

HERITAGE SCREENER

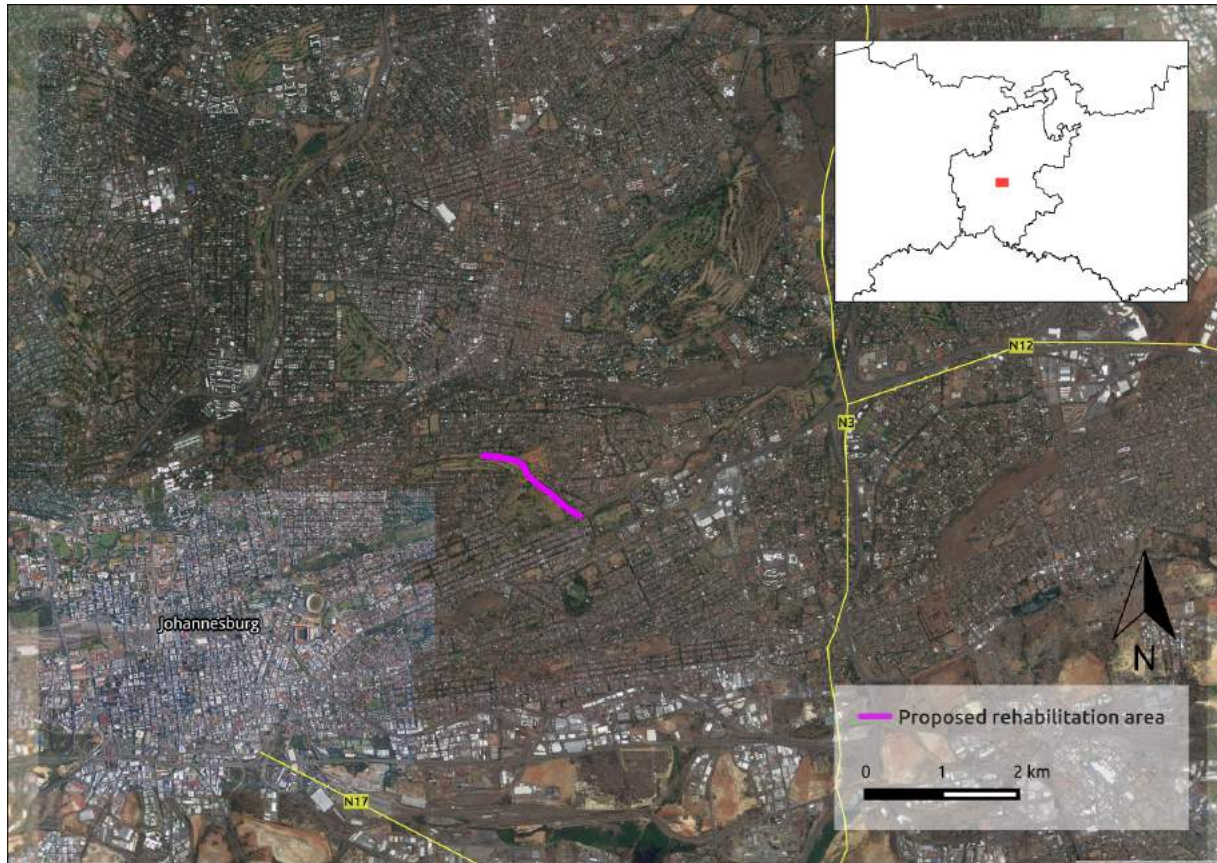
CTS Reference Number:	CTS16_005	
Client:	Envirovolution Consulting	
Date:	26 January 2016	
Title:	Drainage Rehabilitation, Jukskei River, Gauteng	
Recommendation by CTS Heritage Specialists: (Type 1)	(1) The heritage resources in the area proposed for development are sufficiently recorded. Considering the transformed nature of the landscape surrounding the proposed river channel rehabilitation (golf course and agricultural), the limited impact of the activities proposed (upgrade of culverts and gabions) and the low palaeontological sensitivity of the area, it is recommended that no Heritage Impact Assessment is conducted.	

Figure 1a. Satellite image with proposed development area indicated in Gauteng



1. Proposed Development Summary

The proposed project is located along a stream of the Jukskei River system in the Bezhuidenhout Valley, Johannesburg. It entails the rehabilitation of the drainage system along this stream, focusing on sub-catchment 3. The work proposed in these areas will include rehabilitation of the culverts and installation of anti-erosion measures such as gabions along the identified channel. Additionally, there may be the need to excavate along the edges of the channel banks to decrease the angle of the slope along the channel. Most of the upgrade is included within the Observatory Golf Course.

