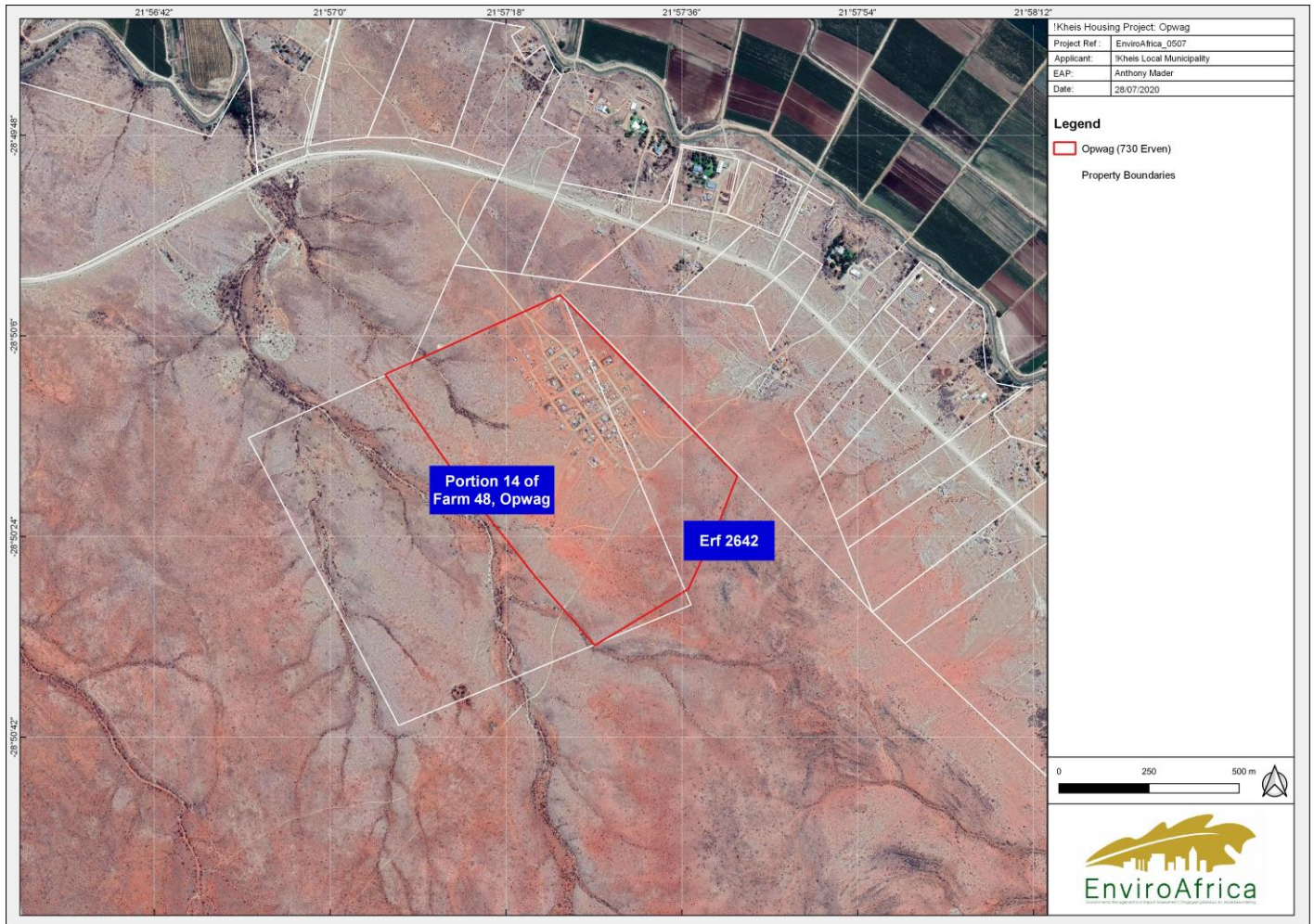
### **2.2.1 Location and Accessibility**

The proposed location is considered to be a viable option. The proposed site is adjacent to the existing residential area of Opwag with some associated infrastructure. The proposed site for development is located approximately 4km off the N10 and approximately 5km from the N8, allowing accessibility and linking to the existing services infrastructure. Any upgrades or additional services infrastructure that will be required will be investigated, and included in the Environmental Impact Report (EIR).

The desirability and location of the proposed development will be further investigated in the Environmental Impact Report, and the town planning motivational report.

### **2.2.2 Compatibility with the Surrounding Area**

The proposed site is adjacent to the existing residential area of Opwag. As stated above, this would provide accessibility and allow the proposed development to link to the existing services infrastructure.



**Figure 2:** Map showing the surrounding landscape, as well as the location of the proposed development in location with the existing residential areas. QGIS, version 3.10.

### 3. LEGAL REQUIREMENTS

The current assessment is being undertaken in terms of the National Environmental Management Act (Act 107 of 1998, NEMA), to be read with section 24 (5): NEMA EIA Regulations 2014. However, the provisions of various other Acts must also be considered within this EIA.

The legislation that is relevant to this study is briefly outlined below.

#### 3.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

The Constitution of the Republic of South Africa (Act 108 of 1996) states that everyone has a right to a non-threatening environment and that reasonable measures are applied to protect the environment. This includes preventing pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

#### 3.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

The National Environmental Management Act (Act 107 of 1998) (NEMA), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the relevant authorities based on the findings of an environmental assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA). These powers are delegated in the Northern Cape to the Department of Environment and Nature Conservation (DE&NC).

On the 04 December 2014 the Minister of Water and Environmental Affairs promulgated regulations in terms of Chapter 5 of the NEMA, namely the EIA Regulations 2014. These were amended on 07 April 2017 (GN No. 326, No. 327 (Listing Notice 1), No. 325 (Listing Notice 2), No. 324 (Listing Notice 3) in Government Gazette No. 40772 of 07 April 2017). Listing Notice 1 and 3 are for a Basic Assessment and Listing Notice 2 for a full Environmental Impact Assessment.

According to the regulations of Section 24(5) of NEMA, authorisation is required for the following listed activities for the proposed agricultural development:

Government Notice R327 (Listing Notice 1) listed activities:

- 12**     *The development of;*
- (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres;*
  - (ii) infrastructure or structures with a physical footprint of 100 square metres or more;*
- where such development occurs;*
- (a) within a watercourse;*
  - (b) in front of a development setback; or*
  - (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;*

- 19** *The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;*  
*(a) will occur behind a development setback;*  
*(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or*  
*(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.*
- 24** The development of a road;  
 (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or  
 (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;  
 but excluding a road;  
 (a) which is identified and included in activity 27 in Listing Notice 2 of 2014; or  
 (b) where the entire road falls within an urban area; or  
 (c) which is 1 kilometre or shorter
- 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.
- 56** The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre;  
 (i) where the existing reserve is wider than 13,5 meters; or  
 (ii) where no reserve exists, where the existing road is wider than 8 metres;  
 excluding where widening or lengthening occur inside urban areas.

Government Notice R325 (Listing notice 2) listed activities:

- 15** The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for;  
 (i) the undertaking of a linear activity; or  
 (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Government Notice R324 (Listing notice 3) listed activities:

- 4** The development of a road wider than 4 metres with a reserve less than 13.5 metres
- 12** The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

- 14** The development of;
- (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 10 square metres;
  - (ii) infrastructure or structures with a physical footprint of 10 square metres or more;
- where such development occurs;
- (a) within a watercourse;
  - (b) in front of a development setback; or
  - (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;
- Excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;

An Application Form AND Draft Scoping Report was submitted to DE&NC. On acknowledgment from DE&NC this Scoping Process is being undertaken to identify potential issues.

