

Site Sensitivity Verification (SSV) and Phase 1 Archaeological and Cultural Heritage Impact Assessment (AIA) –

**IKHEPHU FEEDLOT, ERF 1 ELLIOT,
SAKHISIZWE LOCAL MUNICIPALITY, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE**

EASTERN CAPE PROVINCIAL HERITAGE RESOURCES AUTHORITY (EC PHRA)

T/M: 043 492 1942 / 081 434 3544

E: info@ecphra.org.za

**ENVIRONMENTAL CONSULTANT –
GIBB ENVIRONMENTAL**

Zikhona Wana
T/M: 043 706 3647

E: zwana@gibb.co.za

**HERITAGE CONSULTANT –
ARCHAEOMAPS**

Karen van Ryneveld
T/M: 084 871 1064

E: k.archaeomaps@gmail.com

**DATE –
18 APRIL 2022**



SPECIALIST DECLARATION OF INTEREST

I, Karen van Ryneveld, ArchaeoMaps, declare that:

- I act as independent specialist in this application.
- I do not have any financial or personal interest in the application, its proponent or subsidiaries, aside from fair remuneration for specialist services rendered.
- I am suitably qualified, accredited and experienced to act as independent specialist in this application.
- That work conducted have been done in an objective manner – and that any circumstances that may have compromised objectivity have been reported on transparently.
- That all material information collected for purposes of this application, that may reasonably influence the decision of the consenting authority, are transparently disclosed in the report.
- That work conducted have been done in accordance with relevant heritage legislation, regulations and policy guidelines, and with reference to relevant environmental legislation, regulations and policies, including the principle of Integrated Environmental Management (IEM).



SIGNATURE – 18 APRIL 2022

KAREN VAN RYNEVELD – ARCHAEOMAPS	
NAME:	Karen van Ryneveld
CONTACT:	T/M: 084 871 1064 E: k.archaeomaps@gmail.com A: Postnet Suite 239, Private Bag X3, Beacon Bay, 5205
COMPANY:	ArchaeoMaps cc
REGISTRATION NR:	2005/180719/23
PROFESSIONAL MEMBERSHIP & ACCREDITATION	ASAPA [Association of Southern African Professional Archaeologists] Member Nr. 163 ASAPA CRM [Cultural Resources Management] Accreditation: ❖ Principal Investigator: 2010 – Stone Age CRM ❖ Field Director: 2005 – (Stone Age), Iron Age and Colonial Period CRM
QUALIFICATION	MSc – Archaeology, WITS University, 2003

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EXECUTIVE SUMMARY

PROJECT NAME AND LOCALITY

Ikhephu Feedlot, Erf 1 Elliot, Sakhisizwe Local Municipality, Chris Hani District Municipality, Eastern Cape

- General site co-ordinate: S31°17'15.9"; E27°49'04,7".
- 1:50,000 Map Ref – 3127BD.

PROJECT DESCRIPTION

The *Ikhephu Feedlot, Erf 1 Elliot* development is situated at general development coordinate S31°17'15.9"; E27°49'04,7", on the property Erf 1 Elliot, Sakhisizwe Local Municipality (SLM), with the study site comprising an approximate 38.5ha area of which some 20ha will be directly impacted by development (and with consideration to a development site alternative on said property, situated at general site coordinate S31°17'05.9"; E27°49'28.9" and comprising an approximate 33.5ha area). The development has an existing footprint; the current *Ikhephu Feedlot* comprises, infrastructurally, of a fully fenced property, a three (3) camp feedlot meant to house 450 animals, a steel storage structure, some water related infrastructure and incomplete offices. Optimal utilisation of the facility is hampered, by among other, a gravel access road and the need to upgrade the feedlot facilities. Proposed development at the study site will include: 1) A feedlot to house 1,500 head of cattle in camps not exceeding 150 head of cattle (15m²/animal) with feeding troughs and water reticulation; 2) A load, and off-load facility; 3) A vehicle weigh bridge; 4) An animal handling facility; 5) A receiving pen; 6) An isolation pen; 7) Water supply infrastructure; 8) Upgrade of the existing feed storage shed; 9) Grain storage silos (2 x 30 ton) and hammer mill, 10) Upgrade to the existing (and / or new) office facilities; and 11) The design will make provision for the control of run-off water, waste lagoons, disposal of solid waste, facilities for staff and labour, including ablution facilities, and construction / upgrades to internal roads. The *Ikhephu Feedlot, Erf 1 Elliot* development proposal will make provision for future expansion to 2,000 head of cattle in camps not exceeding 200 head of cattle (20m²/animal). The proposed development's Environmental Authorisation (EA) application does not include subdivision and rezoning applications.

THE SSV AND AIA

Summarised Findings –

Pre-feasibility study: The greater *Ikhephu Feedlot, Erf 1 Elliot* study site terrain is characterised by a low presence of Earlier Stone Age (ESA). Middle- (MSA) and Later Stone Age (LSA) site records are more ample, and including macrolithic and microlithic LSA. The LSA lithic record is complemented by a shelter rock art site, testimony, at least in part, to the rich rock art record typifying the southern Drakensberg. No Earlier- (EIA) or Middle Iron Age (MIA) sites are reported on from Cultural Resources Management (CRM) records; but the Later Iron Age (LIA) is well represented and constitute the dominant type site recorded, including LIA settlement sites, in cases associated with cemeteries / grave sites, and in other cases not, as well as stand-alone LIA cemetery / grave sites. The Colonial Period is fairly poorly represented, with a notably high propensity of trading post sites. A single proposed development from the greater terrain, by the amaHala community, represents a living heritage development.

No declared Provincial Heritage Sites (PHS) are recorded within a 5km radius from the *Ikhephu Feedlot, Erf 1 Elliot* study site, and with the nearest PHSs being situated some 40km from said site.

The village of Elliot was first established in 1885 as the *Slang River Settlement*. In April 1894 the settlement was renamed Elliot, after Sir Henry George Elliot (1826–1912), Chief Magistrate of the Transkeian territories from 1891 to 1902, and the town became a municipality in 1911. In 2017 Elliot was renamed Khowa, signifying the mushrooms that grow in the area in summer. Locally the town is commonly referred to by the double-barrel name of Elliot–Khowa.

Field assessment: Field assessment for the *Ikhephu Feedlot, Erf 1 Elliot* development centred on two (2) study sites, namely the:

- *Ikhephu Feedlot Study Site* (IFSS), being the preferred development site; and the
- *Ikhephu Feedlot Alternative Study Site* (IFASS).

IFSS: The IFSS is situated at S31°17'15.9"; E27°49'04,7", and measures a rough 38.5ha in size. Two (2) archaeological and cultural heritage resources were recorded within the IFSS, namely Site IKF-S01 and IKF-S02:

- Site IKF-S01 constitute partial Colonial Period kraal mound remains; the site is of no scientific or heritage conservation significance and it is recommended that the remains be destroyed without the developer having to apply for an Eastern Cape Provincial Heritage Resources Authority (EC PHRA) site destruction permit.
- Site IKF-S02 constitute the living heritage khowa habitat, characterising not only the IFSS but also the IFASS, albeit most prominently so within the wooded tree clusters typical of the mosaic landscape of the northern portion of the IFSS; the presence of the khowa is of *High Local Significance* and it is recommended that as much of the wooded habitat, but no less than a third of the northern portion of the IFSS be conserved, thereby ensuring, in part and on-site, and in perpetuation of future generations the conservation of the khowa / mushroom habitat within the development framework.

Based on sub-surface evidence in support of a general anthropogenic sterile sub-surface at the IFSS and the IFASS, it is unlikely, although not impossible, that sub-surface archaeological and cultural heritage resources will be encountered during the course of construction.

IFASS: The IFASS comprises the approximate 33.5ha existing Ikhephu Feedlot development, situated between the IFSS and the R58, at general site coordinate S31°17'05.9"; E27°49'28.9". The study site is characterised by recent Ikhephu Feedlot development structures – none of which are older than 60 years, or of any other heritage significance, and by implication not formally protected by the National Heritage Resources Act, Act No. 25 of 1999 (NHRA). Neither were any other protected heritage resources (aside from the khowa / mushroom as described in IFSS) identified at the IFASS area.

ARCHAEOLOGICAL AND CULTURAL HERITAGE RESOURCES SUMMARY IKHEPHU FEEDLOT, ERF 1 ELLIOT, SAKHISIZWE LOCAL MUNICIPALITY, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE				
IFSS: PREFERRED DEVELOPMENT SITE – S31°17'15.9"; E27°49'04.7" (38.5ha)				
MAP CODE	SITE	COORDINATE	SITE SIGNIFICANCE	RECOMMENDATIONS
IKF-S01	Colonial Period – Kraal remains	S31°17'10.6"; E27°49'16.8"	SAHRA ¹ Low Significance Generally Protected – Grade IV-C Field Rating	Site Destruction: Site destruction without the developer having to apply for an EC PHRA permit
IKF-S02	Living Heritage – Khowa habitat	S31°17'07.1"; E27°49'09.3"	SAHRA High Significance Generally Protected – Local Significance of Grade III-A Field Rating	Phase 2 Heritage Conservation: 1. Formal heritage conservation area (≥6ha of the wooded habitat of the northern IFSS) 2. Heritage Management Plan
TP-01	Quarry Site 1	S31°17'06.7"; E27°49'17.7"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-03	Test Pit 3	S31°17'03.9"; E27°49'07.0"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-04	Test Pit 4	S31°17'20.9"; E27°49'13.9"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-05	Test Pit 5	S31°17'28.6"; E27°49'05.8"	(Indicator of sub-surface anthropogenic sterility)	N/A
IFASS – S31°17'05.9"; E27°49'28.9" (33.5ha)				
N/A	Cont. Period – Guard house	S31°17'12.8"; E27°49'41.3"	N/A	N/A
N/A	Cont. Period – Unfinished offices	S31°17'14.6"; E27°49'39.1"	N/A	N/A
N/A	Cont. Period – Shed	S31°17'10.5"; E27°49'34.5"	N/A	N/A
N/A	Cont. Period – Feeding trough	S31°17'07.4"; E27°49'33.8"	N/A	N/A
N/A	Cont. Period – Cattle camps	S31°17'05.6"; E27°49'31.1"	N/A	N/A
TP-02	Test Pit 2	S31°17'13.0"; E27°49'37.6"	(Indicator of sub-surface anthropogenic sterility)	N/A
¹ SAHRA – South African Heritage Resources Agency				

Table 1: Archaeological and cultural heritage development compliance summary

Conclusion: Based primarily on direct field assessment results, but with field assessment results in support of pre-feasibility archaeological and cultural heritage sensitivity of the greater *Ikhephu Feedlot, Erf 1 Elliot* terrain, it is recommended that:

- In the event of development at the IFSS, or the preferred study site, the developer complies with recommended Phase 2 heritage conservation recommendations with regard to the Living Heritage Site IKF-S02 khowa habitat within the development framework. (It is recommended that the Colonial Period Site IKF-S01 remains be destroyed without the developer having to apply for an EC PHRA site destruction permit); and / or
- In the event of development at the IFASS, being the alternative study site, no additional identified archaeological and cultural heritage compliance requirements apply.

The proposed development poses no *Fatal Flaws* with regard to protected archaeological and cultural heritage resources – provided Phase 2 heritage conservation requirements are met if development proceeds at the IFSS – and consideration of a *No Development* option is, resultanty, not warranted from said heritage perspective. Compliance with the recommended IFSS Phase 2 heritage conservation will result in a primarily long-term – or implementation phase – positive cumulative archaeological and cultural heritage impact by the *Ikhephu Feedlot, Erf 1 Elliot* development.

RECOMMENDATIONS

The Screening Report (2021a, 2021b) indicates the archaeology and cultural heritage theme for the *Ikhephu Feedlot, Erf 1 Elliot* study site as: 1) IFSS – "Low Sensitivity"; and 2) IFASS – "Low Sensitivity". In the case of the IFSS, based on SSV by way of an AIA, the "Low Sensitivity" rating needs to be dispelled, with direct reference to living heritage.

Based on the results of the SSV and AIA, and with reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA, it is recommended that the proposed *Ikhephu Feedlot, Erf 1 Elliot* development proceeds as applied for, provided:

- In the event of development at the IFSS, being the preferred development site, the developer complies with recommended Phase 2 heritage conservation recommendations with regard to the Living Heritage Site IKF-S02 khowa habitat within the development framework; and / or
- In the event of development at the IFASS, no additional identified archaeological and cultural heritage compliance requirements apply.

The EC PHRA Archaeology, Palaeontology and Meteorites Unit (APM Unit) Heritage Impact Assessment (HIA) Comment will state legal requirements for development to proceed, or reasons why, from a heritage perspective, development may not be further considered.

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1 – PROJECT DESCRIPTION AND TERMS OF REFERENCE

GIBB (Pty) Ltd (GIBB Environmental) is appointed as independent Environmental Assessment Practitioner (EAP) by the Eastern Cape Department of Rural Development and Agrarian Reform (DRDAR), by way of a Basic Assessment to the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT), under the National Environmental Management Act, Act No. 107 of 1998 (NEMA) and the Regulations 2014, for the proposed *Ikhephu Feedlot, Erf 1 Elliot, Sakhisizwe Local Municipality, Chris Hani District Municipality, Eastern Cape* development (GIBB 2022).

The *Ikhephu Feedlot, Erf 1 Elliot* development is to be situated at general development coordinate S31°17'15.9"; E27°49'04,7", on the property Erf 1 Elliot, with the study site comprising an approximate 38.5ha area of which some 20ha will be directly impacted by development (and with consideration to a development site alternative on said property, situated at general site coordinate S31°17'05.9"; E27°49'28.9" and comprising an approximate 33.5ha area) [1:50,000 Map Ref – 3127BD] (GIBB 2022).

