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Environmental Management Plan

*Permanent closure of Erf 2392,
Tseiblaagte Extension 4 as
Public Open Space*

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ABBREVIATIONS

AIDS	Acquired Immuno-Deficiency Syndrome
APF	Africa Planning Forum
CR	Council's Representative
EA	Environmental Assessment
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
GG	Government Gazette
GIS	Geographic Information System
GN	Government Notice
GPS	Global Positioning System
HIV	Human Immuno-deficiency Virus
I&APs	Interested and Affected Parties
NHCN	National Heritage Council of Namibia
Reg.	Regulation
S	Section
SPC	Stubenrauch Planning Consultants
TB	Tuberculosis

1 INTRODUCTION

The Keetmanshoop Municipality obtained an Environmental Clearance Certificate (ECC) in April 2014 for the following:

- **Environmental Impact Assessment for the proposed permanent closure of Erf 2392, Tseiblaagte Extension 4 as Public Open Space.**

An Environmental Management Plan (EMP) was compiled by Africa Planning Forum and submitted and approved by the Ministry of Environment and Tourism (MET) with the ECC application. The conditions of the ECC, together with the 2014 EMP outline certain management actions which need to be complied with during construction activities on site. The existing structures on site remained operational and are used for Residential purposes.

The ECC is only valid for three years and as such has expired. The proponent has thus appointed Stubenrauch Planning Consultants (SPC) to apply on their behalf for the renewal of the ECC.

As such the EMP is herewith updated in order to apply for the renewal of the ECC.

An Environmental Management Plan (EMP) is one of the most important outputs of the EIA process as it synthesises all the proposed mitigation and monitoring actions, set to a timeline and with specific assigned responsibilities. This EMP details the mitigation and monitoring actions to be implemented during the following phases of these developments:

- Construction – the period during which the proponent, having dealt with the necessary legislative and administrative arrangements, appoints a contractor for the construction of the proposed development as well as any other construction process(s) within the development areas.

The decommissioning of these developments is not envisaged; as such no management actions in this regard were provided.

2 PROPOSED DEVELOPMENT

Due to the anticipated increase in demand for residential property Keetmanshoop Municipality intends to permanently close Erf 2392 as a Public Open Space. Erf 2392, Tseiblaagte Extension 4 measures $\pm 8,500 \text{ m}^2$ in extent. The permanent closure of the Erf 2392, Keetmanshoop as a “Public Open Space” was advertised in accordance with the Local Authorities Act, 1992 (Act No.23 of 1992). The Keetmanshoop Municipality has resolved to approve the permanent closure and subsequent subdivision of erf 2392 into new erven and Remainder.

The subject erf accommodates informal structures erected on it as depicted on **Figure 2-1** below. The proposed erf is intended for residential development that will be subdivided into 24 new erven and Remainder (Street) (**Figure 2-2 and 2-3**). The proposed subdivision will result in the establishment of new erven and this will require the provision of additional services in the form of water, electricity and waste removal (sewage and solid waste).



