

STELLENBOSCH MEMORIAL PARK

PROPOSED ESTABLISHMENT OF A MEMORIAL PARK (CEMETRIES), STELLENBOSCH MUNICIPALITY

Remainder of the Farm Louw's Bos No. 502

<h3>LOUW'S BOS SOUTH & LOUW'S BOS NORTH</h3>
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Two potential sites on the same property.

BIODIVERSITY SENSITIVITY MAPS

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DECLARATION OF INDEPENDENCE

EnviroAfrica CC is an independent consulting firm, and has no interest in the activity other than fair remuneration for services rendered. Remunerations for services are not linked to approval by decision making authorities and EnviroAfrica have no interest in secondary or downstream development as a result of the outcome of this project. There are no circumstances that compromise the objectivity of this report.

The findings, results, observations and recommendations given in this report are based on the author's best scientific and professional knowledge and available information. EnviroAfrica reserve the right to modify aspects of this report, including the recommendations if new information becomes available which may have a significant impact on the findings of this report.



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EXECUTIVE SUMMARY

LOUW'S BOS SOUTH

Louw's Bos South is located on land transformed by agriculture. The 2017 Western Cape Biodiversity Spatial Plan (WCBSP) does not recognise any area of special concern (CBA or ESA) areas within the proposed footprint. However, since the site overlaps an area that would originally have been covered by the critically endangered Swartland Granite Renosterveld vegetation type a precautionary approach would have been advised. Recommendations would have included that a spring botanical scan be commissioned. Such a report was already commissioned (Refer to McDonald, 2018).

From a biodiversity perspective the site chosen for the proposed Stellenbosch Memorial Park / Cemetery at Louw's Bos South is eminently suitable for the desired purpose. Effect on natural vegetation and habitat would be very low and the use of this area would not lead to any further loss of critically endangered Swartland Granite Renosterveld. The project is thus supported unreservedly from a botanical / biodiversity perspective (McDonald, 2018).

LOUW'S BOS NORTH

Louw's Bos North site is also located on land transformed by agricultural land. However, portions of the site overlaps an ecological support areas (associated with degraded wetland areas), which must be regarded as sensitive and should be considered for rehabilitation. But the rehabilitation could form part of the larger landscaping of the memorial park (and could become a wetland feature, which will benefit the degraded stream). The proposed Stellenbosch Western By-Pass road must be taken into consideration as the proposed alignment passes through this site.

IN CONCLUSION

From an environmental sensitivity view, both sites are considered degraded agricultural land suitable for the proposed development, but Louw's Bos North may potentially impact on an ESA (which should be considered for rehabilitation) and may impact on the Stellenbosch western by-pass road. However, it is important to note that both these features can potentially be incorporated into the Memorial Park layout and with good planning the ESA areas can benefit from the proposed layout by incorporating (and rehabilitating) the wetland and streams as part of the final layout. The ESA can potentially be incorporated into the Memorial Park layout and become part of the Memorial Park.

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1. INTRODUCTION

Stellenbosch Municipality is in urgent need to develop further communal cemetery(s) in order to service the larger community. The cemeteries will take the form of memorial parks, which would allow significant leeway for walkways and landscaping (which could take the form of natural corridors).

1.1 BACKGROUND

EnviroAfrica was initially tasked to do a preliminary biodiversity scan on 3 potential sites of which 2 is likely to be used (Refer to Botes, 2017a). The three sites were:

1. **De Novo (Northern District):** Portion 10 of the Farm De Novo, No. 727, approximately 192 ha in size.
2. **Louw's Bos (Central District):** Remainder of Farm 502, approximately 217 ha in size.
3. **Calcutta (as an alternative for De Novo):** Remainder of Farm Calcutta No. 29, approximately 39 ha in size.

Towards the end of 2017, a fourth site was identified and EnviroAfrica was tasked to do a similar Draft Sensitivity map for the following property (Refer to Botes, 2017b):

1. **Louw's Bos (Eastern District):** Portion 1 of the Farm Louw's Bos No. 1006 (a.k.a. Louw's Bos North).

1.2 LOUW'S BOS SOUTH

Environmental constraints and inputs from the various role-players has resulted in a further site being identified on the Rem. of Farm Louw's Bos No. 502, referred to as Louw's Bos South.

EnviroAfrica was again tasked to do a Draft Sensitivity map for the new site and to evaluate this site against a portion of the original site identified on the Farm Louw's Bos (referred to as Louw's Bos North) (Refer to Figure 1). It is important to note that a Botanical study of the Louw's Bos South site was already commissioned which was used to add value to the recommendations in this report.



