Serial: SvDokT1328



# REPUBLIC OF NAMIBIA MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

# OFFICE OF THE ENVIRONMENTAL COMMISSIONER

# **ENVIRONMENTAL CLEARANCE CERTIFICATE**

ISSUED

In accordance with Section 37(2) of the Environmental

Management Act (Act No. 7 of 2007)

то

KEETMANSHOOP MUNICIPALITY PRIVATE BAG 2125, KEETMANSHOOP

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

PROPOSED TOWNSHIP ESTABLISHMENT OF BRUKHAROS PROPER ON PORTION A OF THE REMAINDER OF KEETMANSHOOP TOWN AND TOWNLAND NO.150, //KARAS REGION

ENVIRONMENT. FORESTR Private Bag 13306 WINDHOEK NAMIBIA 0 5 MAY 2021 ENVIRONMENTAL COMMISSIONER UBLIC OF NAMIBIE

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2021-05-05 2024-05-05

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### **CONDITIONS OF APPROVAL**

ä. 1

ECC -

- 1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office
- 2. This certificate does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants
- 3. This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project
- 4. All applicable and required permits are obtained and mitigation measures stipulated in the EMP are applied particularly with respect to management of ecological impacts.
- 5. Strict compliance with national heritage guidelines and regulations is expected throughout the life-span of the proposed activity, therefore any new archaeological finds must be reported to the National Heritage Council for appropriate handling of such.



November 2020
REPORT NUMBER: APP-002111

# **APPLICATION FOR ENVIRONMENTAL CLEARANCE:**

# TOWNSHIP ESTABLISHMENT OF PROPER ON PORTION A OF THE REMAINDER OF KEETMANSHOOP TOWN AND TOWNLANDS NO.150 WITHIN THE //KHARAS REGION

# DRAFT SCOPING REPORT

# PROPONENT

Sector -

KEETMANSHOOP MUNICIPALITY PRIVATE BAG 2125 KEETMANSHOOP NAMIBIA

SUBMISSION: MINISTRY OF ENVIRONMENT FORESTRY AND TOURISM PRIVATE BAG 13306 WINDHOEK NAMIBIA

# DEVELOPER

Development Workshop Namibia P O Box 40723 Ausspannplatz Windhoek Namibia

URBAN DYNAMICS AFRICA P O Box 20837 WINDHOEK NAMIBIA REFERENCE: 1209 ENQUIRIES: ALLISON ANDERSON JOHANN OPPERMAN TEL: +264-61-240300





#### **GENERAL LOCATION DESCRIPTION OF THE DEVELOPMENT AREA:**

DESCRIPTOR:	LOCATION SPECIFICS:		
NATURE OF ACTIVITIES:	Township Establishment / Infrastructure Development / Development		
	within Flood Areas.		
REGION:	//Kharas Region		
LOCAL AUTHORITY:	Keetmanshoop	Municipa	ality
Fall WITHIN:	Division " <b>T</b> "		
NEAREST TOWNS / CITY:	Keetmanshoop	Municipa	ality
SIZE OF PROJECT AREA A:	276 448 sqm		
Land Use:	Undetermined		
STRUCTURES:	Yes		
HISTORICAL RESOURCE LISTINGS:	No		
CEMETERY:	No		
FLOODLINES:	Yes		
ENVIRONMENTAL SIGNIFICANT AREA:	<ul> <li>Smaller Ephemeral Rivers</li> </ul>		
	<ul> <li>Area with existing Structures</li> </ul>		
LATITUDE:	-26.6000834,		
Longitude:	18.158655		
RELEVANT LISTED ACTIVITIES:	The Environmental Management Act (Act 7 of 2007),		
	Section 8.	Water I	Resource Developments;
	8.8. Construction and other activities i		Construction and other activities in
			watercourses within flood lines;
		8.9.	Construction and other activities within a
	catchment area;		
	Section 10.	Infrastr	ructure
	10.1. The construction of-		
	10.1. (b) public roads;		
		10.2.	Route determination of roads and design of associate physical infrastructure where-
	10.2 (a) public roads.		



ABBREVIATION:	DESCRIPTION:
am	ANTE MERIDIEM / BEFORE MIDDAY
Av	Avenue
BID	BACKGROUND INFORMATION DOCUMENT
DEM	DIGITAL ELEVATION MODEL
DWN	Development Workshop of Namibia
ER	EMPLOYERS REPRESENTATIVE
EA	ENVIRONMENTAL ASSESSMENT
EC	ENVIRONMENTAL COMMISSIONER
ECO	ENVIRONMENTAL CONTROL OFFICER
EMP	ENVIRONMENTAL MANAGEMENT PLAN
Etc.	ET CETERA / OTHER SIMILAR THINGS
Ext.	Extension
e.g.	EXEMPLI GRATIA
FEMO	FLOOD EMERGENCY MANAGEMENT OFFICE
FRMP	FLOOD RISK MANAGEMENT PLAN
HIV	HUMAN IMMUNODEFICIENCY VIRUS
i.e.	ID EST. / IN OTHER WORDS
I & APs	INTERESTED AND AFFECTED PARTIES
NBD	The Namibia Biodiversity Database
NDF	Namibia Defence Force
NHC	NAMIBIAN HEALTH CARE
pm	Post Meridiem / After Midday
Ptn.	Portion
RRC	RURAL AND REGIONAL COUNCIL
SME	SMALL-AND-MEDIUM-SIZED ENTERPRISE
TRRP	TREE REMOVAL AND REPLACEMENT PLAN
ТВ	TUBERCULOSIS
WMP	WASTE MANAGEMENT PLAN
UNIT SYMBOL:	UNIT DESCRIPTION:
<b>0</b> <sup>c</sup>	Degrees Celsius
E	EAST
ha	HECTARES
Km	KILOMETER
Km²	Square Kilometer
m	METER
mm	MILLIMETRE
S	South
m²	Square Meters
%	Percentage



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USBAN DYNAMICS

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# **1 APPOINTMENT**

Development Workshop of Namibia appointed Urban Dynamics to obtain Environmental Clearance for the

# ESTABLISHMENT OF A TOWNSHIP ON THE PROPOSED PORTION A OF THE FARM KEETMANSHOOP TOWN AND TOWNLANDS NO. 150 WITHIN THE //KHARAS REGION.

The relevant documentation is included in support of our application to the Environmental Commissioner; please refer to the appendices attached hereto.

# 2 BACKGROUND

Development Workshop of Namibia (DWN) is a charity trust registered in Namibia. It has a focus on sustainable urban development and poverty reduction and is part of a worldwide network of Development Workshop organisations. It was founded in the 1970s by three architect students in the UK and has been funded by non-governmental organisations, private citizens, and national and international development organisations.

In Namibia, DWN's activities focus on urban-related research, the provision of low-cost urban land for housing, and the identification and promotion of appropriate low-cost sanitation solutions for low-income residential areas. DWN's programme is officially supported by the Ministry of Urban and Rural Development and implemented through partnerships with local authorities across the country.



USBAN DYNAMICS



The DWN have had deliberations with the Keetmanshoop Municipality for a portion of Keetmanshoop Townlands No. 150 to assist the Council with the provision of low-cost housing via a high-density residential township that caters for the low-income residents of Keetmanshoop.

The project area is locked between Tseiblaagte Extension 6 to the north; the Namibia Defence Force (NDF) Army Base to the east and the B1 Trunk Road to the south. This is depicted in Figure 1.

As a result, the DWN approached Urban Dynamics for the planning of a number of erven for low-cost development in Keetmanshoop. It is, for this reason, the DWN appointed Urban Dynamics to obtain approval for the subdivision of the Keetmanshoop Town and Townlands No. 150; need and desirability of township establishment on subdivided land and layout approval on the subdivided Portion.

For the purpose of obtaining approval from the Ministry of Urban and Rural Development through the Urban and Regional Council, an Environmental Clearance Certificate must first be obtained from the Ministry of Environment Forestry and Tourism.

# **3 PURPOSE OF THE REPORT**

In terms of the Regulations of the Environmental Management Act (Act 7 of 2007), township establishment is not a listed activity. Although Section 27 of the Act lists land use and transformation as an area within which activities may be listed, the honourable minister chose not to list township establishment as one such activity.

However, Urban Dynamics acknowledges that township establishment may, in some cases, have unacceptable environmental impacts, but that impacts are generally limited since it is mostly done to extend existing urban areas by way of laying out new erven on Townlands already earmarked for urban development. To ensure that there are no unacceptable or unmitigated environmental and social impacts, Urban Dynamics as a matter, of course, provides the Environmental Commissioner (EC) with a baseline report which will enable him to screen the project and determine if a clearance certificate can be issued or if a full assessment is required. Find attached a copy of the minutes of the meeting with the Environmental Commissioner wherein this modus operandi was agreed ("**Appendix D**").



# **4** NATURE OF THE ACTIVITY

The purpose of the application is to obtain approval from the Ministry of Environment and Tourism in terms of

Section 8. Water Resource Developments-

- 8.8. Construction and other activities in watercourses within flood lines;
- 8.9. Construction and other activities within a catchment area;

# Section 10. Infrastructure-

- 10.1. The construction of-
  - 10.1. (b) public roads;
- 10.2. Route determination of roads and design of associate physical infrastructure where-
  - 10.2. (a), public road.

This report documents the baseline information necessary to enable the Environmental Commissioner (EC) to screen this project and issue an Environmental Clearance Certificate in terms of **Section 33 of the Environmental Management Act (Act 7 of 2007).** 

This report deals with the nature of the project, identifies the potential impacts that may be expected and the mitigation measures which will be implemented to deal with the impacts.



# 5 LEGISLATION

The following table provides the legislative framework against which the application should be assessed:

STATUTE	PROVISIONS	PROJECT IMPLICATIONS
THE CONSTITUTION OF THE REPUBLIC OF NAMIBIA, 1990:	The state shall actively promote and maintain the welfare of the people by adopting, inter- alia, policies aimed at the following: (i) management of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all.	Ensure that the ecological integrity of the ecosystems of the area is protected.
Environmental Management:	Environmental Management Act No.7 of 2007: EIA Regulation (EIAR) GN 57/2007 (GG 3212): In terms of Section 10.1(a), 10.1(b), 10.2(a), and 10.2(c) for environmental clearance for the construction of oil, water, gas and petrochemical and other bulk supply pipelines, the construction of public roads and the construction of a road with more than one lane of traffic in both directions. In terms of Section 8.8, 8.10 and 8.11, for construction and other activities in watercourses within flood lines, the high-water and the alteration of natural wetlands are listed activities. Prescribes the procedures to be followed for authorisation of the project (i.e. Environmental clearance certificate).	Evaluate if the alignment of the street will impact on the social and natural environment. Determine if the risk of flooding of the erven is at acceptable levels. Determine if proposed limited infill would impact the function of the watercourse or cause flooding elsewhere. Determine how wastewater pipelines in the riverbed should be designed, constructed and maintained to prevent groundwater and other pollution.

WATER AND RESOURCES		Assess the potential risk that the
MANAGEMENT:	Resources and Management Act No.27	planned activities may have on
	of 2007 Section 92:	both the watercourse on the one
	Section 92 (1), A person may not engage in	hand and future occupants of the
	any construction work or activity that	land on the other.
	causes or is likely to cause, the natural	
	flow conditions of water in to or from a	
	watercourse to be modified, unless the	
	Minister has granted prior written	
	approval for the work or activity to be	
	carried out.	
	Section 100 (e) consult with the regional	
	Council or local authority in determining	
	the geographic extent of flood plain	
	areas in its region or local authority, as	
	the case may be, and assist any such	
	councils in regulating the development	
	and use of land within floodplain areas	
	Section 100 (f) prescribe measures for control	
	and management of storm and flood	
	risk within local authority areas.	
	Section 101 (b) development on the banks of	
	any wetland or dam; and	
	Section 101 (c) the removal of rocks, sand or	
	gravel or any other material from a	
	watercourse.	
THE PUBLIC HEALTH AND HEALTH	The Public Health Act 36 of 1919 as	Prevent activities which can have
AND SAFETY REGULATIONS:	amended and the Health and Safety	an impact on the health and
	Regulations:	safety of the public.
	These acts control the existence nuisances such as litter that can cause a threat to the environment and public health.	



# 6 METHODOLOGY

The following section discusses the methodology used by Urban Dynamics Africa (UDA) in assessing the site in terms of its strengths, weaknesses, opportunities, and threats and to then formulate a planning approach to prepare a layout which harnesses the strengths, accommodate the weaknesses, utilise the opportunities and avoid the threats identified. These also include the natural and social environment within which the project is set.

# 6.1 TOPOGRAPHY AND SITE INFORMATION

In terms of obtaining an accurate topographical base map and aerial survey images, a registered land surveyor was appointed by Development Workshop of Namibia to survey the site during February 2020.

Site information was obtained by means of a site visit of the area and aerial photography. A site visit was conducted in July 2020 by Urban Dynamics, Knight Pièsold consulting, with a senior representative of the Municipality of Keetmanshoop and DWN. The site visit identified some temporary structures, three Smaller Ephemeral Rivers, and existing services infrastructure within the project area.

DWN appointed Knight Pièsold consulting (KP) to create a 1 to 25-year flood analysis of the project site. KP made use of the Hydrologic Engineering Center's River Analysis System (HEC RAS) software version 5.0.7, using a 2 Dimensional (2D) hydrodynamic numerical model. Find attached the KP's Flood study Report as **"Appendix E".** The model area is limited to the extent that was covered in the photogrammetry and LiDAR survey.

Given the uncertainty regarding hydrological parameters, roughness coefficient etc., the resulting floodline should be regarded as approximate but conservative. Peak flows for the 1 in 25 and 1 in 50 year return period flood event calculated by the Alternative Rational Method were used as input to the model. Note that the incremental stormwater outside of the project area are applied at the upstream edge of the HEC RAS model.

#### 6.2 NATURAL RECEIVING ENVIRONMENT

An environmental screening for the affected area was conducted, by the Urban Dynamics team in September 2020, which made use of orthophoto analysis, a site visit, literature surveys and extensive experience on the ground in the region.

Data sources used include:

- Atlas of Namibia (Mendelsohn et. al, 2002);
- DW Namibia Keetmanshoop Flood study Floodline Assessment (Knight Pièsold Consulting., 2020);
- Keetmanshoop Town Planning Amendment Scheme No. 4 (Stuberauch, 2003); and
- Keetmanshoop Structure Plan 2016-2030 -Draft February 2016 (Stuberauch, 2016).



# 6.3 PUBLIC CONSULTATION

Urban Dynamics notified potentially interested and affected parties of the proposed application. Interested and affected parties were invited to register as stakeholders. A Background Information Document (BID) provided background on the nature and location of the activity, and information on where further information on the application or activity can be obtained and the manner in which the person to whom representation in respect of the application may be made.

Simultaneously two newspaper notices were placed in separate newspapers for two successive weeks, and a notice of intent was placed at the site. Find attached the advertisement which was placed as "**Appendix C.1**". A public meeting was held on the 3<sup>rd</sup> of December 2020 at Keetmanshoop, Erf 2972, Tseiblaagte, Extension 7. The meetings minutes and attendance register are attached as "**Appendix C.4**".

#### Figure 2: Public Consultation











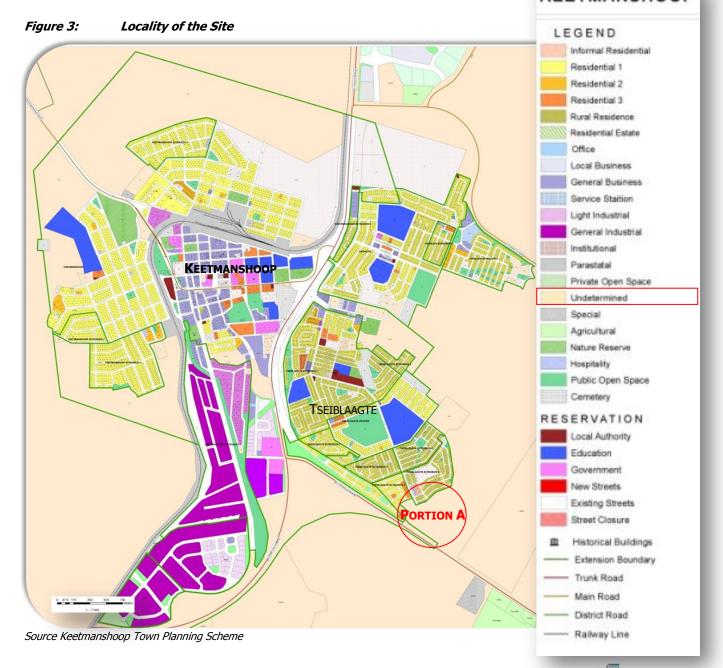
# 7 DESCRIPTION OF THE SITE

This section provides a planning description of the project site relative to the surrounding urban areas, existing use and settlement, services and other infrastructure, topography, and any other features of the site.

#### 7.1 LOCATION OF THE PROPOSED BRUKKAROS

The project site is located at -26.6000834 E, 18.158655 S, on Portion A, within the Keetmanshoop Town and Townlands No.150 in the //Kharas Region.

The site is situated south of Tseiblaagte Ext. 6, west of the NDF Army Base and north of the B1 Trunk Road leading to Grünau (Refer to "**Appendix B**" for the locality of the land).





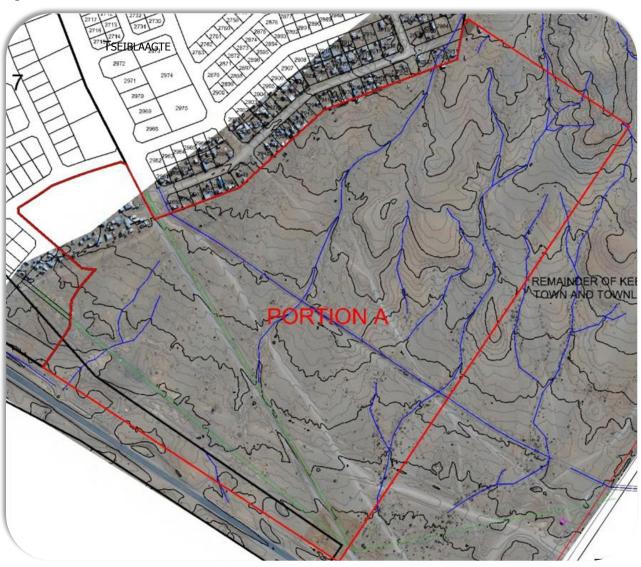
# 7.2 SIZE AND ZONING OF THE PROJECT AREA

The project area measure approximately 27,6 ha and according to the Keetmanshoop Town Planning Scheme, the area is zoned "Undetermined". The current zoning can be seen on Figure 3.

#### Table 1:Proposed Size and Land Use

THE SITE	Land use	Area Size-Ha
Portion A	Undetermined	27.6

#### Figure 4: Form of Portion A



# 7.3 EXISTING LAND USE

The Keetmanshoop Municipality is the registered owner of Portion A of the Keetmanshoop Town and Townlands No. 150. A larger area of the site is vacant and accommodates service infrastructure. The site currently accommodates informal housing north-north-west of the layout.



#### 7.4 ACCESS AND UTILITY SERVICES

#### 7.4.1 Road Access:

Access to the proposed site will be obtained from the internal road network of Tseiblaagte Extensions 6 and 7 and eventually from the B1 Trunk Road via an access point.

Roads Authority does not recommend that the access point be approved. This is as a result of an existing access point located closer to the NDF Army Base and within the buffer zone. However, no development can take place within the buffer zone and therefore, no cadastral boundaries of the road. We recommend that the access point within the buffer zone be shifted to the proposed access point as per the structure plan.

#### 7.4.2 Electrical Supply:

The proposed developments are to be supplied from the Keetmanshoop Municipality distribution network, from the closest and most suitable line.

### 7.4.3 Water Connection:

The development's source of water supply will be from the Keetmanshoop Municipality reticulated network. An existing water pipeline transverse the site from north-west to south of the site.

#### 7.4.4 Sewerage Reticulation:

The town sewerage system consists out of a collection network and four pump stations that send sewerage to oxidation ponds south of the town. The existing sewer reticulation pipeline transverse west of the site.

#### 7.4.5 Communication:

Telecommunication services are available by means of cellular. However, Telecom landline infrastructure will be implemented by Telecom.

# 7.5 CULTURAL RESOURCES

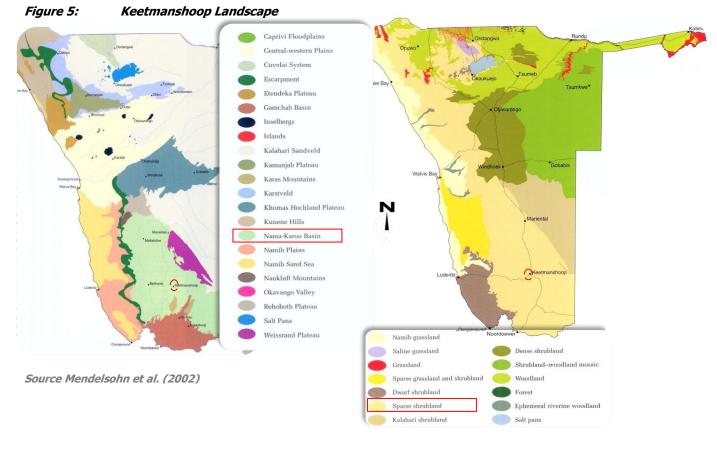
No graves were identified on the site, and no other items of historical value were found or could be identified within the site boundaries.



# 7.6 ENVIRONMENTAL CHARACTERISTICS AND TOPOGRAPHY

#### 7.6.1 Natural Environment:

Mendelsohn *et al.* (2002) indicated that Keetmanshoop is situated within the Nama Karoo Basin in the south-eastern part of Namibia, which forms a large, flat-lying plateau with sedimentary rocks deposited.



The Nama Karoo supports a "varied assemblage of plant communities, ranging from deciduous shrub vegetation to perennial grasslands and succulent shrubs. Although spars shrub land dominates, there is a wealth of plant species due to the great variety of geological substrates, soils and landforms" (Mendelsohn *et al.*, 2002).

The area is characterised by vegetation of the Karas Dwarf Shrubland that mostly is found in Eutric Leptosols and Petric Calcisol soils. The vegetation is dominated by grasslands and low shrubs, according to Mendelsohn *et al.* (2002).

The site itself is vacant with sparse shrubs as shown on Figure 6. A part of the site is partly located within an urban area. As a result of the surrounding urban activities, the site does not accommodate residential wildlife.





The geological formations are part of the Karoo Supergroup, which can be under-classified as dykes and sills, as well as the Main Karoo Basin (Knight Pièsold Consulting., 2020)





# 7.6.2 Topography and Flooding:

The topographical characteristics of the basin slopes from the north, where elevations are about 1,400m above sea level, to the south, where altitudes are approximately 900m above sea level. The Fish, Löwen and Konkiep rivers drain the landscape, all flowing south to the Orange River" (Mendelsohn *et al.*, 2002).

Keetmanshoop Structural Plan (2015), heights that the town itself and a large part of the //Kharas Region fall within the Fish River water basin and Fish River catchment area. The town itself has a number of smaller ephemeral rivers, the largest being the Skaap River that runs through the eastern part of town, southwards to the Naute dam.

The project site naturally drains into a southern direction. Well defined natural river channels (dongas) convey stormwater in a southerly direction. The natural river channels are mostly lined with rock or alluvial material (Knight Pièsold Consulting., 2020).

Floodplains within the project site gradual slopes, approximately 0.026 m/m, characterised by sparse shrubland, rock outcrops, and large barren areas with very little undergrowth.



2D model on Figure 7 shows that a large portion of the project area will be inundated during a 1 in 25 year return period flood.

KP highlighted that given the nature of the development and the 1 in 25 year and 1 in 50 year flood event inundation boundary, an engineered structure should be designed to safely and economically convey the water across the study area, preventing damage to structures and loss of life.

KP recommended to reduce the inundation area, and the natural drainage channels can be widened and deepened.