2. Application References

Name of relevant heritage authority(s)	South African Heritage Resources Agency (SAHRA)
Name of decision making authority(s)	Gauteng Department of Agricultural and Rural Development (GDARD)

3. Property Information

Farm Name and Number	Doornfontein 92
Local Municipality	City of Johannesburg Metropolitan Municipality
District Municipality	City of Johannesburg Metropolitan Municipality
Previous Magisterial District	Johannesburg
Province	Gauteng
Current Use	Golf course and agricultural
Current Zoning	NA
Total Extent	~1.6km

4. Nature of the Proposed Development

Surface area to be affected/destroyed	Culverts and gabions along 1.6km river bed
Depth of excavation (m)	NA
Height of development (m)	NA
Expected years of operation before decommission	Unknown

5. Category of Development

Triggers: Section 38(8) of the National Heritage Resources Act	X
Triggers: Section 38(1) of the National Heritage Resources Act	
1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.	
2. Construction of a bridge or similar structure exceeding 50m in length.	
3. Any development or activity that will change the character of a site-	
a) exceeding 5 000m ² in extent	
b) involving three or more existing erven or subdivisions thereof	
c) involving three or more erven or divisions thereof which have been consolidated within the past five years	
4. Rezoning of a site exceeding 10 000m ²	
5. Other (state):	

6. Additional Infrastructure Required for this Development

NA

7. Mapping - Please see Appendices 3 and 4 for legend keys and methodology.

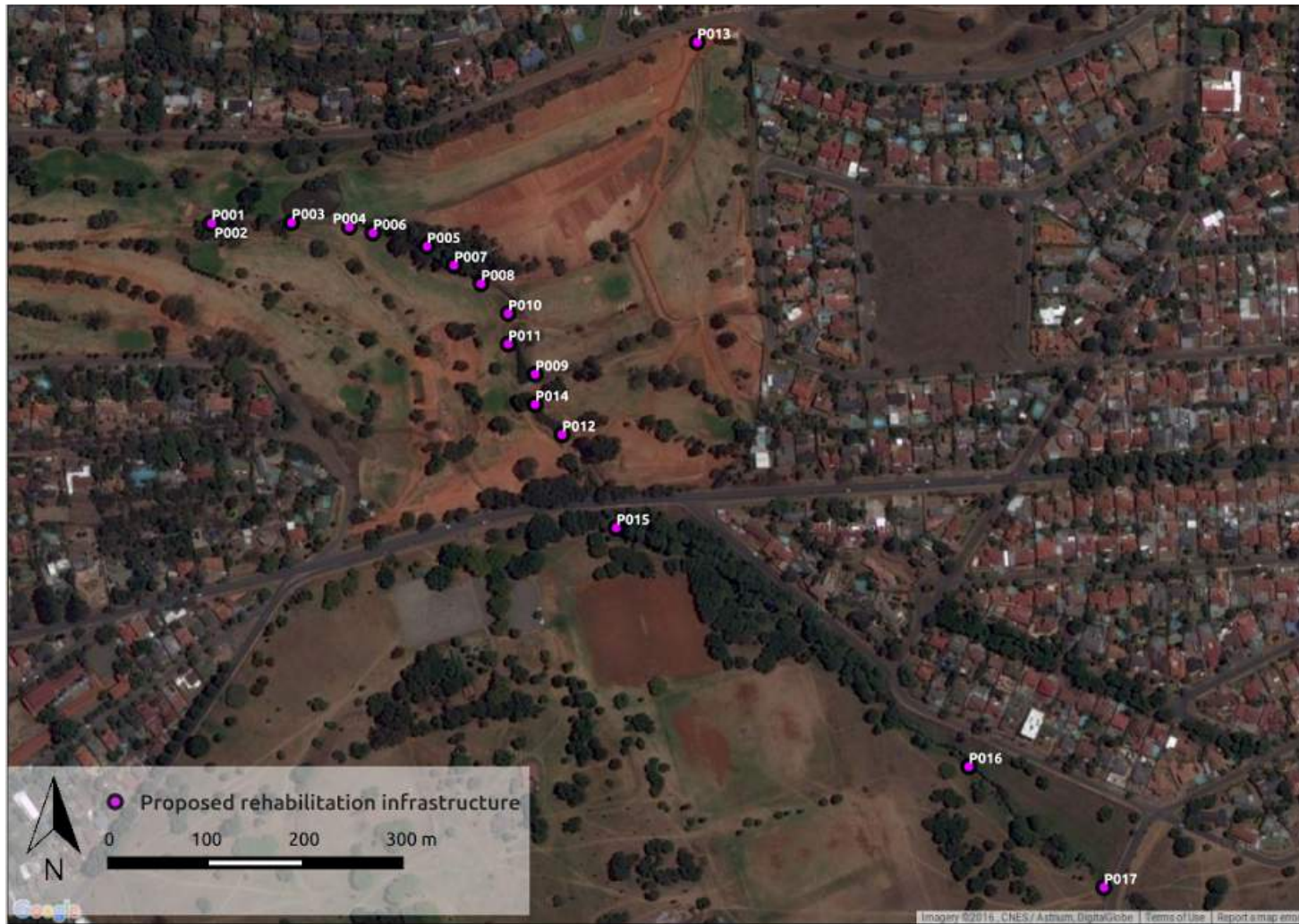


Figure 1b. Overview Map. Satellite image with all proposed rehabilitation points indicated



Figure 1c. Overview Map. Satellite image with rehabilitation points (P001-P012, P014-P015)



