S 24 G APPLICATION

MANINI HOLDINGS

JANUARIE 2023

SCHERP ARABIE 743 KS, PTN, 18 AND R/E OF PTN 19

EPHRAIM MOGALE LOCAL MUNICIPALITY
SEKHUKHUNE DISTRICT

REF #: 12/1/9/S24G-GS37

DRAFT ASSESSMENT REPORT

COMPILED BY:
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TABLE OF CONTENTS

SCREENING

A summary of the environmental sensitivity of the initial screening generated by the National Screening Tool of the Department of Environmental Affairs (https://screening.environment.gov.za) is tabled below.

Theme	Sensitivity				Comment
	Very High	High	Medium	Low	
Agricultural			✓		The proposed development sites are in an area with low-moderate land capability in terms of agriculture. The activity can be regarded as an expansion of current agricultural activities.
Animal Species			✓		Animal species sensitivity was indicated as of medium sensitivity in the initial screening. However, a unique number for one animal species (sensitive species 12, listed as vulnerable) was included in the list of sensitive species. The species is known to make burrows during dry spells and winter periods and may have been impacted by the unlawful development.
Aquatic Biodiversity				✓	The aquatic biodiversity theme is indicated as low sensitivity.
Archaeological and Cultural				✓	The archaeological and cultural theme is specified as low sensitivity. The footprint of the proposed development is more than 0.5 ha, and a heritage impact assessment was conducted in terms of this theme.
Civil Aviation		✓			The civil aviation theme was flagged as high due to the proximal distance (8 km) to an aerodrome, the proposed development does not entail the construction of structures that could be regarded as obstacles in terms of civil aviation.
Defence				✓	Flagged as of low sensitivity. The proposed development does not entail the construction of structures or infrastructure that will impact on the defence theme.
Palaeontological	✓	✓			Flagged as of high (Sites 1 and 3) to very high (Sites 2 and 4) sensitivity. In terms of the SAHRIS palaeo-sensitivity map, the sensitivity varies between blue, yellow and red zones . A desk top study and “finds” protocol is highlighted as requirements.

Table 1: Summary of screening results.

Theme	Sensitivity				Comment
	Very High	High	Medium	Low	
Plant Species			✓		Initial screening indicated a low sensitivity in terms of the plant species theme at all of the sites.
Terrestrial Biodiversity	✓				The proposed development site is located in a Critical Biodiversity Area 2 and Portion 19 is registered as a Private Nature Reserve (Gazette No 3073, Notice 12 of 29 January 1964. Please refer to Appendix G.

Table 2: Summary of screening results (continued).

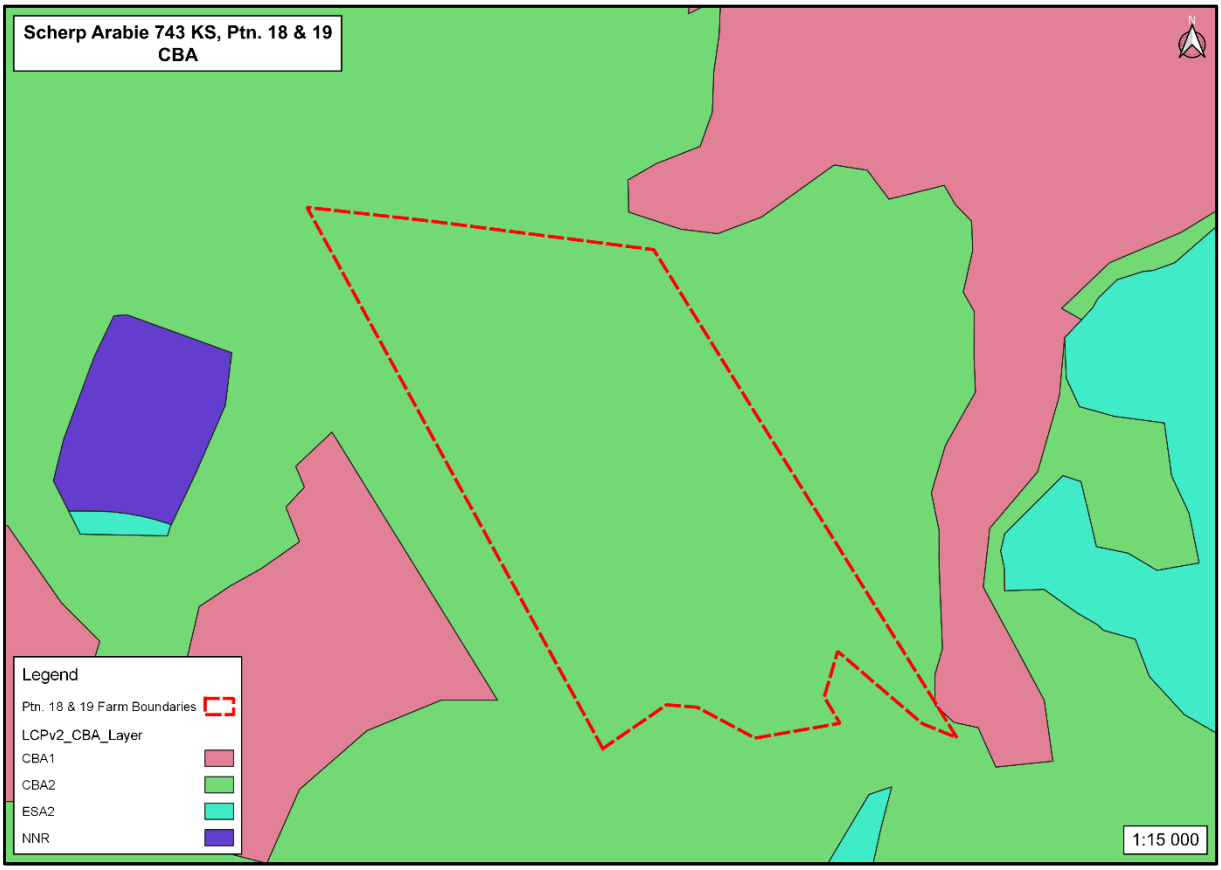


Figure 1: The property is located in a CBA 2 area.

Based on these sensitivities, specialist assessments for the proposed development were identified for inclusion in the assessment. A summary of these specialist reports is tabled below, and reasons provided, if not included in the assessment.

Agricultural Impact Assessment.	Included. Soil Analysis.
Landscape/Visual Impact Assessment.	Included. Impact Assessment.
Archaeological/Cultural Heritage Impact Assessment.	Included. Phase 1 Heritage Impact Assessment.
Palaeontology Impact Assessment.	Included. Palaeontological Desktop Study.
Terrestrial Biodiversity Impact Assessment.	Included. Environmental Baseline Data Report.
Aquatic Biodiversity Impact Assessment.	Included. Environmental Baseline Data Report.
Hydrology Assessment.	Included. Geohydrological Report.
Socio Economic Assessment.	Included. Impact Assessment.
Plant Species Assessment.	Included. Environmental Baseline Data Report.
Animal Species Assessment.	Included. Environmental Baseline Data Report.

Table 3: Specialist studies identified in terms of the S 24 G application for the unlawful agricultural development.

AGRICULTURAL IMPACT ASSESSMENT

The unlawful development entails the expansion of an agricultural development on a property already developed for crop farming in the agricultural community of the Ephraim Mogale Local Municipality. The area is mainly devoted to cultivation. Therefore, it was postulated that the land has the potential to support the proposed development and an agricultural potential assessment was not conducted. However, the soil analysis for the Scherp Arabie farm is included under Appendix D . Clearing of vegetation was done on the Scherp Arabie farm to expand the current cultivation activities originally established in 2016 (Google Earth Satellite). It could not be confirmed if an Environmental Authorization was issued prior to development in 2016.

ABBREVIATIONS

BCA	-	Biological Control Agents.
BGIS	-	Biodiversity Global Information System.
CARA	-	Conservation of Agricultural Resources Act.
CBA	-	Critical Biodiversity Area.
DCA	-	Damage Causing Animals.
DWS	-	Department of Water and Sanitation.
ECO	-	Environmental Control Officer.
EIA	-	Environmental Impact Assessment.
EMPr	-	Environmental Management Programme.
ESA	-	Ecological Support Area.
GPS	-	Global Positioning System.
GSDMBP	-	Greater Sekhukhune District Municipality Bioregional Plan.
HWC	-	Human-Wildlife Conflict.
IPM	-	Integrated Pest Management.
LCP	-	Limpopo Conservation Plan.
LEDET	-	Limpopo Department of Economic Development, Environment & Tourism.
LEMA	-	Limpopo Environmental Management Act.
LTSS	-	Land Type Survey Staff.
NEMA	-	National Environmental Management Act.
NEMBA	-	National Environmental Management: Biodiversity Act.
NFA	-	National Forests Act.
NFEPA	-	National Freshwater Ecosystem Priority Areas.
NR	-	Nature Reserve.
PA	-	Protected Area.
PNR	-	Private Nature Reserve.
SANBI	-	South African National Biodiversity Institute.
SANDF	-	South African Defense Force.
SDF	-	Spatial Development Framework.
SDM	-	Sekhukhune District Municipality.
SNR	-	Schuinsdraai Nature Reserve.

INTRODUCTION

Manini Holdings (Pty) Ltd intended to establish citrus orchards on their recently acquired property and appointed ESZRO Environmental Consulting (Pty) Ltd during 2021 to undertake a Scoping and EIA Process in terms of the requirements of the National Environmental Management Act (Act 107 of 1998) and the Environmental Impact Assessment Regulations of 2014, as amended. However, the applicant commenced with bush clearing activities (approximately 100 hectares), intensive landscaping activities associated with orchard preparation and the construction of a 50 000 m^3 off-stream coffer (storage) dam before the required Environmental Authorization was issued by the Department of Economic Development, Environment and Tourism (Limpopo) and is now submitting a S 24G application to seek authorization for the listed activities which commenced without authorization.

The activity triggered activities listed under Listing Notices 1, 2 and 3 of the 2014 EIA Regulations. When an activity listed in terms of the applicable Environmental Impact Regulations commenced without the mandatory legislative process, Section 24G of the National Environmental Management Act (Act 107 of 1998) makes provision for any person to apply to the relevant MEC/Minister to rectify such unlawful activity. If the application is successful, it will enable that person to lawfully continue with the listed activity, however, the application will not affect any criminal liability of the applicant.

At the time of submission of the application, the EAP was not aware that construction of the 50 000 m^3 coffer dam was already in progress, and the following activities, listed in terms of Listing Notice 1 of the EIA Regulations will also be applicable to this application.

<u>Listing Notice 1, Activity 13</u>

The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.

This activity is applicable to this application as an off-stream storage dam with a capacity of 50 000 m^3 was constructed at the southern boundary of the Scherp Arabie farm.

The affected properties are Portion 18 and the remaining extent of Portion 19 of the farm Scherp Arabie 743 KS, located approximately 9 km north-north-east of Marble Hall town in an agricultural community, mainly devoted to cultivation. Topographically the area lies between the latitudes 24° 53’ 51.36” and 24° 55’ 22.08” South, and longitudes 29° 18’ 40.32” and 29° 20’ 36.96” East. According to topographic map 2429 CD, the altitude of the farm varies between 845 m and 900 m

above sea level. The property lies just north of the Elands River and lies approximately 4 km west south-west of the Arabie Dam.

Manini Holdings (Pty) Ltd has cleared approximately 107 hectares of land with the intent to develop citrus orchards without the required environmental authorization and has now commenced with a Section 24G process to apply for the continuation of the activity.

The property has an existing legal water-use which will be adequate for the irrigation of the planned orchards. Please refer to Appendix F.

CONTENT

This application for the rectification of the unlawful commencement and continuation of a listed activity was compiled in terms of Section 24G of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended. The content of the report is based on the guidelines provided in the Regulation 698 of 2017, promulgated in terms of section 44(1)(aC) and 44(1)(b) of the National Environmental Management Act, 1998 (Act No.107 of 1998), for the submission of 24G applications.

PART 1

Section A: Background Information.
Section B: Activity Information.
Section C: Policy and Legislative Framework.
Section D: Need and Desirability.
Section E: Alternatives.
Section F: Description of the Receiving Environment.
Section G: Public Participation Process.
Section H: Impact Assessment.
Section I: Conclusion and Recommendations.
Section J: Appendixes.

SECTION A: BACKGROUND INFORMATION

DOCUMENT TITLE

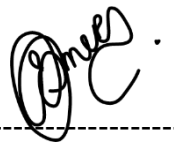
Draft Assessment Report for the submission of a Section 24G application to obtain Environmental Authorization for the citrus development on Portion 18 and the Remaining Extent of Portion 19 of the farm Scherp Arabie 743 LS in the Ephraim Mogale Local Municipality, Sekhukhune District, Limpopo Province.

DOCUMENT PREPARED FOR

Manini Holdings (Pty) Ltd
PO Box 617
BELFAST
1100

PROJECT TEAM

This Impact Report was prepared by Ms. E. Osmers with the required specialist inputs as described below. Ms. Osmers has obtained a National Diploma in Nature Conservation in 1992 and is registered with EAPASA as an Environmental Assessment Practitioner (Registration Number 2019/1752) other professional affiliations include SACNASP - is registered as a Certificated Natural Scientist (Ecological Science) – registration number 117860. A condensed version of the EAP's CV is attached under Appendix F.



E. Osmers

SPECIALISTS AND GIS

This document must be read with the specialist reports listed below.

Environmental Baseline Data:	Mr I.C. Sharp (BSc (Hons) Wildlife Management).
Heritage Impact Assessment:	Adansonia Heritage Consultants.
	Ms C van Wyk Rowe (Heritage Practitioner).
Palaeontological Assessment:	Prof. M. Bamford.
Geohydrological Assessment:	Tale Enviro Consulting (Pty) Ltd.
GIS Mapping:	Mr S.W. Osmers.
Graphics and Research:	Mr Z.A. Osmers.
Technical Assistant:	Ms R. Osmers (Student, BSc Life Sciences BZG).

SECTION B: ACTIVITY INFORMATION

LOCALITY

The development is located on the Portion 18 and R/E of the farm Scherb Arabie 743 KS, situated in the Ephraim Mogale Local Municipality of the Sekhukhune District of the Limpopo Province. According to the General Evaluation Roll (2017-2022) of Ephraim Mogale Local Municipality, the subject property is zoned as Agriculture. The development lies north of the Elands River. The Surveyor general code allocated to the properties are T0KS00000000074300018 (Portion 18) and T0KS00000000074300019 (Portion19). Figure1 below illustrates the location of the property.

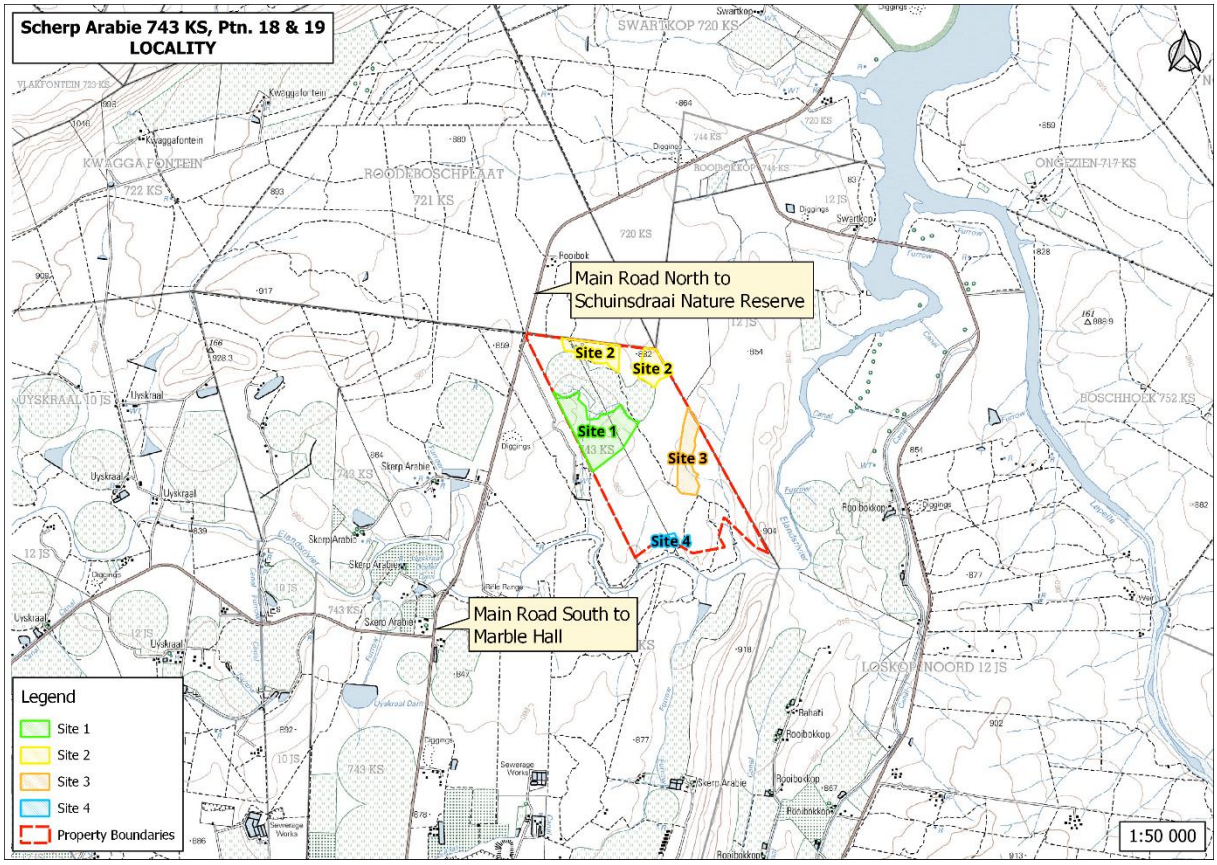


Figure 2: Location of the Scherp Arabie farm, also indicating the location of the cleared areas.

