APPENDIX D6.3

TERRESTRIAL PLANT VERIFICATION REPORT

INITIAL SITE SENSITIVITY VERIFICATION.

1. REQUIREMENTS FOR VERIFICATION REPORT.

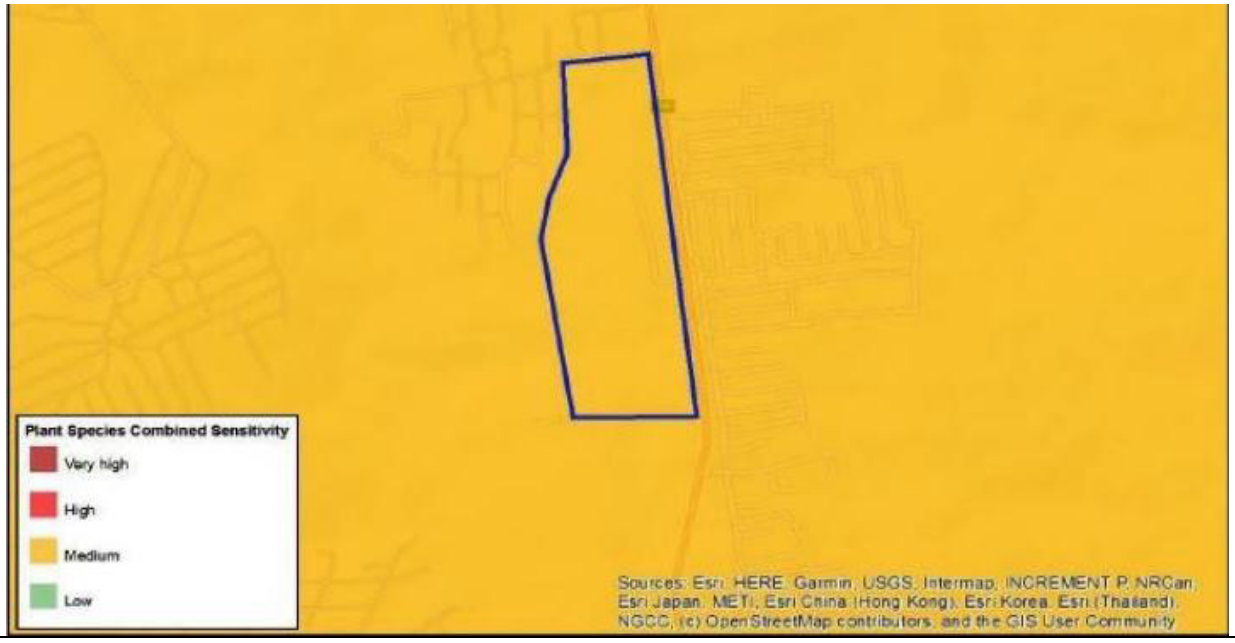
Prior to initiating an environmental impact assessment, the current land use and the potential environmental sensitivity of the site as identified by the national web based environmental screening tool must be confirmed by undertaking an Initial Site Sensitivity Verification. GNR1150 of 30 October 2020 sets out the requirements for site sensitivity verification and minimum report content.

2. BACKGROUND INFORMATION.

2.1	PROJECT/SITE NAME.	**ACORN CITY MIXED USE TOWNSHIP DEVELOPMENT.**
2.2	PROPERTY DESCRIPTION.	**POR 27 FARM ARTHURSEAT 214-KU BUSHBUCK RIDGE LOCAL MUNICIPALITY**
2.3	STUDY AREA.	**POR 27 FARM ARTHURSEAT 214-KU**
2.4	PROJECT AREAS OF INFLUENCE (PAOI).	**UNLISTED 275 SENSITIVE SPECIES.**

3. DESKTOP TERRESTRIAL PLANT SPECIES SENSITIVITY VERIFICATION OF THE PROJECT SITE.

3.1 SCREENING OF TERRESTRIAL PLANT SPECIES SITE SENSITIVITY (NATIONAL WEB BASED TOOL.)
MAP OF TERRESTRIAL PLANT SPECIES SENSITIVITY SCREENING.