Figure 2-1: Structures on site

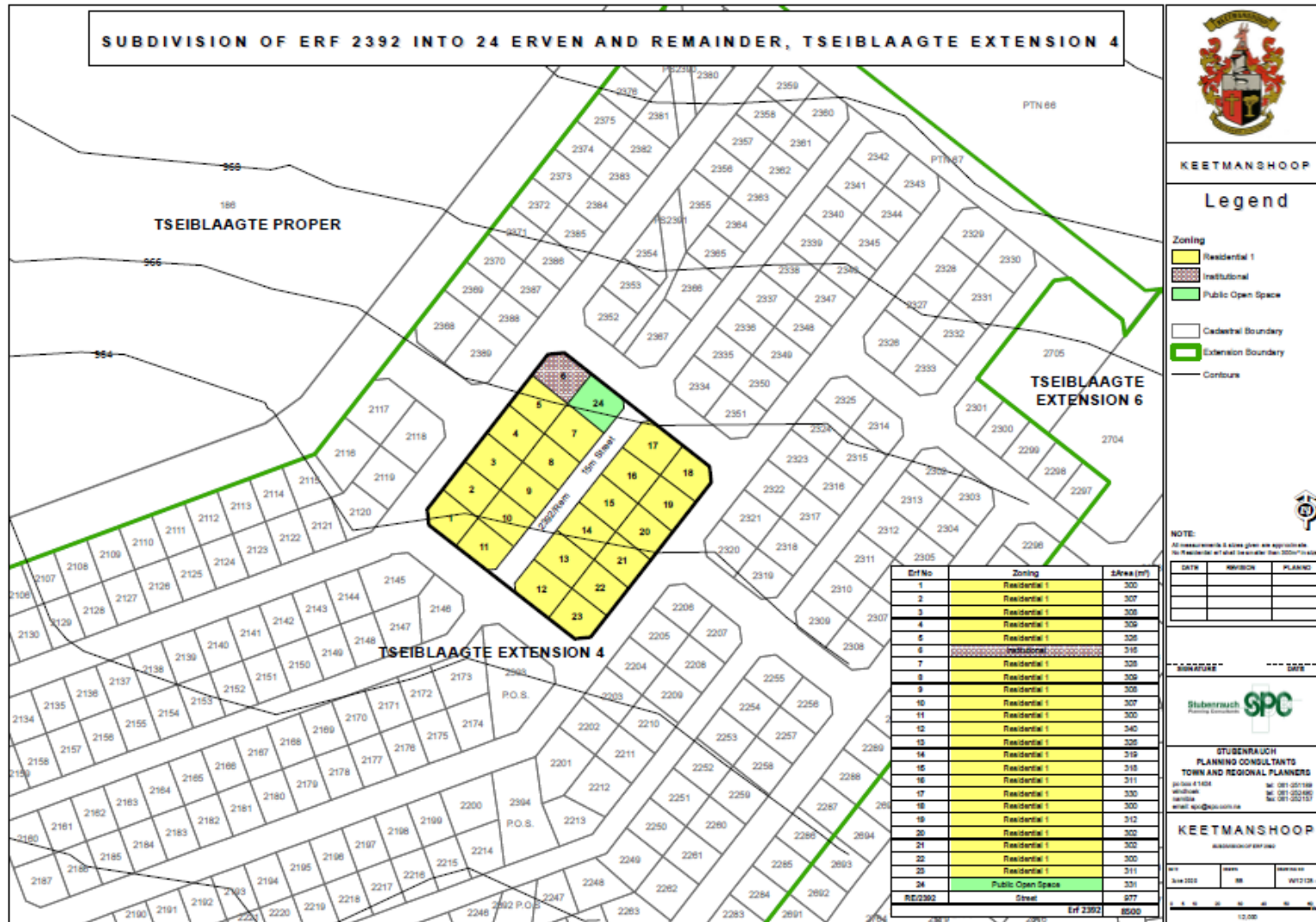


Figure 2-2: Subdivision of Erf 2393, Tseiblaagte Extension 4

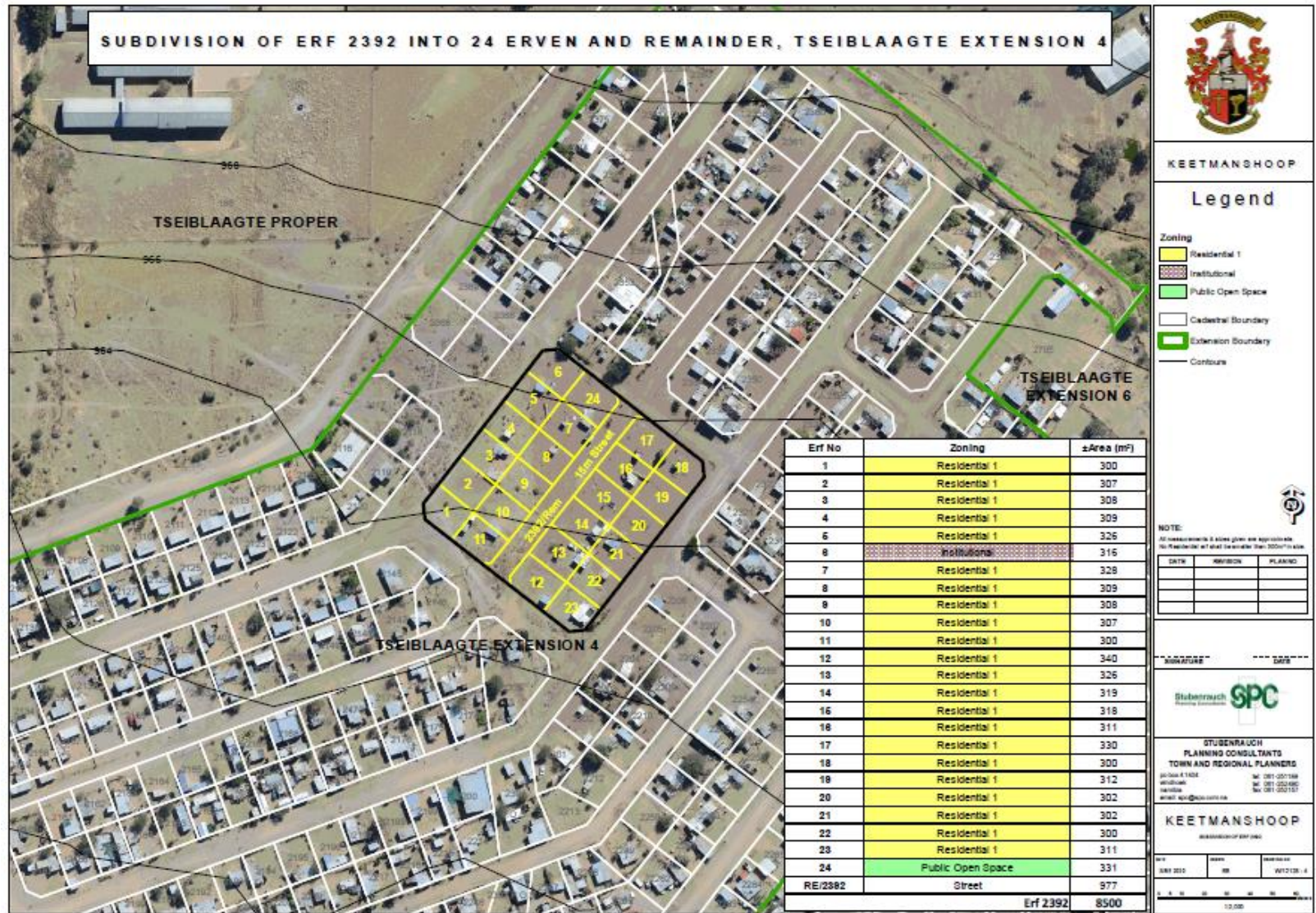


Figure 2-3: Aerial Map of Subdivision of Erf 2393, Tseiblaagte Extension 4

The following impacts were identified during the environmental assessment process which could potentially result due to the proposed subdivision (Africa Planning Forum, 2014):

- Pollution of subterranean and surface water sources by sewage if not properly maintained
 - If sewage is not properly maintained during both construction and operational phases, there is a possibility of sewage run-off into surface water sources within the area.
- Increased demand in electricity and water
 - Water and electricity will be provided to the newly established residences, resulting in an increase in demand for these resources
- Changing road conditions.
 - An increase in traffic may be experienced during construction. Based on the income levels of the people who will be making use of the new residential developments; traffic volumes in general may increase in the area
- Loss of Public Open Space
 - Much of the public open space will be lost although the Keetmanshoop Municipality have reserved a portion on the proposed erf for public open space.
- Resettlement of informal settlers
 - There are informal settlements on the proposed erf. These settlements will be formalised by Council in order to merge with the proposed erven. The informal settlers on the proposed erf will be resettled in the new erven upon completion of the project.
- Increased demand for services to erven
 - There will be a need for municipal services, such as waste and sewage removal, when the proposed erven are formalised
- Generation of waste
 - An increase in waste production will be expected especially during construction and operational phase

3 ROLES AND RESPONSIBILITIES

The proponent (Keetmanshoop Municipality) is ultimately responsible for the implementation of the EMP, from the planning and design phase to the decommissioning phase (if these developments are in future decommissioned) of these developments. The proponent will delegate this responsibility as the project progresses through its life cycle. The delegated responsibility for the effective implementation of this EMP will rest on the following key individuals:

- Council’s Representative;
- Environmental Control Officer; and
- Contractor (Construction and Operations and Maintenance).