According to the South Africa Protected Area Database (2022), Portion 19 of the Scherp Arabie farm is part of a proclaimed private nature reserve (PR de Jager PNR), proclaimed on 29 January 1964. Since the land-use on the property is no longer compatible with a protected area, an application for de-registration should be submitted to the authorities.

The purpose of the Limpopo Conservation Plan is to develop the spatial component of a bioregional plan and to support integrated development planning and sustainable development by identifying an efficient set of Critical Biodiversity Areas that are required to meet national and provincial biodiversity objectives, in a configuration that is least conflicting with other land-uses and activities.

However, as stated in the Limpopo Conservation Plan, incomplete biodiversity datasets and generally coarse mapping of biodiversity features impose limitations on this plan. Although these limitations do not restrict the application of the LCP, it needs to be recognized and appropriately accommodated when the LCP is used. Therefore, it is clearly stated that the LCP does not replace the need for Environmental Impact Assessments and the verification of the CBA sites when developments are considered.

The features that are attributed to the classification of the land as a CBA 2 area are listed below.

- Buffer on large river (Proximity to Elands River).
- Central Sandy Bushveld.
- The area is important in terms of corridors and connectivity.
- EBA 1 Area – supporting climate change resilience.
- EBA 2 Area – supporting climate change resilience.
- EBA 3 Area – supporting climate change resilience.
- River corridor.
- Natural Distribution Range of the white-backed vulture (*Gyps africanus*).

CBA 2 areas are selected to meet biodiversity patterns and/or ecological processes but are not regarded as irreplaceable. In terms of the Limpopo Conservation Plan, intensification of land-use should be avoided and these areas should be maintained in a natural state with limited or no biodiversity loss. The land-use management objectives of the Limpopo Conservation Plan states that current agricultural practices, including arable agriculture, can continue as long as these are managed in a way to ensure populations of threatened species are maintained and the ecological processes which support them are not impacted on. Although the expansion of extant intensive agricultural production operations does not form part of the land-use management objectives for CBA 2 areas, the Limpopo Conservation Plan makes provision for the expansion of such activities, subject to a detailed impact assessment.

Three areas, with a total footprint of approximately 107 ha, were cleared for the establishment of citrus orchards and a fourth site of approximately 2 hectares was cleared for the construction of a off-stream coffer dam for the storage of water for irrigation.

SITE 1

Site 1 is located south of the extant cultivated area on the western boundary of the Scherp Arabie farm. The area is divided by an ephemeral drainage line, feeding into the Elands River drainage system. The location of this area is illustrated in Figure 3.

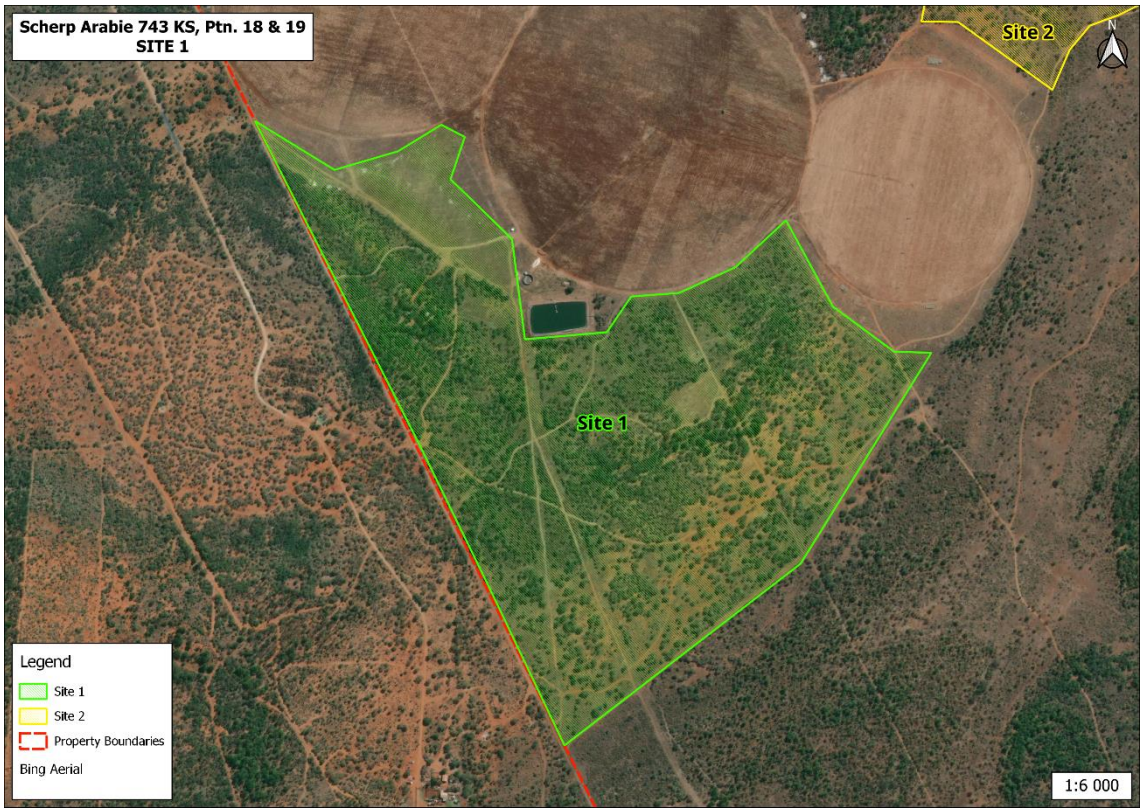


Figure 3: Illustrating the location of Site 1, unlawfully cleared to establish citrus orchards.

A site visit was conducted on 27 April 2022. At the time of the site visit, landscaping work on the site continued. The environmental status of Site 1 was recorded. The woody, shrub and herbaceous layers have been removed and soil structure destroyed where orchard rows were now established. Unearthed rocks and vegetation debris were dumped in the adjacent remaining patches of natural vegetation. Piles of removed plant material were burnt on site. Uprooted bulbous species were exposed and vulnerable to further impact. According to the Ecological Baseline Report (Sharp, 2022), two protected tree species were impacted and the ephemeral drainage line and its associated riparian vegetation was significantly compromised by the unlawfull clearing activity.

The magnitude of the impact on the organisms that occupied the site is difficult to determine in retrospect, but it is postulated that many amphibians may have been compromised, as the ephemeral drainage line would have been a suitable habitat.

Figure 4: Heavy machinery at work preparing the site for orchard landscaping. The smoke in the background is from burning piles of removed vegetation.

SITE 2

Site 2 is located north of the extant cultivated area and borders the northern boundary of the Scherp Arabie farm. This area is separated by a natural rocky outcropping, home to protected species such as *Boscia albitrunca* and *Spirostachys africana*.

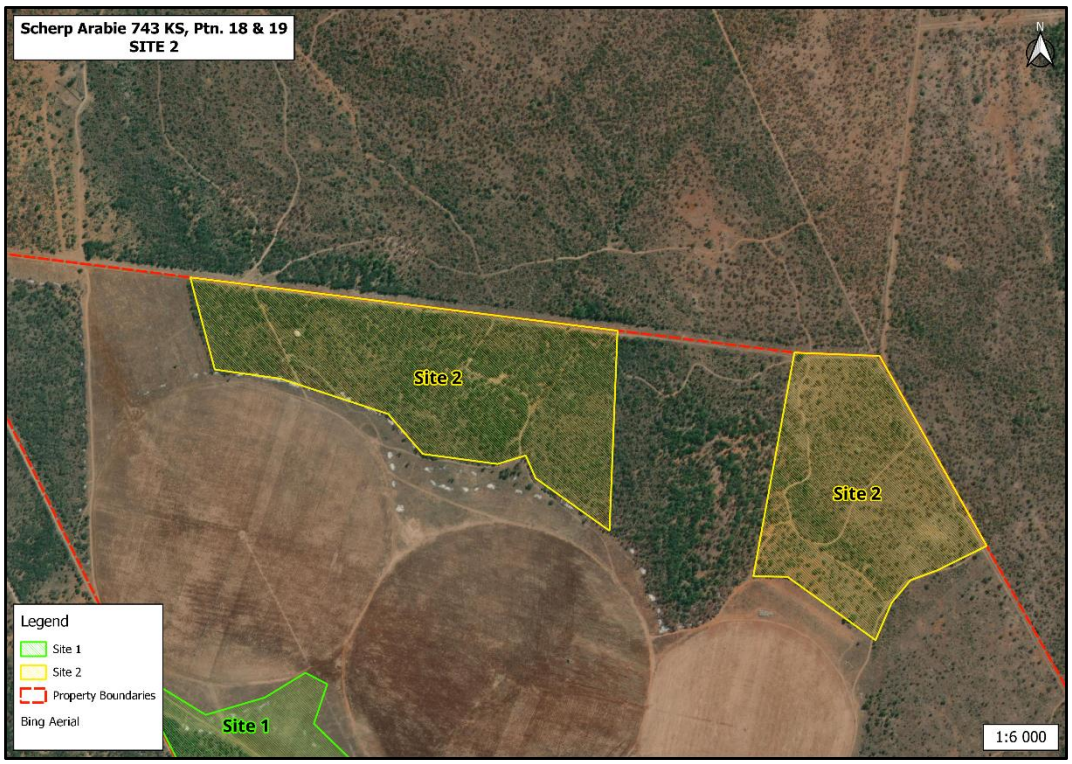


Figure 5: Illustrating the location of Site 2, unlawfully cleared to establish citrus orchards.

A site visit was conducted on 27 April 2022. At the time of the site visit, the environmental status of Site 2 was recorded. The woody, shrub and herbaceous layers have been removed and soil structure destroyed where orchard rows have been established. The rocky outcrop was impacted. Unearthed rocks and vegetation debris were dumped in the adjacent remaining patches of natural vegetation. Piles of removed plant material were burnt on site. Uprooted bulbous species were exposed and vulnerable to further impact. According to the Ecological Baseline Report (Sharp, 2022), three protected tree species and bulbous plant species were impacted. The soils are susceptible to erosion and the risk of erosion will only decrease once a herbaceous layer re-established between the landscaped orchard rows.

The impact on wildlife is difficult to determine in retrospect, it should also be considered that there was a further impact on this component when the uprooted plant material was burnt, as many wildlife species would have sought refuge in the uprooted vegetation debris piles.

SITE 3

Site 3 is located in the eastern parts of the Scherp Arabie farm and lies south of sites 1 and 2. The southern part of this site was previously cultivated, as is evident from historic satellite images of the area and the vegetation structure prior to the clearing operations.

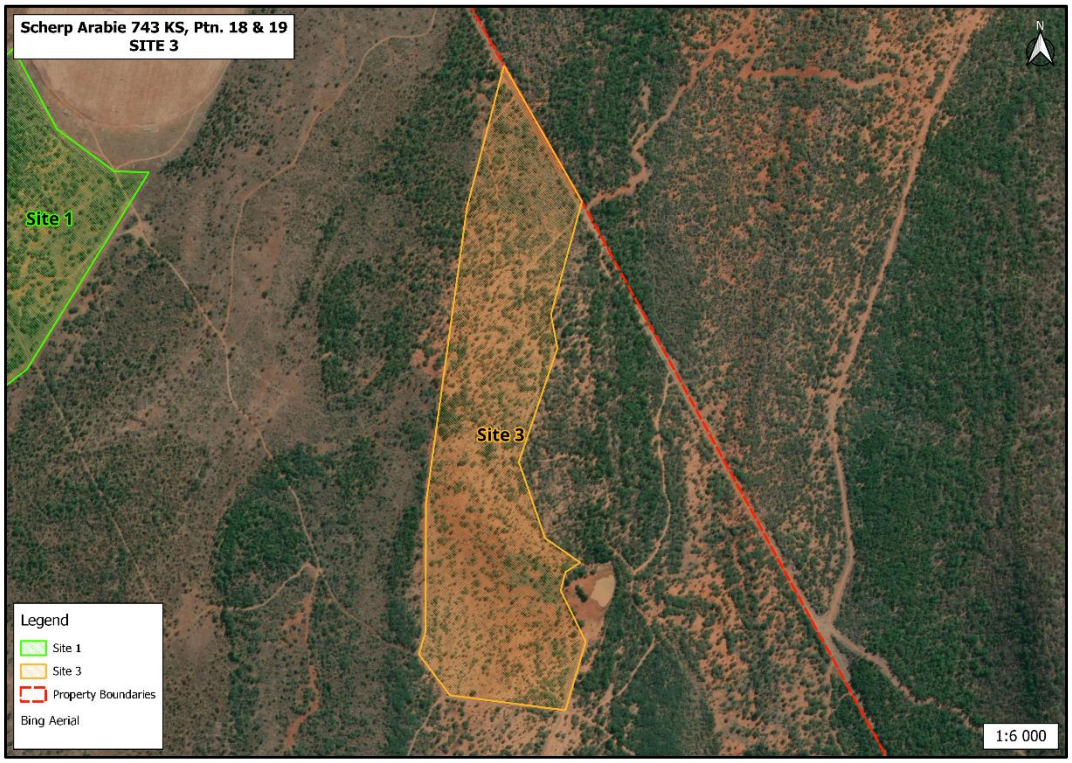


Figure 6:Illustrating the location of Site 3, unlawfully cleared to establish citrus orchards.

As the EAP was not aware of the third cleared area at the time of the first site visit, another site visit was conducted on 23 May 2022. At the time of the site visit, the environmental status of Site 3 was recorded. The woody, shrub and herbaceous layers have been removed and soil structure destroyed where orchard rows were established. Unearthed rocks and vegetation debris were dumped in the adjacent remaining patches of natural vegetation. Piles of removed plant material were burnt on site. Uprooted bulbous species were exposed and vulnerable to further impact. Bulbous plant species were impacted. The soils are susceptible to erosion and the risk of erosion will only decrease once a herbaceous layer re-established between the landscaped orchard rows.

The impact on wildlife is difficult to determine in retrospect, it should also be considered that the there was a further impact on this component when the uprooted plant material was burnt, as many wildlife species would have sought refuge in the uprooted vegetation debris piles.

SITE 4

Site 4 is located in the southern section of the Scherp Arabie farm in close proximity to the Elands River and extant boreholes. Of concern is the fact that the dam site extends into a servitude registered to the Department of Water and Sanitation. The two equipped boreholes are also located in this servitude area.