Figure 1: Google overview showing the remainder of the Farm Louw's Bos No. 502 and the two sites (the new site being Louw's Bos South)

This report will focus on the Louw's Bos South site but will compare it with the Louw's Bos North site (evaluated during 2017) in terms of potential environmental sensitivity.

1.3 ABBREVIATIONS USED

CBA	Critical Biodiversity Area
ESA	Ecological Support Area
WCBSP	Western Cape Biodiversity Spatial Plan (2017)

1.4 DESKTOP SCANS

The 2017 Western Cape Biodiversity Spatial Plan (WCBSP) includes a map of biodiversity importance for the entire province, covering both the terrestrial and freshwater realms, as well as major coastal and estuarine habitats.

CBA1 are critical biodiversity areas (CBA's) that are likely to be in a natural condition and CBA2 are ones that are potentially degraded or represent secondary vegetation. This distinction is based on best available land cover data, and therefore may not be an entirely accurate or current reflection of condition. Site visits are recommended to verify habitat condition. Similarly, a distinction is made between ecological support areas (ESA's) that are likely to be functional (i.e., in a natural, near-natural or moderately degraded condition; ESA 1), and Ecological Support Areas that are likely severely degraded or have no natural cover remaining and therefore require restoration where feasible (ESA 2).

Importantly, both CBAs and ESAs are further divided into sub-categories which recognise important inherent attributes of the site, allowing for greater specificity in applying land-use guidelines. The sub-categories should be used in conjunction with the WCBSP Handbook and its proposed land use guidelines.

1.5 SITE VISIT

A physical site visit was performed on the 30th of August 2018 (start of spring). The site visit comprised of walking a driving the sites, whilst photographing and marking any feature of special significance in term biodiversity.

2. LOUW'S BOS SOUTH

The new site (Louw's Bos South) is located just south of the Annandale Road, which connects the R44 with Baden Powel Drive and about 10 km south of Stellenbosch. The Louw's Bos North site is located on the same property, but to the north of the Annandale road (just south of the Stellenbosch Airfield) (Refer to Botes, 2017a).

Size: The portion of Farm Louw's Bos (502/Re) south of the Annandale road is approximately 490 ha in size, of which only approximately 70 ha was investigated.

Land use: Please note that this study only focused on the approximately 70 ha approved for development by the Stellenbosch Municipality, which is referred to as Louw's Bos South in Figure 1.

- The predominant land use within this 70 ha area was agriculture.

Available area: Figure 2, shows the property boundaries in yellow and the available land (approved by the Stellenbosch Municipality) for development in blue.