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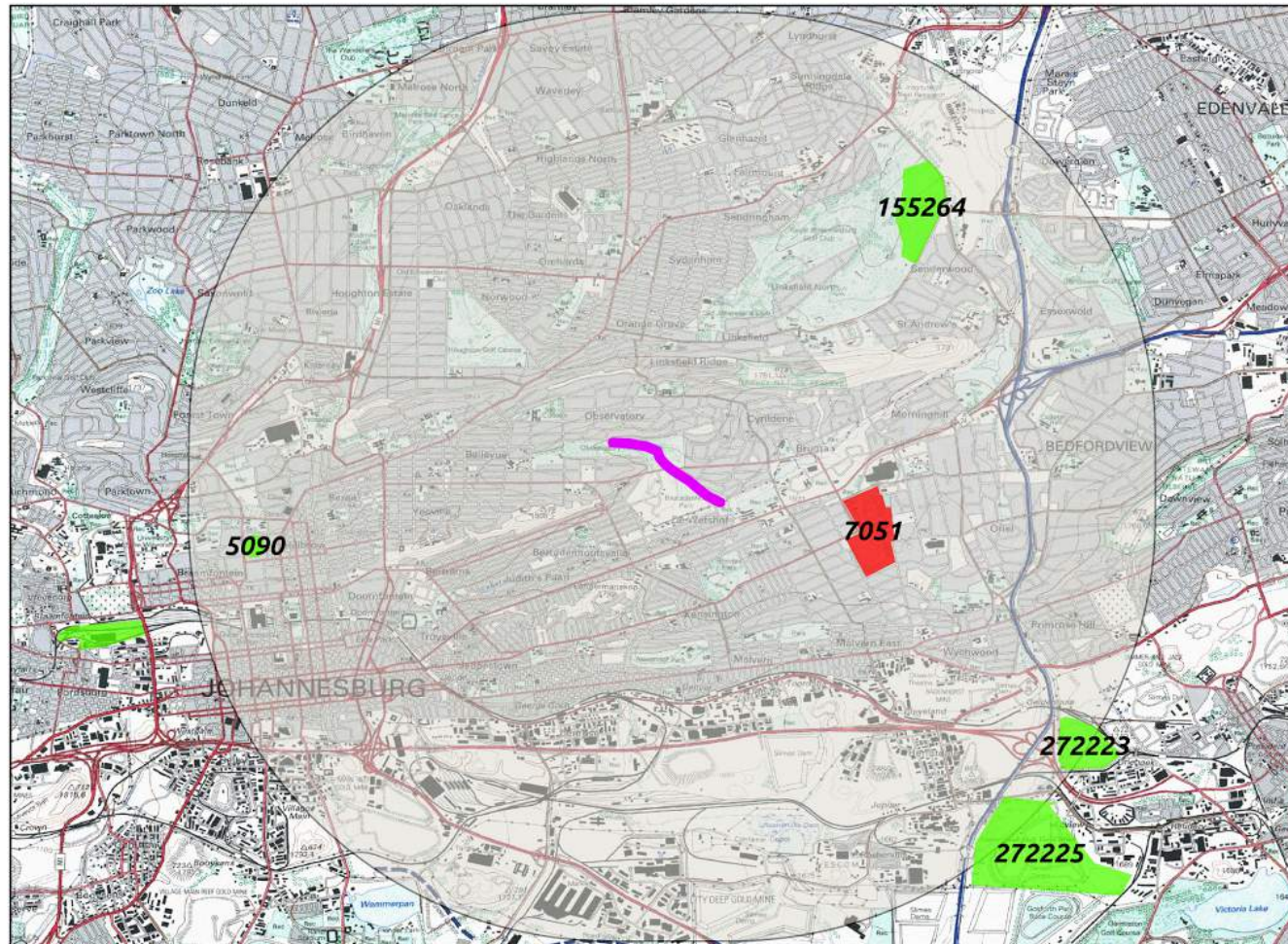
Figure 1d. Overview Map. Satellite image with proposed rehabilitation point P013 indicated.



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Figure 1e. Overview Map. Satellite image with proposed rehabilitation points indicated (P016-P017).