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Sensitive species 275
Medium	Sensitive species 722

SCORE OF TERRESTRIAL PLANT SPECIES SENSITIVITY SCREENING.	The screening score is Medium, based on the presence of sensitive species

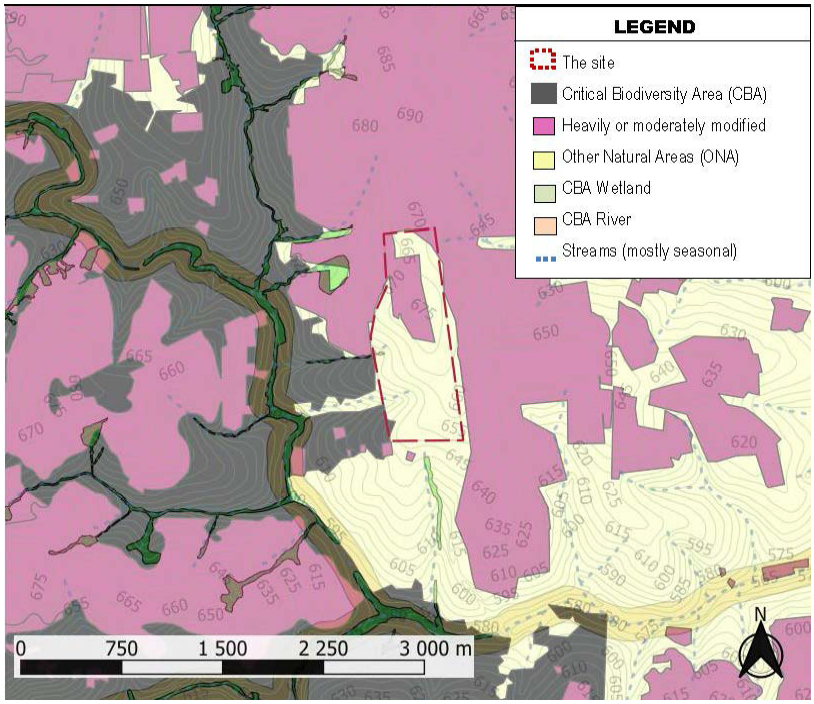
INTERPRETATION OF THE TERRESTRIAL PLANT SPECIES SENSITIVITY SCREENING SCORE.

- This site is approximately 49 Ha in extent in the Legogote Sour Bushveld Vegetation Type is enclosed by a largely dilapidated fence and surrounded by dense human habitation. Heavy foot traffic is present along footpaths crossing the area from people walking between residential and commercial areas. Also visible is harvesting of firewood as well as heavy damage to Marula trees (*Sclerocarya birrea* ssp. *caffra*). The high prevalence of the CARA Act indicator species of bush encroachment is evidence of high modification.

- Protected species which have a distribution range that may include the proposed area but are not necessarily present are the following: DWAFF protected species: *Pterocarpus angolensis, Philenoptera violacea, Spirostachys africana, Sclerocarya birrea, Sideroxylon inerme, Combretum imberbe.* MTPA protected species: *Bersama tysoniana, Berchemia zeyheri, Aloe marlothii, Pterocarpus angolensis, Spirostachys africana, Berchemia zeyheri, Cassipourea gerrardii, Curtisia dentata*, All Olea, All *Adenium*, *Pachypodium saundersii.*

3.2 **TERRESTRIAL PLANT SPECIES PRIORITY ASSESSMENT**.

MAP OF TERRESTRIAL PLANT SPECIES PRIORITY MBSP



CLASSIFICATION OF TERRESTRIAL PLANT SPECIES ASSESSMENT INTERPRETATION.

HEAVILY MODIFIED. Areas in which significant or complete loss of natural habitat and ecological function have taken place due to activities such as cultivation, hardening of surfaces, open-cast mining, etc.