The principles of environmental management as set out in section 2 of NEMA have been taken into account. The principles pertinent to this activity include:

- People and their needs will be placed at the forefront while serving their physical, psychological, developmental, cultural and social interests. The activity seeks to provide additional employment and economic development opportunities, which are a local and national need – *the proposed activity is expected to have a beneficial impact on people, especially developmental and social benefits, as well providing additional employment and economic development opportunities.*
- Development will be socially, environmentally and economically sustainable. Where disturbance of ecosystems, loss of biodiversity, pollution and degradation, and landscapes and sites that constitute the nation's cultural heritage cannot be avoided, are minimised and remedied. The impact that the activity will potentially have on these will be considered, and mitigation measures will be put in place - *potential impacts have been identified and considered, and any further potential impacts will be identified during the public participation process. Mitigation measures will be included in the EMP.*
- Where waste cannot be avoided, it will be minimised and remedied through the implementation and adherence of the Environmental Management Programme (EMP) – *this will be included in the EIR.*
- The use of non-renewable natural resources will be responsible and equitable.
- The negative impacts on the environment and on people's environmental rights will be anticipated, investigated and prevented, and where they cannot be prevented, will be minimised and remedied.
- The interests, needs and values of all interested and affected parties will be taken into account in any decisions through the Public Participation Process.
- The social, economic and environmental impacts of the activity will be considered, assessed and evaluated, including the disadvantages and benefits.
- The effects of decisions on all aspects of the environment and all people in the environment will be taken into account, by pursuing what is considered the best practicable environmental option.



### 3.3 NATIONAL HERITAGE RESOURCES ACT

The protection and management of South Africa's heritage resources are controlled by the National Heritage Resources Act (Act No. 25 of 1999). South African National Heritage Resources Agency (SAHRA) is the enforcing authority.

In terms of Section 38 of the National Heritage Resources Act, SAHRA will require a Heritage Impact Assessment (HIA) where certain categories of development are proposed. Section 38(8) also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is found to be adequate, a separate HIA is not required.

The National Heritage Resources Act requires relevant authorities to be notified regarding this proposed development, as the following activities are relevant:

- *any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent;*
- *the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length*

Furthermore, in terms of Section 34(1), no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the SAHRA, or the responsible resources authority. Nor may anyone destroy, damage, alter, exhume or remove from its original position, or otherwise disturb, any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority, without a permit issued by the SAHRA, or a provincial heritage authority, in terms of Section 36 (3). In terms of Section 35 (4), no person may destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object, without a permit issued by the SAHRA, or the responsible resources authority.

### 3.4 EIA GUIDELINE AND INFORMATION DOCUMENT SERIES

The following are the latest guidelines and information Documents that have been consulted:

- Department of Environmental Affairs and Development Planning's (DEA&DP) *Environmental Impact Assessment Guideline and Information Document Series (Dated: March 2013)*:
  - ✓ *Guideline on Transitional Arrangements*
  - ✓ *Generic Terms of Reference for EAPs and Project Schedules*
  - ✓ *Guideline on Alternatives*
  - ✓ *Guideline on Public Participation*
  - ✓ *Guideline on Exemption Applications*
  - ✓ *Guideline on Appeals*
  - ✓ *Guideline on Need and Desirability*
- Department of Environmental Affairs and Tourism (DEAT) *Integrated Environmental Management Information Series*

### 3.5 NATIONAL WATER ACT

Besides the provisions of NEMA for this EIA process, the proposed development may also require authorizations under the National Water Act (Act N0. 36 of 1998). The Department of Water and Sanitation, who administer that Act, will be a leading role-player in the EIA.



If, and as required by the Department of Water and Sanitation, a Water Use Licence Application (WULA) may be compiled and submitted.

### **3.6 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT**

The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA) is part of a suite of legislation falling under NEMA, which includes the Protected Areas Act, the Air Quality Act, the Integrated Coastal Management Act and the Waste Act. Chapter 4 of NEMBA deals with threatened and protected ecosystems and species and related threatened processes and restricted activities. The need to protect listed ecosystems is addressed (*Section 54*).

### **3.7 NATIONAL FORESTS ACT**

The National Forests Act, 1998 (Act 84 of 1998) (NFA) makes provisions for the management and conservation of public forests.

In terms of section 15(1) of the National Forests Act, 1998, no person may

- (a) cut, disturb, damage or destroy any protected tree; or
- (b) possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree, except
  - (i) under a license granted by the Minister; or
  - (ii) in terms of an exemption from the provisions of this subsection published by the Minister in the Gazette.

### **3.8 NORTHERN CAPE CONSERVATION ACT, ACT 09 OF 2009**

On the 12<sup>th</sup> of December 2011, the new Northern Cape Nature Conservation Act 9 of 2009 (NCNCA) came into effect, which provides for the sustainable utilization of wild animals, aquatic biota and plants. Schedule 1 and 2 of the Act give extensive lists of specially protected and protected fauna and flora species in accordance with this act. The NCNCA is a very important Act in that it put a whole new emphasis on a number of species not previously protected in terms of legislation.

It also put a new emphasis on the importance of species, even within vegetation classified as “Least Threatened” (in accordance with GN 1002 of 9 December 20011, promulgated in terms of the National Environmental Management Biodiversity Act 10 of 2004). Thus, even though a project may be located within a vegetation type or habitat previously not considered under immediate threat, special care must still be taken to ensure that listed species (fauna & flora) are managed correctly.

### **3.9 THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (ACT 16 OF 2013)**

The subject area falls under the jurisdiction of the local municipality and the appropriate zoning and subdivision would need to be allocated in order to permit the development of the land for the intended purpose.

## **4. ALTERNATIVES**

Alternatives to the proposed development are very limited and have therefore not been considered for the following reasons described below.

### **4.1 SITE ALTERNATIVES**

The proposed site is the only viable site available at this stage and the only one that will be investigated in this application. Housing is a constant need in the municipality, with other sites possibly earmarked for residential development that will not form part of this application. These will be addressed in the Environmental Impact Report.

### **4.2 ACTIVITY ALTERNATIVES**

Activity alternatives are also very limited with no feasible alternatives besides residential development to assess. Due to the need for housing in the !Kheis Local Municipality, the housing development and associated infrastructure on the property is therefore the only activity considered.

The development may include a number of different land-uses however, besides just residential opportunities, to be incorporated into the layout. These will be investigated during the Environmental Impact Report phase.

### **4.3 LAYOUT ALTERNATIVES**

Various layout alternatives will be investigated during the Environmental Impact Report. These will be compiled with input from the municipality and its requirements, as well as input and/or recommendations of the various specialists, as well as input from Interested and Affected Parties, including the community