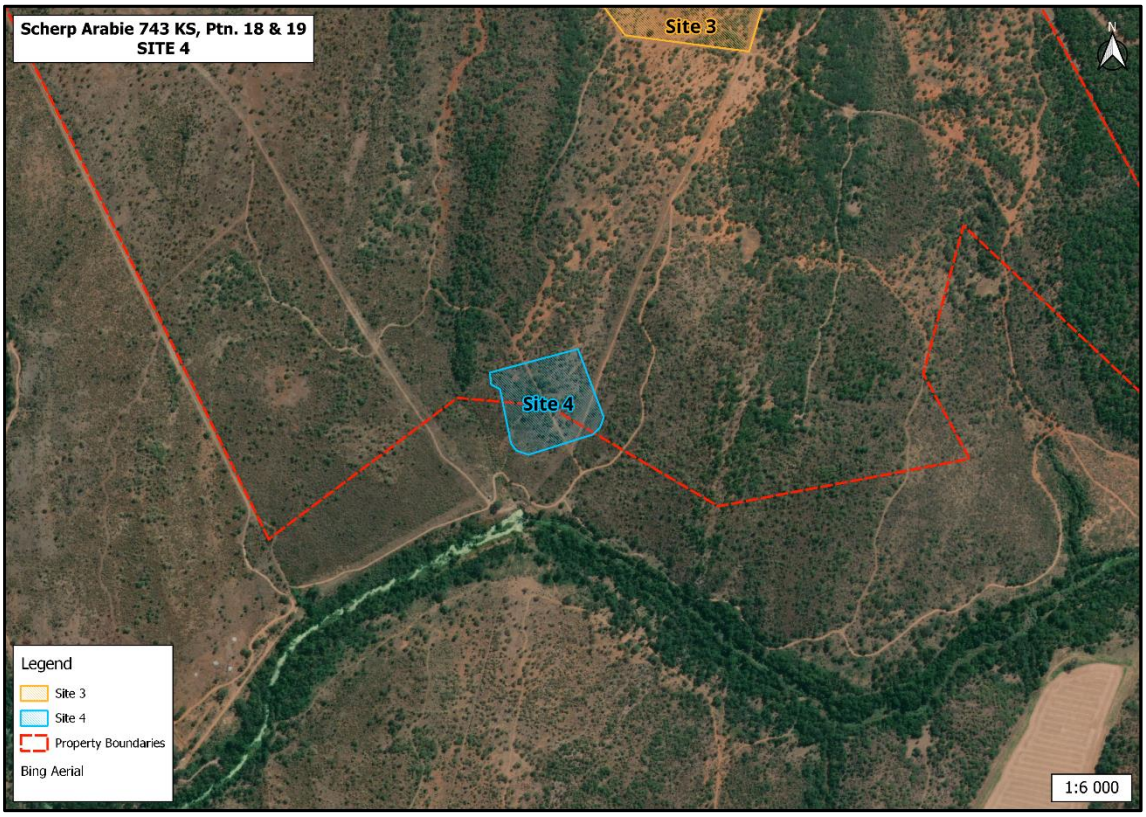


Figure 7: Illustrates the location of the dam site extending into the DWS servitute.

At the time of the site visit, the environmental status of Site 4 was recorded. Heavy machinery were still operating at the site to continue construction. The woody, shrub and herbaceous layers have been removed and soil structure destroyed when the dam site was excavated. Unearthed rocks and vegetation debris were dumped in the adjacent remaining patches of natural vegetation. Piles of removed plant material were burnt on site. Bulbous plant species were impacted. The soils are susceptible to erosion and the risk of erosion will only decrease once a herbaceous layer re-establishes on the constructed dam walls.

PAST AND PRESENT ACTIVITIES

At the time of acquiring the land, land-use on the Scherp Arabie farm included:

- Extant cultivated area, centrally located in the northern section of the property..
- A coffer dam for water reticulation.
- Existing pipeline/irrigation system.
- Production of cash crops.
- Game farming on the preponderance of the property, south of the extant cultivated area, including a perimeter fence suitable to contain the game species.
- Management tracks and access roads.
- Water points.
- Extant camp in the northern parts of the property.
- Farm dwelling and associated infrastructure.

Existing activities and infrastructure includes:

- A newly constructed pumphouse at the old coffer dam.
- Approximately 107 ha of citrus orchards. (Different stages of development at last site visit of 23 May 2022).
- A 50 000 m^3 coffer dam still under construction on 23 May 2022.
- New farm dwellings.

NEIGHBOURING PROPERTIES

The most dominant land-use in the area is agriculture and game farming. The Scherp Arabie farm is bordered by cultivated areas to the south as well as the registered Pasop Private Nature Reserve. There are mostly game farms lying to the north and south of the property. A summary of the neighbouring properties and associated land-use are tabled below.

Neighbouring Properties				
Landowner	**Orientation**	**Property Description**	**Zoning**	**Land-use**
Hannes Roets	North	Roodeboschplaat 721 KS, Ptn 2	Agriculture	Agriculture Game Farming
Hennie Wiese	East	Loskop Noord 12 JS, Ptn 48	Agriculture	Agriculture Game Farming
National Government, DWS	South	Scherp Arabie 743 KS, Ptn 47	Registered Servitude	
Andries van der Walt	South	Scherp Arabie 743 KS, Ptn 10	Agriculture	Agriculture Game Farming
Stapkoe Beleggings Trust	South	Scherp Arabie 743 KS, Ptn 11	Agriculture	Pasop PNR Game Farming
Eddie Visagie (jnr)	West	Scherp Arabie 743 KS, R/E Ptn 3	Agriculture	Agriculture Game Farming

Table 4:Summary of neighbouring properties.

Figure 8 illustrates neighbouring properties and associated land-use as well as neighbouring conservation areas.

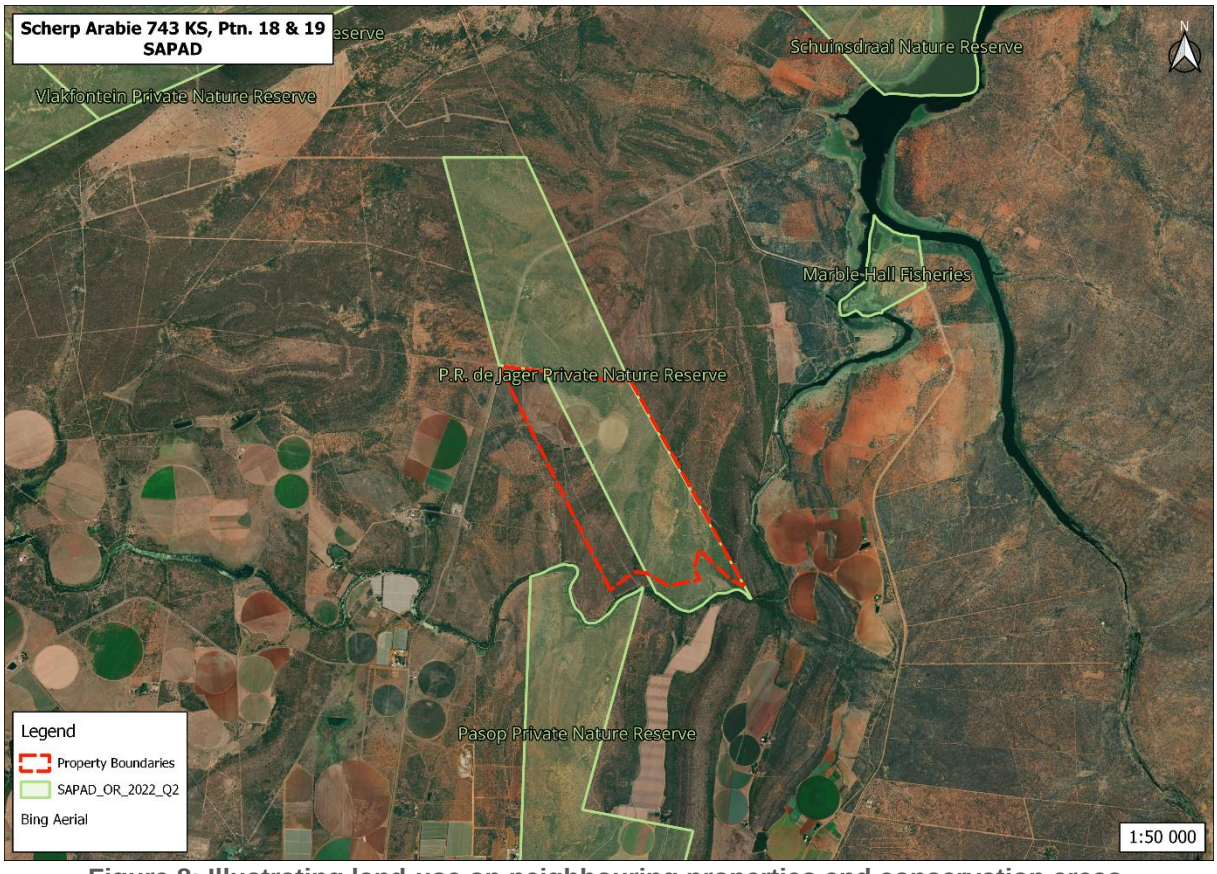


Figure 8: Illustrating land-use on neighbouring properties and conservation areas.

SCOPE OF THE ACTIVITY

Approximately 107 hectares of vegetation were cleared with the intent to establish additional citrus orchards on Portions 18 and R/E of Portion 19 of the farm Scherp Arabie 743 KS. This agricultural activity is listed in terms of Listing Notices 1, 2 and 3 of the EIA Regulations of 2014 and commenced without the required environmental authorization.

When an activity listed in terms of the applicable Environmental Impact Regulations commenced without the mandatory legislative process, Section 24G of the National Environmental Management Act (Act 107 of 1998) makes provision for any person to apply to the relevant MEC/Minister to rectify such unlawful activity. If the application is successful, it will enable that person to lawfully continue with the listed activity. However, the application will not affect any criminal liability for the applicant.

The listed activities, as summarized below, have been contravened in terms of the National Environmental Management Act, 1998 (Act 107 of 1998):

LISTING NOTICE 1

Activity 13 refers to the development of facilities or infrastructure for the off-stream storage of water with a capacity of 50 000m^3 or more. The coffer dam (Site 4) has this capacity.

LISTING NOTICE 2

Activity 15 refers to the clearance of vegetation of more than 20 ha. Approximately 107 hectares of vegetation was removed in the preparation of the land for the establishment of the citrus orchards.

LISTING NOTICE 3

Activity 12 refers to the clearance of an area of 300m^2 and is relevant to the project as it is situated outside an urban area in the Limpopo Province in an area classified as a Critical Biodiversity Area 2.

DESCRIPTION OF THE ACTIVITY

The activity entailed the clearance of 107 hectares of vegetation in preparation for the development of citrus orchards. Additionally, approximately 2 hectares were cleared for the construction of a 50 000 m^3 off-stream coffer dam for the storage of water. A summary of the activities associated with the development is included below:

- Orchard design.

- The growing of the citrus saplings. Saplings were prepared by a registered Nursery (Du Roi) according to GLOBALG.A.P. requirements and standards.
- Preliminary irrigation design by an irrigation specialist.
- The clearing of vegetation. The entire tree, shrub and herbaceous layers were removed during the clearing activity. The clearing activity also impacted on seasonal drainage lines.
- Site preparation and levelling of the area that was earmarked for orchard establishment and the construction of the coffer dam. Site preparation was done with heavy earth-moving equipment and additional work was done by hand.
- The removed plant material was burnt in piles throughout the sites and in some areas plant debris, together with unearthed rocks, were dumped in the remaining adjacent natural areas.
- The construction of an unpaved management road grid to access citrus management units.
- The construction of a pump house at the extant coffer dam. The installation of a suitable irrigation system.
- The planting of the citrus saplings along designated orchard rows.

Currently, the activity is operational as citrus saplings were planted in the previously cultivated lands and in some of the unlawfully cleared areas. The EAP cannot confirm if planting of saplings continued after the last site visit. If planted, the citrus orchards are now managed to cultivate the fruit for the export market. Activities associated with this operational phase of the unlawful development include:

- Water use for irrigation purposes, including the reticulation of water from the Elands River. The property has an existing legal water-use registered for irrigation with the Department of Water and Sanitation for 120 ha of groundwater which is sufficient to meet the irrigation requirements of the activity. Furthermore, the property has a 30.25 ha water-use entitlement allocated by the Trans Elands Water Users Association. Please refer to Appendix F.
- Orchard management, including the application of herbicides to orchard tree-lines to restrict herbaceous plant growth.

SECTION C: POLICY AND LEGISLATIVE CONTEXT

Although the National Environmental Management Act is considered to be the primary environmental legislation in terms of the environmental impact assessment process, other legislative frameworks and policies are also relevant. Legislation which may be relevant to the proposed development is listed below and pertinent sections considered in this evaluation, are highlighted.

NATIONAL LEGISLATION

THE CONSTITUTION OF THE RSA (ACT 108 OF 1996)

The Constitution is the supreme law of South Africa and provides a legal foundation for the existence of the republic and protecting the human rights of its citizens. It also provides the legal framework for the legislation that regulates environmental management in general. In terms of Section 24 of the Constitution everyone has the right:

a) to an environment that is not harmful to their health or well-being; and

b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that:

(i) prevent pollution and ecological degradation;

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Relevance to the project:

In terms of the constitution the landowner has the right to the utilization of the natural resources on his property within the legal framework and should achieve this in an ecologically sustainable manner. The project must adhere to basic constitutional rights and whether this application is successful or not, the property must be managed in such a way to prevent pollution and ecological degradation and promote conservation. Therefore, if authorization for continuation of the project is not granted, the disturbed areas on the property should be rehabilitated. The project should be ecologically sustainable which implies that the available natural resources must be used sustainably whilst justifiable economic and social development should be promoted.

NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

Being the primary environmental legislation of South Africa, the purpose of the National Environmental Management Act is to provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment. The Act also promotes cooperative governance and procedures for coordinating environmental functions and makes provision for the enforcement of other environmental management laws. When an activity listed in terms of the applicable Environmental Impact Regulations commenced without the mandatory legislative process, Section 24G of the National Environmental Management Act (Act 107 of 1998) makes provision for any person to apply to the relevant MEC/Minister to rectify such unlawful activity. If the application is successful, it will enable that person to lawfully continue with the listed activity. The application will not affect any criminal liability for the applicant.

Relevance to the proposed project:

The activity commenced without the required legislative process and a Section 24G application is now submitted to rectify the unlawful development to enable the applicant to lawfully continue with the activities that are listed in terms of the Environmental Impact Regulations. The competent authority is the Provincial Department of Economic Development, Environment and Tourism. The purpose of this report is to inform the process and governing principles of NEMA and the requirements of the NEMA EIA Regulations, 2014 (as amended). As per the requirements for good governance prescribed by the Act, this assessment report is informed by the most up to date and relevant information available to support the decision-making process. Activities relevant to this application include Activity 13 of Listing Notice 1, Activity 15 of Listing Notice 2 and Activity 12 of Listing Notice 3.

NEMBA (ACT 10 OF 2004)

The purpose of the National Environmental Management Biodiversity Act (Act 10 of 2004) is to provide for the protection of listed endangered ecosystems and restricts activities according to the classification of the area and it promotes the application of appropriate environmental management tools to protect biodiversity. Chapter 3 of the Act allows for the publication of bioregional plans whilst Chapter 5 refers to the control of alien invasive species. The Threatened or Protected Species (TOPS) Regulations were promulgated in terms of Section 97 of the Act which requires an authorization/permitting process to be followed for listed species.

The Alien Invasive Species Regulations are promulgated in terms of the National Environmental Management Biodiversity Act (10 of 2004).

Relevance to the proposed project:

In terms of the Sekhukhune District's Bioregional Plan, the development site falls mostly within Critical Biodiversity Area 2 (CBA 2). These biodiversity planning frameworks must be consulted to inform decision making as it provides land-use guidelines for the affected areas. Land-use guidelines for CBA 2 areas indicate that the intensification of land-use should be avoided and, where possible, these areas should be maintained in a natural state with limited or no biodiversity loss. Degraded areas should be rehabilitated and arable agriculture is regarded as an incompatible land-use. However, the LCP also make provision for the continuation of current agricultural practices, including arable agriculture, as long as these are managed in a way to ensure populations of threatened species are maintained and the ecological processes which support them are not impacted on. Although the expansion of extant intensive agricultural production operations does not

form part of the land use management objectives for CBA 2 areas, the LCP makes provision for the expansion of such activities, subject to a detailed impact assessment.

A number of undesirable alien plant species were noted at the cleared sites. All the alien species that were observed are tabled below.

Alien plants noted at the sites			
SPECIES	**COMMON NAME**	**CATEGORY**	**PREVALENCE**
Argemone mexicana	Mexican Poppy	1b	Localized
Bidens pilosa	Blackjack	-	Localized
Cereus jamacaru	Queen-of-the-night	1b	Localized
Opuntia ficus-indica	Sweet Prickly-pear	1b	Widespread
Opuntia stricta	Sour Prickly-pear	1b	Widespread
Datura stramonium	Bone apple	1b	Localized
Zinnia peruviana	Wildejakopregop	-	-

Table 5: Alien plant species identified at the cleared sites – EBD Report.