The *Ikhephu Feedlot, Erf 1 Elliot* development has an existing footprint; the current Ikhephu Feedlot comprises, infrastructurally, of a fully fenced property, a three (3) camp feedlot meant to house 450 animals, a steel storage structure, some water related infrastructure and incomplete offices. Optimal utilisation of the facility is hampered, by among other, a gravel access road and the need to upgrade the feedlot facilities. Proposed development at the *Ikhephu Feedlot, Erf 1 Elliot* study site will include (GIBB 2022):

- 1) A feedlot to house 1,500 head of cattle in camps not exceeding 150 head of cattle (15m²/animal) with feeding troughs and water reticulation;
- 2) A load, and off-load facility;
- 3) A vehicle weigh bridge;
- 4) An animal handling facility;
- 5) A receiving pen;
- 6) An isolation pen;
- 7) Water supply infrastructure;
- 8) Upgrade of the existing feed storage shed;
- 9) Grain storage silos (2 x 30 ton) and hammer mill,
- 10) Upgrade to the existing (and / or new) office facilities; and
- 11) The design will make provision for the control of run-off water, waste lagoons, disposal of solid waste, facilities for staff and labour, including ablution facilities, and construction / upgrades to internal roads.

The *Ikhephu Feedlot, Erf 1 Elliot* development proposal will make provision for future expansion to 2,000 head of cattle in camps not exceeding 200 head of cattle (20m²/animal).

The proposed development's EA application does not include subdivision and rezoning applications. The applicant, in their capacity, will apply for such should they be required.

The *Ikhephu Feedlot, Erf 1 Elliot* study site is situated amidst a mix of agricultural- and open land, and the R58 leading to Barkly East.

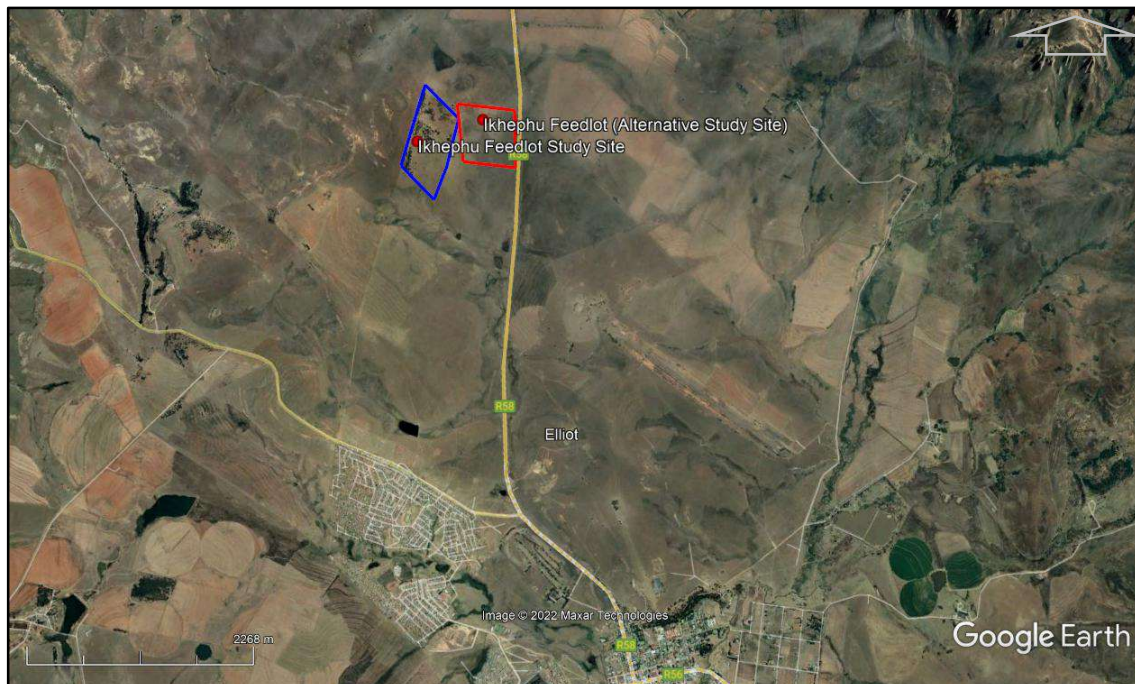
ArchaeoMaps was appointed by GIBB Environmental to compile the SSV on archaeological and cultural heritage resources as per Schedule A of Government Notice (GN) No. 320 of 2020 enacted under NEMA, by way of an AIA, in accordance with the specifications of the NHRA, as required by NEMA, as specialist component to, and with findings and recommendations thereof to be included in the *Ikhephu Feedlot, Erf 1 Elliot* development's Basic Assessment Report (BAR) and Environmental Management Programme (EMPr). The Terms of Reference (ToR) for the SSV and AIA is summarised as:

- o Desktop analysis, preliminary site inspection and use of any other available material and relevant information to confirm or dispute the current landuse and archaeological and cultural heritage sensitivity as identified in the Screening Report.
- o Describe the existing area to be directly affected by the development proposal in terms of its archaeological and cultural heritage characteristics as formally protected by the NHRA 1999, and the general sensitivity of these components to change;
- o Describe the likely scope, scale and significance of impacts (positive and negative) on the archaeological and cultural heritage resources of the area associated with the 1) construction and 2) implementation or use phases of the proposal;

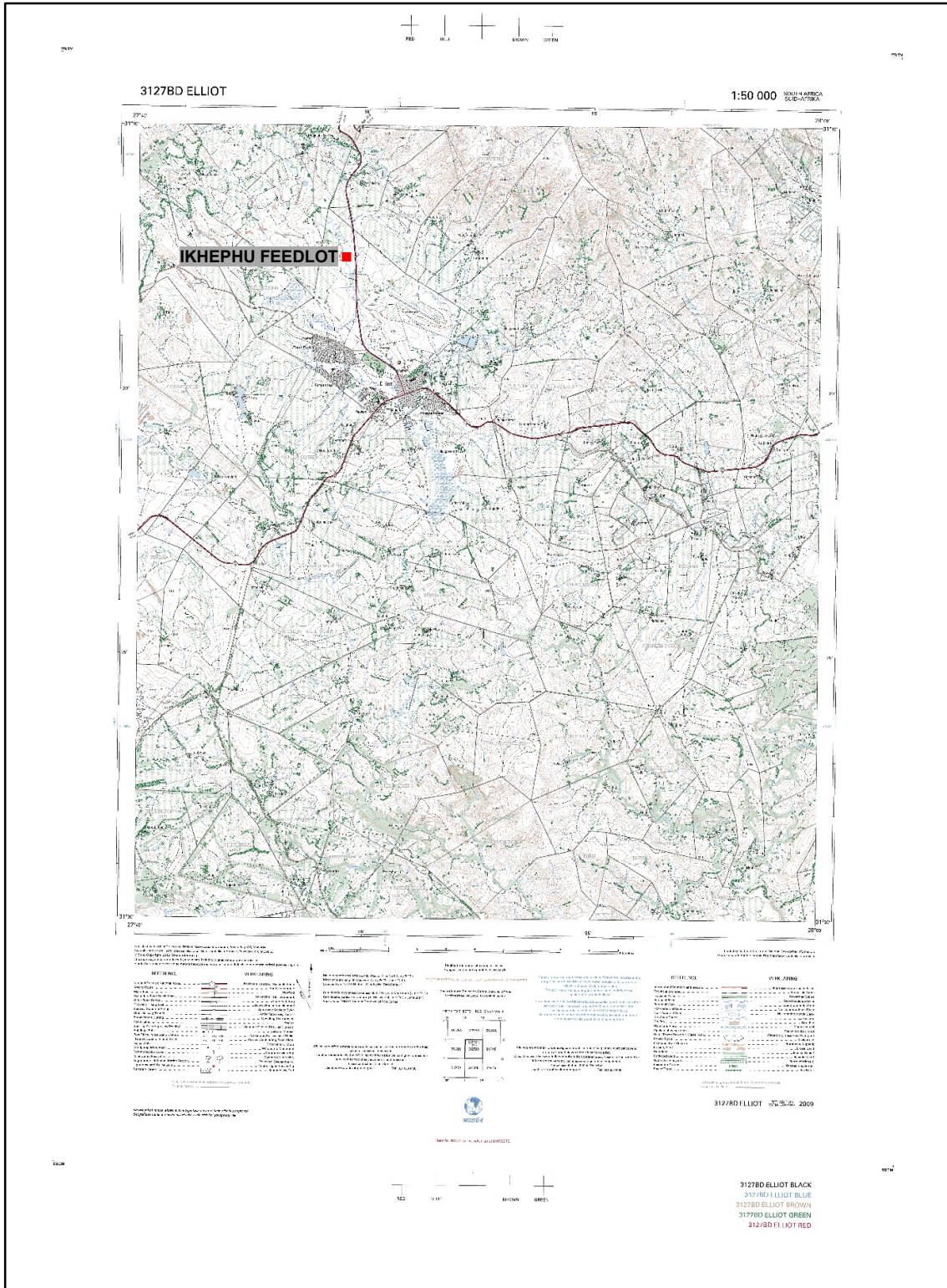
- Make recommendations on the scope of any mitigation measures that may be applied during the 1) construction and 2) implementation or use phases to reduce / avoid the significance of negative-, and manage other impacts. Mitigation measures could be design recommendations, operational controls, and management procedures, or Phase 2 permitted heritage measures such as excavation, testing, monitoring and destruction, where necessary, and including Phase 3 heritage resources conservation and development.
- Broadly describe the implication of a *No Development* option;
- Broadly comment on the cumulative impact (positive or negative) on archaeological or cultural heritage resources associated with the 1) construction and 2) implementation or use phases of the proposal; and
- Confirm if there are any outright *Fatal Flaws* to the proposal at its current location from an archaeological and cultural heritage perspective.



Map 1: General locality of the *Ikhephu Feedlot, Erf 1 Elliot* development [1]



Map 2: General locality of the *Ikhephu Feedlot, Erf 1 Elliot* development [2]



Map 3: General locality of the *Ikhephu Feedlot, Erf 1 Elliot* development [1:50,000 Map Ref – 3127BD]

2 – THE PHASE 1 ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT

2.1. ARCHAEOLOGICAL AND CULTURAL HERITAGE LEGISLATIVE COMPLIANCE

The archaeological and cultural heritage theme SSV for the *Ikhephu Feedlot, Erf 1 Elliot* development, requested in terms of Schedule A of GN No. 320 of 2020 and the NEMA Regulations 2014, is addressed by way of an AIA.

The proposed *Ikhephu Feedlot, Erf 1 Elliot* development is subject to the NHRA Section 38 process, including the submission of a Notification of Intent to Develop (NID) to the EC PHRA [NHRA Section 38(1)]. The combined SSV and AIA report addresses archaeological and cultural heritage compliance requirements in terms of the NHRA Sections 38(3) and 38(4) for the development and is to be submitted to the EC PHRA in (partial) fulfilment for purposes of a NHRA Section 8(8) HIA Comment by the EC PHRA.

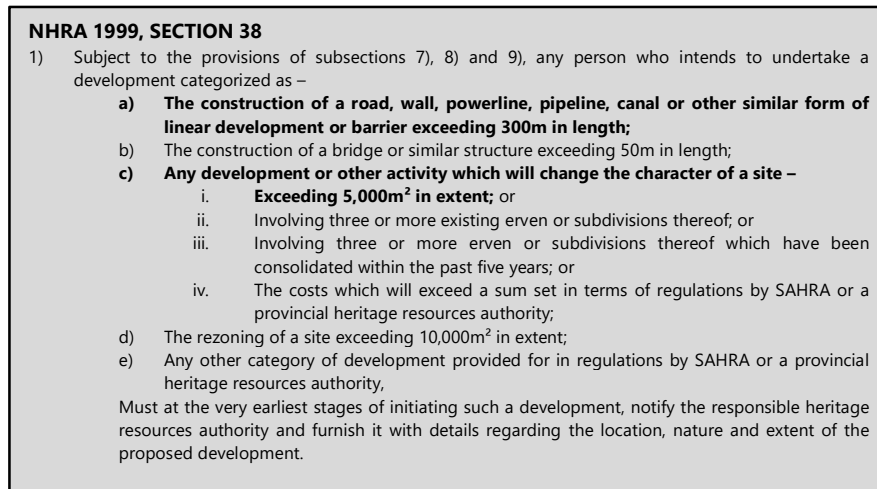


Figure 1: The NHRA Section 38(1)

This report comprises a SSV by way of an AIA, including a pre-feasibility study and field assessment only. The report aims firstly to meet SSV requirements with reference to an accurate description of the archaeological and cultural heritage sensitivity of the *Ikhephu Feedlot, Erf 1 Elliot* study site; results of the report may thus confirm or dispute the site sensitivity as preliminary identified in the Screening Report (Screening Report 2021a, 2021b) as: 1) IFSS – “Low Sensitivity”; and 2) IFASS – “Low Sensitivity”.

The archaeological and cultural heritage sensitivity of the study site is determined by way of an AIA, vested in a joint pre-feasibility–field assessment process: The pre-feasibility study focuses on the collection of applicable database information pertaining to the study site and its immediate surrounds. The purpose of the field assessment is to locate, identify and assess the significance of formally protected archaeological and cultural heritage resources, as per the NHRA Sections 2, 34, 35, 36 and 37, and inclusive of archaeological deposits / sites (Stone Age, Iron Age and Colonial Period), rock art- and shipwreck sites, built structures older than 60 years, sites of military history older than 75 years, certain categories of burial grounds and graves, graves of victims of conflict, public monuments and memorials, basic living heritage, and cultural landscapes and viewsapes, and the general sensitivity of these heritage components to change. Site specific recommendations are made for identified protected heritage resources to guide the development planning process in accordance with the principles of IEM and to ensure compliant development throughout the: 1) construction- and 2) implementation or use phases of development.

The AIA is prepared in accordance with the SAHRA *Minimum Standards* specifications (SAHRA 2007).

