

CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	CTS19_015
SAHRIS Reference:	13596
Client:	Terreco
Date:	March 2019
Title:	Proposed development of two high level pedestrian bridges in Mdantsane, East London
Recommendation by CTS Heritage Specialists:	RECOMMENDATION: Due to the limited footprint of the proposed development, and the previously disturbed nature of the development area, it is recommended that no further heritage studies are required. However, it is recommended that the Chance Finds Procedure is implemented during excavations into fresh bedrock and that this monitoring is included into the overall management plan of the project during construction phase of the bridges.

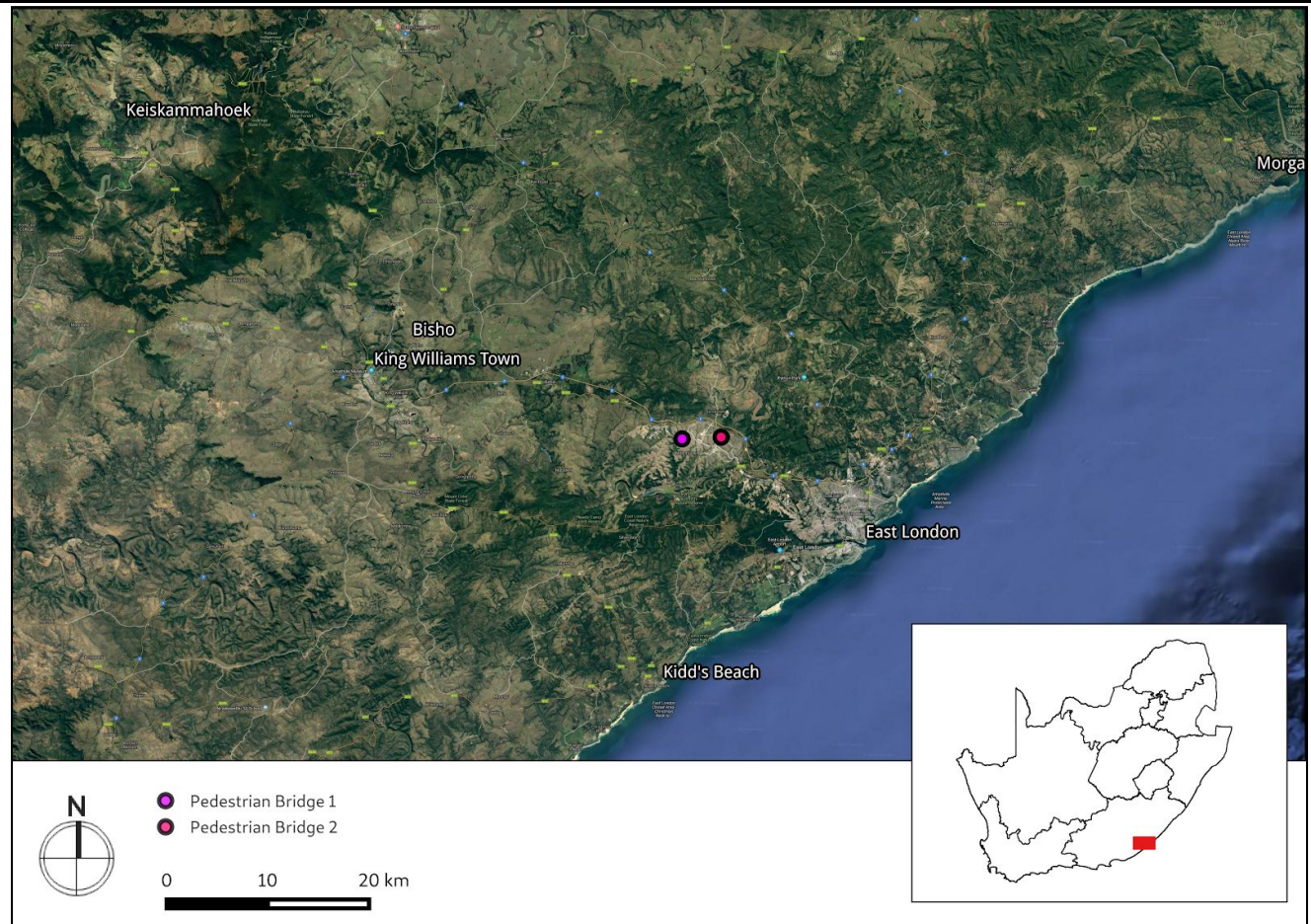
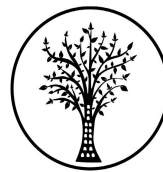