NATIONAL FORESTS ACT (ACT 84 OF 1998)

The National Forest (Act 84 of 1998) allows for the protection of tree species listed under this legislation. In terms of Sections (5) 1 and 62 (2) (c) of the National Forest Act (Act 84 of 1998), a license is required to remove, cut, disturb, damage or destroy any of the listed protected trees. The most recent list of protected tree species was published in March 2022. The Department of Agriculture, Forestry and Fisheries (DAFF) is authorized to issue permits for any removal, cutting, disturbance, damage to or destruction of any of these listed protected trees.

Relevance to the proposed project:

Tree species listed as protected under the National Forest Act (Act 84 of 1998) were identified in the adjacent areas where the protected tree species surveys were done. These species include, *Boscia albitrunca*, *Sclerocarya birrea* and *Spirostachys africana*. *Boscia albitrunca* and *Sclerocarya birrea* specimens were removed without the required permit from the Department of Agriculture, Forestry and Fisheries. Examples of the uprooted trees are included below.

Figure 9: A large *Sclerocarya birrea*, uprooted during the clearing activity. Photo I.C. Sharp.

Figure 10: *Spirostachys africana* specimens uprooted during the clearing activity. Photo I.C. Sharp.

Figure 11: *Boscia albitrunca* specimens uprooted during the clearing activity.

CARA (ACT 43 OF 1983):

The purpose of the Conservation of Agricultural Resources Act is to prevent over utilization of natural agricultural resources, to promote the conservation thereof, to prevent erosion and to combat weeds and invader plant species.

CARA also includes regulations relevant to alien invasive plants. According to the amended regulations (GN R280 of March 2001), declared weeds and invader plants are divided into three categories:

- Category 1 may not be grown and must be eradicated and controlled,
- Category 2 may only be grown in an area demarcated for commercial cultivation purposes and for which a permit has been issued, and must be controlled, and
- Category 3 plants may no longer be planted; however, existing plants may remain as long as the spreading thereof is prevented. Not applicable to flood lines of watercourses and wetlands.

It is the legal duty of the landowner or the land user to control invasive alien plants occurring on the property/land under their control.

Relevance to the proposed project:

During the ecological assessment of the proposed development site, seven alien invasive plant species were identified of which some are regulated in terms of CARA. The three cactus species Queen-of-the-night (*Cereus jamacaru),* Sweet Prickly Pear *(Opuntia ficus-indica)* and Sour Prickly Pear (*Opuntia stricta*) are classified as Category 1 weeds and of environmental and legal concern.

NATIONAL WATER ACT (ACT 36 OF 1998)

The National Water Act deals with the management, equitable allocation, and conservation of the water resources in South Africa. It controls and manages water use in terms of water abstraction, water storage, wastewater discharge, impact on watercourses, alteration of watercourse flow and the determination of the reserve. General principles in terms of water-use are addressed under Section 21 of the Act.

Relevance to the proposed project:

The property has an existing legal allocation (30.25 ha) from the Trans Elands Water Users Association. However, the allocation did not meet the water-use requirements of the development and an application for the abstraction of groundwater was submitted to DWS. The abstraction of groundwater for the irrigation of 120 ha of citrus was authorized by DWS. Please refer to Appendix F.

NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)

The purpose of the National Heritage Resources Act (Act 25 of 1999) is to provide a framework for the management of national heritage resources which include both landscapes and natural features of cultural significance. The protection of archaeological and paleontological resources is the responsibility of a provincial heritage resources authority/agency and all archaeological objects, paleontological material and meteorites are the property of the State.

In terms of Section 38 (1) subject to the provisions of Subsections (7), (8) and (9), of the Act, a heritage assessment is required if any person intends to undertake a development categorized as:

a) the construction of a road, wall, power line, pipeline, canal or other similar forms of linear development or barrier exceeding 300 m in length;
b) the construction of a bridge or similar structure exceeding 50 m in length;
c) any development or other activity which will change the character of the site –
    (i) exceeding 5000 m^2 in extent,

Relevance to the proposed project:

The South African Heritage Resources Agency is responsible for the identification, conservation, and management of heritage resources. The development footprint exceeded 500 m^2, therefore a Phase 1 Heritage Impact Assessment (HIA) regarding archaeological and other cultural heritage resources was conducted. Results are included in the attached HIA Report.

To comply with the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was required before development.

NATIONAL ENVIRONMENTAL MANAGEMENT PROTECTED AREAS ACT (ACT 57 OF 2003)

The purpose of the National Environmental Management Protected Areas Act is to provide for the protection and conservation of ecologically viable areas which is representative of South Africa's biological diversity and its natural landscapes and to manage these protected areas in accordance with national norms and standards.

Relevance to the proposed project:

Portion 19 of the farm Scherp Arabie 743 KS, is registered as part of the P.R. De Jager PNR. Agriculture is not regarded a compatible land-use and an application for de-registration was supposed to be obtained prior to development.

NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT (ACT 59 OF 2008)

The purpose of the Act is to regulate waste management to protect the environment and general health by providing reasonable measures to prevent ecological degradation and pollution.

Relevance to the proposed project:

The proposed development will produce solid waste during both the development and operational phases. Waste should be disposed of as per legislative requirements. A Waste Management Plan is included in the EMPr.

PROVINCIAL LEGISLATION

LIMPOPO ENVIRONMENTAL MANAGEMENT ACT (ACT 7 OF 2003)

The Limpopo Environmental Management Act deals with the conservation of natural resources and the protection of wildlife. A permit must be obtained from the Wildlife Trade and Regulation Division if any plants or animals listed in the Act had to be removed.

Relevance to the proposed project:

Spirostachys africana specimens, listed as protected in terms of this legislation, were uprooted during the clearing activity. Refer to Figure 10. A number of reptile species were noted at the sites, also protected under LEMA.

POLICIES AND GUIDELINES

The policies and plans that have been considered in the compilation of this impact assessment report are listed below.

- Bioregional Plan for Sekhukhune District.
- Limpopo Conservation Plan.
- Limpopo Provincial Growth and Development Plan.
- Ephraim Mogale Integrated Development Plan.
- Ephraim Mogale Spatial Development Framework.
- Spatial Planning and Land-use Management By-Law, 2016
- South African National Development Plan, 2030.

SECTION D: NEED AND DESIRABILITY

Portion 18 and the R/E of Portion 19 of the farm Scherp Arabie 743 KS was recently acquired by Manini Holdings (Pty) Ltd. These properties were acquired with the intent to develop a citrus farm for the production and export of citrus fruit. According to the Department of Agriculture, Forestry and Fisheries, citrus is the third largest horticulture industry in South Africa and represents approximately 21% of South Africa's agricultural production. Statistics show that citrus production increased exponentially over the last decade, mainly driven by the volume of production, the volume of export (due to increasing demand) and international prices owing to fluctuating foreign exchange rates.

Land-use on the Scherp Arabie farm prior to the unlawful clearing of vegetation was agriculture (cultivation of cash crops) and game farming. The development can be regarded as an expansion of the agricultural enterprise that was extant at the time of purchase. The agricultural development conforms with the Limpopo Provincial Growth and Development Strategy (LPGDS) as it contributes

to the economic sector of the region, and creates permanent job opportunities and temporary job opportunities (every year during the harvesting season). These jobs are mainly accrued to previously disadvantaged people and are once again aligned with the LPGDS as it contributes to the stimulation of economic growth in the local villages. The development is also in line with the National Development Plan 2030 of South Africa, where agriculture is identified as the primary economic activity in rural areas. According to NDP agriculture has the potential to create almost one million new jobs by 2030, which will significantly contribute to the improvement of the current unemployment rate of the Limpopo Province. According to an article published in Business Tech (December 2022), the unemployment rate of the Limpopo Province is 31%, whilst the expanded unemployment rate in Limpopo is estimated at 49.9%.

SECTION E: ALTERNATIVES

As per regulatory requirements, reasonable and feasible alternatives to the proposed development need to be considered as part of the impact assessment process. As an area of approximately 107 hectares was cleared prior to this application, the consideration of an alternative site is not considered feasible, therefore, alternative land-use and the "no-go" alternative was investigated during this process.

ALTERNATIVE LAND-USE

At the time of purchase, the land-use on the Scherp Arabie farm was agriculture (production of cash crops) and game farming with limited tourism activities. Therefore, tourism as an alternative land-use was investigated. During the unlawful activity, the Scherp Arabie farm was developed to be operated as a commercial citrus farm. The clearing of vegetation throughout the property and extensive landscaping to develop the orchards and the off-stream storage dam, modified the landscape to such an extent that a tourism development will no longer be viable, unless cleared areas are rehabilitated.

In terms of the Spatial Development framefork of Ephraim Mogale Local Municipality, Portion 18 and the remaining extent of Portion 19 of Scherp Arabie 743 KS is located in the crop farming zone. Refer to Figure 12. Therefore, the cultivation of citrus is a compatible land-use. In terms of the South African Protected Areas Database (2022), Portion 19 of Scherp Arabie 743 KS, is registered as part of the P.R. de Jager PNR, however, Sites 2 , 3, and 4 (partially) were developed on this portion and the habitat extensively modified. Therefore, it is recommended that de-registration as part of the PNR should be considered, if continuation of the project is allowed.

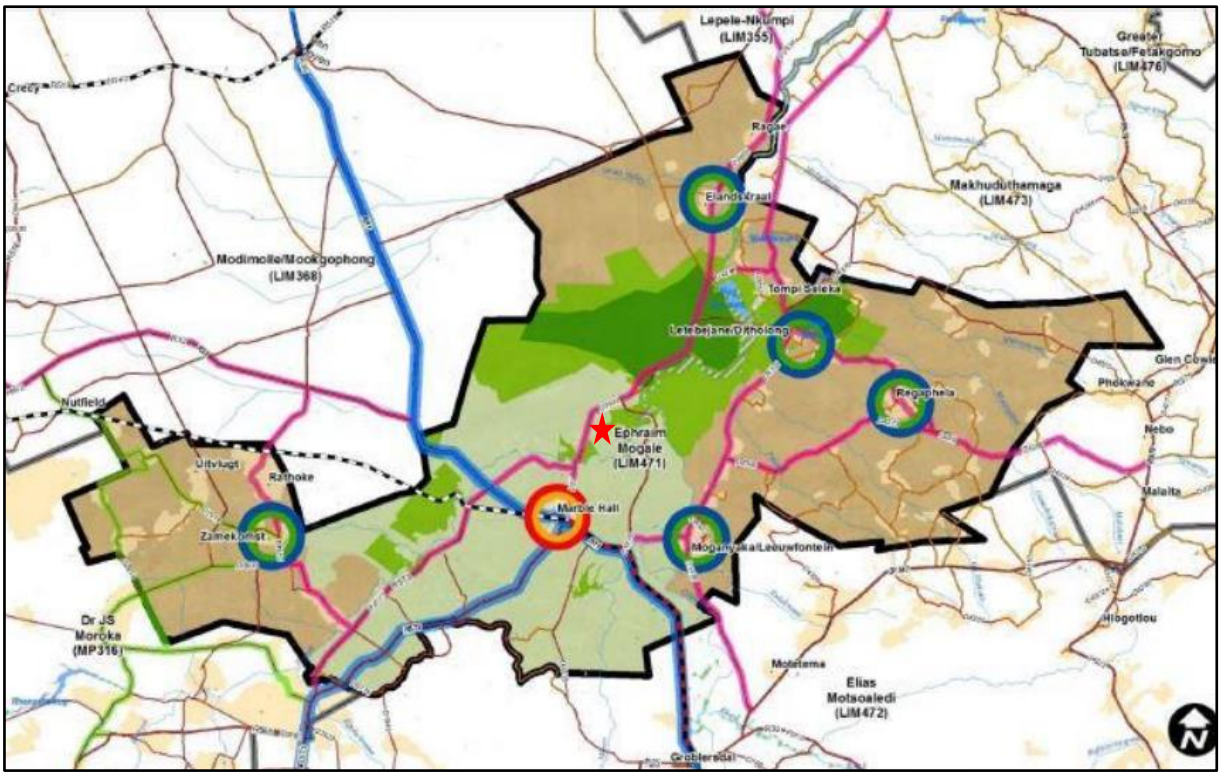


Figure 12: The Scherp Arabie farm is in a crop farming area – Ephraim Mogale IDP, page 37.

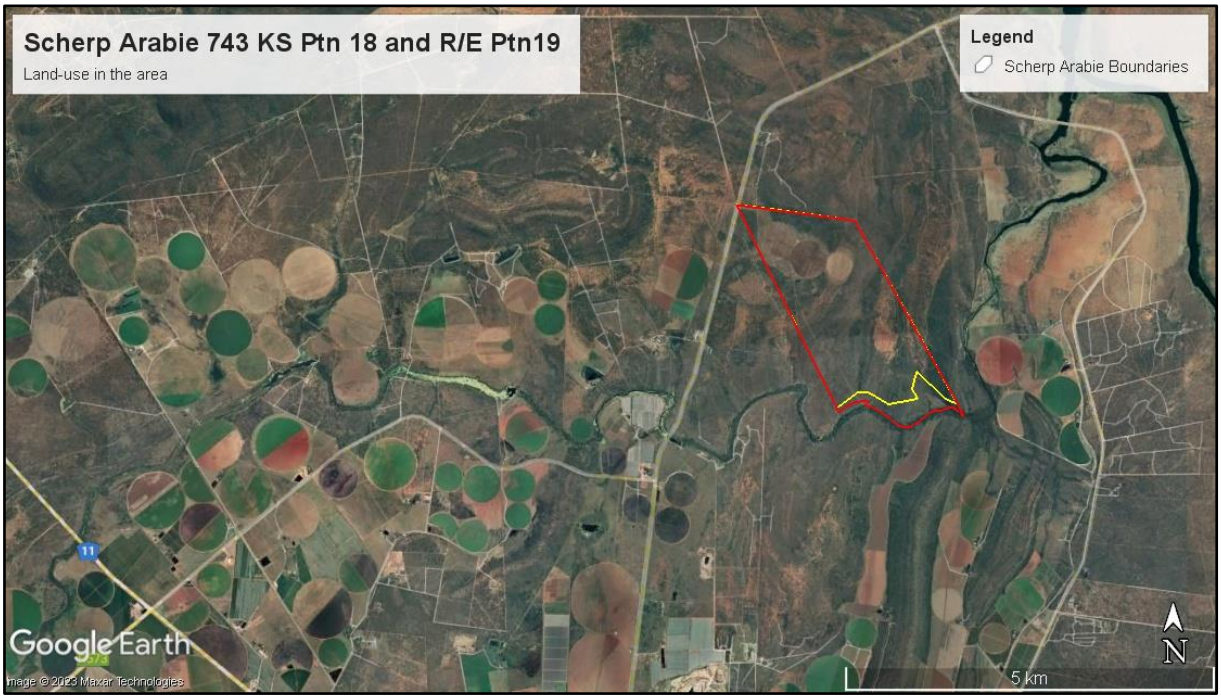


Figure 13: Illustrating land-use in the area.

Whilst investigating the option of an alternative land-use, social-economic impact also had to be considered. The most dominant land-use in the area is crop farming (See Figure 13) and the unlawful activity will not have a detrimental impact on "sense of place" in the area, should authorization for continuation of the project be granted.

The unlawful activity is considered an expansion of the current agricultural activities that were established in 2015. A water use lisence of 120 ha (groundwater) was issued for the irrigation of the citrus orchards and the property has an existing legal allocation (30.25 ha) from the Trans Elands Water Users Association which will be adequate for the irrigation of the citrus orchards. Furthermore, the citrus development will have a greater positive economic impact in the region as opposed to a tourism development.

A 'hunting camp' is extant on the property, however, if tourism as an alternative land-use is considered, additional facilities will be required which will result in additional environmental damage for the construction of a lodge and associated infrastructure. However, it should be noted that the impact associated with such an development is not on the scale of the clearing for citrus orchards. Additional employment opportunities will be accrued, but if the potential positive socio-economic impact of the citrus development is considered, the citrus development will have a greater positive impact than a tourism development from an employment point of view.