Legend

— Proposed rehabilitation area

Inclusion Zone 5km

Previous surveys

High coverage

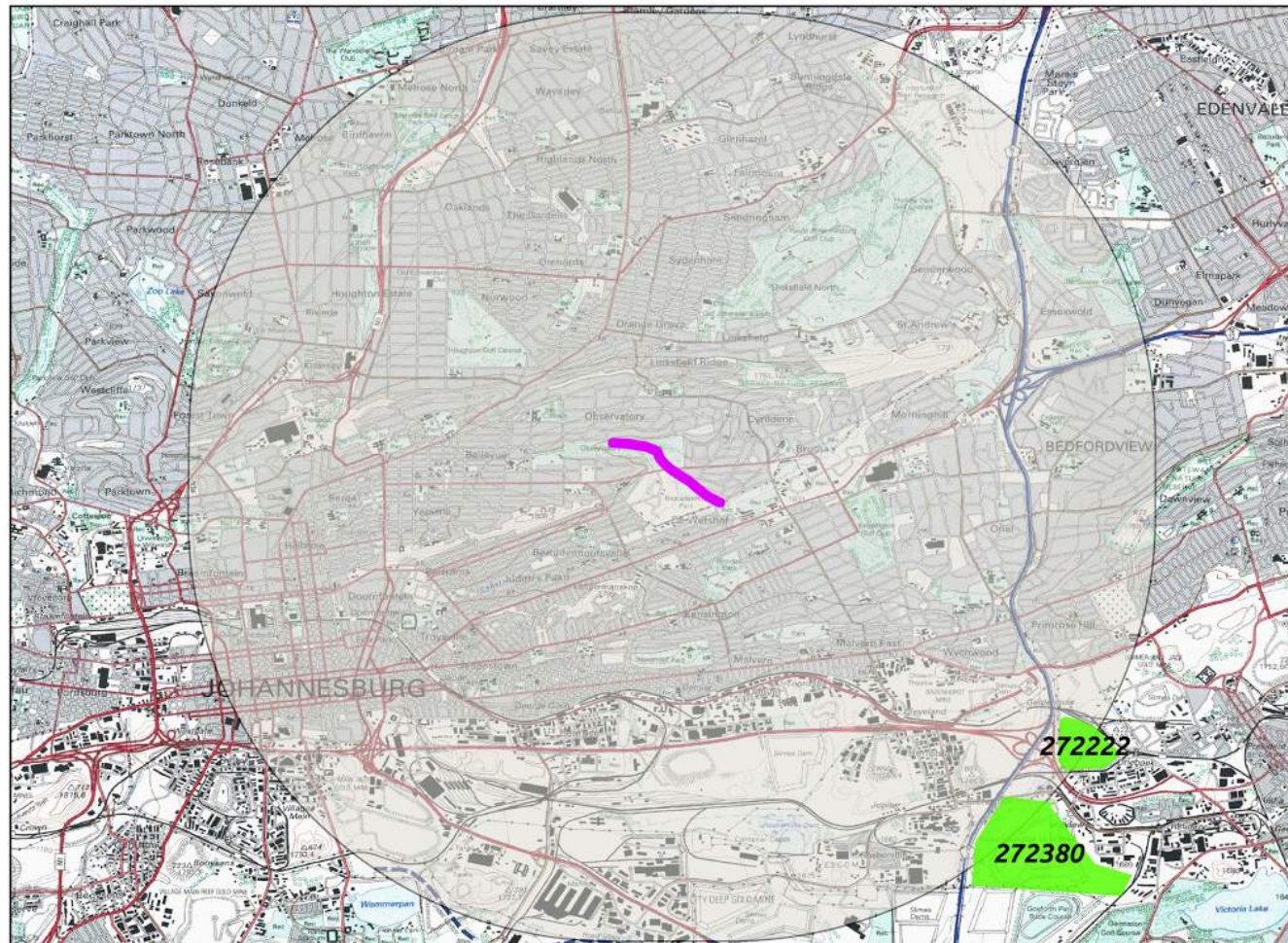
Medium coverage

Low coverage

0 2 4 km



Figure 2. HIAs Map. Previous Heritage Impact Assessments done in and near the proposed development area (PIAs excluded) with SAHRIS NID labels indicated.