Figure 1a. Satellite map indicating the location of the proposed development in the Eastern Cape Province

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1. Proposed Development Summary

Buffalo City Metropolitan Municipality have developed proposals to construct two high level pedestrian bridges in Mdantsane, East London. These bridges will link NU11B and NU12, and link Sithembiso Secondary School. The proposed pedestrian bridge designs consist of a 2m wide precast deck spanning a maximum of 7 metres between vertical columns. The vertical columns proposed are 1m diameter manhole rings filled with concrete.

2. Application References

Name of relevant heritage authority(s)	ECPHRA
Name of decision making authority(s)	Department of Economic Development, Environmental Affairs and Tourism

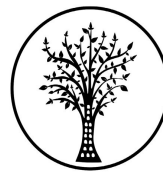
3. Property Information

Latitude / Longitude	Bridge 1 - 32°56'0.33"S 27°43'16.05"E; Bridge 2 - 32°55'54.55"S 27°45'45.01"E
Erf number / Farm number	Bridge 1 - ERF 2466 & 3222; Bridge 2 - 9678 & 9696
Local Municipality	Buffalo City
District Municipality	Amatole
Previous Magisterial District	Mdantsane
Province	Eastern Cape
Current Use	Vacant, not in use. Natural drainage lines.
Current Zoning	Open Space Zone 1

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4. Nature of the Proposed Development

Total Surface Area	Each bridge will be longer than 50m
Depth of excavation (m)	Approx. 0.5m
Height of development (m)	Bridge 1 - approx. 7m; Bridge 2 - approx. 3m
Expected years of operation before decommission	NA

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.	X
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):	

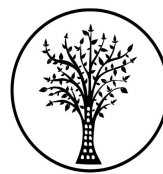
6. Additional Infrastructure Required for this Development

Paving

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7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)