### **4.4 NO-GO ALTERNATIVE**

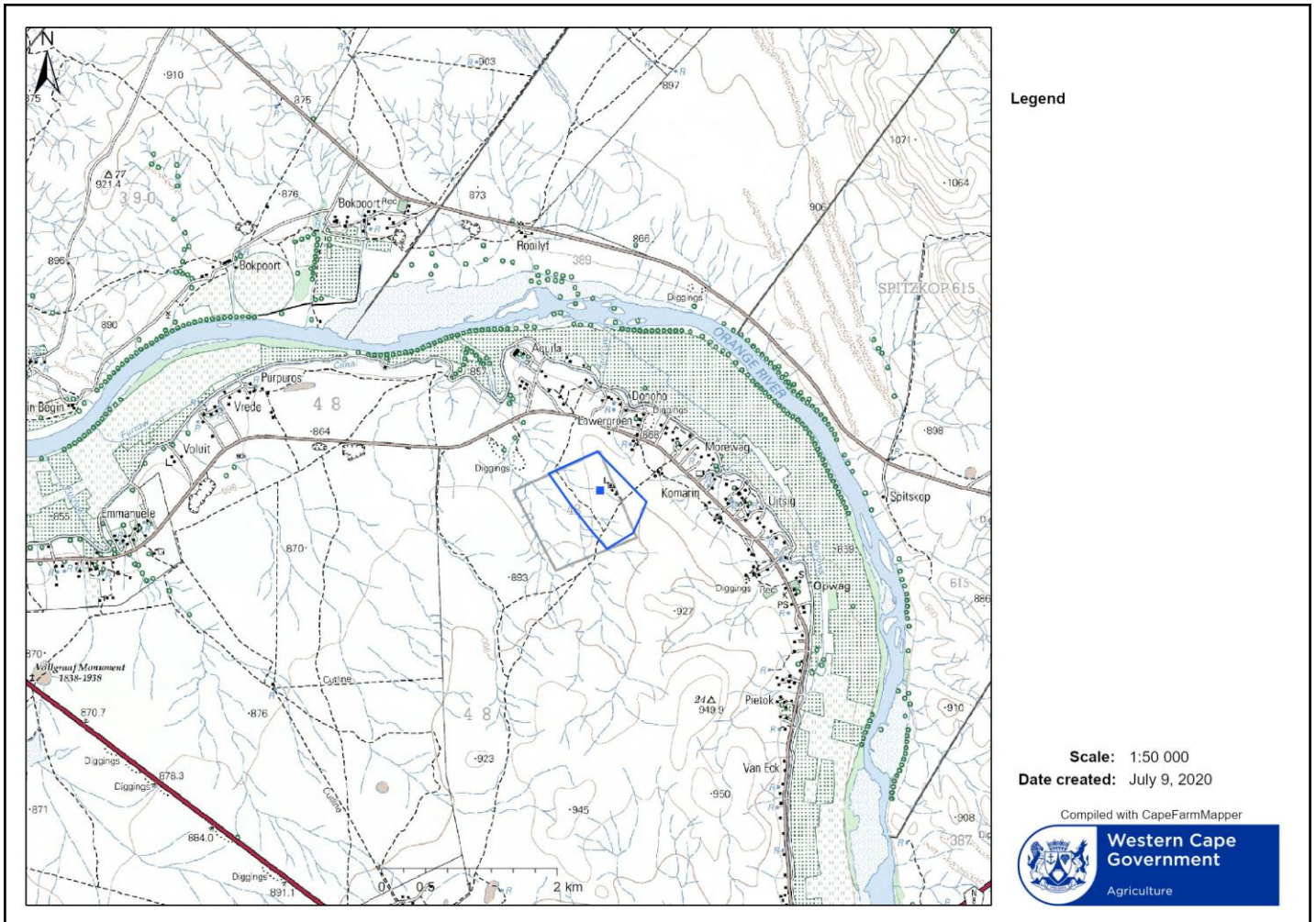
This is the option of not developing the proposed residential development.

Although the no-go development might result in no potential negative environmental impacts, the direct and indirect socio-economic benefits of not constructing the residential development will not be realised. The need for additional housing opportunities in the !Kheis Local Municipality will not be realised. These potential negative and/or positive environmental impacts will be assessed in the Environmental Impact Report.

## 5. SITE DESCRIPTION

### 5.1 LOCATION

The proposed site is located approximately 78km south east of Upington (as the crow flies), and is located north of the N10 and south of the Orange River. The proposed site is situated within Ward 3 of the !Kheis Local Municipality, ZF Mgcawu District Municipality, Northern Cape. The proposed site for the Opwag housing development is located at 28°50'0.82"S; 21°56'54.08"E.



**Figure 3:** Locality map (1: 50 000) showing location of the proposed Opwag Housing development.

## 5.2 VEGETATION

The proposed site of the residential development is generally undeveloped, fallow and generally near natural. The edges of the site, especially adjacent to the existing residential areas, are disturbed. Informal households have encroached along the eastern and north-eastern borders of the developmental footprint.

According to the Vegetation map of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2006, as updated in the 2012 beta version) only one broad vegetation type is expected on the majority of the proposed site, namely Bushmanland Arid Grassland (Least Threatened). The Lower Gariep Alluvial Vegetation type, located east of the proposed site for development, is an Endangered ecosystem type associated with the Orange River.

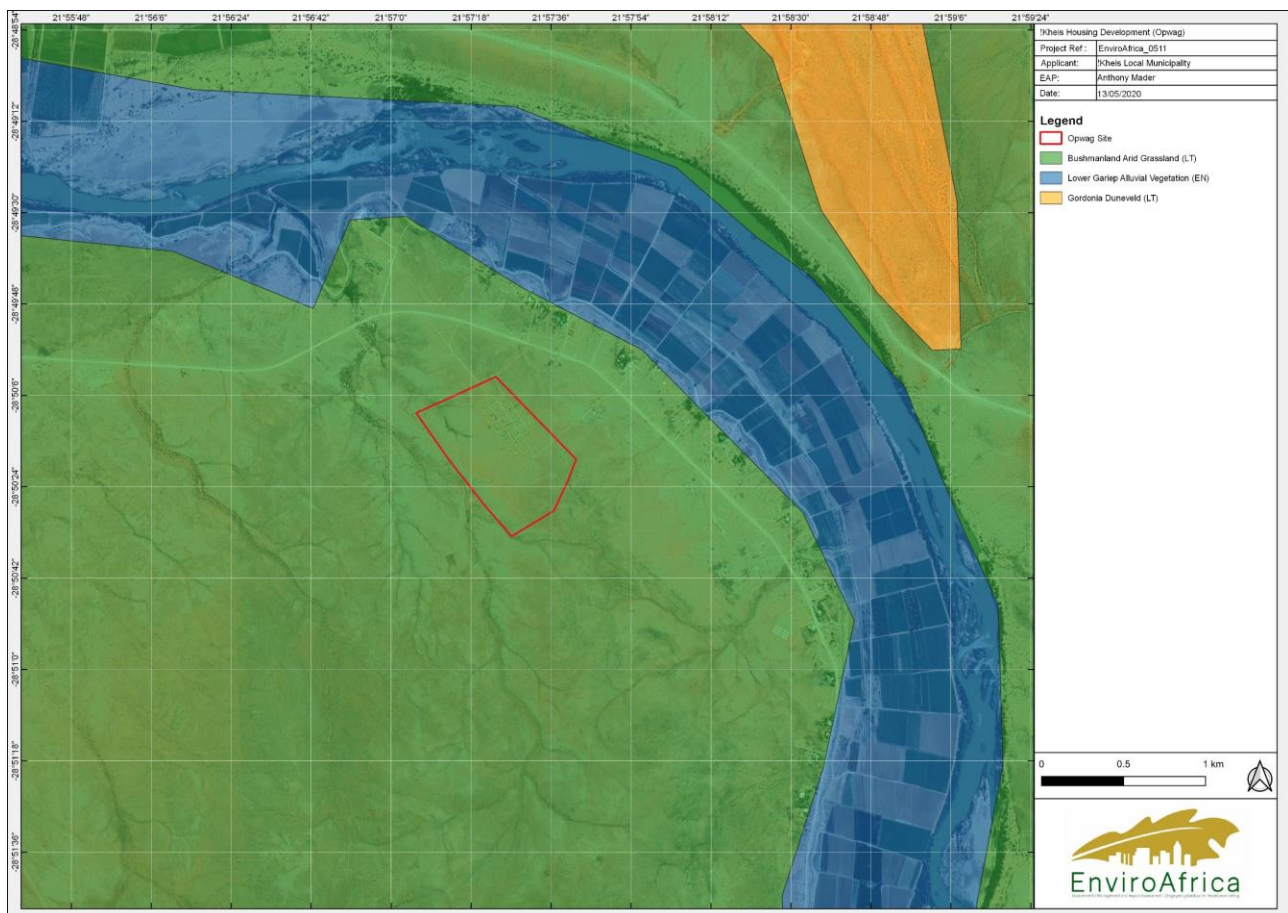
The Bushmanland Arid Grassland vegetation type is distributed throughout the Northern Cape Province, spanning about one degree of latitude from around Aggeneys in the west to Prieska in the east. The southern border of the unit is formed by edges of the Bushmanland Basin while in the northwest this vegetation unit borders on desert vegetation (northwest of Aggeneys and Pofadder). The northern border (in the vicinity of Upington) and the eastern border (between Upington and Prieska) are formed with often intermingling units of Lower Gariep Broken Veld, Kalahari Karroid Shrubland and Gordonia Duneveld. Most of the western border is formed by the edge of the Namaqualand hills. The altitude throughout this vegetation type ranges from 600–1 200 m<sup>1</sup>.