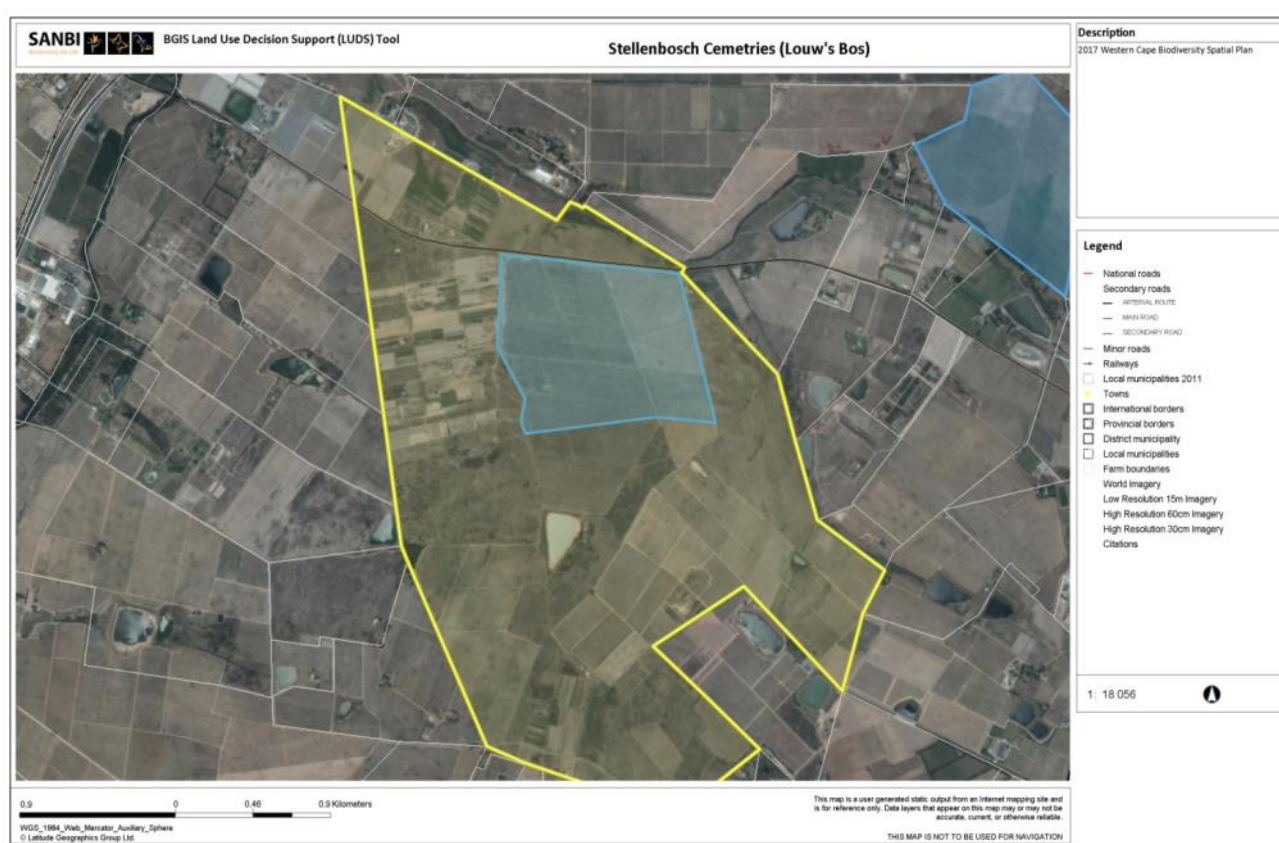


Figure 2: The Remainder of Farm Louw's Bos 502 (Yellow) with the Louw's Bos South site in blue

Potential restrictions: **Vegetation:** The original vegetation expected in the study area would be Swartland Granite Renosterveld, a critically endangered vegetation type. As a result a botanical assessment was commissioned (Refer to McDonald, 2018). The detailed botanical assessment showed that habitat is highly transformed and that there are no botanical or other habitat indicators that would preclude development (no Swartland Granite Renosterveld remnants were found).

Western Cape Biodiversity Spatial Plan: Figure 3 show that the proposed site does not overlap critical biodiversity-, or ecological support areas. According to

McDonald (2018) and own observations, it was clear that the entire focus area has been irreversibly degraded and no longer supports any habitat that could be restored to the original or near-original condition.

McDonald (2018) further states that no plant species of conservation concern were recorded and there is no significant paucity of geophytes in the focus area (ascribed to the long history of agriculture).