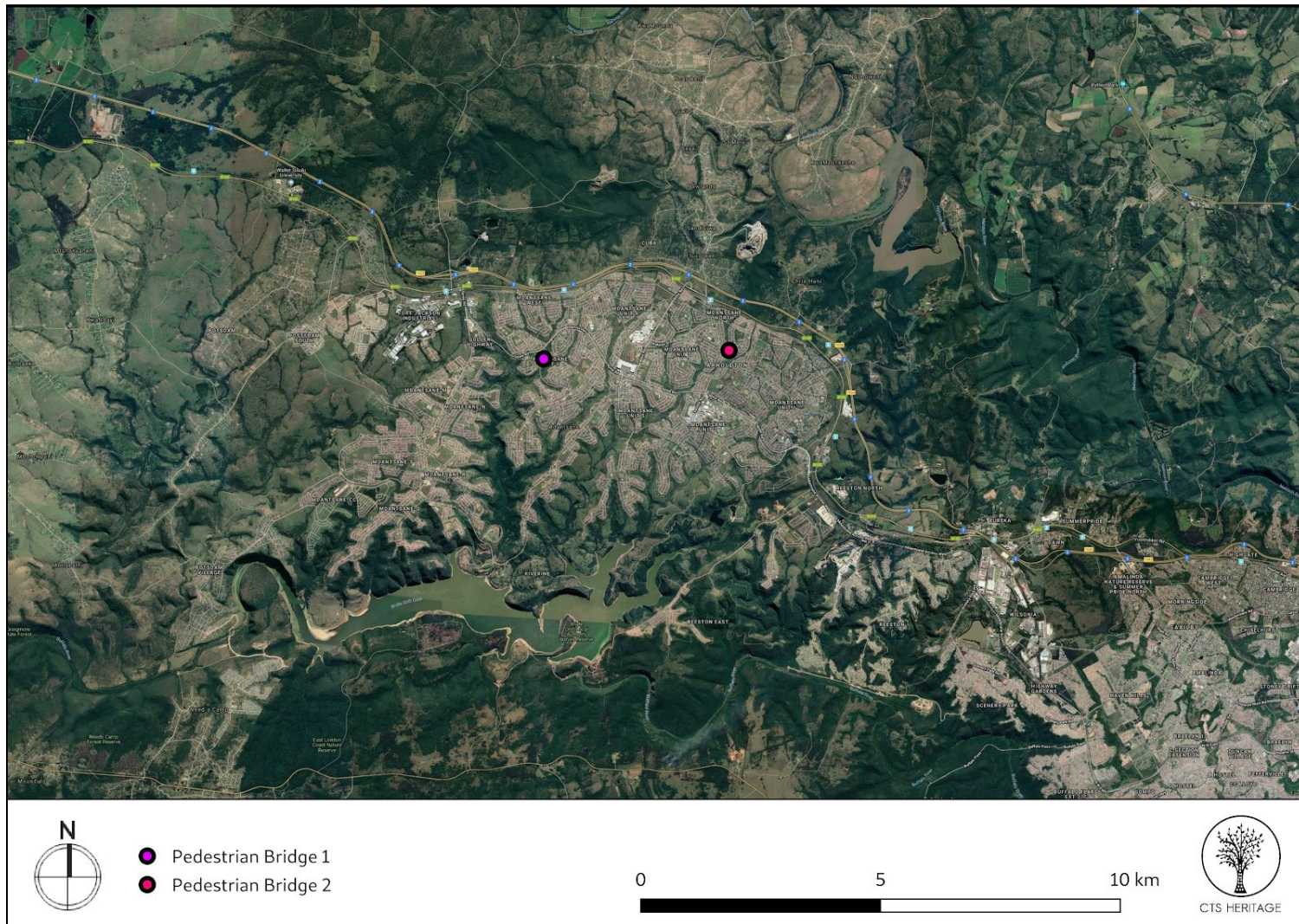
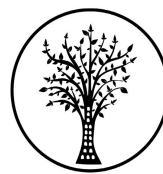


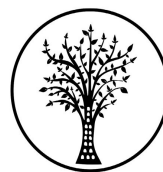
Figure 1b. Overview Map. Satellite image (2017) indicating the proposed development area at closer range.



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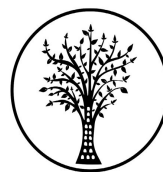
Figure 1c. Overview Map. Satellite image indicating the proposed development area at closer range



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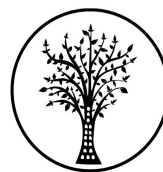
Figure 1d. Overview Map. Satellite image indicating the proposed development area at closer range at Bridge 1



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Figure 1e. Overview Map. Satellite image indicating the proposed development area at closer range at Bridge 2