The vegetation component comprises of extensive-to-irregular plains on a slightly sloping plateau sparsely vegetated by grassland dominated by white grasses (*Stipagrostis* spp) giving this vegetation type the character of semidesert 'steppe'. In certain places, low shrubs of *Salsola* change the vegetation structure. In years of abundant rainfall rich displays of annual herbs can be expected. From a conservation perspective, the vegetation type is categorized as Least Threatened (LT) with a conservation target of 21%. Only small patches statutorily conserved in Augrabies Falls National Park and Goegab Nature Reserve. Very little of the area has been transformed. Erosion is very low (60%) and low (33%)<sup>2</sup>.

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<sup>1</sup> Mucina and Rutherford, (2006). The Vegetation of South Africa, Lesotho and Swaziland. *Strelitzia*, 19.





**Figure 4:** Vegetation types associated with the proposed Opwag Housing development. Source: QGIS, version 3.10.

According to the Northern Cape Critical Biodiversity Areas (CBA) maps the proposed site falls within a CBA area (Figure 6). However, there is no alternative on Municipal land that will not impact on the CBA. The 2016, Northern Cape CBA Map (Figure 5) identifies biodiversity priority areas, called Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), which, together with protected areas, are important for the persistence of a viable representative sample of all ecosystem types and species as well as the long-term ecological functioning of the landscape as a whole (Holness & Oosthuysen, 2016). The 2016 Northern Cape Critical Biodiversity Area (CBA) Map updates, revises and replaces all older systematic biodiversity plans and associated products for the province (including the Namakwa District Biodiversity Sector Plan, 2008). Priorities from existing plans such as the Namakwa District Biodiversity Plan, the Succulent Karoo Ecosystem Plan, National Estuary Priorities, and the National Freshwater Ecosystem Priority Areas were incorporated. Targets for terrestrial ecosystems were based on established national targets, while targets used for other features were aligned with those used in other provincial planning processes.



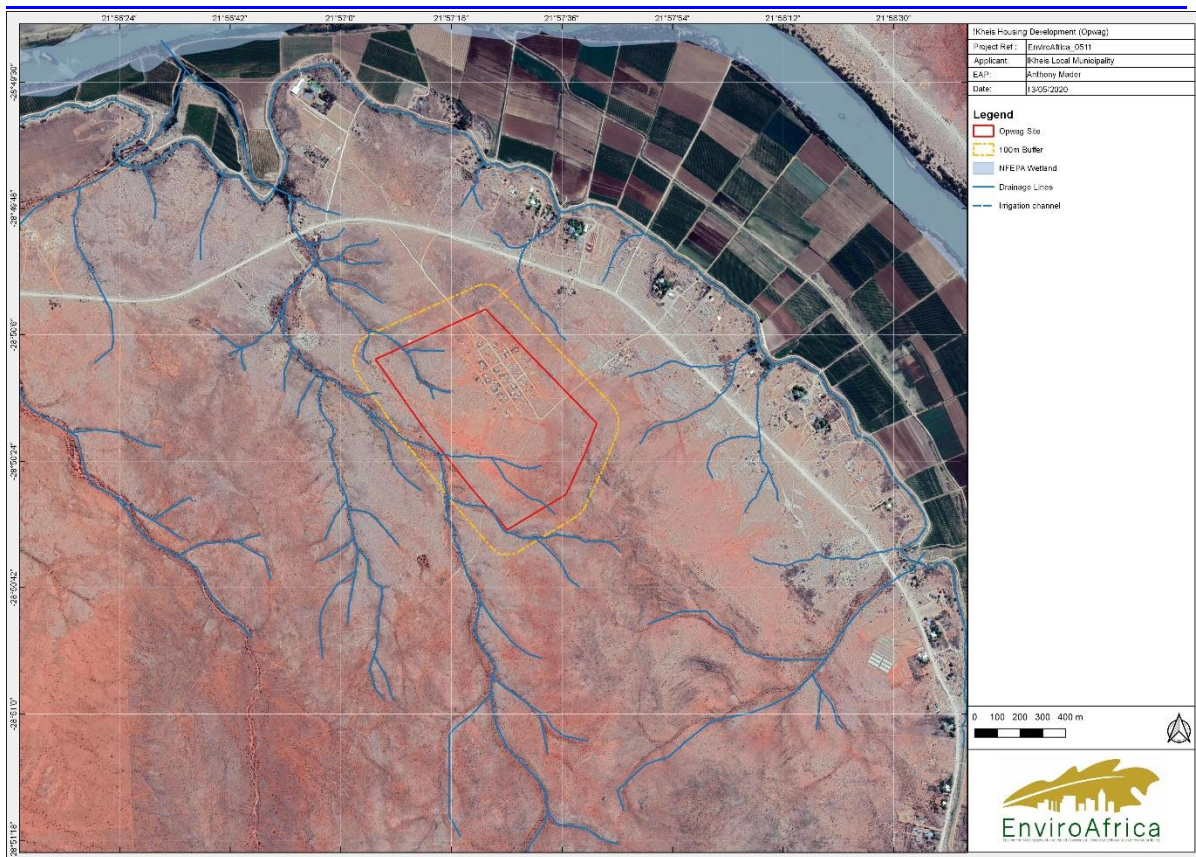


Figure 5: CBA associated with the proposed Opwag site for development. Source: BGIS.

### 5.3 FRESHWATER

From the SANBI National Freshwater Ecosystem Priority Areas map (see Figure 6 below), no NFEPAs wetlands were identified during the desktop study. Two drainage lines run through the site.

The source and nature of this water is to be investigated during the Scoping Phase, and if these are determined to be natural watercourses/wetlands, the impact of the proposed development on these watercourses are to be investigated in the Environmental Impact Report. The Orange River is also located approximately 1km east of the site.



**Figure 6:** Identification of NFEPA wetlands and watercourses, with associated 100m buffer, during the desktop study.

## 5.4 CLIMATE

Climate data for Upington will be used, the nearest town (approximately 90km from Groblershoop) with reliable data. The Upington area is regarded as an arid area (regions with a rainfall of less than 400 mm per year are regarded as arid). This area normally receives about 180 mm of rain per year, with rainfall largely in summer. It receives the least amount of rain in winter (July), and the most amount during March.

The average annual temperature is 19.3°C, with an average of 26.2°C in January, and 11.5°C in July.

## 5.5 SOCIO-ECONOMIC CONTEXT

Housing is a national need, including in the !Kheis Local Municipality.

The !Kheis Local Municipality's aims to promote socioeconomic development through the eradication of backlogs associated with water and sanitation, electricity, and housing, as well as improve basic services within Opwag. In order to meet the needs of the community within Opwag, the Council resolved that a project business plan be submitted to Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA) as well as the construction of 730 erven in Opwag over the short to medium term, along with associated infrastructure. As per the !Kheis Integrated Development Plan (IDP) 2019/2020, a key performance indicator includes the provision of infrastructure and basic service through securing suitable land for human settlement projects, where suitable land was previously identified in Opwag,

Topline, Wegdraai, Grootdrink, Gariiep, and Opwag. The provision of affordable housing units remains a high priority for the Municipality which will restore the dignity of poor people by providing shelter and access to basic human rights as enshrined in the Constitution of South Africa.