Legend

— Proposed rehabilitation area

Inclusion Zone 5km

Previous surveys

High coverage

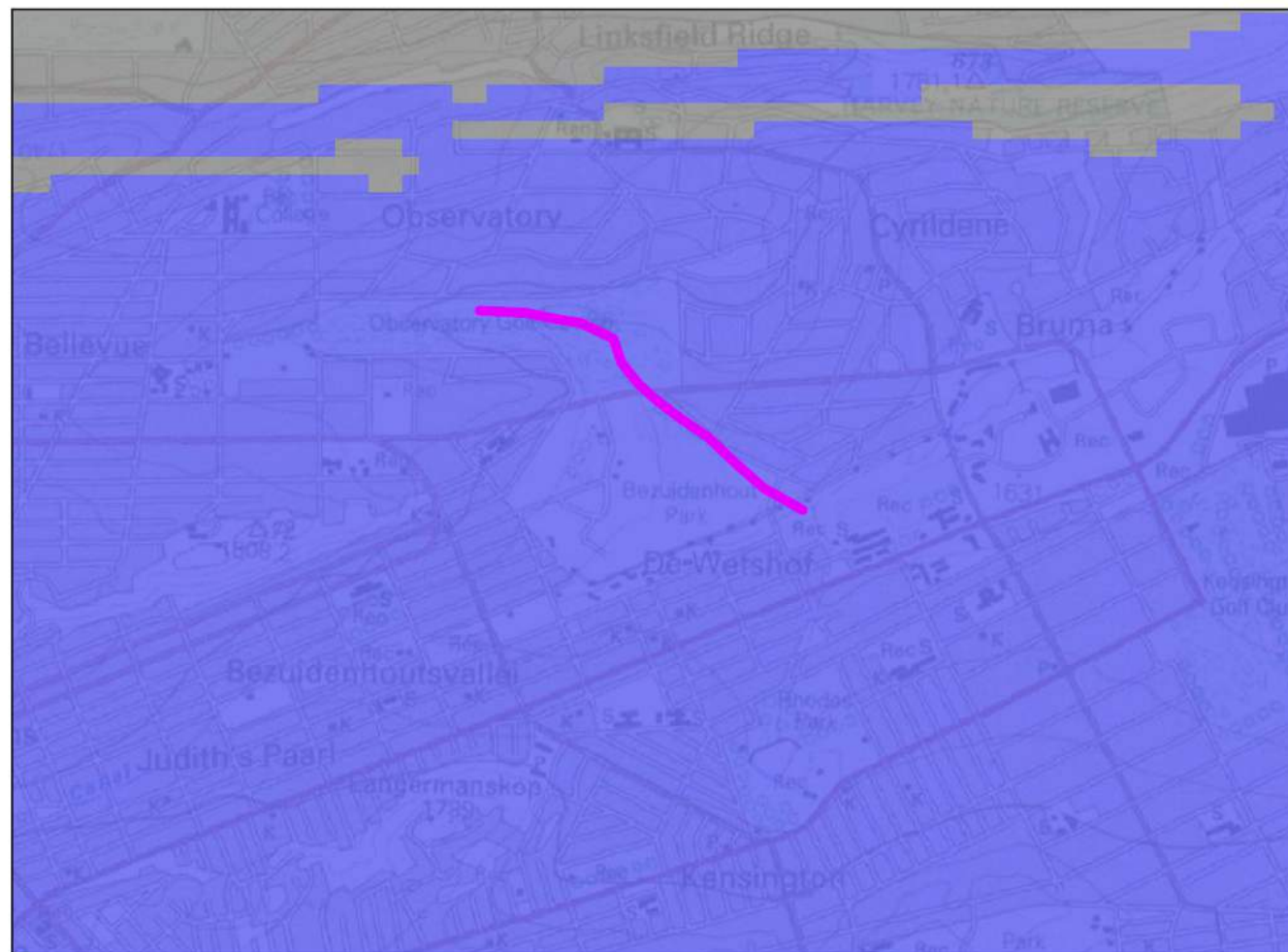
Medium coverage

Low coverage

0 2 4 km



Figure 2. PIAs Map. Previous Palaeontological Impact Assessments done in and near the proposed development area with SAHRIS NID labels indicated.



Legend

— Proposed rehabilitation area

Palaeontological sensitivity

RED	Very high
ORANGE	High
GREEN	Moderate
BLUE	Low
GREY	Insignificant/zero
WHITE	Unknown

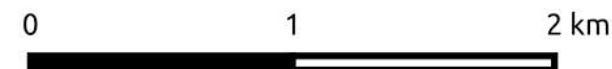
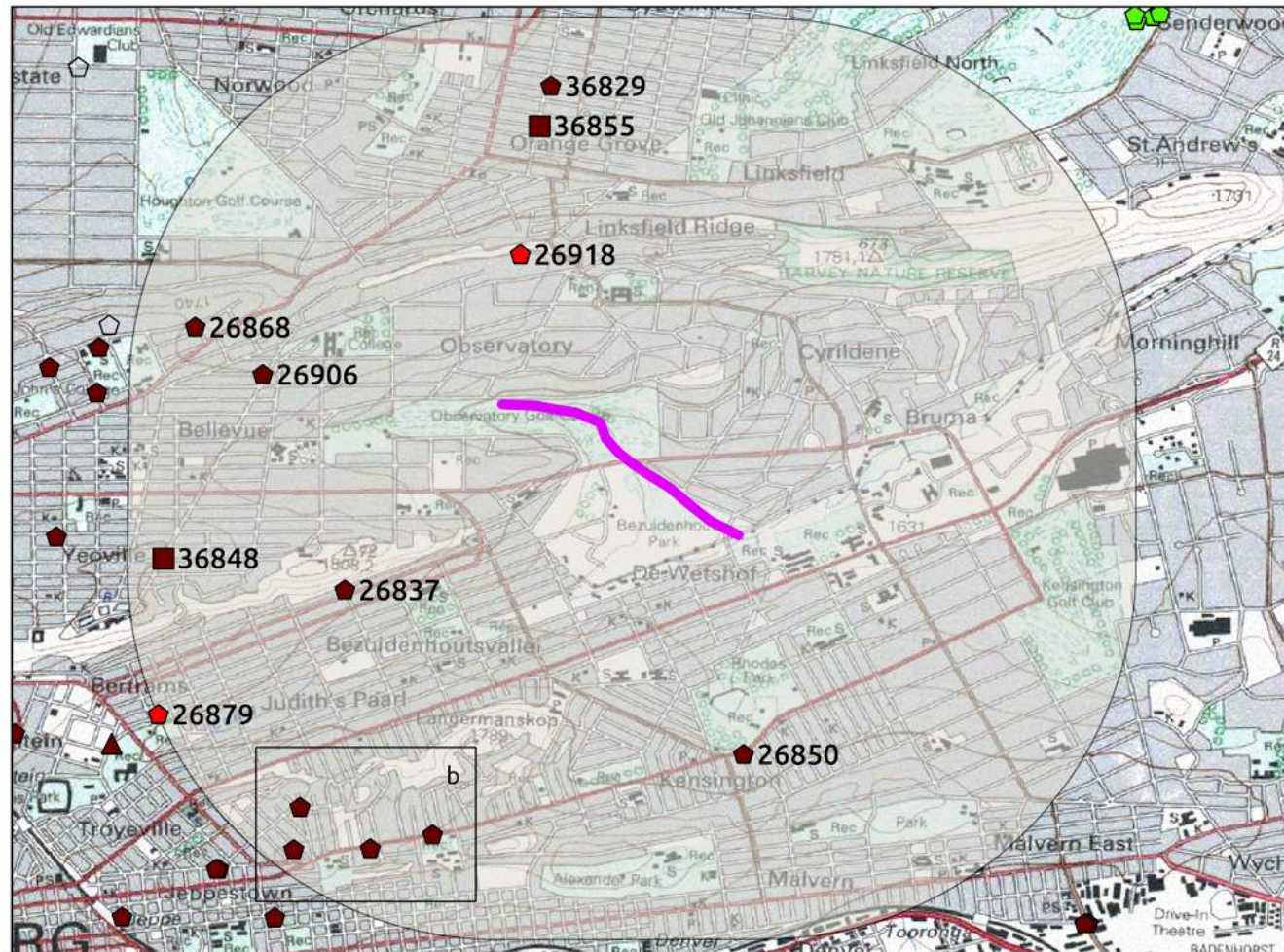