2.2. METHODOLOGY AND HERITAGE PRACTICE STANDARDS

The AIA includes a basic pre-feasibility study and field assessment:

- The pre-feasibility assessment is based on the Appendix A schematic outline of South Africa’s pre-colonial and colonial past, associated with introductory archaeological as well as general and scientific literature

available and relevant to the study site. Databases consulted include the SAHRA 2009 Mapping Project Database (MPD), the South African Heritage Resources Information System (SAHRIS), and SAHRA database(s) on declared PHS, pertaining to the study site. The study excludes consultation of museum and university databases.

- The field assessment was done over a one-day period (24 March 2022) with fieldwork conducted by the author. Geographic Positioning System (GPS) coordinates were taken with a Garmin Montana 680 (Datum: WGS84). Photographic documentation was done with a Canon EOS 1300D camera. A combination of Garmap (Base Camp) and Google Earth software was used in the display of spatial information.

The Phase 1 AIA methodology follows the SAHRA (2007) *Minimum Standards* system prescribed for the Phase 1–3 HIA process:

- Phase 1 HIA – A Phase 1 HIA is compulsory for development types as stipulated in the NHRA, Section 38(1) and Section 38(8), including any other development type or study site as required by SAHRA or relevant Provincial Heritage Resources Authority (PHRA). A Phase 1 HIA comprises at minimum of: 1) An AIA; and 2) A Palaeontological Impact Assessment PIA, but aims to address all heritage types protected by the NHRA, and to alert developers to additional heritage specialist requirements, if and where relevant, to a development. Phase 1 HIA studies focus on pre-feasibility / desktop studies, routinely coined with field assessments in order to locate, describe and assign heritage site significance ratings to identified resources that may be impacted by development. The aim of a Phase 1 HIA is to make site specific and general development recommendations with regard to identified heritage resources for development planning and implementation purposes, and may thus include recommendations pertaining to the design and layout of a proposed development, operational controls, or management procedures, or Phase 2 permitted / permissioned heritage measures such as excavation, testing, sampling, monitoring and destruction, where necessary, and including Phase 3 heritage resources conservation and development.
- Phase 2 HIA – Phase 2 HIAs are as a norm required where heritage resources of such significance have been identified during the Phase 1 HIA that mitigation (excavation, testing, monitoring, etc.) thereof is deemed necessary, associated with development impact. Aside from formal Phase 2 mitigation (routinely to precede development impact), lower keyed Phase 2 requirements may well include sampling, testing and monitoring during the construction or implementation phase of a development. Phase 2 HIA work is as a norm done under a heritage permit.
- Phase 3 HIA – As an extension to Phase 2 HIA work, in cases where significant heritage conservation forms part of a development's heritage compliance requirements, Phase 3 heritage site conservation or site development recommendations may include a site's scientific or heritage tourism development, or formal heritage declaration, within the development framework.

Archaeological and cultural heritage site significance assessment ratings and mitigation recommendations are based on the combined NHRA 1999 Section 7(1) and SAHRA (2007) system.

SAHRA HERITAGE SITE SIGNIFICANCE RATING SYSTEM			
SITE SIGNIFICANCE	FIELD RATING	GRADE	RECOMMENDED MITIGATION
High Significance	National Significance	Grade I	Heritage site conservation / Heritage site development
High Significance	Provincial Significance	Grade II	Heritage site conservation / Heritage site development
High Significance	Local Significance	Grade III-A	Heritage site conservation or extensive mitigation prior to development / destruction
High Significance	Local Significance	Grade III-B	Heritage site conservation or extensive mitigation prior to development / destruction
High / Medium Significance	Generally Protected A	Grade IV-A	Heritage site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B	Grade IV-B	Heritage site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C	Grade IV-C	On-site sampling, monitoring or no heritage mitigation required prior to or during development / destruction

Table 2: SAHRA heritage site significance assessment rating system and associated mitigation recommendations

2.1.1. PRE-FEASIBILITY ASSESSMENT: SUMMARY

The greater *Ikhephu Feedlot, Erf 1 Elliot* study site terrain is characterised by a low presence of ESA. MSA and LSA site records are more ample, and including macrolithic and microlithic LSA. The LSA lithic record is complemented by a shelter rock art site, testimony, at least in part, to the rich rock art record typifying the southern Drakensberg. No EIA or MIA sites are reported on from CRM records; but the LIA is well represented and constitute the dominant type site recorded, including LIA settlement sites, in cases associated with cemeteries / grave sites, and in other cases not, as well as stand-alone LIA cemetery / grave sites. The Colonial Period is fairly poorly represented, with a notably high propensity of trading post sites. A single proposed development from the greater terrain, by the amaHala community, represents a living heritage development.

No declared PHSs are recorded within a 5km radius from the *Ikhephu Feedlot, Erf 1 Elliot* study site, and with the nearest PHSs being situated some 40km from said site.

The village of Elliot was first established in 1885 as the *Slang River Settlement*. In April 1894 the settlement was renamed Elliot, after Sir Henry George Elliot (1826–1912), Chief Magistrate of the Transkeian territories from 1891 to 1902, and the town became a municipality in 1911. In 2017 Elliot was renamed Khowa, signifying the mushrooms that grow in the area in summer. Locally the town is commonly referred to by the double-barrel name of Elliot-Khowa.

2.1.2. THE SAHRA 2009 MPD AND SAHRIS DATABASES

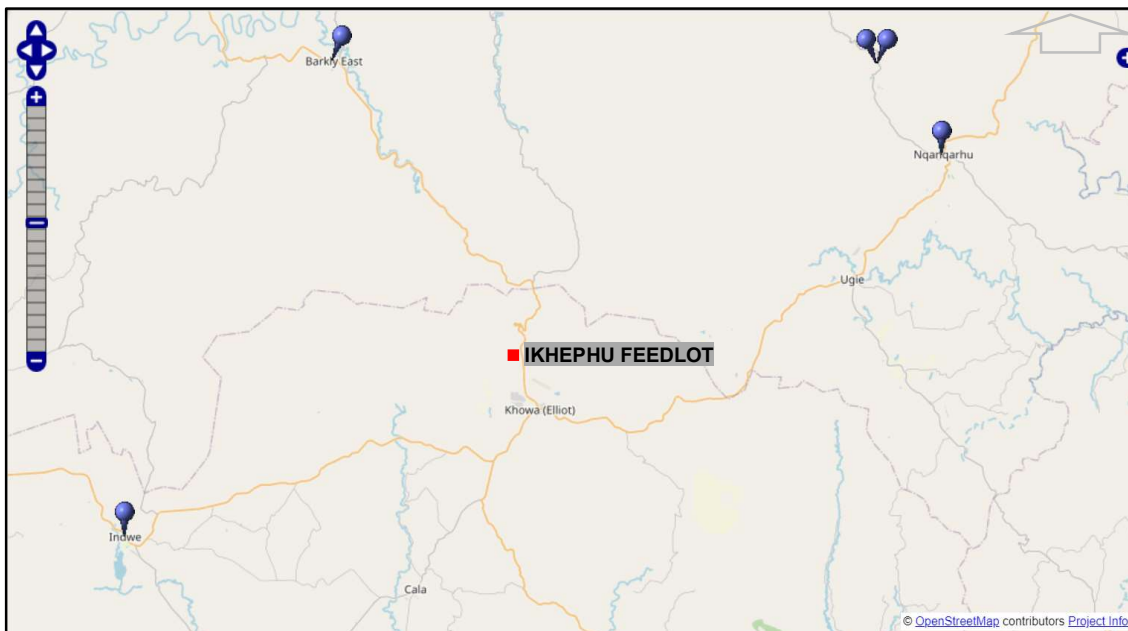
Twenty-four (24) SAHRIS cases are recorded within an approximate 40km radius from the *Ikhephu Feedlot, Erf 1 Elliot* study site. SAHRIS CaseID 2018 comprises a palaeontological permit application; SAHRIS CaseIDs 7014 and 13814 NIDs, without relevant specialist studies submitted; SAHRIS CaseIDs 1230, 2432 and 2443 are recorded as “For Noting” only; SAHRIS CaseIDs 1155, 1160 and 1164 pertain to a regional Chris Hani District Municipality (CHDM) *Borrow Pit* project, with a single AIA applicable to the listed SAHRIS cases; and SAHRIS 2009 MPD CaseIDs 01194, 02137 and 02243 have AIA reports listed, but not available for pre-feasibility interpretation. SAHRA 2009 MPD and SAHRIS databases AIA reports used for pre-feasibility inquiry are referenced as:

- Anderson, G. (Umlando). 2007. The Archaeological Survey of the Elitheni Mine, Indwe, Eastern Cape. [MPD CaseID 303812].
- Booth, C. (Albany Museum). 2012. An Archaeological Desktop Study for the proposed Elliot Wind Energy Facility on a Site West of Elliot, Sakhisizwe Local Municipality. [SAHRIS CaseID 2953].
- CTS Heritage Specialist. (Heritage Screener). 2018. Proposed Internal Access Roads within Forestry Compartments on behalf of P.G. Bison near Ugie, Eastern Cape. [SAHRIS CaseID 12774].
- Dreyer, C. (Private). 2007. First Phase Archaeological and Cultural Heritage Assessment of the proposed Diamond Prospecting on the Farm Saamwerk (Portion 14 of Grootrivierwagensdrift 29), Aliwal North, Eastern Cape. [MPD CaseID 01458].
- Kruger, N. (AGES). 2013a. Archaeological Impact Assessment for the Cluster 6 Lokshini Water Supply Augmentation Project, Chris Hani District Municipality, Eastern Cape Province. [SAHRIS CaseID 4846].
- Kruger, N. (AGES). 2013b. Archaeological Impact Assessment for the Sinqumeni and Dulati Bulk Water Supply Scheme, Eastern Cape Province. [SAHRIS CaseID 4847].
- Marais-Botes, L. (Private). 2018. Phase 1 Heritage Impact Assessment (HIA) for the Proposed 4,800 Sow Unit Piggery to be Established on Several Farm Portions in the Ida Area, Eastern Cape Province. [SAHRIS CaseID 12828].
- Rossouw, L. (Palaeo Field Services). 2019. Phase 1 Heritage Impact Assessment of a Proposed new Bitumen Emulsion Plant at an Existing Gravel Quarry near Indwe, EC Province. [SAHRIS CaseID 13221].
- Van Schalkwyk, L. & Wahl, E. (eThembeni). 2007. Heritage Impact Assessment of Waste Water Treatment Works, Ugie, Eastern Cape Province, South Africa. [MPD CaseID 01658].
- Van Schalkwyk, L. (eThembeni). 2015. Application for Exemption for a Phase 1 Heritage Impact Assessment for the Proposed Mhlanga Water Reticulation Project, Chris Hani District Municipality, Eastern Cape, South Africa. [SAHRIS CaseID 8200].

- Van Ryneveld, K. (ArchaeoMaps). 2011. Phase 1 Archaeological Impact Assessment: Utilization of Borrow Pits – Chris Hani District Municipality, Eastern Cape, South Africa. [SAHRIS CaseID 1155; 1160 & 1164].
- Van Ryneveld, K. (ArchaeoMaps). 2014. Phase 1 Archaeological Impact Assessment – The Silver Stream – Dubeni Stream Crossing, Dubeni (near Queenstown), Chris Hani District Municipality, Eastern Cape. [SAHRIS CaseID 5499].
- Van Ryneveld, K. (ArchaeoMaps). 2018. Phase 1 Archaeological and Cultural Heritage Impact Assessment – Adventure Trail within the Hala Area of the Engcobo Local Municipality, Chris Hani District Municipality, Eastern Cape. [SAHRIS CaseID 12251].

2.1.3. THE SAHRA PHS DATABASE, EASTERN CAPE

No geo-referenced declared PHSs are recorded in the SAHRA PHS, Eastern Cape, database (https://en.wikipedia.org/wiki/List_of_heritage_sites_in_Eastern_Cape) and situated within an approximate 5km radius from the *Ikhephu Feedlot, Erf 1 Elliot* study site, with the nearest recorded PHSs being situated in Indwe, Barkly East and the Nqanqarhu–Maclear district, more than 40km from said study site.



Map 4: Spatial distribution of geo-referenced PHSs in the SAHRA–Eastern Cape database, in relation to the study site

2.1.4. GENERAL ARCHAEOLOGICAL AND CULTURAL HERITAGE SENSITIVITY OF THE STUDY SITE

The desktop study by Booth (2012) for the Wind Energy Facility near Elliot and to a lesser extent the pre-feasibility component of Rossouw's (2019) Bitumen Emulsion Plant assessment near Indwe are of importance. Both studies explore scientific sources, including museum- and academic databases as well as academic literature resources, providing an in depth perspective of the heritage importance of the greater *Ikhephu Feedlot, Erf 1 Elliot* study site terrain, from mainly a past, but including a current research perspective; and concluding that the greater terrain, spanning researched resource types ranging from the ESA to the Colonial Period, is from a scientific heritage point of view notably representative of the broad range of heritage industries. It is then interesting to note that CRM AIA reported heritage resources from the greater terrain are largely representative of the range of research type sites, albeit with CRM reported resources varying significantly in quantity and quality from those included in the scientific record. This section further describes the CRM record, as gleaned from reported AIA heritage resource / site records.