The proposed !Kheis housing development falls in line with the !Kheis IDPs key strategic and development objectives of the KLM, to improve and maintain basic service delivery through specific infrastructural projects including human settlements, water, sanitation, electricity, as well as streets and storm water management. The demographic profile of the KLM includes the total population of 16 637 individuals in 2011 with a total number of 4 145 households. This community requires formalized, state-instituted housing, and associated, infrastructure. The proposed development will distribute the density of the population, improve community member's standard of living, as well as access to essential services including roads, electricity, water supply, appropriate sewage disposal infrastructure, and environmental health in the area. Therefore, the proposed development will enable adequate housing to be constructed, thereby promoting access to basic service delivery as well as socioeconomic development in Boegoeberg and its surroundings.

The proposed Opwag Housing development is in line with the !Kheis IDPs key strategic and development objectives, namely to improve and maintain basic service delivery through specific infrastructural projects including human settlements and basic services, in the poverty-stricken Opwag Township. The Opwag community requires formalized, state-instituted housing, and associated, infrastructure. The proposed development will distribute the density of the population, improve community member's standard of living, as well as access to essential services including roads, electricity, water supply, appropriate sewage disposal infrastructure, and environmental health in the area. Therefore, the proposed development will enable adequate housing to be constructed, thereby promoting access to basic service delivery as well as socioeconomic development in the Opwag Township and its surroundings. !Kheis Local Municipality is committed to the vision of the National Government of which it committed itself towards accelerating shared growth to halve poverty and unemployment and promote social inclusions. Housing is one of the social inclusions in this vision.

The majority of the KLM population is located in five settlements, namely: Grootdrink, Topline, Wegdraai, Groblershoop and Boegoeberg, with the largest of those settlements being Groblershoop, Grootdrink and Wegdraai. With regards to the functional age groups, 60% of KLM's population is of working age (15--64). Grootdrink (40%) and Boegoeberg (40%) have the highest percentages of population aged between 0 and 14, which is decidedly higher than the district percentage of 28%. Education levels and school attendance have increased in KLM. Grootdrink has the lowest percentage individuals with Gr.12 at 9,1%, while Topline has the highest percentage of individuals with 'no schooling' at 17,5%. In comparison Groblershoop has the highest percentage of individuals with Gr.12 (18,5%) and individuals with higher education (1,7%).

## 5.6 HERITAGE FEATURES

Due to the nature and size of the proposed development, potential heritage resources may be affected by the development. Heritage resources include any of the following, as defined by the National Heritage Resources Act (Act 25 of 1999):

- living heritage as defined in the National Heritage Council Act No 11 of 1999 (cultural tradition; oral history; performance; ritual; popular memory; skills and techniques; indigenous knowledge systems; and the holistic approach to nature, society and social relationships);

- Ecofacts (non-artefactual organic or environmental remains that may reveal aspects of past human activity; definition used in KwaZulu-Natal Heritage Act 2008);
- places, buildings, structures and equipment;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds;
- public monuments and memorials;
- sites of significance relating to the history of slavery in South Africa;
- movable objects, but excluding any object made by a living person; and
- battlefields.

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## 6. SERVICES

Due to the scale of the development, the availability of bulk services for the development will need to be investigated. The !Kheis Local Municipality will more than likely be the service provider for the bulk services.

BVi Engineers will prepare the Bulk Engineering Services Reports on the external services for the proposed development.

### 6.1 WATER

The water source, upgrades to existing water reticulation infrastructure and connection with the proposed internal water network will need to be determined. Back-up storage will also need to be investigated.

The availability and confirmation that sufficient capacity exists to service the proposed development will need to be addressed, and confirmation received from the engineers and/or municipality.

### 6.2 SEWER

The availability of sewer services, the potential upgrades to existing infrastructure or the potential development of new infrastructure to adequately service the proposed development will need to be investigated.

The availability and confirmation that sufficient capacity exists to service the proposed development will need to be addressed and confirmed by the engineers and/or the municipality.

### 6.3 ROADS

The internal road network and design standards, including any access roads, will need to be determined in line with the proposed layout design. The main entrance to the development is expected to be from an unnamed access road off the N10.

A Traffic Impact Assessment will be conducted to determine the design of the internal roads, including any upgrades that will be required to existing roads to provide adequate access to the site, or if new access points will be needed.

### 6.4 STORMWATER

The internal stormwater network and links and upgrades to the existing external stormwater network, will need to be determined and addressed in the Bulk Engineering Services Reports. This will be determined once a conceptual site layout plan has been developed.

## **6.5 SOLID WASTE (REFUSE) REMOVAL**

Refuse removal will be via the Municipal waste stream and disposed of at the nearest municipal bulk solid waste disposal site. Sufficient capacity to adequately service the proposed development will need to be confirmed by the engineers and municipality.

## **6.6 ELECTRICITY**

The proposed internal electrical network, electrical infrastructure requirements, upgrades to the existing external electrical network, including the provider and confirmation of sufficient capacity will need to be determined and addressed in the Bulk Engineering Services Reports.



## 7. ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

Environmental issues were raised through informal discussions with the project team, specialists and authorities. All issues raised will be assessed in the specialist reports and will form part of the Environmental Impact Report. Additional issues raised during the public participation will be listed in the Final Scoping Report.

The following potential issues have been identified:

### 7.1. BOTANICAL

A botanical impact assessment will be conducted to determine if there is any sensitive or endangered vegetation on the proposed site. Due to the size of the development (approximately 50ha), there will be a loss of vegetation during the construction phase of the project.

A Botanical Impact Assessment will be conducted, which will describe and assess the botanical sensitivity of the area. The terms of reference for this study required a baseline analysis of the flora of the property, including the broad ecological characteristics of the site.

The botanical assessment will include the following:

- The significance of the potential impact of the proposed project, alternatives and related activities – with and without mitigation – on biodiversity pattern and process at the site, landscape and regional scales.
- Recommended actions that should be taken to prevent or, if prevention is not feasible, to mitigate impacts.

### 7.2. FRESHWATER

Freshwater ecosystems were identified on desktop analysis, and due to the size and nature of the development and the unknown source of standing water within the development site, a freshwater impact assessment will be conducted. Any potential impacts to the Orange River will also be investigated.

The terms of reference for the Freshwater assessment are as follows:

- Literature review and assessment of existing information
- Site Assessment of the proposed activities and impact on the associated freshwater systems. This will include an assessment of the freshwater ecological condition, using river health indices such as in-stream and riparian habitat integrity, aquatic macro-invertebrates and riparian vegetation to determine set back lines and geomorphological condition of the streams, which will then determine the overall Ecstatus of the streams and provide data that will inform the Water Use Licence Application of the project.
- Describe ecological characteristics of freshwater systems and compile report based on the data and information collected in the previous two tasks, describe ecological characteristics of the freshwater systems, comment on the conservation value and importance of the freshwater systems and delineate the outer boundary of the riparian zones/riverine corridors.
- Evaluate the freshwater issues on the site and propose mitigation measures and measures for the rehabilitation of the site as well as setback lines for future development.

- Compilation of the documentation for submission of the water use authorisation application (WULA) to the Department of Water and Sanitation (if deemed necessary).

### **7.3. HERITAGE**

The possible impact on heritage resources has been identified as a possible environmental impact as a result of the development.

A Heritage Impact Assessment will be conducted on the site.

The terms of reference for the heritage and archaeological study are as follows:

- To determine whether there are likely to be any important archaeological sites or remains that might be impacted by the proposed development;
- To identify and map archaeological sites/remains that might be impacted by the proposed development;
- To assess the sensitivity and conservation significance of archaeological sites/remains in the inundation area;
- To assess the status and significance of any impacts resulting from the proposed development, and
- To identify measures to protect any valuable archaeological sites/remains that may exist within the estimated inundation area.

x

### **7.4. VISUAL IMPACT**

The potential impact on the sense of place of the proposed development will also be considered. However, due to the nature of the activity, the surrounding land-uses, and that the sense of place is not expected to be significantly altered by the proposed development, no further studies are suggested.

### **7.5. OTHER ISSUES IDENTIFIED**

Any further issues raised during the public participation process or by the Competent Authority not mentioned in this section, will be dealt with during the EIA phase.