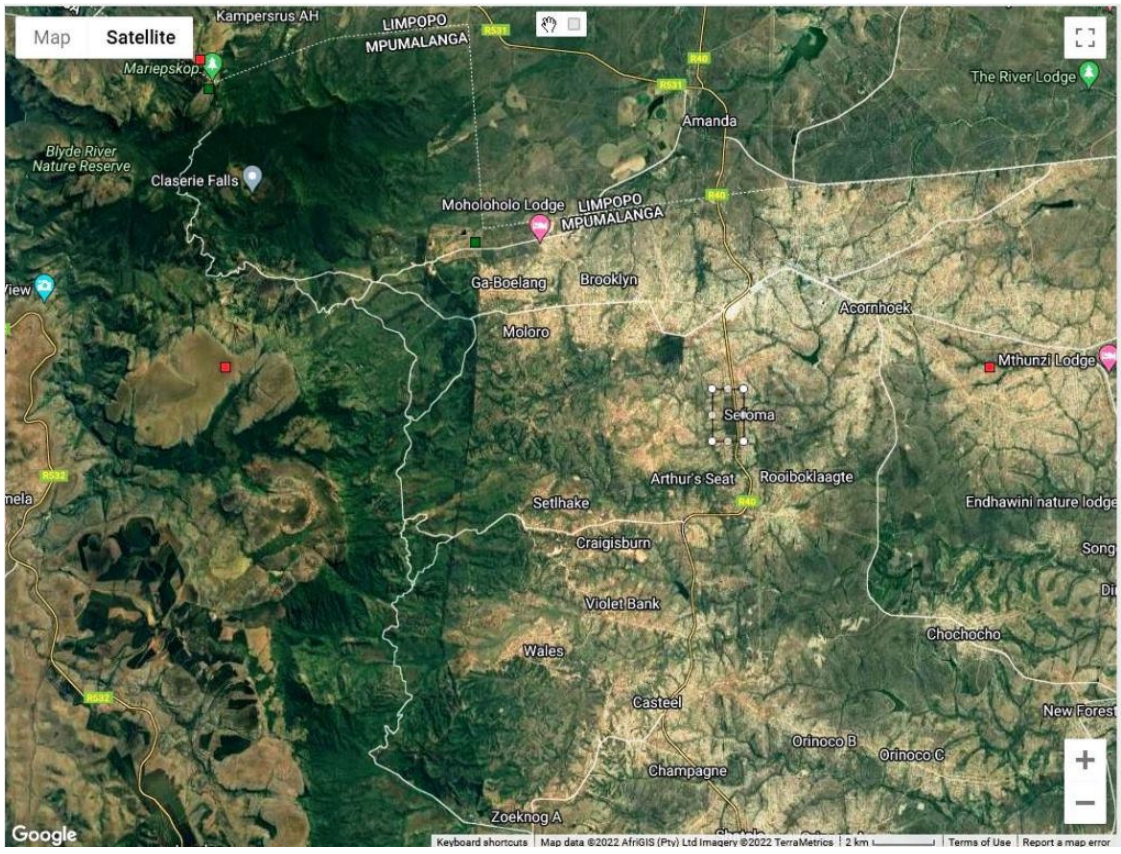
OTHER NATURAL AREAS. Natural or near-natural areas that are currently not considered essential for meeting biodiversity targets or maintaining ecological functioning; may still retain valuable biodiversity or play an important role as ecological infrastructure or in the delivery of ecosystem services. Important vegetation communities are unlikely to occur in this particular area.