Identified ESA resources are particularly scarce with only two (2) sites, Borrow Pits 603_BP02 and 603_BP03, recorded as yielding ESA / MSA lithics, reported on from the CHDM *Borrow Pits* study site (Van Ryneveld 2011). MSA and LSA site reports are more ample: From the CHDM *Borrow Pits* assessment the MSA was identified at Borrow Pits

728_BP03 and 734_BP01, with MSA combined LSA lithic deposits present at Borrow Pits 732_BP02, 732_BP04 and 732_BP08, and a MSA / microlithic LSA assemblage was identified at Borrow Pit 732_BP06. The MSA / LSA deposits at Borrow Pit 660_BP02 were described as of significant importance, with recommendations made for mitigation (Van Ryneveld 2011). A further MSA / LSA site was reported on from the Elitheni Mine study site (Anderson 2007) and another from the Silver Stream–Dubeni study site (Van Ryneveld 2014). In addition, a macrolithic LSA typifies the Borrow Pit 734_BP02, CHDM *Borrow Pits*, study site (Van Ryneveld 2011). Complementing the lithic Stone Age record, a small rock shelter with (painted) rock art (LSA) was reported situated on the banks of the Zabasa River from the Sinqumeni and Dulati study site (Kruger 2013b). It is necessary to understand the scarcity of recorded CRM rock art sites within the broader heritage context; the southern Drakensberg is particularly rich in rock art sites, as is well represented in the research record.

No EIA or MIA sites are reported on from CRM assessment records, but the LIA is well represented and constitute the dominant type site recorded. Kruger (2013a) reported on four (4) LIA homestead settlement sites, comprising mainly poorly preserved hut and livestock enclosure remains, but with some 49 LIA culturally assigned, but including contemporary period grave sites, complementing the Cluster 6 Lokshini assessment record. Grave sites recorded comprise a combination of modern and traditional style graves, routinely situated within a homestead context, and including near livestock byres and agricultural fields. A further nine (9) LIA settlement sites, but without associated identified graves, were reported on from the Sinqumeni and Dulati study site (Kruger 2013b). Five (5) LIA settlement sites, including sites of inferred fair LIA temporal depth as well as more recent remains, and with a cemetery / grave site directly associated with one (1) of the sites, were recorded from the Elitheni Mine study site (Anderson 2007). Seven (7) LIA settlement sites, at Borrow Pits 567_BP05, 041_BP01, 261_BP07, 261_BP08, 261_BP10, 042_BP03 and 381_BP01, were reported on from the CHDM *Borrow Pits* study site. LIA settlement sites in the area are characterized by rectangular shaped stone livestock enclosure remains, typically associated with hut, including hut mound remnants, and with localized cemetery / grave sites directly associated with two (2) of the sites. Graves recorded comprise traditional style stone cairn graves only (Van Ryneveld 2011). A LIA cemetery was reported on from the Ugie WTW study site, with graves typified by stone cairn and stone headstone demarcated graves. Four (4) extensive LIA cemeteries characterize the direct Silver Stream–Dubeni study site, situated immediately adjacent to the access road in a direct access road–village context. Grave types comprise a notable variety, ranging from modern to traditional style graves, and with significant LIA time depth reasonably inferred for some of the graves; identification of the cemeteries, in the case of the Silver Stream–Dubeni assessment, was done, regrettably, in a compromised Environmental Impact Assessment (EIA) context and only after road upgrade development had commenced at the site.

Colonial Period type sites are fairly poorly represented, and include two (2) trading posts reported on from the Sinqumeni and Dulati study site (Kruger 2013b), a further trading post was reported from the Silver Stream–Dubeni study site (Van Ryneveld 2014), a farmstead from the Borrow Pit 261_BP07 CHDM *Borrow Pits* study site (Van Ryneveld 2011), and a photographic record report only of an old church and cemetery from the Sow Unit Piggery study site (Marais-Botes 2018) completes the current Colonial Period record.

The Hala Area Adventure Trail represents the only proposed development directly comprising a living heritage development; the development is recorded as without affect on any other defined and protected heritage resources (Van Ryneveld 2018).

* * *

Elliot, originally established as the *Slang River Settlement*, but colloquially known as Khowa – and renamed as such in 2017 (https://en.wikipedia.org/wiki/Elliot,_South_Africa; SABC News 2017) has an intriguing history. The village of Elliot was first established in 1885 as the *Slang River Settlement*. In April 1894 the settlement was renamed Elliot, after Sir Henry George Elliot (1826–1912), Chief Magistrate of the Transkeian territories from 1891 to 1902, and the town became a municipality in 1911 (https://en.wikipedia.org/wiki/Elliot,_South_Africa). Ncapayi (2019) expands on the abbreviated history given:

“Elliot emerged in 1885 out of a small village of white people that settled along the Slang River. Tracing the origins of the group of white people shows that these were farmers that acquired the land through Chief Ngangelizwe in 1876. Seemingly, these were part of white people that had been showing interest in the land since 1862. However, the group could not move in until 1883 due to the presence of Africans in the area. Eventually, sixteen white farmers were allocated the land and developed a settlement called ‘The Slang River Settlement Farms’. The group acquired the land from Chief Ngangelizwe when he opened up Maxongo’s Hoek to white people. According to Wagenaar (1998), the chief also gave some foreigners land in the mouth

of the Tsomo River. The allocation of land caused strained relations between the chief and the colonial administrator. By 1902, the population of Elliot stood at 905.

By 1905, the village developed into the rural farming town called Elliot. Indigenous people call the town Khowa – signifying the mushrooms that grow in the area in summer. The town is named after Sir Henry George Elliot (1826–1912), a veteran of the Crimean War. After a career spanning 25 years in the British army, Elliot retired and migrated to Natal in South Africa in 1870. In 1877, Prime Minister John Molteno persuaded Elliot to accept an invitation from Sir Henry Barkly to become the Resident Commissioner for Thembuland. He became the Chief Magistrate of the Transkeian Territories from 1891 to 1902. Elliot ‘lies in [a] grassy, spacious valley at the foot of the Drakensburg, towered by curtainlike buttresses’ (Bulpin, 1983: 525). From the beginning of 1885 to mid-1911 the town was controlled by the Elliot Village Management Board under the leadership of CW Chabaud.

Elliot started with very few houses. According to Sampson (*Thembuland News*, 27/10/1911), one would find ‘a house dotted here and there; the streets were swampy and undrained; where our beautiful park stands was a barren plain; we had only one or two stores, one hotel, a Post Office – a little raw brick building measuring about 10 x 12 feet. The Dutch Reformed Church was a pigmy (an old tin shanty) about 10 times as small as the present building; in fact, Elliot in those days looked like a decent sized farm’. But, [...] the town had significantly changed economically and socially by the time it attained municipal status. It had been ‘linked to the world by rail’, which marked the start of its economic development. Indeed, five stores had opened in the town. Public buildings such as the magistrate’s offices, a jail, a park and several church buildings followed the installation of [the] railway line. By 1912, the first public school was built in the town. The school was formally opened on 15 July 1912.

Between 1887 and 1900 twelve schools were opened in Elliot and the surrounding farm areas. For instance, on 1 April 1887 a classroom was built as a school for the white population in Elliot. The school was officially opened with 22 learners in July 1887. [...] In July 1887, another school was opened in Draaifontein Farm; in Gubenxa in January 1888; and in Glen Avon Farm in March 1889.

The town’s population [had] been steadily increasing from 904 people in 1904 to about 7,250 by the 1970s. By 2004 the population stood at about 14,366. As will be shown later, part of the population growth is linked to the influence of land reform in the Elliot District. Elliot saw a number of farms taken over by Africans through the land reform programme (Department of Land Affairs, 2004).

Since 2000 Cala and Elliot have constituted one new municipality called Sakhisizwe Municipality. Elliot and its surroundings have been divided into wards 1 and 2 of Sakhisizwe. Ward 1 is made up of the town, Hillview, Takalani, Old Location, the farms to the east and north-east of Elliot, as well as Gubenxa. Ward 2 consists of Vergenoeg, Polar Park, farms to the west and south-west, the Be[e]stekraal farms, Zikhonkwane and Sifonondile.”

Emphasizing the importance of agriculture in the development of the Elliot-Khowa region, and with accent on the development of commercial agriculture, underscored by the town’s colonial past – or “connections” – Ncapayi (2019) opines:

“The [colonial] connections emerge out of a series of colonial wars of conquest that culminated in occupation of Xhalanga. There was loss of land by indigenous people and gain of land by colonialists. The first loss of land was in 1858 when colonialists pushed Chief Sarhili out of Xhalanga; forcing him to settle in the Centane area. Sarhili’s departure enabled the colonialists to manipulate land allocation processes. They declared Xhalanga a vacant land and engineered the movement of four chiefs from the Glen Grey area to St Marks in Qamata, Southeyville and Xhalanga. The colonial authorities persuaded the chiefs in Glen Grey to move to Emigrant Thembuland. The hope was that the chiefs would move with their subjects out of Glen Grey. The aim was to move the indigenous people out of Glen Grey and replace them with white people. Glen Grey, which is closer to Queenstown, was earmarked for development of white commercial farming. Eventually, only four junior chiefs – Ndarhala, Matanzima, Gecelo and Stokwe – took the offer and moved out. But, these four senior chiefs remained behind: Zenzile of the amaNdungwane, Mpangele of the amaGcina, Gungubele of the amaTshatshu and Nonesi of the amaHala. The plan of the colonial authorities of clearing Africans from the Glen Grey area was compromised.

Chief Gecelo and his followers settled in Xhalanga by 1865. Xhalanga’s boundaries stretched from the north of Southeyville to the Drakensburg Mountains. The area also incorporated the Slang River valley.

The boundaries changed after the souring of relations between Chief Gecelo and the colonialists. The relations changed with [the] outbreak of the Gun War of 1880–1881. Chief Gecelo and the other chiefs who participated in the war against colonialists were defeated. The participation of Chief Gecelo in the war soured the relations. After the war the colonial administrators established the Thembuland Commission to consider the future of Africans in the northern part of Xhalanga. The Commissioners recommended changes to the boundaries. Specifically, the Commissioners recommended [...] the change of the northern boundary line of Xhalanga from the Drakensburg [Drakensberg] Mountains further down to the Cala Road Railway Station. The implication of the recommendation is that the northern part towards the Drakensburg was separated from Xhalanga. This is the area that constitutes the Elliot district. To compensate for the reduction of Xhalanga, the Commissioners adjusted the southern boundary downwards to incorporate Southeyville into Xhalanga.

This new land arrangement affected landholders north of the boundary line. These African farmers were moved southwards to remain within the new Xhalanga boundary. Twenty-two strong African farmers were affected as they were relocated from the upper section of the area. These are the African landholders Bundy (1979) wrote about in his book *'The Rise and Fall of the South African Peasantry'* as the progressive African farmers.

Thus, although the Elliot district emerges after the recommendations of the Thembuland Commission, its origins are in 1881. By 1881, the colonial administrators had already decided to demarcate the northern part of Xhalanga into farms for lease to white farmers. Actually, CJ Levy, the Chief Magistrate of Cala, was instructed to demarcate the land in 1882. This was before the Thembuland Commission recommended the change of boundaries. Thus, the relocation of African farmers downwards was predetermined to clear the northern part of Xhalanga.

Indeed, there has always been pressure from white farmers to have access to land in the area. There had been a group of white farmers interested in the land in the area since 1862. The group could not gain access to the area because, as already indicated, there were Africans in the area. The interest of some white farmers was fulfilled in 1876, when Chief Ngangelizwe allocated land to 16 white farmers. The farmer[s] settled along the Slang River and their settlement was called *'The Slang River Settlement Farms'*.

The development of railway was instrumental in economic development of a country. For instance, the railway network in England, which started in the 1840s, was linked to the development of urban centre[s] and movement of goods and people to such centres. Indeed, emergence of the railway service after [...] World War I [1914–1918] has been central in the development of agriculture in countries such as the United States. According to Wallace (*ibid.*: 63) *'(A)griculture and railroad transportation have developed together, each making the rapid extension of the other possible, and together they contributed to the rapid development of the country'*. Van Rensburg (1996: 1) concurs that the railway service was efficient for movement of *'freight and passengers'*. Likewise, railroad played an important role in the development of South Africa.

Unlike in Europe and the United States, the development of the railway service was slow in South Africa. Railway service in South Africa was *'the indirect product of the great Railway Boom in England'*. However, the railway service had a slow start in South Africa due to low levels of industrialisation which meant limited demand for goods in urban areas. There was also opposition to the railway development from those who ran the wagon transportation service. According to Van Rensburg (*ibid.*) *'Anti Railway Conferences'* which met in Ladybrand, Dewetsdorp and Bran[d]fort, in 1887 opposed the railway because: *'(a) All railways are unnecessary; (b) they are detrimental to transport riding by wagon; (c) they are injurious to horse breeding; (d) they are likely to entail heavy land taxes; and (e) they will encroach on property rights'* (*ibid.*: 3). Nevertheless, the first railway line was laid between Cape Town and Wellington [1863]. Similarly, the first line laid down in Natal was between Durban and Pietermaritzburg in 1878. The demand for reliable mass transportation service during World War II [1939–1945] saw rapid development of the railway network in South Africa.

Similarly, railroad made communication and transportation a critical component of Elliot's economy. Replacing the wagon transport, the railway service improved rural transportation services in South Africa. This was particularly the case with the local farmers who made use of the railroad for transportation of their production. Collection points were established for farm produce from nearby farms for transportation to nearby and far flung towns. However, railway development in South Africa was along racial lines though in that areas with white population had more railway networks than areas occupied by African people. That is why areas such as Lesotho and the Transkei had less railway network."

Ncapayi (2019) laments the decline of Elliot–Khowa into a “Ghost Town” as the culmination of numerous factors, closely tied with the deregulation of the railway line and the negative impact thereof not only on the commercial agricultural sector, but extending to broader societal impoverishment and regression. This Ncapayi juxtaposes against “liberation economies” that have resulted in additional unemployment, in turn consequent urbanization, directly associated with increasing stresses on old and insufficient municipal infrastructure. Unemployment and general societal impoverishment and regression go hand-in-hand with ever escalating crime rates, not excluding the role of the African People’s Liberation Army (APLA) – in the case of Elliot–Khowa, surmised to also be tied to farm murders.