## 8. DETAILS OF THE PUBLIC PARTICIPATION PROCESS

Potential Interested and Affected Parties (I&APs) have been and will be identified throughout the process. Landowners adjacent to the proposed site, relevant organs of state, organizations, ward councillors and the Local and District Municipality were added to this database. A complete list of organisations and individual groups identified to date is shown in **Appendix 1**.

Public Participation will be conducted for the proposed development in accordance with the requirements outlined in Regulation 41 of the NEMA EIA Regulations 2014. The issues and concerns raised during the scoping phase will be dealt with in the EIA phase of this application.

As such each subsection of Regulation 41 contained in Chapter 6 of the NEMA EIA Regulations 2014 will be addressed separately to thereby demonstrate that all potential Interested and Affected Parties (I&AP's) were notified of the proposed development.

### **R54 (2) (a):**

**R41 (2) (a) (i):** The site notices (A2 and A3 sizes) were placed at different locations around the project site as well as at the municipality office in town.

The posters contained all details as prescribed by R41(3) (a) & (b) and the size of the on-site poster was at least 60cm by 42cm as prescribed by section R41 (4) (a).

**R41 (2) (a) (ii):** N/A. There is no alternative site.

### **R41 (2) b):**

**R41 (2) (b) (i):** N/A. The Applicant is the landowner

**R41 (2) (b) (ii):** Notification letters will be circulated to residents adjacent to/within close proximity of the project site. **Appendix 1C**

**R41 (2) (b) (iii):** An initial notification letter will be sent to the municipal Ward councillor at the !Kheis Local Municipality, for the ward in which the site is situated.

**R41 (2) (b) (iv):** No notification letter will be sent to the !Kheis Local Municipality as the municipality is the Applicant

**R54 (2) (b) (v):** The Draft Scoping Report and notification letters were sent to the following organs of state having jurisdiction in respect of any aspect of the activity:

- Department of Water and Sanitation
- Department of Agriculture and Land Reform
- Department of Roads and Public Works
- Department of Agriculture, Forestry and Fisheries
- Department of Cooperative Governance, Human Settlements and Traditional Affairs
- SANRAL
- Department of Environment and Nature Conservation

- South African Heritage Resources Agency

**R41 (2) (c) (i):** An advertisement was placed in the local newspaper.

**R41 (2) (d):** N/A

**R41 (6):**

**R41 (6) (a):** All relevant facts in respect of the application were made available to potential I&AP's.

**R41 (6) (b):** I&AP's were given more than 60-days to register and/or comment on the Draft Scoping Report. In response to the current COVID-19 lockdown, the Department of Environment, Forestry and Fisheries (DEFF) published new directions (*Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 Relating to National Environmental Management Permits and Licenses*) on the 5<sup>th</sup> June. These new directives stated that any public participation conducted after the 5<sup>th</sup> June 2020 requires an extended 30-day comment period in addition to the initial 30-day comment period (total of a 60-day comment period). If public participation was conducted before lockdown (27<sup>th</sup> March 2020), the formal comment period between 27<sup>th</sup> March and 5<sup>th</sup> June 2020 are null and void and are therefore, resumed on the 6<sup>th</sup> June 2020. An additional 21 days were required to be added to the initial comment period (totalling a 51-day comment period).

**R42 (a), (b), (c) and R43(2):** A register of interested and affected parties was opened, maintained and is available to any person requesting access to the register in writing.

Please find attached in **Appendix 1:**

- Proof of Notice boards, advertisements and notices that were sent out
- List of potential interested and affected parties
- Summary of issues raised by interested and affected parties

## 9. PLAN OF STUDY FOR THE EIA

### 9.1.1. TASKS TO BE UNDERTAKEN

Due to the nature of the proposed development there are a number of activities that will still need to be undertaken during the next phase of the project. The proposed process is as described as follows (This follows from a Scoping process to be accepted by the D:E&NC):

The NEMA Application Form was submitted to the DE&NC, along with the Draft Scoping Report, on the **29<sup>th</sup> July 2020** and was made available for a **60-day comment period** starting from the **3<sup>rd</sup> August 2020 to 7<sup>th</sup> October 2020**. Comments received during the Public Participation Process have been incorporated into the Final Scoping Report, which is to be submitted to DE&NC for a decision (this report).

The following is a list of tasks to be performed as part of the EIA Process. Should the process be modified significantly, changes will be copied to D:E&NC.

**Table 1:** Detailed Project Plan as per NEMA Scoping and EIA Regulations 2014 (as amended): !Kheis Housing Development: Opwag Housing

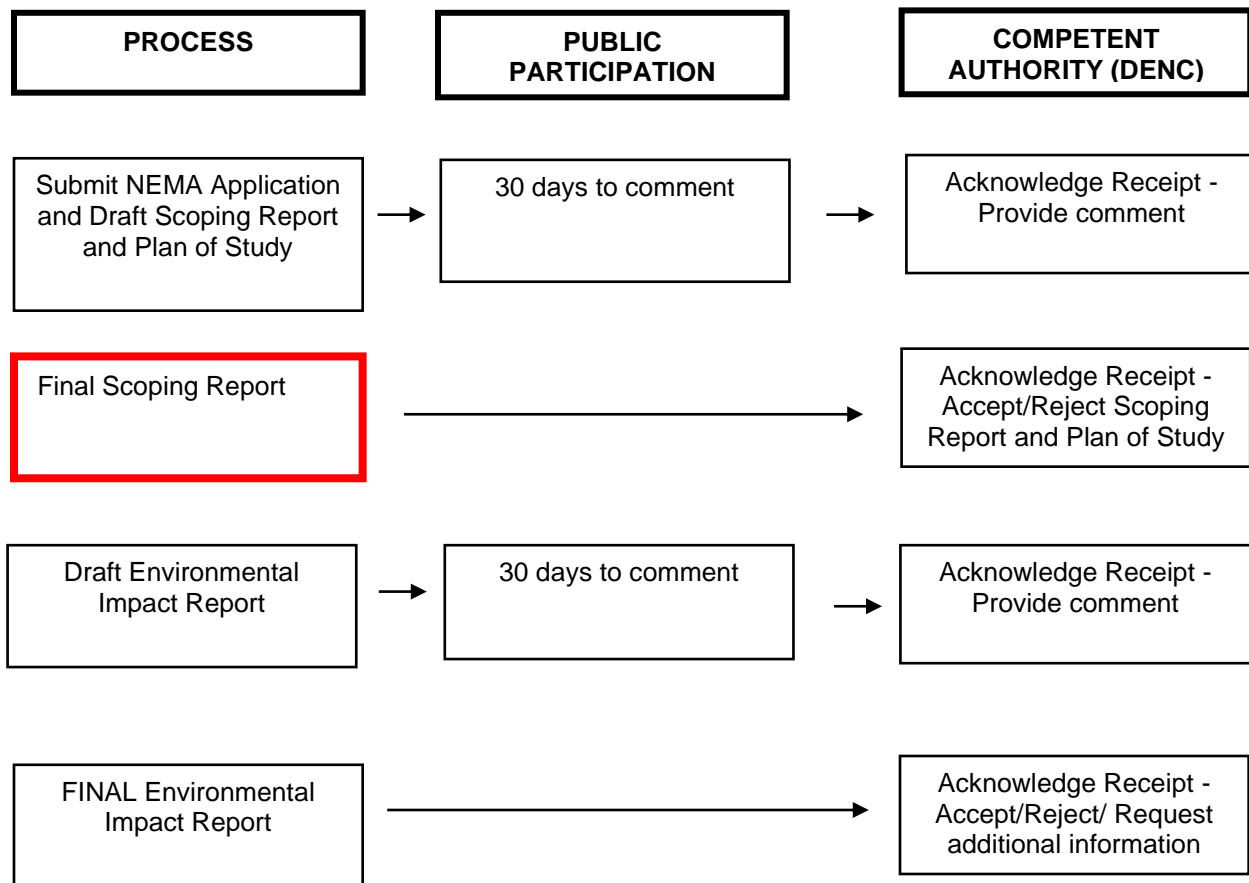
No.	Action	Timeline
1	Clarification meeting with client and appointment of environmental assessment practitioner (EAP) for EIA and environmental authorisation (EA) application	17 <sup>th</sup> April 2020
2	Appointment of specialists for EIR assessments	Botanical Specialist
		Freshwater Specialist
		Archaeological Specialist
3	Draft Scoping Report compilation	10-14 <sup>th</sup> May 2020
4	EAP site visit	19 <sup>th</sup> May 2020
5	Public participation (PP): <ul style="list-style-type: none"> <li>- Letter drops (Adjacent Landowner Notification);</li> <li>- Poster placement (Public notice board at the !Kheis Local Municipality, public notice board of AgriMark (Groblershoop), local Clinic, different conspicuous locations along the boundary of the proposed site for development (with a lot of foot traffic), and three tuckshops/ stores.</li> <li>- Advertisement publication (<i>published on 11<sup>th</sup> June 2020</i>)</li> </ul> PP comment period must be a minimum of 60 days <sup>2</sup>	19 <sup>th</sup> May 2020
6	Specialist site visits	Botanical Assessment (Mr Peet Botes)
		Freshwater Assessment (Dr Dirk Van Driel)
		Archaeological Assessment (Mr Jan Engelbrecht)
7	Advert comment period ends ( <i>60-day comment period as per new directions</i> )	14 <sup>th</sup> August 2020