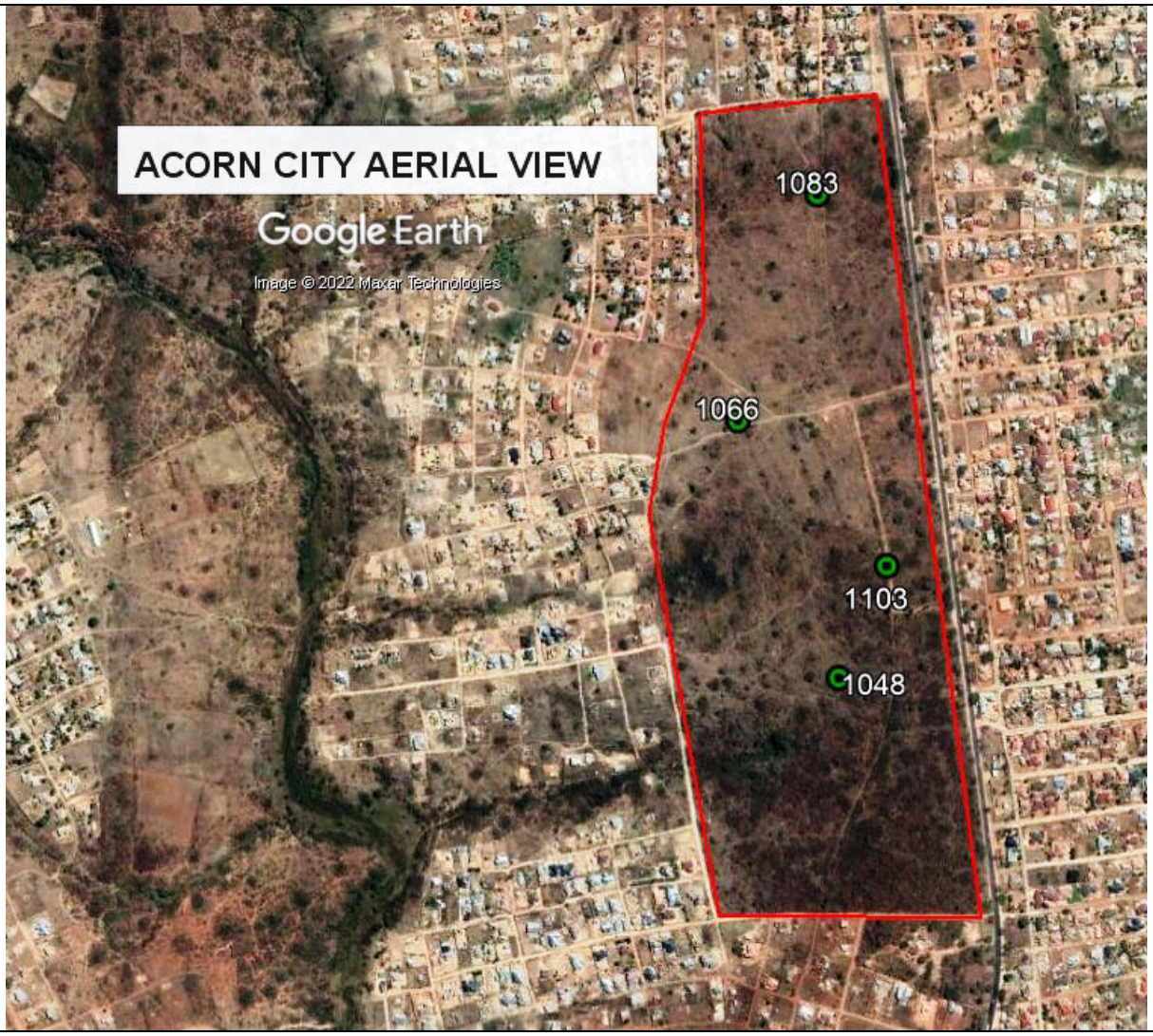
THREATENED ECOSYSTEM. This project is situated within the Legogote Sour Bushveld Threatened Ecosystem (Vulnerable). The northern part of which is classified as heavily or moderately modified in terms of the MBSP. There is probably very little left of the original typical vegetation structure as it dominated by encroachment of the CARA declared indicator species of bush encroachment including *Dichrostachys cinerea* and *Acacia ataxacantha* which are also often found in short thicket on less rocky areas. These species may create very dense thorny vegetation which limits free movement of larger animals as it can at its worst approach a monoculture scenario at its worst. This is different from the undisturbed dense woodland of the Legogote Sour Bushveld vegetation structure. The southern part of the study area which, according to the MBSP is considered Other Natural Areas In terms of the MBSP is likewise infested by the CARA Act species resulting in dense patches with low diversity.

3.3 PRELIMINARY TERRESTRIAL PLANT SPECIES AERIAL PHOTO / SATELLITE IMAGERY INTERPRETATIONS.

The northern portion that corresponds with the Heavily Modified finding of the MBSP (images 1066 and 1083 in 3.3) is clearly shown as a nearly barren open area with a neighbouring are invaded by dominant *Dichrostachys cinerea* with hardly any grass present, modified from dense woodland and shrubs as per the original vegetation type. This not in any declared Centre of Endemism.

Image from Brahms Online search does not indicate any sensitive plant in the vicinity of the project site more or less in the centre of the image.