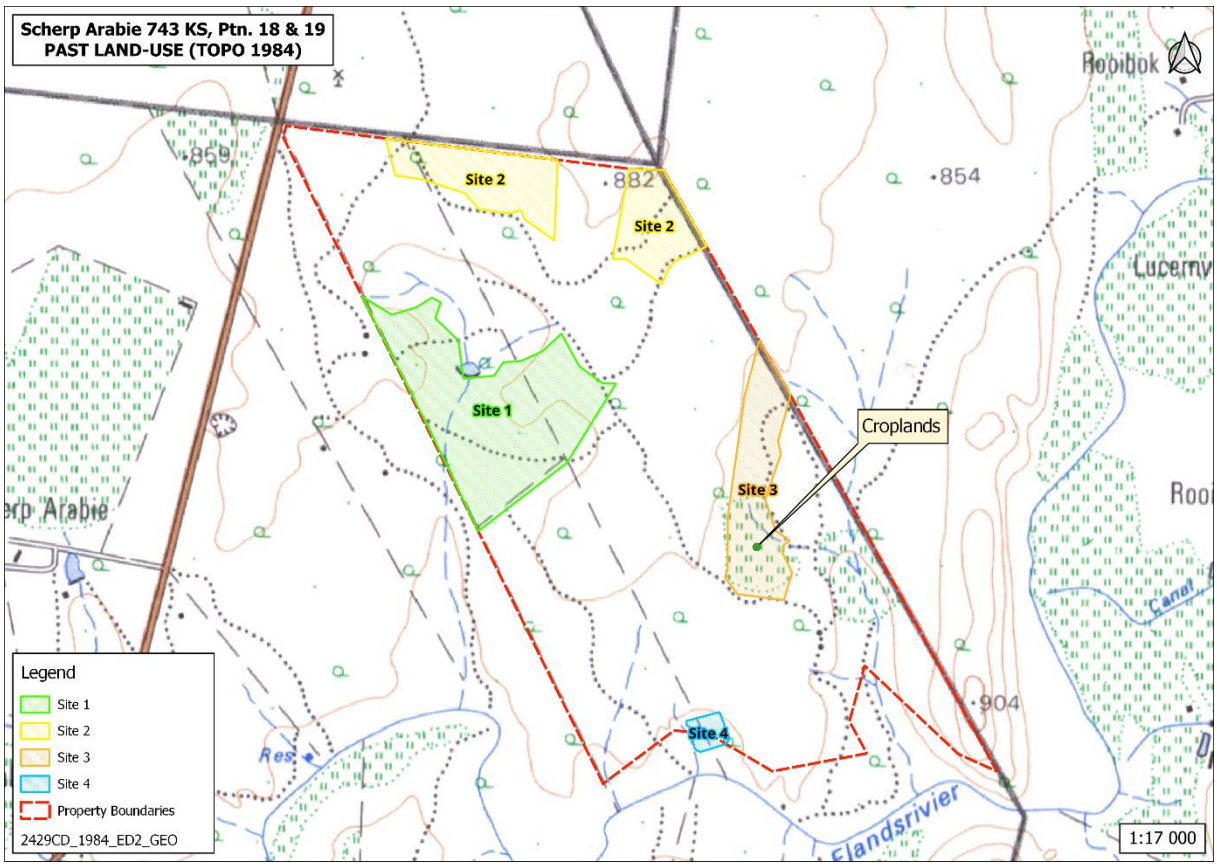


Figure 14: The 1984 topographical map 2429 CD indicating cultivation in the area of Site 3.

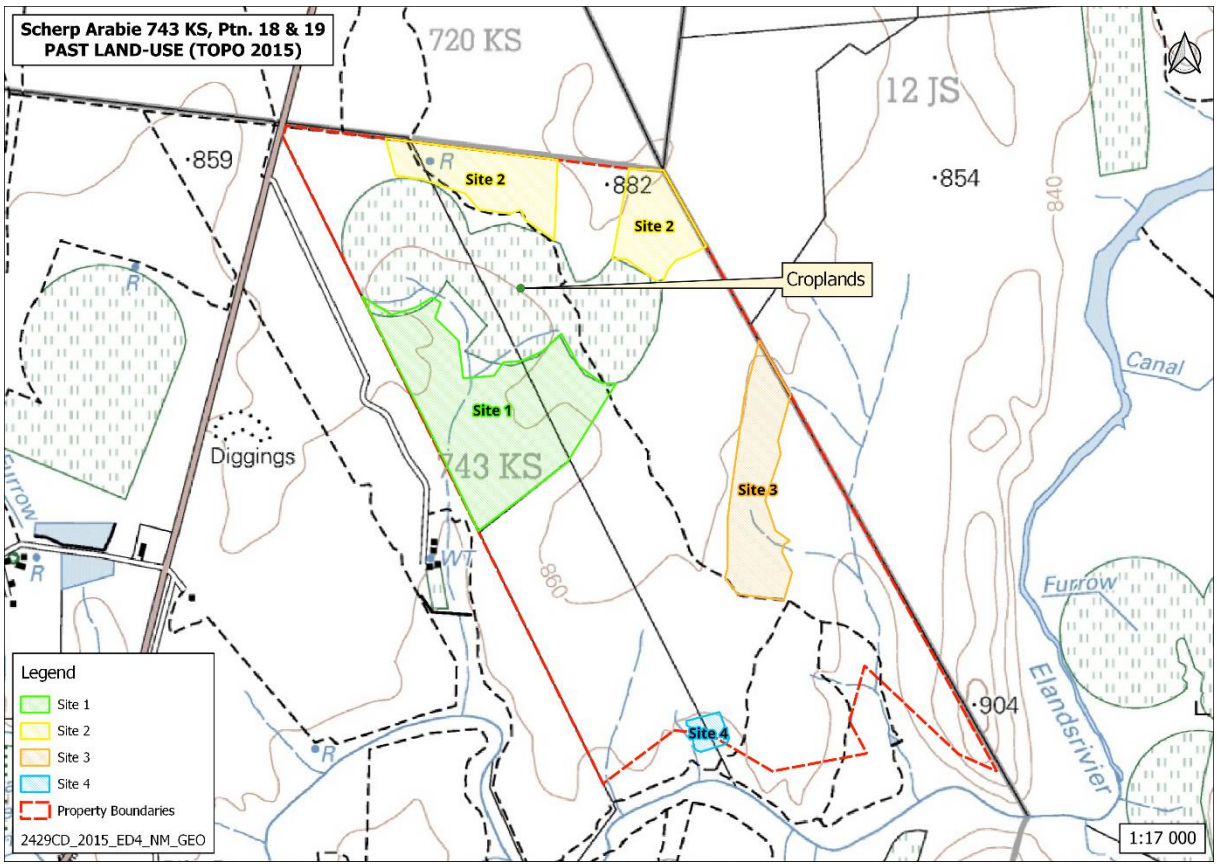


Figure 15: The 2015 topographical map 2429 CD, cultivation in the northern parts of the Scherp Arabie farm.

As discussed under "Need and Desirability" the development of the citrus orchards is in line with the Limpopo Provincial Growth and Development Strategy (LPGDS), as it contributes to the economic sector of the region and will create both permanent and temporary job opportunities. These jobs are mainly accrued to previously disadvantaged people and are once again aligned with the LPGDS as it contributes to the stimulation of economic growth in the local villages. The development is also in line with The National Development Plan 2030 of South Africa, where agriculture is identified as the primary economic activity in rural areas. According to NDP agriculture has the potential to create almost one million new jobs by 2030, which will significantly contribute to the improvement of the current unemployment rate of the Limpopo Province. According to an article published in Business Tech (December 2022), the unemployment rate of the Limpopo Province is 31%, whilst the expanded unemployment rate in Limpopo is estimated at 49.9%.

If the present *status quo* of the Scherp Arabie farm is considered, tourism as an alternative land-use is not considered a viable economic option.

"NO-GO" ALTERNATIVE

The consideration of the "no-go" alternative implies that the activity will not continue and that the site is either left lying fallow to allow natural succession to occur or that the site is rehabilitated. The following points were considered:

- At the time of purchase a 70-ha area was utilized for crop farming and land-use on neighbouring properties is mainly crop farming. Therefore, it is postulated that the property presents the potential to support the agricultural expansion.
- A water-use license (120 ha groundwater) was issued for irrigation and the property has a legal water-use entitlement from the Trans Elands Water Users Association (30.25 ha) for abstraction from the Elands River. This ELU will be sufficient for irrigation purposes.
- Based on the survey findings of the Heritage Impact Assessment Report, Adansonia Heritage Consultants stated that should recommended mitigation measures be implemented, there is no compelling reason for the activity not to continue. The report also states that if any distinct archaeological material or human remains are revealed during further development, a suitably qualified archaeologist must investigate and assess the finds. However, it should be noted that an ECO was not appointed to monitor the unlawful development. Therefore, it cannot be confirmed if any material of archaeological importance was uncovered during the clearing activity or the orchard landscaping.
- Results of the Ecological Baseline Data Assessment indicated that the clearing activity impacted on natural areas that had functional ecosystems, some sensitive habitats such as the drainage line areas.
- According to SANBI, the habitat is considered "Vulnerable". The habitat is regionally replicated in private game farms and formal nature reserves.
- Although the lack of implementation of mitigation measures during the clearing activity is of concern, the protected plant species affected by the activity still occur on the remainder of the property and the integrity of these species on the Scherp Arabie farm was not greatly affected by the clearing activity
- Faunal species protected under various pieces of legislation may still occur in the remaining natural areas of the farm The natural vegetation on the remainder of the property can be maintained as a biodiversity offset. Faunal species colonizing the demarcated orchards can be relocated to these areas.
- The development will not have a prodigious effect on any species (fauna or flora) that is protected or has a high conservation value. Although the area falls within a CBA2 area in terms of the Limpopo Conservation Plan and the Sekhukhune District's Municipality Bioregional Plan, verification through the ecological assessment indicated that the habitat is not unique and that mostly no ecological process will be adversely affected, should the development continue.

- No signs of serious erosion damage resulting from the clearing activity was observed during the site visits. However, it should be noted that the site visits were conducted at the end of the wet season. Should authorization be granted to continue with the activity, the appointment of an ECO is of utmost importance to implement mitigation measures during the operational phase to prevent degradation, especially pertinent to the drainage lines and any other sensitive areas.
- If the 'no-go' alternative is implemented, the associated job opportunities will be lost.
- The project value or capital investment is estimated at R82 000 000.00 and the associated job opportunities are estimated at 36 temporary and 10 permanent positions which will support 46 families in the community, thus contributing to the alleviation of poverty in the Limpopo Province.

In conclusion, the development will have a positive social-economic impact in the region as it will create jobs and contribute to poverty alleviation. The specialist studies further concluded that the potential negative impacts associated with the proposed development can be sufficiently mitigated. No species of conservation concern will be adversely affected on a national level by the development and it is envisaged that the development will not lead to the eradication of any functioning ecosystems.

SECTION F: THE RECEIVING ENVIRONMENT

TOPOGRAPHY

Topography is a broad term used to describe the surface features of a specific area and has an influence on other natural resources such as rainfall and soil (has an influence on soil formation) which will ultimately influence the vegetation type of an area. Vegetation, in turn, influence the wildlife species adapted to survive in the area.

The terrain of the Scherp Arabie farm can be described as slightly undulating with scattered rocky outcroppings with an altitude varying between 860 m and 880 m above sea level (Topographical map 2429 CD). Undulating terrain may influence the flow of air and moisture which can cause either increased rainfall or "rainfall shadows" in an area that may differ from the regional norm.

According to Kumhalova (2008), the topography of the area is pertinent to any agricultural development as it influences flow direction and flow accumulation which will influence the nutrient content of the soil and ultimately the yield.

GEOLOGY AND SOIL

According to Mucina and Rutherford (2011), the general geology of the region in which the Scherp Arabie farm lies is dominated by the Lebowa Granite Suite and the Rashoop Granophyre Suite, both subdivisions of the Bushveld Complex. According to Sharp (2022), the most prominent rock types occurring in the region are: mudrock, quarzitic sandstone, ironstone, quartzite and feldspar. The Bushveld Complex contains some of the largest deposits of major minerals.

Where water is the main limiting factor, it is the physical properties of soil that determine the rainfall efficiency thereby influencing vegetation composition. This implies that the soil and parent rock from which the soil is formed exercise a strong influence on grazing management and the potential for agricultural practices. Soil affects the supply of water and nutrients to the plants. The soil moisture regime, a primary determinant of savanna dynamics and by extension vegetation composition, is influenced by four factors other than the pattern and amount of rainfall namely, infiltration, percolation, root extraction and evaporation (Sharp, 2022).

The entire Scherp Arabie farm is covered by the Land Type Ah77 (LTSS, 2002). The dominant soils in Land Type Ah77 are given as Hutton-, Mispah- and Clovelly soils. The characteristics of these soils are tabled below.

Soil Type	Characteristics
Hutton series	Very deep, poorly draned soils that formed in alluvium from mixed sources.
Clovelly series	Very deep, very poorly drained, very slowly permeable soils.
Mispah series	Orthic A-horizon overlaying hard rock.

Table 6: Characteristices of the dominant soil types of the Scherp Arabie farm.

Please refer to the Ecological Baseline Data Report, attached under Appendix C, for more detail regarding the geology and the soils of the area.

To attain adequate growth and yield, citrus trees require large quantities of minerals and nutrients (Erner, ?). Therefore, a chemical soil analysis was conducted by Agri Technovation to determine required supplements. The results is attached under Appendix C. The purpose of the analysis was to identify the chemical composition of the soils to determine the products and quantity thereof that need to be added to the soil for the successful cultivation of the citrus. These products are tabled below.

Product	Function
Chloorkop Gypsum	Agricultural gypsum is routinely applied to: • Supplement calcium and sulphates in a form readily available to plants. • Remove excess sodium to improve the structure of alkaline soils. • Eliminate surface crusting.
Immerpan Calcitic Lime	• Correct pH of soils. Reduce acidity levels that may be detrimental to plant health. • Provide essential plant nutrients. • Enhance water percolation of the soil.
Potassium Sulphate	• Has an effect on internal and external fruit qualities i.e., yield, size, color of the fruit and roughness of the skin.
Nutricast	• Natural organic fertilizer.

Table 7: Products to be added to the soil on the Sherp Arabie farm in terms of the chemical analysis.

CLIMATE

The Köppen- Geiger climate classification system was first published by a Russian-German climatologist (Wladimir Köppen) in 1884. According to this system, different climate regions are identified according to average annual and monthly temperatures and precipitation and it also considers the seasonality of the precipitation. In terms of this system, the climate of the Scherp Arabie farm is classified as BSh indicating that it is a hot, semi-arid climate. These regions tend to have hot (sometimes extremely hot) summers and warm to cool winters with minimal precipitation.

According to Mucina and Rutherford (2011), the property falls within a summer rainfall area with very dry winters. The hot, wet season stretches from November to April and mean annual precipitation is given as about 500 mm – 700 mm. The area is generally frost-free with mean monthly maximum and minimum temperatures recorded for Marble Hall 30°C (January) and 7°C for (July). Please refer to the Ecological Baseline Data Report, attached under Appendix C, for more detail regarding the climate of the area.

VEGETATION

The general vegetation of the area is discussed in this section of the report. Site-specific information is included in the Ecological Baseline Data Report, attached to this document under Appendix C.

Vegetation can be classified from a broad regional scale to a detailed local scale and is generally recognized as biomes, bioregions, vegetation types and vegetation communities.

A biome is a broad ecological unit, represented by the same general vegetation structure that developed under similar climatic conditions. The Scherp Arabie farm is situated in the Ephraim Mogale Local Municipality in an area classified as savanna biome which is described as a

combination of trees, shrubs and grass in different proportions and densities. The vegetation combination usually depends on the soil type and the rainfall associated with the specific area.

The savanna biome is extensively used for agriculture and game ranching. Although less than 5% of this biome is formally conserved in South Africa, it is home to many well-known wildlife sanctuaries, for example, the Kruger National Park, and can thus be considered as effectively preserved. According to SANBI's biodiversity summary for Ephraim Mogale Local Municipality, 100% of the municipal area is classified as savanna. Game farming and hunting play an important role in the savanna biome's preservation, but over-utilization is considered problematic especially on smaller properties which contributes to the degradation of sections thereof.

A bioregion is a vegetation unit with similar physical features and living organisms on a regional scale (Van Oudtshoorn, 2015). The Scherp Arabie farm is part of the Central Bushveld Bioregion.

A vegetation type is a medium to small scale vegetation unit with the same landscape characteristics and the same general vegetation. Mucina and Rutherford (2011) describe the vegetation as low undulating areas, sometimes between sandy plains and mountains and the veld type is classified as Central Sandy Bushveld (SVcb 12). According to SANBI's biodiversity summary, this vegetation type covers approximately 75.3% of the land (143 747 ha) within the Ephraim Mogale municipal area and is considered "vulnerable". The conservation target is 19% and only 3% is statutorily preserved. The Central Sandy Bushveld vegetation type has been described by other authors in past publications – details are listed below.

- Mixed Bushveld (VT18), (Veld Types of South Africa; J.P.H. Acocks, 1953).
- Sourish Mixed Bushveld (VT 19), (Veld Types of South Africa; J.P.H. Acocks, 1953).
- Mixed Bushveld (LR 18), (Vegetation of South Africa, Lesotho and Swaziland; Louw and Robelo, 1996).