Ncapayi (2019) thus explains: *“Up until 31 March 1990 SATS (South African Transport Services) operated under the South Africa Services Act (Act No. 65 of 1981), as amended [...]. The deregulation of the railway service [...] followed by closure of the railway line in Elliot since the late 1990s [...has left] the commercial farming sector, which relied on the rail line for transportation [...of] its produce, without this critical infrastructure. Commercial agriculture, which has been the main economic driver of the town has been in decline. Indeed, there has been a drastic change in Elliot’s economic development direction.”*

Further unravelling the spiral of economic and associated societal decline, so closely tied with the demise of the farming sector, Ncapayi (2019) continues: *“The district has seen a decline in the number of farming units during the early-1990s. The decline in farming units went hand-in-hand with growth in sizes of the farming units. This is the period generally associated with consolidation of farms in South Africa, [...closely] linked [to] global economic trends that include trade liberalisation. In other words, the opening up of South Africa’s economy to foreign investments and imports which impacted the economy of Elliot.”* But the *“financial difficulties associated with trade liberalisation [...negatively] affected the Elliot district, [...a] period [...known] as the period of agricultural intensification. The totality of these developments meant that between 1988 and 1993, the Elliot district experienced a 16 per cent decline in farm employment. From 1994 the sector underwent further changes as many white farmers moved out of farming. The period is also associated with [the] introduction of the land reform programme with pieces of legislation such as the Extension of Tenure Act [...and the] Sectoral Determination Act [...] threaten[ing to] white farmers. Indeed, some Africans acquired farms through the land reform programme,”* although, the *“implementation of land reform unsettled some farm workers and dwellers, forcing them to leave the farms. In some instances, land reform beneficiaries actually refused to incorporate farm workers and dwellers as members of the project. This forced a lot of the farm workers and dwellers out of the farms to informal settlements in Elliot and [...] nearby [...];”* in turn causing a ripple-effect social impact with a particularly *“destabilising effect on the families of farm workers and dwellers. The move of the families to informal settlements means they get into [a] new and unfamiliar environment. The social network of the families, which also serve as a support structure, get broken down.”* According to Ncapayi *“[t]he establishment of Polar Park as a new informal settlement and informal settlements as extensions of existing townships (e.g. Ejonini in Old Location, Ekuthuleni in Vergenoeg) is an outcome of this development. The movement of form[er] farm workers and dwellers into informal settlements around Elliot present serious infrastructural challenges for Elliot. The aging and limited infrastructure barely copes with the increased demand for services.”*

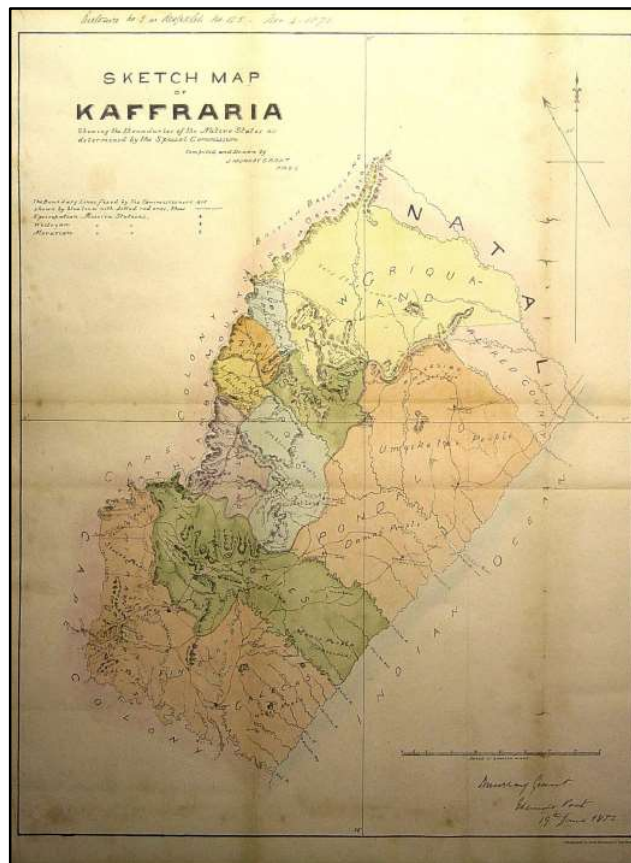
Moreover, *“[a] combination of the economic squeeze and the crumbling infrastructure has grave implications on the economy of Elliot. A number of businesses either left or closed in Elliot,”* while crime is on the increase: *“Records on Elliot reflect an upward trend in criminal acts in the town.”* This combination of *“crumbling infrastructure and escalating crime discourages business owners from staying in Elliot.”* But *“[t]he departure of businesses is not only an economic challenge. There are social challenges as well. The departure of businesses indicates lack of development of an area. Lack of development limits the area chances of keeping and / or attracting skills. There is ample evidence that poor municipalities struggle to attract skilled people, hence the low skills base in rural municipalities. Similarly, underdeveloped areas experience ‘brain drain’ – which is outmigration of skilled people to developed areas”* (Ncapayi 2019).

In addition to the described dire socio-economic circumstances of the Elliot–Khowa region, Ncapayi (2019) does not refrain from the inopportunity of addressing political ideology alleged to further underscore the reported decline:

“The district and its surroundings experienced a series of farm attacks. For instance, between 1991 and 2001 fifteen farmers were fatally attacked in the Elliot district. Because of close proximity to Cala and surrounding villages under the former Transkei homeland, white farmers in Elliot and neighbouring districts experienced frequent attacks. [...] [T]here were not less than six farm attacks in the Maclear area between 22 August and 6 October 1997. The farm attacks in Maclear symbolise similar APLA-associated attacks across various provinces of South Africa. [...] [T]he farm attacks contributed to the abandonment of farming by some white

farmers [...]; affect[ing...] employment and the economy of Elliot. The 1990s was a period of heightened military operations by APLA. The broader context is that Sabelo Phama, APLA's Chief Commander had declared in April 1993 the year to be 'The Year Of The Great Storm' (Seroke, n.d.: Truth and Reconciliation Commission, 1998). Indeed, there was escalation in farm attacks associated with APLA operations from 66, in 1991, to 92 in 1994. The escalation of attacks was clearly linked to the call to action by the APLA Commander. The attacks influenced some white farmers to abandon farming. Their farms became part of the farms offered to the Department of Land Affairs (now the Department of Rural Development and Land Reform) for land reform. Indeed, the department's annual report [2005] shows the number of farms transferred through land reform, [...and] the Elliot district had, by 2002, 'one of the largest concentrations of redistribution projects in the country, in particular LRAD [Land Redistribution and Agricultural Development] projects'."

Accordingly Ncapayi (2019) concludes, citing the critical role municipalities play in the development of communities, and calling on the SLM to fulfil its municipal mandate "to promote social and economic development" through the promotion and undertaking of development projects; Ncapayi's call hence brings us back to the very *Ikhephu Feedlot, Erf 1 Elliot* development proposal – a concerted effort to address, at least in part, but through a systematic and calculated approach, the plethora and complexity of socio-economic concerns, and with direct cognisance to the role the declining farming sector plays therein, as raised by Ncapayi on behalf of the greater Elliot–Khowa community.



Map 5: Sketch map of Kaffraria (or the greater Transkei region), 1872 (Braun 2008)



Map 6: Plan of the Transkeian Territories, Sheet No. 7, 1912, showing the District of Elliot Slang River and parts of Maclear and Engcobo
 (<https://digitalcollections.lib.uct.ac.za/islandora/object/islandora%3A30067/datastream/OBJ/view>)

2.2.1. FIELD ASSESSMENT: SUMMARY

Field assessment for the *Ikhephu Feedlot, Erf 1 Elliot* development centred on two (2) study sites, namely the:

- IFSS, being the preferred development site; and the
- IFASS.

IFSS: The IFSS is situated at S31°17'15.9"; E27°49'04.7", and measures a rough 38.5ha in size, of which some 20ha will be directly impacted by development. Surface visibility is described as varied, ranging between poor to fair, and mainly characterised by grass cover. The southern portion of the study site is typified by grassfield, with a woody tree cluster demarcating its western boundary. Vegetation changes noticeably towards the northern portion of the study site; with the northern portion being a mosaic landscape of grassfield intersected with wooded clusters of trees.

Two (2) archaeological and cultural heritage resources, as defined and protected by the NHRA, were identified during the field assessment of the IFSS, namely Site IKF-S01 and IKF-S02. Site IKF-S01 constitute partial Colonial Period kraal mound remains; the site is of no scientific or heritage conservation significance and it is recommended that the remains be destroyed without the developer having to apply for an EC PHRA site destruction permit. Site IKF-S02 constitute the living heritage khowa habitat, characterising not only the IFSS but also the IFASS, albeit most prominently so within the wooded tree clusters typical of the mosaic landscape of the northern portion of the IFSS; the presence of the khowa is of *High Local Significance* and it is recommended that as much of the wooded habitat, but no less than a third of the northern portion of the IFSS be conserved, thereby ensuring, in part and on-site, and in perpetuation of future generations the conservation of the khowa / mushroom habitat within the development framework.

The remainder of the study site yielded an anthropogenically sterile surface; recent Bovid III faunal remains are a consequence of current farming activities and not of zoo-archaeological origin.

Sub-surface indicators point, likewise, towards anthropogenic sub-surface site sterility: Five (5) sub-surface "Test Pit" locales are in specific reported on here to demonstrate the point, although more shallow sub-surface exposed sections are present across the IFSS and IFASS. TP-01 (IFSS), an old quarry site, constitutes the most prominent sub-surface indicator, with exposed sections ranging from 1–5+m in depth, indicating a general base Hutton Sand member overlain by an approximate 1m in depth mudstone member (present only at intervals), in turn overlain by an approximate 30–70cm top red gravelly surface member – no anthropogenic layer or lens was identified within the stratigraphic sequence. TP-02 (IFASS) comprises an old test pit with a sub-surface depth of some 80cm, yielding an anthropogenic sterile section of Hutton Sand only without a mudstone or gravelly top layer. TP-03, TP-04 and TP-05 (IFSS) comprise shallow sub-surface exposures of 40–50cm in depth; all being in single anthropogenic sterile stratigraphic sequence similar to TP-02. Sub-surface indicator "Test Pit" locales are geo-spatially summarised as:

- 1) TP-01 (S31°17'06.7"; E27°49'17.7");
- 2) TP-02 (S31°17'13.0"; E27°49'37.6");
- 3) TP-03 (S31°17'03.9"; E27°49'07.0");
- 4) TP-04 (S31°17'20.9"; E27°49'13.9"); and
- 5) TP-05 (S31°17'28.6"; E27°49'05.8").

In conclusion, based on sub-surface evidence in support of a general anthropogenic sterile sub-surface, it is unlikely, although not impossible, that sub-surface archaeological and cultural heritage resources will be encountered during the course of construction.

IFASS: The IFASS comprises the approximate 33.5ha existing Ikhephu Feedlot development, situated between the IFSS and the R58, at general site coordinate S31°17'05.9"; E27°49'28.9". Similar to the scenario described for the IFSS, development will directly impact on an approximate 20ha area of the IFASS. Visibility across the IFASS is described as particularly poor, typified by thick grass cover virtually obscuring surface visibility, and associated with a manifold of drainage lines and varying sized localised wetlands. The study site is characterised by recent Ikhephu Feedlot development infrastructure and structures, most notably the:

- 1) Guard house (S31°17'12.8"; E27°49'41.3");
- 2) Unfinished offices (S31°17'14.6"; E27°49'39.1");

- 3) Shed (S31°17'10.5"; E27°49'34.5");
- 4) Feeding trough (S31°17'07.4"; E27°49'33.8"); and
- 5) With the cattle camps centred around general coordinate S31°17'05.6"; E27°49'31.1".

All of the current Ikhephu Feedlot structures constitute contemporary structures. None of the structures are older than 60 years, or of any other heritage significance; by implication none of the Ikhephu Feedlot structures are formally protected by the NHRA. Neither were any other heritage resources (aside from the khowa / mushroom as described in IFSS), as defined and protected by the NHRA, identified during the field assessment of the IFASS area.

Based primarily on direct field assessment results, but with field assessment results in support of pre-feasibility archaeological and cultural heritage sensitivity of the greater *Ikhephu Feedlot, Erf 1 Elliot* terrain, it is recommended that:

- o In the event of development at the IFSS, or the preferred study site, the developer complies with recommended Phase 2 heritage conservation recommendations with regard to the Living Heritage Site IKF-S02 khowa habitat within the development framework. (It is recommended that the Colonial Period Site IKF-S01 remains be destroyed without the developer having to apply for an EC PHRA site destruction permit); and / or
- o In the event of development at the IFASS, being the alternative study site, no additional identified archaeological and cultural heritage compliance requirements apply.

The proposed development poses no *Fatal Flaws* with regard to protected archaeological and cultural heritage resources – provided Phase 2 heritage conservation requirements are met if development proceeds at the IFSS – and consideration of a *No Development* option is, resultantly, not warranted from said heritage perspective. Compliance with the recommended IFSS Phase 2 heritage conservation will result in a primarily long-term – or implementation phase – positive cumulative archaeological and cultural heritage impact by the *Ikhephu Feedlot, Erf 1 Elliot* development.