Figure 3. Palaeo Map. Palaeosensitivity of the study area. See Appendix 3 for full guide to the legend.



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Legend

- Proposed rehabilitation area
- Inclusion Zone 2km

Heritage resources

Type

- Structures, Monuments & Memorials
- Liv. Heritage/Sacred sites, Burial Grounds and Graves, Natural, Place
- Conservation Area, Cultural Landscape

Grading

- | | |
|----------|----------|
| DARK RED | I & II |
| RED | IIIa |
| ORANGE | IIIb |
| GREEN | IIIc |
| CLEAR | Ungraded |



Figure 4a. Heritage Resources Map. Heritage resources previously identified in and near the study area, with SAHRIS Site IDs indicated (see figure 4b for insets).



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Figure 4b. Inset map.

8. Heritage statement and character of the area

EnviroLution is undertaking a Basic Assessment Report process for the rehabilitation of the river channel within the Jukskei River System in the Bezhuidenhout Valley, Johannesburg. The proposed project includes rehabilitation of the culverts and installation of anti-erosion measures such as gabions. The upgrade of the river channel is mostly located within the Observatory Golf Course which is the oldest golf course in the city. Another section of the proposed rehabilitation is currently surrounded by agricultural activities, which have transformed the surrounding landscape.

An inclusion zone of 5km was considered around the proposed upgrade of the river channel when assessing previous Heritage Impact Assessments (HIAs). These HIAs were undertaken for the nearby golf course and residential developments. No sites of significance have been identified during these assessments. Despite this, thirteen heritage sites (mostly structures - see Appendix 1) older than 60 years, which were formally protected and declared in the 1970s-80s, are recorded within the 2km radius immediately surrounding the river channel (Figs. 4a and 4b). None of these sites is expected to be impacted by the proposed upgrade project.

Given the limited impact of the proposed rehabilitation on the surrounding landscape and the transformed character of the area (golf course and agricultural activities), **it is recommended that no further archaeological studies are necessary.**

The area is geologically underlain by formations of low palaeontological significance which do not require further studies. This is confirmed by two desktop palaeontological studies undertaken by Almond (2014a and b) for the Jupiter Extension residential developments (NID 272222 and 272380 in Fig. 2b). **Considering the low palaeontological significance and the very limited impact of the proposed development, no further palaeontological study is recommended.**

Should any archaeological or palaeontological find or burial be uncovered, an archaeologist or a palaeontologist (depending on the nature of the findings), as well as the South African Heritage Resources Agency, must be contacted immediately. No further work should be undertaken in the area until permitted by the heritage authority.



APPENDIX 1 - Site Lists

List of sites within 2km inclusion zone and outside proposed development area

Site ID	Site Reference	Full Site Name	Site Type	Grading
36822	David Webster House	David Webster House	Building	Grade II
36829	Patel House	Patel House	Building	Grade II
36848	Herman Charles Bosman Site, Bellevue East	Herman Charles Bosman Site, Bellevue East	Place	Grade II
36855	Wemmer Pan Precinct	Wemmer Pan Precinct	Place	Grade II
26923	9/2/228/0008	Jeppe High School for Boys, Kensington, Johannesburg	Building	Grade II
26906	9/2/228/0048	Emoyeni, Parktown, Johannesburg	Building	Grade II
26892	9/2/228/0071	Lion House, 20 Roberts Avenue, Kensington, Johannesburg	Building	Grade II
26868	9/2/228/0115	Stone Ledge, St David Road, Houghton, Johannesburg	Building	Grade II
26864	9/2/228/0126	Gandhi House, 19 Albermarle Street, Troyeville, Johannesburg	Building	Grade II
26850	9/2/228/0178	Scott House, Kensington, Johannesburg	Building	Grade II
26837	9/2/228/0201	Yukon, Bezuidenhouts Valley, Johannesburg	Building	Grade II
26879	9/2/228/0087	Terrace Houses, Bertrams, Johannesburg	Building	Grade IIIa
26918	9/2/228/0009	Tracey's Folly, 11 Grace Road, Observatory, Johannesburg	Building	Grade IIIa