3.1 DEVELOPER’S REPRESENTATIVE

The proponent should assign the responsibility of managing all aspects of these developments for all development phases (including all contracts for work outsourced) to a designated member of staff, referred to in this EMP as the Council’s representative (CR). The proponent may decide to assign this role to one person for the full duration of these developments, or may assign a different CR to each of the development phases – i.e. one for the planning and design phase, one for the construction phase and one for the operation and maintenance phase. The CR’s responsibilities are as follows:

Table 3-1 Responsibilities of CR

Responsibility	Project Phase
Making sure that the necessary approvals and permissions laid out in Table 4-1 are obtained/adhered to.	<ul style="list-style-type: none"> • Throughout the lifecycle of these developments
Monitoring the implementation of the EMP weekly.	<ul style="list-style-type: none"> • Construction
Suspending/evicting individuals and/or equipment not complying with the EMP	<ul style="list-style-type: none"> • Construction
Issuing fines for contravening EMP provisions	<ul style="list-style-type: none"> • Construction

3.2 ENVIRONMENTAL CONTROL OFFICER

The proponent should assign the responsibility of overseeing the implementation of the whole EMP on the ground during the construction and operation and maintenance phases to an independent and suitably qualified external consultant, referred to in this EMP as the Environmental Control Officer (ECO). The proponent may decide to assign this role to one person for both phases, or may assign a different ECO for each phase. The ECO will have the following responsibilities during the construction and operation and maintenance phases of these developments:

- Management and facilitation of communication between the proponent, CR, the contractors, and Interested and Affected Parties (I&APs) with regard to this EMP;
- Conducting bi-annual site inspections and auditing all construction and/or infrastructure maintenance areas with respect to the implementation of this EMP (audit the implementation of the EMP);
- Assisting the Contractor in finding solutions with respect to matters pertaining to the implementation of this EMP;
- Advising the CR on the removal of person(s) and/or equipment not complying with the provisions of this EMP;
- Making recommendations to the CR with respect to the issuing of fines for contraventions of the EMP; and
- Undertaking an annual review and bi-annual audit of the EMP and recommending additions and/or changes to this document.

3.3 CONTRACTOR

Contractors appointed by the proponent are automatically responsible for implementing all provisions contained within the relevant chapters of this EMP. Contractors will be responsible for the implementation of this EMP applicable to any work outsourced to subcontractors. **Table 4-2** applies to contractors appointed during the construction phase. In order to ensure effective environmental management, the aforementioned chapters should be included in the applicable contracts for outsourced construction, operation and maintenance work.

The tables in the following chapter (**Chapter 4**) detail the management measures associated with the roles and responsibilities that have been laid out in this chapter.

4 MANAGEMENT ACTIONS

The aim of the management actions in this chapter of the EMP is to avoid potential impacts where possible. Where impacts cannot be avoided, measures are provided to reduce the significance of these impacts.

The following tables provide the management actions recommended to manage the potential impacts rated in the scoping-level EA conducted for these developments. These management actions have been organised temporally according to project phase:

- Applicable legislation (**Table 4-1**);
- Construction phase management actions (**Table 4-2**);
- The proponent should assess these **commitments** in detail and should acknowledge their commitment to the specific management actions detailed in the tables below.

4.1 ASSUMPTIONS AND LIMITATIONS

This EMP has been drafted with the acknowledgment of the following assumptions and limitations:

- This EMP has been drafted based on the scoping-level Environmental Assessment (EA) conducted for the proposed development by Africa Planning Forum in 2014. SPC will not be held responsible for the potential consequences that may result from any alterations to the above-mentioned layout.
- It is assumed that construction labourers will be sourced mostly from the Keetmanshoop townlands area and that migrant labourers (if applicable) will be housed in established accommodation facilities within Keetmanshoop.
- No engineering designs have been carried out for the development of the associated services infrastructure (roads, potable water, storm water, sewerage and electrical reticulations).

4.2 APPLICABLE LEGISLATION

Legal provisions that have relevance to various aspects of these developments are listed in **Table 4-1** below.