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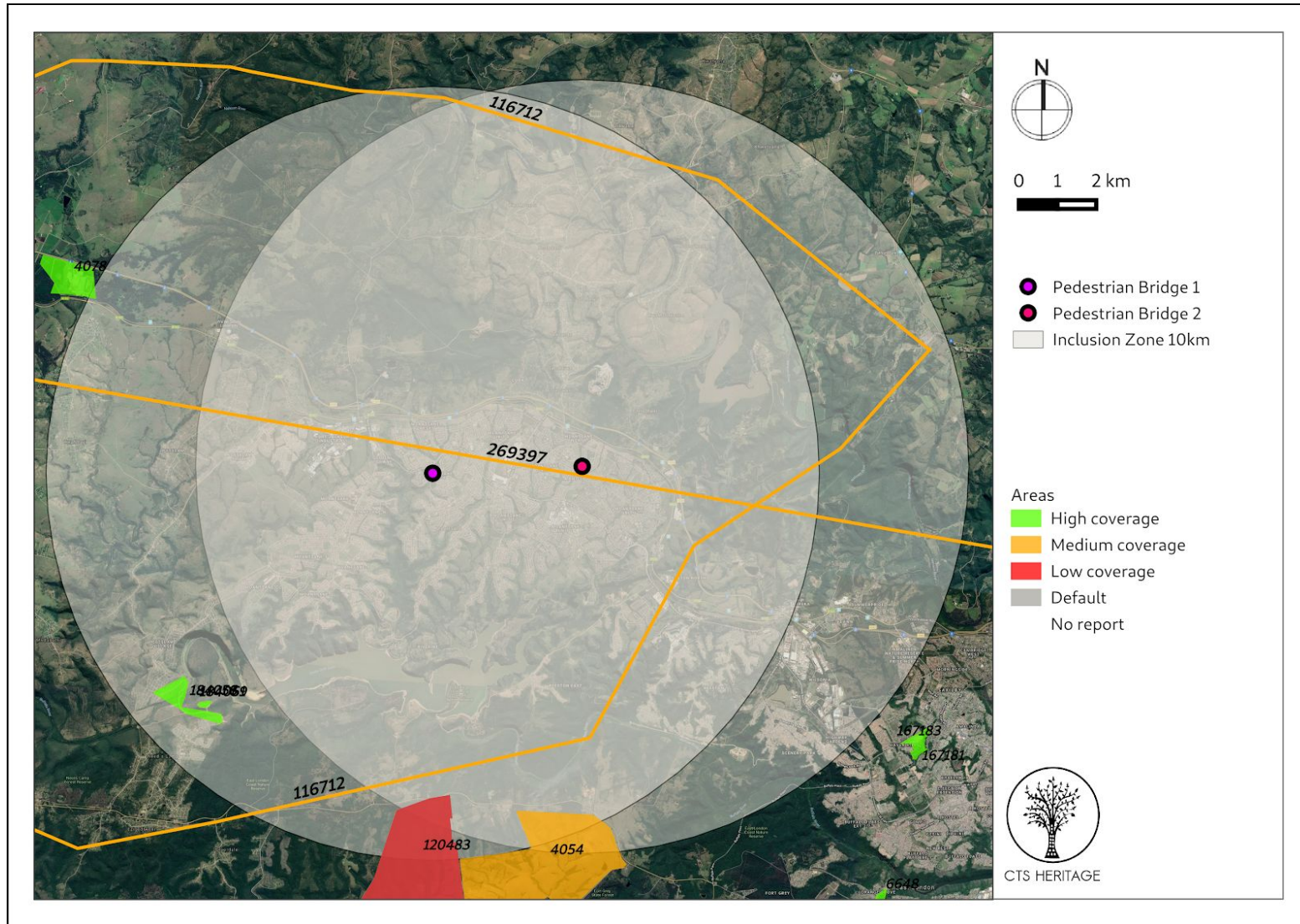
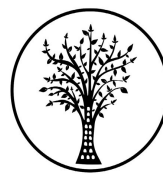


Figure 2a. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 10kms, with SAHRIS NIDS indicated (please see Appendix 2 for full reference list).