APPENDIX 2 - Reference List

List of previous assessments within 5km inclusion zone







Nid	Author/s	Date	Report Type	Title
5090	Neels Kruger, MH Alex Schoeman	24/10/2006	AIA	Phase 1 Sub-Surface Investigation Archaeological Project Report Old Johannesburg Fort
7051	Thomas Huffman, G Lathy	1/3/1998	AIA	Archaeological Survey of the Kensington Golf Course, Johannesburg
155264	R. C. De Jong	22/09/2006	HIA	Final Heritage Impact Assessment Report Version 3: Proposed Huddle Park Golf Course Development, Johannesburg
272222	John Almond	01/12/2014a	PIA desktop	Recommended Exemption From Further Palaeontological Studies: Proposed Mixed Use Development (JUPITER Extension 8) On Portion 2 Of Farm Elandsfontein 90-1r, Ekurhuleni Metropolitan Municipality, Gauteng
272223	Karen Van Ryneveld	25/05/2015	AIA	Phase 1 Archaeological Impact Assessment - Proposed Mixed-Use development (Jupiter Extension 8) on Portion 2 of farm Elandsfontein 90-IR, Ekurhuleni Metropolitan Municipality, Gauteng
272225	Karen Van Ryneveld	25/05/2015	AIA	Phase 1 Archaeological Impact Assessment - Proposed Mixed-use Development (Jupiter Ext 9) on farms Elandsfontein 90-IR and 108-IR, Germiston, Ekurhuleni Metropolitan Municipality, Gauteng
272380	John Almond	01/12/2014b	PIA desktop	Recommended Exemption From Further Palaeontological Studies: Proposed Mixed Use Development (JUPITER Extension 9) On Farms Elandsfontein 90-Ir And 108-Ir, Ekurhuleni Metropolitan Municipality, Gauteng

APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DEA	Department of Environmental Affairs
HIA	Heritage Impact Assessment
GDARD	Gauteng Department of Agricultural and Rural Development
MPRDA	Mineral and Petroleum Resources Development Act, no 28 of 2002
NEMA	National Environmental Management Act, no 107 of 1998
NHRA	National Heritage Resources Act, no 25 of 1999
PIA	Palaeontological Impact Assessment
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
VIA	Visual Impact Assessment

Full guide to Palaeosensitivity Map legend

	RED:	VERY HIGH - field assessment and protocol for finds is required
	ORANGE/YELLOW:	HIGH - desktop study is required and based on the outcome of the desktop study, a field assessment is likely
	GREEN:	MODERATE - desktop study is required
	BLUE/PURPLE:	LOW - no palaeontological studies are required however a protocol for chance finds is required
	GREY:	INSIGNIFICANT/ZERO - no palaeontological studies are required
	WHITE/CLEAR:	UNKNOWN - these areas will require a minimum of a desktop study.



APPENDIX 4 - Methodology

The Heritage Screener summarises the heritage impact assessments and studies previously undertaken within the area of the proposed development and its surroundings. Heritage resources identified in these reports are assessed by our team during the screening process.

The heritage resources will be described both in terms of **type**:

- Group 1: Archaeological, Underwater, Palaeontological and Geological sites, Meteorites, and Battlefields
- Group 2: Structures, Monuments and Memorials
- Group 3: Burial Grounds and Graves, Living Heritage, Sacred and Natural sites
- Group 4: Cultural Landscapes, Conservation Areas and Scenic routes

and **significance** (Grade I, II, IIIa, b or c, ungraded), as determined by the author of the original heritage impact assessment report or by formal grading and/or protection by the heritage authorities.

Grading of heritage sites which form part of the national estate is defined in s. 7 of the National Heritage Resources Act (NHRA) as:

*(a) **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance; Examples of these sites are Mapungubwe Cultural Landscape, The Parliament of South Africa, Sarah Baartman Burial Site, Robert Sobukwe's grave, Lake Fundudzi, Voortrekker Monument, Union Buildings.*

*(b) **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; they are normally declared Provincial Heritage Sites under s. 27 of the NHRA after the competent Provincial Heritage Resources Authority has established their significance. Many of the current Provincial Heritage Sites were declared National Monument under the previous heritage legislation and their status was changed to Provincial Heritage Sites when the National Heritage Resources Act was proclaimed in 1999. Amongst these sites, Mapoch's Caves in Limpopo, Umhlathuzana Rock Shelter in KwaZulu Natal, Van der Stel's Copper Mine in the Northern Cape, the old Cemetery in Grahamstown, Eastern Cape and Baboon Point, in the Western Cape.*

