

7. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

7.1 Introduction

Section 8 of the EMA Regulations (2012) stipulates that the Scoping Report must include a Draft Management Plan, which includes:

- information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified.
- measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development (as far as is reasonably practicable).
- description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation.

The purpose of this EMP is therefore to ensure that the proponent maintains adequate control over the project operations with respect to project activities in order to:

- To prevent negative impacts where possible
- Reduce or minimise the extent of negative impacts
- Prevent long term environmental degradation.

The impact evaluation done above has shown that most of the potential negative impacts are rated low, while few are rated medium and none in the high impact category. The positive impacts are significant. Below, is a description of what should be done in order to minimise or eliminate the potential negative impacts on the environment.

7.2 Management Actions

The minimum management actions which should be taken to minimise and/or eliminate the potential negative impacts are summarised in Table 18 below.

Table 18: Summary of management actions which should be taken to minimise potential negative impacts.

Construction Phase		
Environmental Feature	Potential impact	Management action
Conservation of vegetation	Loss of vegetation diversity	<ul style="list-style-type: none">• Limit clearance of vegetation along the new road and around the satellite dish site to the bare minimum area required for the construction.• There should be no setting up of

		<p>fires in risky areas to avoid accidental veld fires.</p> <ul style="list-style-type: none"> ○ The contractor to make sure and advise on such locations. • Workers are prohibited from cutting down trees for wood or other purposes unless an appropriate permit has been obtained to do so. Otherwise wood should be obtained from usual commercial suppliers. • Workers should not collect wood or other plant products on or near work sites unless an appropriate permit has been obtained to do so. • No alien plant species may be planted on or near work areas. • Unused construction material must not be dumped in the woodlands around but must be properly disposed of in accordance with Municipal Laws. • Any rubble arising from construction work must be removed and properly disposed of in accordance with Municipal Laws.
Hydrology	Potential ground water level decrease	<ul style="list-style-type: none"> • Use water sparingly and if possible use water from external tanks instead of pumping from groundwater on site.
Dust pollution / Air quality	<p>Excavation and removal of sediments</p> <p>Potential air contamination through applications of primer and pesticides.</p>	<ul style="list-style-type: none"> • Limit excavation area • Dampen dust sources, ideally using semi-treated water. • Workers operating at or near dust sources be assigned with and wear dust protection masks.
Topography and land use changes	Changes to land use and topography	<ul style="list-style-type: none"> • Properly fence off the site to limit access by large mammals. • Steepness of topography should be taken in account during the planning and execution of construction phase.
Geological features (lithological units,	Potential ground subsidence	<ul style="list-style-type: none"> • Remove all the weathered rocks (saprolite layer) and

joints and faults)		build the foundation on fresh bedrock (schist or quartzite).
Hydrology, Drainage and Water quality	Potential ground water level decrease	<ul style="list-style-type: none"> • Use water sparingly and if possible use water from external tanks instead of pumping from groundwater on site • Monitor changes in water levels.
	Potential contamination of groundwater through dumping of harmful waste	<ul style="list-style-type: none"> • All wastes should be disposed of properly to avoid contaminating groundwater • Continuous monitoring of groundwater quality is encouraged.
Conservation of Soil	Soil erosion	<ul style="list-style-type: none"> • Minimal disturbance - disturbance to soil and existing vegetation on the site should be at the bare minimum required for the construction work. • Site management practices - appropriate scheduling of construction sequence and erosion control measures should be in place and monitoring and maintenance of erosion control measures should be put in place. • Diversion banks and channels - these intercept and divert run-off water away from disturbed ground and dispose it safely from the construction site. • Graded banks and channels – these should be done and designed to intercept and direct sediment run-off from within the disturbed site to an appropriate sediment basin or trap.
Operation phase		
Environmental Feature	Potential Impact	Management action
Conservation of vegetation	Loss of vegetation diversity	<ul style="list-style-type: none"> • There should be no setting up of fires in risky areas to avoid accidental veld fires. • Vegetation clearance during road maintenance should be limited to 2 m or less from the edge of the road.

		<ul style="list-style-type: none"> • All invasive and alien plant species should be removed from the sites.
Radiation	Potential radiation effects.	<ul style="list-style-type: none"> • No potential effects were identified. No management action is needed except regular monitoring of radiation levels throughout.
Dust pollution / Air quality	Dust pollution	<ul style="list-style-type: none"> • Appropriate aftercare of excavated areas should mitigate wind and water erosion.
Topography and Land use changes	Changes to land use and topography	<ul style="list-style-type: none"> • No management action needed
Geological features (lithological units, joints and faults)	Potential ground subsidence	<ul style="list-style-type: none"> • Monitoring the buildings for any major cracks after any earthquake event is reported in Windhoek.
Hydrology, Drainage and Water quality	Potential Water level decrease	<ul style="list-style-type: none"> • Use water sparingly and if possible use water from external tanks instead of pumping from groundwater on site • Monitor changes in water level. • Continuous monitoring of groundwater quality is encouraged.
Conservation of Soil	Soil erosion	<ul style="list-style-type: none"> • There should be a minimal disturbance to the soil and existing vegetation. • There should be a scheduling of the construction sequence and clearly put on the notice board as well as the access restriction to non-essential areas. • Install diversion banks and channel, to intercept and divert storm water away from disturbed ground. • Install graded banks and channels to intercept and direct runoff sediments from within the disturbed site to an appropriate sediment basin or trap.