#### Figure 7: Natural Drainage Channels

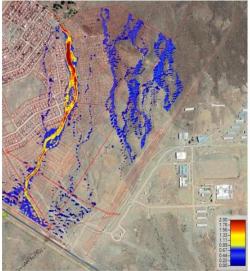


Figure 4-1 Velocity Distribution (in m/s) for 1 in 25 year return period flood

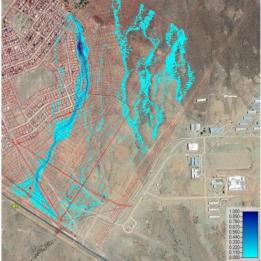


Figure 4-2 Flow Depth Distribution (in m) for 1 in 25 year return period flood

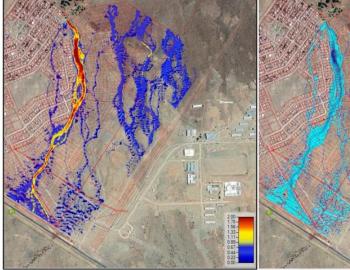
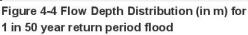


Figure 4-3 Velocity Distribution (in m/s) for 1 in 50 year return period flood

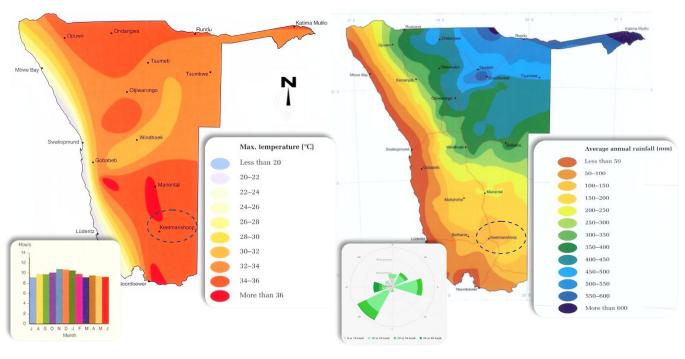


Sources Knight Pièsold Consulting., (2020)



#### 7.6.3 Climate, Rainfall and Wind Directions:

Namibia is a hot and dry country, and due to low levels of humidity in the air, the country experiences low levels of cloud cover and rain and extremely high rates of evaporation. The average monthly temperature at Keetmanshoop ranges from 4°C in July to 36°C in January. From February to October, Keetmanshoop has an average of 10 -11 hours of sunshine per day (Mendelsohn *et al.*, 2002).



#### Figure 8: Climate, Wind Directions, and Rainfall

HOURS SUNSHINE PER DAY

DOMINANT WIND DIRECTIONS

#### Sources Mendelsohn et al. (2002) & Meteoblue (2020)

Most rain-bearing clouds are fed into the country by east north-easterly winds. As such, the South and Western parts of the country receive less rainfall than the central and northern parts of the country. The average monthly humidity within the region ranges from 50-60% in the highest humidity time in April and between 10-20% of the least humidity in October (Mendelsohn *et al.*, 2002).

Approximately 99% of the annual rainfalls from December to February with January receiving the most precipitation. The average yearly rainfall across the south-eastern regions increases from west to east. The area is relatively dry, with an annual average rainfall of between 100 - 150mm per year within the Keetmanshoop Urban area (Mendelsohn *et al.,* 2002).

Winds in Keetmanshoop are infrequent, as the area experiences wind calm about 57% of the time. Predominant wind to be from the north, south and south-east and seldom reach



speeds exceeding 38 km per hour. The windiest months are from June to September (Mendelsohn *et al.*, 2002 & Meteoblue, 2020).

#### 7.6.4 Status of Protected Area:

The site itself has no protected status. However, the Keetmanshoop Structure Plan (2015), do classify small ephemeral rivers as sensitive areas, which need to be protected.

# 7.7 SUMMARY OF THE HABITATION ON SITE

As a result of the population density at Keetmanshoop, habitat alteration occurred. The site is ecologically degraded and no longer pristine and is not fully functional at the ecosystem level.

Key environmentally relevant features show that:

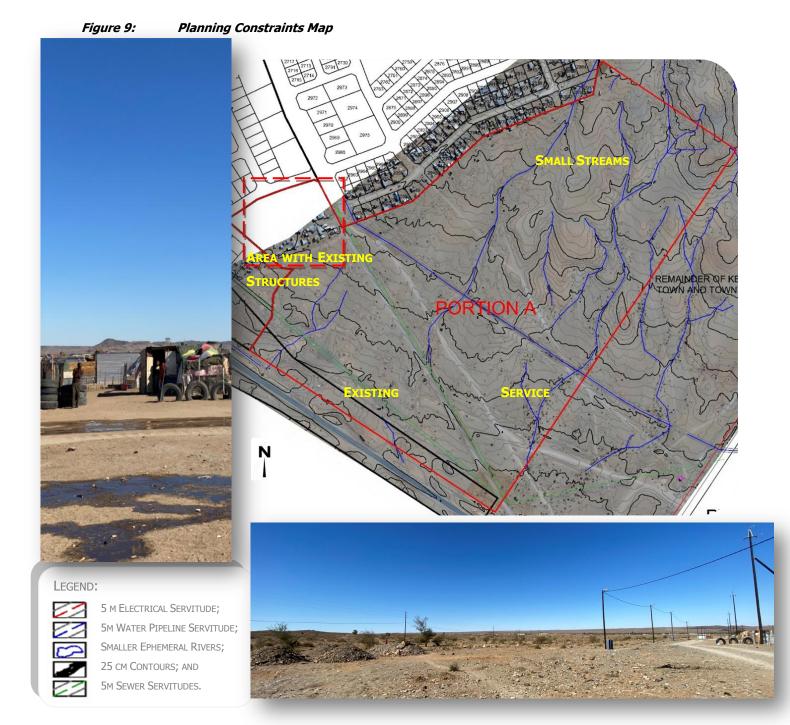
- The site is vacant, and the land is zoned undetermined;
- The surrounding landscape of the site consists of out of rocks, sandy soil and spares shrub land vegetation which forms part of the Nama-Karoo Basin;
- The floodplains have gradual slopes, approximately 0.026 m/m, characterised by sparse shrubland, rock outcrops, and large barren areas with very little undergrowth;
- The site itself has no protected status;
- KP recommend reducing the inundation area. The natural drainage channels can be widened and deepened;
- Approximately 99% of the annual rainfalls from December to February with January receiving the most precipitation; and
- ✤ The area is relatively dry, with an annual average rainfall of between 100 150mm per year within the Keetmanshoop Urban area (Mendelsohn *et al.*, 2002).

The screening process turned up no significant biodiversity-related issues for the current development, and there are no aspects that require further investigation. However, the draft layout should consider KP's 1 in 25 years and 1 in 50 years floodlines and the management plan need to include structural their recommend. It is recommended that the development proceeds without the need for further assessment, as provided for under articles 33 and 34 of the Environmental Management Act.



# 7.8 SITE CONSTRAINTS

As indicated in Figure 9, existing structures, smaller ephemeral rivers, and 5m sewer servitude, a 5m electrical servitude, and 5m water pipeline servitude, forms planning constraints on the site.





# 8 THE PROJECT TOWNSHIP

After the subdivision of the townlands, the Keetmanshoop Municipality with DWN intent to establish a new township on Portion A of the Remainder of the proposed Keetmanshoop Town and Townlands No. 150, to be known as Brukkaros Proper. The Township will consist of a mixed-use neighbourhood, thereby meeting the rising demand for housing and business plots within Keetmanshoop and the //Kharas Region.

# 8.1 LAYOUT DETAIL

Brukkaros Proper will alter the current zoning from undetermined to include Residential I-, Residential II-, Institutional-, Business 1-, Light Industrial, Local Authority and Public Open Spaces. The block's shapes and sizes are illustrated in Figure 10.

The table below provides a summary of the detailed land-use allocation for the Portion, while the detail of the street layout is discussed afterwards.

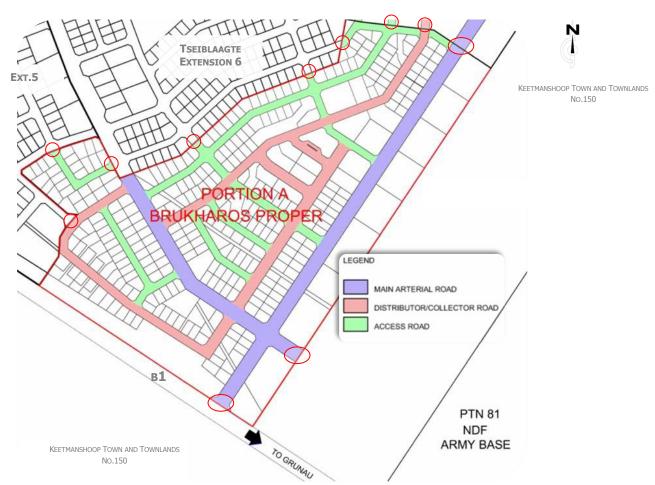
#### ZONINGS **# ERVEN** M<sup>2</sup> AVE SIZE (M<sup>2</sup>) % **RESIDENTIAL I** 299 106,377 356 38% **RESIDENTIAL II** 925 5 4,627 2% **BUSINESS 1** KEETMANSHOOP TOWN AND 8 10,924 1,366 4% INSTITUTIONAL 1 1,717 1,717 1% **TOWNLANDS NO.150** LOCAL AUTHORITY 9 10,049 1,117 4% LIGHT INDUSTRIAL 6 22,225 8% 3,704 **TSEIBLAAGTE EXTENSION 6** POS 15 36,196 2,413 13% STREET PORTION 1,904 1,904 1% 1 82,429 STREET 30% TOTAL 100% 344 276,448 **TSEIBLAAGTE** Ехт. 7 STREET LEGEND: **BUSINESS** 1 LOCAL AUTHORITY LIGHT INDUSTRIAL RESIDENTIAL I (T/103) RESIDENTIAL II INTUITIONAL PUBLIC OPEN SPACE KEETMANSHOOP TOWN AND TOWNLAND No.150



USBAN DYNAMICS

# 8.2 STREET LAYOUT

Access to the layout will be obtained through 11 access points - one access point on the B1 trunk road, south of the proposed layout site and ten access points connecting the internal road networks of Tseiblaagte Ext. 6 and 7. The internal road network of Tseiblaagte Ext. 6 and 7 provide access to the site via 25 m, 15 m, 13 m, and 10 m wide roads. These internal roads run from a western to an eastern direction, providing access to the proposed layout. The proposed road hierarchy can be seen on the figure below.



#### Figure 11: The Proposed Road Hierarchy

The **main arterial** provides access to the site from the B1 Trunk Road and is 25 m wide. This is indicated on the figure in purple. Its position and hierarchy were determined during the structure plan compilation.

The internal layout of the proposed extensions comprises a hierarchy of roads which allows for mobility between the respective areas within. "Distributor roads" provide a mobility function between the different zones within the urban context. They have 15 m wide road reserves. They are also being used to service the proposed commercial activities due to the high number of vehicle trips and the frequency

of perhaps delivery vehicles. These roads are normally referred to as "traffic collector roads". The distributor roads are indicated on the figure in pink.

At a lower order, "access roads" with 10 m and 13 m wide reserves provide for lower volumes of traffic, linkages between collector roads and ultimately access to the residential erven.

"Traffic Collectors" provide a function of internal mobility throughout the new suburb and also between the different facilities and land use zones within the urban context. They have a 20 m wide road reserves and fall under the jurisdiction of the local authority.

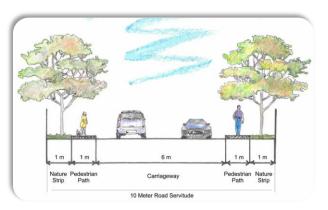
At a moderate order, "Access Roads" with 15 m wide reserves provides for middle volumes of traffic, linkages between collector roads and ultimately access to the residential erven. These roads ease traffic away from the distributor roads reducing congestion on major roads.

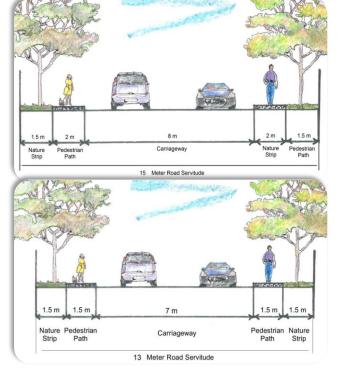
At a lower order, "Access Roads" with 13 m wide reserves provides for the lower volumes of traffic. These roads are the smallest and carry the least traffic. It can be seen on the image below that a 13 m road reserve provides sufficient space for a 1.5 m nature strip, 1.5 m Pedestrian path and a 3.5 m lane with exactly the same uses on the other half of the road.

#### 8.2.1 Provision for Pedestrians

The proposed 25 m, 15 m, 13 m and 10m road reserves include sufficient space to accommodate pedestrian lanes and areas for landscaping.







# 8.2.2 **Provision for Drainage**

Stormwater drainage will be designed, and culverts and bridges will be used to accommodate the flow of the water.





# 9 POTENTIAL IMPACTS

During the course of preparing the Brukkaros Proper layout, the team constantly assessed the potential positive and negative impacts of the project. Attempts have been made to enhance and strengthen positive impacts and mitigate and weaken the effects of negative impacts in all cases. Several iterations of the plan were produced until the planners were satisfied that the layout had been refined to the point where it limits risks, mitigates negative impacts and enhances positive impacts to as great an extent as possible. The following section explores each of these impacts in detail, describing and exploring the various ideas integrated into the layout, and assessing alternatives where they seem viable.

The section also explores positive impacts that are not fully addressed by the layout. Many impacts may be transitory in nature (for example, occurring only during the construction phase of the project) or unavoidable given the site constraints and the need for maximising long-term benefits overall. These impacts and strategies for dealing with them are discussed here, but given that this document is an application for environmental clearance, the measures dealing with their mitigation/enhancement are dealt with in detail in the EMP.

# 9.1 SUMMARY OF POTENTIAL IMPACTS

The planning of the layout, together with the upgrading of bulk infrastructure, the alignment of roads has the potential to cause environmental and social impacts. The following is a list of the potential effects identified through the scoping process:

#### 9.1.1 Benefits of the Project:

- Provide for serviced erven;
- Stimulation of economic development and providing new employment opportunities during the construction;
- > Employment creation and local economic development; and
- Stimulate the health and wellness of Keetmanshoop and the //Kharas Region.

#### 9.1.2 Potential Negative Impacts During the Construction:

- Impact of dust;
- Impact of noise;
- Impact of construction waste;
- > Impact on traffic flow during construction; and
- > Impact on the health and safety of workers.



#### 9.1.3 Potential Negative Impacts During Operations:

- Impact on smaller ephemeral rivers;
- Impact on existing infrastructure;
- Impact of the relocation of households;
- > Impact of waste during operation.

#### 9.2 POTENTIAL IMPACTS

#### 9.2.1 Project Benefits:

- Provide for serviced erven. The Keetmanshoop communities will now have access to properly planned erven with specified erf boundaries. This will also lead to residents having formal and permanent occupation of land and security of tenure. The process of layouts creates a formal development framework, which would prevent uncontrolled settlement growth and address the current uncontrolled developments.
- Stimulate health and wellness within the extension and town. The layout makes provision for much-needed service connections that are safe and in line with the layout. It will also create properly aligned roads which will ease traffic circulation within the Township. Clearly defined roads will allow for the provision for pedestrian infrastructure, creating a walkable environment.

#### > Stimulate the health and wellness of Keetmanshoop and the //Kharas Region.

The development will lead to employment creation during the construction and operation phase. Such development will render services within the formal economy of Keetmanshoop, employ staff, contribute to rates and taxes and spend money within the same economy.

#### 9.2.2 Potential Negative Impacts During Construction:

- Impact on traffic flow during construction. Construction vehicles would need to haul the excavated soil to a disposal site and provide building material and other supplies (i.e. fuel, supplies to the construction site etc.), most of which could be delivered to the site by trucks. Construction vehicles are most likely to pass in close proximity to homes, as well as disrupt traffic flow on the B1 Trunk Road (although the exact access routes to the site are yet to be defined).
- Impact of dust. The movement of construction vehicles on bare soil will cause excessive dust, which will expose the community and workers on the site to dust pollution, which can impact their health. Prevention measures need to be put in place on the site to prevent excessive dust.



- Impact of potential construction noise. Construction machinery creates substantial noise, and this will impact the surrounding community. Ongoing noise can cause stress and health impacts on nearby residents.
- Impact of construction waste. Solid waste is the expected major source of waste at the construction site. If no waste management plan is in place to address the disposal of general and hazardous waste at the site, it can lead to water and soil pollution on the site, and/or within the water areas.
- Impact on the health and safety of workers and nearby residents. Construction activities always have potential risk for workers and nearby residents. Inadequate site management measures can expose workers and residents living near the site to hazardous chemicals and dust and noise. A lack of notices and signs within the area where deep excavation work is done can put the lives of residents and workers in danger.

# 9.2.3 Potential Impacts During Operations:

- Impact on smaller ephemeral rivers. Solid waste is also expected to be a major source of waste during operations. If now recycling disposal of general waste at the settlement happen, it can lead to water air and soil pollution on the site.
- Impact on existing infrastructure. Existing infrastructure within the Solid site waste is also expected to be a major source of waste during operations. If now recycling disposal of general waste at the settlement happen, it can lead to water air and soil pollution on the site.
- Impact of operational waste. Solid waste is also expected to be a major source of waste during operations. If now recycling disposal of general waste at the settlement happen, it can lead to water air and soil pollution on the site.



# 9.3 LAYOUT STRATEGIES

Potential environmental and social impacts were addressed throughout several layout strategies.

The following impacts that can be influenced by alternative layout strategies were considered and dealt with in different ways than was originally proposed:

**Relocation of households:** The proposed layout has to conform to the minimum requirements and standards of formal townships. In areas where development densities are very high, it is not possible to accommodate or formalise all structures and households in their current position. Applying guidelines and requirements such as minimum street widths (development guidelines), formal road access to all erven and sufficient space for municipal services resulted in some casualties. The area with informal structures is marked in red on the layout below.

The Keetmanshoop Municipality and DWN compiled a database of impacted informal structures households on the project site. The database of affected households will be used to give priority to the existing households living on the project site when they need to be relocated to new erven on the layout.



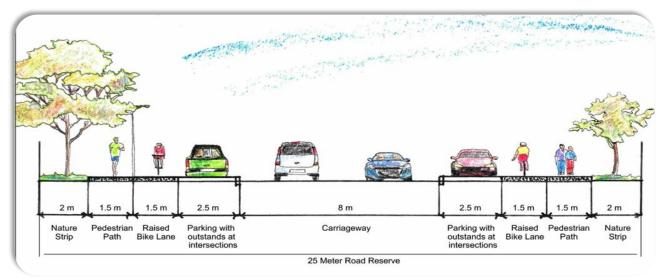
Figure 13: Provision to Accommodate Smaller Ephemeral Rivers, and Servitudes

**Transport Hub:** Erf 1 at the southern entrance from the B1 Trunk Road will accommodate a <u>transport</u> <u>hub</u>. This could be a bus/taxi rank used to drop off and pick up customers travelling out of or into town.



The 25m road that provides access to the project area is identified as an activity street in the Keetmanshoop Structure Plan. The plan describes this street as a local street that accessibility and permeability are key. Pedestrian movement, cycling routes and public transport are important. It is for this reason the transport hub was provided and located along this road.





**Light Industrial Erven:** The layout made provision for 6 Light Industrial erven. The erven are located along the eastern boundary of the layout. The land use summary table indicates a total of 22,225m<sup>2</sup> to be used for light industrial purposes. Light Industrial erven has an average size of 3,704m<sup>2</sup> in extent.

According to the Keetmanshoop Structure Plan, it is the future plans of the Keetmanshoop Municipality to provide Light Industrial activities to be located along the buffer zone next to the NDF Army Base. It is important to mention, part of the layout accommodates the area demarcated for Light Industrial activities.

**Smaller Ephemeral Rivers:** The layout made provision to accommodate the small ephemeral river on Public Open Space, Therefore steering development away from the ephemeral rivers.

A total of 15 Public Open Spaces had been provided within the layout. The public open space takes up 13% of the project area. A "central" green space is also accommodated, and it may be used as a playground or a park, surrounded by the business activity node of the layout.

**Water, Electrical and Sewer Servitudes:** The layout also accommodates service infrastructures which include water and sewer pipelines. Ownership of all infrastructures is in the name of the Keetmanshoop Municipality. Local Authority plots were created on the layout to accommodate these service infrastructures.



### 9.4 DEALING WITH RESIDUAL IMPACTS

#### 9.4.1 Residual Social Impacts:

Residual social impacts through this project could be elaborated on as follows:

Informal structures will have to be relocated. However, the owners of the structures know that they are within the townlands and will be relocated within erven within the new layout and Extension 7, Tseiblaagte by the developer and the Keetmanshoop Municipal Council.

#### 9.4.2 Residual Environmental Impacts

Residual environmental impacts through this project could be elaborated on as follows:

- The development project will create dust and noise during the construction phase. However, this will be limited, and a method to limit it is contained in the EMP.
- The project development will have an impact on traffic during the construction phase. To minimise the increase in transportation, during the construction phase, mitigation measures to manage the vehicles on the construction site, when services are installed is included in the provisions of the EMP.
- During the construction phase, there will be a potential impact on the health and safety of the workers, as a result of their work environment. This will be limited, and methods to limit it are contained in the EMP.



# 10 SUMMARY AND APPLICATION

# 10.1 PROJECT IMPACTS, AVOIDANCE MEASURES AND RESIDUAL IMPACTS

POTENTIAL IMPACT:	Measures:			RESIDUAL
	AVOIDANCE:	MITIGATION:	ENHANCEMENT:	IMPACTS:
POSITIVE IMPACTS:				
STIMULATE LOCAL ECONOMIC DEVELOPMENT AND CREATE EMPLOYMENT OPPORTUNITIES:			During the Brukkaros development phase, the construction company will render service within the formal economy, employ staff, pay rates and taxes and spend money all within the same economy. Emphasis must be placed on the	
			requirement and employment of local people.	
<b>P</b> ROVIDING SERVICED RESIDENTIAL ERVEN:			The project will lead to a formal and permanent occupation of land, the security of tenure, access to capital and partaking in the economy, and ultimately to wealth creation in the operational phase.	
STIMULATE THE HEALTH AND WELLNESS OF THE COMMUNITY:			THE DEVELOPMENT: Provide for a closed system sewer system, which will prevent	
			pollution. Provide for pedestrian infrastructure. The development is also situated walkable	
			distance from the town centre, schools and health facilities within Keetmanshoop. Provide formal and permanent occupation of land and the security of tenure.	



### DRAFT APP-002111-THE TOWNSHIP ESTABLISHMENT AT KEETMANSHOOP - NOVEMBER 2020

Potential	MEASURES:		RESIDUAL	
Імраст:	AVOIDANCE:	MITIGATION:	ENHANCEMENT:	IMPACTS:
POTENTIAL NEGATIVE IM	PACTS			
<b>P</b> OTENTIAL REMOVAL OF STRUCTURES AND HOUSEHOLDS		Currentinformal structures households will have a preference when accommodated within:-The-Thehousehold resettlement databaseThe new erven within 		Not all the structures can be included within the layout, and these should be compensated as per Cabinet policy.
		Servitudes:		
POTENTIAL REMOVAL OF EXISTING INFRASTRUCTURE:	Avoid impacting sewer and water pipelines within the layout during the planning phase.	<ul> <li>Bulk services infrastructure servitudes are accommodated within planned public open space.</li> </ul>		
<b>P</b> OTENTIAL IMPACT ON SMALLER EPHEMERAL RIVERS:	Avoid small ephemeral rivers on the site.	Small Ephemeral Rivers: - Rivers with 5m buffers areas are accommodated on public open space.		
<b>P</b> OTENTIAL DUST AND NOISE ON THE CONSTRUCTION SITE:		<ul> <li><b>Dust:</b></li> <li>No removal of vegetation or soil on the site except where necessary during the construction phase.</li> <li><b>Noise:</b></li> <li>Construction work will be restricted between 07h00 and 18h00.</li> </ul>		Not all the dust and noise can be prevented.



### DRAFT APP-002111-THE TOWNSHIP ESTABLISHMENT AT KEETMANSHOOP - NOVEMBER 2020

POTENTIAL	MEASURES:			RESIDUAL
Імраст:	AVOIDANCE:	Avoidance: Mitigation: E		IMPACTS:
POTENTIAL NEGATIVE IM	IPACTS			
<b>P</b> OTENTIAL IN AN INCREASE IN TRAFFIC DURING THE CONSTRUCTION PHASE:	Avoid an uncontrolled increase in traffic during the construction phase.	Traffic during the construction phase will be restricted between 07h00 and 18h00.		Increase in traffic can be managed. However, the increase in traffic will still have a potential impact on residents.
Health and safety of workers:	Avoid health and safety impacts on workers during the construction phase.	Proper construction practices and safety procedures need to be applied.		Not all the health and safety aspects of the workers can be prevented.

## **11 APPLICATION FOR ENVIRONMENTAL CLEARANCE**

Given the findings of this baseline investigation, no significant biodiversity-related issues were identified, and there are no aspects that require further investigation. However, the layout should consider the dense forest areas, as well as the various protected species of tree in the area, and where necessary apply for permits for these to be moved.