*(c) **Grade III:** Other heritage resources worthy of conservation, and which prescribes heritage resources assessment criteria, consistent with the criteria set out in section 3(3), which must be used by a heritage resources authority or a local authority to assess the intrinsic, comparative and contextual significance of a heritage resource and the relative benefits and costs of its protection, so that the appropriate level of grading of the resource and the consequent responsibility for its management may be allocated (...).*

The following sub-categories are currently in use for Grade III::

Grade IIIa sites are sites of such a high local significance that should be protected and retained. These sites should be included in the heritage register of each province as defined in s. 30 of the NHRA and should not be impacted upon. In the instance of buildings, any alteration must be regulated. Because of their nature, all human remains are considered of high significance. While relocation of graves is common practice, this should always be considered as the last option. Examples of these sites are all graves and burial grounds which have not been graded I or II, Peers Cave in Western Cape,



Grade IIIb sites are resources of medium local significance. They should preferably be retained where possible, but where not possible the site must be fully investigated and/or mitigated. After mitigation they may be impacted upon.

Grade IIIc sites are of low local significance. These resources must be satisfactorily studied before destruction. In many instances the recording and description of the site undertaken at the heritage impact assessment level is sufficient and further recording or mitigation may not be required. These sites include for instance small knapping sites which have been sufficiently recorded at the archaeological impact assessment level, palaeontological fossils of low significance which do not require recovery. In the case of the built environment, IIIc structures will only require protection and regulation if the significance of the environs in which they are located is sufficient to warrant protective measures.

The heritage specialist in the field should suggest a grading for the site, but it will then need to be ratified and accepted by the competent heritage authority.

DETERMINATION OF THE EXTENT OF THE INCLUSION ZONE TO BE TAKEN INTO CONSIDERATION

The extent of the inclusion zone to be considered for the Heritage Screener will be determined by CTS based on:

- the size of the development,
- the number and outcome of previous surveys existing in the area
- the potential cumulative impact of the application.

The inclusion zone will be considered as the region within a maximum distance of 50 km from the boundary of the proposed development.

DETERMINATION OF THE PALAEOONTOLOGICAL SENSITIVITY

The possible impact of the proposed development on palaeontological resources is gauged by:

- reviewing the fossil sensitivity maps available on the South African Heritage Resources Information System (SAHRIS)
- considering the nature of the proposed development
- when available, taking information provided by the applicant related to the geological background of the area into account

DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

Each report assessed for the compilation of the Heritage Screener is colour-coded according to the level of coverage accomplished. The extent of the surveyed coverage is labeled in three categories, namely low, medium and high. In most instances the extent of the map corresponds to the extent of the development for which the specific report was undertaken.

Low coverage will be used for:

- desktop studies where no field assessment of the area was undertaken;
- reports where the sites are listed and described but no GPS coordinates were provided.



- older reports with GPS coordinates with low accuracy ratings;
- reports where the entire property was mapped, but only a small/limited area was surveyed.
- uploads on the National Inventory which are not properly mapped.

Medium coverage will be used for

- reports for which a field survey was undertaken but the area was not extensively covered. This may apply to instances where some impediments did not allow for full coverage such as thick vegetation, etc.
- reports for which the entire property was mapped, but only a specific area was surveyed thoroughly. This is differentiated from low ratings listed above when these surveys cover up to around 50% of the property.

High coverage will be used for

- reports where the area highlighted in the map was extensively surveyed as shown by the GPS track coordinates. This category will also apply to permit reports.

RECOMMENDATION GUIDE

The Heritage Screener includes a set of recommendations to the applicant based on whether an impact on heritage resources is anticipated. One of three possible recommendations is formulated:

(1) The heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources. There are no known sites which require mitigation or management plans. No further heritage work is recommended for the proposed development.

This recommendation is made when:

- enough work has been undertaken in the area
- it is the professional opinion of CTS that the area has already been assessed adequately from a heritage perspective for the type of development proposed

(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for the proposed development.

This recommendation is made in instances in which there are already some studies undertaken in the area and/or in the adjacent area for the proposed development. Further studies in a limited HIA may include:

- improvement on some components of the heritage assessments already undertaken, for instance with a renewed field survey and/or with a specific specialist for the type of heritage resources expected in the area
- compilation of a report for a component of a heritage impact assessment not already undertaken in the area
- undertaking mitigation measures requested in previous assessments/records of decision.



(3) The heritage resources within the area proposed for the development have not been adequately surveyed yet - Few or no surveys have been undertaken in the area proposed for development. A full Heritage Impact Assessment with a detailed field component is recommended for the proposed development.

Note:

The responsibility for generating a response detailing the requirements for the development lies with the heritage authority. However, since the methodology utilised for the compilation of the Heritage Screeners is thorough and consistent, contradictory outcomes to the recommendations made by CTS should rarely occur. Should a discrepancy arise, CTS will immediately take up the matter with the heritage authority to clarify the dispute.

The compilation of the Heritage Screener will not include any field assessment. The Heritage Screener will be submitted to the applicant within 24 hours from receipt of full payment. **If the 24-hour deadline is not met by CTS, the applicant will be refunded in full.**