

## SITE SENSITIVITY VERIFICATION (SSV) REPORT

**PROJECT DESCRIPTION:** THE PROPOSED EXPANSION OF AN INSTREAM DAM ON THE REMAINDER OF FARM ZWARTFONTEIN NO. 792 AND PORTION 8 OF THE FARM ZWARTFONTEIN NO. 792, ZWARTFONTEIN, MALMESBURY, WESTERN CAPE

### 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)<sup>1</sup>. These Protocols, effected as on the 9<sup>th</sup> 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 DEA Screening Tool (Appendix E – DEA Screening Tool), to determine the need for specialist inputs in relation to the themes (and proposed specialist assessments) included in the Protocols.

### METHODOLOGY:

The Site Sensitivity Verification (SSV) report was compiled based on desktop studies [including the Western Cape Biodiversity Spatial Plan, vegetation maps (Vegetation map of SA (Mucina & Rutherford, 2006), NFEPA, land-use map, google earth imagery, historical imagery, and QGIS), specialist input (Botanical, Freshwater, and Heritage inputs), as well as a site visit (conducted in March 2019) to investigate, identify, and evaluate potential impacts, associated with the proposed development, on the receiving environment (namely the proposed site for development). The SSV report was compiled by the EAP (Mr Anthony Mader).

### AIM OF THE SSV REPORT:

The aim of the SSV Report is to;

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

---

<sup>1</sup> 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).

## **EnviroAfrica**

**Please note:** that this SSV report must be read in combination with the Botanical Assessment (Appendix G1), Freshwater Assessment (Appendix G.2), and the Notice of Intent to Develop (Appendix G.3). This will aid in contextualizing the transformed / disturbed status of the proposed site for development. Please refer to the Draft Basic Assessment Report (BAR) for more information and detailed site description.

### **SITE DESCRIPTION:**

As per the site visit, the area within the proposed development footprint can be described as highly disturbed and transformed attributed to the proposed development footprint being situated within the construction footprint of the previously constructed Zwartfontein Dam. As per the Botanical Specialist, the transformation of the proposed site for development likely resulted in the removal in the topsoil, along with the indigenous seed bank within this soil layer. The proposed site for development overlaps areas that were already disturbed / transformed as a result of agriculture and associated activities. Furthermore, the area located near the bottom of the dam is highly degraded where plant species composition comprises of hardy shrubs and alien pioneer species – indicators of disturbed sites. Please see photographs below:



**Figure 1.** Site overview photographs showing status of proposed site for development. **A:** Degraded vegetation along the slopes of the existing Zwartfontein Dam. Please note that the sections for the area earmarked for development were previously within the construction footprint when the existing Zwartfontein Dam was being constructed, **B:** As per the Botanical Report, the degraded weedy vegetation within the proposed development footprint was observed during the site visit. Moreover, it is expected that topsoil (and associated indigenous seed banks) were removed when the original dam was built, **C:** Note previously transformed areas for agricultural production.



**Figure 2. A:** Disturbed and transformed areas (red arrow) associated with the existing Zwartfontein Dam, **B:** Photo showing the existing level of disturbance / transformation where the proposed development is situated. Note disturbed areas along the dam slope and transformed area in the background (agriculture), **C:** vegetation was described as highly disturbed (along with the absence of any plant species of conservational value) where the vegetation composition is comprised of hardy weeds and alien invasive plant species (indicator of disturbed areas).