It is recommended that the development proceeds without the need for further assessment, as provided for under articles 33 and 34 of the Environmental Management Act. The application form for an Environmental Clearance Certificate as per Section 32 is attached as "**Annexure 1**" to this Scoping Report.



## **12 REFERENCES**

Mendelsohn, *et al.* (2002). Atlas of Namibia: A Portrait of the Land and its People. Cape Town: David Philip Publishers for The Ministry of Environment and Tourism.

Knight Pièsold Consulting., (2020). Namibia Keetmanshoop Flood study Floodline. For Development Workshop Namibia;

Stubenrauch (2003). Keetmanshoop Town Planning Amendment Scheme No. 4. For the Municipality of Keetmanshoop; and

Stubenrauch (2016). Keetmanshoop Structure Plan 2016-2030 -Draft February 2016. For the Municipality of Keetmanshoop.



## ANNEXURE 1

# FORM 1 APPLICATION FOR AN ENVIRONMENTAL CLEARANCE CERTIFICATE

### FORMS

### Form 1

## **REPUBLIC OF NAMIBIA**

## **ENVIRONMENTAL MANAGEMENT ACT, 2007**

## (Section 32)

## APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE

NAMIBIA REVENUE

NAMIBIA

REVENUE N\$100



1. Name:	Urban Dynamics Africa (Pty) Ltd
2. Business Registration / Identity No.	93/423
3. Correspondence Address:	P. O. Box 20837, Windhoek
4. Name of Contact Person:	Mrs. H. Bindemann-Nel
5. Position of Contact Person:	Planner in Training/Eap
6. Telephone No.:	(061) 240 300
7. Fax No.:	(061) 240 309
8. E-mail Address:	heidri@udanam.com

## PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

The environmental clearance certificate is for: TOWNSHIP ESTABLISHMENT AT KEETMANSHOOP WITHIN THE //KHARAS REGION		
Title of Activity:	The alignment and construction of public roads and the construction of infrastructure within flood areas through township establishment.	
Nature of Activity:	Infrastructure development/ township establishment	
Location of Activity:	Keetmanshoop within the //Kharas Region	
Scale and Scope of Activity:	Scoping Report	

## PART C: DECLARATION BY APPLICANT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental clearance certificate may be suspended, amended or cancelled if any, information given above is false, misleading, wrong or incomplete.

Signature of Applicant

Heidri Bindemann-Nel Full Name in Block Letters

Planner in training/Eap Position

on behalf of the **Keetmanshoop Municipality** Date: <u>18/11/2020</u>

## ANNEXURE 2

# CV OF ENVIRONMENTAL PRACTITIONER

## CURRICULUM VITAE FOR HEIDRI ESTELLE BINDEMANN-NEL URBAN DYNAMICS AFRICA (PTY) LTD

- 1. Surname: Heidri Estellè Bindemann-Nel
- 2. Profession: Environmentalist
- 3. Date of Birth: 29 March 1977
- 4. Nationality: South African, PR number N6723/94
- 5. Membership in Professional Bodies:
  - Member of the Namibia Council of Town and Regional Planners
  - Member of the Namibia Institute of Town and Regional Planners

## **KEY QUALIFICATIONS: (RELEVANT TO THE PROJECT)**

SELECTED TOWN PLANNING EXPERIENCE RELATED TO ENVIRONMENTAL CLEARANCE		
ENVIRONMENTAL CLEARANCE		
DETAILED TASKS ASSIGNED:	RELEVANT PROJECTS:	
SCOPING REPORTS FOR ENVIRONMENTAL CLEARANCE FROM THE MINISTRY OF ENVIRONMENTAL	Environmental Clearance for Township Establishment at, Tungo within the Rundu Town and Townlands No. 1329. (approved 2014),	
AND TOURISM:	Environmental Clearance for Township Establishment at, Ozondje within the Omaruru Town and Townlands No. 85. (approved 2014),	
	Environmental Clearance for Township Establishment at, Onesi Town and Townlands No. 992. (approved 2015),	
	Environmental Clearance for Township Establishment at, Onayena Town and Townlands No. 985. (approved 2015),	
	Environmental Clearance for Township Establishment at Portion 154, within the Consolidated Farm Okahandja Town and Townlands No. 277. (approved 2015),	
	Environmental Clearance for Townships Establishments for the development of 18 New Township Extensions in Oshitayi, within the Ondangwa Town and Townlands No.882. (approved 2016),	
	Environmental Clearance for Township Establishment on Portion 1 of Farm 1115, within the Opuwo Townlands No. 876. (approved 2017),	
	Environmental Clearance for creating of a street on the Remainder of Erf 3093, Tsumeb, Extension 4. (approved 2017),	
	Environmental Clearance for the Amendment of Conditions of Title from Residential to Industrial and the Existing Charcoal Storage and Packing Facility on Portion 149 (Randte), within the Remainder of Farm Outjo Townlands No. 193 (approved 2019),	
	Environmental Clearance for the Rezoning of Erf 680, Swakopmund From "General Residential 2" to "General Business" (approved 2019),	
	Environmental Clearance for Odila Lodge within the Ohangwena Region" (approved 2019),	
	Environmental Clearance for the Establishment of Townships at Okanjengedi South within the Remainder of Farm Okshakati Townland No. 880. (approved 2019),	

SCOPING REPORTS FOR ENVIRONMENTAL CLEARANCE FROM THE MINISTRY OF ENVIRONMENTAL AND TOURISM:	<ul> <li>Environmental Clearance for the Establishment of the establishment of Land Hold Titles at Onawa, Oshakait – As defined by the Flexible Land Tenure Act, 2012 (Act 4 of 2012. (approved 2019),</li> <li>Environmental Clearance for the creation of a street and construction and other activities within a watercourse floodline, on the Remainder of Erf 3526, Extension 7, Katima Mulilo. (approved 2019),</li> </ul>	
FIELDWORK OR SURVEYS:		
COLLECTED AND ANALYSED DATA:	Townships Establishments for the development of 18 New Township Extensions in Oshitayi, within the Ondangwa Town and Townland No.882. (2014) Township Establishment at Portion 154, within the Consolidated Farm Okahandja Town and Townlands No. 277. (2015)	
COLLECTED DATA:	Socio-Economic impact study on the DR 3670, DR 3671 and DR 3672 (2017)	

## **EDUCATION:**

INSTITUTION:	DATES ATTENDED:	DEGREES OBTAINED:
Stellenbosch University	2006 to 2008	B.A in Environmental Studies
Stellenbosch University	2009 to 2010	Honours in Geography and Environment
University of Pretoria	2012 to 2014	Masters Degree in Town and Regional Planning

## **EMPLOYMENT RECORD:**

JULY 2014 - CURRENT:	Urban Dynamics (Pty) Ltd - Windhoek-Namibia	
	<b>Position held::</b> Environmental Practitioner and Town and Regional Planner in training.	
	<b>Responsibilities include:</b> Compiling Scoping Reports for environmental clearance, consolidations, subdivisions and drafted locality and site plans.	
FEBRUARY 2013 - JULY 2014:	Bindemann Associates, Land Surveyors- Walvis Bay-Namibia	
	Position held:: Office assistant	
	Responsibilities include:	
	Compiling applications for consolidations, subdivisions and drafted locality and site plans.	
MAY TO DECEMBER 2012:	Silberbauer Welman Design – Grabouw –South Africa	
	Position held: Assisting draftsperson	
	Responsibilities include:	
	Drafting house and site plans and submitting building plans and environmental clearance applications to the local governments regarding the Koberg Biosphere. Projects were located in Grabouw and Hermanus, South Africa.	

### LANGUAGE:

A PARA AND AND A	Speaking	Reading	Writing
English	Good	Good	Good
Afrikaans	Excellent	Good	Good

### **CERTIFICATION:**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and experience.

Date: 8 / 10 / 2019

incleman Signed:

Heidri Estellè Bindemann-Nel

## ANNEXURE 3

## CONTACT DETAIL OF THE PROPONENT

## **DETAIL OF THE PROPONENT**

1. Name:	KEETMANSHOOP MUNICIPALITY	THEET MANSHOOM
2. Business Registration / Identity No.		
3. Correspondence Address:	Private BAG 2125 Keetmanshoop Namibia	•
4. Name of Contact Person:	MR. GREGORIUS ANDRIES	
5. Position of Contact Person:	TOWN PLANNING OFFICER	
6. Telephone No.:	(0)81 733 6516	
7. Fax No.:		

## ANNEXURE 4

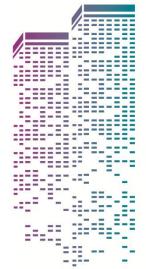
## CONTACT DETAIL OF THE CONSULTANT

     1. Name:	URBAN DYNAMICS / Heidri Bindemann-Nel
2. Identity No.	770329 0222 084
3. Correspondence Address:	Private Bag 20837, Windhoek
<ol> <li>4. Position of Contact Person:</li> </ol>	EAP/Planner in Training
5. Telephone No.:	081 651 7336 / 061 240 300
6. Fax No.:	061 240 309
7. E-mail Address:	heidri@udanam.com
L	'

## **ANNEXURE 5**

## ENVIRONMENTAL MANAGEMENT PLAN







## **ENVIRONMENTAL MANAGEMENT PLAN:**

FOR THE ALIGNMENT AND CONSTRUCTION OF PUBLIC ROADS AND THE CONSTRUCTION OF INFRASTRUCTURE AS A RESULT OF TOWNSHIP ESTABLISHMENT WITHIN KEETMANSHOOP

DEVELOPMENT PARTNERS:	
Keetmanshoop Municipality Private Bag 2125 Keetmanshoop Namibia	
Development Workshop Namibia (Pty) Ltd. P O Box 40723 Ausspannplatz Windhoek Namibia	DU Development Workshop Namibia
Urban Dynamics AFRICA (Pty) Ltd. P O Box 20837 Windhoek Namibia	USBAN DURANCES Durand regional planners



## **GENERAL LOCATION DESCRIPTION OF THE DEVELOPMENT AREA:**

DESCRIPTOR:	LOCATION SPECIFICS:			
NATURE OF ACTIVITIES:	Township Establishment / Infrastructure Development / Development			
	within Flood Areas.			
REGION:	//Kharas Regio	//Kharas Region		
LOCAL AUTHORITY:	Keetmanshoop	Municip	ality	
Fall Within:				
NEAREST TOWNS / CITY:	Keetmanshoop	Municip	ality	
SIZE OF PROJECT AREA A:	276 448 sqm			
LAND USE:	Undetermined			
STRUCTURES:	Yes			
HISTORICAL RESOURCE LISTINGS:	No			
CEMETERY:	No			
FLOODLINES:	Yes			
ENVIRONMENTAL SIGNIFICANT AREA:	<ul> <li>Smaller Ephemeral Rivers</li> </ul>			
	<ul> <li>Area with existing Structures</li> </ul>			
LATITUDE:	-26.6000834,			
LONGITUDE:	18.158655			
RELEVANT LISTED ACTIVITIES:	The Environmental Management Act (Act 7 of 2007),			
	Section 8.	Water	Resource Developments;	
		8.8.	Construction and other activities in watercourses flood lines;	
		8.9.	Construction and other activities within a cate area;	
	Section 10. Infrastructure			
		10.1.	The construction of-	
	10.1. (b) public roads;			
		10.2.	Route determination of roads and design of as physical infrastructure where-	
	10.2 (a) public roads.			



ABBREVIATION:	DESCRIPTION:
am	ANTE MERIDIEM / BEFORE MIDDAY
Av	Avenue
BID	BACKGROUND INFORMATION DOCUMENT
EPP	EMERGENCY PREVENTION PLANS
ER	Employers Representative
EA	Environmental Assessment
EC	Environmental Commissioner
ECO	Environmental Control Officer
EMP	Environmental Management Plan
etc.	ET CETERA / OTHER SIMILAR THINGS
e.g.	Exempli Gratia
FC/AC	FIBRE CEMENT/ASBESTOS CEMENT
HIV	HUMAN IMMUNODEFICIENCY VIRUS
i.e.	ID EST. / IN OTHER WORDS
I&APs	INTERESTED AND AFFECTED PARTIES
NHC	Namibian Health Care
NAMPAB	Namibian Planning Advisory Board
pm	Post Meridiem / After Midday
SME	Small-and-Medium-Sized Enterprise
TMP	TRAFFIC MANAGEMENT PLAN
TRRP	TREE REMOVAL AND REPLACEMENT PLAN
ТВ	TUBERCULOSIS
WMP	WASTE MANAGEMENT PLAN

#### UNIT SYMBOL: **UNIT DESCRIPTION:** 0<sup>c</sup> DEGREES CELSIUS Е East ha HECTARES Km KILOMETRE m Meter MILLIMETRE mm S SOUTH m² SQUARE METERS % PERCENTAGE



### APP-002111-Environmental Management Plan for Township Establishment within Keetmanshoop – November 2020

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## **1** INTRODUCTION

Development Workshop of Namibia (DWN) is a charity trust registered in Namibia. It has a focus on sustainable urban development and poverty reduction and is part of a worldwide network of Development Workshop organisations. It was founded in the 1970s by three architect students in the UK and has been funded by non-governmental organisations, private citizens, and national and international development organisations.

In Namibia, DWN's activities focus on urban-related research, the provision of low-cost urban land for housing, and the identification and promotion of appropriate low-cost sanitation solutions for low-income residential areas. DWN's programme is officially supported by the Ministry of Urban and Rural Development and implemented through partnerships with local authorities across the country.



Figure 1. The Locality of Keetmanshoop within the //Kharas Region

The DWN have had deliberations with the Keetmanshoop Municipality for a portion of Keetmanshoop Townlands No. 150 to assist the Council with the provision of low-cost housing via a high-density residential township that caters for the low-income residents of Keetmanshoop.

The project area is locked between Tseiblaagte Extension 6 to the north; the Namibia Defence Forst (NDF) Army Base to the east and the B1 Trunk Road to the south. This is depicted in Figure 1.

As a result, the DWN approached Urban Dynamics for the planning of a number of erven for low-cost development in Keetmanshoop. It is for this reason the DWN appointed Urban Dynamics to obtain approval for the subdivision of the Keetmanshoop Town and Townlands No. 150; need and desirability of



township establishment on subdivided land and layout approval on the subdivided Portion.

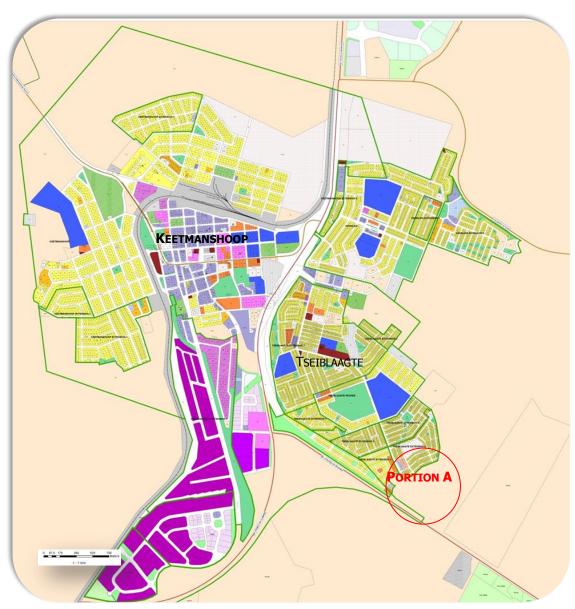
For the purpose of obtaining approval from the Ministry of Urban and Rural Development through the Urban and Regional Council, an Environmental Clearance Certificate must first be obtained from the Ministry of Environment Forestry and Tourism.

## **1.1 LOCATION OF THE PROPOSED DEVELOPMENT**

The project site is located at -26.6000834 E, 18.158655 S, on Portion A, within the Keetmanshoop Town and Townlands No.150 in the //Kharas Region.

The site is situated south of Tseiblaagte Ext. 6, west of the NDF Army Base and north of the B1 Trunk Road leading to Grünau. (Refer to **Appendix "B"** for the locality of the land).

## Figure 2. The Locality of the Site `







Keetmanshoop Proper will alter the current zoning from undetermined to include Residential I-, Residential II-, Institutional-, Business 1-, Light Industrial, Local Authority and Public Open Spaces. The block's shapes and sizes are illustrated in Figure 3.

The table below provides a summary of the detailed land-use allocation for the Portion, while the detail of the street layout is discussed afterwards.



%

38%

2%

4%

1%

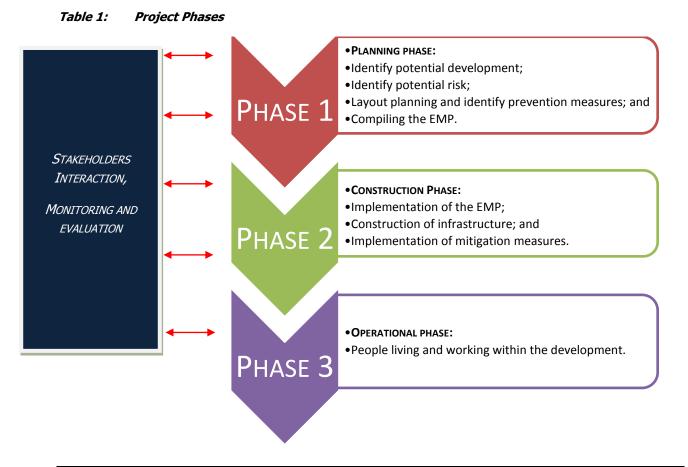
Figure 3. Proposed Keetmanshoop Layout & Land Use Table

LEGEND:



An EMP is an essential product of an Environmental Assessment (EA) process. An EMP synthesises all recommended mitigation and monitoring measures laid out according to the various stages of a project life cycle, with clearly defined follow-up actions and responsibility assigned to specific actors. This EMP has been drafted in accordance with the Namibian Environmental Management Act (No. 7 of 2007) and it's Environmental Impact Assessment Regulations (2012). This plan describes the mitigation and monitoring measures to be implemented during the following phases of the development:

- Construction and
- Operation



## 2 **RESPONSIBILITIES**

Implementation of the EMP is ultimately the responsibility of the Municipality of Keetmanshoop, who will be the Developer and the administrator of the development after construction. Due to the magnitude of the project, it may be necessary to outsource certain functions pertaining to managing all aspects of the actual development process. When implementing the Environmental Management Plan (EMP), the following roles and responsibilities apply.

Each role player's responsibilities are described below.

## EMPLOYERS REPRESENTATIVE (ER)

The Employers Representative (ER) is appointed by the Developer to manage all contracts for



work/services that are outsourced during the construction phase. Any competent employee or third party organisation which possesses the appropriate experience may fill this position. Any official communication regarding work agreements is delivered through this person/organisation.

The ER shall assist the Environmental Control Officer (ECO) where necessary and will have the following responsibilities regarding the implementation of this Environmental Management Plan:

- Ensuring that the necessary legal authorisations and permits have been obtained by the Contractor,
- Assisting the Contractor in finding environmentally responsible solutions to problems with input from the ECO where appropriate,
- Warning and ordering the removal of individuals and/or equipment not complying with the EMP,
- Issuing fines for the transgression of site rules and penalties for contravention of the EMP, and
- Providing input into the ECO's ongoing internal review of the EMP. This review report should be submitted on a monthly basis to the Developer.

## ENVIRONMENTAL CONTROL OFFICER (ECO)

The ECO should be a competent person appointed by the ER. If the ECO has no training in occupational safety and health on a construction site, they should be sent for such training. The ECO is the ER's onsite representative primarily responsible for the monitoring and review of onsite environmental management and implementation of the EMP by the Contractor(s). If no ECO is appointed the duties of the ECO fall upon the ER. The the Municipality of Keetmanshoop should, with the commencement of the project monitor the implementation of the EMP onsite on an ad hoc basis.

The ECO's duties include the following:

- Assisting the ER in ensuring that the necessary legal authorisations have been obtained;
- Maintaining open and direct lines of communication between the ER, Developer, Contractor, and Interested and Affected Parties (I&APs) with regard to this EMP and matters incidental thereto;
- Monthly site inspection of all construction areas with regard to compliance with this EMP;
- Monitor and verify adherence to the EMP (audit the implementation of the EMP) and verify that environmental impacts are kept to a minimum;
- Taking appropriate action if the specifications for the EMP are not adhered to;
- Assisting the Contractor in finding environmentally responsible solutions to problems;



- Training of all construction personnel with regard to the construction and operation mitigation measures of this EMP and continually promoting awareness of these;
- Ensure that all contractors shall provide for adequate environmental awareness training (see Plan Component 5) of senior site personnel by the ECO and that all construction workers and newcomers receive an induction presentation on the importance and implications of this EMP. The presentation shall be conducted, as far as is possible, in the employees' language of choice;
- Monthly inspection to verify if new personnel have received appropriate environmental, health and safety training and training those who have not;
- ✤ Advising on the removal of person(s) and/or equipment not complying with the specifications of the EMP in consultation with the ER;
- Recommending the issuing of fines for transgressions of site rules and penalties for contraventions of the EMP; and
- Undertaking a monthly-month review of the EMP and recommending additions and/or changes to the document.

## CONTRACTOR

The Contractor is responsible for the implementation, onsite monitoring and evaluation of the EMP. In order to ensure sound environmental management, the relevant sections of this EMP should be incorporated operation in all contracts of work outsourced, thus legally binding all appointed contractors.

The Contractor must keep records of all environmental training sessions, including names, dates and the information presented for inspection and reporting by the ER and ECO at all times.



## 3 RELEVANT LEGISLATION AND PERMIT REQUIREMENTS

The following table provides the legislative framework within which the EMP should be viewed:

STATUTE	PROVISIONS	PROJECT IMPLICATIONS
THE CONSTITUTION OF THE REPUBLIC OF NAMIBIA, 1990:	The state shall actively promote and maintain the welfare of the people by adopting, inter- alia, policies aimed at the following: (i) <i>management of ecosystems, essential</i> <i>ecological processes and biological diversity of</i> <i>Namibia and utilisation of living natural</i> <i>resources on a sustainable basis for the</i> <i>benefit of all.</i>	Ensure that the ecological integrity of the ecosystems of the area is protected.
Environmental Management:	Environmental Management Act No.7 of 2007: EIA Regulation (EIAR) GN 57/2007 (GG 3212): In terms of Section 10.1(a), 10.1(b), 10.2(a), and 10.2(c) for environmental clearance for the construction of oil, water, gas and petrochemical and other bulk supply pipelines, the construction of public roads and the construction of a road with more than one lane of traffic in both directions. In terms of Section 8.8, 8.10 and 8.11, for construction and other activities in watercourses within flood lines, the reclamation of land from below or above the high-water and the alteration of natural wetlands are listed activities. Prescribes the procedures to be followed for authorisation of the project (i.e. Environmental clearance certificate).	Evaluate if the alignment of the street will impact on the social and natural environment. Determine if the risk of flooding of the erven is at acceptable levels. Determine if proposed limited infill would impact the function of the watercourse or cause flooding elsewhere. Determine how wastewater pipelines in the riverbed should be designed, constructed and maintained to prevent groundwater and other pollution.

WATER AND RESOURCES MANAGEMENT:	The Water Act No. 54 of 1956 and Water Resources and Management Act No.27 of 2007 Section 92: Section 92 (1), A person may not engage in any construction work or activity that causes or is likely to cause, the natural flow conditions of water in to or from a watercourse to be modified, unless the Minister has granted prior written approval for the work or activity to be carried out. Section 100 (e) consult with the regional Council or local authority in determining the geographic extent of flood plain areas in its region or local authority, as the case may be, and assist any such councils in regulating the development and use of land within floodplain areas Section 100 (f) prescribe measures for control and management of storm and flood risk within local authority areas. Section 101 (b) development on the banks of any wetland or dam; and Section 101 (c) the removal of rocks, sand or gravel or any other material from a watercourse.	Assess the potential risk that the planned activities may have on both the watercourse on the one hand and future occupants of the land on the other.
THE PUBLIC HEALTH AND HEALTH AND SAFETY REGULATIONS:	The Public Health Act 36 of 1919 as amended and the Health and Safety Regulations: These acts control the existence nuisances such as litter that can cause a threat to the	Prevent activities which can have an impact on the health and safety of the public.