ARCHAEOLOGICAL AND CULTURAL HERITAGE RESOURCES SUMMARY IKHEPHU FEEDLOT, ERF 1 ELLIOT, SAKHISIZWE LOCAL MUNICIPALITY, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE				
IFSS: PREFERRED DEVELOPMENT SITE – S31°17'15.9"; E27°49'04.7" (38.5ha)				
MAP CODE	SITE	COORDINATE	SITE SIGNIFICANCE	RECOMMENDATIONS
IKF-S01	Colonial Period – Kraal remains	S31°17'10.6"; E27°49'16.8"	SAHRA Low Significance Generally Protected – Grade IV-C Field Rating	Site Destruction: Site destruction without the developer having to apply for an EC PHRA permit
IKF-S02	Living Heritage – Khowa habitat	S31°17'07.1"; E27°49'09.3"	SAHRA High Significance Generally Protected – Local Significance of Grade III-A Field Rating	Phase 2 Heritage Conservation: 1. Formal heritage conservation area (≥6ha of the wooded habitat of the northern IFSS) 2. Heritage Management Plan
TP-01	Quarry Site 1	S31°17'06.7"; E27°49'17.7"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-03	Test Pit 3	S31°17'03.9"; E27°49'07.0"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-04	Test Pit 4	S31°17'20.9"; E27°49'13.9"	(Indicator of sub-surface anthropogenic sterility)	N/A
TP-05	Test Pit 5	S31°17'28.6"; E27°49'05.8"	(Indicator of sub-surface anthropogenic sterility)	N/A
IFASS – S31°17'05.9"; E27°49'28.9" (33.5ha)				
N/A	Cont. Period – Guard house	S31°17'12.8"; E27°49'41.3"	N/A	N/A
N/A	Cont. Period – Unfinished offices	S31°17'14.6"; E27°49'39.1"	N/A	N/A
N/A	Cont. Period – Shed	S31°17'10.5"; E27°49'34.5"	N/A	N/A
N/A	Cont. Period – Feeding trough	S31°17'07.4"; E27°49'33.8"	N/A	N/A
N/A	Cont. Period – Cattle camps	S31°17'05.6"; E27°49'31.1"	N/A	N/A
TP-02	Test Pit 2	S31°17'13.0"; E27°49'37.6"	(Indicator of sub-surface anthropogenic sterility)	N/A

Table 3: Field assessment findings – Archaeological and cultural heritage resources summary

2.2.2. ARCHAEOLOGICAL AND CULTURAL HERITAGE RESOURCE / SITE DESCRIPTIONS

Two (2) archaeological and cultural heritage resources, as defined and protected by the NHRA, were identified during the field assessment of the *Ikhephu Feedlot, Erf 1 Elliot* study site:

2.2.2.1. SITE IKF-S01: S31°17'10.6"; E27°49'16.8" – Colonial Period – Kraal Remains

Site IKF-S01 comprises partial Colonial Period earth mound kraal remains. The former kraal is mainly identifiable by its north-western fence's mound remains: An approximate 40–60m long earth mound of about 1m in width. The rectangular north-eastern corner of the site is traceable by a change in vegetation. It is, however, not possible to estimate the original size of the kraal; towards the south-west landscape contouring, in a typical case of cultural overlay, impacted on the site, and discerning kraal mound remains from the contour mound (approximately 1.5–2m in width) becomes difficult to impossible, ending in a deceiving rectangular corner that in fact is nothing more than an eroded track. It is reasonably inferred that the kraal was branch constructed, most possibly with wood chopped from the tree rich surrounds – and being organic built had decayed into typical earth mound manner. No inferred date is assigned to Site IKF-S01: Branch and wood were commonly used by Colonial Period Western farmers from the early years (any date from 1885 onwards may be applicable in this case), but branch and wood are still thus used, and not necessarily restricted to temporary structures. The only relative date that can with surety be applied is that the kraal mound remains predate the contouring that overlies it, with contouring widely practiced in South Africa from the rough 1950s onwards.

Site Significance and Recommendations: Site IKF-S01 is ascribed a *SAHRA Low Significance* with a *Generally Protected Grade IV-C Field Rating*. Site remains are, however, of no scientific or heritage conservation worth and it is recommended that the site be destroyed without the developer having to apply for an EC PHRA site destruction permit.

2.2.2.2. SITE IKF-S02: S31°17'07.1"; E27°49'09.3" – Living Heritage – Khowa Habitat

The Site IKF-S02 coordinate refers to the widespread presence of the khowa / mushroom – after which Elliot was renamed in 2017 – across the *Ikhephu Feedlot, Erf 1 Elliot* study site, including the IFSS and IFASS areas. The khowa was found growing, infrequently, across the grassfield characterising the greater study site, but was particularly prolific and thriving within the wooded tree cluster habitat – and including amidst other fungus types – typical of the mosaic landscape of the northern portion of the IFSS.

The khowa is not unique to the *Ikhephu Feedlot, Erf 1 Elliot* study site, nor the greater Elliot–Khowa region, but is found spread across South Africa's subtropical rainforest areas from Mpumalanga to KwaZulu-Natal and as far south as the old Transkei (SFFFB [undated]). The khowa has in recent years received more widespread recognition for its rightful place in the living heritage arena. First raised prominently into the sphere of living heritage in KwaZulu-Natal and propelled into the indigenous culinary industry (Catch Cook 2020), the mushroom is known in Xhosa as [singular] inkowane, or [plural] iinkowane (Personal communication: Z. Wana, GIBB Environmental, 9 April 2022) and translates from both isiZulu and isiXhosa merely as "wild mushroom" (SFFFB [undated]).

The khowa, or *Termitomyces umkowaani*, is a large finely-fleshed white mushroom, with a cap that can grow up to 30cm in diameter. It belongs to a variety of mushroom that depend on termite activity for propagation and grow in a symbiotic relationship with termites in their nests; the termites transplant the khowa spores to their nests where the fungi break down wood and dried grass, decomposing materials like cellulose and lignin – which the termites cannot digest – and form a biomass that is rich in nitrogen, that in turn is consumed by the termites (SFFFB [undated]).

inkowane grow wild, with growth quantities and seasonal distribution a direct factor of the weather – in rainy summers they are found widespread, in dry summers they are scarce. After the first spring rains, within 24 hours, the fungi produce the aboveground edible fruiting portion of the mushroom. The mushrooms are collected individually for personal or family use, or alternatively can be purchased at informal markets or small local restaurants. They are used in several local dishes, as a meal on their own, or as a soup or sauce, or are cooked in stews with meat and vegetables, and reputed to be best done in a pan fried or open fire setting with its taste described invariably as sweet, chicken-like, or nutty in flavour (Catch Cook 2020; SFFFB [undated]).

The natural habitat of the khowa is threatened, by fluctuating climate cycles as well as development in general and urbanisation in specific – and iinkowane are becoming increasingly rare. Despite attempts by commercial growers the khowa has to date not been successfully cultivated and they are still only found growing in the context of their symbiotic relationship with termites (SFFF B [undated]).

Site Significance and Recommendations: Despite the much wider geo-spatial distribution of iinkowane, the presence of the khowa at the *Ikhephu Feedlot, Erf 1 Elliot* study site is within its direct study site and greater Elliot–Khowa context ascribed a *SAHRA High Significance* with a *Generally Protected – Local Significance, Grade III-A Field Rating*.

The khowa's habitat is threatened, by fluctuating climate cycles as well as development in general and urbanisation in specific. Furthermore, to date propagation or cultivation of the khowa has proven unsuccessful – conservation of the khowa, as a living heritage resource, is thus only possible within its natural habitat. Hence it is recommended that development at the IFSS, with its development footprint on the wooded habitat within which the fungi thrive, be accompanied by a parallel Phase 2 heritage conservation programme. It is recommended that as much of the wooded habitat, but no less than a third of the northern portion of the IFSS be conserved, to ensure, in part and on-site, and in perpetuation of future generations the khowa as a protected living heritage resource.

The proposed Phase 2 heritage conservation area, indicated on Map 8 in blue, makes provision for an approximate 8ha conservation area. Proposed conservation area boundaries indicated on Map 8 may be regarded as provisional, and changes thereto for development purposes, provided a conservation area of no less than 6ha within the mosaic wooded landscape of the northern part of the IFSS be conserved. The conservation area should be formally fenced (with an access gate) and set aside for khowa habitat conservation in specific, implying no development impact, with specific reference to cattle trampling, on the fragile wooded habitat within which the khowa, amidst other fungus types, thrive.

In accordance with SAHRA / EC PHRA requirements for heritage sites / areas a Conservation Management Plan (CMP) should be compiled for the khowa conservation area, ensuring also that management of the development, Ikhephu Secondary Co-Operative, reports annually to EC PHRA on the heritage conservation area in accordance with heritage standards and requirements as per the CMP, and with cognisance to the principles of IEM.

Formal declaration of a heritage conservation area is not at present recommended; suitable and responsible conservation and management of the khowa habitat as living heritage resource within a direct development framework is preferable, with any further consideration of formal declaration best kept for future deliberation and to be based on a track record of successful heritage management experience of the resource in question.



Plate 1: Ikhephu Feedlot Study Site (IFSS) – General view of the study site from the southern part thereof [1]



Plate 3: IFSS - General view of the southern part of the study site typified by contoured terracing [1]



Plate 2: IFSS – General view of the study site from the southern part thereof [2]



Plate 4: IFSS – general view of the southern part of the study site typified by contoured terracing [2]



Plate 5: IFSS – General view of the central part of the study site typified by a mosaic of grassland and woody pockets of tree clusters [1]



Plate 6: IFSS – General view of the central part of the study site typified by a mosaic of grassland and woody pockets of tree clusters [2]



Plate 7: IFSS – General view of the northern part of the study site typified by woody tree clusters [1]



Plate 8: IFSS – General view of the northern part of the study site typified by woody tree clusters [2]



Plate 9: IFSS – General view of the northern part of the study site typified by woody tree clusters [4]



Plate 11: IFSS – General view of the northern part of the study site typified by woody tree clusters [6]



Plate 10: IFSS – General view of the northern part of the study site typified by woody tree clusters [5]



Plate 12: IFSS – Recent faunal Bovid III remains



Plate 13: IFSS – Site IKF-S01; Colonial Period livestock enclosure mound remains [1]



Plate 15: IFSS – Site IKF-S01; eastern corner of the site characterised by a change in change in vegetation



Plate 14: IFSS – Site IKF-S01; Colonial Period livestock enclosure mound remains [2]



Plate 16: IFSS – Site IKF-S01; western extremity of the site impacted by contouring and an eroded track



Plate 17: linkowane in their Ikhephu Feedlot study site wooded habitat



Plate 19: Other mushrooms from the greater Ikhephu Feedlot study site [1]



Plate 18: A young khowa fruiting after the rain from the greater Ikhephu Feedlot study site



Plate 20: Other mushrooms from the greater Ikhephu Feedlot study site [2]



Plate 21: IFSS – General view of the TP-01 quarry site [1]



Plate 23: IFSS – A rough 1.5–2m sub-surface anthropogenic sterile section at TP-01



Plate 22: IFSS – General view of the TP-01 quarry site [2]



Plate 24: IFSS – An in excess of 5m sub-surface anthropogenic sterile section at TP-01



Plate 25: IFASS – TP-02; a rough 80cm anthropogenic sterile sub-surface section



Plate 27: IFSS – TP-04; a rough 40cm anthropogenic sterile sub-surface section



Plate 26: IFSS – TP-03; a rough 50cm anthropogenic sterile sub-surface section



Plate 28: IFSS – TP-05; a rough 50cm anthropogenic sterile sub-surface section



Plate 29: Ikhephu Feedlot Alternative Study Site (IFASS) – General view of the study site



Plate 31: IFASS – General view with the shed and feeding troughs in the background



Plate 30: IFASS – General view with a typical wetland in the foreground



Plate 32: IFASS – General view of the shed with the cattle camps in the background



Plate 33: IFASS – View of the shed



Plate 35: IFASS – View of the feeding troughs [2]



Plate 34: IFASS – View of the feeding troughs [1]



Plate 36: IFASS – View of the cattle camps [1]



Plate 37: IFASS – View of the cattle camps [2]



Plate 39: IFASS – View of the cattle camps [4]



Plate 38: IFASS – View of the cattle camps [3]



Plate 40: IFASS – Access tracks at the study site [1]



Plate 41: IFASS – Access tracks at the study site [2]



Plate 43: IFASS – The unfinished offices



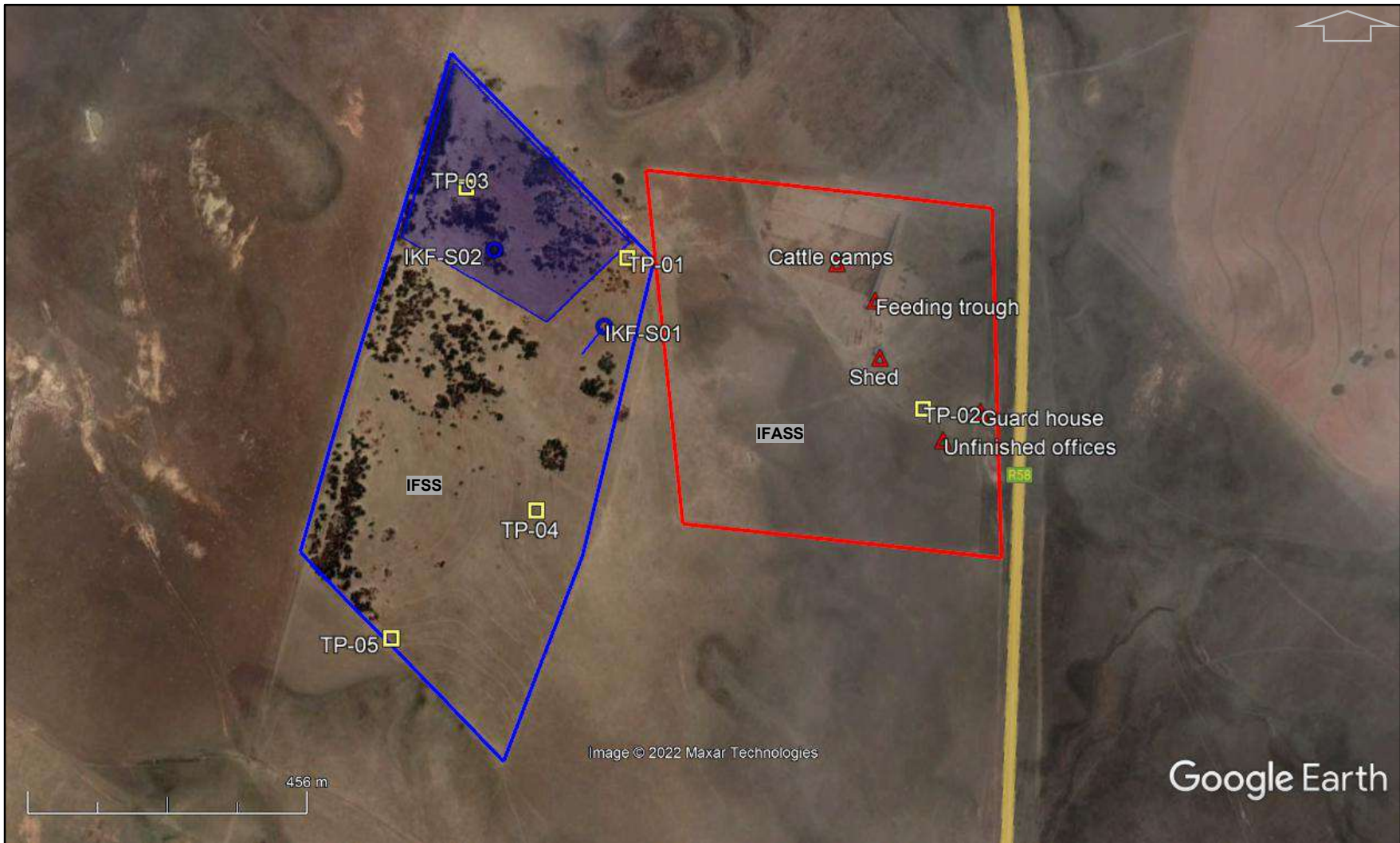
Plate 42: IFASS – Access road with the guard house in the background and unfinished offices