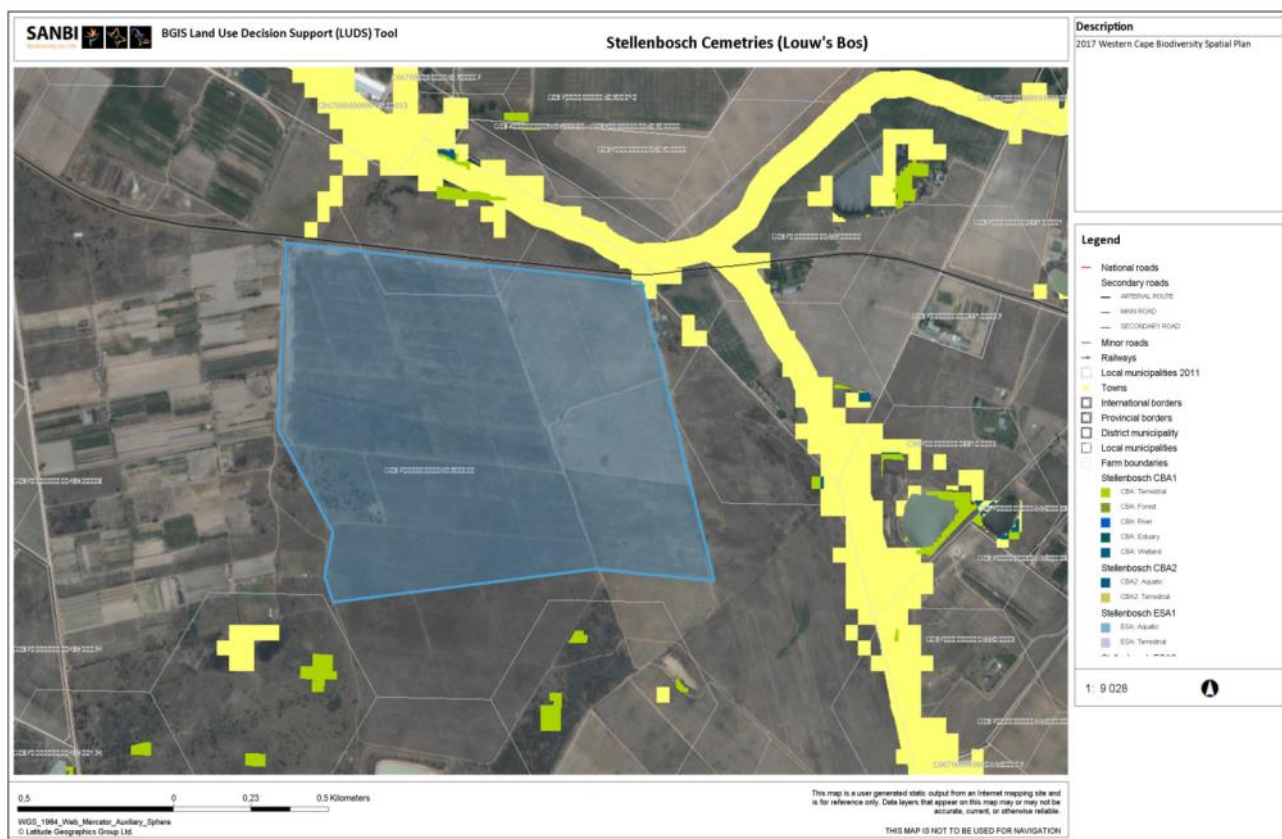


Figure 3: Western Cape Biodiversity Spatial Plan overlaid onto the property



Photo 1: Showing some of the typical disturbed land encountered

2.1 CAPENATURE COMMENTS

Still to be discussed with CapeNature.

2.2 RECOMMENDATIONS

Louw's Bos South is located on land transformed by agriculture. The 2017 Western Cape Biodiversity Spatial Plan (WCBSP) does not recognise any area of special concern (CBA or ESA) areas within the proposed footprint. However, since the site overlaps an area that would originally have been covered by the critically endangered Swartland Granite Renosterveld vegetation type a precautionary approach would have been advised. Recommendations would have included that a spring botanical scan be commissioned. Such a report was already commissioned (Refer to McDonald, 2018).

Dr McDonald is a highly respected botanist and the findings of his botanical report (McDonald, 2018) are fully supported. Personal observations supported by McDonald (2018) indicated that:

- *"The site chosen for the proposed Stellenbosch Memorial Park / Cemetery at Louw's Bos South is eminently suitable for the desired purpose. Effect on natural vegetation and habitat would be very low and the use of this area would not lead to any further loss of critically endangered Swartland Granite Renosterveld. The project is thus supported unreservedly from a botanical / biodiversity perspective."*

3. LOUW'S BOS NORTH

The area approved by the Stellenbosch Municipality for development within the northern section of the Remainder of Farm Louw's Bos 502 (referred to as Louw's Bos North) was part of the original area assessed by Botes (2017a).

- In this assessment the majority of Louw's Bos North site was regarded as transformed agricultural land and given as the first option for development (in other words potentially suitable for development from a botanical perspective).
- However, portions of Louw's Bos north overlaps into an ecological support areas (Refer to Figure 4) associated with degraded wetland area and it was recommended that these area should be regarded as sensitive and should be considered for rehabilitation. But the rehabilitation could form part of the larger landscaping of the memorial park (and could become a wetland feature, which will benefit the degraded stream).
- Lastly, CapeNature also recommended that the proposed Stellenbosch Western By-Pass road (Figure 5) must be taken into consideration as the proposed alignment passes through this site. As it stands, the proposed by-pass road will pass almost through the centre of the proposed Louw's Bos North site. Again, this can be taken into account when developing the memorial park, and should not exclude the use of the site.