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

No	Theme	Sensitivity	Specialist Evidence
1	Agriculture Theme	Very High Sensitivity	The proposed enlargement of the existing dam is in line with the zoning of the proposed site, namely Agriculture. Although approximately 4.5ha of orchards will be lost due to the proposed enlargement of the Zwartfontein Dam, the preferred layout meets the applicant's target storage capacity and is in line with the applicant's storage demand for the irrigation of existing orchards. Therefore, an assessment into agriculture potential was not envisaged. <i>Please refer to Figure 1.</i>
2	Animal Species Theme	Medium Sensitivity	No animals were noted on site during the site visit however, conditions and measures have been addressed and stipulated in the draft BAR and EMPr to mitigate potential impact(s) of the proposed development on animal species. This includes conducting earth moving activities in phases (to enable any fauna which may be present to move away from the area and to reduce soil erosion). <i>Please refer to Figure 1 and Figure 2.</i>
3	Aquatic Biodiversity Theme	Very High Sensitivity	Due to the nature of the proposed development (i.e. expansion of the existing Zwartfontein dam), a Freshwater Assessment was conducted. The Freshwater Assessment comments on plant species associated with the wastercourse. Please refer to the Freshwater Report (Appendix G2) of the Draft BAR.
4	Civil Aviation Theme	High Sensitivity	The proposed development is for the expansion of the existing Zwartfontein Dam and thus will not pose any threat to civil aviation within the area. Due to the nature of the proposed project, i.e. the expansion of an existing dam, it is therefore envisaged that the proposed expansion will not impact on any civil aviation activities.

5	Defence Theme	Low Sensitivity	There are no defence related structures or zones on the site or within close proximity to the site. Due to the nature of the proposed project, i.e. the expansion of an existing dam, it is envisaged that the proposed expansion will not impact any defence-related activities.
6	Plant Species Theme	Medium Sensitivity	Although the Plant Species Theme was classified as Medium (see DEA Screening Tool), a Botanical Assessment was conducted. The proposed site is located within the Swartland Shale Renosterveld, a vegetation type classified as Critically Endangered (GN 1002, December 2011). A Botanical Study was conducted whereby the Specialist concluded that the proposed enlargement of the Dam will not impact on any remaining vegetation or plant species of conservation value. Most of the terrain and its immediate surroundings are considered heavily degraded-to-transformed, and only a few indigenous species and alien pioneer species remains. <i>Please refer to the Botanical Report (Appendix G1).</i>
7	Terrestrial Biodiversity Theme	Very High Sensitivity	No animals were noted on site during the site visit. A Botanical Study was conducted whereby the Specialist concluded that the proposed enlargement of the Dam will not impact on any remaining terrestrial, flora biodiversity (i.e. vegetation or plant species of conservation value). Most of the terrain and its immediate surroundings are considered heavily degraded-to-transformed, and only a few indigenous plant species and alien pioneer species remains – providing limited habitat for fauna. No animals were noted on site during the site visit. <i>Please refer to Figure 1 and Figure 2.</i>

**Table 2.** Specialist assessments identified as per the DEA Screening Tool.

No	Proposed Specialist Assessment	Verification of Site Sensitivity And Motivation On The Need For Specialist Investigation
1	Landscape/ Visual Impact Assessment	<p>The proposed project is for the expansion of the existing Zwartfontein Dam. The site is zoned for agricultural purposes and the proposed site for dam expansion is surrounded by agricultural land uses. The nature of the proposed development is in line with the surrounding land use (i.e. expansion of an existing dam) and therefore will not be a novel visual impact. Therefore, it is envisaged that a Visual Impact Assessment will not be required.</p>
2	Archaeological and Cultural Heritage Impact Assessment (HIA)	<p>As per section 38 of the National Heritage Resources Act, 1999 (Act 25 of 1999), and more specifically section 38. (1) (c) - any development or other activity which will change the character of a site-</p> <p>(i) <i>exceeding 5 000 m<sup>2</sup> in extent;</i></p> <p>This subsection is applicable to this application as the proposed expansion of the Zwartfontein Dam will result in an increase the development footprint by 109 000m<sup>2</sup> (10.9ha).</p> <p>A Notice of Intent to Develop (NID) was submitted to HWC. The Heritage screener, conducted by CTS Heritage, concluded that no structures of heritage significance will be impacted on by the proposed enlargement of the dam. In terms of archaeological significance of the proposed site for dam enlargement, while it may be likely that, due to its proximity to the Berg River, that archaeological resources may be located within the proposed development area, it is unlikely that these resources will be <i>in situ</i> due to the extensive agricultural activity that has occurred on this site. Furthermore, no impacts to significant palaeontological resources are anticipated. HWC provided comment stating that the proposed dam enlargement will not impact on heritage resources.</p>
3	Palaeontological Impact Assessment	<p>As per the PalaeoSensitivity Map , the site is located within an area of low paleontological sensitivity (see Figure 3 below/ accessed at: <a href="https://sahris.sahra.org.za/map/palaeo">https://sahris.sahra.org.za/map/palaeo</a>). As per the comment above, no impacts to significant palaeontological resources are anticipated.</p>