Plate 44: IFASS – Access road leading to the shed



Map 7: Close-up of the Ikhephu Feedlot, Erf 1 Elliot, Sakhisizwe Local Municipality, Chris Hani District Municipality, Eastern Cape study site



Map 8: Field assessment results for the Ikhephu Feedlot, Erf 1 Elliot, Sakhisizwe Local Municipality, Chris Hani District Municipality, Eastern Cape study site

3 – ENVIRONMENTAL IMPACT ASSESSMENT RATING

AIA identified archaeological and cultural heritage resources are ascribed an Impact Assessment (IA) rating, based on the outline presented below, to provide a significance rating of development impact on resources, both during the 1) construction and 2) implementation or use phases of development.

CRITERIA AND RATING SCALES	
CRITERIA	RATING
Overall Nature	1) Negative (negative impact on affected biophysical or human environment); or 2) Positive (benefit to the affected biophysical or human environment).
Type	1) Direct (caused by the action and occur at the same time and place); 2) Indirect or secondary (caused by the action and are later in time or further removed in distance but reasonably foreseeable); or 3) Cumulative (impact which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions; can result from individually minor, but collectively significant actions taking place over a period of time).
Spatial Extent	1) Site (immediate area of activity, incorporating a 5m zone from the edge of the affected area); 2) Local (area up to and/or within 10km from the 'site' as defined above); 3) Regional (entire community, basin or landscape); or 4) National (South Africa).
Duration	1) Short-term (impact would last for the duration of activities; quickly reversible); 2) Medium-term (impact would affect project activity; reversible over time); 3) Long-term (impact would continue beyond project activity); or 4) Permanent (impact would continue beyond decommissioning).
Severity	1) Low ; 2) Medium ; or 3) High ; being +) Positive ; or -) Negative (based on separately described categories examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functionality or slightly alters the environment itself).
Reversibility	1) Completely reversible (completely reversible impact with implementation of correct mitigation measures); 2) Partly reversible (partly reversible impact with implementation of correct mitigation measures); or 3) Irreversible (impact cannot be reversed, regardless of mitigation or rehabilitation measures).
Replaceability	1) Resource will not be lost (resource will not be lost provided mitigation measures are implemented); 2) Resource will be partly lost (partial loss or destruction of the resource will occur even though management and mitigation measures are implemented); or 3) Resource cannot be replaced (resource is irreplaceable no matter which management or mitigation measures are implemented).
Probability	1) Unlikely (<40% probability); 2) Possible (40% probability); 3) Probable (>70% probability); or 4) Definite (>90% probability).
Mitigation potential	1) High or completely mitigatable (relatively easy and cost effective to manage. Specialist expertise and equipment generally not required. Nature of impact easily understood and may be mitigated through implementation of a management plan or "good housekeeping", including regular monitoring and reporting regimes. Significance of the impact after mitigation is likely to be low or negligible); 2) Moderate or partially mitigatable (management requires higher level of expertise and resources to maintain impacts with acceptable levels. Mitigation can be tied up in the design of the project. Significance of the impacts after mitigation is likely to be low to moderate. It may not be possible to mitigate the impact entirely, with residual impacts resulting); or 3) Low or un-mitigatable (will not be possible to mitigate the impact entirely, regardless of expertise and resources. Potential to manage the impacts may be beyond the scope of the project. Management of the impact is not likely to result in a measurable change in the level of significance).
Impact significance	1) Negligible ; 2) Low (largely of HIGH mitigation potential, after consideration of other criteria); 3) Moderate (largely of MODERATE or partial mitigation potential, after consideration of other criteria); or 4) Substantial (largely of LOW mitigation potential, after consideration of other criteria).

Table 4: Impact Assessment (IA) criteria and rating scales

RATING IKHEPHU FEEDLOT, ERF 1 ELLIOT, SAKHISIZWE LOCAL MUNICIPALITY, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE												
Potential Impacts	Overall nature	Type	Spatial extent	Duration	Severity	Reversibility	Replaceability	Probability	MITIGATION POTENTIAL	IMPACT SIGNIFICANCE		MITIGATION MEASURES
										Without mitigation	With mitigation	
SITE: IKF-S01												
Construction phase	Negative	Direct	Site	Short-term	Low (-)	Irreversible	Resource cannot be replaced	Definite	High or completely mitigatable	Low	Negligible	Site destruction
Operational phase	Negative	Direct	Site	Short-term	Low (-)	Irreversible	Resource cannot be replaced	N/A	N/A	Low	Negligible	
SITE: IKF-S02												
Construction phase	Negative	Direct	Site	Short-term	High (-)	Irreversible	Resource will be partly lost	Definite	Moderate or partially mitigatable	Substantial	Moderate	Phase 2 heritage conservation
Operational phase	Positive	Cumulative	Local	Permanent	High (+)	Completely reversible	Resource will not be lost	Unlikely	Moderate or partially mitigatable	Substantial	Moderate	
MITIGATION DETAILS:												
Site IKF-S01: Site Destruction –												
1) Site destruction without the developer having to apply for an EC PHRA permit												
Site IKF-S02: Phase 2 Heritage Conservation –												
1) Formal heritage conservation area (≥6ha of the wooded habitat of the northern IFSS)												
2) Heritage Management Plan												

Table 5: Impact Assessment (IA) rating: Ikhephu Feedlot, Erf 1 Elliot, Sakhisizwe Local Municipality, Chris Hani District Municipality, Eastern Cape

4.1. RECOMMENDATIONS FOR DEVELOPMENT

The Screening Report (2021a, 2021b) indicates the archaeology and cultural heritage theme for the *Ikhephu Feedlot, Erf 1 Elliot* study site as: 1) IFSS – “Low Sensitivity”; and 2) IFASS – “Low Sensitivity”. In the case of the IFSS, based on SSV by way of an AIA, the “Low Sensitivity” rating needs to be dispelled, with direct reference to living heritage.

Based on the results of the SSV and AIA, and with reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA, it is recommended that the proposed *Ikhephu Feedlot, Erf 1 Elliot* development proceeds as applied for, provided:

- In the event of development at the IFSS, being the preferred development site, the developer complies with recommended Phase 2 heritage conservation recommendations with regards to the Living Heritage Site IKF-S02 khowa habitat within the development framework; and / or
- In the event of development at the IFASS, no additional identified archaeological and cultural heritage compliance requirements apply.

The EC PHRA–APM Unit HIA Comment will state legal requirements for development to proceed, or reasons why, from a heritage perspective, development may not be further considered.

NOTE: Should any registered Interested and Affected Party wish to be consulted in terms of Section 38(3)(e) of the NHRA (Socio-cultural consultation / SAHRA Social Impact Assessment) it is recommended that the DRDAR / Ikhephu Secondary Co-Operative ensures that the consultation be prioritized within the timeframe of the EIA process.

4.2. SUMMARISED PHASE 1 AIA FINDINGS

Pre-feasibility study: The greater *Ikhephu Feedlot, Erf 1 Elliot* study site terrain is characterised by a low presence of ESA. MSA and LSA site records are more ample, and including macrolithic and microlithic LSA. The LSA lithic record is complemented by a shelter rock art site, testimony, at least in part, to the rich rock art record typifying the southern Drakensberg. No EIA or MIA sites are reported on from CRM records; but the LIA is well represented and constitute the dominant type site recorded, including LIA settlement sites, in cases associated with cemeteries / grave sites, and in other cases not, as well as stand-alone LIA cemetery / grave sites. The Colonial Period is fairly poorly represented, with a notably high propensity of trading post sites. A single proposed development from the greater terrain, by the amaHala community, represents a living heritage development.

No declared PHSs are recorded within a 5km radius from the *Ikhephu Feedlot, Erf 1 Elliot* study site, and with the nearest PHSs being situated some 40km from said site.

The village of Elliot was first established in 1885 as the *Slang River Settlement*. In April 1894 the settlement was renamed Elliot, after Sir Henry George Elliot (1826–1912), Chief Magistrate of the Transkeian territories from 1891 to 1902, and the town became a municipality in 1911. In 2017 Elliot was renamed Khowa, signifying the mushrooms that grow in the area in summer. Locally the town is commonly referred to by the double-barrel name of Elliot–Khowa.

Field assessment: Field assessment for the *Ikhephu Feedlot, Erf 1 Elliot* development centred on two (2) study sites, namely the:

- IFSS, being the preferred development site; and the
- IFASS.

IFSS: The IFSS is situated at S31°17'15.9"; E27°49'04.7", and measures a rough 38.5ha in size, with direct development impact estimated at some 20ha of the 38.5ha study site. Two (2) archaeological and cultural heritage resources were recorded within the IFSS, namely Sites IKF-S01 and IKF-S02:

- Site IKF-S01 constitute partial Colonial Period kraal mound remains; the site is of no scientific or heritage conservation significance and it is recommended that the remains be destroyed without the developer having to apply for an EC PHRA site destruction permit.

- Site IKF-S02 constitute the living heritage khowa habitat, characterising not only the IFSS but also the IFASS, albeit most prominently so within the wooded tree clusters typical of the mosaic landscape of the northern portion of the IFSS; the presence of the khowa is of *High Local Significance* and it is recommended that as much of the wooded habitat, but no less than a third of the northern portion of the IFSS be conserved, thereby ensuring, in part and on-site, and in perpetuation of future generations the conservation of the khowa / mushroom habitat within the development framework.

Based on sub-surface evidence in support of a general anthropogenic sterile sub-surface at IFSS and IFASS, it is unlikely, although not impossible, that sub-surface archaeological and cultural heritage resources will be encountered during the course of construction.

IFASS: The IFASS comprises the approximate 33.5ha existing Ikhephu Feedlot development (with the proposed development including a rough 20ha footprint area), situated between the IFSS and the R58, at general site coordinate S31°17'05.9"; E27°49'28.9". The study site is characterised by recent Ikhephu Feedlot development structures – none of which are older than 60 years, or of any other heritage significance, and by implication not formally protected by the NHRA. Neither were any other protected heritage resources (aside from the khowa mushroom as described in IFSS) identified at the IFASS area.

Conclusion: Based primarily on direct field assessment results, but with field assessment results in support of pre-feasibility archaeological and cultural heritage sensitivity of the greater *Ikhephu Feedlot, Erf 1 Elliot* terrain, it is recommended that:

- In the event of development at the IFSS, or the preferred study site, the developer complies with recommended Phase 2 heritage conservation recommendations with regards to the Living Heritage Site IKF-S02 khowa habitat within the development framework. (It is recommended that the Colonial Period Site IKF-S01 remains be destroyed without the developer having to apply for an EC PHRA site destruction permit); and / or
- In the event of development at the IFASS, being the alternative study site, no additional identified archaeological and cultural heritage compliance requirements apply.

The proposed development poses no *Fatal Flaws* with regards to protected archaeological and cultural heritage resources – provided Phase 2 heritage conservation requirements are met if development proceeds at the IFSS – and consideration of a *No Development* option is, resultantly, not warranted from said heritage perspective. Compliance with the recommended IFSS Phase 2 heritage conservation will result in a primarily long-term – or implementation phase – positive cumulative archaeological and cultural heritage impact by the *Ikhephu Feedlot, Erf 1 Elliot* development.