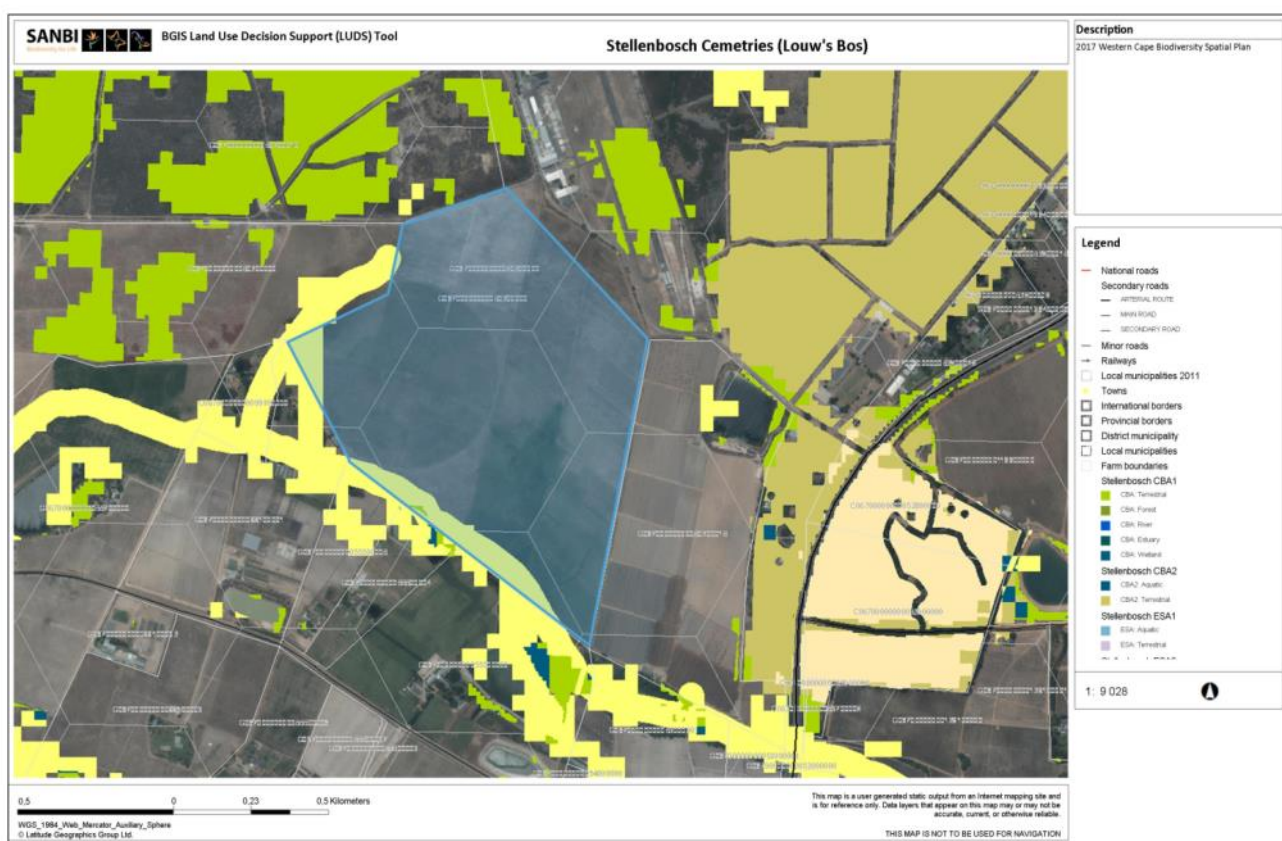


Figure 4: Western Cape Biodiversity Spatial Plan, showing ecological support areas (yellow) to the west and south of Louw's Bos North