A vegetation community is a group of plants occurring together to form a characteristic vegetation type.

RESULTS OF THE HERITAGE IMPACT ASSESSMENT

A phase 1 Heritage Impact Assessment was conducted by Christine Rowe of Adansonia Heritage Consultants prior to the clearing activity to determine if any resources of archaeological or cultural significance are present at the sites and to point out any sensitive areas, if applicable. The study included extensive historical research and a field survey of the receiving environment to determine if the development may impact on any heritage resource.

According to the specialist, vegetation was fairly dry and open at the time of the site visit which made visibility in most parts good. The survey revealed an old stone structure (house) of more than 60

years old and several graves. Archaeological material or graves are not always visible during a field survey, artefacts can also be sub-surface and may only be revealed during new development activities. In mitigation, if any artefact or grave is uncovered, all activities should stop and a qualified archaeologist consulted.

According to Rowe (2021), SAHRA regards all graves and buriel sites of high sinnificance and mitigation measures are included in the report to preserve these sites. In terms of mitigation, the three grave sites must be fenced off and a buffer of 15 m must be maintained. Access must be allowed for visitation.

The historical stone structure is protected under Section 34 of the National Heritage Resources Act (Act 25 of 1999) and has local significance. Should the Applicant wish to destroy the feature, an application for a destruction permit must be submitted to SAHRA. It could not be confirmed if the structure was unlawfully removed.

Based on the survey results, Adansonia Heritage Consultants indicated that there are no compelling reasons which may prevent the development to continue if recommended mitigation measures are implemented.

RESULTS OF THE PALAEONTOLOGICAL ASSESSMENT

A phase 1 Palaeontological Impact Assessment was conducted by Prof. Marion Bamford. To comply with the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was required before development but. According to Prof. Bamford, results of the study indicated that the tilled area lies on the non-fossiliferous Upper Zone (Rustenburg Layered Sequence, Bushveld Complex and Duitschland Formation (Chuniespoort Group, Transvaal Supergoup). It also lies on the supposedly fossiliferous dolomites of the Timeball Hill Formation, Pretoria Group, Transvaal Supergroup) but no stromatolites have been recorded. It is assumed that the tilled land is on soils and not on the dolomitic rocks so there has been no impact on the palaeontological heritage. For future tilling on Portions 18 and 19 of Scherp Arabie 743 KS, a Fossil Chance Find Protocol should be added to the EMPr. Based on this information it is recommended that no palaeontological site visit is required and no damage has been done.

Based on experience and the lack of any previously recorded fossils from the area, Prof Bamford concluded that it is extremely unlikely that any fossils would have been preserved in the tilled soils. Even if trace fossils, such as stromatolites, do occur in the Timeball Hill Formation, they are of little scientific value because they seldom preserve the algal cells that formed them. However, a Fossil

Chance Find Protocol was added to the EMPr. If fossils are found during future clearing on Portions 18 and 19 of the Scherp Arabie farm, they should be rescued and a palaeontologist called to assess and collect a representative sample.

RESULTS OF THE GEOHYDROLOGICAL ASSESSMENT

A geohydrological assessment was conducted by Tale Enviro Consuting (Pty) Ltd and it was concluded that the Scherp Arabie farm is in a region with limited aquifer systems and low producing boreholes were projected. According to the specialist, it is expected that the acquifer has a low susceptibility to pollution due to the farm's location in a minor aquifer system. Six usable boreholes were identified on the Scherp Arabie farm and groundwater dependence in the region include domestic water-use and irrigation.

The specialist concluded that the agricultural development can continue if recommended mitigation measures, as summarized below, are implemented.

- Re-establish herbaceous vegetation between the orchard rows and implement andscaping techniques to prevent erosion associated with irrigation.
- Use optimum management methods for irrigation to increase water-use effectiveness and water quality.
- Implement strict protocols for the application of plant protection products and fertilizer.

A water use lisence was issued for the abstraction of 120 hectares of water. Sustainability of the boreholes is of concern as the Scherp Arabie farm is in an area with limited acquifer systems. As per specialist recommendation, both active and non-active boreholes should be monitored to prevent over-utilization and the subsequent impact on other water users in the area.

RESULTS OF ECOLOGICAL BASELINE ASSESSMENT

An Ecological Baseline Assessment of the affected footprint was conducted by Mr IC Sharp. The purpose of the assessment was to assess the terrestrial ecosystems that were affected by the unlawful activity. In order to achieve this, surveys were conducted in the adjoining natural areas to determine a possible baseline condition of the cleared site.

The unlawful activity impacted on natural areas that had functional ecosystems present with sensitive habitats in terms of vegetation communities and drainage-line areas. All woody species were removed from the cleared sites, therefore, the habitats and micro-habitats that were provided by the woody component have all been compromised. Although, the habitat type found at the sites is considered 'vulnerable' according to SANBI BGIS biome classification,it was considered that it is regionally replicated in smaller nature reserves and private game farms.

Drainage-lines need protection from any direct impact or any collateral damage that may result due to an unlawful activity or when authorization is given for a proposed development. These areas are considered a refuge for organisms that may remain following bush-clearing or may populate areas of suitable habitat when the activity is fully operational. Failure to delineate crucial buffer areas to protect these habitats has resulted in the total loss of the drainage-line habitat. Of concern is both the removal of the protected woody species within this zone and the erosion potential as the removal of the protective vegetation layer may result in accelerated erosion.

The removal of the vegetation have had an impact on the wildlife in the area, especially on the smaller organisms that are usually not easily observed. Activities such as the burning of the woodpiles and the flattening of the termitaria in the area are pertinent to the expected impact.

It is common practice that termitaria be removed within areas earmarked for developments similar to this 24G application. However, termitaria are considered of great importance to the functioning of a number of aspects within ecosystems. Within the cleared area some termitaria remnants were noted as still functional. It is recommended that, where possible, it should be considered to allow the termitaria to remain within the established orchards as functioning ecosystems.

Figure 16: Remnants of a termitarium, Site 3.

Some protected plant species associated with the vegetation type and observed in the adjacent natural areas have been impacted on. The following species that were recorded at the site or noted in the adjacent natural area, are protected under the National Forests Act (No. 84 of 1998):

- *Boscia Albitrunca*
- *Sclerocarya birrea.*

The relevant provincial legislation, the Limpopo Environmental Management Act (No.7 of 2003), lists the following species as protected:

- *Spirostachys africana* (Tree).
- *Ansellia africana* (Epiphyte)

Some plant specimens are not protected under the relevant pieces of legislation but are considered to be 'of Interest' mainly attributed to the uniqueness or size of such specimens. The *Aloe* spp prevailent throughout the sites is an example.

Figure 17: Aloe spp identified on the Scherp Arabie farm.

Figure 18: Aloes uprooted during the clearing activity.

The bush clearing activities would have impacted on fauna species through the alteration and destruction of a range of suitable habitats. Affected species could include small nocturnal mammals, cavity-nesting birds and reptiles and amphibians, specifically fossorial and aestivating species.

Through the process of biodiversity offsets, sensitive habitats and species that have been affected by the bush-clearing activities can be mitigated to a certain extent. Mitigation measures include:

- Allow protected tree species to regrow, where possible.
- Remove bulbous or succulent plant species to demarcated safe-zones.
- Capture and relocate wildlife species found, that are affected by the agricultural activities, to safe-zones or adjacent natural habitats.
- Rehabilitate potential areas of erosion.
- Limit development to the earmarked footprint within the available water allocation limits.
- Preserve the remaining adjacent natural habitats.
- Implement drainage-line buffer areas.

There is a clear indication of significant impacts on certain environmental aspects resulting from the unlawful activity. Under the normal EIA process, prior to the implementation of a proposed development, it is considered that only where there is no clearly defined reason for withholding environmental authorization, would approval be considered as a result of an investigation. If the

continuation of this development in terms of the operational phase is authorized, mitigation measures as described in this report should be addressed and biodiversity offsets applied.

VISUAL REPRESENTATION OF THE DEVELOPED FOOTPRINT

A photographic record is included under Appendix B to give a visual representation of the affected environment. The purpose of this photographic record is to provide a visual representation of the affected sites. Two site visits were conducted prior to the bush clearing activity on 20 January 2021 and 24 April 2021 and eight locations were selected to achieve a true visual representation of the sites that was earmarked for the development.

After the clearing activity two more site visits were conducted one on 24 April 2022 and again on 23 May 2022. Seven photo points were selected for a visual representation of the affected sites. Photo Points A and B (post clearing) are in the same locations as Photo Points 6 and 8, captured before any clearing activity.

At each point photos were taken in the 8 main compass directions to obtain a 360-degree representation of the visual features at that point. Two photos of each compass direction are included – a plain illustration and an illustration with a data overlay to illustrate compass direction. The positions of the photo points are plotted on the map included in the Photographic Record.

SECTION G: PUBLIC PARTICIPATION

Initially a Public Participation Process commenced for the Scoping and EIA process, however, the clearing activity then commenced without the required authorization and a S24 G process was initiated. A Complete Public Participation Report with details of the process followed according to legal prescripts are included under Appendix D.

SECTION H: IMPACT MANAGEMENT

ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Please refer to the Public Participation Report attached under Appendix E, specifically the Comments and Response Registers. No issues were raised by registered Interested and Affected Parties.

IMPACTS THAT MAY OCCUR AND PROPOSED MITIGATION MEASURES

The activity commenced prior to authorization, and construction activities associated with the agricultural development such as bush clearing, orchard landscaping and the construction of the off-stream coffer dam continued after the application to rectify the unlawful development was submitted,

as observed on 27 April 2022 and 23 May 2022, even though lawfully all activities should have ceased only to continue if so authorized. Therefore, where feasible, the impact of the activities related to the construction and operational phases of the proposed development was evaluated by using an environmental significance scale. The ENVIRONMENTAL SIGNIFICANCE SCALE is an attempt to evaluate the importance of a specific impact in the relevant context, as an impact can either be singular ecological, social-economic or it may include both of the above-mentioned factors. At this point, it is important to note that the evaluation of the significance of an impact relies on the judgement of the evaluator(s). However, the developed methodology of assigning significance to impacts avoids random assignments of significance.

Potentially significant impacts, relevant to the activity, were evaluated to determine their importance. Impacts were evaluated in terms of their direct- indirect- and cumulative impacts and mitigation measures proposed accordingly. The suitability and subsequent feasibility of the proposed mitigation measures are included in the assessment and can be determined by the significance of the impact before and after the implementation of mitigation. Decommissioning of the unlawful development will depend on the outcome of LEDET's decision.

The significance of the impacts/potential impacts was determined by quantifying the impact according to the criteria as described in the tables below.

Status	Refers to the predicted effect of the impact on the affected environment.
Extent	Refers to the scale of the impact.
Duration	Refers to the lifetime of the Impact.
Magnitude	Describes the intensity of the impact.
Probability	Describes the chance that an impact will occur.
Significance	Refers to the significance of the identified impact in terms of the combined impact of the above aspects. (Extent + Duration + Magnitude x Probability = Significance).

Table 8: Definition key to Table 5.

Criteria	Weight	Category	Description
Significance	2-12	Negligible	Very low impact, almost no mitigation measures required
	13-30	Low	Low impact, mitigation can easily be achieved
	31-56	Moderate	The impact will be real but non-substantial, mitigation achievable
	57-90	High	Impact real and substantial, mitigation achievable but difficult
	91 -100	Very High	High impact, mitigation not possible.

Table 9: Significance Scale of evaluated impacts.

Quantification of the Impact Evaluation			
Criteria	**Weight**	**Category**	**Description**
Status	N/A	Neutral	Impact neither advantageous nor adverse.
	N/A	Positive	The impact is beneficial.
	N/A	Negative	The impact is harmful or adverse.
Extent	1	Very Low	Impact limited to site and its immediate vicinity.
	2	Low	The impact will affect local neighbourhoods within a 10-12 km radius of the proposed activity.
	3	Medium	Regional – the impact will have a provincial effect and may affect neighbouring provinces.
	4	High	The impact will affect the whole of South Africa.
	5	Very High	International affect beyond South Africa's borders.
Duration	1	Very Short	0 – 1 year.
	2	Short-term	2 – 5 years.
	3	Medium-term	5 – 15 years.
	4	Long-term	> 15 years.
	5	Permanent	Impact will only stop after the operational life of the activity.
Intensity	0	None	No Impact.
	2	Minor	Impact does not affect any natural function or process.
	4	Low	Impact affects the environment but natural processes and functions can continue.
	6	Moderate	Impact alter the environment, but natural processes and functions can continue, even if modified.
	8	High	Impact alter the environment, natural processes and functions cease temporarily or permanent.
	10	Extreme	Impact alter the environment, natural processes and functions cease permanently.
Probability	1	Very Improbable	Less than 20% chance that impact will occur.
	2	Improbable	20% - 40% chance that impact will occur.
	3	Probable	40% - 60% chance that impact will occur.
	4	Highly Probable	60% - 80% chance that impact will occur.
	5	Definite	More than 80% chance that impact will occur regardless of preventative measures.

Table 10: Criteria for the classification of environmental impacts.

CONSTRUCTION PHASE

1. Impact:

Intensification of land-use.

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

Approximately 107 hectares of natural vegetation, used for extensive private game farming was cleared for the expansion of the agricultural development and the development of citrus orchards. Large specimens of protected trees, including *Spirostachys africana*, *Boscia albitrunca* and *Sclerocarya birrea* were uprooted during the clearing activity. Many plants of interest such as the Aloe species and other succulent and bulbous species were destroyed during the clearing activity, although mitigation measures such as the relocation of such plants would have mitigated impact. The area would have supported a number of smaller wildlife species.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	High (8)	Definite (5)	High (70)

Mitigation Measures:

- Appoint an ECO to oversee the operational phase of this activity, should authorization be obtained.
- The coppicing of other protected species were identified in the cleared area. These species can be re-established to mitigate the impact.
- Succulent or bulbous plant species can be re-planted in a safe area. These plants can be utilized to rehabilitate disturbed areas. The same applies to small protected tree species which can be successfully transplanted.
- Plant replacement indigenous trees in areas outside designated orchard areas as part of a biodiversity offset programme. This will also be in line with DAFF's policy to plant 3 trees for every protected tree removed.
- Maintain the herbaceous layer between developed orchard rows to preserve both fauna and flora species still present.
- Unearthed rocks can be utilized to establish a rock-pile refuge for animal species displaced by the unlawful activity.
- Rehabilitate areas identified as sensitive, i.e., the drainage line as part of the biodiversity offset process.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Moderate (6)	Highly Probable (4)	Moderate (48)
Moderate impact. Impact real but non-substantial, mitigation achievable but difficult.				

2. Impact:

Destruction of protected species or species of high conservation concern (Fauna and Flora).

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

The construction phase of the agricultural activity required the removal of all woody vegetation. In the process, protected plant species were impacted on. Many protected fauna and flora species would have occupied the natural habitats that constituted the site prior to the bush clearing process. If it is considered that the previous land-use was game farming, it implies that the site was reasonably natural and probably containing an array of protected species. This is also evident if the photographic records prior to and post development are compared. Evidence of the destruction of three protected tree species was noted during the surveys. Disturbance of the soil may have uprooted protected bulbous or succulent species. Protected wildlife species may have been destroyed or disturbed by the activity of bush clearing. Species unable to flee from the niches they occupied were impacted on during the initial activity. Reptile species were probably well represented in a variety of habitats, many under LEMA. Burning of the vegetation remains further impacted on these species as many occupied refuges within trees. A variety of other protected wildlife e.g. baboon spiders, tortoises and amphibians, naturally occur in the area of the cleared site and may have been impacted. A number of wildlife organisms probably occupied a range of refuges available throughout the site. Refuge seeking nocturnal small mammal species such as aardvark and pangolin, probably occupied a range of refuges that would have been available (Sharp, 2022).

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-term (4)	High (8)	Definite (5)	High (65)

Mitigation Measures:

- If discovered during the operational phase, small, protected plant species should be re-located.
- Efforts should be made to rehabilitate sensitive areas, i.e., the rocky outcropping.
- Succulent or bulbous plant species can be re-planted in a safe area. These plants can be utilized to rehabilitate disturbed areas. The same applies to small protected tree species which can be successfully transplanted.
- Plant replacement trees in areas outside designated orchard areas as part of a biodiversity offset programme. This will also be in line with DAFF's policy.
- Maintain the herbaceous layer between developed orchard rows to preserve both fauna and flora species still present.
- Where possible, preserve termitaria structures.
- The habitat is not unique and considered sufficiently replicated in the area.
- Provide staff awareness training on the protection of all fauna species.
- Contribute to an off-sitestewardship programme as part of the biodiversity offset process.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-Term (4)	Moderate (6)	Highly Probable (4)	Moderate (44)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

3. Impact:

Localized extinction of species.