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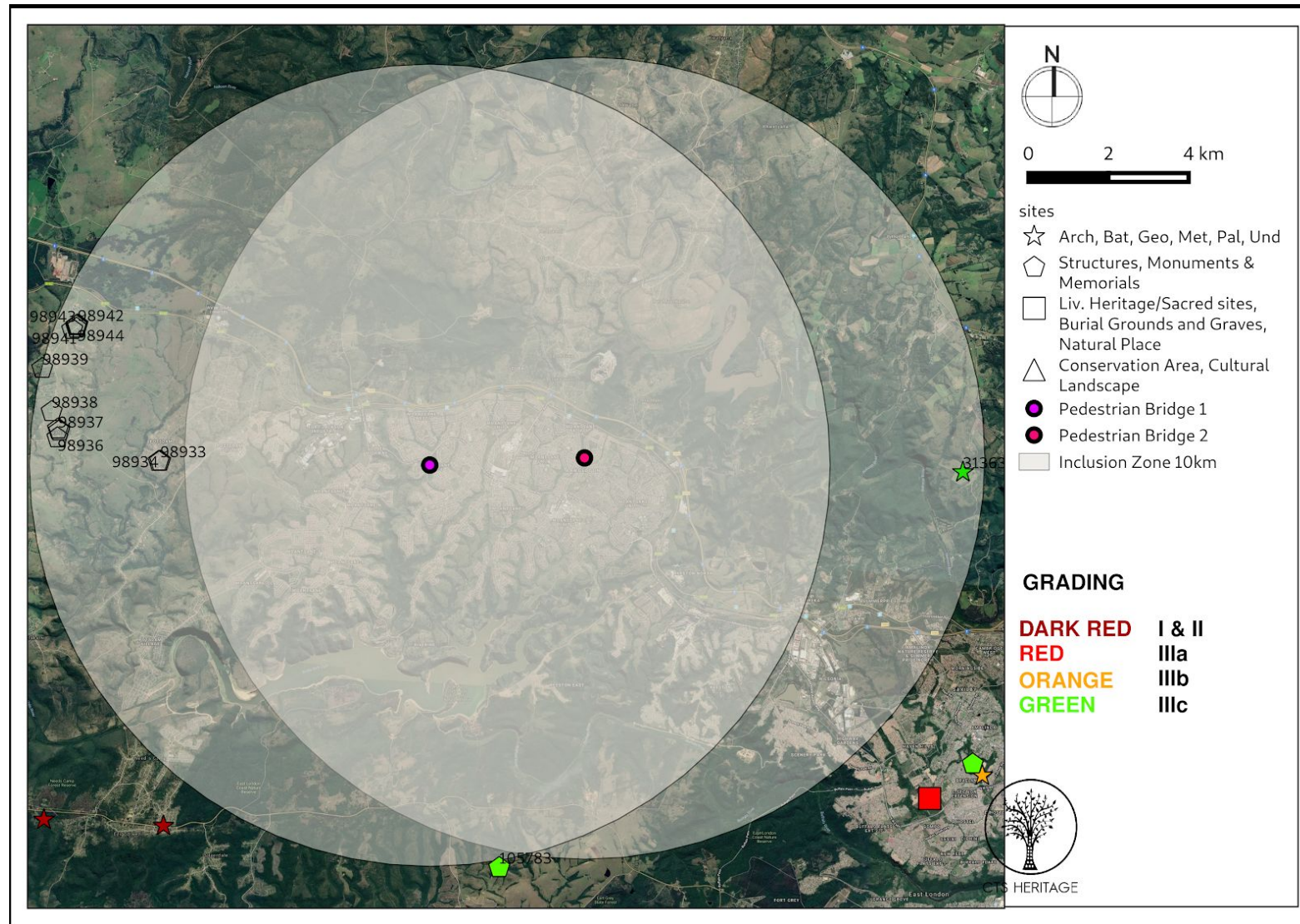
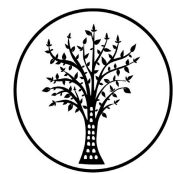


Figure 3. Heritage Resources Map. Heritage resources previously identified in and near the study area, with SAHRIS Site IDs indicated. See Appendix 4 for full description of heritage resource types.