5 – ACRONYMS AND ABBREVIATIONS

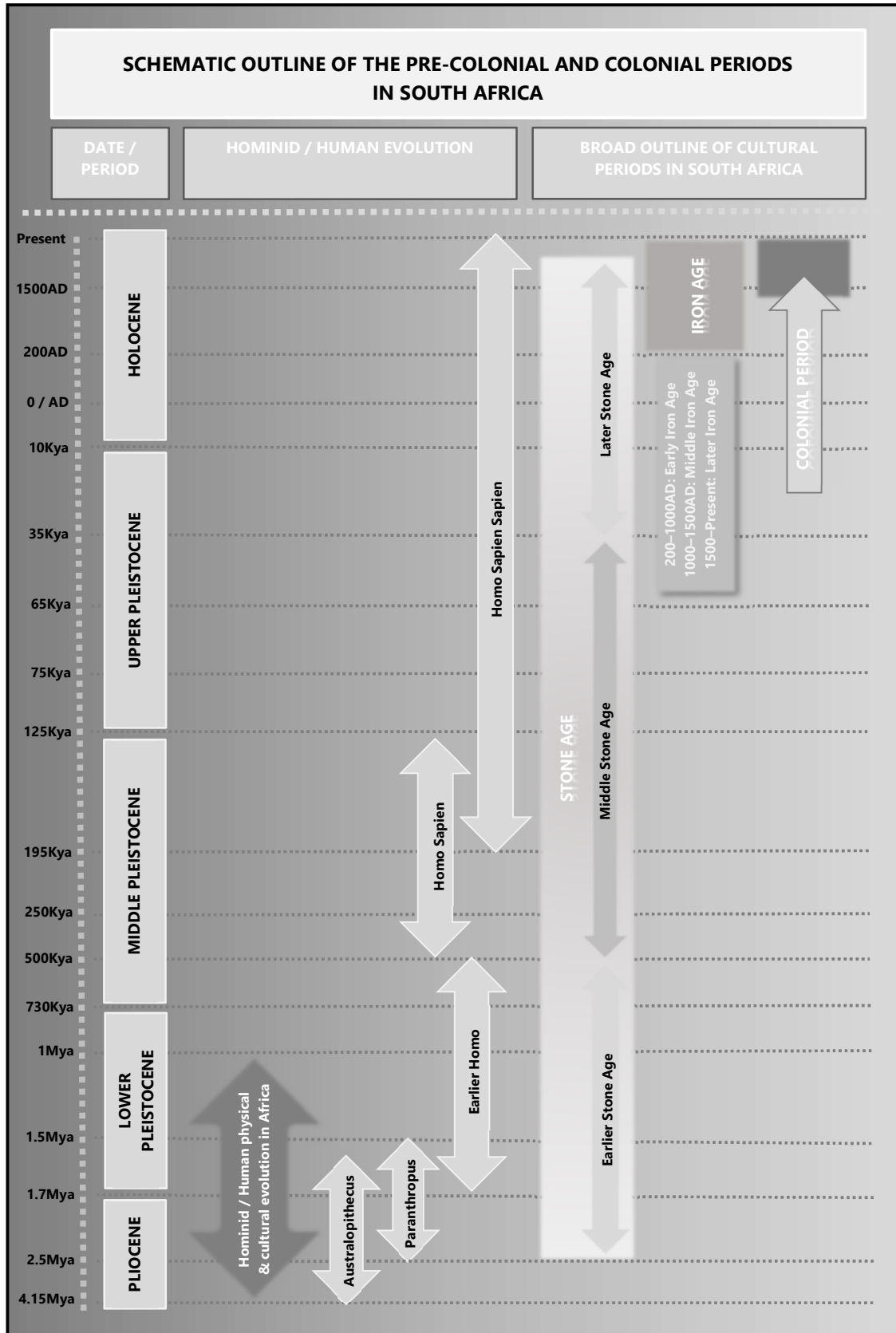
LIST OF ACRONYMS AND ABBREVIATIONS	
AD	Anno Domini (the year 0)
AIA	Archaeological and Cultural Heritage Impact Assessment
APM Unit	Archaeology, Palaeontology and Meteorites Unit
ASAPA	Association of Southern African Professional Archaeologists
BAR	Basic Assessment Report
BC	Before the Birth of Christ (the year 0)
BCE	Before the Common Era (the year 0)
BP	Before the Present (the year 0)
CHDM	Chris Hani District Municipality
Cm	Centimetre
CMP	Conservation Management Plan
CRM	Cultural Resources Management
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism
DRDAR	Department of Rural Development and Agrarian Reform
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
ELO	Environmental Liaison Officer
EC PHRA	Eastern Cape Provincial Heritage Resources Agency
EIA ₁	Environmental Impact Assessment
EIA ₂	Early Iron Age
EMPr	Environmental Management Programme
ESA	Earlier Stone Age
GN	Government Notice
GPS	Geographic Positioning System
Ha	Hectare
HIA	Heritage Impact Assessment
IA	Impact Assessment
IEM	Integrated Environmental Management
IFASS	Ikhephu Feedlot Alternative Study Site
IFSS	Ikhephu Feedlot Study Site
Km	Kilometre
Kya	Thousands of years ago
LIA	Later Iron Age
LSA	Later Stone Age
M	Metre
m ²	Square metre
MIA	Middle Iron Age
MPD	Mapping Project Database
MSA	Middle Stone Age
Mya	Millions of years ago
NEMA 1998	National Environmental Management Act, Act No. 107 of 1998
NHRA 1999	National Heritage Resources Act, Act No. 25 of 1999
PHS	Provincial Heritage Site
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SIA	Social Impact Assessment
SLM	Sakhisizwe Local Municipality
SSV	Site Sensitivity Verification
ToR	Terms of Reference

Table 6: List of acronyms and abbreviations

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Appendix A: SCHEMATIC OUTLINE OF THE PRE-COLONIAL AND COLONIAL PERIODS IN SOUTH AFRICA



Appendix B:
HERITAGE PROTOCOL FOR INCIDENTAL FINDS DURING THE CONSTRUCTION PHASE OF DEVELOPMENT

Site Sensitivity Verification (SSV) and Phase 1 Archaeological and Cultural Heritage Impact Assessment (AIA) –
IKHEPHU FEEDLOT, ERF 1 ELLIOT,
SAKHISIZWE LOCAL MUNICIPALITY, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE

Should any archaeological or cultural heritage resources, including human remains / graves, as defined and protected by the NHRA¹, be identified during the construction phase of development, including as a norm during vegetation clearing, surface scraping / levelling, trenching and excavation, the process described below should be followed:

❖ **ON-SITE REPORTING PROCESS**

1. The identifier should immediately notify his / her supervisor of the find.
2. The identifier's supervisor should immediately (and within 24 hours after reporting by the identifier) report the incident to the on-site SHE / SHEQ² officer.
3. The on-site SHE / SHEQ officer should immediately (and within 24 hours after reporting by the relevant supervisor) report the incident to the appointed ECO / ELO³. [Should the find relate to human remains the SHE / SHEQ officer should immediately notify the nearest SAPS station informing them of the find].
4. The ECO / ELO should ensure that the find is within 72 hours after the SHE / SHEQ officer's report reported on SAHRIS / EC PHRA / project heritage specialist, and that a relevant heritage specialist is contacted to make arrangements for a heritage site inspection. [Should the find relate to human remains the ECO / ELO should ensure that the archaeological site inspection coincides with a SAPS site inspection, to verify if the find is of forensic, authentic (informal / older than 60 years), or archaeological (older than 100 years) origin].
5. The appointed heritage specialist should compile a heritage site inspection report based on the site-specific situation / findings. The site inspection report should make recommendations for the destruction, conservation or mitigation of the find and prescribe a recommended way forward for development. The heritage site inspection report should be submitted to the ECO / ELO, who should ensure submission thereof on SAHRIS / arrange with the heritage specialist for submission on SAHRIS.
6. SAHRA / the relevant PHRA will state legal requirements for development to proceed in the SAHRA / PHRA Comment on the heritage site inspection report.
7. The developer should proceed with implementation of the SAHRA / PHRA Comment requirements. SAHRA / PHRA Comment requirements may stipulate permit specifications for development to proceed.
 - Should permit specifications stipulate further Phase 2 archaeological investigation (including grave mitigation) a suitably accredited heritage specialist should be appointed to conduct the work according to the applicable SAHRA / PHRA process. The heritage specialist should apply for the permit. Upon issue of the SAHRA / PHRA permit the Phase 2 heritage mitigation program may commence.
 - Should permit specifications stipulate destruction of the find under a SAHRA / PHRA permit the developer should immediately proceed with the permit application. Upon the issue of the SAHRA / PHRA permit the developer may legally proceed with destruction of the heritage resource.

¹ **Simplified Guide to the Identification of Archaeological Sites:**

- ❖ **Stone Age** – Knapped stone display flakes and flake scars that appear unnatural and may result in similar type 'shaped' stones often concentrated in clusters or forming a distinct layer in the geological stratigraphy. ESA shapes may represent 'pear' or oval shaped stones, often in the region of 10cm or larger. Typical MSA types include blade-like or rough triangular shaped artefacts, often associated with randomly shaped lithics or flakes that display use- or edge-wear around the rim of the artefact. LSA types are similar to MSA types, but generally smaller (≤3cm in size), often informally shaped, and are frequently found in association with bone, pieces of charcoal, ceramic shards and food remains.
 - **Rock Art** – Includes both painted and engraved images.
 - **Shell Middens** – Include compact shell lenses that may be quite extensive in size or small ephemeral scatters of shell food remains, often associated with LSA artefact remains, but may also be of MSA and Iron Age cultural association.
- ❖ **Iron Age** – Iron Age sites are often characterized by stone features, i.e. the remains of former livestock enclosures or typical household remains; huts are identified by either mound or depression hollows. Typical artefacts include ceramic remains, farming equipment, beads and trade goods, metal artefacts (including jewellery) etc. Remains of the 'Struggle' – events, histories and landmarks associated therewith are often, based on cultural association, classed as part of the Iron Age heritage of South Africa.
- ❖ **Colonial Period** – Built environment remains, either urban or rural, are of a Western cultural affiliation with typical artefacts representing early Western culture, including typical household remains, trade and manufactured goods, such as old bottle, porcelain and metal artefacts. War memorial remains, including the vast array of associated graves and the history of the Industrial Revolution form important parts of South Africa's Colonial Period heritage.
- ❖ **Grave and Cemetery Sites** – Marked grave and cemetery sites are routinely associated with the Iron Age and Colonial Period. Unmarked grave sites associated with the Stone Age, Iron Age and Colonial Period may be uncovered during the course of development.

² SHE / SHEQ – Safety, Health and Environment / Safety, Health, Environment and Quality

³ ECO / ELO – Environmental Control Officer / Environmental Liaison Officer

- Upon completion of the Phase 2 heritage mitigation program the heritage specialist will submit a Phase 2 report to the ECO / ELO, who should in turn ensure submission thereof on SAHRIS / arrange with the heritage specialist for submission on SAHRIS. Report recommendations may include that the remainder of a heritage site be destroyed under a SAHRA / PHRA permit, or be conserved under recommended alterations to development design and layout.
- Should the find relate to human remains of forensic origin the matter will be directly addressed by the SAPS: A SAHRA / PHRA permit will not be applicable.

NOTE: The SAHRA / PHRA permit requirements relating to the mitigation of human remains is subject to a prescribed process, including consultation, permissions, mitigation and re-internment / deposition of remains.

❖ DUTIES OF THE SUPERVISOR

1. The supervisor should immediately upon reporting by the identifier ensure that all work in the vicinity of the find is ceased.
2. The supervisor should ensure that the location of the find is immediately secured (and within 12 hours of reporting by the identifier), by means of a temporary conservation fence (construction netting or similar measures) allowing for a 5–10m heritage conservation buffer zone around the find. The temporary conserved area should be sign-posted as a "No Entry – Heritage Site" zone.
3. Where development has impacted on the resource, no attempt should be made to remove artefacts / objects / remains further from their context, and artefacts / objects / remains that have been removed should be collected and placed within the conservation area or kept for safekeeping with the SHE / SHEQ officer. It is imperative that where development has impacted on heritage resources the context of the find be preserved as good as possible for interpretive and sampling / testing purposes.

The supervisor should record the name, company and capacity of the identifier and compile a brief report describing the events surrounding the find. The report should be submitted to the SHE / SHEQ officer at the time of the incident report.

❖ DUTIES OF THE SHE / SHEQ OFFICER

1. The SHE / SHEQ officer should ensure that the location of the find is recorded with a GPS. A photographic record of the find (including implementation of temporary conservation measures) should be compiled. Where relevant a scale bar or object that can indicate scale should be inserted in photographs for interpretive purposes.
2. The SHE / SHEQ officer should ensure that the supervisors report, GPS co-ordinate(s) and photographic record of the find be submitted to the ECO / ELO. [Should the find relate to human remains the SHE / SHEQ officer should ensure that the mentioned reporting be made available to the SAPS at the time of the incident report].
3. Any retrieved artefacts / objects / remains should, in consultation with the ECO / ELO, be deposited in a safe place (preferably on-site) for safekeeping.

❖ DUTIES OF THE ECO / ELO OFFICER

1. The ECO / ELO should ensure that the incident is reported on SAHRIS. (The ECO / ELO officer should ensure that he / she is registered on the relevant SAHRIS case / request the heritage specialist to ensure reporting on SAHRIS on his / her behalf).
2. The ECO / ELO should ensure that the incident report is forwarded to the heritage specialist for interpretive purposes at his / her soonest opportunity and prior to the heritage site inspection.
3. The ECO / ELO should facilitate appointment of the heritage specialist by the developer / construction consultant for the heritage site inspection.
4. The ECO / ELO should facilitate access by the heritage specialist to any retrieved artefacts / objects / remains that have been kept in safekeeping.
5. The ECO / ELO should facilitate coordination of the heritage site inspection and the SAPS site inspection in the event of a human remains incident report.
6. The ECO / ELO should facilitate heritage reporting to, and heritage compliance requirements by SAHRA / the relevant PHRA, between the developer / construction consultant, the heritage specialist, the SHE / SHEQ officer (where relevant) and the SAPS (where relevant).

❖ DUTIES OF THE DEVELOPER / PRINCIPAL ENGINEERING OR CONSTRUCTION CONSULTANT

The developer / principal engineering or construction consultant should ensure that an adequate heritage contingency budget is accommodated within the project budget to facilitate and streamline the heritage compliance process in the event of incidental heritage resources being uncovered during the course of development, including as a norm during vegetation clearing, surface scraping / levelling, trenching and excavation phases, when resources not visible at the time of the surface assessment may well be exposed.

NOTE: Officer designations used in the *Heritage Protocol for Incidental Finds during the Construction Phase of Development* may well vary from that used on-site, in which case it is the responsibility of the developer / principal engineering or construction consultant to ensure that described duties be assigned to designated staff.