Table 4-1: Legislation applicable to proposed development

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
The Constitution of the Republic of Namibia as Amended	<p>Article 91 (c) provides for duty to guard against “the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.”</p> <p>Article 95(l) deals with the “maintenance of ecosystems, essential ecological processes and biological diversity” and sustainable use of the country’s natural resources.</p>	Sustainable development should be at the forefront of this development.
Environmental Management Act No. 7 of 2007 (EMA)	<p>Section 2 outlines the objective of the Act and the means to achieve that.</p> <p>Section 3 details the principle of Environmental Management</p>	The development should be informed by the EMA.
EIA Regulations GN 28, 29, and 30 of EMA (2012)	<p>GN 29 Identifies and lists certain activities that cannot be undertaken without an environmental clearance certificate.</p> <p>GN 30 provides the regulations governing the environmental assessment (EA) process.</p>	<p>Activity 10.1 (b) Infrastructure</p> <p>Activity 10.2 (a) Infrastructure</p> <p>Activity 5.1 (d) Land Use and Development Activities</p>
Convention on Biological Diversity (1992)	Article 1 lists the conservation of biological diversity amongst the objectives of the convention.	The project should consider the impact it will have on the biodiversity of the area.
Draft Procedures and Guidelines for conducting EIAs and compiling EMPs (2008)	Part 1, Stage 8 of the guidelines states that if a proposal is likely to affect people, certain guidelines should be considered by the proponent in the scoping process.	The EA process should incorporate the aspects outlined in the guidelines.
Namibia Vision 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.
Water Act No. 54 of 1956	Section 23(1) deals with the prohibition of pollution of underground and surface water	The pollution of water resources should be avoided during construction and operation of the

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	bodies.	development.
The Ministry of Environment and Tourism (MET) Policy on HIV & AIDS	MET has recently developed a policy on HIV and AIDS. In addition, it has also initiated a programme aimed at mainstreaming HIV and gender issues into environmental impact assessments.	The proponent and its contractor must adhere to the guidelines provided to manage the aspects of HIV/AIDS. Experience with construction projects has shown that a significant risk is created when migrant construction workers interact with local communities.
Township and Division of Land Ordinance 11 of 1963	The Townships and Division of Land Ordinance regulates subdivisions of portions of land falling within a Local Authority area	In terms of Section 19 such applications are to be submitted to NAMPAB and Townships Board respectively.
Local Authorities Act No. 23 of 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with provisions of the Local Authorities Act.
Labour Act no. 11 of 2007	Chapter 2 details the fundamental rights and protections. Chapter 3 deals with the basic conditions of employment.	Given the employment opportunities presented by the development, compliance with the labour law is essential.
National Heritage Act No. 27 of 2004	The Act is aimed at protecting, conserving and registering places and objects of heritage significance.	All protected heritage resources (e.g. human remains etc.) discovered, need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before they may be relocated.
Roads Ordinance 17 of 1972	<ul style="list-style-type: none"> • Section 3.1 deals with width of proclaimed roads and road reserve boundaries • Section 27.1 is concerned with the control of traffic on urban trunk and main roads • Section 36.1 regulates rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads • Section 37.1 deals with Infringements and obstructions on and interference with proclaimed roads. 	Adhere to all applicable provisions of the Roads Ordinance.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Public and Environmental Health Act of 2015	This Act (GG 5740) provides a framework for a structured uniform public and environmental health system in Namibia. It covers notification, prevention and control of diseases and sexually transmitted infections; maternal, ante-natal and neo-natal care; water and food supplies; infant nutrition; waste management; health nuisances; public and environmental health planning and reporting. It repeals the Public Health Act 36 of 1919 (SA GG 979).	Contractors and users of the proposed development are to comply with these legal requirements.
Nature Conservation Ordinance no. 4 of 1975	Chapter 6 provides for legislation regarding the protection of indigenous plants	Indigenous and protected plants must be managed within the legal confines.
Water Quality Guidelines for Drinking Water and Wastewater Treatment	Details specific quantities in terms of water quality determinants, which wastewater should be treated to before being discharged into the environment	These guidelines are to be applied when dealing with water and waste treatment
Environmental Assessment Policy of Namibia (1995)	The Policy seeks to ensure that the environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and that the term ENVIRONMENT is broadly interpreted to include biophysical, social, economic, cultural, historical and political components.	This EIA considers this term of Environment.
Water Resources Management Act No. 11 of 2013	Part 12 deals with the control and protection of groundwater Part 13 deals with water pollution control	The pollution of water resources should be avoided during construction and operation of the development. Should water need to be abstracted, a water abstraction permit will be required from the Ministry of Water, Agriculture and Forestry.
Forest Act 12 of 2001 and Forest Regulations of	To provide for the establishment of a Forestry Council and the	Protected tree and plant species as per the Forest Act No 12 of 2001