		 <p><b>Figure 3.</b> Site palaeontological sensitivity (Blue = Low Sensitivity).</p>
4	Terrestrial Biodiversity Assessment	<p>The proposed site is located within the Swartland Shale Renosterveld, a vegetation type classified as Critically Endangered (GN 1002, December 2011). No animals were noted on site during the site visit. A Botanical Study was conducted whereby the Specialist concluded that the proposed enlargement of the Dam will not impact on any remaining vegetation / plant species of significant conservation value. Most of the terrain and its immediate surroundings are considered heavily degraded-to-transformed, and only a few indigenous species and alien pioneer species remain. <i>Please refer to the Botanical Report (Appendix G1), the Freshwater Report (Appendix G2), as well as Figure 1 and Figure 2.</i></p>
5	Aquatic Biodiversity Impact Assessment	<p>As per the DEA Screening Tool, the Aquatic Biodiversity Theme is classified as Low however, due to the nature of the proposed development, a Freshwater Assessment was conducted. <i>Please refer to the Freshwater Report (Appendix G2).</i></p>
6	Hydrological Assessment	<p>Please see comment above.</p>
7	Socio-economic Assessment	<p>All comments received from I&amp;APs will be addressed and responded to by the relevant personnel, namely the EAP, Applicant, and/ or Specialists. Conditions and measures will be implemented to mitigate any impacts on socioeconomic development within the area and surrounds. Therefore, it is</p>



		envisaged that a Socio-economic Assessment will not be required. <i>Please refer to the Draft BAR for more information.</i>
8	Plant Species Assessment	Although the Plant Species Theme was classified as Medium (see DEA Screening Tool), a Botanical Assessment was conducted. The proposed site is located within the Swartland Shale Renosterveld, a vegetation type classified as Critically Endangered (GN 1002, December 2011). A Botanical Study was conducted whereby the Specialist concluded that the proposed enlargement of the Dam will not impact on any remaining vegetation / plant species of significant conservation value. Most of the terrain and its immediate surroundings are considered heavily degraded-to-transformed, and only a few indigenous species (of no conservational value) and alien pioneer species remain. <i>Please refer to the Freshwater Report (Appendix G2).</i>
9	Animal Species Assessment	No animals were noted on site during the site visit however, conditions and measures will be addressed and stipulated in the draft BAR and EMPr to mitigate potential impact(s) of the proposed development on animal species. This will include conducting earth moving activities in phases (to enable any animal species which may be present to move away from the area and to reduce soil erosion). Therefore, it is envisaged that no Animal Species Assessment will be required. <i>Please refer to Figure 1 and Figure 2.</i>
10	Civil Aviation	The proposed development is for the expansion of the existing Zwartfontein Dam and thus will not pose any threat to civil aviation within the area. Due to the nature of the proposed project, i.e. the expansion of an existing dam, it is therefore envisaged that the proposed expansion will not impact any civil aviation activities.
11	Defence	There are no defence related structures or zones on the site / within close proximity to the site. Due to the nature of the proposed project, i.e. the expansion of an existing dam, it is envisaged that the proposed expansion will not impact any defence-related activities.

## EnviroAfrica

Please do not hesitate to contact me should you require any further information or clarity on the above.

**Best Regards,**

Anthony Mader



*Environmental Assessment Practitioner*

**EnviroAfrica cc**

p: +27 21 851 1616 m: +27 83 309 9211

f: +27 86 512 0154

a: Unit 7, Pastorie Park, Reitz St, Somerset West, 7130

P.O. Box 5367, Helderberg, 7135

w: [www.enviroafrica.co.za](http://www.enviroafrica.co.za) e: [anthony@enviroafrica.co.za](mailto:anthony@enviroafrica.co.za)