Pollution Control and Waste Management Bill:	<i>Pollution Control and Waste</i> <i>Management Bill:</i> This bill aims to promote sustainable development and to prevent and regulate the discharge of pollutants into the environment.	Consider the risk of pollution as a result of the sewer infrastructure in the riverbed.
Labour:	<i>Labour Act. 11 of 2007:</i> This bill aims to protect workers and their environment which they work in.	Ensure the protection of workers' rights and safety in Namibia.
COMPENSATION POLICY:	CabinetCompensationPolicyGuidelines for Communal land:Providingcompensationtoindividualsregarding the relocation of people, removaloffruittreesorthedevelopmentofMahango fields, within communal land.	Assess to what extent the proposed policy complies with the provision of the plan to ensure the rights of individuals within communal land.



## PLANNING AND DESIGN PHASE

## Table 2: Management Requirements for the Planning and Design Phase

ASPECT	MANAGEMENT REQUIREMENTS	
Natural Building Material	<b>All building material</b> (sand and gravel) must be sourced from a local registered borrow pit only. Road building material, (G4, G5, etc. material) must be sourced in collaboration within Keetmanshoop from approved borrow pits within the townlands. If suitable material can only be sourced from untouched land to create a new borrow pit, then that is legally subject to an EIA as well by the Council.	
EMP Implementation	<b>Relevant sections</b> of this EMP should be included in the tender documents for all construction so that tenderers can make provision for implementation of the EMP.	
Financial Provisions	• <b>Financial provision</b> for the facilitation of an induction programme for senior, temporary construction personnel as well as subcontractors and associated personnel should be included as a cost item within tenders concerning the construction and/or operation and maintenance of the proposed development.	
	• <b>Financial provision</b> for the compilation of a Tree Management Plan should be included as a cost item within construction tender documents.	
Recruitment	• <b>Provisions designed</b> to maximise the use of local labour should be included within tenders concerning the construction of bulk and reticulation services.	
	• <b>A provision</b> stating that all unskilled labour should be sourced locally should be included in tenders concerning the construction of all services of the development.	
	• <b>Specific recruitment</b> procedures ensuring local firms enjoy preference during tender adjudication should be included in tenders concerning the construction of the development's bulk services.	
	• <b>Provisions promoting gender equality</b> pertaining to recruitment should be included in tenders concerning the construction of the township services.	
	• <b>Women</b> should be given preference for certain jobs (e.g. those jobs that require relatively less physical strength).	



## 4 CONSTRUCTION MITIGATION DETAIL

**Table 3** provides a scale overview of all the major environmental management themes pertaining to both generic and site-specific construction mitigation detail. This table serves as a reference for the mitigation detail that follows subsequently for each theme. This is done to simplify the implementation of the construction component of this EMP.

Тнеме:	Овјесттие:	MITIGATION DETAIL:	
		GENERIC:	SITE-SPECIFIC:
Waste Management:	Minimise and avoid all waste pollution associated with construction.	PLAN COMPONENT 1	YES
Health and Safety Management:	Focusing on the wellbeing of the labourers on and the community near the construction.	PLAN COMPONENT 2	YES
NOISE AND DUST MANAGEMENT:	Minimise and avoid all noise and dust associated with construction.	PLAN COMPONENT 3	YES
TRAFFIC MANAGEMENT:	Minimise and avoid traffic impacts.	PLAN COMPONENT 4	YES
ENVIRONMENTAL TRAINING AND AWARENESS:	Awareness creation regarding the provisions of the EMP as well as the importance of safeguarding environmental resources.	PLAN COMPONENT 5	YES
ENVIRONMENTAL CONSERVATION:	Minimise the effect of the activity and protect the social environment in which it is happening.	PLAN COMPONENT 6	YES
EMPLOYMENT /RECRUITMENT	Ensure the protection of workers' rights and safety in Namibia.	PLAN COMPONENT 7	YES
STAKEHOLDER COMMUNICATION:	Provide a platform for stakeholders to raise grievances and receive feedback and hence, minimise conflict.	PLAN COMPONENT 8	YES
SOCIO-ECONOMIC AND MISCELLANEOUS:	Protecting cultural and general wellbeing of the affected.	PLAN COMPONENT 9	YES



## 4.1 PLAN COMPONENT 1: WASTE MANAGEMENT

At the Keetmanshoop construction site, high importance shall be placed on waste management, and it needs to be performed daily. Solid waste is the expected major source of waste at the construction site, and therefore, a *Waste Management Plan* (WMP) should be compiled. The WMP must address measures for the uses and the disposal of general waste and hazardous waste at the site, as indicated below:

## 4.1.1 CONSTRUCTION WASTE MANAGEMENT:

### GENERAL WASTE:

- The construction site should be kept tidy at all times. All general construction waste produced should be cleaned and contained daily,
- > No waste may be buried or burned,
- > No waste may be dumped in any watercourse in and around the project area,
- A sufficient number of separate waste containers (bins) for hazardous and domestic/general waste must be provided onsite. These should be clearly marked as such, and
- Construction labourers should be sensitised to dispose of waste in a responsible manner and not to litter.

## HAZARDOUS WASTE:

- All heavy construction vehicles and large fuel-powered equipment on the site should be provided with a drip tray,
  - If the vehicle used is suspected of having an oil leakage, drip trays are to be transported with vehicles wherever they go on site.
  - Drip trays should be cleaned daily, and spillage handled, stored, and disposed of as hazardous waste.
- Spilled concrete (wet) should be treated as waste and disposed of by the end of each day in the appropriate waste containers,
- Unbound cement (dry) in its raw state and cement infused water from mixers are classified as hazardous waste, due to its high alkalinity content. Treatment would be the same as for hazardous waste and disposal of such should take place in the appropriate labelled hazardous waste containers,

- A hazardous waste spill clean-up kit should be kept onsite, and its stock replenished as needed. The kit will consist of the following items (with the numbers of each item is up to the discretion of the ER):
  - Medium-sized shovels, strong plastic bags, drip trays, dust masks, heavy-duty gloves, and a biodegradable hand wash (degreasing) agent, and
- A storage location must be provided for the use of all hazardous substances (e.g. fuel etc.) or chemicals. The storage area must be of an impermeable surface; this is bonded awaiting use and disposal afterwards.

The duration of the phase is short term (0-5 years) and will end at the start of the operational phase. The responsibility to implement of the EMP, onsite monitoring and evaluation of the EMP / WMP lies with the Contractor, environmental control officer and the ER.

## 4.1.2 **OPERATIONAL WASTE MANAGEMENT:**

## GENERAL WASTE:

- The development needs to provide efficient waste management infrastructure for household and business, which will include recycling infrastructure,
- The household and business waste needs to be collected by the Keetmanshoop Council or service provider, and
- Sewerage needs to be pumped through a closed system pipeline to the proposed oxidation ponds.

The timeframe of the actions mentioned above are long term, and the responsibility and monitoring lie with the Municipality of Keetmanshoop who will be responsible for the maintenance of the sewerage pipelines after construction and the solid waste removal.



## 4.2 PLAN COMPONENT 2: HEALTH AND SAFETY

The health and safety aspect of the workspace is something that cannot be understated; considering that unexpected severe events can occur at any given moment.

## 4.2.1 HEALTH AND SAFETY MANAGEMENT:

The construction industry is fraught with hazards; therefore, careful planning and prevention measures are necessary to reduce the risk of serious injuries while on duty.

The Contractor needs to apply to the Labour Act. Nr 11 of 2007 in conjunction with Regulation 156, 'Regulations which describe the health and safety of employees at work'.

## HIV/AIDS AND TB TRAINING:

The Contractor should approach the Ministry of Health and Social Services to appoint a health officer to facilitate HIV/AIDS and TB education programmes periodically onsite during the construction phase.

## **ROAD SAFETY:**

- Vehicles contents/consignments should be adequately secured to avoid items falling off the vehicle.
- All trucks carrying sand or fine material loads should be covered with a shade net cover to prevent these materials from being blown off onto approaching vehicles from both directions.
- No construction vehicle may be used to transport personnel to and from the construction site. This is an offence and punishable by law due to the extreme safety risk involved.

## SAFETY AROUND EXCAVATED AND WORK AREAS:

- A meeting with the neighbouring community shall be held, and the safety precautions of the construction area explained,
- > Excavations should be left open for an absolute minimum time only,
- Excavate short lengths of trenches and box areas for services or foundations in such a way that the trench will not be left unattended for more than 24 hours,
- > Demarcate the following areas with danger tape or orange demarcation netting:
  - All excavation works;
  - Soil and other building material stockpiles; and



- Temporary waste stockpiles.
- Provide additional warning signage in areas of movement and in "no person allowed" areas where workers are not active;
- > Work areas must be set out and isolated with danger tape on a daily basis,
- All building materials and equipment are to be stored only within set out and demarcated work areas;
- > Only construction personnel will be allowed within these demarcated work areas; and
- > Two dry chemical powder fire extinguishers should be available at fuel storage areas and the workshop area, as well as the site office.

# **ABLUTIONS:**

- Separate ablutions (toilet) should be available for men and women and should clearly be indicated as such,
- > Portable toilets (i.e. easily transportable) should be available at every construction site:
  - 1 toilet for every 25 females.
  - 1 toilet for every 50 males.
- Sewage waste needs to be removed on a regular basis to an approved (council) sewage disposal site. Alternatively, pump it into sealable containers and store it until it can be removed, and
- Workers responsible for cleaning the toilets should be provided with latex gloves and masks.

# 4.2.2 OPERATIONAL PHASE HEALTH AND SAFETY MANAGEMENT:

Keetmanshoop has low lying areas which are known for flooding during the raining season. Law laying contours were identified, which forms flood areas within the sites. Flood and stream areas are accommodated within public open space within the layouts. This is to ensure that limited development takes place within the floodarea. Flood areas within the road reserve will be filled when constructing the road. However, mitigation measures must be put in place to prevent any flood risk within the layout.

# Flood Risk Impact Preventions:

- All services (power and sewer lines) need to be placed in the evaluated road reserve, to prevent it from being influenced during raining seasons.
- The sewerage network needs to link up with the nearby sewer line which runs through the area. The system will be incorporated with the nearest extensions sewerage network, which flows to the oxidation ponds located east of the settlement. A

closed gravity system needs to be used to prevent any future pollution in the area during raining seasons.

- > The residents or Contractor need to inform the Council's sewer or electrical department if they have problems with the sewer or electrical network.
- > Culverts need to be maintained.

The timeframe of the actions mentioned above are continuous, and the responsibility and monitoring lie with the Municipality of Keetmanshoop or the owner of the new erven.

# 4.3 PLAN COMPONENT 3: NOISE AND DUST

Noise and dust can cause stress and health impacts on nearby residents, patients at the clinic, students of the nearby schools and construction workers. Therefore, high priority needs to be placed on mitigation measures at the site to manage noise and dust pollution near Tseiblaagte, Extension 6 and 7.

# 4.3.1 NOISE PREVENTION:

Mitigation measures need to be in place to prevent noise pollution within the area.

- > No noisy activities onsite between 17:00 and 07:00;
- > Construction activities on Saturday should be between 08:00 and 13:00;
- > Sunday and public holidays no noisy activities onsite; and
- In the event that work is necessary outside the designated working hours, all receptors (residents or businesses within 500 m from the work areas) need to be notified at least two days in advance.

The duration of the actions mentioned above are short term, and the impact ceases after the operational phase starts. The responsibility for monitoring lies with the Contractor, Environmental Control Officer of the development, and the Municipality of Keetmanshoop.

# 4.3.2 **DUST PREVENTION:**

The movement of construction vehicles on bare soil will cause excessive dust, which will expose nearby residents and workers on the site to dust pollution. Fugitive dust from construction sites can spread crystalline silica, which can impact nearby residents and site workers' health.

Fugitive dust from the construction site can also cause poor visibility for road users using the main road B1. Mitigation measures must be put in place to prevent dust pollution.

The following measures are provided below to minimise dust:

- Provide a suitable screen/panels surrounding the construction site, to reduce the spread of dust from the site;
- > Dust palliatives need to be applied to the road surfaces to prevent dust clouds;
- A watering truck with semi-purified water should be used on gravel roads with the most vehicle movement, especially during dry and windy conditions;
- Stockpiles of building material and earth material need to be kept moist, or the surfaces need to be kept stabilised. A nylon mesh cover which reduces dust lift with ± 50% can be an alternative option;
- > Limit the size of stockpiles of large quantities of soil, topsoil and other fine material;
- > Dust protection masks should be issued to all workers exposed to dust on the site; and
- Improve awareness of ambient air quality and consideration regarding wind speed and direction when undertaking dust-generating activities.

The duration of the actions mentioned above are short term, and the impact ceases after the operational phase starts. The responsibility for monitoring lies with the Contractor, Environmental Control Officer of the development, and the Municipality of Keetmanshoop.



# 4.4 PLAN COMPONENT 4: TRAFFIC MANAGEMENT

The construction of the infrastructure will have a disruptive impact on the surrounding traffic. Mitigation measures should be in place to minimise the anticipated disruption of the surrounding traffic during the construction of the infrastructure upgrade.

# **4.4.1 TRAFFIC DURING THE CONSTRUCTION PHASE:**

The following measures are provided to minimise traffic:

## TRAFFIC MITIGATION:

- Develop a Traffic Plan to reduce traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with shuttle service;
- Schedule operations, affecting traffic for off-peak hours. Minimise obstruction of throughtraffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites;
- Construction vehicles should be restricted during peak hours, between 07:00-08:00 and 17:00-18:30; and
- > Appropriate advance road warning signage should be used on the site.

The duration of the actions mentioned above is short term and will end when the operation phase commences. The responsibility for implementation and monitoring lies with the Contractor. However, the road infrastructure will become permanent, and the responsibility for maintaining the streets will rest with the Municipality of Keetmanshoop after construction.

# 4.5 PLAN COMPONENT 5: ENVIRONMENTAL TRAINING AND AWARENESS

All construction workers at the development site are to undergo environmental training and awareness programs. The following aspects should be included:

- > Explanation of the importance of complying with the EMP;
- > Discussion of the potential environmental impacts of construction activities;
- > Employees' roles and responsibilities, including emergency preparedness;
- Explanation of the mitigation measures that must be implemented when particular workgroups carry out their respective activities; and
- Explanation of the specific mitigation measures within this EMP, especially unfamiliar provisions.

**During the training sessions,** an attendance register should be completed, including the names, positions designations and signatures of everyone who attended the training and kept on file for auditing

purposes. Thereby, all the training sessions prior to it being conducted must be approved by the ECO.

# 4.6 PLAN COMPONENT 6: ENVIRONMENTAL CONSERVATION

## 4.6.1 TREE MANAGEMENT PLAN:

The scoping report did not identify large, protected trees. However, trees in the project site will remain intact as far as possible during development. Trees should be accommodated on individual erven, and along the road in such a manner as to allow the positioning and construction of residential buildings and construction of the road without necessitating removal.

A **Tree Management Plan** shall be implemented, which should include the following content at the minimum level:

- > All protected trees should be surveyed;
- > Permits shall be obtained before the removal of protected trees, by the ECO;
- Protected trees which are removed shall be replaced and used within the landscaping of the development; and
- The forestry officers can also direct the Developer to nearby nurseries where additional trees may be bought.

The duration of the actions mentioned above is long term. The responsibility for the implementation of the **Tree Management Plan** lies with the Developer, Contractor and Council.

## 4.6.2 MATERIALS CAMP AND LAY-DOWN AREAS:

A suitable location for the **materials camp and lay-down** areas should be identified with the assistance of the ER, and the following should be considered in selecting these sites:

- The areas designated for the proposed services infrastructure should be used as far as possible; and
- > Sensitive areas should be avoided (e.g. watercourses).

The duration of the actions mentioned above is short term. The responsibility for the implementation of the EMP lies with the Contractor, ER and ECO.

# 4.7 PLAN COMPONENT 7: EMPLOYMENT/RECRUITMENT

The construction of the development will take place over several years and will employ about up to a thousand (500) workers. It is not clear at this stage which skill sets would be required, nor the extent to which employment opportunities could be created in the project area.

The benefits to the local community from jobs could be dependent on the extent of local recruitment and the measures put in place to ensure preferential local gender-based recruitment where possible.

# 4.7.1 RECRUITMENT:

The formal recruitment process should be compiled and shall include the following minimum provisions:

- A recruitment process whereby local residents shall be given preference shall be designed by the ER and the Contractor;
- Ensure that all sub-contractors are aware of recommended recruitment procedures and discourage any recruitment of labour outside the agreed-upon process;
- Contractors should give preference in terms of recruitment of sub-contractors and individual labourers to those from the project area and only then look to surrounding towns; and
- Clearly explain to all job-seekers the terms and conditions of their respective employment contract (e.g. period of employment, etc.) – make use of interpreters when required.

# 4.7.2 LEGISLATION:

The Contractor needs to adhere to the legal provisions in the Labour Act (Labour Act. 11 of 2007), for the recruitment of labour (target percentages for gender balance, optimal use of local labour and SME's, etc.) in the contract.



# 4.8 PLAN COMPONENT 8: STAKEHOLDER COMMUNICATION

Within the construction phase, the Developer should draft a *Communication Plan*. Thereby the ER in collaboration with the Developer must appoint an ECO to liaise between the Contractor, Stakeholders, Developer, and Consultants. The appointed Contractor shall appoint a person from the construction team to take responsibility for the implementation for all provisions of this EMP.

# 4.8.1 COMMUNICATION PLAN:

In addition, the plan shall specify:

- How stakeholders, who require ongoing communication for the duration of the construction period, will be identified and recorded and who will manage and update these records,
- > How these stakeholders will be consulted on an ongoing basis, and
- ➤ How grievances shall be handled i.e. how concerns can/ will be lodged/ recorded and how feedback will be delivered as well as further steps of arbitration in the event that feedback is deemed unsatisfactory.

# 4.8.2 GENERAL COMMUNICATION:

- The Contractor shall at every site meeting report on the status of the implementation of all provisions of the EMP,
- The ECO must list the stakeholders of the project and their contact details with whom ongoing communication would be required for the duration of the contract. This list, together with the **Communication Plan**, must be agreed upon and given to the ER before construction commences,
- > The Communication Plan, once agreed upon by the Developer, shall be binding,
- > All communication with the stakeholders must take place through the ECO,
- A copy of the EMP must be available at the site office and should be accessible to all stakeholders,
- The Contractor should liaise with the Developer regarding all issues related to community consultation and negotiation before construction commences,
- A procedure should be put in place to ensure that concerns raised have been followed-up and addressed, and
- All people on the stakeholder's list should be informed about the availability of the complaints register in writing by the ER prior to the commencement of construction activities.



## Table 4:Public Consultation Process

THE PROCESS:	<b>DESCRIPTION OF THE PROCESS:</b>
PLANNING PHASE:	•
I&APS IDENTIFICATION:	Key Interested and Affected Parties (I&APs) were identified and included in a list of I&APs ( <b>Appendix D.3</b> ). The list included the Municipality of Keetmanshoop council.
NEWSPAPER NOTICES:	Notices were placed, for two consecutive weeks in two widely circulated newspapers, briefly describing the developments and their locality, inviting the public to register as I&APs ( <b>Appendix C.1</b> ).
INFORMATION PROVISION:	A Background Information Document (BID) was compiled that contained essential information about the project ( <b>Appendix C.2</b> ).
MEETINGS:	A Public Meeting was held on the <b>3<sup>rd</sup> of December 2020.</b>
Public Comments Period:	The public comments period was from the <b>12<sup>th</sup> of November to the 11<sup>th</sup> of December 2020.</b>
THE CONSTRUCTION PHASE:	
COMMUNICATION PLAN:	<ul> <li>The Contractor shall at every site meeting report on the status of the implementation of all provisions of the EMP.</li> <li>The ECO must list the stakeholders of the project and their contact details with whom ongoing communication would be required for the duration of the contract. This list, together with the Communication Plan, must be agreed upon and given to the ER before construction commences.</li> <li>The Communication Plan, once agreed upon by the Developer, shall be binding.</li> <li>All communication with the stakeholders must take place through the ECO.</li> <li>A copy of the EMP must be available at the site office and should be accessible to all stakeholders.</li> <li>The Contractor should liaise with the Developer regarding all issues related to community consultation and negotiation before construction commences.</li> <li>A procedure should be put in place to ensure that concerns raised have been followed-up and addressed.</li> <li>All people on the stakeholder's list should be informed about the availability of the complaints register in writing by the ER prior to the commencement of construction activities.</li> </ul>



# 4.9 PLAN COMPONENT 9: SOCIO-ECONOMIC AND MISCELLANEOUS

# Heritage or Archaeological Sites

In the case where a heritage or archaeological site is uncovered or discovered during the construction phase of the development, a 'chance find' procedure should be applied as follows:

- > If operating machinery or equipment to stop work immediately;
- > Demarcate the site with danger tape;
- Determine GPS position if possible;
- Report findings to foreman;
- > Cease any works in the immediate vicinity;
- Visit the site and determine whether the work can proceed without damage to the findings;
- > Determine and demarcate exclusion boundary;
- > Inspect site and confirm the exact location.
- Advise the National Heritage Council (NHC) and request written permission to remove findings from the work area; and
- > Recovery, packaging and labelling of findings for transfer to National Museum.

Should human remains be found, the following actions will be required:

- > Apply the 'chance find' procedure as formerly described;
- > Schedule a field inspection with an archaeologist to confirm that the remains are human;
- > Advise and liaise with the NHC and Police; and
- Remains will be recovered and removed either to the National Museum or the National Forensic Laboratory.

If it is found that the construction site is on a heritage site or an archaeological site, the Developer will need to apply for a permit from the National Heritage Council in order to carry out works in a protected place as indicated in the National Heritage Act 27 of 2004.



# APPENDIX A

# CONSENT FROM MURD

**Keetmanshoop** Municipality



Private Bag 2125, Keetmanshoop, Namibia - Tel.: +264(63)221 211 - Fax: +264(63)223 065 E-mail: ceosec@keetmansmunicipality.org.na, 37 Hampie Plichta Avenue

Enquiries: G.D. Andries Tel no: +264 63 221242 gdandries@gmail.com

06th of October 2020

## Urban Dynamics

Town and Regional Planners P.O.Box 20837 Windhoek

Attention: Mr Johann Opperman

Dear Sir

RE: TOWN PLANNING AND CONTROL OVER ERVEN: TOWNSHIP ESTABLISHMENT -

- <u>SUBDIVISION OF THE REMAINDER OF KEETMANSHOOP TOWN AND</u>
   <u>TOWNLANDS NO.150 INTO PORTION A AND REMAINDER;</u>
- <u>NEED AND DESIRABILITY FOR TOWNSHIP ESTABLISHMENT ON PROPOSED</u>
   <u>PORTION A OF THE REMAINDER OF KEETMANSHOOP TOWN AND
   TOWNLANDS NO.150 AND
  </u>
- LAYOUT APPROVAL AND TOWNSHIP ESTABLISHMENT ON PROPOSED
   PORTION OF KEETMANSHOOP TOWN AND TOWNLANDS NO.150 –
   BRUKHAROS PROPER

REF: 15/4/1/1

Your application letter dated 25<sup>th</sup> of August 2020 bears reference.

Council at its Eight (2020/2021) Ordinary Council meeting held on 16<sup>th</sup> of September 2020 under item 224 resolved as follows that:

- 1) Council approves the Subdivision of the Remainder of Keetmanshoop Town and Townlands No.150 into Portion A and Remainder;
- Council approves the Need and Desirability for the Township Establishment on proposed Portion A of the Remainder of Keetmanshoop Town and Townlands No.150 and
- 3) Council approves the layout and township establishment on the proposed Portion of Keetmanshoop Town and Townlands No.150 Brukharos Proper

Trusting that you find above resolution considerate.

urs sincerely

Mr. Desmond Nicodemus Basson CHIEF EXECUTIVE OFFICER

# KEETMANSHOOP MUNICIPALITY Private Bag 2125. Tel: 063 - 221212. Fax: 063 - 223818 OFFICE OF THE CHIEF EXECUTIVE OFFICER

# "EXTRACT MINUTES"

# EIGHT ORDINARY COUNCIL MEETING HELD ON 16 SEPTEMBER 2020 AT 14H00 IN THE MUKOROB CHAMBERS AT MUNICIPAL HEAD OFFICE: KEETMANSHOOP

# ATTENDANCE

Cllr G. Kröhne	:	Mayor
Cllr H. Titus	:	Deputy Mayor
Cllr V. Asino	;	MC Member
Cllr C. Pieter	:	Council Member
OFFICIALS		

Mr. D. Basson	:	CEO
Mr. B. Christiaan	:	SE:LED
Mr. S. Nashima	;	SE: ITS
Mr. E. Mukaya	:	SE: HR
Mr. R. Brandt	:	SE:KEBU

# SECRETARY

Ms. J. M	ungunda :
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# **ITEM 220**

CMS

# TOWN PLANNING & CONTROL OVER ERVEN: REZONING OF ERF 876, KEETMANSHOOP PROPER, C/O OF ERENST KALWEIT AND WARMBAD STREET FROM "RESIDENTIAL 1" WITH A DENSITY OF 1:600m<sup>2</sup> TO "RESIDENTIAL 2" WITH A DENSITY OF 1:100m<sup>2</sup> AND CONSENT TO START WITH THE CONSTRUCTION WHILE THE REZONING IS IN PROCESS

Ref No: 15/4/1/1

# **Appointment**

An application was submitted by Plan Africa Planning Consulting CC on behalf of Mr Megameno. H.Z. Shikongo for the rezoning of Erf 876 which is located in the CBD from

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"Single Residential" to "General Residential" in order to erect backyard flats on such piece of property.

