

SITE SENSITIVITY VERITIFICATION (SSV) REPORT: THE PROPOSED ESTABLISHMENT OF A WASTEWATER TREATMENT WORKS AND ASSOCIATED INFRASTRUCTURE FOR KAKAMAS ON THE REMAINDER OF ERF 1409, KAKAMAS SOUTH SETTLEMENT

INTRODUCTION:

This Site Sensitivity Verification (“SSV”) Report was undertaken in terms of the *Protocols for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes* (referred to “the Protocols” hereafter) as per Government Notice No. 320 (published in Government Gazette No. 43110 on 20 March 2020)¹. These Protocols, effected as on the 09 May 2020, must be complied with for every new application submitted after the effective date. According to the Protocols, the EAP must verify the current use of the proposed site for development as well as the site’s environmental sensitivity, in accordance with the DFFE Screening Tool Report, to determine the need for specialist inputs in relation to the themes (and proposed specialist assessments) included in the Protocols.

METHODOLOGY:

The SSV Report was compiled based on desktop studies including the SANBI BGIS Biodiversity Spatial Plan, vegetation maps (Vegetation map of SA (Mucina & Rutherford, 2006, as updated in the 2012 beta version and 2018 Final), NFEPA, land-use map, Google Earth imagery including historical imagery, CapeFarmMapper. This was done in combination with a site visit conducted on 10 April 2025 to investigate, identify, and evaluate potential impacts associated with the proposed development on the receiving environment. The SSV report was compiled by the Maboe Nthejane (EAPASA Reg. No. 2022/4942).

AIM OF THE SSV REPORT:

The aim of the SSV Report is to;

- Verify land use and theme sensitivities as identified by the DFFE Screening Tool;
- Confirm or motivate against the need for a particular specialist assessment(s) as indicated by the DFFE Screening Tool; and
- Should the need for a specialist assessment be refuted/challenged, provide a motivation as to why the proposed specialist assessment is not applicable to the proposed development.

¹ The Protocols are in line with Section 24(5)(a) and (h) and Section 44 of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998).

SITE DESCRIPTION:

The oxidation ponds at the existing Kakamas Wastewater Treatment Works (WWTW) are no longer able to adequately treat the volumes of wastewater received from Kakamas and the surrounding villages. The upgrading or refurbishment of the existing WWTW is not considered viable due to its proximity to the residential area. The use of several smaller decentralized WWTW at Kakamas and the surrounding villages (including Alheit) is therefore proposed in addition to vacuum tanker trucks to service these communities.

The development proposal entails the establishment of a new WWTW on the Remainder of Erf 1409, Kakamas South Settlement and some associated infrastructure, approximately 500m to the south-west of Alheit, immediately west of the cemetery (Figure 1).

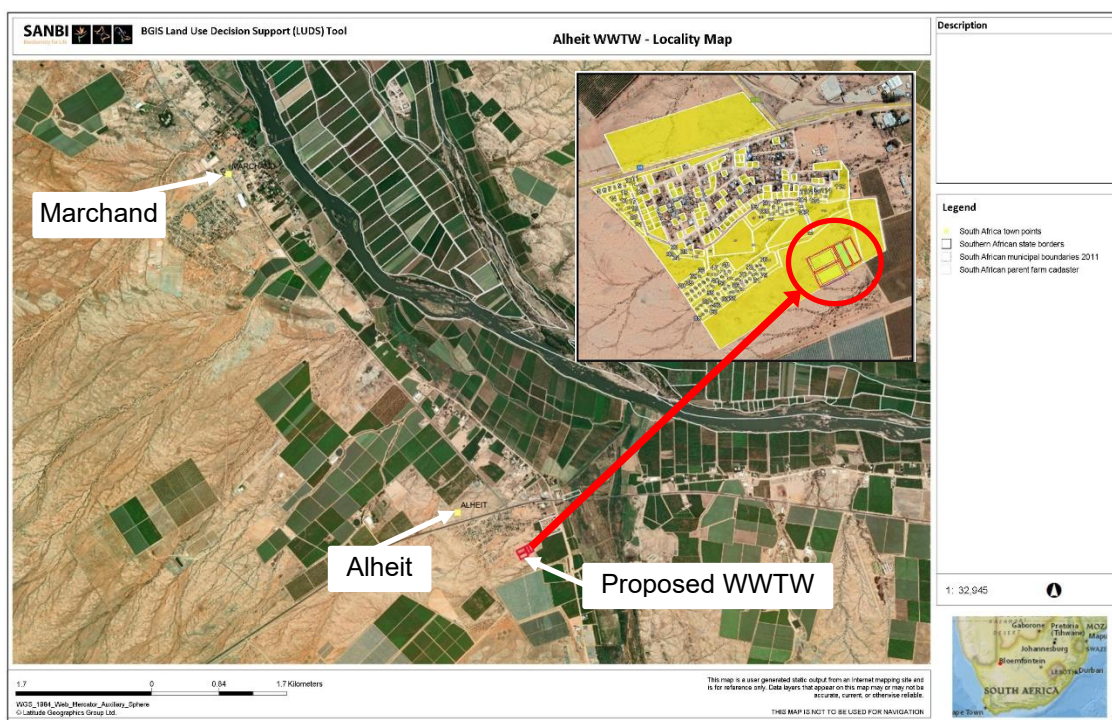


Figure 1: SANBI BGIS image of the locality of a new proposed WWTW in Alheit

Approximate site coordinates: 28°45'47.41" S, 20°32'18.04" E.