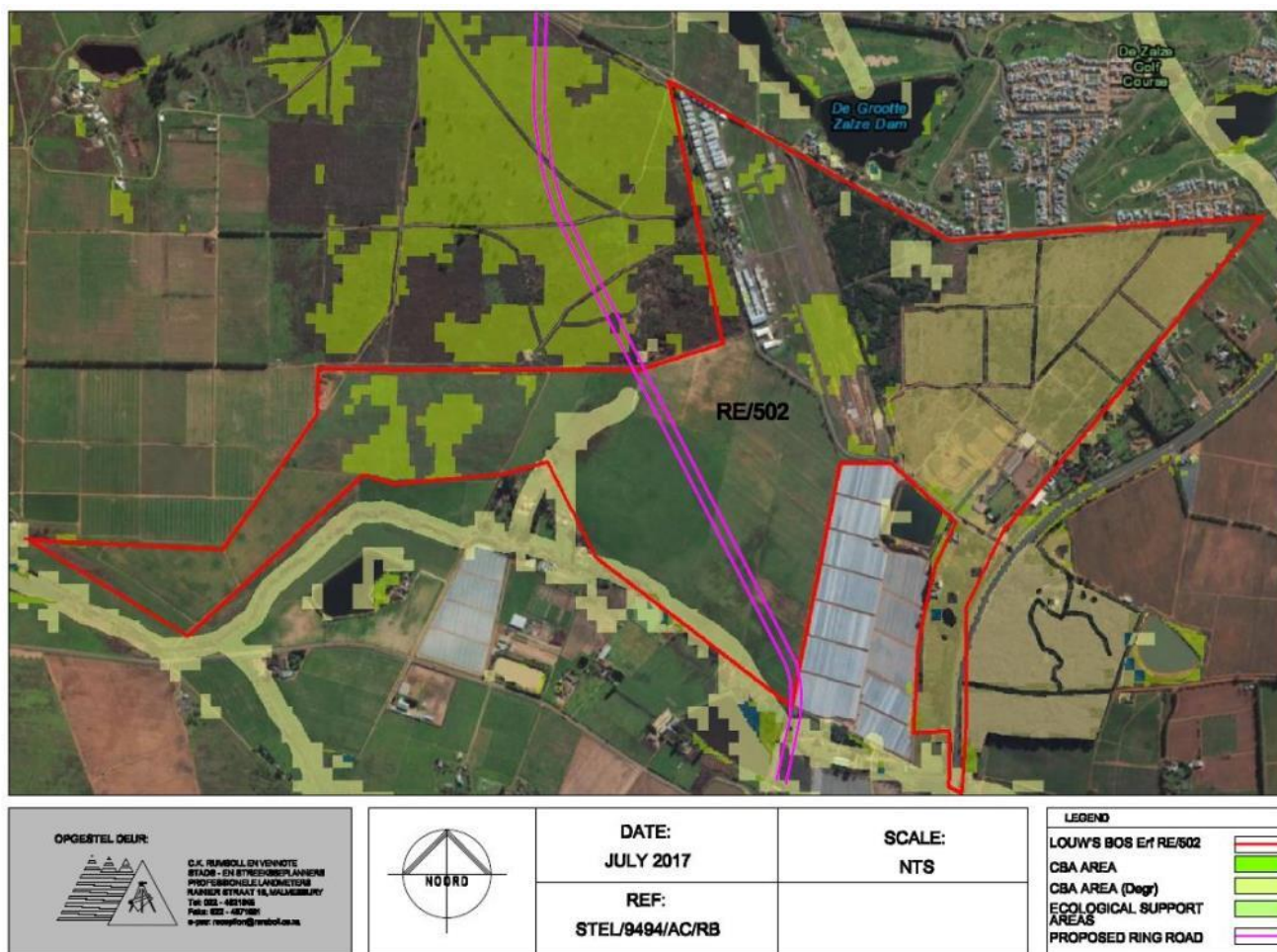


Figure 5: Proposed Stellenbosch Western By-pass road

4. LOUW'S BOS SOUTH VS LOUW'S BOS NORTH

Part of the brief of this report was to compare Louw's Bos South with Louw's Bos North in terms of environmental sensitivity and suitability for the proposed development. The following were taken into consideration:

- Botanical sensitivity: Both Louw's Bos South and Louw's Bos North are considered transformed agricultural land with no natural veld of potential value remaining.
- The Western Cape Biodiversity Spatial Plan does not recognise any critical biodiversity areas (CBA) or ecological support area (ESA) within the proposed Louw's Bos South area. However, it does recognise ESA areas (associated with wetlands or stream) to the west and south of the Louw's Bos North site.
- Other considerations: The proposed Stellenbosch western by-pass road will run through the proposed Louw's Bos North cemetery area.

4.1 IN CONCLUSION

From an environmental sensitivity view, both sites are considered degraded agricultural land suitable for the proposed development, but Louw's Bos North may potentially impact on an ESA (which should be considered for rehabilitation) and may impact on the Stellenbosch western by-pass road. However, it is important to note that both these features can potentially be incorporated into the Memorial Park layout and with good planning the ESA areas can benefit from the proposed layout by incorporating (and rehabilitating) the wetland and streams as part of the final layout. The ESA can potentially be incorporated into the Memorial Park layout and become part of the Memorial Park.

5. REFERENCES

- Botes, P.J.J. 2017a.** Draft Biodiversity Sensitivity Maps. Stellenbosch Memorial Park. Proposed establishment of a memorial park (cemeteries), Stellenbosch Municipality on Portion 10 of the Farm De Novo No. 727, Remainder of the Farm Louw's Bos No. 502 and Remainder of the Farm Calcutta No. 29. Unpublished report prepared for CK Rumboll & Partners. 25 July 2017.
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