# Main motivation points

- Efficient use of vacant space is clearly outlined in the Urban Structure Plan of Keetmanshoop:
- The proposed development is in line with the conditions of the Keetmanshoop Town Planning Scheme;
- Parking requirements, coverage and height of the buildings will be verified if such client submit the site and building plans to the local authority;
- Any issues related to health, hygiene and pressure on the bulk services can be advice by the Health and Technical Departments of the Municipality

# COUNCIL RESOLUTION C220/16/09/2020/8TH OCM 2020

After discussions and on proposal by Cllr Titus, seconded by Cllr Asino, it was resolved that:

- 1. Council approves the rezoning of Erf 876, Keetmanshoop from "Residential 1" with a density of 1:600m<sup>2</sup> to "Residential 2" with a density of 1 dwelling unit per 100m<sup>2</sup>;
- 2. Council grant consent to Mr Megameno H.Z. Shikongo to start with the construction while the rezoning is in process and
- 3. Applicant to pay the applicable betterment fee.
- 4. Rule 44 to apply.

# ITEM 221

# TOWN PLANNING & CONTROL OVER ERVEN: REZONING OF ERF 1509, KEETMANSHOOP, C/O OF FOURTH AVENUE AND THIRD STREET FROM "RESIDENTIAL 1" WITH A DENSITY OF 1:750m<sup>2</sup> TO "BUSINESS 2" WITH A BULK FACTOR OF 1 AND CONSENT TO USE TO PROPERTY FOR BUSINESS PURPOSES WHILE THE REZONING IS IN PROCESS

Ref No: 15/4/1/1

# <u>Appointment</u>

An application was received from Plan Africa Planning Consulting CC on behalf of Mr Efraim and Loretta Fredericks for the rezoning of Erf 1509, Keetmanshoop from "Residential 1" to "Business 2" in order to establish a larger convenient store on such erf.



**Keetmanshoop Municipality** 

Private Bag 2125, Keetmanshoop, Namibia - Tel.: +264(63)221 211 - Fax: +264(63)223 065 E-mail: ceosec@keetmansmunicipality.org.na, 37 Hampie Plichta Avenue

Enquiries: G.D. Andries Tel no: +264 63 221242 gdandries@gmail.com 06th of October 2020

## **Urban Dynamics**

Town and Regional Planners P.O.Box 20837 Windhoek

Attention: Mr Johann Opperman

Dear Sir

RE: TOWN PLANNING AND CONTROL OVER ERVEN: TOWNSHIP ESTABLISHMENT -

- <u>SUBDIVISION OF THE REMAINDER OF KEETMANSHOOP TOWN AND</u>
   <u>TOWNLANDS NO.150 INTO PORTION A AND REMAINDER;</u>
- <u>NEED AND DESIRABILITY FOR TOWNSHIP ESTABLISHMENT ON PROPOSED</u>
   <u>PORTION A OF THE REMAINDER OF KEETMANSHOOP TOWN AND
   TOWNLANDS NO.150 AND
  </u>
- LAYOUT APPROVAL AND TOWNSHIP ESTABLISHMENT ON PROPOSED PORTION OF KEETMANSHOOP TOWN AND TOWNLANDS NO.150 – BRUKHAROS PROPER

REF: 15/4/1/1

Your application letter dated 25<sup>th</sup> of August 2020 bears reference.

Council at its Eight (2020/2021) Ordinary Council meeting held on 16<sup>th</sup> of September 2020 under item 224 resolved as follows that:

- 1) Council approves the Subdivision of the Remainder of Keetmanshoop Town and Townlands No.150 into Portion A and Remainder;
- Council approves the Need and Desirability for the Township Establishment on proposed Portion A of the Remainder of Keetmanshoop Town and Townlands No.150 and
- 3) Council approves the layout and township establishment on the proposed Portion of Keetmanshoop Town and Townlands No.150 Brukharos Proper

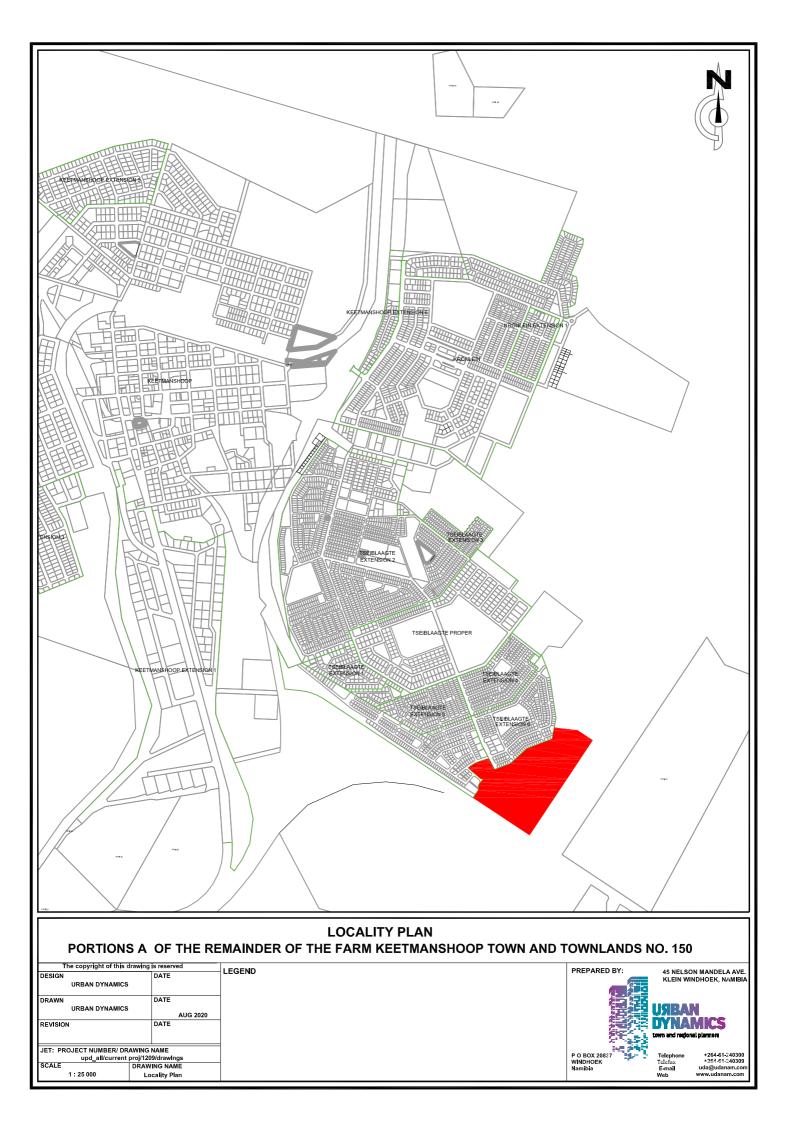
Trusting that you find above resolution considerate.

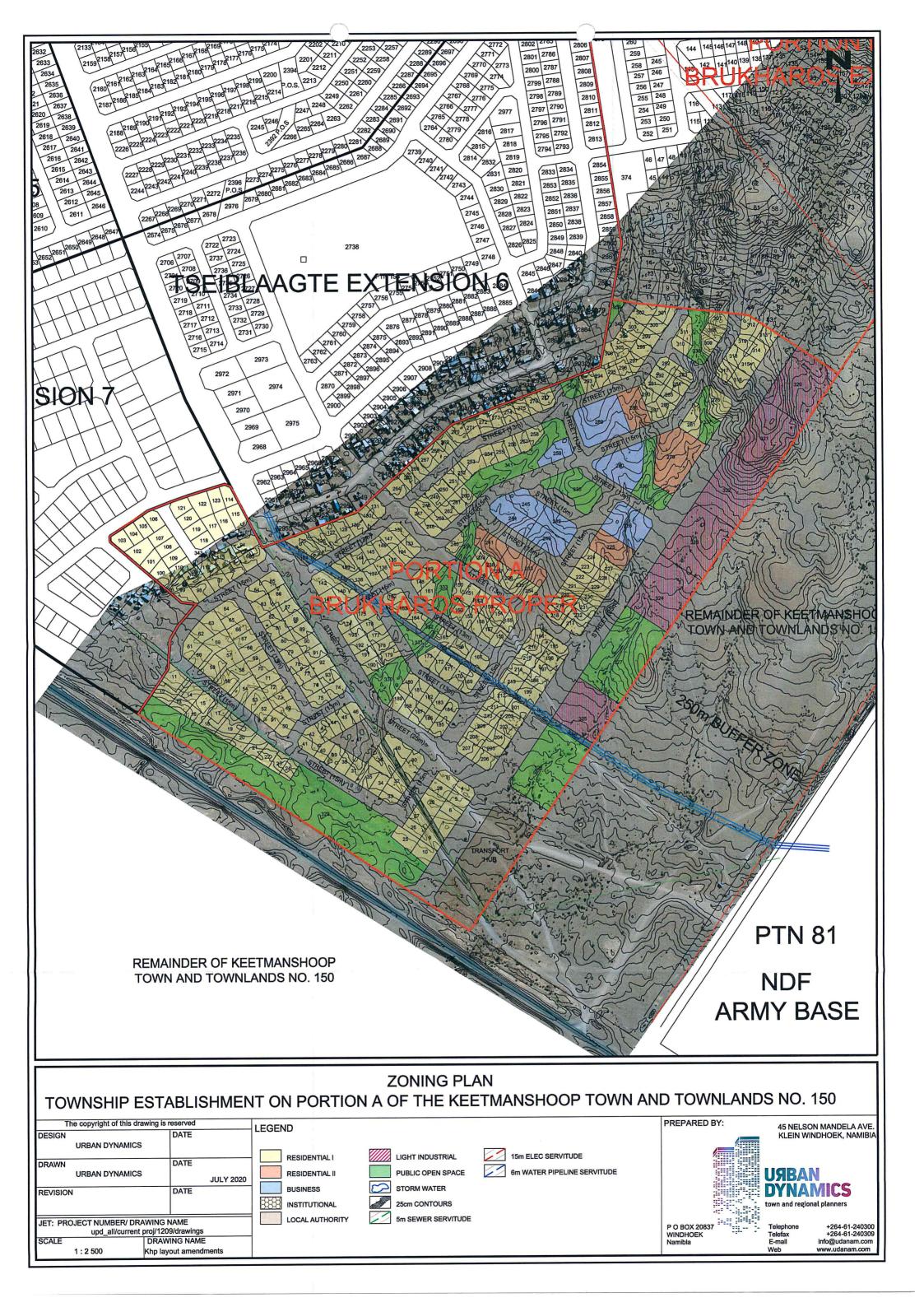
ours sincerely, 2021

Mr. Desmond Nicodemus Basson CHIEF EXECUTIVE OFFICER

# APPENDIX B

# LOCALITY PLAN





# APPENDIX C

# PUBLIC CONSULTATION PROCESS

# **APPENDIX C.1**

# NOTES AND ADVERTISEMENTS

# Thursday 19 November 2020 NEW ERA



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wish to apply, forward a .pdf of your CV and a letter explaining vour interest to jobs@ ccfnamibia.org Both positions require university degrees, computer literacy, and fluency in English. Email applications only: phone/ fax/mail applications will be ignored.

Closing dates: 4 December 2020 Registered as a non-profit organisation To be No.1 in TVET Training STUDY OPPORTUNITIES NATIONAL COURSES (NTA) NQF LEVEL 1 • Solar Equipment Installation & Maintenance. • Fire Fighting & Rescue Operations.

Solar Equipment Installation & Maintenance. Co Fire Fighting & Rescue Operations. Possible grants offered T&Cs Apply Day, Evening & Weekend Classes SMS/CELL 0812931140 /

SMS/CELL 08129311407 SMS ONLY 0811481404/ Email: info@namtvet.college.com or

danny@mweb.com.na Website: www. namtvetcollege.com development in NGOs of early childhood education • Fluent in written and spoken English and German is essential · Ability to coordinate and manage the partnership between Forderkis FaireKITA and Sustainable House Foundation Experience in managing international stakeholders to acquire funding in Namibia and Germany · Practical knowledge and understanding in Monitoring and Evaluation of projects in education for sustainable development • Knowledge of the major evaluation methodologies (e.g. qualitative, quantitative, mixed-method, and impact) and data collection and analysis methodologies · Working experience in establishing NGOs, recruitment of staff and designing volunteer strategies • Creating networks and partnerships between kindergartens in Namibia and stakeholders in Germany Ability to write reports and strategies in English and German
 Computer literacy in MS Office, Adobe Illustrator · Code B driver's license

> Email motivational letter, certified copy of passport, CV with references and educational transcript to: contact@thesustainablehouse.org.

Application deadline: 21 November 2020.

and a second a second a second second second

**CENTRE FOR GEOSCIENCES RESEARCH** cc has been appointed to undertake an Environmental Impact Assessment (EIA) in accordance with the Namibian Environmental Management Act (2007) and it Regulations (2012).

Rodger Kauta; Mining Claims- 72194, 72195, 72196,72197 & 72198 in Gobabis District Omaheke Region is proposing to undertake mining of zeolite group of mineral (Sepiolite).

The mining is being undertaken in line with the mining programme that has been submitted to the Ministry of Mines and Energy in the application for award of the mining claims. Interested and affected parties are encouraged to register via email in order to receive the Background Information Document (BID) to the email below within a period of fourteen days from the date of advert to the email below, and information on a possible arrangement for a Public meeting.

All comments and concerns should be submitted to CENTRE FOR GEOSCIENCES RESEARCH. Please contact:

Mr Mulife Siyambango CENTRE FOR GEOSCIENCES RESEARCH cc P.O. Box 31423 Pioneerspark Windhoek. Namibia. 128A Bach Street Tel: 061-307157/ Cell: 0856419511 Email: cegeornam@gmail.com



GEMS FIELD PRIVATE SCHOOL in Omusheshe-Ongwediva is still enrolling learners for pre-primary and Grade 1 up to 3 for the year 2021. Private boarding facilities available and it is home away from home for your child.

For more details kindly please contact: Monica +26481 3433 867 or +26481 263 5221 or simply visit the school website: www.gemsfield.net

If interested, please download the application form, complete it and email it before 15/12/2020 to: hezmhunduru@yahoo.com.



Tuma etumwalaka lyoye efupi nenge "sms" konomola ndji 99902, omanga inoo shanga etumwalaka lyoye, tameka noshitya Oshi opo ihe to landulithako "osms" yoye. Osms kehe ota yi gu N\$1.

# Ehangano lyaChina lya sindana po otendela yoomiliyona N\$530

... iilonga yetungo lyopate yokuumbugantu woshilongo

PANGELO lyaNamibia okwa li lya gandja okontalaka yotendela yoomiliyona N\$530 kehangano lyomatungo lya yama kepangelo lyaChina opo li tunge opate ndjoka ya thaanekwa tayi ka tungwa kuumbugantu woshilongo.

Oodokumente odhu ulike kutya ehangano lyokusila oshimpwiyu oopate moshilongo lyedhina Roads Authority (RA) okwa li lya gandja okontalaka kehangano lyedhina China Henan International Cooperation Group momasiku sho ga li 3 Novemba.

Otendela ndjoka oyo ku tunga opate yopokati kaTses naGochas.

Etokolo ndyoka inali nyanyukilwa komahangano ogendji gomoshilongo ngoka ga li ga ningi omaindilo giilonga mbyoka nelalakano kutya otaga vulu oku ka kala ga kaleka po oompito dhaaniilonga yawo.

"Eliko lyoshilongo otali nana nondatu ashike onkene natango otatu kutha mo oshimaliwa [moshilongo]," osho gumwe gomoshikondo shomatungo a popi ngaaka oshiwike sha zi ko. Ashike nande ongaaka, omahangano ogendji

ngoka ga li ga holola ohokwe yokupewa okontalaka ya tumbulwa pombanda natango ogAachina.

Omahangano ngoka ongaashi China State Construction, Zhongmei Engineering Group, China Jiangxi International, China Geo-Engineering Corporation, Synohydro and Otjomuise JV, osho wo Shanxi Mechanical JV.

Omahangano galwe natango ga li ga tala ngele genongo taga fe gongombe okupewa otendela ndjoka omwa kwa telwa WBHO Construction, Unik Construction, NCR Joint venture, Avic-**International Project** 

Engineering osho wo Shanxi Construction Investment Group.

Omukuluntuwiliki go-RA, Conrad Lutombi, mEtiyali okwa li a koleke kutya ehangano ndyoka lyedhina China Henan International Cooperation Group olyo lya li lya tothwa mo okupewa otendela ndjoka.

"Omolwonkalo nuunene woprojeka ndjoka, ehogololo okwa li lya ningwa okupitila momaindilo gopandondo yopaigwana kwi ikwatelelwa kokatendo 30 kOveta yokulanda Iipambele yepangelo," osho a popi ngaaka.

Omulandu ngoka gwegandjo lyompito komahangano gokondje yoshilongo, Lutombi, okwa popi kutya, ogwa pitika omahangano agehe kutya nee ogo moshilongo nenge ogo megumbo ga ninge omaindilo gotendela ndjoka, notashi ningwa mokutotha mo kwi ikwatelelwa kowino notseyo yi niwe komahangano ngoka.

"Ehangano ndyoka lya tothwa mo olya adha iipumbiwa ayihe lyo olyo natango lya li lya pewa iintsa yi li pombanda pethimbo lyokutotha mo, noli na ondando yi li pevi," osho Lutombi a popi ngaaka.

Pauvelele wa zi kuLutombi, otendela ndjoka oya li ya gandiwa kwi ikwatelelwa kompango nomilandu ndhoka dha li dha ziminwa pokati komahangano gaali, lyo-RA osho wo lyedhina KfW lyokOndowishi - ndyoka tali ka kwathela mokufuta okushilipaleke kutya omahangano gokondje yoshilongo ngoka ga pewa iilonga mbyoka oge na okukala ga gandja ontseyo komahangano gomoshilongo pethimbo lyiilonga yokutunga oprojeka yontumba," osho a popi ngaaka.

"Oshi li miipumbiwa kutya oopelesenda dhontumba dhofuto yokontalaka ndjoka odhi na okufutwa omahangano gopevi gomoshilongo ngoka taga ka pewa oshinakugwanithwa shiilongadhalwa iishona motendela ndjoka, nomahangano ngoka gopevi oge na okukala gAanamibia," osho a popi ngaaka.

Okwa li a gwedha po kutya omahangano gomoNamibia ngoka ge li moshikondo shomatungo nago onkene taga ka kala ge na mo oshitopolwa motendela ya tumbulwa pombanda notaga ka kala lela ga mona mo omauwanwa.

Monakuziwa onzonkundaneki ndjika oya li ya lopota kutya omahangano gAachina ngoka haga pewa ooteendela dhokutunga oopate ga longele pamwe nomahangano gomoshilongo, olundji ohaga ka thiga omahangano gomoshilongo mofogo.

Dhokutya ehangano lyo-RA ohali kala olundju tali thindile omahangano gomoshilongo konankondongolo nokukala owala tali gandja ootendela komahango gopondje yoshilongo, Lutombi okwa popi kutya ndhoka odha nakalindi.

"Uuna pu na euvathanotsokumwe nomahangano [taga yambidhidha mofuto yotendela], o-Roads Authority aluhe oyi na okukala yi iyutha komilandu nokoompango dhehangano ndyoka tali kwathele mokufuta - unene tuu ngele otashi ya komulandu ngoka kutya ompito [yokupewa okontalaka yontumba] nayi egulukile nomahangano gokiilongo yopondje,"

# CALL FOR PUBLIC PARTICIPATION FOR A COMMUNITY MEETING AT OPUWO

Notice is herewith given to interested and affected parties that application will be made to the Environmental Commissioner in terms of the Environmental Management Act 2007 (Act 2007) and the EIA Regulations (GN No. 30 of 6 February 2012 for the following:

osho a popi ngaaka. Lutombi okwa popi kutya RA aluhe ohayi shilipaleke kutya uuna otendela ya gandjwa kehangano lyopondje yoshilongo, omahangano gopevi meni lyoshilongo oga pewa mo oshitopolwa moprojeka ndjoka.

"Moprojeka ndjika, okontalaka oyoomiliyona N\$530, ashike oopelesenda dhi li po-20, ndhoka dhi thike poomiliyona N\$120, oshitopolwa nenge oshipambu shoka tashi ka pewa omahangano gomoshilongo," osho a popi ngaaka.

Ndjoka hayo ashike okontalaka onene yotango tayi ka kala yapewa ehangano lyoko-Beijing shaChina. MuJuni numvo onzokundaneki ndjika oya li ya kundaneke kutya epangelo lyaChina okwa li lya gandja omusholondondo gomadhina gomahangano ga pamba epangelo lyawo kepangelo lyaNamibia, opo ku vule okutothwa mo ehangano ndyoka tali ka pewa oshinakugwanithwa shotendela yokutunga nokunenepeka okapale kopaigwana ka-Hosea Kutako International Airport, koshimaliwa shoobiliyona dhi li po-N\$3,5. Oonzokundaneki pethimbo ndyoka okwa li dha popi kutya omukalelipo gwaChina moNamibia Zhang Yiming okwa li a ningi iigongi naanambelewa aakuluntu mepangelo kombinga yetulo miilonga lyokontalaka ndjoka yokutanununa okapale hoka koondhila.

Sho ali a pulwa kombinga yokontalaka ndjoka muJuni numvo, minista gwIimaliwa Iipumbu Shiimi okwa li a yanda omapulo.

Okwali a popi kutya uuyelele mboka wokutya epangelo lyaChina okwa li lya gandja epopilo lyomahangano ngoka taga vulu okupewa otendela ndjoka, ke wu shi. "Uuyelele wu li ngaaka mombelewa yandje natango inawu thika mo," osho a li a yamukula ngaaka.

## CALL FOR PUBLIC PARTICIPATION FOR A COMMUNITY MEETING AT **KEETMANSHOOP**

Notice is herewith given to interested and affected parties that application will be made to the Environmental Commissioner in terms of the Environmental Management Act 2007 (Act 7 of 2007) and the EIA Regulations (GN No. 30 of 6 February 2012 for the following:



#### **Conrad Lutombi**

otendela ndjoka. Nomeuvathanotsokumwe lyomahangano ngoka gaali okwa li kwa tokolwa opo ompito yaamboka ye na ohokwe yokutunga opate ndjoka, yi kale ya patulukila omahangano agahe kutya nee ogo kondje yoshilongo. "Osha pumbiwa ndi shi popye mpaka, kutya oshi li oshinakugwanithwa sho-Roads Authority

#### **OPUWO COMMUNITY MEETING: ON 3 DECEMBER 2020**

Venue: Orutjandja Etati; Time: 10:00; Proponent: Development Workshop of Namibia; Project Location: Portoin B of the Remainder of Farm Opuwo Townlands No. 1115 & on Portion Y of the Remainder of Opuwo Townlands No. 876. Project: Opuwo Township Establishment.

Registration as Interested and Affected Parties: I&AP's are invited to register to receive the background information document and/or submit their written comments/questions/concerns before 11 December 2020 Heidri Nel at:

USBAN

DYNAMICS

email: heidri@udanam.com and Tresia Amwaalwa at email: tre udanam.com Fax: 061 240 309, or Phone: 061 240 300

#### **KEETMANSHOOP COMMUNITY MEETING: ON 3 DECEMBER 2020**

Venue: Erf 2972, Tseiblaagte, Extension 6; Time: 18:00;

Proponent: Development Workshop of Namibia; Project Location: Keetmanshoop on Portion A of the Remainder of Keetmanshoop Town and Townlands No.150; Project: Establishment of Brukharos Proper.