Construction of an 800m³/ day Aerated Facultative Pond system for Alheit and Marchand Villages, comprising the following:

- Operational Building/Shelter
- Inlet Works (inclusive of Tanker Truck discharge facility)
- Screenings Removal
- Grit Channels
- Flow measurement
- Facultative Ponds x 2 (lined with HDPE membrane)
- Wind powered Floating Aerator/Mixers
- Medium Bubble Diffused Air aeration system Stainless Steel
- Low Pressure Centrifugal Fan c/w Motor
- Electrical Switchgear & DO Control System
- Aerobic Ponds x 2 (lined with HDPE membranes)
- Disinfection facility
- Irrigation equipment for disposal of Effluent on sports fields
- 22kV x 1.5km overhead Electrical Power supply line + Transformer

In accordance with the 2018 Vegetation map of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2006), the proposed footprint would historically have been covered in one broad vegetation type, mainly Bushmanland Arid Grassland which is categorised as “Least Threatened”.

The footprint is not within 32m of any Freshwater Ecosystems Priority Area (FEPAs) or any other notable rivers or wetlands. However, there is evidence of nearby ephemeral streams and associated riparian vegetation which should be assessed.

The proposed WWTW footprint does fall within a Critical Biodiversity Area (CBA) 2 which will need to be assessed by a specialist.

Please see photographs taken on the 10 April 2025 below:



Photo 1: Image looking south to north over the eastern section of the proposed site, with a cemetery and agricultural lands in the background.



Photo 2: Image looking easterly of the south-east section proposed site, showing dumping



Photo 3: Image looking north to south of the proposed site with agricultural lands in the background.



Photo 4: Image looking westly of the west section of the proposed site, showing litter.

Table 1. Themes and associated sensitivity as per the DFFE Screening Tool

No	Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation
1	Agriculture Theme	Very High Sensitivity	Disagree	Low	The proposed site is close to a residential area. An agricultural enterprise on the proposed site would thus face a serious security risk and this lowers the value of the proposed site for agriculture. However, a specialist has been appointed to compile a specialist study report that will inform the application for environmental authorisation.
2	Animal Species Theme	High Sensitivity	Disagree	Medium	A specialist has been appointed to compile a specialist study report that will inform the application for environmental authorisation..
3	Aquatic Biodiversity Theme	Low Sensitivity	Disagree	Medium	A specialist has been appointed to compile a specialist study report that will inform the application for environmental authorisation. Due to the proximity to the Orange River and presence of ephemeral streams a specialist has been appointed to compile a specialist study report that will inform the application for environmental authorisation.
4	Archaeological and Cultural Heritage Theme	High Sensitivity	Agree		A specialist has been appointed to compile a specialist study report that will inform the application.
5	Civil Aviation Theme	Medium Sensitivity	Disagree	Low	<p>A WWTW is unlikely to pose any kind of significant risk to civil aviation and so a specialist will not be appointed to compile a specialist study report that will inform the application. The EAP is of the view that the significance rating for the Civil Aviation Theme should be Low, unlike the High significance rating indicated in the Screening Tool Report.</p> <p>However, the Civil Aviation Authority will be requested to provide comment on the application for environmental authorisation.</p>
6	Defence Theme	Low Sensitivity	Agree		The proposed WWTW is unlikely to cause any significant impacts relating to the country's defence.
7	Plant Species Theme	Medium Sensitivity	Agree		A specialist has been appointed to compile a specialist study report that will inform the application.
8	Terrestrial Biodiversity Theme	Very High Sensitivity	Agree		A specialist has been appointed to compile a specialist study report that will inform the application.

Table 2. Specialist assessments identified as per the DFFE Screening Tool

No	Proposed Specialist Assessment	Verification of Site Sensitivity And Motivation On The Need For Specialist Investigation
1	Landscape/ Visual Impact Assessment	The low height, small scale and nature of the development proposal make the specialist study to inform the application unwarranted. The specialist study report will therefore not be conducted
2	Archaeological and Cultural Heritage Impact Assessment (HIA)	A specialist has been appointed to compile a specialist study report that will inform the application.
3	Palaeontological Assessment	A specialist has been appointed to compile a specialist study report that will inform the application.
4	Terrestrial Biodiversity Assessment	A specialist has been appointed to compile a specialist study report that will inform the application.
5	Aquatic Biodiversity Impact Assessment	A specialist has been appointed to compile a specialist study report that will inform the application.
6	Socio-Economic Assessment	The proposed development is unlikely to cause any kind of significant changes in the socio-economic characteristics of Kakamas. A specialist will therefore not be appointed to compile a socio-economic impact study report to inform the application for environmental authorisation.
7	Plant Species Assessment	A specialist has been appointed to compile a specialist study report that will inform the application.
8	Animal Species Assessment	A specialist has been appointed to compile a specialist study report that will inform the application.

All the Specialist Assessments and Compliance Statements compiled by specialists and the written opinions of other suitably qualified professionals will be appended to the Basic Assessment Report and submitted to the competent authority for review.

Please do not hesitate to contact EnviroAfrica for any further information or clarity regarding the above.

Yours faithfully,

Maboe Nthejane



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