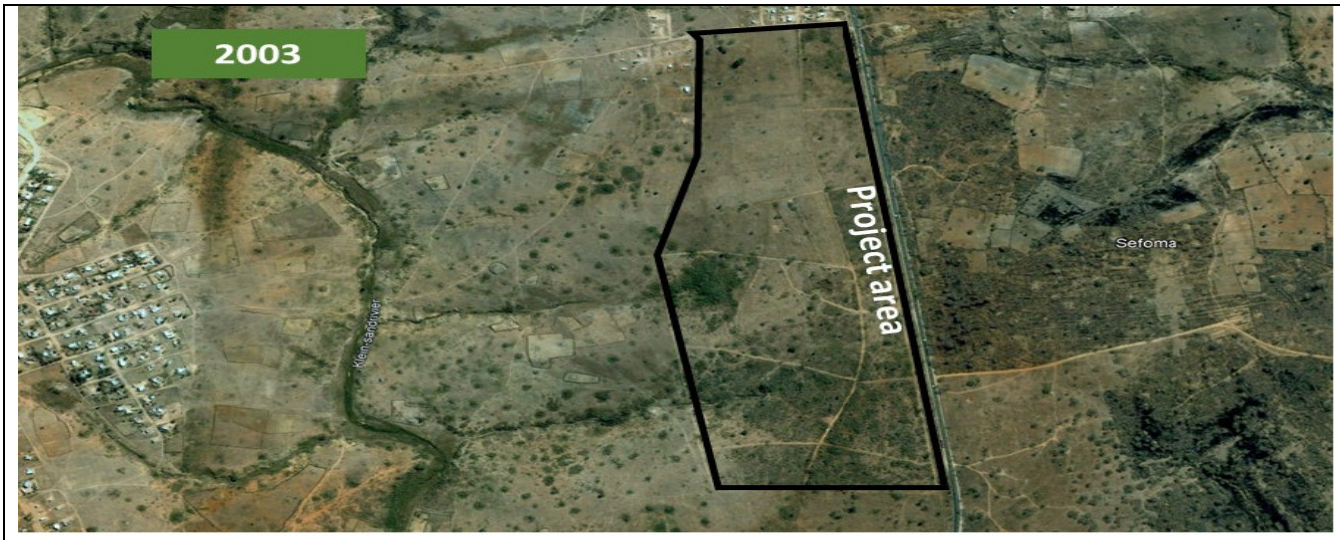


3.4 DESCRIPTION OF AERIAL PHOTO ANALYSIS.

The numerous sensitive species on which the result of the screening report is based are not expected to occur here as habitats are moderately to heavily to modified and not suitable for sensitive species. No other plant species of conservation concern are known to occur inside the study area. A search of Brahms Online did not indicate any species of note and no other species of conservation concern is expected to be present. Image showing heavily modified Northern area and denser vegetation in the Southern area.

4. ON-SITE TERRESTRIAL PLANT SPECIES SENSITIVITY VERIFICATION

The on-site verification includes a photo reference of the present state of the vegetation that is currently dominant at the site. Representative images are below. Due to the extensive urban development surrounding this area on all sides with concomitant removal of natural vegetation no important vegetation communities are present. Neither site inspection nor a search of the Brahms Database indicated known presence of red data species. Due to the current disturbed state and severe encroachment in some areas, red data species may be discovered during vegetation clearing and a knowledgeable Ecologist should be present during clearing.



Aerial photo comparison shows the extent of change already evident in the surrounding area (2003 image) in seemingly open areas surrounding the proposed to township development. This seems to show severe transformation of the Legogote Sour Bushveld including negative impact on the current proposed development site which now has little resemblance to the natural vegetation structure of the Legogote Sour Bushveld.

SITE PHOTO REFERENCE NUMBER: 1066	SITE PHOTO REFERENCE NUMBER: 1083
	

SITE PHOTO REFERENCE NUMBER: 1103	SITE PHOTO REFERENCE NUMBER: 1048
	

5. TERRESTRIAL PLANT SPECIES SITE SENSITIVITY VERIFICATION OUTCOME.

5.1 VERIFICATION CONFIRMATION/DISPUTE.

- Sensitive species listed in the screening report does not occur at the site.
- The Mpumalanga Terrestrial Biodiversity Assessment indicates the northern portion mostly as Heavily or Moderately Modified.
- The southern portion is indicated as Other Natural Areas. These are natural or near natural areas that are currently not considered essential for meeting biodiversity targets or maintaining ecological function, but may still retain value or play an important role as ecological infrastructure or in delivery of ecosystem services. Due to this site being completely surrounded by built-up residential areas the latter will probably have a very limited influence.

5.2 VERIFICATION MOTIVATION.

- Due to the high presence of CARA indicators of bush encroachment which results in an overall low occurrence of potential terrestrial plant species, site sensitivities/species of conservation concern is not to be expected since the study area vegetation is highly modified.
- The Screening report plant species sensitivity was rated MEDIUM. In terms of this assessment it should be downgraded to LOW. A thorough investigation indicates moderate to severe disturbance with very little likelihood of the presence of sensitive species.

5.3 VERIFICATION RECOMMENDATION.

Based on the above, it is recommended that a Verification Report is sufficient to account for the potential impacts of the proposed activity/development. The screening score should be adjusted to LOW

Koos dWet

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2022-02-25