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

The construction phase of the agricultural activity required the removal of all the vegetation, leading to habitat modification or destruction. Many species of various ecological systems were present at the site of investigation prior to the clearing activities. Many of these species may still be present in the adjacent natural areas. The radication of the floristic species had an impact on many organisms including fossorial species, avifauna and reptiles. Fauna species which were not able to flee the area were eradicated (Sharp 2022). Reptile species seeking refuge in tree-hollows or burrows may have been killed in the process of vegetation removal. If present, bulbous plant species and succulents are damaged or uprooted. Epiphytes including hemi-parasites are eradicated in conjunction with the woody substrates they grow on. Burning of the vegetation debris in the clearing

process affects all wildlife species still seeking refuge in the tree trunks and the epiphytes and hemi-parasites attached to the uprooted substrates.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-term (4)	High (8)	Highly Probable (4)	Moderate (52)

Mitigation Measures:

- The coppicing of other protected species were identified in the cleared area. Preservation of these species should be considered.
- Succulent or bulbous plant species can be re-planted in a safe area. These plants can be utilized to rehabilitate disturbed areas. The same applies to small protected tree species which can be successfully transplanted.
- Plant replacement trees in areas outside designated orchard areas as part of a biodiversity offset programme. This will also be in line with DAFF's policy to plant 3 trees for every protected tree removed.
- Maintain the herbaceous layer between developed orchard rows to preserve both fauna and flora species still present.
- Where possible, preserve termitaria structures.
- Utilise unearthed rocks to create a rock-pile that can be used as a refuge for fauna species.
- Any wildlife e.g., fossorial species or hibernating individuals, disturbed by the continuation of activities to be re-located to secure areas of similar habitat.
- The habitat is not considered unique and is sufficiently replicated in the region.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-Term (4)	Moderate (6)	Highly Probable (4)	Moderate (44)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

4. Impact:

Damage to natural ecosystems.

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

The functioning of ecosystems may be disrupted as a result of the clearing activity in sensitive areas and possible buffer zones. All the micro-habitats associated with the unlawfully cleared area (e.g., termitaria) have been removed through the bush clearing and orchard landscaping process. Encroachment into drainage lines and the removal of associated flora and orchard landscaping impacted on the fauna and caused damage to the vegetation and the stability of the soil substrate.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-term (4)	High (8)	Highly Probable (4)	Moderate (52)

Mitigation Measures:

- Implement measures to rehabilitate remnants of functioning ecosystems to create additional habitats and connectivity for fauna.
- Maintain a good herbaceous layer between the planted orchard rows to support the invertebrate and fossorial species still present or re-colonizing the areas.
- Where possible, preserve termitaria structures.
- Utilise unearthed rocks to create a rock-pile in designated sites in the orchard areas that can be used as a refuge for fauna species.
- Provide sufficient buffer areas to allow heavy machinery operational leeway without entering buffer or sensitive areas.
- Provide staff awareness training to sensitize them to the continued preservation of the rehabilitated habitats described above.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Medium-Term (3)	Moderate (6)	Highly Probable (4)	Moderate (40)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

5. Impact:

Accelerated soil erosion that may result in donga erosion.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The probability of potential soil erosion has increased as a result of the clearing activity and the disturbance of soil stability. The encroachment on the adjacent drainage line increased the risk of erosion potential, specifically pertinent to the sodic area. The ephemeral drainage-line has been totally destroyed together with the vegetation it supported, increasing the risk of erosion. Uncontrolled water flow leads to accelerated water speed contributing to erosion action. This is pertinent where vegetation cover has been removed and landscaping applied down the gradient (Sharp, 2022). Uncontrolled water flow leads to accelerated water speed contributing to erosion action especially pertinent where vegetation cover has been removed and landscaping applied down the gradient.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Long-term (4)	Moderate (6)	Highly Probable (4)	Moderate (44)

Mitigation Measures:

- Delineate a buffer zone to protect drainage-line from further impacts associated with the cleared area. Allow the vegetation to re-establish in an attempt to rehabilitate the drainage line.
- Construct mitre drains at regular intervals along management roads to reduce water runoff speed, especially down any gradient.
- Rehabilitate eroded areas which resulted from the clearing of vegetation.
- Maintain the herbaceous layer between the orchard rows to prevent erosion.
- Water run-off control structures put in place along susceptible landscaped orchards rows.
- Trenching within the proposed drainage line buffer should be avoided.
- The application of mulch will prevent soil erosion and to reduce water-use.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Medium-Term (3)	Moderate (6)	Probable (3)	Low (30)
Low impact. Mitigation can easily be achieved.				

6. Impact:

Impact on the water quality of aquatic systems as a result of water pollution.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The removal of the natural vegetation may have potentially enhanced soil erosion. Silt generated by uncontrolled erosion will affect water quality in the Elands River if precautions are not implemented to curtail or prevent excessive erosion especially as these areas are required to be left undisturbed for the duration of the rectification process. Disturbance of soils during vegetation removal operations and encroachment into sensitive drainage-line areas and sensitive rocky outcropping areas by heavy earth-moving machinery increases the risk of erosion. The use of heavy machinery increases the probability of pollution through fuel and lubricant spills from such machines.

During the interim management of the orchard developed zone, the possibility exists of collateral damage to organisms in the adjacent natural areas such as the drainage-lines and aquatic habitats of the Elands River, from plant protection products used in the newly-established orchards (Sharp, 2022).

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	High (8)	Highly Probable (4)	High (60)

Mitigation Measures:

- Implement an erosion control programme immediately.
- Establish the recommended buffer zone along the drainage line.
- According to GLOBAL G.A.P. requirements, storage of potential hazardous products is regarded as a high-level compliance criterion. The minimum requirement in terms of GLOBAL G.A.P. is bunded areas, which shall be impervious and be able to contain at least 110% (165% for environmentally sensitive areas) of the largest tank stored within it.
- Storage facilities for plant protection products should have a concrete floor to clear away any accidental spillage or leakage.
- Implement Integrated Pest Management Systems wherever possible.
- Provide staff awareness training to ensure that all correct procedures are applied with all of the above functions.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Moderate (6)	Probable (3)	Moderate(39)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

7. Impact:

Impact on aquatic systems, interruption of sustainable water flow in the Elands River.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The establishment of orchards will require water resources for irrigation purposes. The farm has registered water usage for 30 ha sourced from the Elands River for the farm but have applied for an additional quota for 140 ha. The establishment of the extended orchards will impact on the sustainable water flow to support ecological processes in the aquatic system. Utilization of water from the river, especially during periods of drought, to irrigate orchards, will affect the flow of water to the Flag Boshielo Dam and therefore the Schuinsdraai NR protected area downstream from the unlawful development. The potential lack of water flow will affect aquatic organisms and may lead to reduction in riparian vegetation status. Refuges within the riparian habitat will decline and the river system pools supporting the aquatic ecosystems diminish over time.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Medium (3)	Permanent (5)	High (8)	Highly Probable (4)	High (64)

Mitigation Measures:

- The Trans-Elands Water Board exists in the farming community and controls irrigation quotas thus ensuring a continued flow of water resources downstream.
- The Scherb Arabie farm has a water use lisence for the abstraction of 120 ha of groundwater.
- Micro-irrigation used for the irrigation of citrus orchards greatly conserves water.
- Protected areas and adjacent landowners have supplementary water provision (boreholes) and does not rely entirely on the Elands River for water provision.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Medium (3)	Permanent (5)	Moderate (6)	Probable (3)	Moderate (42)
Moderate impact. The impact is real but non-substantial, mitigation achievable.				

8. Impact:

The potential impact on air quality, especially as a result of dust pollution.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The clearing of vegetation would have likely resulted in the generation of dust particles. It is presumed that the number of emissions that have occurred were within the acceptable dustfall rate limits as stipulated in the National Dust Control Regulations of 1 November 2013, promulgated in terms of the National Environmental Management: Air Quality Act, (Act 39 of 2004). According to these Regulations the dustfall rate for non-residential areas is $600<D<1200$ mg/m^2/day (30-days average). In terms of the regulations the permitted frequency to exceed this rate is two non-sequential months per year. It is assumed that the dust generation during construction had a negative impact of moderate significance on air quality.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Very Short (1)	High (8)	Definite (5)	Moderate (50)

Mitigation Measures:

- The vegetation was cleared prior to any impact assessment. No mitigation was implemented during the construction phase.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (2)	Very Short (1)	High (8)	Definite (5)	Moderate (50)
Moderate impact. The impact is real but non-substantial, mitigation achievable.				

9. Impact:

The potential impact on heritage resources.

Nature of the Impact:

Direct, negative.

Description of the Impact:

The clearing of vegetation could have destroyed heritage resources.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Very Short (1)	Moderate (6)	Probable (3)	Low (24)

Mitigation Measures:

- The vegetation was cleared prior to any impact assessment. No mitigation was implemented during the construction phase. However, a phase 1 heritage impact assessment was conducted and local people interviewed, recommendations were made to mitigate impact..

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Very Short (1)	Moderate (6)	Probable (3)	Low (24)
Low impact. Mitigation can easily be achieved.				

10. Impact:

Visual Impact.

Nature of the Impact:

Direct, negative.

Description of the Impact:

The clearing of vegetation could have resulted in a negative visual impact.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Short-term (2)	High (8)	Definite (5)	High (60)

Mitigation Measures:

- The vegetation was cleared prior to any impact assessment. No mitigation was implemented during the construction phase.

- The clearing activity is the expansion of an extant agricultural land-use.
- The natural vegetation between the cleared area and the neighbouring properties provides a visual barrier.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Short-term (2)	Moderate (4)	Probable (3)	Low (21)
Low impact. Mitigation can easily be achieved.				

OPERATIONAL PHASE

1. Impact:

Impact on the water quality of aquatic systems as a result of water pollution.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

Wastewater can lead to the contamination of ground- and surface water resources if not properly managed. Of concern is the remnant wastewater where chemicals are mixed and vehicles and farming equipment are cleaned. Protocols can be implemented to manage the wastewater and to mitigate potential pollution as a result of effluent.

The poor management of fertilizers, herbicides and pesticides may lead to environmental degradation if not properly managed. Although regulations for the handling of chemicals are in place, the enforcement thereof is mostly self-regulated. However, if the citrus produced on the Scherp Arabie farm is prepared for the export market, the applicant must comply with the GLOBAL G.A.P. requirements which include strict management protocols on the storage and application of chemicals.

Wastewater can lead to accellirated erosion if not properly managed.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	High (8)	Highly Probable (4)	High (60)

Mitigation Measures:

- Implement an erosion control programme.
- Maintain a buffer zone along the drainage line, allow re-establishment of riparian vegetation.
- Optimize the irrigation programme to prevent excessive use of water that can lead to leaching.
- According to GLOBAL G.A.P. requirements, storage is regarded as a high-level compliance criterion. The minimum requirement in terms of GLOBAL G.A.P. is bunded areas, which shall be impervious and be able to contain at least 110% (165% for environmentally sensitive areas) of the largest tank stored within it.
- Mixing of chemicals and re-fuelling of vehicles must be done in a bunded area according to GLOBAL G.A.P. prescripts. Wastewater will evaporate from the bunded area and the residue will remain in the gravel. Biodegradable chemicals will then break down without contaminating the environment. In the case of spillage, the gravel can be removed by an accredited facility and suitably disposed of.
- In the case of an accidental spill in the orchard, remove contaminated or polluted soil immediately. Follow prescripts.
- Storage facilities should have a concrete floor to clear away any accidental spillage or leakage.
- Use bio-degradable herbicides and pesticides such as pyrethroid chemicals to reduce potential effects on the environment. These chemicals break down within hours after application, dissolve poorly in water and are known to bind tightly to soil and organic matter; therefore, it does not penetrate soil effectively.
- Where possible, apply Integrated Pest Management Systems.
- The person responsible for the mixing and application of fertilizers, herbicides and pesticides must have the technical competence and the required qualification in terms of GLOBAL G.A.P requirements.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Moderate (6)	Probable (3)	Moderate(39)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

2. Impact:

Additional water use may cause interruption of sustainable flow in the Elands River or deplete water resources.

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

The establishment of additional orchards will in future require water resources for irrigation purposes. The establishment of the additional orchards will impact on the sustainable water flow for ecological processes to continue. Utilization of water from the river, especially during periods of drought, to irrigate orchards will affect the flow of water to the neighbouring protected area. The potential lack of water flow will affect aquatic organisms and may lead to a reduction in riparian vegetation status. Refuges within the riparian habitat will decline and the river system pools supporting the aquatic ecosystems diminish over time (Sharp, 2022).

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Medium (3)	Permanent (5)	High (8)	Highly Probable (4)	High (64)

Mitigation Measures:

- The Trans-Elands Water Board exists in the farming community and controls irrigation quotas thus ensuring a continued flow of water resources downstream.
- The Scherb Arabie farm has a water use lisence for the abstraction of 120 ha of groundwater.
- Micro-irrigation used for the irrigation of citrus orchards greatly conserves water.
- Protected areas and adjacent landowners have supplementary water provision (boreholes) and does not rely entirely on the Elands River for water provision.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Medium (3)	Permanent (5)	Moderate (6)	Probable (3)	Moderate (42)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

3. Impact:

Use of chemicals may lead to environmental degradation.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The poor management of fertilizers, herbicides and pesticides may lead to environmental degradation, both terrestrial and aquatic, if not properly managed. Although regulations for the handling of chemicals are in place, the enforcement thereof is mostly self-regulated. However, if the citrus produced on the Scherp Arabie farm is prepared for the export market, the applicant must comply with the GLOBAL G.A.P. requirements which include strict management protocols on the storage and application of chemicals.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Moderate (6)	Highly Probable (4)	Moderate (48)

Mitigation Measures:

- The storage facility must be suitable to protect all fertilizers and plant protection products from high temperatures, sunlight and rain.
- Fertilizers and plant protection products should be stored separately to prevent cross-contamination. These products may be stored in the same storage facility but must be separated by a barrier.
- Storage facilities should be free from waste and rodent activities.
- Storage facilities should have a concrete floor to clear away any accidental spillage or leakage.
- Storage is regarded as a high-level compliance criterion. The minimum requirement in terms of GLOBAL G.A.P. is bunded areas, which shall be impervious and be able to contain at least 110% (165% for environmentally sensitive areas) of the largest tank stored within it.
- Mixing of chemicals and re-fuelling of vehicles must be done in a bunded area according to GLOBAL G.A.P. prescripts.
- Where possible, apply Integrated Pest Management Systems.
- The use of pesticides is regulated by the Department of Agriculture, Fisheries and Forestry. Ensure compliance with relevant legislation.
- The person responsible for the mixing and application of fertilizers, herbicides and pesticides must have the technical competence and the required qualification in terms of GLOBAL G.A.P requirements.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Low (4)	Probable (3)	Low (30)
Low impact. Mitigation can easily be achieved.				

4. Impact:

Impact on biodiversity as a result of chemical drift.

Nature of the Impact:

Direct, negative, partially reversible.

Description of the Impact:

The non-targeted application of pesticides by either the spraying equipment or wind blowing the chemicals off-site. This usually occurs during the application period or shortly thereafter. Potential chemical spray drift associated with the development refers to the off-target movement of a pesticide during a liquid application.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Moderate (6)	Probable (3)	Moderate (36)

Mitigation Measures:

- *Plant Protection Product:* A larger droplet will reach its destination faster, therefore the pesticides are formulated to ensure viscosity. Additionally, drift retardants may be added to the spraying mixture.
- *Wind Speed*: Wind speed is the major contributor to non-targeted application, therefore, wind speed should be closely monitored. If high wind speeds occur all spraying events should be ceased until favourable conditions return.
- *Wind Direction*: Wind direction should be determined prior to a spraying event to prevent damage to sensitive areas.
- *Temperature*: Chemical drift is more likely if temperatures are high. In mitigation, spraying events are done at night. Nightly spraying events may result in additional impacts such as potential noise and light pollution.
- *Nozzle selection*: Drift reduction nozzles are designed to create larger droplets at the same flow rate and operating pressure as standard nozzles. Drift reduction is accomplished by the addition

of a pre-exit hole, creating larger droplets which reduces drift significantly. Several different designs are currently being marketed and are commonly known as air-induction nozzles.