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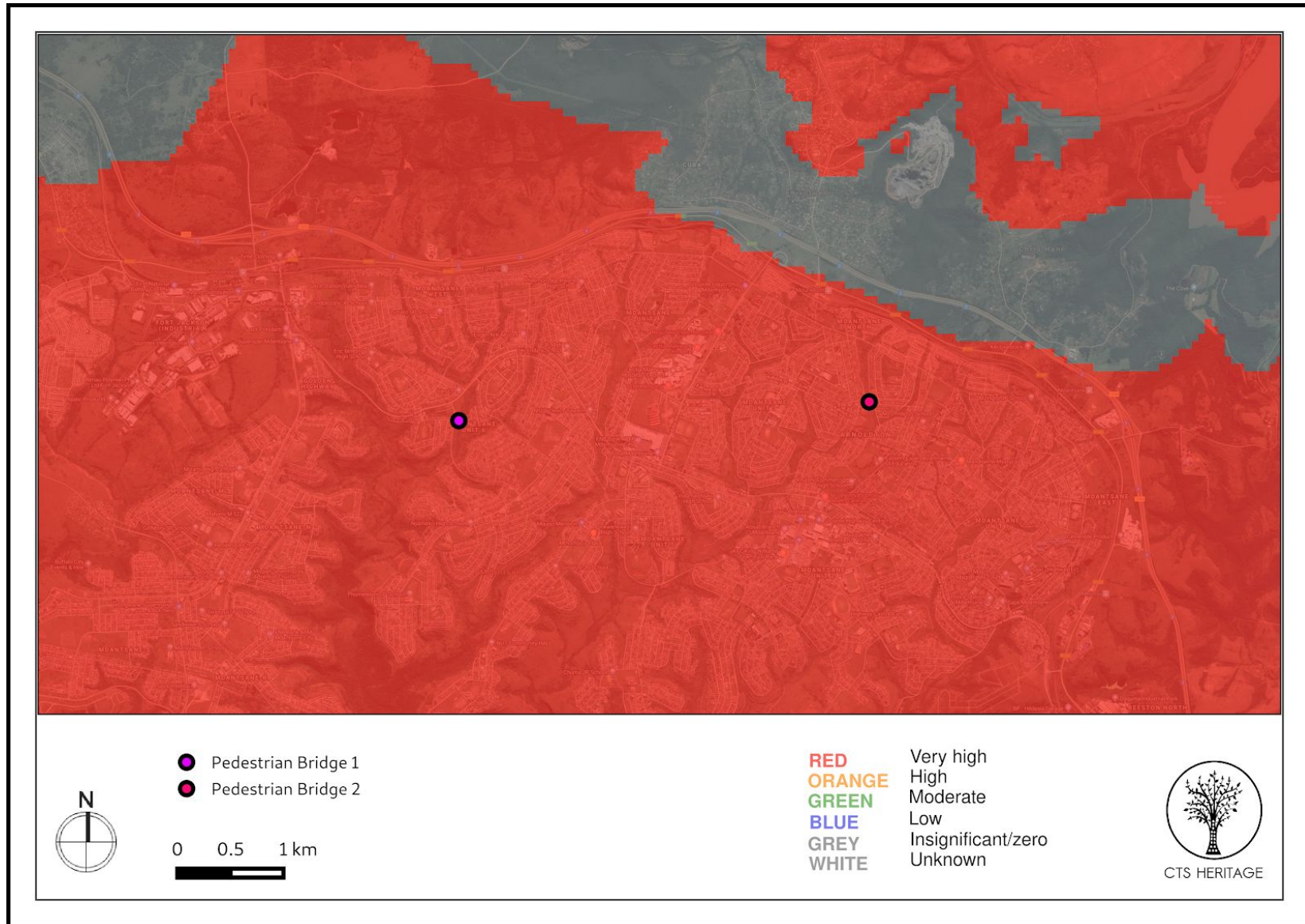
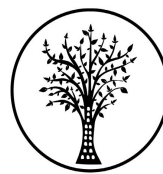


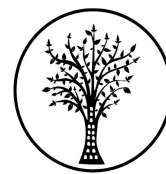
Figure 4. Palaeosensitivity Map, Indicating varied fossil sensitivity underlying the study area. See Appendix 3 for full guide to the legend.



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Figure 5. Extract from the 1:250 000 Geology Map of South Africa (Council of GeoScience). Map 3226 King Williams Town. Area is underlain by Pum: Middleton Formation of the Adelaide Subgroup of the Beaufort Group consisting of grey and "red" mudstone sandstone



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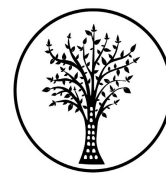


Figure 6.1. Contextual Image, Google Street View of area proposed for Bridge 1

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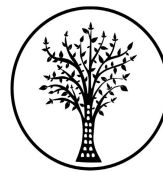


Figure 6.2. Contextual Image, Google Street View of area proposed for Bridge 2

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8. Heritage statement and character of the area

This application is for the proposed development of two pedestrian foot bridges in Mdantsane, located 15km outside of East London in the Eastern Cape. Mdantsane was established in 1963 in response to the Apartheid Government's Group Areas Act requirements and increasingly poor living conditions in Duncan Village (established in the 1940's). In the early 1960's the entire black population of East London was forcibly moved to Mdantsane which was, at the time, located within the boundaries of the Xhosa native reserve under the administration of the Ciskei Territorial Authority which had been set up in 1961. Mdantsane is also the site of the Egerton Bus Boycott Massacre Memorial at Egerton Railway Station outside of Mdantsane. This site forms part of the National Liberation and Resistance Heritage Route. It is very unlikely that the proposed development of the foot bridges will impact on this significant struggle history. In addition, as the township of Mdantsane was developed in 1963, it is unlikely that any structures older than 60 years will be impacted by the proposed development of the foot bridges.