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
2015	appointment of certain officials; to consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and the control and management of forest fires; to repeal the Preservation of Bees and Honey Proclamation, 1923 (Proclamation No. 1 of 1923), Preservation of Trees and Forests Ordinance, 1952 (Ordinance No. 37 of 1952) and the Forest Act, 1968 (Act No. 72 of 1968); and to deal with incidental matters.	and Forest Regulations of 2015 may not be removed without a permit from the Ministry of Agriculture, Water and Forestry.
Atmospheric Pollution Prevention Ordinance No 45 of 1965	Part II - control of noxious or offensive gases, Part III - atmospheric pollution by smoke, Part IV - dust control, and Part V - air pollution by fumes emitted by vehicles.	The development should consider the provisions outlined in the act. The proponent should apply for an Air Emissions permit from the Ministry of Health and Social Services (if needed).
Hazardous Substance Ordinance 14 of 1974	To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	The handling, usage and storage of hazardous substances on site should be carefully controlled according to this Ordinance.
Soil Conservation Act No 76 of 1969	Act to consolidate and amend the law relating to the combating and	The proposed activity should ensure that soil erosion and soil

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	prevention of soil erosion, the conservation, improvement and manner of use of the soil and vegetation and the protection of the water sources	pollution is avoided during construction and operation.

4.3 CONSTRUCTION PHASE

The management actions listed in **Table 4-2** apply during the construction phase. This table may be used as a guide when developing EMPs for other construction activities within these development areas.

Table 4-2: Construction phase management actions

Aspect	Action required	Person responsible	Due date	Compliant or not (Y/N)
Waste management	Sufficient waste storage containers available on-site during construction and operation? <ul style="list-style-type: none"> • Does these containers provide effective prevention of waste becoming wind blown • Are these containers emptied according to the Keetmanshoop Municipality`s waste collection system? 			
	Waste is being disposed of at an approved waste disposal site in accordance with Keetmanshoop Municipality`s waste management system			
	Waste is being removed from site on a regular basis in accordance with the Keetmanshoop Municipality waste collection system			
	Hazardous waste is separated from non-hazardous waste <ul style="list-style-type: none"> • Hazardous waste is disposed of at a registered hazardous waste disposal site 			

Aspect	Action required	Person responsible	Due date	Compliant or not (Y/N)
	A waste management plan shall be developed and implemented to ensure that all waste generated on site is correctly managed, stored and disposed of taking in mind site restrictions			
Traffic management	Notices should be affixed at appropriate locations to warn residents and visitors of the risk of construction vehicles			
	Speeds limits have been set on site			
	The necessary signage have been erected at appropriate locations to ensure the safe flow of traffic			
	The direction of traffic flow has been clearly indicated			
	All conditions with regards to road construction shall be adhered to			
	The necessary signage shall be erected during construction			
	Regular road maintenance shall be carried out			
Health and safety	Contractors who are registered with the Social Security Commission and in good standing with this institution were used			
	The contractor provided his employees with the necessary personal protective equipment while operating on site			
	The contractor is allowed to work on site, if equipment is safe and in a good working condition			

Aspect	Action required	Person responsible	Due date	Compliant or not (Y/N)
	All work-related incidents or accidents have been reported			
Health and safety	Firefighting equipment and fire detection equipment are available and operational on site at all times.			
	Ablution and kitchen facilities are available to construction staff and meet the minimum requirements stipulated in the Labour Act			
	The appropriate level of sanitation is made available to residents of the new development			
Archaeological impacts	<p>If a chance archaeological find was discovered on site:</p> <ul style="list-style-type: none"> • Was the site marked of and entry to the site prohibited • Was the Heritage Council contacted with regards to the preservation and relocation of the artefacts in question 			
Rehabilitation	Oil spills are to be cleared up			
	All waste has been removed from site after construction			
Increased water consumption	The increased demand for water is adequately managed and considered in supply programmes for the town?			
Increased electricity demand	The installation of electricity demand reduction devices should be encouraged			

4.4 CONCLUSION

The actions included in this report aim to assist in the management, mitigation or avoidance of negative impacts on the environment that may result from the proposed activities.

Should the measures recommended in this EMP be implemented and monitored, SPC is confident that the risks identified in the DESR can be reduced to acceptable levels.