**Registration as Interested and Affected** Parties: I&AP's are invited to register to receive the background information document and/or submit their written comments/questions/concerns before 11 December 2020 Heidri Nel at:

email: heidri@udanam.com and Allison Anderson at email: allison@udanam.com Fax: 061 240 309, or Phone: 061 240 300



# Thursday 12 November 2020 NEW ERA

C	LA	LS	SI			
Tel: (061 2	2080800	Fax (061)	220584	Email: L	.meroro@ne	pc.c
Services	° Services	Auction	Auction	Notice	Notice	N
Offered	Offered	Goods for sale	Goods for sale	Legal Notice	Legal Notice	Leg
CLASSIFIEDS Rates and Deadlines • Or avoid disappointment an advertisement not appearing on the date you wish, please book timeously • Classifieds smalls and notices: 12:00, two working days prior to placing • Cancellations and alterations: 16:00, two days	CHIEF FINANCIAL OFFICER We are looking for persons with the following requirements urgently: Requirements: * Grade 12 * Grade 12 * Multilingqualism – Spanish and English	ONGWEDIVA RE AUCTION 16 - 19 Websites:www Duly instructed by the B Agreement Act, Aucor Namibia	PO & SALVAGE NOVEMBER 2020	IN THE MAGISTRATE'S COURT FOR THE DISTRICT OF OSHAKATI HELD AT OSHAKATI CASE NO. 61 /2019 In the matter between: SIMSON AINGURA t/a AINGURA ATTORNEYS PLAINTIFF	CALL FOR PUBLI FOR A COMMUN KEETMA Notice is herewith given to inter application will be made to the in terms of the Environmental of 2007) and the EIA Regulativ 2012 for the following:	ITY MEETIN NSHOOP rested and aff Environment Management
before date of publication in writing only Notices	<ul> <li>* +- 10 years of experience in Accounting and Management</li> <li>* +- 10 years of Experience</li> </ul>	AUTOMOTIVE TRUCKS, BAKKIES, 4X4's & SUV's : 2016 ISUZU KB240 4X4	AUTOMOTIVE TRUCKS & SEDANS:	and TIMOTEUS NDEENGENAKO	KEETMANSHOOP CO ON 3 NOVE	The state of the s

(VAT Inclusive) Legal Notice N\$460.00 Lost Land Title N\$402.50 Liquor License N\$402.50 Name Change N\$402.50 Birthdays from N\$200.00 Death Notices from N\$200.00 Tombstone Unveiling from N\$200.00

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- animal science 4. At least 3 years experience in industry



NG AT affected parties that ental Commissioner ent Act 2007 (Act 7 . 30 of 6 February

Venue: Erf 2972, Tseiblaagte, Extension 6; Time: 18:00 Proponent: Development Workshop of Namibia; Project Location: Keetmanshoop on Porton A of the Remainder of Keetmanshoop Town and Townland No.150; Project: Establishment of Brukharos Proper.

Registration as Interested and Affected Parties: I&AP's are invited to register to receive the background information document and/or submit their written comments/questions/ concerns before 11 November 2020 Heidri Nel at: email: heidri@udanam.com and Allison Anderson at email allison@ udanam.com Fax: 061 240 309, or Phone:061 240 300



com.na

Notice

CIPATION

#### CALL FOR PUBLIC PARTICIPATION

OPUWO

Notice is herewith given to interested and affected parties that application will be made to the Environmental Commissioner in terms of the Environmental Management Act 2007 (Act 7 of 2007) and the EIA Regulations (GN No. 30 of 6 February 2012 for the following

# ON 3 NOVEMBER 2020

Venue: Opuwo Town Council, Boardroom; Time: 10:00;

Proponent: Development Workshop of Namibia; Project Location: Porton B of the Remainder of Farm Opuwo Townlands No. 1115 & on Porton Y of the Remainder of Opuwo Townlands No. 876.

Project: Opuwo Township Establishment.

Phone: 061 240 300

Registration as Interested and Affected Parties: I&AP's are invited to register to receive the background information document and/or submit their written comments/questions/ concerns before 11 November 2020 Heidri Nel at: email: heidri@udanam.com and Tresia Amv tresia@udanam.com Fax: 061 240 309, or



Please note that only shortlisted candidates who meet all of the requirements and qualifications will be contacted. No CVs and

in Financial reporting +- 5 years of Experience in Taxation +- 5 years of Experience

in International Reporting Standards (IFRS-EU)

+- 5 years of Experience in the Fishing Industry

Office Systems Proficient in Computerised

Accounting Computer literate and Good command of

**Business software** 

Degree in Business

Responsibilities: \* Financial Reports and

Accounting Auditing, Financial

statements

expenses

policies

Control

business

com

Management

Administration

responsible for

professional services

to the review, issuance of recommendations of

the key processes o the

Should you meet the above

requirements, please

send a resume and cover

letter, including all copies of relevant qualifications to

namvacancies2019@gmail.

Closing date: 11 NOVEMBER 2020

company Analyse markets for

\*

and reporting

Post Graduate Degree in

Auditing and Accounting

Monitoring Accounts and

Management of accounting and maintaining accounting

Analyse internal controls

Team management Preparing Activity Reports Financial Forecasts/

Projection Financial Management

Administration

Qualifications

and Aquaculture

Accounting Proficient in Microsoft

<b>DUTIES</b> 1. Able to run the farm         2. Able to do selection and	documentation will be returned.	CENTRE FOR GEOSCIENCES RESEARCH cc has been appointed to undertake an Environmental Impact Assessment (EIA) in accordance with the Namibian Environmental	13 <sup>th</sup> of SEPTEMBER 2019 the following goods will be sold in a sale in execution on	OVERSEA VACANCIES
breeding of animals 3. Knowledge of administering vaccines through three main	IA ACADEMY	Management Act (2007) and it Regulations (2012). Rodger Kauta; Mining Claims- 72194, 72195, 72196,72197	8 <sup>™</sup> of DECEMBER 2020 at Advanced Refrigeration, Main Road, Oshakati at 12h00.	NOW HIRING FOR 2021 OPENINGS UK/USA/CANADA/AUSTRALIA/DUBAI
avenues; subcutaneous, intramuscular and intravenous	2021 REGISTRATION	& 72198 in Gobabis District Omaheke Region is proposing to undertake mining of zeolite group of mineral (Sepiolite).	1 X LOUNGE SUITE 1 X FLAT SCREEN TV 1 X TV TABLE	ENGINEERS/MINERS/ MECHANICS/WELDERS
<ol> <li>Able to intervene in difficult animal birth</li> <li>Able to manage multiple</li> </ol>	NOW OPEN Grades: Pre-Primary to 7	The mining is being undertaken in line with the mining programme that has been submitted to the Ministry of Mines and Energy in the application for an end of the	1 X FRIDGE 1 X TABLE 1 X MICRO WAVE	CALL NOW TO BOOK YOUR SPACE 0027119726054/002784917253
enterprises namely; poultry, animal, crop and charcoal production	Grades: 8 to 11	and Energy in the application for award of the mining claims. Interested and affected parties are encouraged to register via email in order to receive the Background Information Document	1 X ELECTRIC STOVE 1 X FRIDGE	WEB www.careermarketingint.com Email infocareermarketing@telkomsa.net BOOKING FEE R2300-00
Interested individuals should send their CV to: venenatumfarm@gmail.com	Minimum: 8 Learners per Teacher	(BID) to the email below within a period of fourteen days from the date of advert to the email below, and information on a possible arrangement for a Public meeting.	TERMS OF SALE: VOETSTOOTS AND CASH	
FOR HIRE	AFFORDABLE FEES	All comments and concerns should be submitted to CENTRE FOR GEOSCIENCES RESEARCH.	TO THE HIGHEST BIDDER DATED at OSHAKATI this 22 <sup>ND</sup>	URGENTLY HIRING FOR UK/USA/ CANADA DRIVERS/SECURITY GUARI WELDERS
140G Motor Grader & 15 000 Litres Water	Call Mrs. Basson on 081 308 7930	Please contact:	day of SEPTEMBER 2020. AINGURA ATTORNEYS	CALL 0027119726054/002784917253 BOOKINGS NOW OPEN
tanker For hire Good rates	Email: iaprimary1 @gmail.com	Mr Mulife Siyambango CENTRE FOR GEOSCIENCES RESEARCH cc P.O. Box 31423 Pioneerspark	Legal Practitioners for Plaintiff <b>Per: S AINGURA</b> Room 205, Palms Complex	Email:infocareermarketing@telkomsa.net Web:www.careermarketingint.com
Call/sms 0813817391, App +263772515612	Or visit us at NG KERK, Redecker Str, Pionierspark	Windhoek. Namibia. 128A Bach Street Tel: 061-307157/ Cell: 0856419511 Email: cegeornam@gmail.com	Cnr of Robert Mugabe & Main Road OSHAKATI (Ref: S17211	BOOKING FEE R2500-00 GUARANTEED PLACEMENTS CLOSING DATE 30 NOV 2020

CALL	CALL FOR PUBLIC PARTICIPATION
P	FOR A COMMUNITY MEETING
Notice is herewith given to interested	nterested and affected parties that application will be made to the Environmental
Commissioner in terms of the Environmental Managoof 6 February 2012 for the following:	nvironmental Management Act 2007 (Act 7 of 2007) and the EIA Regulations (GN No. 30 ving:
FOR THE ESTABLISHMENT OF A	SHMENT OF A NEW TOWNSHIP WITHIN KEETMANSHOOP
Keetmanshoop Community Meeting:	feeting:
On: 3 December 2020 Venue: Erf 2972, Tseiblaagte, Extension 6	xtension 6
Proponent: Development Workshop of Namibia	shop of Namibia
Project Location: Keetmanshoop on Portion Project: Establishment of Brukharos Proper.	<b>Project Location:</b> Keetmanshoop on Portion A of the Remainder of Keetmanshoop Town and Townlands No.150 <b>Project:</b> Establishment of Brukharos Proper.
	Registration as Interested and Affected Parties:
	I&AP's are invited to register to receive the background information document and/or
	submit their written comments/questions/concerns before 11 December 2020
	Heidri Nel at email <u>heidri@udanam.com</u> and Allison Anderson at email
1 1	<u>allison@udanam.com</u> Fax: 061 240 309, or Phone: 061 240 300.

# APPENDIX C.2

# BACKGROUND INFORMATION DOCUMENT

# PROPOSED TOWNSHIP ESTABLISHMENT ON PORTION A OF THE REMAINDER OF KEETMANSHOOP TOWN AND TOWNLANDS NO. 150 WITHIN THE //KHARAS REGION

ENVIRONMENTAL ASSESSMENT (EA)

November 2020

# 1. INTRODUCTION

Development Workshop of Namibia (DWN) currently assist the Council with the provision of low-cost housing via a high-density residential township that caters for ultra low-income residents of Keetmanshoop.

As a result, DWN appointed Urban Dynamics Africa, to plan and obtain Environmental Clearance for the proposed Township Establishment on proposed Portion A of the Farm Keetmanshoop Town and Townlands No. 150 within the //Kharas Region.

# Table of Content

- 1. Introduction
- 2. How the EIA process works
- 3. Description of the proposed project
- 4. Anticipated benefits and impacts
- 5. How to become involved

This Background Information Document (BID) was prepared to provide interested and affected stakeholders with the background information and basic detail of the proposed project. It is further aimed at enabling the participation of all stakeholders who may feel that they have an interest or a stake in the impacts of the proposed intervention and explaining how such involvement can be achieved.

# 2. THE EA PROCESS

In terms of the provisions of the Environmental Management Act, the environmental practitioner is required to manage the assessment of the potential social and environmental impacts, conclude the application process and ensure that the general public and interested and affected parties are afforded the opportunity to comment on the proposed intervention. In order to fulfil these requirements, this EA preparation process includes the preparation of a database of possible interested and affected parties, keeping a record of any issue and response register, and circulating all draft and final documents to registered stakeholders.





1

Through this document, we aim to start engagement with stakeholders about the project and allow them to determine if they are interested in such engagement and if so to share their comments, issues and concerns with the EA team.

This BID is, therefore, also an invitation to all potential interested and affected parties to register as stakeholders. By doing so, you will receive the documentation related to the preparation of the EA as well as the draft and final Environmental Assessment and Environmental Management Plan. You will also be able to share comments, issues and concerns about the assessment and the management plan and comment on the reports and findings of the EA.

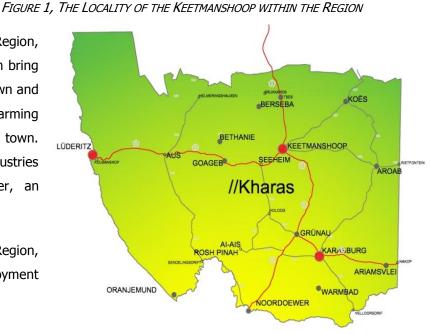
# 3. PROJECT DESCRIPTION

# **PROJECT RATIONALE**

Keetmanshoop is the administrative capital within the //Kharas Region. The town is approximately 500km south of the capital of Namibia and approximately 300km north of the Noordoewer border post and the largest service centre of the region. Keetmanshoop is located on the Trans-Oranje Corridor which links the Lüderitz harbour with the eastern provinces of South Africa, via railway and road. Accordingly, the town is situated on one of the busiest transportation roads (B1 Trunk Road) from South Africa linking Namibia to South Africa and the SADC region.

Being an administrative capital of the //Kharas Region, the town accommodates the line ministries which bring with it the settlement of employees within the town and buying power. These administrative and farming sectors together drive the economy of the town. Furthermore, the government sector with the industries that supports this sector is, for that matter, an important factor for the town.

Being the largest service centre of the Region, Keetmanshoop attracts a number of employment seeking residents from the region and beyond.



The demand for employment, however, exceeds that of the provision thereof depending on the type of employment sought. This increases the town's unemployment rate and its ultra low-income residents. This results into informal settlements being created without any formal services, and therefore not conducive to reside in. When townships are planned, not enough consideration is given to the ultra low-income residents of



the town. It is for this reason, DWN intends to provide an opportunity for ultra low-income residents also to obtain security of tenure.

The proposed development intends to, facilitate an adequate supply of residential properties, to serve the town's ultra low-income residents and to have service infrastructure installed. This creates a conducive environment for the residents to live in.

The proposed layout is situated within the southeastern part of the Keetmanshoop townlands and falls within the structure plan's high-density residential housing area. The proposed development is, therefore, favourable to the Keetmanshoop's future plans and in line with its structure plan/strategic thinking.

# LAY OF THE LAND

The project site is located at -26.6000834 E, 18.158655 S, on Portion A, within the Keetmanshoop Town and Townland No.150 in the //Kharas Region. The site is situated south of Tseiblaagte Ext. 6, west of the Namibia Defence Forst (NDF) Army Base and north of the B1 Trunk Road leading to Grünau. The project area measure approximately 27,6 ha

# **CURRENT LAND USE**

According to the Keetmanshoop Town Planning Scheme, the site is zoned "Undetermined".

A larger area of the site is vacant and accommodates service infrastructure. However, structures are accommodated along the northwestern boundary of the site

# KETMANSHOOP Portion A

FIGURE 2, THE LOCALITY OF THE SITE WITHIN KEETMANSHOOP

N

# WHAT ARE THE PLANNING OBJECTIVES?

- To establish a new township;
- To provide housing within Keetmanshoop and the //Kharas region;
- To ensure dignity through planning; and
- To preserve and conserve the natural environment as much as we can.



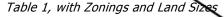
## THE PROPOSED LAYOUT

## New Land Use

The draft layout makes provision for 344 erven and alters the current zoning from undetermined to include Residential I-, Residential II-, Institutional-, Business 1-, Light Industrial, Local Authority and Public Open Spaces. The block's shapes and sizes are illustrated in the figure below. The table below provides a summary of the detailed land-use allocation for the portion.

STREET (25)

## FIGURE 3, PROPOSED DRAFT LAYOUT



	BRUK	HAROS PROPE	R	
ZONINGS	# ERVEN	M <sup>2</sup>	AVE SIZE (M <sup>2</sup> )	%
RESIDENTIAL I	299	106,377	356	38%
RESIDENTIAL II	5	4,627	925	2%
BUSINESS 1	8	10,924	1,366	4%
INSTITUTIONAL	1	1,717	1,717	1%
LOCAL AUTHORITY	9	10,049	1,117	4%
LIGHT INDUSTRIAL	6	22,225	3,704	8%
POS	15	36,196	2,413	13%
STREET PORTION	1	1,904	1,904	1%
STREET		82,429		30%
TOTAL	344	276,448		100%



one con

DU Development Workshop Namibia

Background Information Document: Township Establishment within Keetmanshoop

# **EXISTING INFRASTRUCTURE**

The sewerage system, electricity and water supply, which is currently available for the development, will not be sufficient for the development. Hence, new infrastructure service will be required.

# 4. ANTICIPATED BENEFITS AND IMPACTS

Some of the most important benefits of the project are the following:

- A layout that is functional and in line with the developments on the ground;
- Providing formal erven to the households and businesses currently settled on public open spaces and streets;
- Stimulation of economic development and creation of new development opportunities; and
- Employment creation during both the construction and operation phases of the project.

However, some environmental and social impacts can also occur and should be considered and evaluated. These include

- Relocation and compensation of households;
- The potential flooding of the smaller ephemeral rivers; and
- Potential solid waste pollution in the area during construction and operations phases.



# 5. HOW TO BECOME INVOLVED

Public Participation is an important part of the EIA process because it allows the public to obtain information about the proposed project.

- To become involved in this EIA, any interested or potentially affected party is herewith invited to register as a stakeholder of this project. This should be done by sending an e-mail with your detail to <u>heidri@udanam.com</u>.
- Once registered, you will receive invitations to all public events related to the EIA. You will also receive digital copies of all draft reports and final reports produced as a result of this EIA.
- 3. You will be invited to comment on any event or any report related to the EIA.
- 4. You will be informed of the decision by MET as soon as it's received.



# **CONTACT US**

Urban Dynamics Africa (PTY) Ltd., welcomes any comments and correspondence about this project.

Contact	t us as follows:		
Johann	Opperman	Allison	Anderson
Tel:	(+26461) 240300	Tel:	(+26461) 240300
e-mail:	johann@udanam.com	e-mail:	allison@udanam.com



# **APPENDIX C.3**

# COPY OF THE STAKEHOLDERS LIST

STAKEHOLDERS LIST FOR THE BRUKAROS EIA	AROS EIA						
Category	Name	Title	Name	Surname	Designation	Email	Telephone
REGIONAL COUNCIL	//Kharas Regional Council:	Mr.	Beatus Okeri	Kasete	Chief Regional Officer	b.kasete@karasrc.gov.na	(0)63 20 3800
REGIONAL COUNCIL		Mr.	Mervin	Kazapua		Mervin.Kazapua@mict.gov.na	(0)63 22 3220
INFRASTRUCTURE	NamWater Head Office	Mr.	Johannes K	Shigwedha	Head of Public Relations	info@namwater.com.na	(0)61 71 2277
GOVERNMENT MINISTRY /DEPARTMENT INSTITUTIONAL/ PARASTATAL	Minister of Defence and Veterans Affairs	Lt Col.	Petrus	Shilumbu	Head of Public Relations		
REGIONAL DIRECTORATES OF EDUCATION, ARTS AND CULTURE	//Kharas Regional Office : Keetmanshoop	Mr.	Johannes	//Hoeseb	Director:		(0)63 227 000
REGIONAL DIRECTORATES OF EDUCATION, ARTS AND CULTURE	Public Relations	Ms	Johanna	Absalom	Public Relations Officer	<u>Johanna. Absalom@moe. gov. na</u>	(0)61 293 3358
ROAD AUTHORITY	Road Authority	Mr.	ſ	Hendricks	Engineer	hendricksj@ra.org.na	
LOCAL AUTHORITY		Mr.	Gregorius	Andries	Town Planning Officer	gdandries@gmail.com	
DEVELOPMENT WORKSHOP NAMIBIA		Mr.	Peter	Shikalepo	Coordinator	pishikalepo@dw-namibia.org	
PRIVATE PERSON	Southern Communications	Ms.	Mia	Jacobus	Debtors/Creditors Clerk	southcom.backoffice@gmail.com	(0)63 222 514
LOCAL AUTHORITY	Keetmanshoop Municipality	Ms.	Maree	Smith	Mayor	bsingns@iway.na	
LOCAL AUTHORITY	Keetmanshoop Municipality	Ms.	Charlzitha	Cooper	Councillor		
LOCAL AUTHORITY	Keetmanshoop Municipality	Ms.	Easter	Isaak	Councillor	isaakeaster@gmail.com	
LOCAL AUTHORITY	Keetmanshoop Municipality	Mr	Sidney	Skakana	Councillor		
LOCAL AUTHORITY	Keetmanshoop Municipality	Mr.	Cas	Kisting	Councillor	kaskisting@gmail.com	
LOCAL AUTHORITY	Keetmanshoop Municipality	Mr.	Johannes	Nghidinwa	Councillor	johnsrpaha23@gmail.com	

# ANNEXURE C.4

# COMMUNITY MEETING MINUTES

# **KEETMANSHOOP**

# COMMUNITY MEETING

Date: 3 December 2020

# **AGENDA**

- 1. Welcoming and Introduction: Mr. G. Andries
- 2. Background of Project: Mr. Peter
- 3. Discuss the Environmental and Layout Design
- 4. Questions from community
- 5. Conclusion



*P* a g e / **1** *Minutes of the Community Meeting held at Keetmanshoop on the 3/12/2020* 





Date: 3 December 2020; Meeting held at Erf 2972, Extension 7, Tseiblaagte; Meeting comments at 16:00; and Stakeholders:

- Mr. Gregorius Andries
   Municipality of Keetmanshoop-Town Planning Officer;
- Ms. Allison Anderson Urban Dynamics Project Planner;
- Mr. Peter Shikalepo
   Development Workshop Namibia Coordinator; and
- Ms. Heidri Bindemann-Nel Urban Dynamics Environmental Practitioner.

## **Councillors:**

- The Mayor Ms. Mareé Smit;
- Councillor Ms. Charlzitha Cooper;
- Councillor Ms. Easter Isaak;
- Councillor Mr. Sidney Skakana;
- Councillor Mr. Cas Kisting; andCouncillor Mr. Johannes S Nghidinwa

A total of 49 community members attended the meeting on Thursday. The attendance register is attached to the minutes.

Ms. Anderson held the meeting in Afrikaans and Mr Shikalep translated parts of the meeting into Oshiwambo and English.

Ms. Bindemann-Nel took the meeting's minutes.

## Introduction:

Mr. Andries welcomed the community and the newly elected councillors to the meeting, and he introduced all the stakeholders.

## Background:

**Mr. Shikalepo** provides background on Development Workshop Namibia, and their projects within Namibia and Keetmanshoop.





## Project and Constrains

**Ms. Anderson** stated that Urban Dynamics shared in DWN's vision to provide formal erven (with selected services and land title) to communities on which they can build their own homes.

She explained that Urban Dynamics is currently conducting an environmental assessment for the site on which the layout is planned on. Within the assessment, they need to meet with the community to find out from them if here are any sensitive environmental issues regarding the project site.

**Ms. Anderson** used an A2 aerial image with the proposed layout on the image, to show the locality of planning constraints to the community.

She explained to the community that Urban Dynamics identified some constraints. Constraints includes potential service infrastructure, a 250m buffer zone and a small ephemeral river running from the above existing extension though to the site to the main road.

She also gave an overview of the layout and land use which is planned for the site.

## **QUESTIONS**

#### Stormwater:

**<u>Community Member A</u>** explained that there is a fountain on top of the hill behind Extension 6, Tseiblaagte. He indicated that the erf has an orchard of mango trees on it. He also wanted to know how the stormwater will impact the layout.

**Ms.** Anderson thanked the community member for the information regarding the fountain. She highlighted that she made use of KP Engineers site flood study when she planned the layout. She made provision for stormwater by consolidate the stream area within public open space within the layout.

**<u>Community Member B</u>** asked Ms. Anderson to show him where they were on the layout. She indicated on the layout where Erf 2972, Extension 7, Tseiblaagte was and where the project area is. Community members took part in identifying other existing erven or landmarks on the layout.

**<u>Community Member C</u>** asked her non-related questions which she responded to by saying that she could only answer questions related to the project.





P a g e | 3 Minutes of the Community Meeting held at Keetmanshoop on the 3/12/2020

#### Sewer line:

**<u>Councillor Skakana</u>** indicated that the current sewer line is overflowing lower down the network, and he wanted to know how this will be addressed or planned for within the planning phase.

**Ms. Anderson** explained that it is an engineering problem. Ms. Bindemann–Nel indicated that with the Environmental Assessment, Urban Dinamics also provides a Management Plan with mitigation measures to address issues.

#### **Ownership and Resettlement of Households**

**Community Member D** asked Ms Anderson, who will receive erven. Mr. Shikalepo explained that DWN and the MK, with the assistance of the Shack Dwellers Federation of Namibia, are currently in communication with the current residents. The latter live in the temporary structures on the site. DWN will register the current residents on a DWN database.