In terms of its cultural landscape, a number of Xhosa Vernacular structures were identified on the outskirts of Mdantsane as part of an inventory of Xhosa Vernacular Architecture in the Eastern Cape conducted in 2017. These structures are mapped in Figure 3 and identified in Appendix 1, and contribute to the cultural landscape of the context of Mdantsane. The proposed development of footbridges is unlikely to impact on this cultural landscape.

Few Heritage Impact Assessments have been completed within 10km of the areas proposed for development (Figure 2 and Appendix 2). In Van Ryneveld's assessment of the proposed Needs Camp/Potsdam Bridge and access road in 2014 (SAHRIS NID 184058), she identified a "low density ESA and MSA occurrence." She noted that "Extremely low artefact densities, coined with poor technology and the weathered state of the lithic flakes does not warrant conservation or further investigation of the occurrence prior to development impact." In her 2007 assessment of the proposed Mount Coke Eco-Golf Estate (SAHRIS NID 4054), Van Ryneveld identified a number of 'cultural heritage features', one of which was a structure from the colonial period, however no archaeological resources were identified. Both areas assessed are located approximately 10km away from this area proposed for development. Based on the previously disturbed nature of the area proposed for development, and the location of the footbridges within existing watercourses, it is very unlikely that the proposed development will impact on significant archaeological heritage resources.

The area proposed for development is underlain by sediments of the Middleton Formation of the Adelaide Subgroup of the Beaufort Group consisting of grey and "red" mudstone sandstone. The Beaufort Group has very high palaeontological sensitivity. According to Rossouw (2014, SAHRIS NID 184059); "Sedimentary bedrock in the area is primarily represented by late Permian Adelaide Subgroup rocks (Middleton Formation), made up of fine-grained, cross-bedded sandstone and grey to reddish, poorly stratified mudstones... Biozone boundaries are uncertain in the region, but the Middleton Formation (approximate equivalent of the Teekloof Formation) is biostratigraphically subdivided to include diverse terrestrial and freshwater tetrapods of the Cistecephalus Assemblage Zone (AZ) and Dicynodon AZ (Rubidge 1995). These zones are characterized by a varying suite of therapsid fossils mainly represented by the presence of Cistecephalus, Aulacephalodon and Oudenodon in the former and the first appearance of Dicynodon lacerticeps in the latter. Historically, the East London area has yielded very few vertebrate fossils. Poorly preserved reptile remains have previously been recovered from several localities believed to be along the western bank of the Buffalo River mouth as well as near Morgan Bay (Mountain 1974)." Based on the known fossil sensitivity of this area, potential palaeontological impact is high should excavations extend into fresh mudrock sequences. Potential impact on intact sedimentary bedrock resulting from the proposed bridge construction is expected to be high. It is advised that the Chance Finds Procedure be implemented during excavations into freshly exposed bedrock and alluvial sediments and that this Chance Finds Procedure is included into the overall management plan of the project during construction phase of the bridge (please see attached PIA).

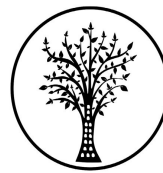
RECOMMENDATION:

Due to the limited footprint of the proposed development, and the previously disturbed nature of the development area, it is recommended that no further heritage studies are required. However, it is recommended that the Chance Finds Procedure is implemented during excavations into fresh bedrock and that this monitoring is included into the overall management plan of the project during construction phase of the bridges.