- *Spray Height*: The spray release height will determine how far a droplet will travel down-wind.
- *Spray Pressure*: Low spray pressure will produce bigger droplets and will reduce drift potential.
- *Application Speed*: Lower speed will reduce air movement and potential drift.
- *Maintenance of Equipment*: Pesticide applicators should be calibrated to ensure that output from each nozzle is consistent and the desired application rate is achieved. Worn nozzles should be replaced.
- *Applicator Decisions*: Sound judgement of the manager/applicator in terms of the above-mentioned factors will reduce hazards associated with chemical drift.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Low (4)	Improbable (2)	Low (20)
Low impact. Mitigation can easily be achieved.				

5. Impact:

Potential increase in human-wildlife conflict.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The creation of monoculture habitats e.g. fruit orchards, within an area where wildlife still occurs in reasonable numbers, could lead to conflict situations. The Elands River system still provides refuge to potential problem animal species e.g. hippos, baboons, vervet monkeys and porcupines. Furthermore, infrastructure associated with the orchard could be damaged as some individuals may try to attain water from irrigation systems.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	High (8)	Highly Probable (4)	High (60)

Mitigation Measures:

- The extant orchards and the unlawfully cleared site are suitably fenced and electrified to control wildlife access to the orchards.
- Guards to be appointed during the pre-harvest season to chase species such as baboons and vervet monkeys from the orchards.
- Fence-lines are regularly patrolled to ensure prompt repairs to any breach of the protective fence e.g. breakages caused by hippo, or holes dug under the fence by warthogs or porcupines.
- Maintain hygienic good practices within the orchard environment to prevent situations that may attract wildlife to the orchard e.g. dumping of spoilt fruit.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Moderate (6)	Imrobable (2)	Moderate (26)
Low impact. Mitigation can easily be achieved.				

6. Impact:

Visual Impact as a result of light pollution.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The operational phase of the citrus development will require the application of PPPs at night when ambient temperatures are lower. The headlights of the tractors may have a negative impact on neighbouring properties.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Minor (2)	Probable (3)	Low (27)

Mitigation Measures:

- Spraying is the only activity that will occur at night. Generally, there will be four spraying periods from mid-September to January, usually at 42-day intervals. For the 107-hectare development, one spraying event will last 4 nights from 18:00 to 06:00 adding up to 16 nights (4.4%) per annum.
- Maintain farming equipment in good working order and ensure that headlights of the tractors illuminate the road at the correct angle (low beams at 60 m and high-beams at 120m).

- Implement an Integrated Pest Management protocol to discourage the development of pest populations to prevent environmental risks and to maintain the intervention of PPPs at economically viable levels. e.g., maintain good sanitary conditions in orchards.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Minor (2)	Improbable (2)	Low (16)
Low impact. Mitigation can easily be achieved.				

7. Impact:

Alien Plant Invasions.

Nature of the Impact:

Direct, negative, reversible.

Description of the Impact:

The operational phase of the agricultural activity may result in the proliferation of alien invasive species.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Minor (2)	Probable (3)	Low (27)

Mitigation Measures:

- Implement an alien plant eradication protocol.
- Prioritize areas that may affect the Elands River riparian area.
- If available, use herbicides registered for the specific species.
- Ensure safe storage of herbicides.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Minor (2)	Improbable (2)	Low (16)
Low impact. Mitigation can easily be achieved.				

8. Impact:

Pollution as a result of inadequate solid waste management.

Nature of the Impact:

Direct, negative, reversable.

Description of the Impact:

Waste products associated with the production of citrus on the Scherp Arabie farm include any material that does not have any direct value to the production of the citrus which has to be disposed of.

Solid waste includes general non-hazardous waste generated by the homestead and staff accommodation units. In rural areas, informal landfilling and the burning of domestic waste is a common practice, as municipal landfill sites are usually not in close proximity. This should be avoided as it may lead to environmental degradation, especially in environmentally sensitive areas. The solid waste generated on the Scherp Arabie farm should feed into the municipal waste stream and be disposed of at the landfill site. Either the services of a waste collector can be acquired to transport the waste to the landfill site or the applicant can transport the waste to the site. A written agreement between the applicant and the Ephraim Mogale Local Municipality to use the facility may be required.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Low (4)	Definite (5)	Moderate (50)

Mitigation Measures:

- Waste generated on-site should be disposed of in suitable containers with sealable lids.
- Abate generated waste by implementing a re-using/re-cycling programme. (e.g. plastic bags of citrus saplings can be donated to local nurseries or community projects).
- Generated waste should be stored in purpose containers such as the Skips provided by the Ephraim Mogale Local Municipality or a waste collector and must feed into the municipal waste stream.
- Ensure that waste disposal containers cannot be accessed by wildlife such as baboons or monkeys.
- Store recyclable waste in purpose containers until enough waste is collected to send to a recycling centre.

- Biodegradable waste such as spoilt fruit should be removed from the orchards. These waste products must not be dumped in the game area – conditioning wildlife to citrus.
- The segregation of the waste streams at the source will be essential to reduce the volume of solid waste that needs to be disposed of. It will also improve waste management in general.
- In accordance with the National Environmental Management Waste Act (Act 59 of 2008), empty plastic containers in which agricultural chemicals are supplied should be managed in a specific way. Empty containers should be cleaned thoroughly (triple-rinsed), and holes should be punched into the containers to ensure that they are not re-usable. These containers should not be burnt or buried but must be securely stored on the Scherp Arabie farm for collection by accredited agencies.
- Develop and implement a waste management plan with adequate provision for waste disposal according to GLOBAL G.A.P. requirements.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Minor (2)	Definite (5)	Moderate (40)
Moderate impact. The impact will be real but non-substantial, mitigation achievable.				

9. Impact:

Potencial Security Risk.

Nature of the Impact:

Direct, positive.

Description of the Impact:

The expansion of the agricultural activity may present additional security risks in the area.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Minor (2)	Definite (5)	Moderate (45)

Mitigation Measures:

- Employ people from the local communities that can travel by bus.
- Use reputable agencies to screen applicants prior to employment.
- Do not make any appointments on-site.
- Do not pay cash wages on site.
- The agricultural activity is an expansion of the current activities.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Very Low (1)	Permanent (5)	Minor (2)	Definite (5)	Moderate (40)
Moderate impact. The impact is real but non-substantial, mitigation achievable.				

10. Impact:

Socio Economic Impact.

Nature of the Impact:

Direct, positive.

Description of the Impact:

Agricultural activity will create permanent and seasonal job opportunities. Furthermore, the development will have a positive impact on the local economy of the Ephraim Mogale Local Municipality.

Significance without Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Minor (2)	Definite (5)	Moderate (45)

Mitigation Measures:

- Use local labour.
- Where possible, use local suppliers and local service providers.
- Ensure safe working conditions at all times.
- Implement Health and Safety responsibilities as per legislative requirements.

Significance with Mitigation:

Extent	Duration	Intensity	Probability	Significance
Low (2)	Permanent (5)	Minor (2)	Definite (5)	Moderate (45)
Moderate impact.				

CUMULATIVE IMPACTS

Cumulative environmental impacts can be defined as the changes or the predicted changes to the environment caused by past, present and future natural processes and human activities. Although the individual impacts associated with the development can be adequately mitigated, the combination of the impacts of these activities may have an adverse effect on the natural environment and should therefore be considered.

The impacts of the identified activities in combination with the continuation of the natural processes may have an unpredictable effect on the affected ecosystems. The change in land-use is one of the activities known to contribute to cumulative effects.

Suggested mitigation measures as discussed in the impact report and the specialist reports would minimize site-specific impacts as well as the potential of cumulative impacts.

Through the implementation of biodiversity offsets, as discussed in the Environmental Baseline Data Report, sensitive habitats and species that have been affected by the clearing activity can be mitigated to a certain extent. Through the rehabilitation of potential areas of erosion, preservation of all remaining adjacent natural habitats and the implementation of drainage-line buffer areas, the biodiversity offset process will be facilitated and may continue should authorization be granted for the activity to continue (Sharp, 2022).

Mitigation of potential cumulative impacts can further be achieved through the implementations of good agricultural practices, as required by GLOBAL G.A.P.

SECTION I: CONCLUSION AND RECOMMENDATIONS

A footprint of approximately 107 hectares was cleared for the development of citrus orchards on the Portion 18 and R/E of Portion 19 of the farm Scherp Arabie 743 KS. The activity impacted on functional ecosystems including sensitive habitats such as termitaria and drainage lines. Although, according to SANBI BGIS biome classification, the habitat type found at the site is considered "vulnerable" it is abundantly replicated in the area.

In terms of the Sekhukhune District's Bioregional Plan, the development footprint is in an area classified as CBA 2 areas. These areas were selected to meet biodiversity patterns and, generally, land-use in these areas should not intensify.

As discussed in the Ecological Baseline Data Specialist Report, three protected tree species were prevalent in the area and animals of high conservation protection status affected by the activity may still occur on the property. However, it was concluded that the activity would not have greatly impacted the integrity of any species.

Many micro-habitats such as termitaria were disturbed and refuges for fossorial species and cavity-nesting birds were destroyed with the removal of the woody layer. Measures as recommended in the EBD report and this Impact Assessment report can be implemented to mitigate the impact. No signs of serious erosion as a result of the clearing activity was recorded on site, however, mitigation measures are recommended to prevent erosion at the cleared sites.

The property has a WUL for the abstraction of 120 ha of groundwater and a further legal water-use allocation of 30.25 ha from the Trans Elands Water Users Association that will be sufficient for the irrigation of the additional citrus orchards. Potential pollution risks associated with the Elands river can be sufficiently mitigated.

The potential of groundwater contamination associated with the application of plant protection products can be mitigated, especially if the GLOBAl G.A.P. requirements are adhered to.

The potential risks associated with human-wildlife conflict can be limited through the implementation of recommended mitigation measures such as the appointment of orchard guards.

The project will have a positive social-economic impact as it will contribute to the economy of the region and will create additional job opportunities.

The development is an expansion of extant agricultural activities. As discussed above, impacts associated with the development can be sufficiently mitigated if recommended mitigation measures are implemented. The implementation of a biodiversity offset programme will further mitigate associated negative environmental impacts.

SECTION J: QUANTUM OF THE SECTION 24G FINE

IMPACTS OR POTENTIAL IMPACTS OF THE ACTIVITY

Index – Socio Economic Impact	Place an 'x' in the appropriate box
Description of variable	
The activity is not giving, has not given and will not give rise to any negative socio-economic impacts.	X
The activity is giving, has given, or could give rise to negative socio-economic impacts, but highly localized.	
The activity is giving, has given, or could give rise to significant negative socio-economic and regionalized impacts.	
The activity is resulting, has resulted or could result in wide-scale negative socio-economic impacts	
Motivation	
The agricultural activity will create permanent and seasonal job opportunities and will have a positive impact on the local economy of the Ephraim Mogale Local Municipality and the region through the citrus value chain.	

Index – Biodiversity Impact	Place an 'x' in the appropriate box
Description of variable	
The activity is not giving, has not given and will not give rise to any impacts on biodiversity.	
The activity is giving, has given, or could give rise to localized biodiversity impacts.	
The activity is giving, has given, or could give rise to significant biodiversity impacts.	X
The activity is, has or is likely to permanently/irreversibly transform/destroy a recognized biodiversity "hot spot' or threaten the existence of a species or subspecies.	

Motivation
Biodiversity-related impacts identified in terms of this development could have been mitigated from potential high impacts to moderate impacts. A moderate impact is considered real but non-substantial and mitigation is achievable if recommendations as stipulated in the Ecological Baseline Data Report, Impact Report and Environmental Management Programme is implemented. As this is a Section 24G investigation, many mitigation measures could not be implemented or activities regulated by the ECO. The possibility of continued biodiversity-related impact occurring in the Elands River aquatic system, cannot be ruled out as, without erosion control measures, flash flooding can result in deposition of silt in the system and, furthermore, the threat of herbicides and insecticides leaching into the aquatic system is a constant possibility.

Index – Sense of Place Impact and/or Heritage Impact	Place an 'x' in the appropriate box
Description of variable	
The activity is in keeping with the surrounding environment and/or does not negatively impact on the affected area's sense of place and/or heritage.	X
The activity is not in keeping with the surrounding environment and will have a localized impact on the affected area's sense of place and/or heritage.	X
The activity is not in keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/or heritage.	
The activity is completely out of keeping with the surrounding environment and will have a significant impact on the affected area's sense of place and/or heritage.	
Motivation	
The Scherp Arabie farm is located in an area where neighbouring land-use is mainly agriculture (cultivation of crops) and game farming. According to the SDF of Ephraim Mogale Local Municipality, the farm lies in an area dedicated to crop farming. Therefore, the citrus development will not have a negative impact on sense of place. Portion 19 of the farm is registered as part of the P.R. de Jager PNR, and an application for de-registration should be submitted as the land-use does not conform with land-use objectives of PNR's. The development may have a localized impact on the area's heritage if mitigation measures recommended for the structures and graves found in the area is not implemented.	

Index – Pollution Impact	Place an 'x' in the appropriate box
Description of variable	
The activity is not giving, has not given and will not give rise to pollution.	
The activity is giving, has given or could give rise to pollution with low impacts.	X
The activity is giving, has given or could give rise to pollution with moderate impacts.	
The activity is giving, has given or could give rise to pollution with high impacts.	
The activity is giving, has given or could give rise to pollution with major impacts.	
Motivation	
If orchard landscaping is not adequately managed, it can lead to erosion and siltation of the Elands River. The incorrect application of plant protection products can lead to pollution of surface and groundwater. If appropriate bunded areas are not provided for refuelling or the mixing of chemicals it may lead to pollution of surface and groundwater resources. Solid waste products can lead to pollution if not adequately managed.	

COMPLIANCE HISTORY AND KNOWLEDGE OF THE APPLICANT

This Section is completed to the best of the EAP's Knowledge.

Index – Previous administrative action (i.e., administrative enforcement notices) issued to the Applicant in respect of a contravention of Section (24F (1) of the National Environmental Management Act and/or Section 20b of the National Environmental Management Waste Act	Place an 'x' in the appropriate box
Description of variable	
Administrative action was previously taken against the applicant in respect of the abovementioned provisions.	
No previous administrative action was taken against the applicant but previous administration action was taken against a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time when the administrative action was taken.	
Administrative action was not previously taken against the applicant in respect of the abovementioned provisions	X
Explanation of all previous administrative action taken in respect of the above	
N/A	

Index – Previous convictions in terms of Section (24F (1) of the National Environmental Management Act and/or Section 20b of the National Environmental Management Waste Act	Place an 'x' in the appropriate box
Description of variable	
The Applicant was previously convicted in terms of either or both of the abovementioned provisions.	
No previous convictions have been secured against the applicant but a conviction has been secured against a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time; or a conviction was secured against a director of the Applicant in his or her personal capacity.	
The Applicant has not previously been convicted in terms of either or both of the abovementioned provisions	X
Explanation of all previous convictions in respect of the above	
N/A	

Index – Number of Section 24 G applications previously submitted by the Applicant	Place an 'x' in the appropriate box
Description of variable	
Previous applications in terms of Section 24G of NEMA were submitted by the Applicant.	
No previous applications have been submitted by the applicant but a previous application(s) have been submitted by a firm(s) on whose board one or more of the applicant's directors sit or sat at the relevant time.	
No previous applications have been submitted by the Applicant but the Applicant sat on the board of a firm that previously submitted an application.	
No previous applications submitted by Applicant	X
Explanation of all previous applications submitted in terms of Section 24G	
N/A	

APPLICANT'S PERSONAL CIRCUMSTANCES

Index – Applicant's Legal Persona	Place an 'x' in the appropriate box
Description of variable	
The Applicant is a Natural Person.	
The Applicant is a Firm.	X
Describe the Firm	
Manini Holdings (Pty) Ltd, is a family business owned by Thabo and Mathapelo Maripane.	

Index – Any other relevant information that the applicant would like to be considered
Motivate and Explain fully
-

SECTION K: APPENDICES

Appendix A: Site Plans & Maps

Appendix B: Photographic Record

Appendix C: Specialist Reports

Appendix D: Public Participation

Appendix E: Draft EMPr

Appendix F: Other Documents

DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, **Elize Osmers** declare that I –

(a) act as the independent environmental practitioner in this application;
(b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
(c) do not have and will not have a vested interest in the proposed activity proceeding;
(d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
(e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
(f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
(g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
(h) will keep a register of all interested and affected parties that participated in a public participation process; and
(i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Signature of the Environmental Assessment Practitioner:

ESZRO Environmental Consulting (Pty) Ltd
Name of the company:

20 November 2020
Date:

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