After the erven have been surveyed and registration took place, the residents as per database will receive titles to erven The new owners will have an option to pay for services of their preference. Only after full payment for the selected services will the new owner be allowed to build or live on the site.

Mr. Shikalepo translated this question and answer into English and Oshiwambo.

**<u>Councillor Skakana</u>** indicated that DWN and Urban Dynamics "*Praat uit twee monde*". As a new councillor of the Municipality of Keetmanshoop, he needed more background on what was explained to the community regarding the DWN's project. His colleagues agreed with him.

<u>Mr. Andries</u> explained to the councillors that DWN and the Municipality do have a Memorandum of Understanding between them, and as Ms. Bindemann-Nel indicated, the meeting was to gain information from the community regarding environmental aspects which can impact the layout

The meeting came to an end at 19:30 after the newly elected councillors indicated that they wish to familiarise themselves with the project. The Mayor, Ms. Smith, asked if they can come back with more questions by the 11<sup>th</sup> of December 2020, which the Urban Dynamics's team indicated that they are more than welcome to do so.

**<u>Ms. Bindemann-Nel</u>** thanked the councillors and the community for attending the meeting and for the environmental information of the site.



# ANNEXURE C.5:

# NOTICE

CALL	CALL FOR PUBLIC PARTICIPATION
P	FOR A COMMUNITY MEETING
Notice is herewith given to interested	nterested and affected parties that application will be made to the Environmental
Commissioner in terms of the Environmental Managor of 6 February 2012 for the following:	vironmental Management Act 2007 (Act 7 of 2007) and the EIA Regulations (GN No. 30 /ing:
FOR THE ESTABLISHMENT OF A	SHMENT OF A NEW TOWNSHIP WITHIN KEETMANSHOOP
Keetmanshoop Community Meeting:	feeting:
On: 3 December 2020 Venue: Erf 2972, Tseiblaagte, Extension 6	xtension 6
Proponent: Development Workshop of Namibia	shop of Namibia
Project Location: Keetmanshoop on Portion Project: Establishment of Brukharos Proper.	<b>Project Location:</b> Keetmanshoop on Portion A of the Remainder of Keetmanshoop Town and Townlands No.150 <b>Project:</b> Establishment of Brukharos Proper.
	Registration as Interested and Affected Parties:
	I&AP's are invited to register to receive the background information document and/or
	submit their written comments/questions/concerns before 11 December 2020
	Heidri Nel at email <u>heidri@udanam.com</u> and Allison Anderson at email
1 1	<u>allison@udanam.com</u> Fax: 061 240 309, or Phone: 061 240 300.

# ANNEXURE D

# MEETING WITH THE ENVIRONMENTAL COMMISSIONER

# Minutes of NITRP meeting held with Environmental Commissioner: 23 July 2012

Attendances: Mr Theo Nghitila - Environmental Commissioner - MET Dr Freddy Sikabongo - MET Mr Pieter Genis - MRLGHRD Mrs Petrine Moongela - City of Windhoek Mr Ernst Simon - Urban Dynamics Africa Mr Edwin Thornley - President of NITRP

The meeting commenced at 14:15 at the board room of the Ministry of Environment and Tourism

The meeting was opened by the Environmental Commissioner, Mr. Theo Nghitila by welcoming all attendants. He started by acknowledging that there are currently many problems experienced with the List of Activities and Regulations within the Environmental Management Act. He indicated that his door is open for discussions and constructive criticism if acceptable solutions could be found. He stated that the Environmental Management Act was not meant to stop or to delay development, but to guide development to be done in a sustainable manner within the natural environment. Implementation of the Act would be a learning process and MET does not want to have a negative perception from stakeholders.

The floor was handed over to Mr Ernst Simon.

Mr Simon thanked the Commissioner for his opening statement and indicated his appreciation towards the positive approach MET has taken with regard to the concerns of stakeholders. He indicated that the meeting was arranged under the auspices of the Namibian Institute of Town and Regional Planners and introduced each person attending the meeting. Mr. Simon was asked by the NITRP to facilitate the meeting. Mr Edwin Thornley is current President of the NITRP, Mr Pieter Genis represented the Ministry of Regional and Local Government Housing and Rural Development, and Mrs. Petrine Moongela represented the City of Windhoek and is also a member of the NITRP Board.

He indicated that the Town and Regional Planning Profession has experience in the Law making exercise and that the Profession understands the predicament currently being faced by MET as far as regulations are concerned. One can never expect to get Regulations one hundred percent right the first time and it is always a process of seeing how it works in practice, identifying shortcomings and then amending it to make it work effectively with all the stakeholders involved.

He categorically stated that the Town Planning Profession fully supports the Environmental Management Act as well as the concept of Sustainable Development and everything that the Environmental Management Act stands for. However, as pointed out by the Commissioner, the Profession has certain immediate problems with the List of Activities in the Regulations. Since the Commissioner has been on NAMPAB before he knows exactly how the process works with planning proposals and how cumbersome the process is. With the addition of the provisions of the Environmental Act, this process could now become even longer and time consuming with the resultant effect of delaying development.

He also indicated that he would like to discuss the impacts of the Listed of Activities and some aspects of the Regulations as far as Town and Regional Planning processes are concerned. He added that he wanted to share the problems experienced to give the Commissioner an idea of the problems the profession are dealing with and to see if some solutions could be found. A presentation to this effect was prepared, but it was understood that it would not be necessary to deal with all the detail at this stage.

Mr Simon indicated that he would like to discuss the process for obtaining a Clearance Certificate to confirm that the process is understood correctly. He also indicated that the Commissioner already had a clear understanding of the problems the Profession is facing with the Listed Activities and that he would not go into

detail regarding each listed activity. Perhaps the most important thing is to explore solutions and map the way forward in terms of the provisions of the Act and especially the regulations.

He presented a diagram showing the process for obtaining a Clearance Certificate which was extracted from the Guidelines prepared in 2008 after the promulgation of the Act. It is understood that a person who would want to have an Environmental Clearance Certificate would apply to the Environmental Commissioner for an such clearance certificate. The Commissioner would then screen the application and decide whether a scoping or full assessment would be required or not.

However, a problem which needed to be discussed was that the process within the Regulations has changed compared to what was indicated in the Guidelines. The Regulations indicated that a scoping report is now required as part of the application and must be submitted before the Commissioner takes a decision.

For example where an application was to be submitted for a rezoning from Residential to Office, a full scoping report would have to be compiled and submitted to MET for screening after which a decision would be made on whether a clearance can be issued or if a full environmental assessment would be required. This was a concern for him as he indicated that a normal rezoning from "Single Residential" to "Office" or "Business" would potentially have no environmental impact at all. It was not clear why a full scoping process would have to be followed for such an application. He indicated that through a planning or screening report it would be possible to assess and determine whether it would be necessary to conduct a scoping or EIA assessment.

He asked the Commissioner to confirm whether the abovementioned process as indicated in the Regulations was understood correctly by him.

The Commissioner responded by confirming that Mr Simon understood the process correctly and that the process as outlined in the Regulations will be the process applying in practical terms. An applicant or proponent intending to obtain a Clearance Certificate must first do a full scoping before the Commissioner will make a decision on whether a full EIA is required or not. He further indicated that this process would be the norm for large scaled activities which would normally have a significant impact on the environment. The activities as referred to by Mr Simon were regarded as "*small works*" by the Commissioner.

He indicated that there are many activities which are similar to small scale rezonings inclusive of small agricultural activities or projects which are already occurring within existing urban areas or mahango fields. The processes for these activities are straight forward. The process of developing the Regulations was done in such a manner as to allow for a competent authority to be established. In a process which concerns agriculture, it would be contradictory to clear an activity by MET if the Ministry of Agriculture does not support that activity. For small scale activities such a rezoning within an existing build environment which has no environmental impact, it would be an administrative nightmare to deal with all the rezoning applications.

He further indicated that MET would not merely leave the decision of such applications in the hands of Municipalities. He indicated that he advised the City of Windhoek to apply for exemption to some of the listed activities. MET would then consider giving exemption to those activities which will have no environmental impact. However, a rezoning to Industrial would be regarded as a different story and would not be exempted easily. All Local Authorities will have to apply to the Commissioner's office to receive an exemption of not more than three years for certain listed activities. However, certain conditions will be attached to these exemptions to which Local Authorities will have to comply.

He indicated that MET will implement the Act and will not move backwards in the process by trying to avoid making mistakes. They are currently in the process of designing a strategy to disseminate and to implement the Act and to exclude minor activities which do not require a full EIA. This will be achieved through consultative workshops and meetings within MET which will be followed by a Road Show where the implications of the Act will be explained to Line Ministries, Municipalities, Local and Regional Authorities. This strategy should address many concerns which were already presented at the meeting.

Activities such as waste management and disposal sites will require a mandatory EIA process and will not be exempted from the list of activities. Rezoning from residential to industrial will have certain conditions since

the scale of the activity will play a role. If a land owner living in Katutura with a large erf wants to develop industrial activities on that property and the City of Windhoek approves the rezoning then it will reflect negatively on the Commissioner. So a Municipality or Local and Regional Authority will have to apply to the Commissioner for exemption for these types of activities. However, rezoning from residential to office or business will be dealt directly by the Local Authority if exemption is obtained from MET.

Mr Simon suggested that rezoning to "commercial" could be completely removed from the list of activities.

The Commissioner responded that it might be possible to remove it, but the Ministry opted to have it included, but exemption could just be given. The Municipality would then handle it within their own area of jurisdiction. There should be different categories.

Mr Simon indicated his appreciation to the Commissioner and added that the fact that there are no categorisations in terms of Clause 56 (1) (d1) of the Act is one of the key problems. Although these activities are listed, for example a hotel, some erven within the CBD is already zoned for many years to accommodate a hotel like the Hilton Hotel. He added that he could not see why an Environmental Impact Assessment or even a Clearance Certificate would be required if a person wants to construct a hotel on a property which already makes provision for it. However, he indicated that should a lodge be constructed within the Groot Berg then it would be a completely different situation.

The Commissioner agreed that it would be a different situation. He further indicated that one cannot expect every detail to be included into the Environmental Management Act. If the situation is already within a build environment obviously it would be different. He indicated that most of us have done and understand that an EIA is a process administered by people which is dependent on the consultation with every party involved. So the Act would not include every detail. When it comes to the construction of a hotel, the screening process will indicate the location. An application would be registered at MET with an application form which should indicate the exact position or location of the hotel. It if is situated within the middle of a town then there would be no need for an EIA. However, if a land owner intends to demolish his house to build a hotel then the Municipality needs to be happy with that first.

Mr Simon added that the pressure on MET would also be high. If one considers the number of rezoning occurring each day in Windhoek alone, MET would probably receive three applications a day. It would flood the system to such an extent that the office of the Commissioner would hardly be able to keep their heads above water.

The commissioner indicated that is exactly why the exemption will be granted, which is not an unusual thing. In this case there will be exemption of three years for those activities. It will be up to a Municipality, Local or Regional Authority to have a valid exemption from these activities. He acknowledged that they have a lot of explanation to do and at the moment they are preparing their information material with regard to explaining how this Legislation and Regulations will be applied.

Mr Simon commented on the issue of making Regulations by indicating that there is also a provision in the Act that any person may make representation to the Minister as to what should be added or removed from the list together with the rationale behind such proposals. From the Town Planning Profession a real option would be to look at some of these regulations, motivate it thoroughly, and make a presentation to the Commissioner to the amendment of the Regulations.

He indicated that he would not discuss specific activities in the list, because one would have to sit and talk about it specifically for a long time. He then referred to two important issues. The first is the listing of "any construction or activities within a catchment area". He explained that it actually means that 'nothing' can happen without a clearance certificate, because every activity that occurs within Namibia, occurs within some or other catchment area. So by just looking at that sentence it encompasses every possible activity that happens within Namibia.

The Commissioner enquired whether there is any definition given of the catchment area?

Mr Simon responded by saying unfortunately not and that the lack of adequate definitions is one of the problems which needs to be dealt with separately.

The second issue is Township Establishment, which is not mentioned as a listed activity. He indicated that township establishment is perhaps one of the most important activities which need to be listed. He suggested that the Commissioner, in consultation with the planning profession, should possibly review the list of activities and regulations from a planning perspective to try and integrate the environmental requirements in a logical way into the whole planning process so that the two processes are actually coordinated properly as provided for in the Act. According to clause 11 of the regulations, the Minister of Environment and Tourism should, in writing, communicate with the competent authority (who in this case is the Ministry of Regional Local Government, Housing and Rural Development) to decide on how to deal with the different Acts so that they work efficiently with each other.

The Commissioner indicated his appreciation that these matters were mentioned. He further indicated that the current Legislation will bring many developments or activities to a hold. However, implementation of the Act will be a learning process and if an argument or proposal for an amendment is brought forward then MET will consider that the Act makes provision for it. If activities are listed which are not possible, such as catchment areas, then they will be extracted or amended to perfect the Legislation. The Act is there to regulate activities and for MET to facilitate the process of obtaining a Clearance Certificate. The doors of MET are still open for discussions since MET must implement the Legislation.

He referred to an example of pesticides or pest control which is one of the listed activities which does not indicate to what scale it should be implemented. He mentioned that if a person wishes to buy a pesticide for home or garden use then it would not be necessary to first obtain a clearance certificate. He also indicated that he would not expect people to apply for a clearance certificate for such a small scale activity.

Mr Simon referred to the issue of definitions and that many of the listed activities are not defined which makes it extremely difficult to interpret. He used an example that "Resettlement Scheme" is not defined. He further indicated that he spoke to Dr. Pieter Tarr and some people within the Environmental Profession. He stated that different people had different opinions about the meaning of a resettlement scheme.

He also referred to "Bulk Services" and asked what was intended when talking about bulk services? He indicated that "Commercial Zonings" is a zoning which does not exist within the Planning Legislations and that these references should be properly defined otherwise it would be impossible to interpret the Environmental Management Act, List of Activities or Regulations.

The Commissioner responded that the Environmental Management Act makes provision to work in conformity with other Laws. He indicated that when a "Resettlement Scheme" is defined in another Act, then the Environmental Management Act will assume the same definition. It was for this reason that one would not expect a definition for "Resettlement Scheme" within the Environmental Management Act.

He indicated that MET would be implementing the Act as it is and that they know that there are many amendments which would urgently need to be made. He added by saying that they "are talking the same language".

He once again indicated his appreciation for pointing out some of the obvious issues which needs urgent attention. He also indicated that his Ministry will not amend the Act, List of Activities or Regulations without first implementing them. When the Act was drafted, it exchanged many hands, and it is not simply a Law which was drafted by one person only. Some things are the way they should be and they should not be amended a month after it was Gazetted. The Act will be perfected to become one of the best Laws within the Environmental Sector and it will be reflective of what our situation is and what Namibians want.

He stated further that some issues were also removed from the Act such as the provision to regulate an Environmental Assessment Practitioner. It is a necessary issue which would be included later, but which would not be possible to implement at this moment. There are many examples which could be discussed such as "pesticides", but a lot of time would be wasted. When it comes to a scale such a Tandjies Koppe, then

obviously it would become applicable. MET will not allow them to get away with such a large scale activity, but

He added that the Regulations do not indicate to what scale "Charcoal Production" requires a Clearance Certificate. Many commercial farmers are fighting bush encroachment and many of them are benefitting from charcoal production. If those farmers require a clearance certificate, then MET will not deny them one if they have not done public consultation. MET will provide the clearance certificate provided that the Ministry of Agriculture issued a letter to MET allowing the activity. This is what it happening on the ground by implementing the Act and MET is dictated by reality and learning from the process.

Dr Sikabonga indicated that some of the smaller scoping and EIA processes were included in the List of Activities for the sake of public consultation. Before an activity takes place, the proponent should consult MET or certain affected parties on the proposed activity. An example was used for overhead electricity lines. Even though the distance may be short, the fact that it passes over an existing cemetery or grave yard becomes a problem for the community or residents. Another example is that in towns you would find some structures within catchment areas or river beds. When it rains the water will backup into the areas and cause more flooded areas. These are some of the areas where MET and the private sector should be conscious about.

Mr Simon indicated that he fully agreed with this statement and indicated that another problem exists for example "Flood Lines". He mentioned that the regulations only state "flood lines" without a proper definition. He also enquired what was meant with flood lines and whether it refers to a 5 year flood line, 10 years, 50 years or a 100 year flood line?

He indicated that it becomes impossible for Town and Regional Planners to work within the framework of a flood line if it is not defined properly as a guideline.

Mr Genis stated that the Profession is under tremendous pressure, in terms of the process of getting new Townships and rezonings approved within a reasonable time. The Minister of Regional and Local Government, Housing and Rural Development wants an application to be approved within 6 months. He further indicated that the Namibian Planning Advisory Board and Townships Board currently do not recommend applications for approval by the Minister of RLGHRD since they are bound by the new Regulations and List of Activities which first require a clearance certificate for certain activities.

He requested the advice from the Commissioner on behalf of the MRLGHRD in relation to the process which should be followed. How should Townships Board and NAMPAB deal with applications within the short term, before they come to the point where the regulations will be streamlined? He indicated that the current process takes about 2-3 years before it reaches a final decision and by referring an application back to the consultants to obtain a clearance would be another addition to the time frames.

Mr Simon added that a preparatory meeting was held during the morning with some Town and Regional Planning Consultants and, from a consultant's point of view, many projects such as Township Establishments has taken up to two years from the starting date. This involved community consultation, taking of aerial photography, base mapping, actual planning design, obtaining approval from the Local or Regional Authority and even NAMPAB. At the moment there are many applications within the final stage which was in process before the Regulations came into force. Those projects have all been approved by Local Authorities and Regional Councils. Many of these would have to go back to their Local Authorities requesting an EIA before they would be approved by NAMPAB or Townships Board. These Local Authorities would not have budgeted for an EIA process and it would take another 6 months in addition to what they already have. The Local Authorities are asking the Planning Profession what they should do.

The Commissioner responded by saying that he did not understand why Local Authorities should be worried about these projects, even going to the extent of referring to the costs, especially small municipalities. He indicated that if the process is already initiated and completed to the stage of seeking approval from NAMPAB or Townships Board, then there should not be a problem with it. He indicated that there is a provision in the Act which will exempt these projects as long as proper justification is provided for.

He suggested that the planning process could be done parallel to include a SEA on the plans which would be a cheaper exercise. A request should be submitted to the Minster or to the Commissioner for exemption to those projects which are already at an advanced stage. This should be done by writing a letter within the provisions of the Act and justifying the situation that these projects should be exempted.

Mr Simon responded by indicating that the Institute could write such a letter asking for exemption for everything that has already been approved by Local and Regional Councils before the Regulations came into effect.

The Commissioner agreed to this statement and indicated that it is the concern of the stakeholders which is a reality. The purpose of the Act is to protect the environment and if there is no significant impact on the environment then one cannot enforce something which is undue. The objectives of the Act are clear.

Mr Simon indicated that this statement was clear and thanked the Commissioner for his flexibility.

Dr Sikabonga added that MET currently experienced situations where most of the proponents would approach their office and demand a solution within an unreasonable timeframe.

Mr Simon agreed that it would be unfair to expect that from MET and suggested that the Commissioner should have a meeting with the Chairpersons of Townships Board and NAMPAB to explain the procedures and verify that certain activities and projects will be exempted. He added that both Townships Board and NAMPAB see themselves as the competent authority and they do not know what they are allowed to do or what they may allow or not. As a result both Boards just block applications by requesting clearance certificates to be obtained. He indicated that the Act refers to coordination between various Legislations and if some sort of agreement could be reached to allow applications to be approved which were ongoing before the Regulations came into effect. This would then allow for a fresh start and all new projects which started after the Regulations came into effect would be subject to the Scoping and EIA process.

The Commissioner indicated that they would only have to engage all relevant bodies of State. He also indicated that even though their mandate increased, the number of staff within his office remained the same even after the Act was Gazetted. He added that his office only interviewed the positions for the Deputy Commissioner and a senior Deputy Director which should be filled soon along with two other senior positions within the department. He requested that even though the stakeholders are not to blame they should at least be patient with the Ministry since they will coordinate the process as efficiently as possible. They will sit around one table to amend the Act to sort out any problems. He also stated that he welcomed constructive criticism which would help facilitate the process to enable the Act to ensure sustainable development within all the listed activities. The Ministry of Environment and Tourism would not block all development as many people tend to believe, but larger companies such as chemical factories will be regulated.

He stated that he is pleased to see how many companies and stakeholders are forthcoming towards the process. Especially within the Mining Sector which is more proactive and setting a good trend towards implementation of the Act and Regulations. The Act has also given people and residents within a city or town more rights to be heard on development intentions. MET has been flooded by many phone calls of people complaining which has become too much for his office to handle. Even this principle of "not in my back yard" has become a reality after being Gazetted. He indicated that their doors are open and they will act accordingly on the proposals to allow approval of applications at NAMPAB immediately so that they are not seen within the industry as delaying development or the process.

Mr Genis suggested that the Ministry of Regional and Local Government, Housing and Rural Development should write a letter to the Ministry of Environment and Tourism highlighting some of the issues discussed so that the two Ministries could come together with suggestions on how to deal with it.

The Commissioner agreed with Mr Genis to write the letter so that his office can see how they could expedite to the point as not to block or delay anything which have already been approved. If Oshikuku is already in the process of being proclaimed after all the approvals, then it should not suddenly be delayed because of this new Act. There should be a way around it as provided for within the Act.

He indicated that he received a similar request form the City of Windhoek in the form of a letter. The City of Windhoek had discussions with MET regarding certain exemptions and it was agreed to write a letter to MET to request such exemptions.

Mrs Moongela indicated that one of the main confusions came in when Townships Board and NAMPAB only heard about the Act and saw which activities could be allowed and which activities should require a clearance certificate. Without consulting any of the stakeholders, they just referred the applications back to first obtain a clearance certificate. She indicated that it might be due to a lack of communication and understanding amongst stakeholders which should be solved by writing a letter and highlighting the issues which would not require a clearance certificate, such as rezoning within the buildup environment.

The Commissioner responded by saying that rezoning will be exempted and this exemption would not be given to individuals but rather to Local Authorities who should be accountable for it. Implementation of the Act has identified many situations which were previously not known by many people. Where a small community of women received enough funding to start a small scale garden proposal, they suddenly required a clearance certificate because they intended to irrigate their fields. He indicated that his office could see that the garden was already located within their existing fields and they would not be using and chemicals so they received the go ahead. He indicated that it was only someone who interpreted the Act wrong. He also indicated that his office were identifying larger activities which had worse environmental impacts such as boats dumping waste within the rivers which was not acceptable and was dealt with strictly.

Mr Simon stated that he fully agreed with the Commissioner and suggested that the Regulations should also be thought through more thoroughly. He explained by saying that the Regulations required an Environmental Practitioner to be appointed within the process. Should a person living in Katutura intend to rezone his erf from residential to business, then he already had to pay the Planning fees involved in the process and now he would be expected to appoint an Environmental Practitioner to do the Scoping report as well. At the end the whole process would become unaffordable to the poorest people as was the case with the group of women who intended to start their little agriculture project. Small and insignificant projects should be judged on the basis of a simple application to the Environmental Commissioner who could then decide if a scoping study or EIA is required.

The Commissioner responded that the Municipality would have an exemption in that case and it would not be a problem. The person would be able to apply for his rezoning.

Mr Thornley requested clarification on which Local Authorities would be able to apply for exemption. Would it be only selected Municipalities and Local Authorities or would all Local Authorities within Namibia be able to apply for exemptions?

The Commissioner responded by saying that every Local Authority who applied to the Commissioner would be able to obtain exemption and that it would be their own responsibility to obtain such exemption. They should write a letter to MET to apply for it since it will not be issued automatically. Should they not apply for exemption, then they would be in serious trouble. He stated that it would be important for his office to reach out to each Local Authority and inform them of the situation. He added that the Act would require each Local Authority or Institution to employ an Environmental Officer whom would work closely with MET. This should ensure that the Act and Regulations would be implemented correctly and that everyone would know exactly what the Law requires.

He referred to an example which should be targeted by these officers such as the quarries or borrow pits from road construction which are visible along the road when driving to the North. He indicated that some of those borrow pits were poorly excavated and some became an eyesore while others became a danger for people and livestock. There are also cases where those borrow pits became dumping sites, which MET does not want. It would take a long time before MET would have a sufficient pollution and waste management system in place and as a result the Clause for registering dumping and waste management sites were included in the Act. This should at least assist MET to control the situation on the ground and manage our waste accordingly.