<sup>2</sup>As per section 4 of the 'Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 Relating to National Environmental Management Permits and Licenses', published on the 5<sup>th</sup> June 2020 by the Department of Environment, Forestry and Fisheries (DEFF). These new directions state that any notice given after the 5<sup>th</sup> June 2020 requires an extended 30-day comment period in addition to the legislated 30-day comment period (total of 60-day comment period). If PP was conducted before the 27<sup>th</sup> March 2020, the formal comment period between 27<sup>th</sup> March and 5<sup>th</sup> June 2020 are null and void and therefore, restarted on the 6<sup>th</sup> June 2020. The initial comment period must be extended by additional 21 days (total of 51 day). Please note that we are still waiting for directives from DEFF on application timelines. These Directives published on the 5<sup>th</sup> June 2020 apply to Level 3 Lockdown Period and are subject to change. Please note: the dates above may be subject to change should the Department of Environmental Affairs, Forestry and Fisheries (DEFF) and the Department of Environment and Nature Conservation (DENC) issue any new directives and legislated timeframes. The final decision (No. 18) may be expedited on request by the applicant.

Application and Scoping Phase		
8	Application Form Compilation and Submission (Competent Authority have 10 days to respond)	7 days
9	EAP to compile the draft Scoping Report (SR) (incl. the Plan of Study for EIA) and submit with Application Form	
10	If in order, the Department to acknowledge the application.	10 days
11	EAP to notify I&APs (incl. the State departments) EAP to notify the registered I&APs (incl. the State departments) of the availability of the draft SR.	7 days
12	Commenting period of 30 days + 30days for I&APs and State departments to comment.	60 days
13	EAP to consider the comments received and complete the final SR.	3 days
14	Following the commenting period the EAP to submit the Final SR together with any comments received on the final SR to the Department (within 44 days of submission of the Application Form)	7 days
15	Department to acknowledge SR & Plan of Study for EIA.	10 days
16	If in order, the Department to accept the SR & Plan of Study for EIA (within 43 days of receipt of Final SR)	43 days
Application and Scoping Phase		
17	EAP to undertake the EIA and compile the draft EIA Report ("EIAR") (including the draft EMP)	40 days
18	EAP to notify registered I&APs (incl. the State departments) of the availability of the draft EIAR for comment.	7 days
19	Commenting period of 30 days for I&APs and State departments.	30 days
20	EAP to consider the comments received and complete the final EIAR.	7 days
21	Following the commenting period the EAP to submit the final EIR together with any comments received on the final EIR to the Department.	7 days
22	Department to acknowledge EIR.	10 days
23	After having received the EIR, the Department to decide whether or not to grant or refuse Environmental Authorisation (within 107 days)	107 days
24	Applicant/EAP to notify I&APs of outcome and if authorised may only commence 20 days after the date of the authorisation.	20 days

EIA PROCESS	
TASK	TIMEFRAMES
Submit NEMA Application and Draft Scoping Report (FSR) and Plan of Study for EIA to D:E&NC and distribute to registered I&APs for comment	July 2020
Submit Final Scoping Report and Plan of Study to D:E&NC for a decision	October 2020
Receive approval for the FSR and the Plan of Study for EIA.	November 2020
Compile the Draft Environmental Impact Report (EIR) for public comment based on specialist information.	November 2020
Submit Draft EIR for public comment.	November 2020
Receive responses to the Draft EIR.	November – January 2020
Preparation of a FINAL EIR and submission to D:E&NC.	January 2021





**Figure 7.** Summary of the EIA process and public participation process. The red indicates the stages where the competent authority will be consulted during the process.

### 8.1 PUBLIC PARTICIPATION AND INTERESTED AND AFFECTED PARTIES

Please refer to Figure 6 to see where the public participation process is present in the environmental impact assessment. The Interested and Affected Parties will have a chance to view and comment on all the reports that are submitted. The figures also indicated what timeframes are applicable to what stage in the process. If required, meetings with key stakeholders will be held.

At the end of the comment period, the EIR will be revised in response to feedback received from I&APs. All comments received and responses to the comments will be incorporated into the Final Environmental Impact Report (EIR). The Final EIR will then be submitted to D:E&NC for consideration and decision-making.

Correspondence with I&APs will be via post, fax, telephone, email and newspaper advertisements.

Should it be required, this process may be adapted depending on input received during the on-going process and as a result of public input. D:E&NC will be informed of any changes in the process.

## 8.2 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

As a result of the environmental issues and potential impacts identified in *Section 6*, the need for the following specialist studies has been identified:

- Biodiversity Assessment
- Freshwater Assessment
- Heritage Impact Assessment

The impacts of the proposed activity on the various components of the receiving environment will be evaluated in terms of duration (time scale), extent (spatial scale), magnitude and significance as outlined in Table 1. These impacts could either be positive or negative.

The magnitude of an impact is a judgment value that rests with the individual assessor while the determination of significance rests on a combination of the criteria for duration, extent and magnitude. Significance thus is also a judgment value made by the individual assessor.

**Table 2:** Criteria used for evaluating impacts

Criteria	Category
<b>Nature of impact</b>	This is an evaluation of the effect that the construction, operation and maintenance of a proposed dam would have on the affected environment. This description should include what is to be affected and how.
<b>Duration</b> (Predict whether the lifetime of the Impact will be temporary (less than 1 year) short term (0 to 5 years); medium term (5 to 15 years); long term (more than 15 years, with the Impact ceasing after full implementation of all development components with mitigations); or permanent.	<b>Temporary:</b> < 1 year (not including construction) <b>Short-term:</b> 1 – 5 years <b>Medium term:</b> 5 – 15 years <b>Long-term:</b> >15 years (Impact will stop after the operational or running life of the activity, either due to natural course or by human interference) <b>Permanent:</b> Impact will be where mitigation or moderation by natural course or by human interference will not occur in a particular means or in a particular time period that the impact can be considered temporary
<b>Extent</b> (Describe whether the impact occurs on a scale limited to the site area; limited to broader area; or on a wider scale)	<b>Site Specific:</b> Expanding only as far as the activity itself ( <i>onsite</i> ) <b>Small:</b> restricted to the site's immediate environment within 1 km of the site ( <i>limited</i> ) <b>Medium:</b> Within 5 km of the site ( <i>local</i> ) <b>Large:</b> Beyond 5 km of the site ( <i>regional</i> )
<b>Intensity</b> (Describe whether the magnitude (scale/size) of the Impact is high; medium; low; or negligible. The specialist study must attempt to quantify the magnitude of impacts, with the rationale used explained)	<b>Very low:</b> Affects the environment in such a way that natural and/or social functions/processes are not affected <b>Low:</b> Natural and/or social functions/processes are slightly altered <b>Medium:</b> Natural and/or social functions/processes are notably altered in a modified way <b>High:</b> Natural and/or social functions/processes are severely altered and may temporarily or permanently cease
<b>Probability of occurrence</b> Describe the probability of the Impact <u>actually</u> occurring as definite (Impact will occur regardless of mitigations)	<b>Improbable:</b> Not at all likely <b>Probable:</b> Distinctive possibility <b>Highly probable:</b> Most likely to happen <b>Definite:</b> Impact will occur regardless of any prevention measures