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APPENDIX 1

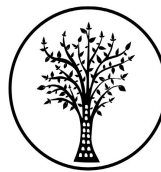
List of heritage resources within the 10km Inclusion Zone

Site ID	Site no	Full Site Name	Site Type	Grading
98938	XVA110	Xhosa Vernacular Architecture 110	Building	Grade IIIc
98937	XVA109	Xhosa Vernacular Architecture 109	Building	Grade IIIc
98936	XVA108	Xhosa Vernacular Architecture 108	Building	Grade IIIc
98943	XVA115	Xhosa Vernacular Architecture 115	Building	Grade IIIc
98942	XVA114	Xhosa Vernacular Architecture 114	Building	Grade IIIc
98941	XVA113	Xhosa Vernacular Architecture 113	Building	Grade IIIc
98940	XVA112	Xhosa Vernacular Architecture 112	Building	Grade IIIc
105783	MC9	Mount Coke East London	Structures	Grade IIIc
98944	XVA116	Xhosa Vernacular Architecture 116	Building	Grade IIIc
98935	XVA107	Xhosa Vernacular Architecture 107	Building	Grade IIIc
98934	XVA106	Xhosa Vernacular Architecture 106	Building	Grade IIIc
98933	XVA105	Xhosa Vernacular Architecture 105	Building	Grade IIIc
31363	UMLANDO-WF	Waterfall farm	Archaeological	Grade IIIc
98939	XVA111	Xhosa Vernacular Architecture 111	Building	Grade IIIc

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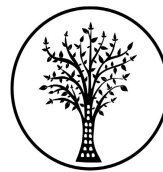
Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
184059	PIA	Lloyd Rossouw	16/12/2014	Phase 1 Palaeontological Impact Assessment - Proposed Utilization of the Needs Camp / Potsdam Borrow Pit [NCP_BP01], (near East London), BCMM, Eastern Cape, South Africa
184058	AIA	Karen Van Ryneveld	16/12/2014	Phase 1 Archaeological Impact Assessment - Proposed Construction of the Needs Camp / Potsdam Bridge and Access Road, (near East London), BCMM, Eastern Cape, South Africa
120483	HIA	Johan Binneman	01/09/2009	A LETTER OF RECOMMENDATION (WITH CONDITIONS) FOR THE EXEMPTION OF A FULL PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED WEATHERED DOLERITE (SABUNGU) MINE ON PORTION 3 FARM NO.860, MOUNT COKE, EAST LONDON, AMATHOLE DISTRICT MUNICIPALITY
4078	HIA	M Hirst, S Victor	10/09/2004	An Heritage Impact Assessment of the Development of the East London Regional Waste Disposal Site on the Grave of the Xhosa Poet Laureate, S.E.K Mqhayi (1875-1945), at Ntab'Ozuko, Berlin, Eastern Cape
4054	AIA	Karen Van Ryneveld	03/12/2007	Phase 1 Archaeological Impact Assessment: Mnt. Coke Eco-Residential and Golf Estate, East London, Eastern Cape, South Africa
269397	AIA	Celeste Booth	02/03/2015	FibreCo Repeater Sites Routes 3 and 4_Heritage_2015 AIA report
116712	HIA	Johnny Van Schalkwyk	01/04/2011	Heritage impact assessment for the proposed ESKOM 400KV ELECTRICITY TRANSMISSION LINE, NEPTUNE TO POSEIDON SUBSTATIONS, EAST LONDON TO COOKHOUSE, EASTERN CAPE PROVINCE

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APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEA	Department of Environmental Affairs (National)
DEADP	Department of Environmental Affairs and Development Planning (Western Cape)
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape)
DEDECT	Department of Economic Development, Environment, Conservation and Tourism (North West)
DEDT	Department of Economic Development and Tourism (Mpumalanga)
DEDTEA	Department of economic Development, Tourism and Environmental Affairs (Free State)
DENC	Department of Environment and Nature Conservation (Northern Cape)
DMR	Department of Mineral Resources (National)
GDARD	Gauteng Department of Agriculture and Rural Development (Gauteng)
HIA	Heritage Impact Assessment
LEDET	Department of Economic Development, Environment and Tourism (Limpopo)
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

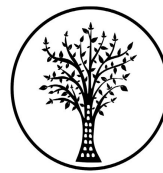
Full guide to Palaeosensitivity Map legend

	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.

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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.

Sites identified and mapped during research projects will also be considered.

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 PALAEOLOGICAL 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

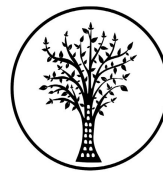
DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

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

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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

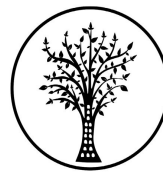
(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for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

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- 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.**

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