Mr Simon agreed to the statement and suggested that community consultation should also be implemented when it come to those borrow pits. He explained that previous Environmental Impact Assessments conducted for road construction projects revealed that many communities requested these borrow pits to remain behind since they become important sources for water and fish. He also added that there should be a compromise between the environmental and social aspects.

He summarized the discussions by commending the flexibility and preparedness of the Commissioner and MET to address the immediate problems experienced by the planners. He conculded that a meeting should be held with the Chairpersons of Townships Board and NAMPAB to clarify the requirements of the MET. He also mentioned that small scale activities would be exempted by writing a letter to MET indicating which applications would be adequate to deal without a screening process to determine whether a Scoping or EIA would be required or not.

He suggested that the Institute should prepare a submission to the Commissioner on the main problems as well as suggest solutions to these problems. This would highlight the concerns and potential solutions as provided for in the Act. He indicated that the office of the Commissioner could deal with the letter as they see fit, but the potential solutions as suggested could be used by the Ministry in the process of fine tuning the regulations.

The Commissioner indicated that he would be happy to receive such a submission.

Mr Thornley added that all projects which have been already approved by Local Authorities prior to the enforcement of the List of Activities and Regulations should also be exempted in general.

Mr Simon agreed and indicated that it should be included under the exemption procedure. He enquired from the Commissioner whether the Institute, the MRLGHRD, Townships Board or NAMPAB should apply to MET for the exemptions of already approved projects?

The Commissioner responded by indicating that it should be from the Ministry of Regional and Local Government, Housing and Rural Development.

Mr Simon agreed to this statement.

The Commissioner indicated that should the MRLGHRD not agree to the proposals, then they would write a letter indicating that it would not be possible. He used and example that if the Ministry of Fisheries wrote a letter to MET which were in contradiction to what was allowed, then it would be difficult for MET to allow such an action. The same would apply to the MRLGHRD, if they were satisfied with the proposal then MET would accept it also. The Act bounds everyone to the process and should something go wrong then MET could still implement the Act to rectify it. He indicated that this should be dealt with as soon as possible in order to speed up the process and to avoid any further delays.

Mr Simon indicated that he agreed with the Commissioner and stated that the letters should reach the Commissioner as soon as possible.

The Commissioner enquired whether there were any other issues which needed to be discussed after which he thanked everyone attending the meeting for their time and effort. He indicated that the meeting was open and constructive and that the Act would not only be used to stop or delay development, but that it will be used to protect the environment which is the ultimate objective. He indicated that he would appreciate any suggestions in writing which would be submitted to his office. He stated that his office would consider the proposals, exclusions and amendments as provided for within the Act.

He indicated that everything as discussed was provided for in the Act and this should be used by the stakeholders. However, he stated that although his office is open for discussions, MET would fist implement the Act to point out where things are not working well and then they would address those issues.

Mr Simon concluded by thanking the Commissioner and Dr Sikabonga for their time and cooperation and indicated that it was much appreciated.

The Commissioner concluded that he was looking forward to continued cooperation within the future which would improve the Act. He added that he would remain open for discussions and would remain transparent throughout the process. He requested, however, that people should understand that they are still in the process of setting up the department and their capacity was limited to only a few people.

The meeting ended at 15h00.

# ANNEXURE E

# KP'S FLOOD STUDY REPORT SEP 2020

Prepared for **Development Workshop Namibia** 18 Nachtigal Street, Windhoek Windhoek Namibia, 9000

Prepared by **Knight Piésold Consulting (Pty) Ltd.** 43 c/o of Hugo Hahn and Nelson Mandela Klein Windhoek Windhoek, Namibia PO Box 80682, Eros

WI311-00692/02

## DW NAMIBIA KEETMANSHOOP FLOODSTUDY FLOODLINE ASSESSMENT

Rev	Description	Date
1	Issued in Draft	30 September, 2020



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#### **APPENDICES**

Appendix A 1 in 25 Year Floodline Appendix B 1 in 50 Year Floodline



## **1.0 INTRODUCTION**

Knight Piésold (KP) was appointed by Development Workshop Namibia (DWN) to conduct a floodline study on Keetmanshoop Portion A Brukharos Proper and Portion B Brukharos Extension 1. The project area is approximately 50.4 hectares in size and is situated on the southern edge of Keetmanshoop town, adjacent to the National Defence Force (NDF) army base. An overview of the proposed development and its topography is shown in Figure 1-1.

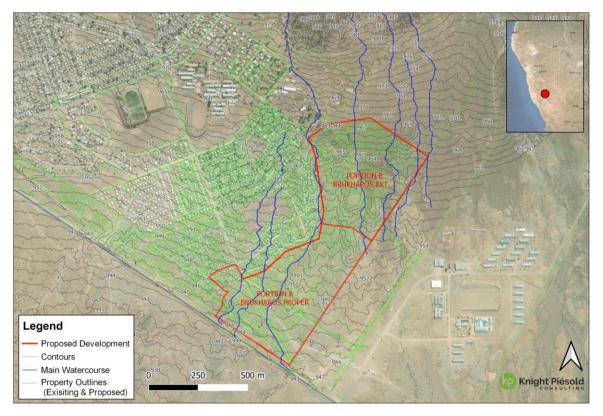


Figure 1-1 Project Area (Indicated in Red)

DWN in conjunction with the Keetmanshoop Town Council intends to formalise and service the project area so that low cost plots can be sold to the residents of Keetmanshoop.

The purpose of this study is to identity areas that are outside the 1 in 25 and 1 in 50 year return period floodlines, so that these areas can be developed, or flood mitigation and routing structure be designed which will allow for a safe development.



# 2.0 SITE CHARACTERISTICS AND DESIGN CRITERIA

## 2.1 SITE OVERVIEW

The proposed development is located on the southern edge of the Keetmanshoop. A comprehensive photo report is attached as Appendix A.

The site characteristics can be described as follows:

- The site naturally drains into a southern direction.
- Well defined natural river channels (dongas) convey stormwater in a southernly direction.
- The natural river channels are mostly lined with rock or alluvial material.
- The floodplains have gradual slopes, approximately 0.026 m/m, characterised by sparse shrubland, rock outcrops, and large barren areas with very little undergrowth.
- The geological formations are part of the Karoo Supergroup, which can be under-classified as dykes and sills, as well as the Main Karoo Basin.
- There is also low density housing within the catchment area which impacts the potential runoff.

## 2.2 DESIGN CRITERIA

The applicable design criteria are summarised in Table 2-1 below.

Table 2-1 Design Criteria

ltem	Design Criteria	Reference
Design Deturn Deried	1 in 25 years	KP
Design Return Period	1 in 50 years	ΝF
Mean Annual Rainfall	177 mm/a	RANAMRU (2014)
Rainfall Region	Summer	KP
Lightning Density	0.5 flashes/km²/a	Namibian Roads Authority (2014)
Design Rainfall Station	Keetmanshoop Town (Station Nr 419215)	RANAMRU (2014)
1 day design Rainfall	1:2 years – 28 mm (For input to Hershfield Equation)	RANAMRU (2014)
Area Distribution Factor	98 % Rural <sup>[1]</sup> , 2 % Urban	KP
Surface Roughness	<ul> <li>Bare plains &amp; riverbeds: n = 0.033</li> </ul>	KP, Namibian Roads Authority (2014)



ltem	Design Criteria	Reference
Catchment Areas	<ul> <li>Catch 1 – 0.082 km<sup>2</sup></li> <li>Catch 2 – 0.055 km<sup>2</sup></li> <li>Catch 3 – 0.083 km<sup>2</sup></li> <li>Catch 4 – 0.016 km<sup>2</sup></li> <li>Catch 5 – 0.040 km<sup>2</sup></li> <li>Catch 6 – 0.830 km<sup>2</sup></li> <li>Catch 7 – 0.021 km<sup>2</sup></li> <li>Catch 8 – 0.124 km<sup>2</sup></li> </ul>	КР
Longest Watercourse & Slope <sup>[2]</sup>	<ul> <li>Catch 1 – 0.96 km, 0.024 m/m</li> <li>Catch 2 – 1.05 km, 0.027 m/m</li> <li>Catch 3 – 1.11 km, 0.027 m/m</li> <li>Catch 4 – 0.53 km, 0.023 m/m</li> <li>Catch 5 – 0.97 km, 0.026 m/m</li> <li>Catch 6 – 2.37 km, 0.026 m/m</li> <li>Catch 7 – 0.43 km, 0.017 m/m</li> <li>Catch 8 – 0.89 km, 0.018 m/m</li> </ul>	KP
Combined Runoff Coefficients <sup>[3]</sup>	<ul> <li>Catch 1 – 0.27</li> <li>Catch 2 – 0.25</li> <li>Catch 3 – 0.28</li> <li>Catch 4 – 0.25</li> <li>Catch 5 – 0.30</li> <li>Catch 6 – 0.31</li> <li>Catch 7 – 0.34</li> <li>Catch 8 – 0.33</li> </ul>	KP, Namibian Roads Authority (2014)

#### NOTES:

- 1. ASSUMED, AS MOST OF THE CATCHMENTS ARE OUTSIDE THE DEVELOPMENT AREA
- 2. CATCHMENT SLOPE CALCULATED BASED ON 10-85 METHOD, AS DESCRIBED BY NAMIBIAN ROAD DRAINAGE MANUAL (2014)
- 3. FINAL RUNOFF COEFFICIENTS CALCULATED AS WEIGHTED AVERAGE OF RUNOFF COEFFICIENTS RECOMMMENDED BY NAMIBIAN ROADS AUTHORITY (2014)

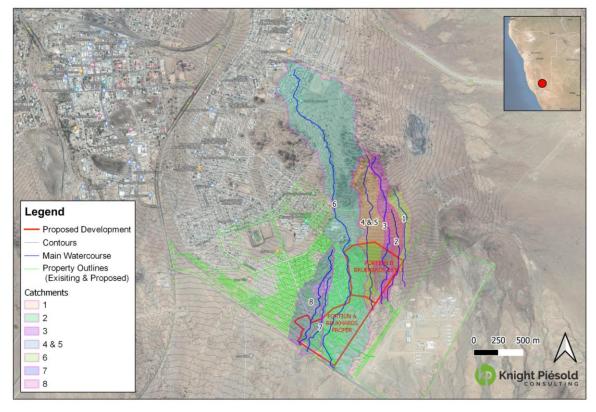


## 3.0 FLOOD HYDROLOGY

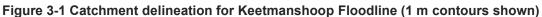
The flood hydrology was conducted based on the recommendations in the Drainage Manual (Namibian Roads Authority, 2014).

The Alternative Rational Method was used to determine the peak runoff per catchment, as it is suitable for small catchments (smaller than 15 km<sup>2</sup>).

The catchment characteristics were derived based on a Light Detection and Ranging (LiDAR) survey conducted for Keetmanshoop in 2014 and a photogrammetry survey conducted in August 2020. Key catchment characteristics are listed in Table 2-1.



The delineated catchments are shown in Figure 3-1.



A summary of the flood hydrology is given in Table 3-1.

Catchment ID <sup>[1]</sup>	Alternative Rational Method 1:25 year flood (m <sup>3</sup> /s)	Alternative Rational Method 1:50 year flood (m <sup>3</sup> /s)
1	0.494	0.657
2	0.326	0.433
3	0.496	0.659

Table 3-1 Peak flows for the 1 in 25 year and 1 in 50 year floods



Catchment ID <sup>[1]</sup>	Alternative Rational Method 1:25 year flood (m <sup>3</sup> /s)	Alternative Rational Method 1:50 year flood (m <sup>3</sup> /s)
4	0.236	0.314
5	0.234	0.311
6	4.944	6.569
7	0.125	0.166
8	0.739	0.982

#### NOTES:

1. REFERS TO FIGURE 3-1

As shown in Table 3-1 above, only catchment 6 produces significant peak runoff, due to the large catchment area, when compared to the surrounding catchments.



## 4.0 FLOOD MODELLING & RESULTS

## 4.1 DESCRIPTION OF MODEL

The floodline was modelled using the Hydrologic Engineering Center's River Analysis System (HEC RAS) software version 5.0.7, using a 2 Dimensional (2D) hydrodynamic numerical model. The model area is limited to the area that was covered in the photogrammetry and LiDAR survey (Figure 1-1).

Given the uncertainty regarding hydrological parameters, roughness coefficient etc., the resulting floodline should be regarded as approximate but conservative.

Peak flows for the 1 in 25 and 1 in 50 year return period flood event calculated by the Alternative Rational Method (see Table 3-1) were used as input to the model. Note that that the incremental stormwater outside of the project area are applied at the upstream edge of the HEC RAS model.

The photogrammetry survey data of the study area from Herman Strydom & Associates was revied in relation to the ground control points and it was found that the survey is of good quality, and therefore suitable to be used for hydrodynamic modelling. HEC RAS's build in mesh generator was used to generate approximately 32 000 cell elements. Break lines were used to define the cells to be perpendicular to well defined drainage channels for accurate modelling.

Manning's roughness values were assigned to different areas of the model based on the field observations (refer to Appendix A):

• Floodplains, Rock Outcrops and occasional structures outside of main channels = 0.033

The HEC RAS model was modelled as unsteady flow, with the peak flows assumed as triangular distribution over the time of concentration per catchment for all the sub-catchments (1 to 8). The times of concentration for the various sub-catchments range from 2 hours to 20 Minutes, depending on the catchment area, shape, longest watercourse and slope. For acceptable accuracy, varying computational interval between 5 seconds and 1 minutes were selected, based on Courants condition.

## 4.2 MODELLING RESULTS

The HEC RAS model was computed and validated. Several maps were generated indicating the simulated flow velocity and flow depth for the study area for the 1 in 25 year return period flood, in Figure 4-1 and Figure 4-2, and for the 1 in 50 year return period flood in Figure 4-3 and Figure 4-4, respectively.



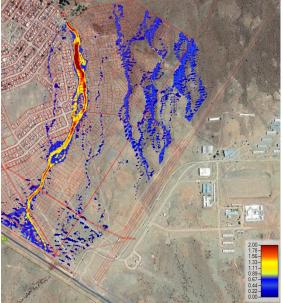


Figure 4-1 Velocity Distribution (in m/s) for 1 in 25 year return period flood

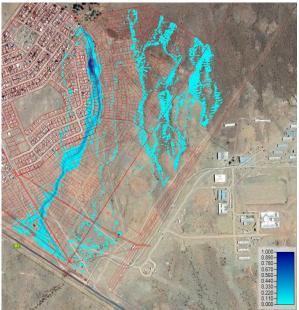


Figure 4-2 Flow Depth Distribution (in m) for 1 in 25 year return period flood

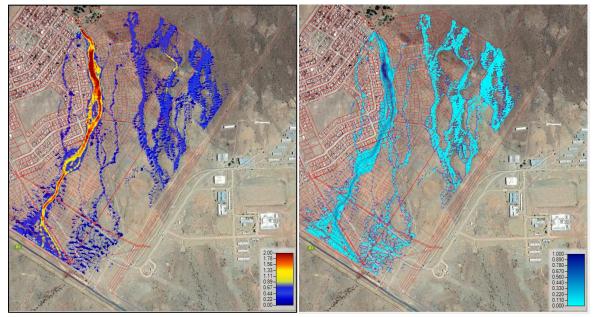
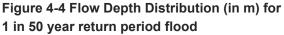


Figure 4-3 Velocity Distribution (in m/s) for 1 in 50 year return period flood



The simulation results indicate an inundation area for the two return periods which are concentrated at the main natural channels. Most of the inundated study area indicates low flow velocity (i.e. less than 0.3 m/s), at low flow depths (> 0.08 m). The low velocity and flow depth areas are deemed not to pose any risks to the general population.

However, on the western edge of the development a significant, partially natural, channel causes a concertation of flow, which needs to be hydraulically routed by a formalised and engineered structure, not to cause sever damage in the immediate flow path.



The floodline recommended for this project is attached in Appendix A and Appendix B, as well as Google Earth KML file.

It should be noted that a large area to the west of the project area, is inundated since the existing natural drainage channels do not have sufficient capacity to convey the stormwater.

To maximise the potential development area, the capacity of the natural drainage features can be increased and possible redirected, by widening selected reaches of the natural channels.



## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

- 1. The 2D model shows that a large portion of the project area will be inundated during a 1 in 25 year return period flood.
- 2. Given the nature of the development and the 1 in 25 year and 1 in 50 year flood event inundation boundary, an engineered structure should be designed to safely and economically convey the water across the study area, preventing damage to structures and loss of life.
- 3. To reduce the inundation area, the natural drainage channels can be widened and deepened, pending detailed analysis.



## 6.0 REFERENCES

Adamson, P. T. 1980. *Southern African Storm Rainfall*. Republic of South Africa Department of Environmental Affairs. Ref. No. TR102

Namibian Roads Authority, 2014. Drainage Manual. 1st Edition. October 2014.



## 7.0 CERTIFICATION

This report was prepared and reviewed by the undersigned.

Prepared:

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Reviewed:

Cilliers Mostert, Inc. Eng Director

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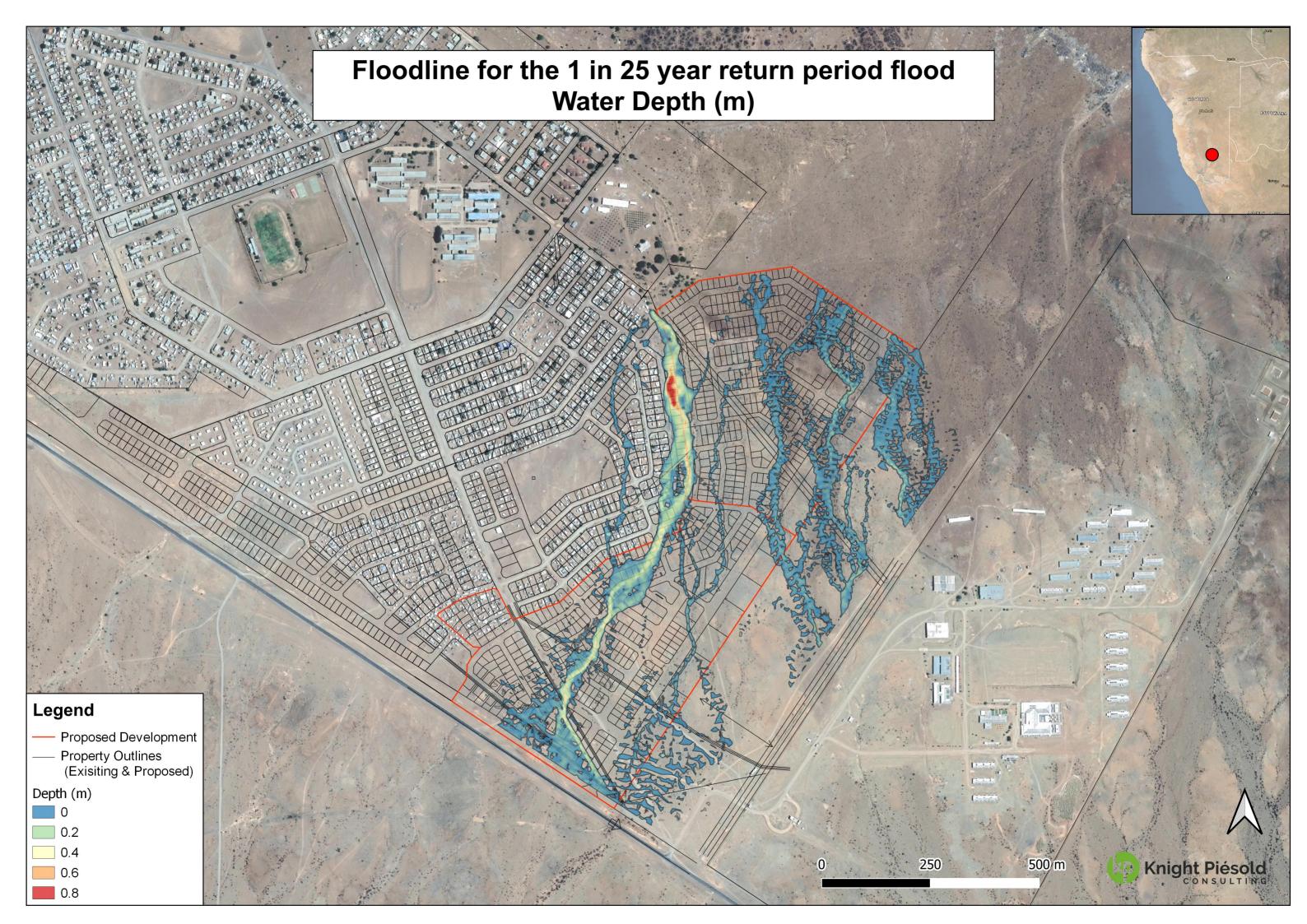
## **APPENDIX A**

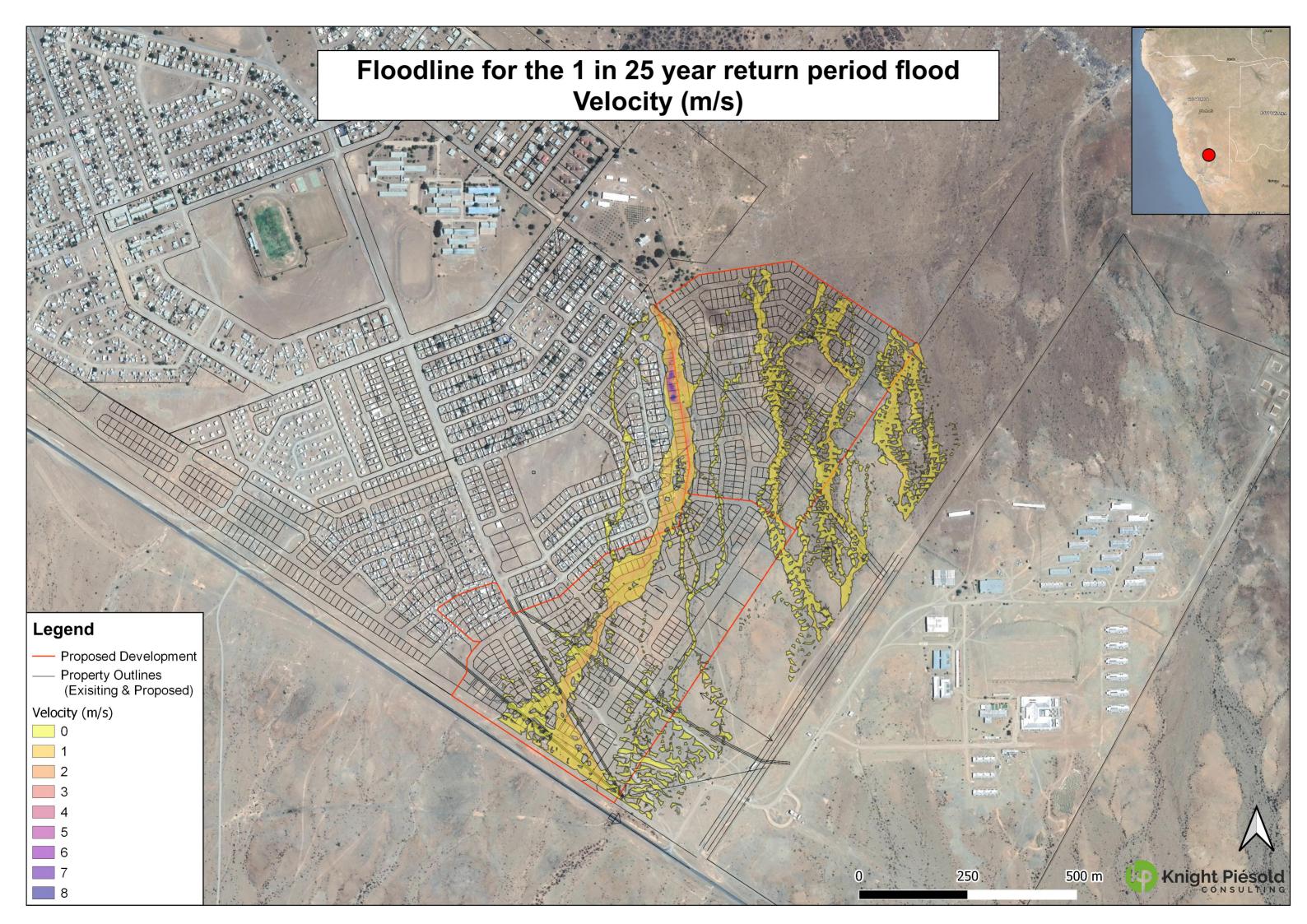
## 1 in 25 Year Floodline

(Pages A-1 to A-2)



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## **APPENDIX B**

## 1 in 50 Year Floodline

(Pages B-1 to B-2)



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