<p><b>Status of the Impact</b> Describe whether the Impact is positive, negative (or neutral).</p>	<p><b>Positive:</b> The activity will have a social/ economical/ environmental benefit  <b>Neutral:</b> The activity will have no affect  <b>Negative:</b> The activity will be socially/ economically/ environmentally harmful</p>
<p><b>Degree of Confidence in predictions</b> State the degree of confidence in predictions based on availability of information and specialist knowledge</p>	<p><b>Unsure/Low:</b> Little confidence regarding information available (&lt;40%)  <b>Probable/Med:</b> Moderate confidence regarding information available (40-80%)  <b>Definite/High:</b> Great confidence regarding information available (&gt;80%)</p>
<p><b>Significance</b> (The impact on each component is determined by a combination of the above criteria and defined as follows) The significance of impacts shall be assessed <u>with and without mitigations</u>. The significance of identified impacts on components of the affected biophysical or socio-economic environment (and, where relevant, with respect to potential legal requirement/s) shall be described as follows:</p>	<p><b>No change:</b> A potential concern which was found to have no impact when evaluated  <b>Very low:</b> Impacts will be site specific and temporary with no mitigation necessary.  <b>Low:</b> The impacts will have a minor influence on the proposed development and/or environment. These impacts require some thought to adjustment of the project design where achievable, or alternative mitigation measures  <b>Moderate:</b> Impacts will be experienced in the local and surrounding areas for the life span of the development and may result in long term changes. The impact can be lessened or improved by an amendment in the project design or implementation of effective mitigation measures.  <b>High:</b> Impacts have a high magnitude and will be experienced regionally for at least the life span of the development, or will be irreversible. The impacts could have the no-go proposition on portions of the development in spite of any mitigation measures that could be implemented.</p>

In addition to determining the individual impacts against the various criteria, the element of mitigation, where relevant, will also be brought into the assessment. In such instances the impact will be assessed with a statement on the mitigation measure that could/should be applied. An indication of the certainty of a mitigation measure considered, achieving the end result to the extent indicated, is given on a scale of 1-5 (1 being totally uncertain and 5 being absolutely certain), taking into consideration uncertainties, assumptions and gaps in knowledge.

**Table 3:** The stated assessment and information will be determined for each individual issue or related groups of issues and presented in descriptive format in the following table example or a close replica thereof.

<b>Impact Statement:</b>		
<b>Mitigation:</b>		
<b>Ratings</b>	Duration	
	Extent	
	Intensity	
	Probability of impact	
	Status of Impact (Positive/negative)	
	Degree of confidence	
<b>Significances</b>	Significance <b>without</b> Mitigation	
	Significance <b><i>WITH</i></b> Mitigation	
Indication of the certainty of a mitigation measure considered, achieving the end result to the extent indicated, is given on a scale of 1-5 (1 being totally uncertain and 5 being absolutely certain), taking into consideration uncertainties, assumptions and gaps in knowledge		
<b>Legal Requirements</b> (Identify and list the specific legislation and permit requirements which are relevant to this development):		

## 10. CONCLUSION AND RECOMMENDATIONS

A scoping exercise is being undertaken to present the proposed activities to the I&APs and to identify environmental issues discussed in this report and concerns raised as a result of the proposed development alternatives to date. The issues and concerns were raised by I&APs, authorities, the project team as well as specialist input, based on baseline studies undertaken.

This Final Scoping Report, being undertaken in terms of NEMA, summarises the process undertaken, the alternatives presented, and the issues and concerns raised.

As a result of the above, the need for the following specialist studies, have been identified:

- Biodiversity Assessment
- Freshwater Assessment
- Heritage Impact Assessment

Any further issues raised as a result of the Public Participation Process will be dealt with during the EIA phase.

The significance of the impacts associated with the alternatives proposed will be assessed in these specialist studies, as part of the EIA. Once the specialist studies have been completed, they will be summarised in an Environmental Impact Report (EIR), which integrates the findings of the assessment phase of the EIA.

Based on the significance of the issues raised during the ongoing Public Participation Process and Scoping Phase, it is evident that an Environmental Impact Assessment (EIA) is required. ***It is therefore recommended that authorisation for the commencement of an EIA for the proposed development is granted.*** Should the EIA process be authorised, the significant issues raised in the process to date will be addressed and the specialist studies noted in this report, will be undertaken.



## 11. DETAILS AND EXPERTISE OF THE EAP

This Final Scoping Report was prepared by Clinton Geysler and Anthony Mader.

Mr Clinton Geysler has a MSc. Degree in Environmental Management. He has been working as an Environmental Assessment Practitioner since 2009 and is currently employed at EnviroAfrica CC.

### Report compiled by Clinton Geysler -

#### Qualifications:

- BSc. Earth Sciences, Majors in Geology and Geography and Environmental Management (1998–2000) and;
- BSc. (hons): Geography and Environmental Management (2001) and;
- MSc. Geography and Environmental Management (2002), all from the University of Johannesburg.

#### Expertise:

Clinton Geysler has over ten years' experience in the environmental management field as an Environmental Assessment Practitioner and as an Environmental Control Officer, having worked on a variety of projects in the Western, Eastern and Northern Cape. Previous completed applications include, but not limited to:

- Civil engineering infrastructure including pipelines, Wastewater Treatment Works, and roads in the Western and Northern Cape.
- Agricultural developments, including reservoirs and dams, in the Western and Northern Cape.
- Telecommunications masts in the Western and Eastern Cape
- Housing Developments in the Western and Northern Cape.
- Resort developments in the Western and Northern Cape.
- Cemeteries in the Western Cape
- Waste Management Licences in the Western Cape

#### Employment:

Previous employment as an EAP: Doug Jeffery Environmental Consultants (2009 – 2012)  
Current employment: EnviroAfrica cc (2012 – present).

### Report compiled by Anthony Mader -

#### Qualifications:

BSc in Environment, Ecology and Conservation (University of the Witwatersrand, 2010-2012);  
BSc (Honours) in Environment, Ecology and Conservation (University of the Witwatersrand, 2013);  
PhD (currently completing at the University of the Witwatersrand).

#### Expertise:

Anthony has over three years of experience within environmental consulting and has worked on private and government projects throughout the country, including Western Cape, Northern Cape, KwaZulu-Natal, and the Eastern Cape. Anthony has facilitated Environmental (EA) and Water Use (WUA) applications whereas other duties included auditing of various types of construction types to ensure environmental compliance with the EA. The variety of projects Anthony has worked on include, but are not limited to;

- Housing developments,

- Civil engineering infrastructure projects such as water supply schemes, roads, culverts, bridges, warehouses, and a substation;
- and auditing of water supply schemes, housing developments, warehouses, roads, bridges, and reservoirs

**Employment:**

Previous employment as an Environmental Consultant: EnviroPro Environmental Consulting (2017-2020)

Current employment: EnviroAfrica cc (2020 – present).

The whole process and report were supervised by Bernard de Witt who has more than 30 years' experience in environmental management and environmental impact assessments.

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